Mount Greylock Regional School District School Committee

Location: MGRS Meeting Room A109 **Thursday, June 13, 2019**

1781 Cold Spring Road Williamstown, MA 01267 **6:00 PM**

Open and Executive Session Agenda

I. Call to Order

II. Approval of Minutes **VOTE**
   - A. May 9, 2019
   - B. May 23, 2019
   - C. May 29, 2019

III. Circulate Warrants

IV. Superintendent Evaluation

V. School Committee member letter of resignation

VI. Principal updates
   - A. Lanesborough Elementary School
   - B. Mount Greylock Regional School
   - C. Williamstown Elementary School

VII. Director of Operation and Director of Academic Technology update

VIII. Superintendent Update
   - A. Introduction of Director of Bldg and Grounds
   - B. Director of Academic Technology job description update. **VOTE**
   - C. End of year wrap ups
   - D. Summer programming/staffing
   - E. Strategic planning - summer working group

IX. Buildings and grounds update
   - A. Lanesborough
   - B. MGRSD
   - C. Williamstown
     1. LED lighting program **VOTE**

X. Building Use/Rental Fee Schedule **VOTE**

XI. E-Mail discussion **VOTE**

XII. Business Manager update

XIII. Finance Sub-Committee Report
   - A. FY 20 budget update
   - B. FY 19 budget update
   - C. FY 19 Line item transfers. **VOTE**

XIV. Phase I Capital Gift Committee update

XV. Phase II Capital Gift Committee update

XVI. Policy Liaison Update

XVII. Summer retreat discussion

XVIII. Motion to adjourn to Executive Session with no intent to return to open session per MGL Chapter 30A Section 21(a)(3) to discuss strategy with respect to litigation (LES Principal) an open meeting would have a detrimental effect on the litigating position of the District, and MGL Chapter 30A Section 21(a)(2) to conduct strategy in preparation for contract negotiations with non-Union personnel (Superintendent and Administrators) and contract negotiations with non-union personnel (Superintendent) and the Chair so declares.

OPEN SESSION May 29, 2019 Call to order at 4 pm

Finance Sub-committee of SBC: Hugh D, Steven W, Kim G, Steve moves, Kim seconds, to go into Executive: Passes unanimously.

Mt Greylock: 401pm: Regina, Dan, Ali, Steve, Al, Christina

II. Steve moves, Dan seconds, to move into Executive Session with intent to return to open session for the following purposes: Per MGL Chapter 30A Section 21(a)(3) to discuss strategy with respect to litigation related to the MGRS school building project; Per MGL Chapter 30A Section 21(a)(2) to conduct a strategy session in preparation for contract negotiations with non-union personnel (Assistant Superintendent of Finance and Business); Per MGL Chapter 30A, Section 21(a)(3) to discuss strategy with respect to collective bargaining (esp/custodians) as an open meeting may have a detrimental effect on the bargaining of the subcommittee and the chair so declares; Per MGL Chapter 30A Section 21(a)(4) to discuss the deployment of security devices, or strategies with respect thereto. Roll Call vote in DiLego – aye, Carter -aye, Caplinger – aye, Miller- aye, Terranova -aye, Conry - aye

Also present: Rob W

OPEN SESSION May 29, 2019 Return to open session from executive session at 5:07 pm

III. Al moves, Dan seconds, to approve the Assistant Superintendent of Finance and Business job description as presented by the Superintendent. Passes unanimously.

IV. Steve moves, Dan seconds, to award the Assistant Superintendent of Finance and Business position to Andrea Wadsworth pending successful negotiation of her contract., passes unanimously.

V. Al moves, Ali seconds, to approve the ESP/custodian contract. Negotiation committee recommends. Passes unanimously.

VI. Remote participation: This was slated to be addressed in April but did not happen. Dan moves to allow remote participation in accordance with the requirements and regulations of MGL 29.10, Steve seconds. Regina stresses that this can not be used to participate for just any inconvenient reason a committee member can not attend. Specific criteria must be met for this to occur and is spelled out in the regulation. Passes unanimously.

Al moves, Steve seconds, to adjourn, passes unanimously at 5:12.

Lanesborough Update

“Students are excited about the summer coming, but still diligently working with the guidance of the faculty and staff. Since the last school committee meeting, the Lanesborough PTO held a Luau that was attended by 168 students out of the 207 currently enrolled. The sixth grade class went to Cape Cod and received praise for their academic pursuit and behavior. Other grades have been taking part in learning experiences outside of the classroom at places such as:Hopkins Forrest, Sheep Hill, Capeless Elementary, and Laston Field. The fourth grade had a state fair in which parents and students came in to hear all about the different states. This Friday afternoon, Lanesborough will have a field day. On Wednesday, June 19th, the Pre-K and Kindergarten will have their Moving On Celebrations and on June 20th, the last day of school, the 6th grade will have their Moving On Ceremony at 10. We look to finish out the year smarter and happier."

~Nolan Pratt

Williamstown Elementary School
115 Church Street
Williamstown, MA 01267
413.458.5707
www.wlschools.org

Joelle Brookner, Principal

End of school news:

- We have several staff members retiring this year- teachers Sue Kirby and Jane Russett and paraprofessional Kathi George. Jane has been at WES 19 years, Kathi has been working with us for 10 years, and Sue Kirby is retiring after 43 years teaching PE at WES. We are sad to see these teachers leave us and thank them for their many years of service to the children of the Williamstown community. On a related note, we are well into hiring for posted positions. We have selected a new PE teacher, are interviewing eight candidates for our open social worker position next week, and our open paraprofessional positions and fourth grade teaching position are posted.

- Sixth grade had a successful trip to Cape Cod last week; we are grateful to the chaperones who helped make the trip a success. They also did a great job with their musical, *Mary Poppins*. Students are excited for their transition to Mount Greylock and will be participating in a "moving up day" on Friday, June 14. Graduation for sixth grade will be on June 20 at 1:15pm.

- We had our schoolwide art show on Tuesday. The art show features work from every child in the school, PK-6. It is amazing to see the creativity displayed. Thanks so much to our art teacher, Emily Beaulieu, for all her work with the students throughout the year and for her tremendous efforts in staging the art show itself. The art show is a large undertaking, and we are so grateful to Emily for carrying on the tradition.

- Also on June 11 and in conjunction with the art show, we had our first ever WES Fest, which featured a family BBQ and concert with Alastair Moock. It was so much fun, and we hope to make this an annual event. Thanks to Cindy Sheehy and Jenna Dickinson who worked with me to make this vision a reality and to the WES PTO for their financial support.

Technology @ Mount Greylock RSD

Eileen Belastock, Director of Academy Technology

Rob Wnuk, Director of Operations

June 2019

What's Going On

- MCAS Computer Based Testing
- Chromebooks
- Software
- Tech/Audio Visual Specialist

Looking Forward

Google Accounts for LES 2nd Graders EdTech Collaboration between Schools	Collaboration with DA Office on Social Media Parent Tech Nights Summer EdTech PD	7th Grade using Canvas Student Data Privacy Communications

Mount Greylock RSD Technology Committee

LOOKING FOR MEMBERS

Spring 2019

10 Member Committee (Teachers, Parents, Community Members, Student)

Fall 2019

Develop district technology goals and benchmarks

Winter/Spring 2020

Implement action plans with stakeholders

MOUNT GREYLOCK REGIONAL SCHOOL DISTRICT

Job Description

JOB TITLE: *Director of Academic Technology*

REPORTS TO: Superintendent

POSITION: Administrative, 210 days, Grant Funded Position

QUALIFICATIONS:

a. MA Degree

b. Minimum of three years' experience in a district instructional technology leadership position.

c. Extensive knowledge of technology uses in educational and instructional settings.

d. Demonstrated knowledge in program evaluation and aligning DLCS Standards to MA Curriculum Frameworks.

REPORTS TO:
Superintendent of Schools

POSITION SUMMARY:
The Director of Academic Technology is responsible for providing leadership and direction to Mount Greylock Regional School District's technology and library media programs that align with the district's vision and strategic goals and ensures vertical articulation of technology PreK-12.

ESSENTIAL JOB FUNCTIONS:

- Maintain thorough knowledge of Massachusetts Digital Literacy and Computer Science Frameworks, as well as the ISTE Standards and CoSN Framework of Essential Skills.
- Knowledgeable of all relevant federal and state statutes, policies, regulations and contractual agreements associated with instructional technology
- Explore innovative and cutting-edge practices to advance the system and make recommendations to assist and support innovative choices across the district.
- Determine the fiscal needs of the MGRSD technology programs, and make appropriate recommendations to the Assistant Superintendent of Business and Finance and Superintendent of Schools for budget development and allocation.
- Follows innovation in technology and media and makes recommendations to support decision-making on educational and administrative matters concerning technology-based education and integration
- Leads the planning, effective use, and equitable access to technology and media resources, which supports and enhances curriculum, teaching, and learning, PreK-12.
- Coordinates private, federal and state grants and projects for educational technology and library media programming.
- Develop, articulate, and execute continuous vision and direction for the Districts' instructional technology program, including multi-year implementation, planning, assessment, and monitoring systems.
- Provide leadership in the development, implementation, and maintenance of the District's technology plan with the District Technology Committee.
- Establish professional relationships with technology leaders and technology vendors to

remain current n the instruction technology and educational fields.

- Research, implement, and sustain appropriate technology resources to support the district in the collection, managing, and sharing data, as well as overseeing effective and efficient data workflow.
- Provide technical assistance and resources required to support curriculum, instruction, assessment, and professional development.
- Participate regularly in District administrative team meetings, K-12 subject area curriculum committee meetings, and other committees designated by the Superintendent.
- Attends workshops, conferences, and conventions to remain updated on trends and developments in technology and digital education.
- Collaborates with principals in developing technology budgets, including instructional materials and provisions for teaching and learning programs.
- Collaborate in the development and implementation of a technology professional development plan in conjunction with principals and administrators to ensure an effective PD program implemented and aligned with the school and district improvement plans.
- Researches and guide the purchase of technology equipment, software, and supporting materials, maintaining an up-to-date inventory in collaboration with the Director of Operations.
- In partnership with guidance department and curriculum leaders' research, recommend and implement a technology-based program of studies, coordination school-based and college courses, Virtual High School, MOOCs, and hybrid programs to provide students with a cohesive and relevant curricular and co-curricular program.
- Promotes and supervise the Makerspace/Robotics programs for students and faculty.
- Assess the district's school libraries/media centers programs concerning state and local district standards for personnel, facilities, materials, and content.
- Initiate, plan, implement, and evaluate in-service opportunities and ongoing professional development for library/media and instructional technology specialists.
- Serves as the district's copyright compliance officer
- Support classroom teachers and students by promoting appropriate instructional technology practices.
- Collaborate with and support teachers in delivering effective technology-rich instruction.
- Ensure the development and implementation of internet safety practices and active engagement with families to build awareness about the safe and responsible use of technology
- Manage the strategic use of technology in the school district, including but not limited to: the deployment of 1:1 mobile instructional technology initiative, utilization of Google Apps for education, the teacher online evaluation program and all online state testing requirements.
- Work with district and building admin on the hiring of relevant licensed staff.

COMPENSATION & BENEFITS:
Compensation and benefits shall be subject to negotiations between the Superintendent (as an agent of the School Committee) and the Director of Academic Technology.

PERFORMANCE EVALUATION:
The Administrator shall be evaluated annually. Evaluation will be based up on the District's Administrator Evaluation process and the annual goals agreed upon they the Employee and the Superintendent.

Superintendent's Office June 2019

RISE ENGINEERING
Efficiency Energized.

Williamstown Elementary School
Mount Greylock Regional School District LED Lighting Upgrade Projects
June 6, 2019

nationalgrid

Line Item	FACILITY LOCATION	CHAPTER 25A SECTION 3 PROCUREMENT LAW	ENERGY CONSERVATION MEASURES	PROJECT COSTS			UTILITY COSTS PER UNIT	ENERGY SAVINGS					RETURN ON INVESTMENT	
#	FACILITY	PROJECT CATEGORY	ECM	PROJECT COST	NGRID ELECTRIC INCENTIVE	CUSTOMER NET COST	$/KwH	kW REDUCTION	kWh REDUCTION	MMBTU REDUCTION	ANNUAL SAVINGS	MAINTENANCE SAVINGS	ROI	PAYBACK IN YEARS
1	WES-2nd Floor	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	$ 72,199	$ 11,159	$ 61,040	$ 0.1919	16.4	44,637	152	$ 8,566	$ 4,769	22%	4.6
2	WES-1st Floor	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	$ 89,869	$ 13,989	$ 75,880	$ 0.1919	18.5	55,957	191	$ 10,738	$ 5,102	21%	4.8
			Williamstown Elementary School Totals	**$ 162,068**	**$ 25,148**	**$ 136,920**		**34.9**	**100,594**	**343**	**$ 19,304**	**$ 9,871**	**21%**	**4.7**

*NGRID rebates estimated are subject to review and approval and may change annually based on program offerings.

Efficiency Energized.

RISE ENGINEERING™

Division of Thielsch Engineering, Inc
1341 Elmwood Avenue
Cranston, Rhode Island 02910

nationalgrid

Williamstown Elementary School-1ST FLOOR
c/o Mount Greylock Regional School District

Financial Summary

Total Project Cost	**$**	**89,869**
Estimated Electric Incentive	**$**	**(13,989)**
Customer Net Cost	**$**	**75,880**
Estimated Energy Cost Savings Annually	**$**	**10,738**
Estimated Maintenance Savings	**$**	**5,102**
Return on Investment (ROI)		**21%**
Simple Payback in Years		**4.8**

Energy Savings

kW Reduction	kWh Reduction
18.47	55,957

Pollution Savings

CO2 Reduction (lbs)	NOx Reduction (lbs)	SO2 Reduction (lbs)
70,897	60.0	221.9

Prepared: 6/6/2019

Efficiency Energized.

RISE ENGINEERING™

Division of Thielsch Engineering, Inc
1341 Elmwood Avenue
Cranston, Rhode Island 02910

nationalgrid

Williamstown Elementary School-2ND FLOOR
c/o Mount Greylock Regional School District

Financial Summary

Total Project Cost	**$**	**72,199**
Estimated Electric Incentive	**$**	**(11,159)**
Customer Net Cost	**$**	**61,040**
Estimated Energy Cost Savings Annually	**$**	**8,566**
Estimated Maintenance Savings	**$**	**4,769**
Return on Investment (ROI)		**22%**
Simple Payback in Years		**4.6**

Energy Savings

kW Reduction	kWh Reduction
16.41	44,637

Pollution Savings

CO2 Reduction (lbs)	NOx Reduction (lbs)	SO2 Reduction (lbs)
56,556	47.9	177.0

Prepared: 6/6/2019

RISE ENGINEERING

Williamstown Elementary School-2ND FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-2ND FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
1	WES	2	209	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
2	WES	2	209	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	3	2520	63	0.19	476	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	2520	36	0.11	272					0.08	204
3	WES	2	209	CLASSROOM WALL & UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
4	WES	2	209	CLASSROOM CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
5	WES	2	210	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
6	WES	2	210	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	3	2520	63	0.19	476	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	2520	36	0.11	272					0.08	204
7	WES	2	210	CLASSROOM WALL & UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
8	WES	2	210	CLASSROOM CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
9	WES	2	211/212/214	RESTROOMS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	3	1760	37	0.11	195	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	3	1760	20	0.06	106					0.05	90
10	WES	2	217	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	5	2520	126	0.63	1,588	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	5	2520	72	0.36	907					0.27	680
11	WES	2	217	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
12	WES	2	217	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
13	WES	2	217	CLASSROOM CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
14	WES	2	216	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	5	2520	126	0.63	1,588	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	5	2520	72	0.36	907					0.27	680
15	WES	2	216	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
16	WES	2	216	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
17	WES	2	216	CLASSROOM CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
18	WES	2	218A/218B	STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
19	WES	2	218C	STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	7	1000	42	0.29	294	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	7	1000	24	0.17	168					0.13	126
20	WES	2	218F	ACTIVITY RM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
21	WES	2	218D	SCIENCE ROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
22	WES	2	218D	SCIENCE ROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	63	0.13	318	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	36	0.07	181					0.05	136
23	WES	2	218D	SCIENCE ROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
24	WES	2	218E	STORAGE RM	D2	2X2 2L2' T8 17W/NP RECESSED PRISMATIC	1	1000	37	0.04	37	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	1000	20	0.02	20					0.02	17
25	WES	2	218H	ACTIVITY ROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	126	0.25	635	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	72	0.14	363					0.11	272
26	WES	2	218G	ACTIVITY ROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	126	0.25	635	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	72	0.14	363					0.11	272
27	WES	2	218G	ACTIVITY ROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	63	0.13	318	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	36	0.07	181					0.05	136

RISE ENGINEERING

Williamstown Elementary School-2ND FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-2ND FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
28	WES	2	218G	STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	5	1000	42	0.21	210	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	5	1000	24	0.12	120					0.09	90
29	WES	2		ACTIVITY CORRIDOR	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	3	4992	45	0.14	674	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	3	4992	20	0.06	300					0.08	374
30	WES	2		ACTIVITY CORRIDOR	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	3	4992	45	0.14	674	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	3	4992	20	0.06	300					0.08	374
31	WES	2		MAIN CORRIDOR	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	8	4992	45	0.36	1,797	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	8	4992	20	0.16	799					0.20	998
32	WES	2		MAIN CORRIDOR	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	8	4992	45	0.36	1,797	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	8	4992	20	0.16	799					0.20	998
33	WES	2		MAIN CORRIDOR	B5	1X4 2L4' T8 28W/LP PENDANT	3	4992	42	0.13	629	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST	3	4992	25	0.08	374					0.05	255
34	WES	2		MAIN CORRIDOR	B6	1X4 2L4' T8 28W/LP PENDANT W/ EMG BATTERY	23	4992	42	0.97	4,822	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	23	4992	25	0.58	2870					0.39	1,952
35	WES	2		MAIN CORRIDOR	A2	1X8 4L4' T8 28W/LP PENDANT	1	4992	83	0.08	414	RETROFIT RPT 2L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST	1	4992	50	0.05	250					0.03	165
36	WES	2	207	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
37	WES	2	207	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	3	2520	63	0.19	476	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	2520	36	0.11	272					0.08	204
38	WES	2	207	CLASSROOM WALL & UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
39	WES	2	207	CLASSROOM CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
40	WES	2	208	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
41	WES	2	208	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	3	2520	63	0.19	476	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	2520	36	0.11	272					0.08	204
42	WES	2	208	CLASSROOM WALL & UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
43	WES	2	208	CLASSROOM CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
44	WES	2		RESTROOMS-BOYS & GIRLS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1760	20	0.04	70					0.03	60
45	WES	2	203	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
46	WES	2	203	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	3	2520	63	0.19	476	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	2520	36	0.11	272					0.08	204
47	WES	2	203	CLASSROOM WALL & UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
48	WES	2	203	CLASSROOM CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
49	WES	2	204	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
50	WES	2	204	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	3	2520	63	0.19	476	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	2520	36	0.11	272					0.08	204
51	WES	2	204	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
52	WES	2	204	CLASSROOM CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
53	WES	2	201/202	RESTROOMS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1760	20	0.04	70					0.03	60
54	WES	2	200	LIBRARY	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	17	2520	126	2.14	5,398	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	17	2520	72	1.22	3084					0.92	2,313

RISE ENGINEERING

Williamstown Elementary School-2ND FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-2ND FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
55	WES	2	200	LIBRARY	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
56	WES	2	200	LIBRARY	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	1	2520	45	0.05	113	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2520	20	0.02	50					0.03	63
57	WES	2	200	LIBRARY	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	2	2520	45	0.09	227	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	2	2520	20	0.04	101					0.05	126
58	WES	2	219	TECHNOLOGY OFFICE	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	1	2080	45	0.05	94	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2080	20	0.02	42					0.03	52
59	WES	2	219	TECHNOLOGY OFFICE	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	5	2080	45	0.23	468	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	5	2080	20	0.10	208					0.13	260
60	WES	2	220	TECHNOLOGY	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	2	2520	45	0.09	227	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1954.8333	20	0.03	63	LRF2-OCR2B-P-WH	2	ESRN	2	0.06	164
61	WES	2	220	TECHNOLOGY	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	10	2520	45	0.45	1,134	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	10	1954.8333	20	0.16	313			FCJS-010	12	0.29	821
62	WES	2		AUDITORIUM	P1	42W CFL PENDANT HOUSE LIGHT	32	2520	48	1.54	3,871	RELAMP 14W LED SCREW-IN BR40 DIMMABLE	32	2520	14	0.45	1129					1.09	2,742
63	WES	2		AUDITORIUM	WM1	1X4 1L4' F40 BIAX 22" PENDANT DIRECT	14	2520	46	0.64	1,623	RELAMP RPT 1L22" BIAX 20W LED 3000K/BYPASS BALLAST	14	2520	20	0.28	706					0.36	917
64	WES	2	301	STAIRS TO ATTIC	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	4	8760	42	0.17	1,472	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	4	8760	20	0.08	701					0.09	771
65	WES	2	301	AIR HANDLER ROOM	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	4	1000	42	0.17	168	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	4	1000	20	0.08	80					0.09	88
66	WES	2	301	AIR HANDLER ROOM	B3	1X4 2L4' T8 28W/LP WRAP	7	1000	42	0.29	294	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	7	1000	24	0.17	168					0.13	126
67	WES	2	221B	STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
68	WES	2	221B	STORAGE RM	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	1	1000	42	0.04	42	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	1	1000	20	0.02	20					0.02	22
69	WES	2		STAGE	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	3	1000	42	0.13	126	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	3	1000	20	0.06	60					0.07	66
70	WES	2		MAIN CORRIDOR	WM1	1X4 1L4' F40 BIAX 22" PENDANT DIRECT	8	4992	46	0.37	1,837	RELAMP RPT 1L22" BIAX 20W LED 3000K/BYPASS BALLAST	8	4992	20	0.16	799					0.21	1,038
71	WES	2	221A	AUDITORIUM ACCESS	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	3	4992	42	0.13	629	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	3	4992	20	0.06	300					0.07	329
72	WES	2	222	INSTRUMENTAL MUSIC	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
73	WES	2	222	INSTRUMENTAL MUSIC	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
74	WES	2	222A	PRACTICE ROOM	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	1	1000	45	0.05	45	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	1000	20	0.02	20					0.03	25
75	WES	2	223	STORAGE RM	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	1	1000	45	0.05	45	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	1000	20	0.02	20					0.03	25
76	WES	2		CORRIDOR TO 237	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	3	4992	45	0.14	674	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	3	4992	20	0.06	300					0.08	374
77	WES	2		CORRIDOR TO 237	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	3	4992	45	0.14	674	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	3	4992	20	0.06	300					0.08	374
78	WES	2	229	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
79	WES	2	229	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
80	WES	2	229	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
81	WES	2	231	TOILET	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1760	20	0.02	35					0.02	30

RISE ENGINEERING

Williamstown Elementary School-2ND FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-2ND FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
82	WES	2	232	STORAGE RM	D2	2X2 2L2' T8 17W/NP RECESSED PRISMATIC	1	1000	37	0.04	37	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	1000	20	0.02	20					0.02	17
83	WES	2	236	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
84	WES	2	236	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
85	WES	2	236	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
86	WES	2	237	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
87	WES	2	237	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
88	WES	2	237	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
89	WES	2	235	SMALL GROUP RM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	126	0.25	635	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	72	0.14	363					0.11	272
90	WES	2	235	SMALL GROUP RM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	63	0.13	318	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	36	0.07	181					0.05	136
91	WES	2	233/234	RESTROOMS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1760	20	0.04	70					0.03	60
92	WES	2	230	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
93	WES	2	230	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
94	WES	2	230	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
95	WES	2		CORRIDOR TO 224	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	1	4992	45	0.05	225	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	4992	20	0.02	100					0.03	125
96	WES	2		CORRIDOR TO 224	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	1	4992	45	0.05	225	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	4992	20	0.02	100					0.03	125
97	WES	2	224	VOCAL MUSIC	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
98	WES	2	224	VOCAL MUSIC	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
99	WES	2		RESTROOMS-ADULT	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1760	20	0.04	70					0.03	60
100	WES	2		CORRIDOR TO 238	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	1	4992	45	0.05	225	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	4992	20	0.02	100					0.03	125
101	WES	2		CORRIDOR TO 238	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	1	4992	45	0.05	225	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	4992	20	0.02	100					0.03	125
102	WES	2	227/228	CUSTODIAN/STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
103	WES	2	238	ACTIVITY ROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
104	WES	2	238	ACTIVITY ROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
105	WES	2	238	ACTIVITY ROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
106	WES	2	239	PLANNING RM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	126	0.25	635	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	72	0.14	363					0.11	272
107	WES	2	239	PLANNING RM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	63	0.13	318	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	36	0.07	181					0.05	136
108	WES	2	239	PLANNING RM CLOSET	D5	2X2 2L2' T8 17W/NP WRAP	1	1000	37	0.04	37	RELAMP RPT 2L2' T8 10W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	20	0.02	20					0.02	17

Prepared: 6/5/2019

RISE ENGINEERING

Williamstown Elementary School-2ND FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-2ND FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
109	WES	2	302	ATTIC EQUIPMENT RM STAIRS	ST1	1X4 1L4' T8 32W/NP WALL MNT STAIRWAY W/ EMG BATTERY	1	8760	22	0.02	193	RETROFIT RPT 1L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	1	8760	10	0.01	88					0.01	105
110	WES	2	302	ATTIC EQUIP AIR HANDLER RM	B3	1X4 2L4' T8 28W/LP WRAP	16	1000	42	0.67	672	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	16	1000	24	0.38	384					0.29	288
111	WES	2	302	ATTIC EQUIP AIR HANDLER RM	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	6	1000	42	0.25	252	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	6	1000	20	0.12	120					0.13	132
112	WES	2	251	GUIDANCE	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	1	2520	126	0.13	318	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2520	72	0.07	181					0.05	136
113	WES	2	251	GUIDANCE	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	1	2520	63	0.06	159	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2520	36	0.04	91					0.03	68
114	WES	2	241/242	ELECTRIC ROOMS	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	2	1000	42	0.08	84	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	2	1000	20	0.04	40					0.04	44
115	WES	2		CORRIDOR TO 249	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	3	4992	45	0.14	674	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	3	4992	20	0.06	300					0.08	374
116	WES	2		CORRIDOR TO 249	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	3	4992	45	0.14	674	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	3	4992	20	0.06	300					0.08	374
117	WES	2	240	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
118	WES	2	240	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
119	WES	2	240	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
120	WES	2	243	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
121	WES	2	243	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
122	WES	2	243	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
123	WES	2	248	SMALL GROUP RM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	126	0.25	635	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	72	0.14	363					0.11	272
124	WES	2	248	SMALL GROUP RM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	63	0.13	318	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	36	0.07	181					0.05	136
125	WES	2	246/247	RESTROOMS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1760	20	0.04	70					0.03	60
126	WES	2	244	UNISEX TOILET	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1760	20	0.02	35					0.02	30
127	WES	2	245	CUSTODIAN	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	1	1000	42	0.04	42	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	1	1000	20	0.02	20					0.02	22
128	WES	2	250	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
129	WES	2	250	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
130	WES	2	250	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
131	WES	2	249	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
132	WES	2	249	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
133	WES	2	249	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
134	WES	1 TO 2		STAIRS TO CAFETERIA	ST2	1X8 2L4' T8 32W/NP WALL MNT STAIRWAY W/ EMG BATTERY	3	8760	42	0.13	1,104	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	3	8760	20	0.06	526					0.07	578
288	WES	EXT	EXT	EXTERIOR BOLLARDS	BL1	100W MH BOLLARD EDISON BASE	2	4380	120	0.24	1,051	RELAMP BOLLARD 18W LED 4000K/BYPASS BALLAST	2	4380	18	0.04	158					0.20	894

Prepared: 6/5/2019

RISE ENGINEERING

Williamstown Elementary School-2ND FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

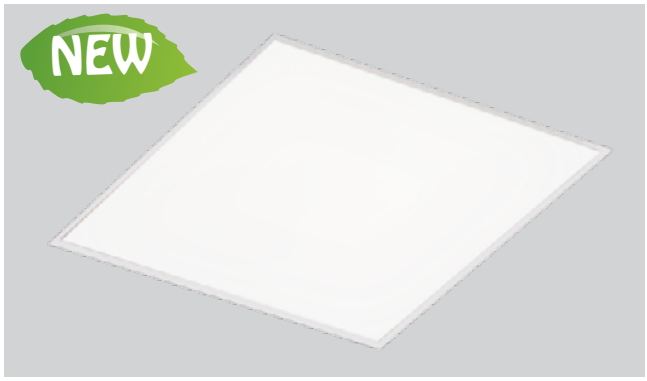
ECM: LED Lighting Upgrades-2ND FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
289	WES	EXT	EXT	EXTERIOR FLAGPOLE	XFL1	250W MH FLOOD FLAGPOLE	1	4380	295	0.30	1,292	NEW LITHONIA 21W LED FLOOD BZ KNUCKLE MNT/ADD ON ROOF/GROUND W/ JB & WIRING	1	4380	21	0.02	92					0.27	1,200
TOTALS							**502**			**35.22**	**93,551**		**502**			**18.81**	**48914**		**2**			**16.41**	**44,637**

FLAT LED PANEL SERIES

2' X 2' FLAT LED PANEL

Catalog Number	-FPL1-LED
Project Name	
Type	



IC RATED

DLC QPL LISTED

* For list of qualified DLC fixture, please consult factory

2000 LUMENS	3000 LUMENS	4000 LUMENS	5000 LUMENS
20 WATT	30 WATT	39 WATT	50 WATT
According to DLC Test Results	According to DLC Test Results	According to DLC Test Results	

The FPL1-LED flat led panel is DLC listed, delivers an exceptional 85+ CRI, while achieving approximately 115 lumens per watt. It is available in 3000K, 3500K, 4000K and 5000K CCT options and has 0-10V dimming, which is perfect for new construction applications or retrofitting existing fluorescent troffer fixtures with recessed installations, widely used in office spaces, major retail stores, education,government, healthcare, and hospitality.

LED CHIP - Tested and approved under LM-80 SMD standards. Active color management maintains superior color consistency over time and temperature. Every fixture is tuned as a complete system to the optimal color point before shipment,ensuring fixture-to-fixture color consistency.

HEAT SINK - The source and radiator distribution in fixture around, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling.This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

OPTICAL SYSTEM - The proprietary optical system utilizes a unique combination of reflective and refractive optical components to achieve a uniform, aesthetically pleasing appearance. Use of a guide plate laser allows high density pixels to shine, creating an even illumination with no glare, while maintaining high efficacy.

THERMAL MANAGEMENT - LED light engines are attached directly to the housing which keeps the engines cool. Our advanced thermal management system allows the light output of the LED engines to be maintained at 70% of initial lumens at 83,000 hours of operation.

DIMMING - The FPL1-LED comes standard with 0-10V dimming on either 120 or 277V. Dimmable down to 1% of initial lumens. Also available in Lutron dimming options. Consult factory for dimmer compatibility.

ELECTRICAL - Powered by high-quality, constant-current power LED drivers which are rated for 50 to 60Hz at 120-277V input, produce less than 20% THD, and have a power factor of .90 to 1.00.

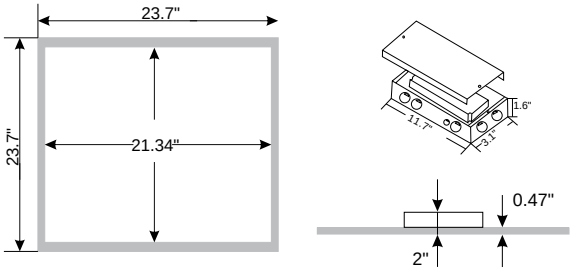
MAINTENANCE - LED engines and driver can be accessed through the bottom by removing hinged door frame and driver box cover. LED engines are removable and upgradable even after fixture installation. Fixture can be regularly and safely wiped down to ensure optimal fixture performance.

OPTIONS - Fixtures can be shipped pre-installed with daylight harvesting controls, occupancy sensors, and/or power pack. Available manufacturer options include Leviton, Wattstopper, Hubble Automation, and others.

QUALITY CONTROL - Every fixture is turned on and rigorously tested by our QC Department before shipping.

LISTING - UL/C-UL listed to US and Canadian standards.
Listed for Damp Location

WARRANTY - Limited 5 Year Warranty



DAMP LOCATION

SAMEDAY SHIPPING
(On selected configuration, consult factory)

PROUDLY ASSEMBLED in AMERICA

Intertek

Ordering Information: Example: 22-FPL1-LED-4000L-DIM10-MVOLT-30K-85

	FPL1	LED							
FIXTURE SIZE	SERIES	TYPE	LUMENS	DIMMING	VOLTAGE	CCT	CRI	EMERGENCY	
22 - 2' X 2'	**FPL1**-Oracle Flat LED Panel	**LED**	**2000L** - (2000 lumens) **3000L** - (3000 lumens) **4000L** - (4000 lumens) **5000L** - (5000 lumens)	**DIM10** - 0-10V Dimming **DIMST** - Step Dimming **LUTH** - Lutron Hilume **OS-OTI** - Osram Optotronic 0-10V Dimming w/ Auxiliary Output **ELD010** - EldoLED 0-10V **ELDODALI** - EldoLED DALI **ELDODMX** - EldoLED DMX	**MVOLT** **347*** * Consult factory for details	**30K** - (3000K) **35K** - (3500K) **40K** - (4000K) **50K** - (5000K)	**85**	**0-EMG-LED**	OTHER OPTIONS **22-FPL1-LED-SMK** - Surface Mount Kit **LMFC-011** - Digital On/Off/0-10V Dimming Fixture Controller **CLM-WCM** - Osram Connected Lighting Module w/ Wireless Control Module

CONTROL OPTIONS

LUTRON

Controls Installed on the Fixture

FCJS-010
Individual
Fixture Control

Fixture Will be Shipped LUTRON VIVE Enabled with LUTRON FCJS-010 0-10V Control Module Installed on the Fixture. Fixtures will be compatible with Lutron FC-SENSOR Occupancy/ Daylight Sensor or FC-VSENSOR Vacancy/Daylight Sensor which can be Added in the Field for Remote Mounting. Fixture May be Controlled with any Vive control systems. Fixtures must be ordered with a 0-10V. Driver.

FCJS-ECO
Individual
Fixture Control

Fixture Will be Shipped LUTRON VIVE Enabled with LUTRON FCJS-ECO EcoSystem Control Module Control Module Installed on the Fixture. Fixtures will be compatible with Lutron FC-SENSOR Occupancy/Daylight Sensor or FC-VSENSOR Vacancy/Daylight Sensor which can be Added in the Field for Remote Mounting. Fixture May be Controlled with any Vive control systems. Fixtures must be ordered with a Lutron Driver.

Controls Provided by Lutron

Lutron
App

Vive Wireless Hub

DayLight
Sensor

Ceiling Mount
Occupancy Sensor

Ceiling Mount
Occupancy/Daylight
Sensor

Wall Mount
Occupancy Sensor

Wall Mount
Switch

Pico
Remote

FPL1-LED SERIES

FLAT LED PANEL SERIES

2' X 4' FLAT LED PANEL

Catalog Number	-FPL1-LED
Project Name	
Type	

IC RATED

DLC QPL LISTED

* For list of qualified DLC fixture, please consult factory

3000 LUMENS	4000 LUMENS	5000 LUMENS	6000 LUMENS
30 WATT	40 WATT	50 WATT	60 WATT
According to DLC Test Results	According to DLC Test Results	According to DLC Test Results	

The FPL1-LED flat led panel is DLC listed, delivers an exceptional 85+ CRI, while achieving approximately 115 lumens per watt. It is available in 3000K, 3500K, 4000K and 5000K CCT options and has 0-10V dimming, which is perfect for new construction applications or retrofitting existing fluorescent troffer fixtures with recessed installations, widely used in office spaces, major retail stores, education,government, healthcare, and hospitality.

LED CHIP - Tested and approved under LM-80 SMD standards. Active color management maintains superior color consistency over time and temperature. Every fixture is tuned as a complete system to the optimal color point before shipment,ensuring fixture-to-fixture color consistency.

HEAT SINK - The source and radiator distribution in fixture around, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling.This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

OPTICAL SYSTEM - The proprietary optical system utilizes a unique combination of reflective and refractive optical components to achieve a uniform, aesthetically pleasing appearance. Use of a guide plate laser allows high density pixels to shine, creating an even illumination with no glare, while maintaining high efficacy.

THERMAL MANAGEMENT - LED light engines are attached directly to the housing which keeps the engines cool. Our advanced thermal management system allows the light output of the LED engines to be maintained at 70% of initial lumens at 83,000 hours of operation.

DIMMING - The FPL1-LED comes standard with 0-10V dimming on either 120 or 277V. Dimmable down to 1% of initial lumens. Also available in Lutron dimming options. Consult factory for dimmer compatibility.

ELECTRICAL - Powered by high-quality, constant-current power LED drivers which are rated for 50 to 60Hz at 120-277V input, produce less than 20% THD, and have a power factor of .90 to 1.00.

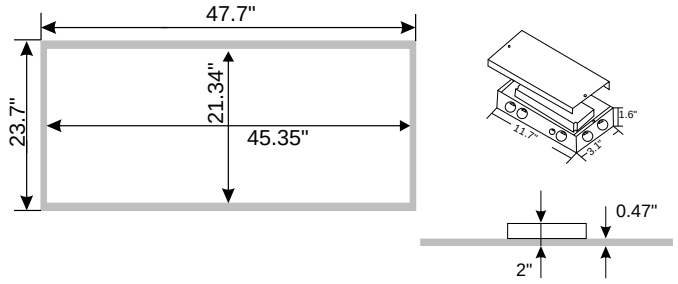
MAINTENANCE - LED engines and driver can be accessed through the bottom by removing hinged door frame and driver box cover. LED engines are removable and upgradable even after fixture installation. Fixture can be regularly and safely wiped down to ensure optimal fixture performance.

OPTIONS - Fixtures can be shipped pre-installed with daylight harvesting controls, occupancy sensors, and/or power pack. Available manufacturer options include Leviton, Wattstopper, Hubble Automation, and others.

QUALITY CONTROL - Every fixture is turned on and rigorously tested by our QC Department before shipping.

LISTING - UL/C-UL listed to US and Canadian standards.
Listed for Damp Location

WARRANTY - Limited 5 Year Warranty



DAMP LOCATION

SAMEDAY SHIPPING (On selected configuration, consult factory)

PROUDLY ASSEMBLED in AMERICA

Intertek

Ordering Information: Example: 24-FPL1-LED-4000L-DIM10-MVOLT-30K-85

	FPL1	LED							
FIXTURE SIZE	SERIES	TYPE	LUMENS	DIMMING	VOLTAGE	CCT	CRI	EMERGENCY	OTHER OPTIONS
24 - 2' X 4'	**FPL1**-Oracle Flat LED Panel	**LED**	**3000L** - (3000 lumens) **4000L** - (4000 lumens) **5000L** - (5000 lumens) **6000L** - (6000 lumens)	**DIM10** - 0-10V Dimming * **DIMST** - Step Dimming * **LUTH** - Lutron Hilume **OS-OTI** - Osram Optotronic 0-10V Dimming w/ Auxiliary Output **ELD010** - EldoLED 0-10V **ELDODALI** - EldoLED DALI **ELDODMX** - EldoLED DMX	**MVOLT** **347*** * Consult factory for details	**30K** - (3000K) **35K** - (3500K) **40K** - (4000K) **50K** - (5000K)	**85**	**0-EMG-LED**	**24-FPL1-LED-SMK** - Surface Mount Kit **LMFC-011** - Digital On/Off/0-10V Dimming Fixture Controller **CLM-WCM** - Osram Connected Lighting Module w/ Wireless Control Module

* DIMST and LUTH dimming options are only available for the fixtures up to 5000 lumens.

CONTROL OPTIONS

LUTRON

Controls Installed on the Fixture

FCJS-010
Individual
Fixture Control

Fixture Will be Shipped LUTRON VIVE Enabled with LUTRON FCJS-010 0-10V Control Module Installed on the Fixture. Fixtures will be compatible with Lutron FC-SENSOR Occupancy/ Daylight Sensor or FC-VSENSOR Vacancy/Daylight Sensor which can be Added in the Field for Remote Mounting. Fixture May be Controlled with any Vive control systems. Fixtures must be ordered with a 0-10V. Driver.

FCJS-ECO
Individual
Fixture Control

Fixture Will be Shipped LUTRON VIVE Enabled with LUTRON FCJS-ECO EcoSystem Control Module Control Module Installed on the Fixture. Fixtures will be compatible with Lutron FC-SENSOR Occupancy/Daylight Sensor or FC-VSENSOR Vacancy/Daylight Sensor which can be Added in the Field for Remote Mounting. Fixture May be Controlled with any Vive control systems. Fixtures must be ordered with a Lutron Driver.

Controls Provided by Lutron

Lutron
App

Vive Wireless Hub

DayLight
Sensor

Ceiling Mount
Occupancy Sensor

Ceiling Mount
Occupancy/Daylight
Sensor

Wall Mount
Occupancy Sensor

Wall Mount
Switch

Pico
Remote

ESSENTIALS SERIES 4.0

LED High Bay Fixtures

Project Name	
Date	
Cat. Number	
Type	

Essentials Series 4.0 provides the highest quality, reliability and performance with extraordinary lumen maintenance and efficacy, delivering superior ROI for your application.

Designed with best-in-class thermal management to perform at ambient temperatures up to 65°C.

APPLICATIONS: Industrial and Commercial Facilities, Warehouses, Manufacturing, Parking Garages, Distribution Centers, Hangars and Indoor Sports.

5 YEAR LUMEN MAINTENANCE WARRANTY

- MULTIPLE PATENTS PENDING -

FEATURES & SPECIFICATIONS

- **Environment:** Dry/Damp, for interior applications (IP4X). Dust rating and Wet Location available. Impact protection (IK08).[20]
- **Ambient Range Operation:** -40°C up to 65°C* (-40°F up to 149°F*). *depending on product line[1].
- **Heat Sinks:** Extruded aluminum heat sinks provide optimal thermal management, decreasing LED junction temperature and ensuring long life and high efficacy.
- **Power Supply Access:** Wireway cover is captured and hinged, opening over 120° for hands-free, easy access and quick wiring. Center hole accepting 3/4" stem and also 1/2" KO near top end of wire way.
- **Mounting:** Fixture is cable ready (CRM) and has a center opening to accept a 3/4" stem mount, cable (CRM), HOOK or surface mount options (with optional MBR). MBR reduces ambient range by 5°C when mounted flush to junction box.
- **Lenses:** UV stable polycarbonate clear and aisle or acrylic (PMMA) frosted available.
- **CCT:** 3500K, 4000K and 5000K standard, other CCT available (extended lead time).[2]
- **Wire Guards:** Optional factory-installed wire guards for the fixture and OCC sensor are available.
- **Warranty:** 5-year standard, up to 10-year optional.
- **Rotatable LED Modules:** Field adjustable rotating modules. Easily adjusted outer modules with stops at 45°, 90° and 135°. Factory set at 0°. Allows for customizing light pattern to suit individual situations.[3,15]
- **Bulk Packaging:** All fixtures come in eco-friendly bulk packaging. Individual boxes are also available.

POWER & CONTROL

- **Power Input:** 120-277V or 347-480 (50/60Hz), Typical, depending on model.
- **Dimming:** 0-10V standard. Capable of dimming down to 10%.
- **Power Factor:** Greater than 0.9 (0.96–0.99 typical).
- **Total Harmonic Distortion:** Less than 20%, 10% typical.
- **Occupancy Sensors:** Optional - factory installed photocell sensors.
- **Emergency Battery Backup (EMB and EMB2):** EMB initial lumen output is ~2200 lumens, thereafter EMB produces ~2000 lumens for a minimum of 90 minutes. EMB2 Initial lumen output is ~3600, thereafter EMB2 produces ~2200 lumens for a minimum of 90 minutes. EMB has 16 watts initial output, EMB2 has 20 watts initial output. Available in LV and HV (EMB only)[1,8,10,15,16,18,25]
- **Surge Protection:** Standard is 6kV for drivers. Additional surge protection is available. All HV orders will have SRG automatically added.
- **Driver Quick Disconnect:** A Driver Quick Disconnect feature is available as an additional option.

LISTINGS & CERTIFICATIONS

- ETL listed (UL 1598) - RoHS Compliant
- DesignLights™ Consortium Premium
- EMI: Title 47 CFR 15 Class A and ICES-005 - CSA 22.2

TECHNICAL SPECIFICATIONS

PERFORMANCE LINE: Highest efficacy and longest life. Up to 65°C (149°F)

Lumen Output[5]	Efficacy	Watts	Frame[6]	Part Number
8291	165	50	2MS	ES40P-A1-08K-2MS
13438	167	81	4MS or 2M	ES40P-A1-13K-4MS (2M)
15544	165	94	4MS or 2M	ES40P-A1-15K-4MS (2M)
17818	164	109	4MS or 2M	ES40P-A1-17K-4MS (2M)
21743	168	129	6MS	ES40P-A1-21K-6MS
24874	167	149	6MS	ES40P-A1-24K-6MS
31088	167	186	4M	ES40P-A1-31K-4M
36044	166	217	4M	ES40P-A1-36K-4M
43486	168	258	6M	ES40P-A1-43K-6M
49749	167	298	6M	ES40P-A1-49K-6M
58933	165	358	6M	ES40P-A1-58K-6M

STANDARD LINE: High efficacy and long life. Up to 55°C (131°F)

Lumen Output[5]	Efficacy	Watts	Frame[6]	Part Number
6453	159	41	2MS	ES40S-A1-06K-2MS
9822	158	62	2MS	ES40S-A1-09K-2MS
12280	152	81	2MS	ES40S-A1-12K-2MS
17295	142	122	4MS or 2M	ES40S-A1-17K-4MS (2M)
20646	161	128	4MS or 2M	ES40S-A1-20K-4MS (2M)
23789	157	151	4MS or 2M	ES40S-A1-23K-4MS (2M)
30969	163	190	6MS	ES40S-A1-30K-6MS
35394	157	227	6MS	ES40S-A1-36K-6MS
43277	160	271	4M	ES40S-A1-43K-4M
49121	156	315	4M	ES40S-A1-49K-4M
73681	159	465	6M	ES40S-A1-73K-6M

VALUE LINE: Lowest cost per lumen. Up to 45°C (113°F)

Lumen Output[5]	Efficacy	Watts	Frame[6]	Part Number
6135	151	41	2MS	ES40V-A1-06K-2MS[24]
13699	150	92	2MS	ES40V-A1-13K-2MS
15378	147	105	4MS or 2M	ES40V-A1-15K-4MS (2M)
27398	151	181	4MS or 2M	ES40V-A1-27K-4MS (2M)
41097	151	271	6MS	ES40V-A1-41K-6MS
54796	154	356	4M	ES40V-A1-54K-4M
70787	157	455	6M	ES40V-A1-70K-6M

2M model available as a variation of 4MS. Consult factory.

[4] LM-79, LM 80 tests and reports are performed in accordance to IESNA standards, per TM-21. Lumen maintenance in hours (L70 via TM-21) based on 24/7 operation. [5] Typical (±10%) at 277V (LV), 25°C, 4000K/5000K, Clear Lens, CRI 80+. Lumen Multipliers: 3500K = 0.93 ; Frosted Lens = 0.98 ; Aisle Lens = 0.96

LUMEN MAINTENANCE[4]

PROJECTED L70 VIA TM-21 (24/7 OPERATION)

25°C Ambient Temp.	65°C Ambient Temp.[1]
309,000 hours	194,000 hours

Ambient	Year 1	Year 5	Year 10
25°C	99.66%	95.60%	90.76%
45°C	99.51%	94.55%	88.68%
55°C	99.34%	93.81%	87.34%
65°C	99.12%	93.00%	85.88%

Ambient	25°C	35°C	45°C	55°C	65°C
Lumen Multiplier	1.00	0.99	0.98[4]	0.98	0.97

PROJECTED L70 VIA TM-21 (24/7 OPERATION)

25°C Ambient Temp.	55°C Ambient Temp.[1]
256,000 hours	184,000 hours

Ambient	Year 1	Year 5	Year 10
25°C	99.60%	94.99%	89.53%
45°C	99.29%	93.63%	87.01%
55°C	99.09%	92.82%	85.55%

Ambient	25°C	35°C	45°C	55°C	65°C
Lumen Multiplier	1.00	0.98	0.97	0.97	X

PROJECTED L70 VIA TM-21 (24/7 OPERATION)

25°C Ambient Temp.	45°C Ambient Temp.[1]
238,000 hours	191,000 hours

Ambient	Year 1	Year 5	Year 10
25°C	99.52%	94.66%	88.92%
45°C	99.19%	93.22%	86.27%

Ambient	25°C	35°C	45°C	55°C	65°C
Lumen Multiplier	1.00	0.98	0.97	X	X

ORDERING EXAMPLES

Base Fixture: ES40P-A1-08K-2MS-50-80-CL-LV-CRM-10V

Base Fixture with Options: ES40P-A1-08K-2MS-50-80-CL-LV-CRM-OCCDIM20-CW-WET-10V

DLC Number: ES40P-A1-08K-2MS-50-80-CL-LV-(xxx)-10V

SELECT ONE

Series-Compliance-Lumens-Frame

ES40S-A1-06K-2MS[7]	ES40V-A1-15K-4MS[7]	ES40S-A1-30K-6MS[7]	ES40S-A1-49K-4M
ES40V-A1-06K-2MS[7,24]	ES40P-A1-17K-4MS[6,7]	ES40P-A1-31K-4M[7]	ES40V-A1-54K-4M[7,21]
ES40P-A1-08K-2MS[7]	ES40S-A1-17K-4MS[6,7]	ES40P-A1-36K-4M	ES40P-A1-58K-6M[21]
ES40S-A1-09K-2MS[7]	ES40S-A1-20K-4MS[6,7]	ES40S-A1-36K-6MS	ES40V-A1-70K-6M[21]
ES40S-A1-12K-2MS[7]	ES40P-A1-21K-6MS[7]	ES40V-A1-41K-6MS[1,8,20,21]	ES40S-A1-73K-6M[7,21]
ES40P-A1-13K-4MS[6,7]	ES40S-A1-23K-4MS[6,7]	ES40P-A1-43K-6M	
ES40V-A1-13K-2MS[7]	ES40P-A1-24K-6MS[7]	ES40S-A1-43K-4M	
ES40P-A1-15K-4MS[6,7]	ES40V-A1-27K-4MS[6,7]	ES40P-A1-49K-6M	

SELECT ONE

Color Temp

35[2]
3500K

40
4000K

50
5000K

Other CCT available upon request

SELECT ONE

CRI

80+
(Standard)

Other CRI available upon request

SELECT ONE

Lens

CL
Clear Lens, Wide Distribution

FR
Frosted Lens, Wide Distribution

AL
Aisle Distribution

SELECT ONE

Voltage

LV
120-277V

HV[27]
347-480V

SELECT ONE

Mounting

CRM[9]
Cable-ready (standard) for suspension mounting or 3/4" stem mount

MBR[10]
Factory installed mounting box and bracket for surface mount applications - adds 1 1/8" to fixture height

HOOK[10]
Field installed mounting kit, includes hook and one pair of leveling cables for hook/loop applications

Plate and **Hanger** mount also available, sold and packaged separately, see Accessories, order as **CRM**.

Other mounting options available, contact factory

SELECT ONE IF APPLICABLE, IF NONE, LEAVE BLANK AND MOVE TO CORD & PLUG

Occupancy Sensors[10] – No OCC sensor (Standard)

OCC8[10,26]
WattStopper OCC Sensor, on/off, w/ photocell, 8' mounting height

OCCDIM8[10,11,26]
WattStopper OCC Sensor, dimmable, w/ photocell, 8' mounting height

MOCCDIM8[10,12,26]
WattStopper OCC Sensor, manual set and photocell, dimmable, 8' mounting height

OCC20[10,26]
WattStopper OCC Sensor, on/off, w/ photocell, 20' mounting height

TOCC20[10,12,13]
IR-TEC OCC Sensor, on/off, w/ photocell, 20' mounting height

OCCDIM20[10,11,26]
WattStopper OCC Sensor, dimmable, w/ photocell, 20' mounting height

MOCCDIM20[10,12,26]
WattStopper OCC Sensor, manual set and photocell, dimmable, 20' mounting height

OCC40[10,26]
WattStopper OCC Sensor, on/off, w/ photocell, 40' mounting height

TOCC40[10,12,13]
IR-TEC OCC Sensor, on/off, w/ photocell, 40' mounting height

OCCDIM40[10,11,26]
WattStopper OCC Sensor, dimmable, w/ photocell, 40' mounting height

MOCCDIM40[10,12,26]
WattStopper OCC Sensor, manual set and photocell, dimmable, 40' mounting height

Other control options available, contact factory

SELECT ONE IF APPLICABLE, IF NONE, LEAVE BLANK, MOVE TO OPTION

Cord & Plug – No cord/plug (Standard) [10,14]

6' 18AWG CORD, WHITE WITH THE FOLLOWING-

CW[10,14]
Cord, 15A, 3-wire, no plug

DW[10,14]
Dimming cord, 15A, 5-wire, no plug

C515[10,14]
Cord, 15A, straight plug 120V (5–15P)

CL515[10,14]
Cord, 15A, locking plug 120V (L5–15P)

CL715[10,14]
Cord, 15A, locking plug 277V (L7–15P)

CL720[10,14]
Cord, 20A, locking plug 277V (L7–20P)

CL2420[10,14]
Cord, 20A, locking plug 347V (L24–20P)

CL820[10,14]
Cord, 20A, locking plug 480V (L8–20P)

CACS[10,16,22]
6' SO Cord whip, ACS Locking System, 277/480V, 2-wire w/ ground

CACSMC[10,16,22]
6' MC Cable, ACS Locking System, 277/480V, 2-wire w/ ground

10' 18AWG CORD, WHITE WITH THE FOLLOWING-

10CW[10,14]
Cord, 15A, 3-wire, no plug

15' 18AWG CORD, WHITE WITH THE FOLLOWING-

15CW[10,14]
Cord, 15A, 3-wire, no plug

15DW[10,14]
Dimming cord, 15A, 5-wire, no plug

15C515[10,14]
Cord, 15A, straight plug 120V (5–15P)

15CL515[10,14]
Cord, 15A, locking plug 120V (L5–15P)

15CL715[10,14]
Cord, 15A, locking plug 277V (L7–15P)

15CL720[10,14]
Cord, 20A, locking plug 277V (L7–20P)

15CL2420[10,14]
Cord, 20A, locking plug 347V (L24–20P)

15CL820[10,14]
Cord, 20A, locking plug 480V (L8–20P)

Other cord options available, contact factory

SELECT AS MANY AS APPLICABLE, SEPARATE EACH WITH "-". IF NONE, LEAVE BLANK, MOVE TO DIMMING

Option [10]

EMB[1,8,10,15,16,18,25]
Emergency battery back-up. Adds 1.25" to fixture height

EMB2[1,8,10,15,16,18,25]
High lumen emergency battery back-up. LV Only. Adds 1.25" to fixture height

QDC[10,15]
Driver Quick Disconnect

SRGOFF[10,16,20,26]
Fixture installed 20kA Surge Suppression Device, Fails to OFF

SRG[10,15,26]
Fixture installed 10kA Surge Protector fails to ON

BOX[10]
Individual box packaging available

CTRWT[7,10]
Counter Balance Weight for MBR and stem mounting (certain fixtures only, see notes for applicable models, contact factory)

CTRL[8,10,12,15,16,26]
Fixture installed EnOcean Control module. 120-277V Wire-in Relay, 16A, 0-10V

CTRLR[10,12,15,16,26]
Control Ready 5-wire harness (factory installed)

WG[10]
Fixture Wire Guard

CTOPEND[8,10,13]
Cord mounted on top edge of wireway

WET[3,10,15,16]
Wet location rated. Only available with no cord or CW or DW cord option.

DUST[10]
Dust resistant

INDR[1,3,10,15]
LED modules factory inverted for Indirect lighting

GTD[10,16,21]
Generator transfer device

10V

Dimming

10V
0–10V Interface (Standard)

When submitting for utility incentives and rebates, please use catalog numbers. When ordering OPTIONS, separate each option with a "-". Catalog number always ends with dimming selection "10V"

DIMENSIONS & DRAWINGS

See End Note #19.

Model	Length (in)	Width (in)	Height (in)	Weight (lb)
2MS	23.1	8.28	2.1	~8
4MS	23.1	11.2	2.1	~10
6MS	23.1	14.1	2.1	~14
2M*	43.72	8.28	2.1	~16
4M	43.72	11.2	2.1	~18
6M	43.72	14.1	2.1	~20.6

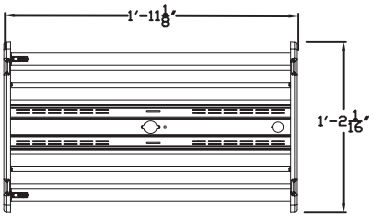
***2M available as a variation of 4MS.** Consult factory.

MBR and EMB mounting options adds 1 ⅛" to fixture height.

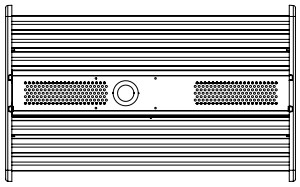
MBR on MS (short) fixtures with EMB adds 1 ¼" to fixture height to fixture height.

Weights are approximate and vary by model, if weight is a concern, please contact factory.

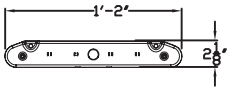
Bottom View



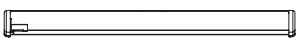
Cable Ready Mount (CRM)



TOP VIEW

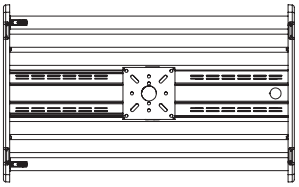


END VIEW

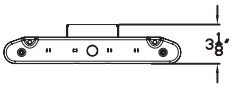


SIDE VIEW

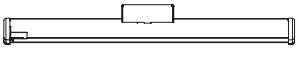
Fixture Mounting Box (MBR)



TOP VIEW

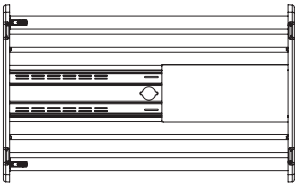


END VIEW

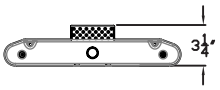


SIDE VIEW

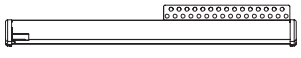
Fixture Mounting Box (EMB)



TOP VIEW



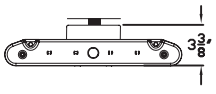
END VIEW



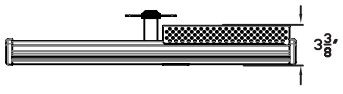
SIDE VIEW

Surface Mount Option

(when ordering **EMB with MBR**)



END VIEW



SIDE VIEW

RL841

8" LED RETROFIT BAFFLE LIGHTING MODULE WITH JUNCTION BOX

ENERGY STAR PENDING

FOR WET LOCATION

CRI	90+
COLOR QUALITY	3-Step MacAdam Ellipses
LUMEN OUTPUT	2500 Lumens
LUMEN PER WATT	Up to 80
CCT	35K, 40K
WARRANTY	5 Years

CERTIFICATIONS
- RoHS
- IECC
- New York state
- Wet Location
- California Title 24
- Washington state
- LM79/LM80

UNIQUELY ENGINEERED FOR NEW AND EXISTING CONSTRUCTION

The RL841 is the newest, most efficient, and advanced LED retrofit modules from ELITE Lighting. It's unique design delivers color quality above a 90 CRI rating. The color matching has never been so close, with a binning as low as 3 MacAdams ellipses. The RL841 LED retrofits meet all new mandatory California Title 24 requirements.

FEATURES

- Over 2500 usable lumens are directed from the luminaire to the work surface
- Greater light output than a 26W CFL or a 65W BR30 while consuming less than 25W of power
- Rated at 90+ CRI to meet California Title-24 strict compliance standards
- Life tested to ensure light output up to 50,000 hours of operation to L70
- High performance optic hides LED chip image but still delivers an even beam of light
- Elite's highly selective LED chips produce zero ultraviolet and virtually no infrared light
- Tested to LM-79 and LM-80 standards

INPUT VOLT.	INPUT FREQ.	THD	POWER FACTOR	INPUT POWER	LUMENS
120	50/60Hz	<20%	>0.9	25W(+/-5%)	2500

DURABILITY

Our die-cast system pulls the heat from the LED chip, allowing the continued cool operation for years. Our LED driver is rated for 50 to 60 Hz at 120V input, and produces less than 20% THD, has a power factor between 0.90 and 1.00 and is thermal protected for additional safety.

DIMMABLE

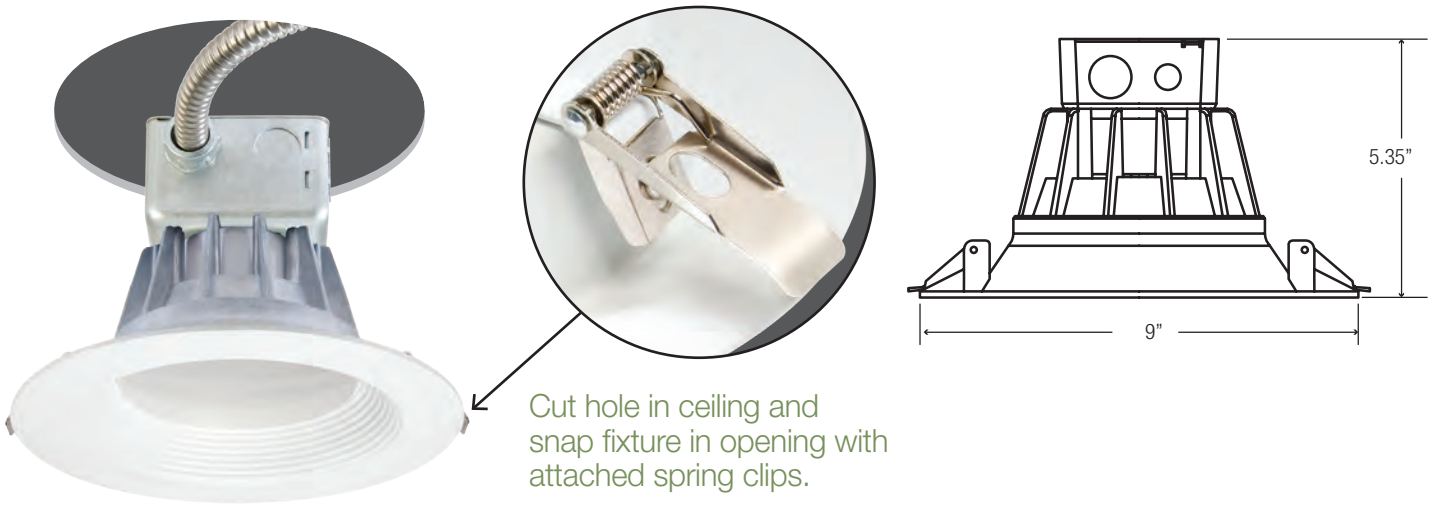
The Elite LED Module is dimmable down to 10% of initial light output with compatible dimmers. Consult factory for complete list of compatible dimming systems.

OUR WORD

The Elite LED lighting system carries a five-year carefree warranty for parts and components. (Labor not included)

RL841

8” LED RETROFIT BAFFLE LIGHTING MODULE WITH JUNCTION BOX



Example: **RL841-2500L-DIM10-MVOLT-35K-90-W-WH**

TYPE	2500L SERIES	CCT	CRI	FINISH
RL841 (Baffle)	❑ 2500L-DIM10-MVOLT	❑ 35K ❑ 40K	❑ 90+	❑ W-WH

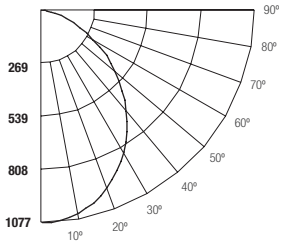
LED

8”

RL841-2500L-DIM10-MVOLT TEST NO.: **EL-113716**

INPUT WATTS: **31.2** LUMENS: **2414** CRI: **90+** EFFICACY: **77** CCT: **3000K** SPACING CRITERIA: **1.22**

Candle Power Distribution (Candelas)



Cone of Light		
4.0	67.3	8.8’
8.0	16.8	17.5’
12.0	7.48	26.4’
16.0	4.21	35.3’
20.0	2.69	44.1’
Distance to Plane	Initial Footcandle at Nadir	Beam diameter

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	388.89	16.10	16.10
0-30	813.42	33.70	33.70
0-40	1301.69	53.90	53.90
0-60	2104.7	87.20	87.20
0-80	2390.77	99.10	99.00
0-90	2414.49	100.00	100.00

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	27001	27023	26973
55	20965	21625	23121
65	14321	16022	17110
75	7835	8750	12266
85	5150	8111	12540

Lumens Per Zone

Zone	Lumens
0-10	101.60
10-20	287.29
20-30	424.54
30-40	488.26
40-50	456.45
50-60	346.56
60-70	203.62
70-80	82.45
80-90	23.72

Candela Tabulation

	0
0	1077.37
5	1072.02
15	1023.79
25	925.58
35	794.80
45	607.40
55	382.56
65	192.54
75	64.51
85	14.28
90	0.86

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

	RC	80%			70%				50%			30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
ROOM CAVITY RATIO	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
	1	110	106	102	99	108	104	100	97	100	97	94	96	94	92	92	90	89	87
	2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
	3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64
	4	86	75	67	61	84	74	66	60	71	65	60	69	63	59	67	62	58	56
	5	79	68	59	53	77	66	59	53	64	58	52	62	56	52	61	55	51	49
	6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44
	7	69	56	48	42	67	55	47	42	54	46	41	52	46	41	51	45	41	39
	8	64	51	43	38	62	50	43	37	49	42	37	48	42	37	47	41	37	35
	9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
	10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	35	31	29

***RC** - Ceiling Cavity Reflectance* ***RW** - Wall Reflectance*

8 INCH LED RETROFIT MODULE

LEDBIAX® LINE VOLTAGE | BIAX STYLE LAMP

Easy line voltage (120-277V AC) LED replacement for BIAX™ style fluorescent lamps (4 pin-2G11). Simply remove fluorescent tube and ballast and install LEDBIAX®. Patented fully diffused lens cover for uniform, glare free illumination. Non Dimmable.

PROJECT NAME

PART NUMBER

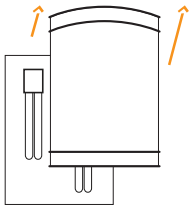
PART NUMBER BUILDER

MANUFACTURER	MODEL NUMBER	LIGHT OUTPUT	COLOR TEMPERATURE	BASE TYPE
RPT	LEDBIAX			2G11
		1500LM (16IN) 2000LM (22IN)	3000K 4000K	

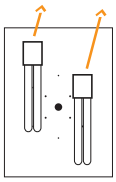
ORDERING EXAMPLE

RPT-LEDBIAX-1500LM-3000K-2G11

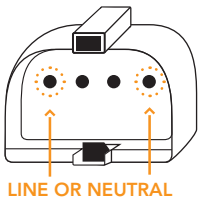
INSTALLATION GUIDE



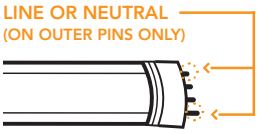
1. Disconnect power at panel & remove fixture lens.



2. Remove existing CFL 2G11 lamp.



3. Remove or bypass the existing ballast. Connect the AC line voltage to the 2G11 socket as shown above.

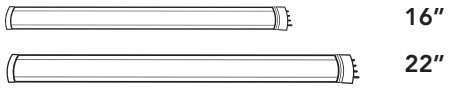


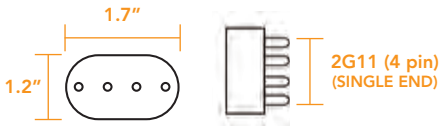
4. Install the LEDBIAX tube into the fixture, place provided warning labels near the appropriate lamp holder. Replace lens.

Simplified instructions. Reference full installation guide for more details. Only qualified personnel should perform installation.

DIMENSIONS

INPUT VOLTAGE	120-277V AC
EFFICACY	>100 lumens/watt
OPERATING TEMP	-30˚C to 45˚C
MAX CASE TEMP	50˚C
POWER FACTOR/THD	>0.90 Power Factor, THD<10%
CRI	83+
WARRANTY	5 years
CERTIFICATIONS	
PERFORMANCE LISTINGS	LM79/LM80 Available





May be protected under the following US patents
US 8,106569 | US 8,882,298 | Additional patents pending.

LEDBIAX® LINE VOLTAGE | BIAX STYLE LAMP

ORDERING GUIDE

QUICK SHIP	DLC E*	PART #	LUMEN OUTPUT (LM)	WATTAGE (W)	CCT (K)	VOLTAGE RANGE (V AC)	WARRANTY (YRS)	TRADITIONAL EQUIVALENT	WATTS SAVED (W)
		RPT-LEDBIAX-1500LM-3000K	1500	15	3000	120-277	5	36W 2G11 FL	21
		RPT-LEDBIAX-1500LM-4000K	1500	15	4000	120-277	5	36W 2G11 FL	21
		RPT-LEDBIAX-2000LM-3000K	2000	20	3000	120-277	5	40W 2G11 FL	20
		RPT-LEDBIAX-2000LM-4000K	2000	20	4000	120-277	5	40W 2G11 FL	20

CONSTRUCTION AND APPLICATION

The "BIAX to LED" LEDBIAX® lamps by RemPhos Technologies offers an economical alternative to upgrade to long lasting LED lighting, while retaining the original fixture. The LED BIAX® series replaces fluorescent 16in. and 22in. lamps. Light is emitted 180 degrees so that the original fixture will be illuminated perfectly and uniformly. Extremely efficient at >100LPW, the LEDBIAX® runs off of a built in driver operating at 120-277VAC through its 2G11 pin base. UL Listed. Multiple lumen output and CCTs are available.

RemPhos Technologies LLC • p 877.997.3674 • www.remphos.com
90 Holten Street • Danvers, MA USA • sales@remphos.com

LEDBARKIT-INTERNAL DRIVER (LBI) THE LINEAR TRANSFORMER

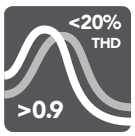
WARRANTY

VOLTAGE

DIMMING

EFFICACY (LIGHT ENGINE)

OPERATING TEMP



PWR FACTOR/THD

CRI

OPTIONAL EMG BATTERY BACKUP


OPTIONAL MOTION SENSOR

one light – unlimited possibilities

available in both BASE & PRO

	PRO	BASE
DIMMABLE	✓ 0-10V	—
CONTROL POWER	✓ 12V	—
FLEX COLOR	✓	—
FLEX WATT	✓	—
WARRANTY	10YR	5YR
L70	>100,000 HRS	50,000 HRS

DEFAULT CONFIGURATIONS

PART #	UPC	DESCRIPTION	WATTAGE	LUMENS	LPW	CCT (K)	DLC PRODUCT CODE
RP-LBI-G1-2F-6W-40K-WC	844006023867	2FT PRO INTERNAL DRIVE LIGHT BAR	**6**/9/12	780-1560	130-135	3500/**4000**/5000	PFLO5RPC
RP-LBI-G1-3F-10W-40K-WC	844006023959	3FT PRO INTERNAL DRIVE LIGHT BAR	**10**/12/15	1400-2100	140-145	3500/**4000**/5000	PTTC4A0W
RP-LBI-G1-4F-15W-40K-WC	844006024079	4FT PRO INTERNAL DRIVE LIGHT BAR	10/**15**/25	1370-3425	137-150	3500/**4000**/5000	PCW0MQPB
RP-LBI-G1-4F-15W-40K-B	844006024215	4FT BASE INTERNAL DRIVE LIGHT BAR	**15**	2325	155	**4000**	

Default settings are above. See pages 7 and 8 for additional styles, lumen packages, color temperatures and options.

DLC PREMIUM · RoHS Compliant · ETL LISTED UL 1598 LISTED FIXTURE · FC CLASS B · BAA SECTION 1605 COMPLIANT OPTIONAL

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBARKIT-INTERNAL DRIVER (LBI) THE LINEAR TRANSFORMER

Usage & Applications

One solution. ETL and DLC listed as both a retrofit kit and a fixture.

Retrofit Kit

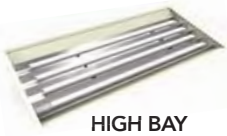
Using the fast install magnetic brackets, light bars fit between any T5, T8 or T12 socketed fixture including

TROFFERS

Example 2x2 and 2x4 retrofitted with 3 light bars.

VAPOR TIGHT

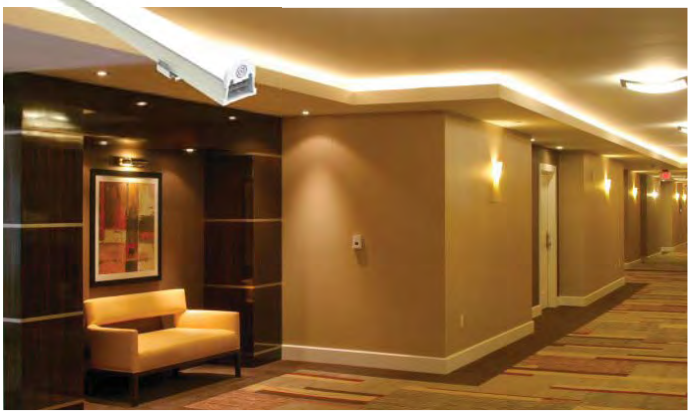
WRAP



HIGH BAY

CONTINUOUS RUNS

UTILITY STRIP



Coming Soon!

RETROFIT MOUNTING KITS

Mount light bar to a Retrofit Mounting Kit for a faster, cleaner install.
- contact us for details.

Fixture

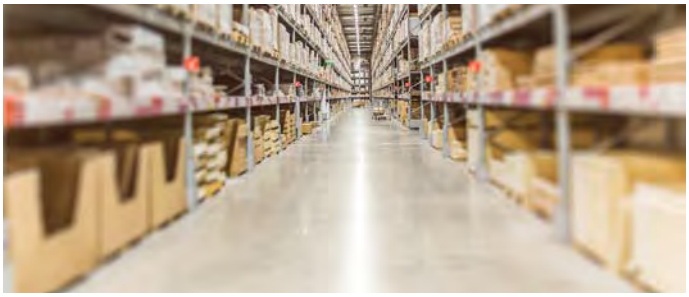
ETL and DLC listed as a fixture under the following categories

STAIRWELL FIXTURE

LINEAR AMBIENT FIXTURE

HIGH BAY FIXTURE (LOW CEILING HEIGHTS)

HIGH BAY FIXTURE (HIGH CEILING HEIGHTS)



Coming Soon!

FIXTURE HOUSING KITS

Mount light bar to a Fixture Housing Kit for a faster, cleaner install.
- contact us for details.

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

The Linear Transformer

With up to 155 lumens per watt, and up to 25 years of virtually maintenance free operation, learn why smart decision makers use the The Linear Transformer when upgrading to LED.

Perfect replacement for

- Linear and general purpose
- Strips & Wraps
- Troffers
- Vapor Tights
- Low bay and High bay
- Coves and Soffits
- Stairwells

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

LEDBarKit-Internal Driver (LBI)

FEATURES

The Linear Transformer is available in both BASE and PRO versions – choose which is best for you!

PRO

9 SKUs in 1 WITH FLEXWATT™ & FLEXCOLOR™ TECHNOLOGY

flexWATT

2FT	6W	9W	12W
3FT	10W	12W	15W
4FT	10W	15W	25W

- Eliminate ordering and stocking multiple wattages and color temperatures. Product offers 9 SKUs in 1 unit which can easily be configured to 3 different wattage packages and 3 different CCTs.

flexCOLOR

- 3500°K NEUTRAL WHITE
- 4000°K NEUTRAL WHITE
- 5000°K COOL WHITE

- Product ships at a default color temp (K) and wattage setting (install as is, or tailor the settings to fit your needs).
- Save on labor costs by having us factory pre-set the wattage and color temperature.

FLEXCONTROL™ TECHNOLOGY

- Order control ready or basic control (integrated high/low and daylight sensor) or advanced controls (such as LG, Philips Easy Sense, Avion Bluetooth or Lutron Vive).
- Optional sensors are directly linkable to the light bars.
- Our basic motion/daylight control (OC2 ordering code) is adjustable via remote control for (1) sensitivity (2)duration of time at high light level before dimming to low (2) duration of time at low light level before turning off (3) ramping up and down light levels based on daylight and (4) the dimmed light level %.

SUITABLE FOR DRY & DAMP LOCATIONS

PASS-THROUGH 0-10V DIMMING & AUXILIARY 12V OUTPUT

- Allows all light bars to be dimmed together as a group.

ADAPTABLE MOUNTING

- Various mounting clip options with integrated rare-earth magnets for easy placement in all style fixtures.
- High Bay pendant chain options available.

CONNECT UP TO 40 LIGHT BARS ON ONE INCOMING POWER CABLE

130-150 LUMENS PER WATT EFFICACY

10 YEAR WARRANTY, L70 >100,000HRS

OPTIONAL EMERGENCY BATTERY BACKUP

OPTIONAL BAA SECTION 1605

BASE

SUITABLE FOR DRY & DAMP LOCATIONS

ADAPTABLE MOUNTING

- Various mounting clip options with integrated rare-earth magnets for easy placement in all style fixtures.
- High Bay pendant chain options for high bay installation.

CONNECT UP TO 40 LIGHT BARS ON ONE INCOMING POWER CABLE

155 LUMENS PER WATT EFFICACY

5 YEAR WARRANTY, L70 >50,000HRS

OPTIONAL EMERGENCY BATTERY BACKUP

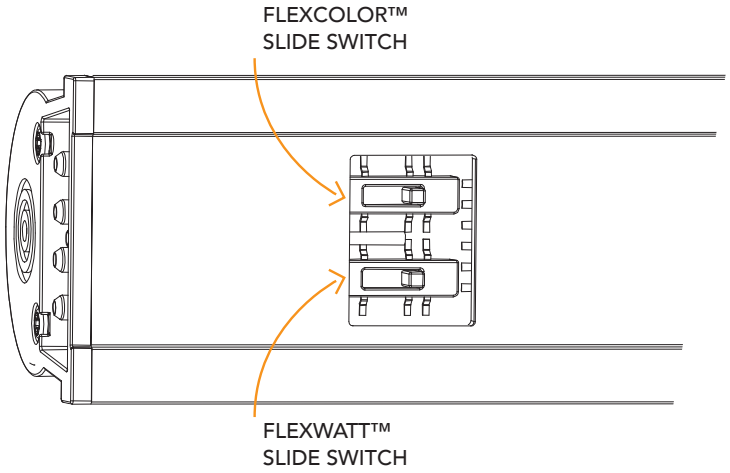
OPTIONAL BAA SECTION 1605

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

LEDBarKit-Internal Driver (LBI)

FLEXWATT + FLEXCOLOR



flexWATT

2FT	6W	9W	12W
3FT	10W	12W	15W
4FT	10W	15W	25W

HOW IT WORKS

Our exclusive LED driver is designed to operate at 90%+ efficiency at each wattage setting. Our competitor's drivers have much lower efficiency (as low as 60%) which results in poor performance and reduced efficacy.

WATTAGE CHOICES

2FT	6W	9W	12W
3FT	10W	12W	15W
4FT	10W	15W	25W

WATTAGE SELECTION

Adjust the 3-position slide switch, no tools required. Can be "locked-out" to prevent field-adjustability, if desired.

flexCOLOR

- 3500°K NEUTRAL WHITE
- 4000°K NEUTRAL WHITE
- 5000°K COOL WHITE

HOW IT WORKS

We select the highest efficacy, multiple color LED diodes from quality suppliers, and mount them on the circuit board. A proprietary LED binning process ensures color consistency between fixtures. The FlexColor technology ensures the desired color is selected, every time.

COLOR CHOICES

FLEXCOLOR SLIDE SWITCH POSITION		
TOP	MIDDLE	BOTTOM
3500K	4000K	5000K

COLOR SELECTION

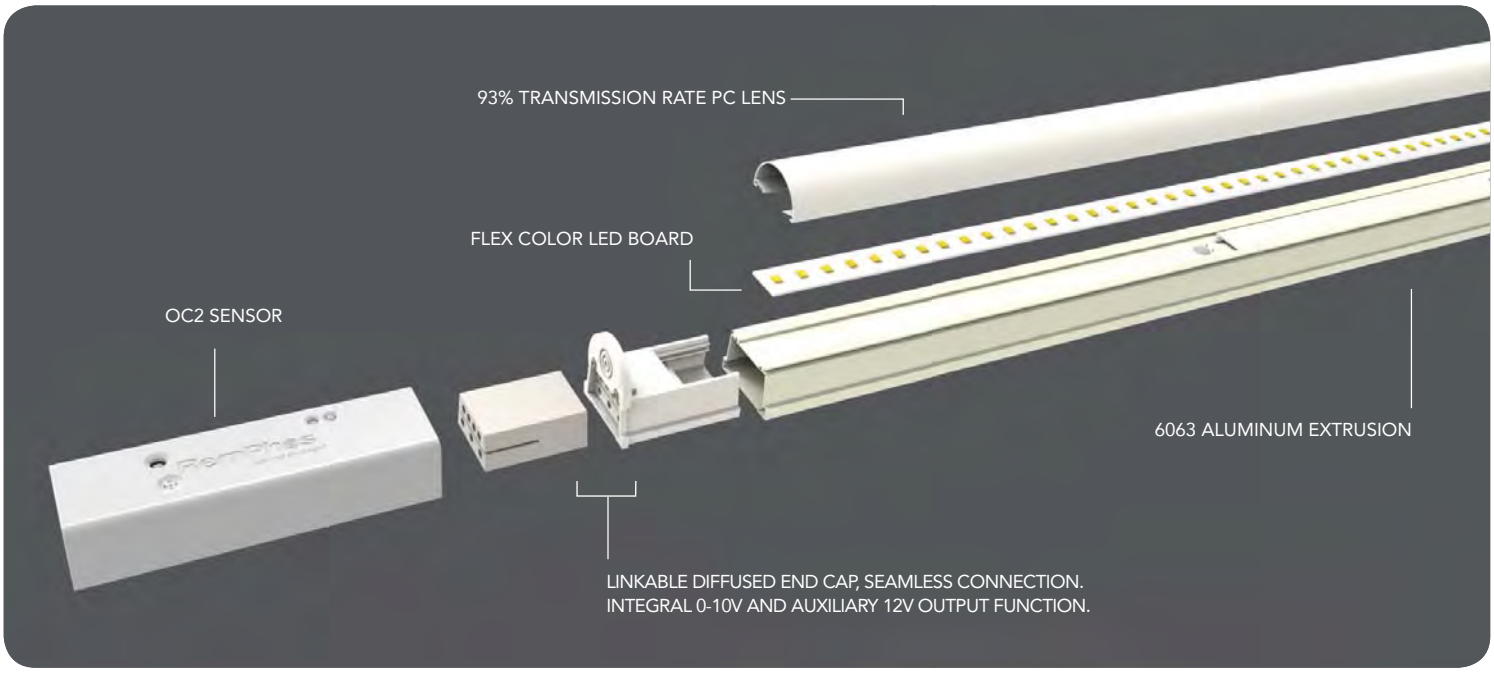
Adjust the 3-position slide switch by hand. Can be "locked-out" to prevent field-adjustability, if desired.

RemPhos by Light Efficient Design
lighting on target

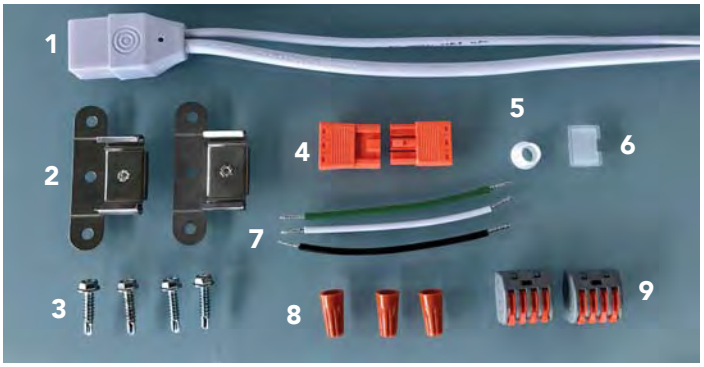
FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

LEDBarKit-Internal Driver (LBI)

EXPLODED CONSTRUCTION VIEW

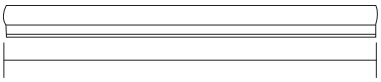


INCLUDED WITH EVERY BAR



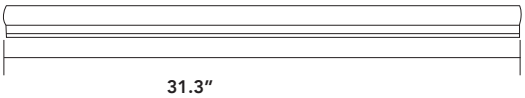
1. Incoming power and control cable
2. (2) Surface mount magnetic clips (with easy bend and break lines)
3. (4) 1/4" hex head - self drilling screws
4. Service disconnect
5. Abrasion protection grommet
6. Flex setting cover
7. Wires for connection between service disconnect and latch connector
8. (3) Wire nuts for low voltage connections (0-10V DIM; 12V Aux power)
9. (2) Latch connectors for parallel wiring (AC power)

DIMENSIONS



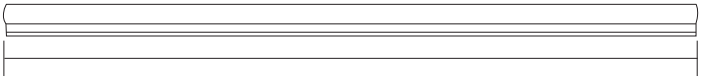
19.3"

RP-LBI-G1-2F-6W-40K-WC



31.3"

RP-LBI-G1-3F-10W-40K-WC



43.3"

RP-LBI-G1-4F-10W-40K-WC | RP-LBI-G1-4F-15W-40K-B

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

LEDBarKit-Internal Driver (LBI)

PRODUCT SELECTION GUIDE

Default lumen package (wattage and CCT) are shown below in bold. There are two ways to achieve a non-default lumen package and/or CCT:
1. You can easily adjust in field via our FlexWatt and FlexColor internal switches. **2**. Have us adjust the FlexWatt and FlexColor at the factory for an additional charge.

		PART #	CCT	Wattage Per Bar	Lumens Per Bar	Total Wattage	Total Lumens	Linear Ambient	High-Bay	Linear Ambient	Troffers
								DLC/QPL (FIXTURE)		DLC/QPL (RETROFIT)	
PRO 1X BAR KITS	2FT	RP-LBI-G1-2F-6W-35K-WC	3500K	6	780	6	780	PFLO5RPC			
		RP-LBI-G1-2F-6W-40K-WC	**4000K**	**6**	**780**	**6**	**780**	**PFLO5RPC**			
		RP-LBI-G1-2F-6W-50K-WC	5000K	6	780	6	780	PFLO5RPC			
		RP-LBI-G1-2F-9W-35K-WC	3500K	9	1170	9	1170	P56G7BMO			
		RP-LBI-G1-2F-9W-40K-WC	4000K	9	1170	9	1170	P56G7BMO			
		RP-LBI-G1-2F-9W-50K-WC	5000K	9	1170	9	1170	P56G7BMO			
		RP-LBI-G1-2F-12W-35K-WC	3500K	12	1560	12	1560	PSZAPJNF			
		RP-LBI-G1-2F-12W-40K-WC	4000K	12	1560	12	1560	PSZAPJNF			
		RP-LBI-G1-2F-12W-50K-WC	5000K	12	1560	12	1560	PSZAPJNF			
	3FT	RP-LBI-G1-3F-10W-35K-WC	3500K	10	1400	10	1400	PTTC4A0W			
		RP-LBI-G1-3F-10W-40K-WC	**4000K**	**10**	**1400**	**10**	**1400**	**PTTC4A0W**			
		RP-LBI-G1-3F-10W-50K-WC	5000K	10	1400	10	1400	PTTC4A0W			
		RP-LBI-G1-3F-12W-35K-WC	3500K	12	1680	12	1680	PO7IL0R7			
		RP-LBI-G1-3F-12W-40K-WC	4000K	12	1680	12	1680	PO7IL0R7			
		RP-LBI-G1-3F-12W-50K-WC	5000K	12	1680	12	1680	PO7IL0R7			
		RP-LBI-G1-3F-15W-35K-WC	3500K	15	2100	15	2100	PFD0B6O2			
		RP-LBI-G1-3F-15W-40K-WC	4000K	15	2100	15	2100	PFD0B6O2			
		RP-LBI-G1-3F-15W-50K-WC	5000K	15	2100	15	2100	PFD0B6O2			
	4FT	RP-LBI-G1-4F-10W-35K-WC	3500K	10	1370	10	1370	P950LG3J			
		RP-LBI-G1-4F-10W-40K-WC	4000K	10	1370	10	1370	P950LG3J			
		RP-LBI-G1-4F-10W-50K-WC	5000K	10	1370	10	1370	P950LG3J			
		RP-LBI-G1-4F-15W-35K-WC	3500K	15	2055	15	2055	PCW0MQPB			
		RP-LBI-G1-4F-15W-40K-WC	**4000K**	**15**	**2055**	**15**	**2055**	**PCW0MQPB**			
		RP-LBI-G1-4F-15W-50K-WC	5000K	15	2055	15	2055	PCW0MQPB			
		RP-LBI-G1-4F-25W-35K-WC	3500K	25	3425	25	3425	PRNWHBGQ			
		RP-LBI-G1-4F-25W-40K-WC	4000K	25	3425	25	3425	PRNWHBGQ			
		RP-LBI-G1-4F-25W-50K-WC	5000K	25	3425	25	3425	PRNWHBGQ			
PRO 2X BAR KITS	2FT	RP-LBI-G1-2F-6W-35K-WC-2X	3500K	6	780	12	1560				
		RP-LBI-G1-2F-6W-40K-WC-2X	**4000K**	**6**	**780**	**12**	**1560**				
		RP-LBI-G1-2F-6W-50K-WC-2X	5000K	6	780	12	1560				
		RP-LBI-G1-2F-9W-35K-WC-2X	3500K	9	1170	18	2340				
		RP-LBI-G1-2F-9W-40K-WC-2X	4000K	9	1170	18	2340				
		RP-LBI-G1-2F-9W-50K-WC-2X	5000K	9	1170	18	2340				
		RP-LBI-G1-2F-12W-35K-WC-2X	3500K	12	1560	24	3120				
		RP-LBI-G1-2F-12W-40K-WC-2X	4000K	12	1560	24	3120				
		RP-LBI-G1-2F-12W-50K-WC-2X	5000K	12	1560	24	3120				
	3FT	RP-LBI-G1-3F-10W-35K-WC-2X	3500K	10	1400	20	2800				
		RP-LBI-G1-3F-10W-40K-WC-2X	**4000K**	**10**	**1400**	**20**	**2800**				
		RP-LBI-G1-3F-10W-50K-WC-2X	5000K	10	1400	20	2800				
		RP-LBI-G1-3F-12W-35K-WC-2X	3500K	12	1680	24	3360				
		RP-LBI-G1-3F-12W-40K-WC-2X	4000K	12	1680	24	3360				
		RP-LBI-G1-3F-12W-50K-WC-2X	5000K	12	1680	24	3360				
		RP-LBI-G1-3F-15W-35K-WC-2X	3500K	15	2100	30	4200				
		RP-LBI-G1-3F-15W-40K-WC-2X	4000K	15	2100	30	4200				
		RP-LBI-G1-3F-15W-50K-WC-2X	5000K	15	2100	30	4200				
	4FT	RP-LBI-G1-4F-10W-35K-WC-2X	3500K	10	1370	20	2740				
		RP-LBI-G1-4F-10W-40K-WC-2X	4000K	10	1370	20	2740				
		RP-LBI-G1-4F-10W-50K-WC-2X	5000K	10	1370	20	2740				
		RP-LBI-G1-4F-15W-35K-WC-2X	3500K	15	2055	30	4110				
		RP-LBI-G1-4F-15W-40K-WC-2X	**4000K**	**15**	**2055**	**30**	**4110**				
		RP-LBI-G1-4F-15W-50K-WC-2X	5000K	15	2055	30	4110				
		RP-LBI-G1-4F-25W-35K-WC-2X	3500K	25	3425	50	6850				
		RP-LBI-G1-4F-25W-40K-WC-2X	4000K	25	3425	50	6850		P4JORD8A		
		RP-LBI-G1-4F-25W-50K-WC-2X	5000K	25	3425	50	6850				

All models on the DLC QPL are premium listed.

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBarKit-Internal Driver (LBI)

PRODUCT SELECTION GUIDE (CONTINUED)

Default lumen package (wattage and CCT) are shown below in bold. There are two ways to achieve a non-default lumen package and/or CCT:
1. You can easily adjust in field via our FlexWatt and FlexColor internal switches. **2**. Have us adjust the FlexWatt and FlexColor at the factory for an additional charge.

		PART #	CCT	Wattage Per Bar	Lumens Per Bar	Total Wattage	Total Lumens	DLC/QPL (FIXTURE) Linear Ambient	DLC/QPL (FIXTURE) High-Bay	DLC/QPL (RETROFIT) Linear Ambient	DLC/QPL (RETROFIT) Troffers
PRO 3X BAR KITS	2FT	RP-LBI-G1-2F-6W-35K-WC-3X	3500K	6	780	18	2340				
		RP-LBI-G1-2F-6W-40K-WC-3X	**4000K**	**6**	**780**	**18**	**2340**				
		RP-LBI-G1-2F-6W-50K-WC-3X	5000K	6	780	18	2340				
		RP-LBI-G1-2F-9W-35K-WC-3X	3500K	9	1170	27	3510				
		RP-LBI-G1-2F-9W-40K-WC-3X	4000K	9	1170	27	3510				
		RP-LBI-G1-2F-9W-50K-WC-3X	5000K	9	1170	27	3510				
		RP-LBI-G1-2F-12W-35K-WC-3X	3500K	12	1560	36	4680				
		RP-LBI-G1-2F-12W-40K-WC-3X	4000K	12	1560	36	4680				
		RP-LBI-G1-2F-12W-50K-WC-3X	5000K	12	1560	36	4680				
	3FT	RP-LBI-G1-3F-10W-35K-WC-3X	3500K	10	1400	30	4200				
		RP-LBI-G1-3F-10W-40K-WC-3X	**4000K**	**10**	**1400**	**30**	**4200**				
		RP-LBI-G1-3F-10W-50K-WC-3X	5000K	10	1400	30	4200				
		RP-LBI-G1-3F-12W-35K-WC-3X	3500K	12	1680	36	5040				
		RP-LBI-G1-3F-12W-40K-WC-3X	4000K	12	1680	36	5040				
		RP-LBI-G1-3F-12W-50K-WC-3X	5000K	12	1680	36	5040				
		RP-LBI-G1-3F-15W-35K-WC-3X	3500K	15	2100	45	6300				
		RP-LBI-G1-3F-15W-40K-WC-3X	4000K	15	2100	45	6300				
		RP-LBI-G1-3F-15W-50K-WC-3X	5000K	15	2100	45	6300				
	4FT	RP-LBI-G1-4F-10W-35K-WC-3X	3500K	10	1370	30	4110				
		RP-LBI-G1-4F-10W-40K-WC-3X	4000K	10	1370	30	4110				
		RP-LBI-G1-4F-10W-50K-WC-3X	5000K	10	1370	30	4110				
		RP-LBI-G1-4F-15W-35K-WC-3X	3500K	15	2055	45	6165				
		RP-LBI-G1-4F-15W-40K-WC-3X	**4000K**	**15**	**2055**	**45**	**6165**				
		RP-LBI-G1-4F-15W-50K-WC-3X	5000K	15	2055	45	6165				
		RP-LBI-G1-4F-25W-35K-WC-3X	3500K	25	3425	75	10275		P0F750MP		
		RP-LBI-G1-4F-25W-40K-WC-3X	4000K	25	3425	75	10275		P0EV8SJB		
		RP-LBI-G1-4F-25W-50K-WC-3X	5000K	25	3425	75	10275		PIPGRRCP		

PRO 4 BAR KITS

Please note we do not sell 4X Bar Kits therefore order as **TWO - 2X BAR KIT** or **FOUR - 1X BAR KIT**

To order for continuous runs, please order "1 Bar Kits" + required accessory connectors (sold separately). Connect up to 40 light bars on one incoming power cable.

All models on the DLC QPL are premium listed.

BASE VERSION (4FT, 1X BAR KIT) - 15W ONLY

PART #	UPC	DESCRIPTION	WATTAGE	LUMENS	LPW	CCT (K)	DLC PRODUCT CODE
RP-LBI-G1-4F-15W-40K-B	844006024215	4FT BASE INTERNAL DRIVE LIGHT BAR	15	2325	155	4000	

STAIRWELL FIXTURE

PART #	UPC	DESCRIPTION	WATTAGE	LUMENS	LPW	CCT (K)	DLC PRODUCT CODE
RP-LBI-G1-2F-12W-40K-W-OC2	844006024505	2FT INTERNAL DRIVE LIGHT BAR STAIRWELL KIT	12	1560	130	4000	P3QQVAJH
RP-LBI-G1-4F-15W-40K-W-OC2	844006024512	4FT INTERNAL DRIVE LIGHT BAR STAIRWELL KIT	15	2055	137	4000	PS1Q17X9

Kit comes with 1X light Bar + OC2 Motion Sensor Kit.

RemPhos by Light Efficient Design
lighting on ta et

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBarKit-Internal Driver (LBI)

APPLICATION TABLE OF CONTENTS

EMERGENCY BATTERY BACKUP (SOLD SEPARATELY)

RP-LBI-EMG1-25W

Output Power
25 Watts

Input Power
8 Watts (max)

Input Voltage
100-277VAC, 50-60Hz

Emergency Operation3
≥90 Minutes

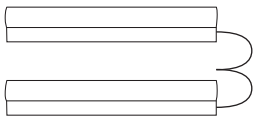
Dimensions
L 17.14" x W 2.13" x H 1.57"

EXAMPLE (2FT)
4X 2FT 6 WATT LIGHT BARS
2X 2FT 12WATT LIGHT BARS

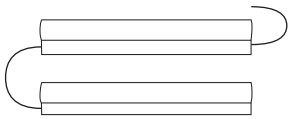
EXAMPLE (4FT)
2X 4FT 10 WATT LIGHT BARS
1X 4FT 25WATT LIGHT BAR

IMPORTANT NOTE ON WIRING METHOD

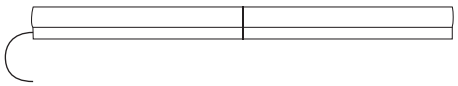
As you will see on the following pages, there are many possible uses for The Linear Transformer. Each light bar comes with its own incoming power cable. If your application calls for multiple light bars in a single fixture, there a 2 possible ways to order and wire (see below).



PARALLEL
This method is the most cost effective. Each light bar comes with its own incoming power cable. Multiple power cables can be grouped together under the ballast cover to make connection to incoming power and controls.



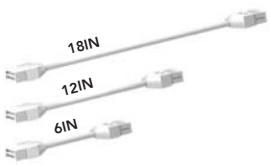
SERIES (WITH LINKING CABLE)
This method is the fastest. The first light bar uses an incoming power cable, additional light bars are linked using "linking cables" which are available in a variety of lengths. Linking cable are sold separately.



SERIES (WITH SEAMLESS CONNECTOR)
This method provides a near seamless appearance between the bars. The first light bar uses an incoming power cable, additional light bars are linked using "seamless connectors" which are sold separately.

LEDBarKit-Internal Driver (LBI)

PARTS & ACCESSORIES



LINKING CABLES

RP-LBI-LC-6IN-DIM-10P
RP-LBI-LC-6IN-NODIM-10P

RP-LBI-LC-12IN-DIM-10P
RP-LBI-LC-12IN-NODIM-10P

RP-LBI-LC-18IN-DIM-10P
RP-LBI-LC-18IN-NODIM-10P

(10 PACK ONLY)

SEAMLESS CONNECTOR

RP-LBI-SSC-DIM-10P
RP-LBI-SSC-NODIM-10P

LINKING CABLES & SEAMLESS CONNECTORS

Use Linking Cables and Seamless Connectors to easily connect the power and control wires from one light bar to another. The **…-DIM** version of the linking cables and seamless connector link all connections (AC power; 12V Aux power; 0-10V DIM signal) from light bar to light bar. Use these items to control all light bars from one sensor or incoming cable connection. The **…-NODIM** version of these items only links the AC power. Use these items to AC power all light bars with a single power feed; but separate control signals into individual groups.

4.7IN SPACER CONNECTOR | RP-LBI-SRC-4.7IN (SINGLE PACK)

Use the 4.7in Spacer Connector to bring the length of the bar system to a standard dimension (24in, 36in, 48in). This is useful when retrofitting linear fixtures of a standard length. It allows for the bar to be centered on each standard-length fixture. Each 4.7in spacer connector comes with (2) Seamless Connector-DIM.

OC2 SENSOR KIT | RP-LBI-OC2 (SINGLE PACK)

Sensor OC2 is a Tri-Level, remote controllable high frequency sensor designed to easily integrate with the light bars. It is totally plug&play! It can dim the light bars down to conserve more energy from both motion and daylight. The OC2 sensor controls the 0-10V DIM signal in both directions from the Sensor unit. Each sensor kit comes with (1) OC2 sensor; (1) surface mount magnetic clip; (2) Seamless Connector-DIM; (1) 12" Linking Cable-DIM. *See RP-LBI-OC2 data sheet for more details.*

SURFACE MOUNT MAGNETIC CLIP | RP-LBI-SMM-10P (10 PACK ONLY)

The Surface Mount Magnetic Clip provides the most universal method for attaching the light bar to a wall, ceiling, or fixture to be retrofitted. The mounting tabs that extend perpendicularly from the light bar can be easily removed by bending and breaking on the pre-scored line. The strong rare-earth magnets are intended to hold light bars in place while installing mechanical fasteners. Not intended for permanent installation with magnets only.
Two of these clips are included in each light bar kit.

SUSPENDED IN-LINE BRACKET | RP-LBI-SIL-10P (10 PACK ONLY)

The Suspended In-Line Bracket is a wide clip that fastens over the junction of 2 light bars to keep them straight in-line and provides mounting points for common suspension methods (air craft cable, drop chain, etc.)

T-BAR CLIP | RP-LBI-T1516-10P (10 PACK ONLY)

The T-Bar Clip is the fastest way to mount a light bar to a T-Bar grid ceiling. Works with standard 15/16" grid only.

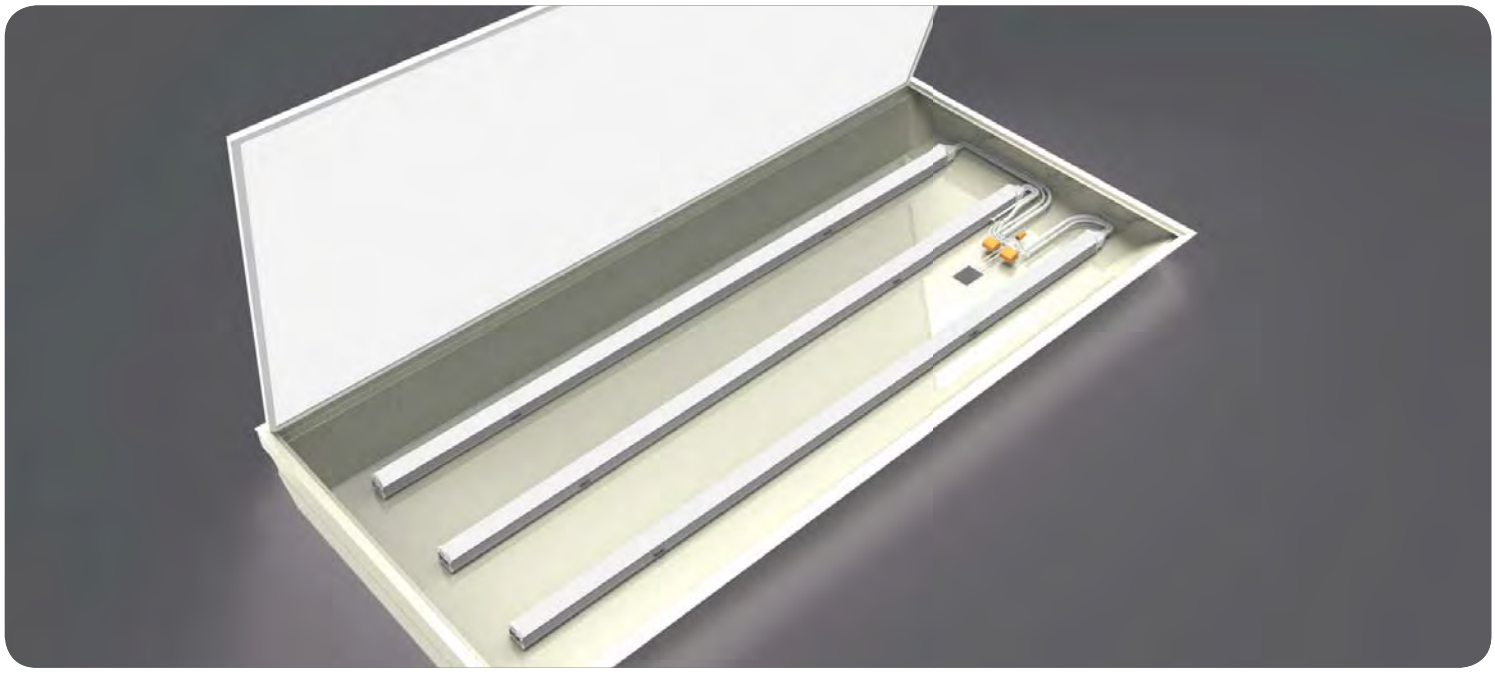
BLADE CLIP | RP-LBI-BLC-10P (10 PACK ONLY)

The Blade Clip is designed to provide a retrofit solution for fixtures that have thin sheet metal or plastic film reflectors commonly found on high bay fixtures. The rotating mounting blade provides a degree of freedom to align the mounting holes on the blade with fastening locations that may not be in-line with the light bar or where the distance between available mounting points is greater than the length of the light bar. It is common to attach the blade to the same point holding the thin reflector to the fixture frame.

RemPhos by Light Efficient Design
lighting on target

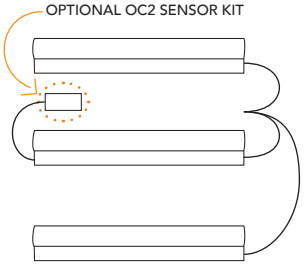
LEDBarKit-Internal Driver (LBI)

RETROFIT TROFFERS*



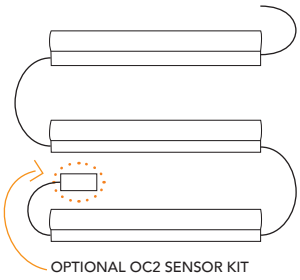
* Example Retrofit. Fixture not included.

RECOMMENDED INSTALLATION



PARALLEL

This method is the most cost effective. Each light bar comes with its own incoming power cable. Multiple incoming power cables are connected together under the ballast cover.

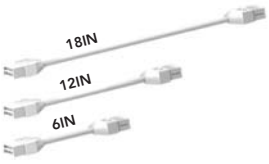


SERIES

This method is the fastest. The first light bar uses an incoming power cable, additional light bars are linked using "linking cables" which are available in a variety of lengths. Linking cables are sold separately.

ACCESSORIES

NO ADDITIONAL ACCESSORIES REQUIRED



LINKING CABLES*

RP-LBI-LC-6IN-DIM
RP-LBI-LC-6IN-NODIM

RP-LBI-LC-12IN-DIM
RP-LBI-LC-12IN-NODIM

RP-LBI-LC-18IN-DIM
RP-LBI-LC-18IN-NODIM

* Choose the appropriate linking cable length based on the dimensions of your fixture.

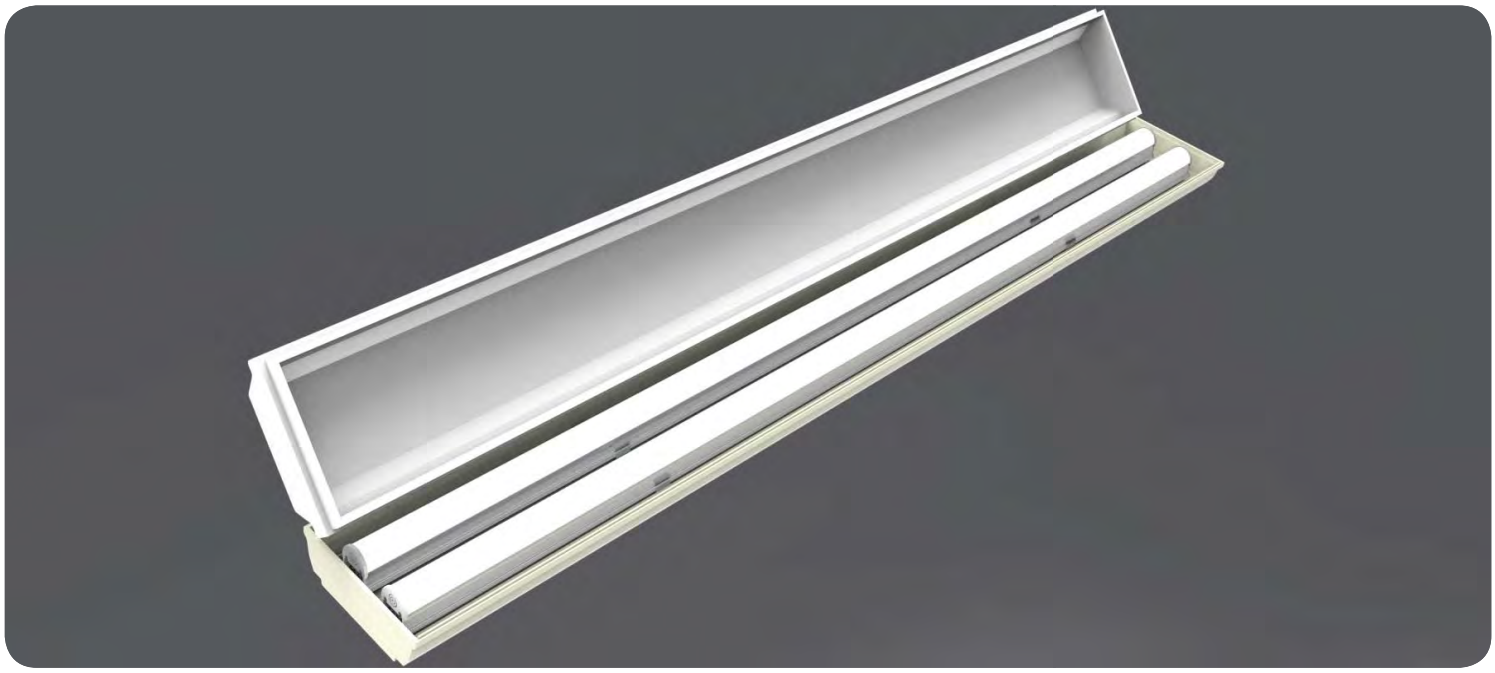
RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

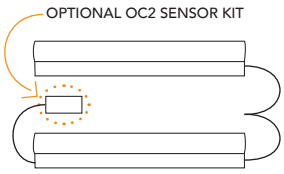
LEDBarKit-Internal Driver (LBI)

RETROFIT LINEAR FIXTURES *



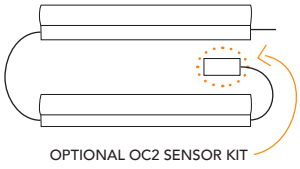
* Example Retrofit. Fixture not included.

RECOMMENDED INSTALLATION



PARALLEL

This method is the most cost effective. Each light bar comes with its own incoming power cable. Multiple incoming power cables are connected together under the ballast cover.

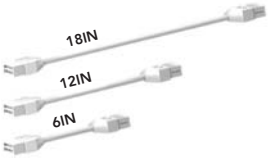


SERIES

This method is the fastest. The first light bar uses an incoming power cable, additional light bars are linked using "linking cables" which are available in a variety of lengths. Linking cables are sold separately.

ACCESSORIES

NO ADDITIONAL ACCESSORIES REQUIRED



LINKING CABLES*

RP-LBI-LC-6IN-DIM
RP-LBI-LC-6IN-NODIM

RP-LBI-LC-12IN-DIM
RP-LBI-LC-12IN-NODIM

RP-LBI-LC-18IN-DIM
RP-LBI-LC-18IN-NODIM

* Choose the appropriate linking cable length based on the dimensions of your fixture.

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

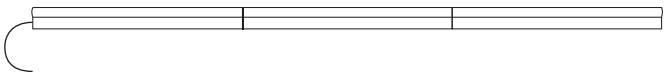
LEDBarKit-Internal Driver (LBI)

CONTINUOUS RUN FIXTURES / RETROFIT*

* Example Retrofit. Fixture not included.

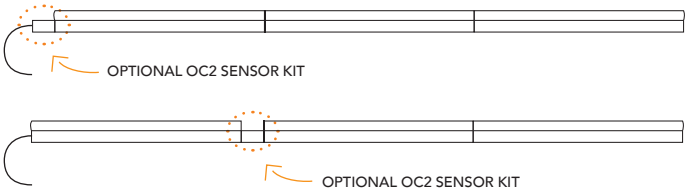
RECOMMENDED INSTALLATION

CONTINUOUS RUN



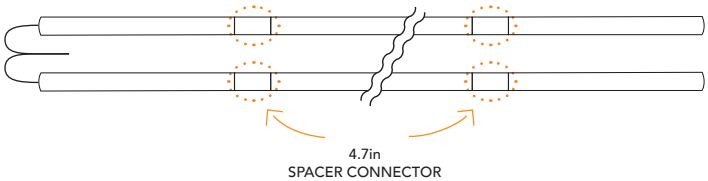
CONTINUOUS RUN WITH OPTIONAL OC2 SENSOR KIT

OC2 Sensor can be installed on either end or in between any bars



CONTINUOUS RUN WITH SPACER CONNECT

Ideal for retrofitting fixtures of standard length



ACCESSORIES

SEAMLESS CONNECTOR*

RP-LBI-SSC-DIM (sold separately)
Links the OCC control signal to all bars.
RP-LBI-SSC-NODIM (sold separately)
Isolates each OCC control group within the continuous run.

*All continuous run installations require seamless connectors.

SURFACE MOUNT MAGNETIC CLIP

RP-LBI-SMM (2x included with bar)

SUSPENDED IN-LINE BRACKET

RP-LBI-SIL (sold separately)
Recommended qty = number of bars + 1

T-BAR CLIP

RP-LBI-T1516 (sold separately)
Recommended qty = 2x per bar

4.7in SPACER CONNECTOR

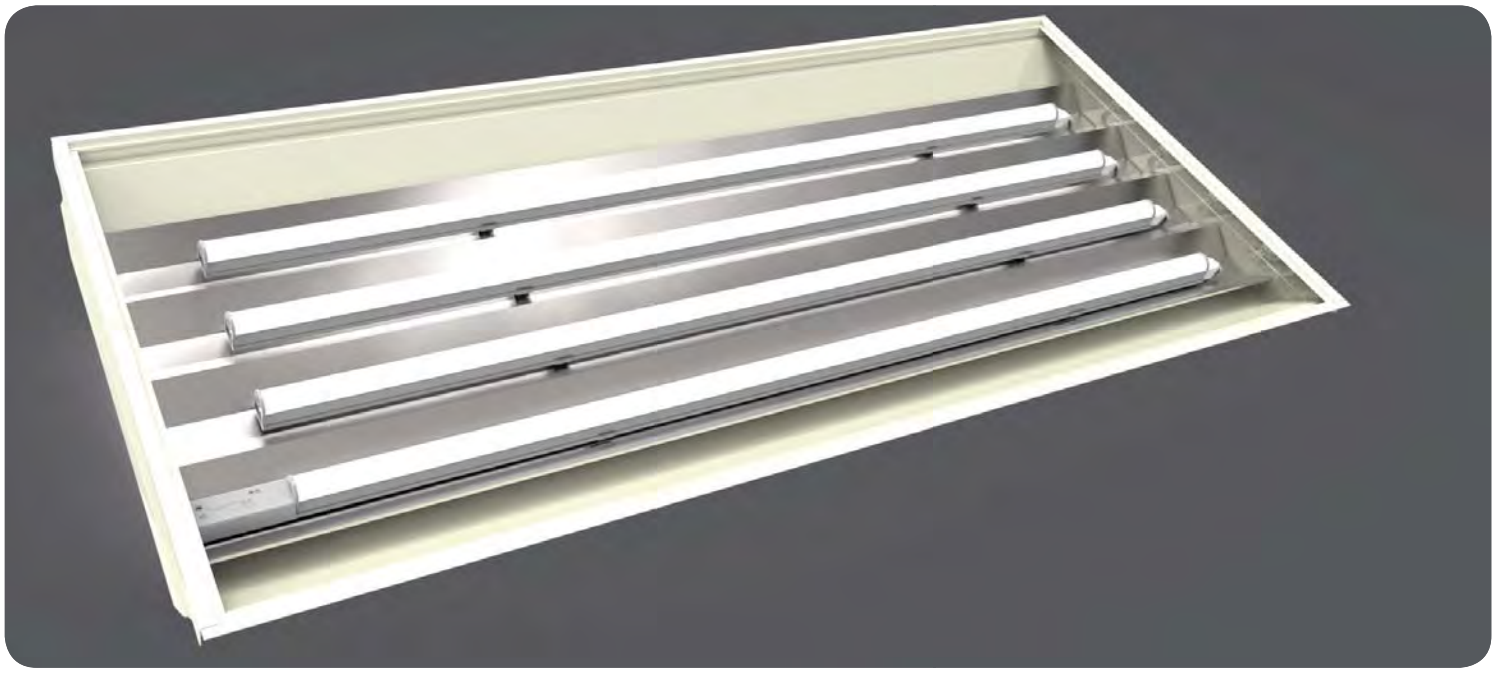
RP-LBI-SRC-4.7IN (sold separately)

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

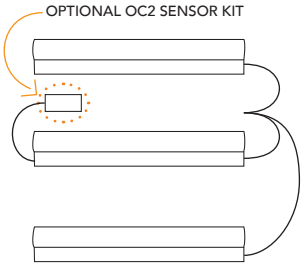
LEDBarKit-Internal Driver (LBI)

HIGH BAY FIXTURE / RETROFIT*



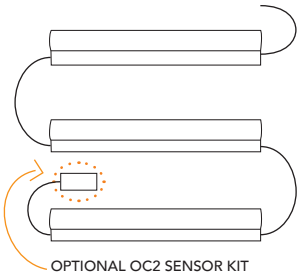
* Example Retrofit. Fixture not included.

RECOMMENDED INSTALLATION



PARALLEL

This method is the most cost effective. Each light bar comes with its own incoming power cable. Multiple incoming power cables are connected together under the ballast cover.



SERIES

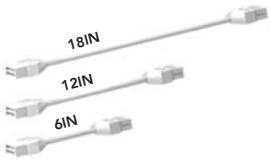
This method is the fastest. The first light bar uses an incoming power cable, additional light bars are linked using "linking cables" which are available in a variety of lengths. Linking cables are sold separately.

ACCESSORIES

BLADE CLIP

RP-LBI-BLC-10P

The Blade Clip is designed to provide a retrofit solution for fixtures that have thin sheet metal or plastic film reflectors commonly found on high bay fixtures. It is common to attach the blade to the same point holding the thin reflector to the fixture frame.



LINKING CABLES*

RP-LBI-LC-6IN-DIM
RP-LBI-LC-6IN-NODIM

RP-LBI-LC-12IN-DIM
RP-LBI-LC-12IN-NODIM

RP-LBI-LC-18IN-DIM
RP-LBI-LC-18IN-NODIM

* Choose the appropriate linking cable length based on the dimensions of your fixture.

Light Bars are DLC listed under the high bay fixture category. You can choose to purchase Light Bars only and hang/mount as a standalone fixture or retrofit an existing high bay fixture housing as shown above.

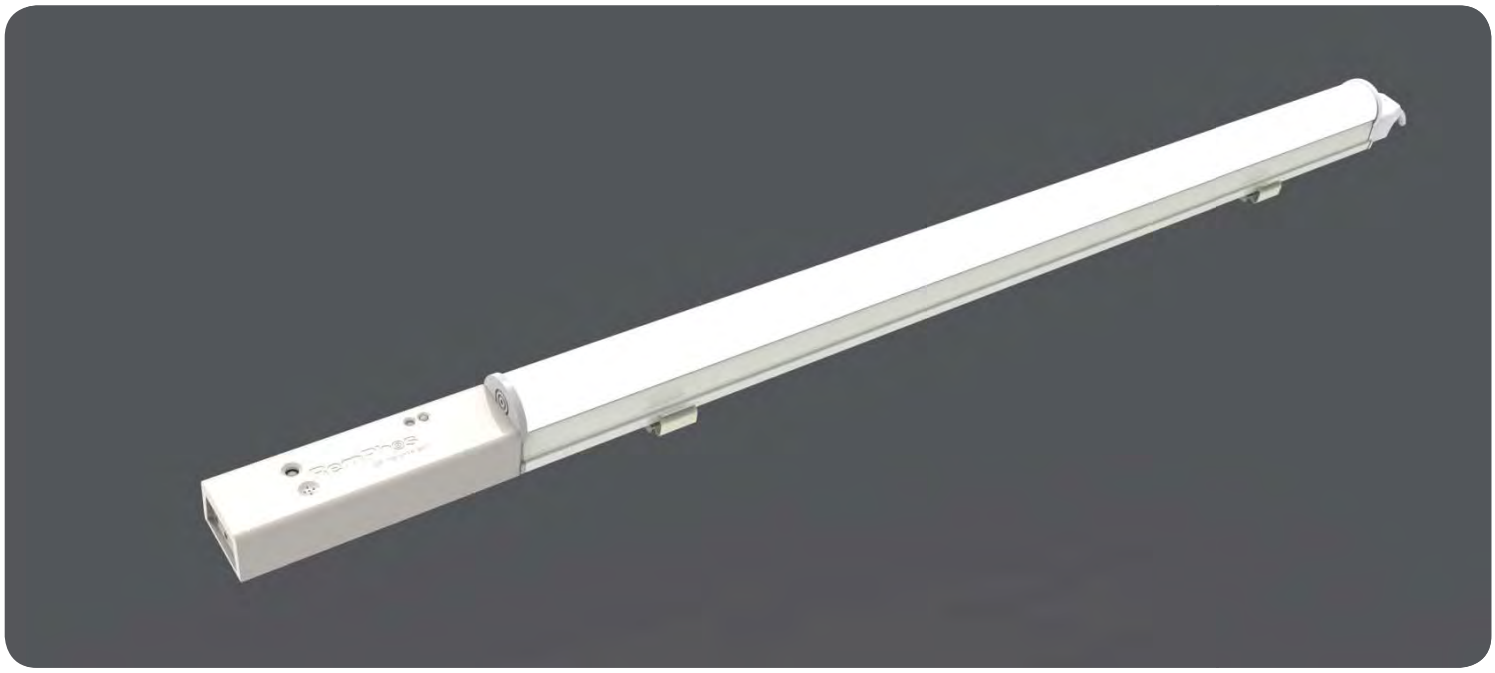
RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBarKit-Internal Driver (LBI)

STAIRWELL FIXTURE KIT / UTILITY FIXTURE*



* Example Retrofit. Fixture not included.

STAIRWELL FIXTURE KIT INCLUDES

ORDERING #
2FT: RP-LBI-2F-12W-40K-W-OC2
4FT: RP-LBI-4F-15W-40K-W-OC2

1 - INTERNAL DRIVE BAR KIT
LEDBAR + Incoming power cable + Magnetic mounting brackets + Power disconnect, connectors and grommet.

1 - OC2 SENSOR KIT
RP-LBI-OC2
Sensor + Seamless Connector-DIM

UTILITY FIXTURE

To use as a standalone utility fixture, purchase 1X Light Bar kit.

Fixture housings to be used as wiring and emergency battery compartment currently in development. Call for more information.

RemPhos by Light Efficient Design
lighting on target

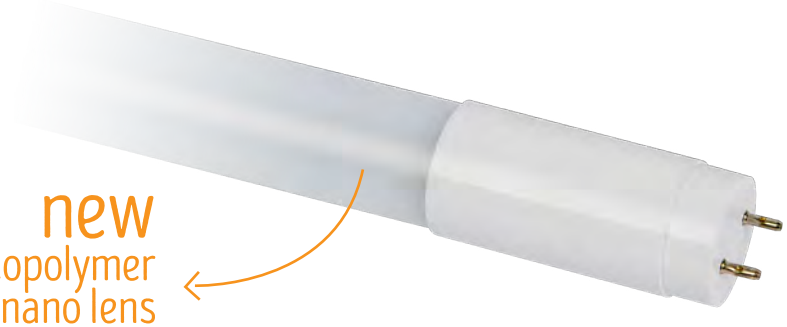
FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

TOTALTUBE® T8 G3 UL TYPE A+B BALLAST COMPATIBLE & LINE VOLTAGE

PRO
BASE

a TOTALLY perfect tube

THE TOTALTUBE T8 G3 IS OUR LATEST GENERATION OF LED TUBE WHICH BUILDS ON OUR PREVIOUS G1 AND G2 MODELS. THE PERFECT "TOTAL" LED TUBE SOLUTION: LOW COST, HIGH EFFICACY, BEAUTIFUL ILLUMINATION AND VERSATILE WITH 2 DIFFERENT METHODS OF INSTALLATION.



new copolymer nano lens material

provides the safest possible installation

NEW HIGH PERFORMANCE NANO LENS MATERIAL

Manufactured from a plastic and glass copolymer. Higher transmission rate, more uniform illumination and increased rigidity compared with plastic lenses without the breakage issues of an all glass tube.

2 METHODS OF INSTALLATION

- UL Type A: plug & play compatible with almost all fluorescent ballasts (see ballast compatibility guide for more details).
- UL Type B Double-End 120-277V: ballast bypass installation using non-shunted or shunted sockets with power applied to both ends of the tube.

SHUNTED NON SHUNTED

NEW 135LPW EFFICACY

Improved driver design, higher efficiency LED chips and high performance NANO lens.

NEW WIDE 240° BEAM ANGLE

Perfect for either direct or direct/indirect applications.

NEW G3 SMARTSENSE-TLED INTELLIGENT SAFETY SYSTEM

Faster installation with our new switch-less technology. This safety system prevents any risk of electricity flowing from one end of the tube and also prevents against "socket to lamp pin"electrical arcing.

AVAILABLE IN 2FT, 3FT, 4FT & UBEND SIZES

Available in multiple CCTs. Available in standard and HO outputs for the 4ft model only. UBend available in 2 widths.

SUITABLE FOR DRY & DAMP LOCATIONS

UL CLASSIFIED RETROFIT KIT LISTED AND DLC QPL LISTED

(See ordering guide for DLC QPL part numbers)

5 YEAR STANDARD WARRANTY, L70 >100,000HRS

OPTIONAL "BAA" BUY AMERICA ACT

Compliant models available, assembled in our state-of-the-art Middleton, MA assembly center. (BAA SECTION 1605 COMPLIANT)

PLEASE NOTE: When installing an LED tube with an existing or new fluorescent ballast, always confirm that: (1) the ballast is compatible with the LED tube by checking the ballast compatibility guide (2) the lamp holders utilized and the wiring diagram are correct for that specific fluorescent ballast, by checking the fluorescent ballast installation guide (for example, DO NOT use non-shunted sockets on instant-start ballasts (3) the lamp holders are in good working condition and are making contact with all of the LED tube pins (for example, DO NOT install an LED tube in a loose lamp holder where there is a visible air gap between the end of the LED tube and the lamp holder) so that there is no risk of arcing.

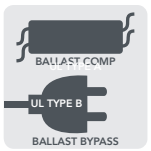
03.01.18 Information is subject to change without notice.

RemPhos • 877.997.3674 • www.remphos.com
30 Log Bridge Road • Building 200 • Middleton, MA 01949 • USA

RemPhos
lighting on target

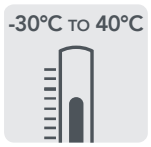
TOTALTUBE® T8 G3 UL TYPE A+B BALLAST COMPATIBLE & LINE VOLTAGE

PRO
BASE



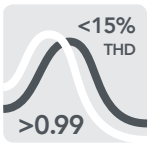
INSTALL METHOD

EFFICACY



OPERATING TEMP

LENS

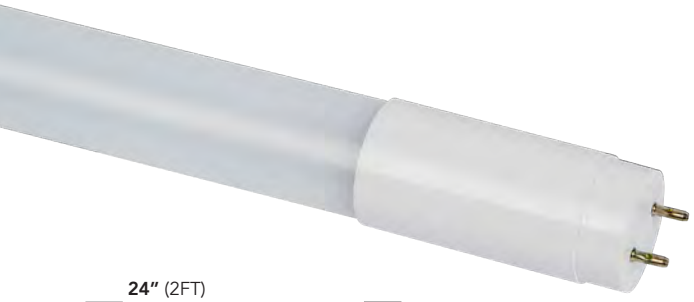


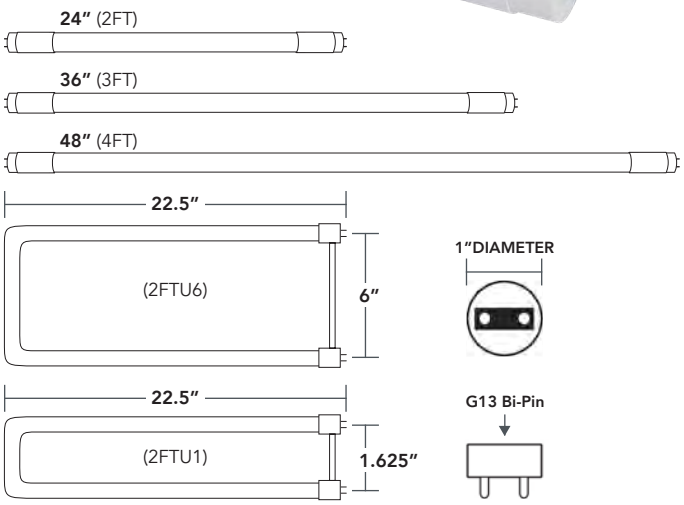
PWR FACTOR/THD

CRI

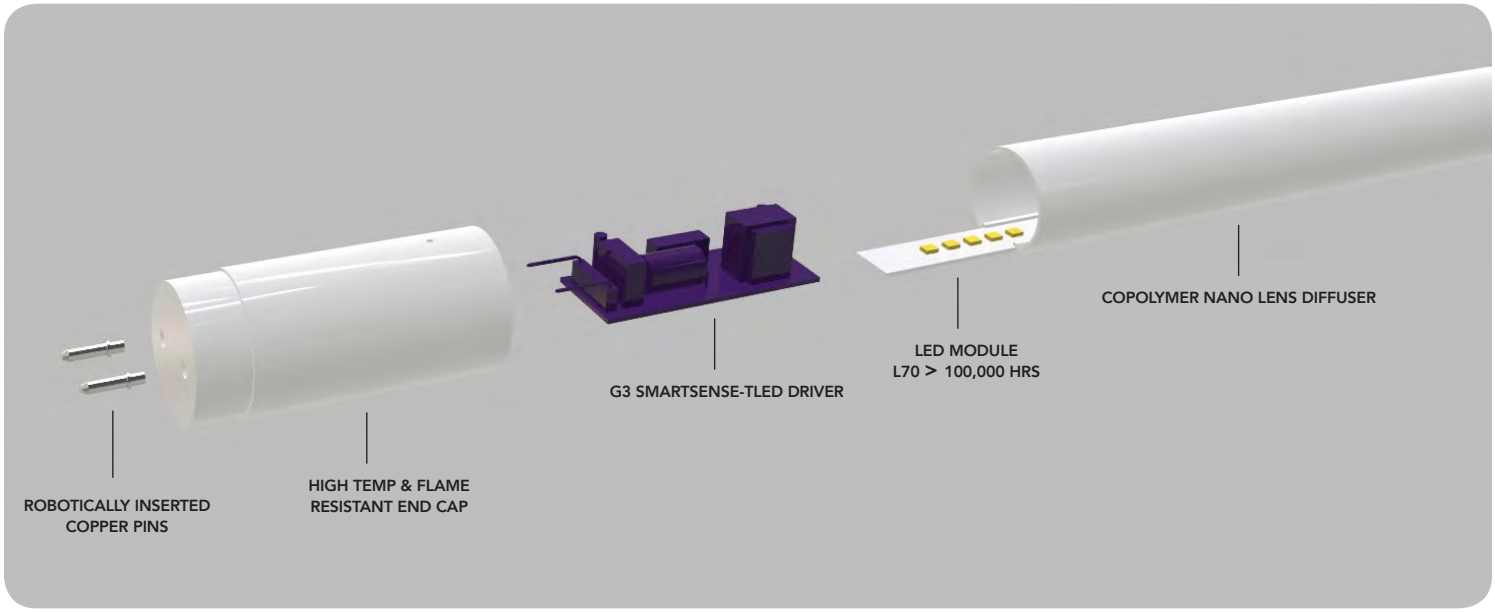
BEAM ANGLE

RATED LIFE





- 2 METHODS OF INSTALLATION (UL TYPE A+B)
- NEW WIDE 240° BEAM ANGLE
- NEW G3 SMARTSENSE-TLED INTELLIGENT SAFETY SYSTEM
- AVAILABLE IN 2FT, 3FT AND 4FT LENGTHS & UBEND SIZES
- SUITABLE FOR DRY & DAMP LOCATIONS
- UL CLASSIFIED RETROFIT KIT LISTED AND DLC QPL LISTED
- 5 YEAR STANDARD WARRANTY, L70 >100,000HRS
- OPTIONAL "BAA" BUY AMERICA ACT
- NEW HIGH PERFORMANCE NANO LENS MATERIAL
- NEW 135LPW EFFICACY DUE TO IMPROVED DRIVER DESIGN, HIGHER EFFICIENCY LED CHIPS AND HIGH PERFORMANCE NANO LENS.



03.01.18 Information is subject to change without notice.

RemPhos • 877.997.3674 • www.remphos.com
30 Log Bridge Road • Building 200 • Middleton, MA 01949 • USA

RemPhos
lighting on target

TOTALTUBE® T8 G3 UL TYPE A+B BALLAST COMPATIBLE & LINE VOLTAGE

PRO
BASE

PART NUMBER BUILDER

MFR	FAMILY	PRODUCT	GEN	SIZE	COLOR	VERSION	BAA
RPT	B	TOTALTUBE-T8	G3			A	
				2FT 3FT 4FT 4FTHO 2FTU1 2FTU6	830=3000K/85CRI 835=3500K/85CRI 840=4000K/85CRI 850=5000K/85CRI		BLANK=NON-BAA BAA=BAA SECTION 1605 COMPLIANT

ORDERING EXAMPLE
RPT-B-TOTALTUBE-T8-G3-2FT-830-A

ORDERING GUIDE

CASE QTY	ENERGY STAR	DLC	PART #	UL TYPE B (LINE VOLTAGE) LUMEN OUTPUT (LM)	WATTAGE (W)	VOLTAGE RANGE (VAC)	WARRANTY (YRS)	TRADITIONAL EQUIVALENT
42		•	RPT-B-TOTALTUBE-T8-G3-2FT-8XX-A	1350	10	120-277	5	17W FL
42			RPT-B-TOTALTUBE-T8-G3-3FT-8XX-A	1350	10	120-277	5	25W FL
42		•	RPT-B-TOTALTUBE-T8-G3-4FT-8XX-A	1860	12	120-277	5	32W FL
42		•	RPT-B-TOTALTUBE-T8-G3-4FTHO-8XX-A	1980	15	120-277	5	32W FL
10			RPT-B-TOTALTUBE-T8-G3-2FTU1-8XX-A	1950	15	120-277	5	32W FL
10			RPT-B-TOTALTUBE-T8-G3-2FTU6-8XX-A	1950	15	120-277	5	32W FL

● DLC STANDARD ▲ DLC PREMIUM

SYSTEM POWER AND LUMINOUS FLUX INFORMATION (WITH A BALLAST)

PART #	AVERAGE SYSTEM POWER (W) LOW BF (0.77)	NORMAL BF (0.88)	HIGH BF (1.18)	AVERAGE LAMP FLUX (LM) LOW BF (0.77)	NORMAL BF (0.88)	HIGH BF (1.18)
RPT-B-TOTALTUBE-T8-G3-2FT-8XX-A	9.2	10.5	12.5	1150	1350	1500
RPT-B-TOTALTUBE-T8-G3-3FT-8XX-A	9.2	10.5	12.5	1150	1350	1500
RPT-B-TOTALTUBE-T8-G3-4FT-8XX-A	12.5	15.5	16.5	1500	1860	1980
RPT-B-TOTALTUBE-T8-G3-4FTHO-8XX-A	14.2	16.5	17.8	1704	1980	2136
RPT-B-TOTALTUBE-T8-G3-2FTU1-8XX-A	12.5	15.5	16.5	1350	1700	1850
RPT-B-TOTALTUBE-T8-G3-2FTU6-8XX-A	12.5	15.5	16.5	1350	1700	1850

NOTE The average system power is calculated by measuring the average system wattage for a single LED tube including the ballast. Average system power was measured at 120V and 277V with multiple ballasts from Philips, Osram, GE, Keystone, Sunpark, Howard.

ACCESSORIES

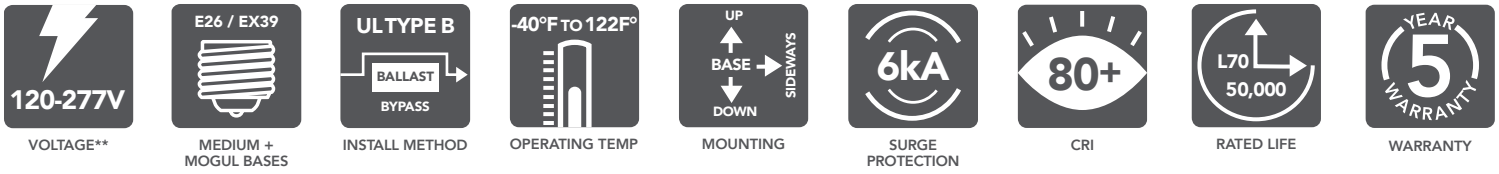
PART #	DESCRIPTION	INPUT VOLTAGE (V AC)	FLUX OUTPUT (LM)	EST. EMG. RUN TIME (MIN)
RPT-ACCESSORY-EMGKIT-HS1-500LM	UL Classified Emergency Kit	120-277	500	145
RPT-ACCESSORY-EMGKIT-HS1-1000LM	UL Classified Emergency Kit	120-277	1000	145

DIMMING AND EMERGENCY OPERATION GUIDE

	UL TYPE A	UL TYPE B
DIMMABILITY	Not recommended (use RemPhos BCTUBE T8 G3)	NO
EMERGENCY OPERATION	YES (see ballast compatibility guide)	See accessories above for EMG Kit

03.01.18 Information is subject to change without notice.

BOLLARD RETROFITS 360° OMNI DIRECTIONAL DESIGN



bright & compact

fits almost anywhere

- Available in 14W, 18W & 24W models replacing up to 150W HID.
- Multi-directional mounting capability & 360° design. Use base down, base up or base sideways without affecting performance.
- Pretested & potted drivers are burnt in 3x prior to shipping and protected against vibration & moisture.
- Expertly engineered to work efficiently in enclosed fixtures & damp environments, while also protected against insects & dust.
- Dual stage MOV protection with integrated 6kA surge.
- USA designed & specified LED driver.

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)*	BASE	DLC PRODUCT CODE
LED-8038E57-A	844006082970	70W	14W	2217	5700K	E26	N/A
LED-8039E57-A	844006080488	100W	18W	2465	5700K	E26	N/A
LED-8039M57-A	844006084394	100W	18W	2465	5700K	EX39	PVNFJNV1
LED-8029E57-A	844006080297	150W	24W	3425	5700K	E26	N/A
LED-8029M57-A	844006081560	150W	24W	3374	5700K	EX39	P17Z7EQS

* See page 2 for additional color temperatures.

** See page 2 for 347 volt options for Canada.

MOGUL OR 120V MEDIUM BASE ONLY

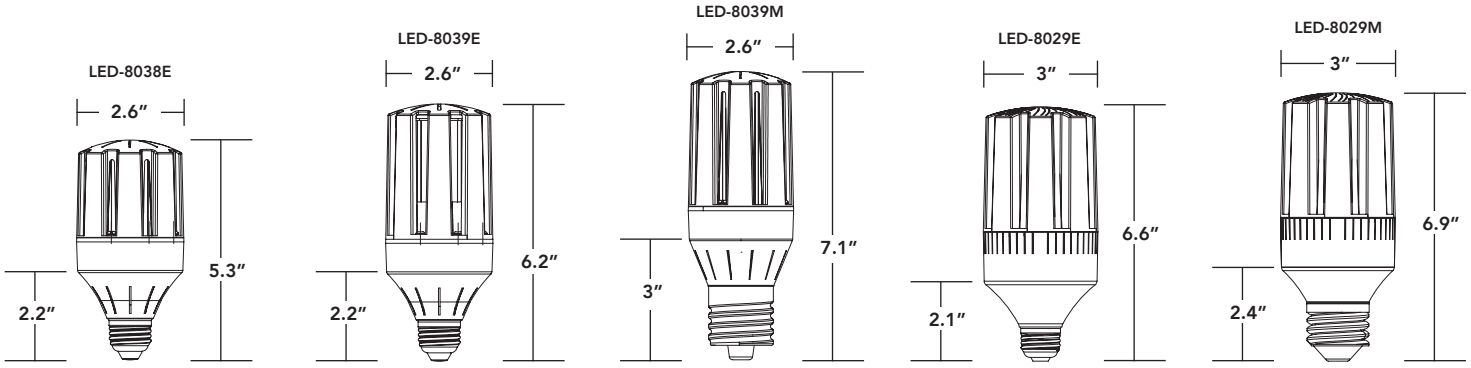
Light Efficient Design

RemPhos

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

02.13.19 Information is subject to change without notice.

BOLLARD RETROFITS 360° OMNI DIRECTIONAL DESIGN



ORDERING GUIDE

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)	BASE	DLC PRODUCT CODE
LED-8038E30-A	844006082956	70W HID	14W	1840	3000K	E26	N/A
LED-8038E40-A	844006082963	70W HID	14W	2065	4000K	E26	N/A
LED-8038E57-A	844006082970	70W HID	14W	2217	5700K	E26	N/A
LED-8039E30-A	844006080495	100W HID	18W	2758	3000K	E26	N/A
LED-8039E40-A	844006080648	100W HID	18W	2983	4000K	E26	N/A
LED-8039E57-A	844006080488	100W HID	18W	2465	5700K	E26	N/A
LED-8039M30-A	844006084356	100W HID	18W	2758	3000K	EX39	PN8CHYH1
LED-8039M40-A	844006084370	100W HID	18W	2983	4000K	EX39	P19GG12F
LED-8039M57-A	844006084394	100W HID	18W	2465	5700K	EX39	PVNFJNV1
LED-8029E30-A	844006080396	150W HID	24W	3024	3000K	E26	N/A
LED-8029E40-A	844006080631	150W HID	24W	3422	4000K	E26	N/A
LED-8029E57-A	844006080297	150W HID	24W	3425	5700K	E26	N/A
LED-8029M30-A	844006081546	150W HID	24W	3431	3000K	EX39	PAKDVMFU
LED-8029M40-A	844006081553	150W HID	24W	3374	4000K	EX39	PN6Y8ECX
LED-8029M57-A	844006081560	150W HID	24W	3374	5700K	EX39	P17Z7EQS

347 VOLT OPTIONS FOR CANADA

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)	BASE	DLC PRODUCT CODE
LED-8038E30C-A	844006082987	70W HID	14W	1789	3000K	E26	N/A
LED-8038E40C-A	844006082994	70W HID	14W	2037	4000K	E26	N/A
LED-8038E57C-A	844006083007	70W HID	14W	2155	5700K	E26	N/A
LED-8039E30C-A	844006082550	100W HID	18W	2919	3000K	E26	N/A
LED-8039E40C-A	844006082567	100W HID	18W	3053	4000K	E26	N/A
LED-8039E57C-A	844006082574	100W HID	18W	2695	5700K	E26	N/A
LED-8039M30C-A	844006084363	100W HID	18W	2919	3000K	EX39	PDYQHD1W
LED-8039M40C-A	844006084387	100W HID	18W	3053	4000K	EX39	PVLHXS0K
LED-8039M57C-A	844006084400	100W HID	18W	2695	5700K	EX39	P2NOX14J
LED-8029E30C-A	844006080952	150W HID	24W	3099	3000K	E26	N/A
LED-8029E40C-A	844006080969	150W HID	24W	3568	4000K	E26	N/A
LED-8029E57C-A	844006080976	150W HID	24W	3426	5700K	E26	N/A
LED-8029M30C-A	844006081721	150W HID	24W	3129	3000K	EX39	P76RARZA
LED-8029M40C-A	844006081714	150W HID	24W	3405	4000K	EX39	PN4K3SC8
LED-8029M57C-A	844006081707	150W HID	24W	3165	5700K	EX39	PA216JKT

Light Efficient Design

RemPhos

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

d"series

D-Series Size 1
LED Flood Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

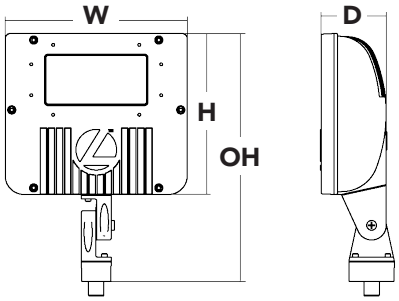
Introduction

The D-Series Size 1 Flood features precision optics to beautifully illuminate a variety of applications while its sleek, compact styling blends seamlessly with the environment.

The D-Series Flood reflector systems and cutting-edge chip-on-board LED technology produce low field-to-beam ratios for minimal spill light and incredible photometric performance. It's the ideal long-life replacement for 50 - 150W metal halide floods, with typical energy savings of 72% and expected service life of over 100,000 hours.

Specifications

EPA:	0.6 ft² *(0.05 m²)*
Depth:	3-1/8" *(8.0 cm)*
Width:	8-7/8" *(22.4 cm)*
Height:	7-3/4" *(19.8 cm)*
Overall Height	12" *(30.5 cm)*
Weight:	7.2 lbs *(3.3 kg)*



Ordering Information

EXAMPLE: DSXF1 LED 2 A530/40K MSP MVOLT THK DDBXD

DSXF1 LED							Catalog Number
Series	**Light Engines**	**Performance Package**	**Distribution**	**Voltage**	**Mounting**	**Options**	**Finish** *(required)*
DSXF1 LED	1 One COB engine 2 Two COB engines	**530 mA options:** A530/30K 3000K A530/40K 4000K A530/50K 5000K	NSP Narrow spot MSP Medium spot MFL Medium flood FL Flood WFL Wide flood WFR Wide flood, rectangular HMF Horizontal flood	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1]	**Shipped included** THK Knuckle with 1/2" NPS threaded pipe IS Integral slipfitter (fits 2-3/8" O.D. tenon) **Shipped separately** [2] DSXF1/2TS Tenon slipfitter (2-3/8" O.D. THK required)	**Shipped installed** PE Photocontrol, button style [3] SF Single fuse (120, 277V) [4] **Shipped separately** [2] UBV Upper/bottom visor (universal) FV Full visor VG Vandal guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
DSXF1 LED 1 A530/40K WFL MVOLT THK DDBXD	**DSXF1 LED 1 40K**
DSXF1 LED 1 A530/50K WFL MVOLT THK DDBXD	**DSXF1 LED 1 50K**
DSXF1 LED 2 A530/40K WFL MVOLT THK DDBXD	**DSXF1 LED 2 40K**
DSXF1 LED 2 A530/50K WFL MVOLT THK DDBXD	**DSXF1 LED 2 50K**

Accessories

Ordered and shipped separately.

DSXF1/2TS DDBXD U	Slipfitter for 1-1/4" to 2-3/8" OD tenons; mates with 1/2" threaded knuckle (specify finish)
FRWB DDBXD U	Radius wall bracket, 2-3/8" OD tenon (specify finish)
FSPB DDBXD U	Steel square pole bracket, 2-3/8" OD tenon (specify finish)
DSXF1UBV DDBXD U	Upper/bottom visor accessory (specify finish)
DSXF1FV DDBXD U	Full visor accessory (specify finish)
DSXF1VG U	Vandal guard accessory

For more mounting options, visit our Floodlighting Accessories pages.

NOTES

1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF option) or photocontrol (PE).
2. Also available as separate accessories; see Accessories information at left.
3. Photocontrol (PE) requires 120, 208, 240 or 277 voltage option.
4. Single fuse (SF) requires 120 or 277 voltage option.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Contact factory for performance data on any configurations not shown here.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	Field Angle		Beam Angle		30K (3000K, 70 CRI)			40K (4000K, 70 CRI)			50K (5000K, 70 CRI)		
					°H	°V	°H	°V	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW
1	530	A530/--K	19W	NSP	48	49	19	19	7062	1408	74	7300	1692	89	7277	1700	89
				MSP	50	48	24	23	6782	1541	81	6740	1923	101	6719	1916	101
				MFL	60	60	47	46	2249	1316	69	2806	1581	83	2797	1588	84
				FL	85	84	63	62	1845	1752	92	1855	2105	111	1849	2115	111
				WFL	106	106	71	72	1301	1739	92	1391	1995	105	1387	2099	110
				WFR	107	88	85	64	1279	1764	93	1386	2119	112	1381	2129	112
				HMF	100	62	80	13	1445	771	41	1259	927	49	1255	931	49
2	530	A530/--K	37W	NSP	48	49	19	19	13,379	2668	72	13,803	3206	87	13,760	3221	87
				MSP	50	48	24	23	12,850	2920	79	12,744	3643	98	12,704	3631	98
				MFL	60	60	47	46	4260	2493	67	5305	2995	81	5288	3009	81
				FL	85	84	63	62	3496	3320	90	3507	3989	108	3496	4008	108
				WFL	106	106	71	72	2465	3294	89	2630	3958	107	2622	3977	107
				WFR	107	88	85	64	2422	3342	90	2620	4015	109	2612	4034	109
				HMF	100	62	80	13	2738	1462	40	2381	1756	47	2374	1764	48

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.07
10°C	50°F	1.04
20°C	68°F	1.02
25°C	**77°F**	**1.00**
30°C	86°F	0.98
40°C	104°F	0.95

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **DSXF1 LED 2 A530** platform based on 8400 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.94	0.90	0.80

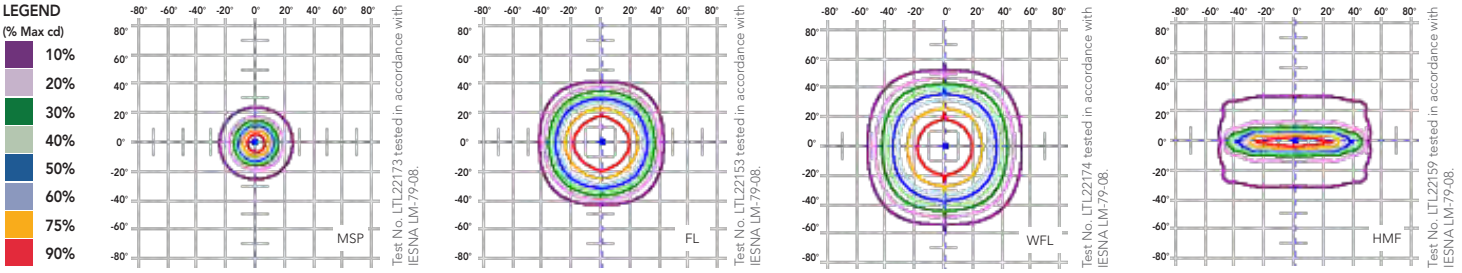
Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1	530	19W	0.16	0.1	0.09	0.08	-	-
2	530	37W	0.32	0.19	0.17	0.15	-	-

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Flood Size 1 homepage.

Isocandela plots for the DSXF1 LED 2 A530/40K.



Mounting, Options and Accessories

THK - Knuckle with 1/2" NPS threaded pipe

IS – Integral slipfitter
H= 2-1/2" (6.3 cm)
ID= 2-3/8" (6.0 cm)
OD= 3-1/2" (8.8 cm)

UBV – Upper/bottom visor
W= 5-1/4" (13.3 cm)
H= 2-1/2" (6.3 cm)
D= 3" (7.6 cm)

FV – Full visor
W= 5-1/4" (13.3 cm)
H= 2-1/2" (6.3 cm)
D= 3" (7.6 cm)

VG – Vandal guard
W= 6-1/2" (16.5 cm)
H= 4" (10.1 cm)

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 Flood reflects the embedded high performance LED technology. It is ideal for landscape, signage and accent lighting in many commercial and residential applications.

CONSTRUCTION
Die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.6 ft^2) for optimized wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS
A variety of precision-molded vacuum-metallized specular reflectors are engineered for superior field-to-beam ratios, uniformity and spacing. Light engines are available in 3000K (70 CRI min.), 4000K (70 CRI min.) or 5000K (70 CRI min.) configurations. Optional visors offer additional versatility.

ELECTRICAL
Light engine(s) consist of chip-on-board (COB) LEDs directly coupled to the housing to maximize heat dissipation and promote long life (100,000 hrs, L80). Single-engine unit uses a Class 2 electronic driver; dual-engine unit uses a Class 1 electronic driver. Both drivers have a power factor >90%, THD <20%, and an expected life of 100,000 hours. Surge protection meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Integral adjustable knuckle with 1/2-14NPS threaded pipe, tenon slipfitter, or integral slipfitter, facilitates quick and easy installation to a variety of mounting accessories. This secure connection enables the D-Series Size 1 to withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications subject to change without notice.

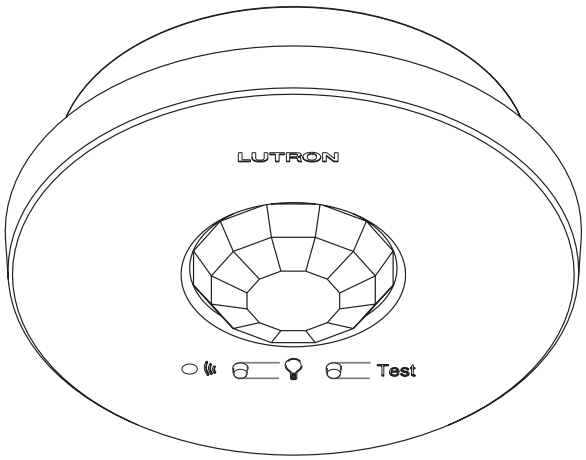
369480h 1 02.16.16

Radio Powr Savr™ Wireless Occupancy/Vacancy Ceiling Sensor

Lutron® Radio Powr Savr™ occupancy/vacancy sensors are wireless, battery-powered, passive infrared (PIR) sensors that automatically control lights via RF communication to compatible dimming and switching devices. These sensors detect the heat (IR radiation of 9.5 µm) from people moving within an area to determine when the space is occupied. The sensors then wirelessly transmit the appropriate commands to the associated dimming and switching devices to turn the lights on or off automatically. They combine both convenience and exceptional energy savings potential along with ease of installation.

Features

- Wireless occupancy sensor has 3 settings available: Auto-On/Auto-Off, Auto-On Low-Light/Auto-Off, and Manual-On/Auto-Off
- Auto-On Low-Light feature will turn lights on automatically only if there is less than approximately 10 Lux (1 fc) of ambient light
- Vacancy-only model available to meet California (U.S.A.) Title 24 requirements
- Uses Clear Connect® technology
- Passive infrared motion detection with exclusive Lutron® XCT™ Technology for fine motion detection
- 360˚ coverage ranges from 324 ft^2 (30.2 m^2) to 676 ft^2 (62.4 m^2), depending on mounting height
- Simple and intuitive adjustments available for Timeout, Auto-On, and Activity settings
- Supports advanced occupancy features, such as dependent occupancy groups and customizable occupied/unoccupied presets in some systems
- Multiple sensors can be added for extended coverage. Refer to product specification submittal of receiving device to determine system limits
- Lens illuminates during test mode to verify ideal locations
- Multiple ceiling-mount methods available for different ceiling materials
- Front accessible test buttons make programming easy
- 10-year battery life design
- RoHS compliant



Models Available

- LRF__-OCR2B-P-WH
  - Color Code
  - Occupancy and Vacancy
  - Frequency/Channel Code
- LRF2-VCR2B-P-WH
  - Vacancy Only
  - Available for Channel Code 2 Only

Frequency/Channel Codes

Available

2 = 431.0–437.0 MHz (U.S.A., Canada, Mexico, Brazil)
3 = 868.125–869.850 MHz (Europe, U.A.E.)
4 = 868.125–868.4755 MHz (China, Singapore)
5 = 865.5–866.5 MHz (India)
6 = 312.3–314.8 MHz (Japan)
7 = 433.05–434.79 MHz (Hong Kong, Macau)

Color Code

WH = White

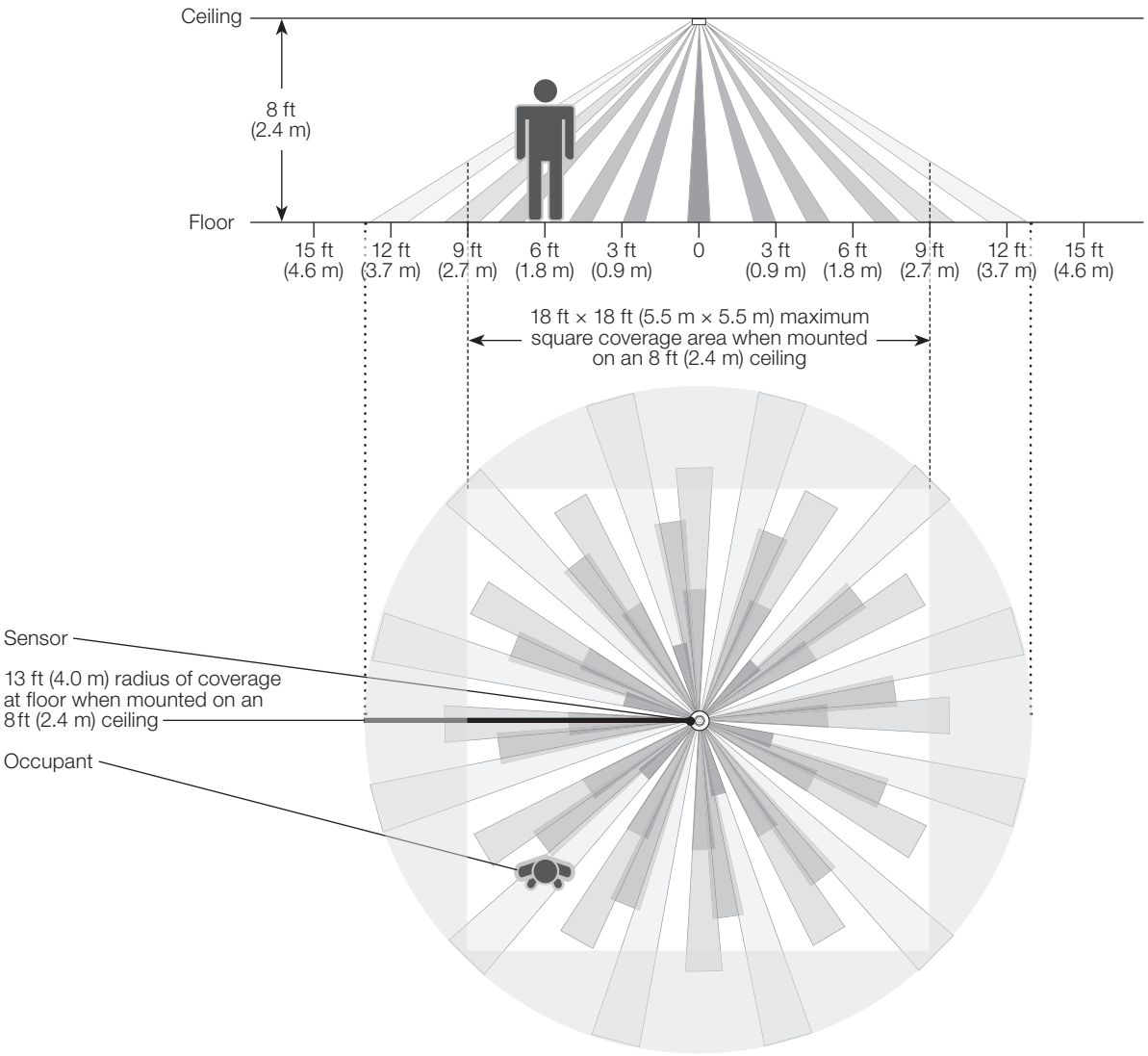
Compatible RF Devices

- For use with Lutron® products only
- Communicates to various wireless Lutron® systems*

* Contact Lutron® Customer Service at www.lutron.com for frequency/channel code compatibility with your particular geographic region, and for integrating with other Lutron® lighting and shading products.

Job Name:	Model Numbers:	
Job Number:		

Range Diagrams



Sensor Coverage Chart (for sensor mounted in center of room)

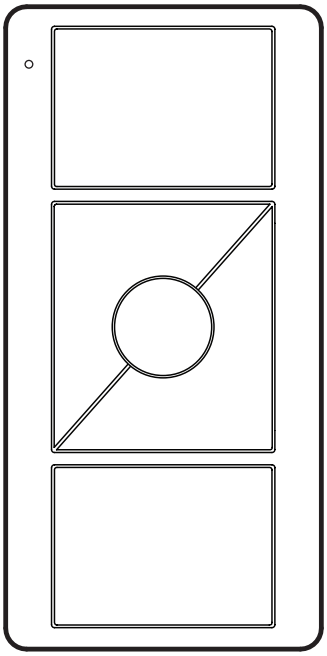
Ceiling Height	Maximum Square Coverage Area*	
8 ft (2.4 m)	18 ft × 18 ft (5.5 m × 5.5 m)	324 ft^2 (30.2 m^2)
9 ft (2.7 m)	20 ft × 20 ft (6.1 m × 6.1 m)	400 ft^2 (37.2 m^2)
10 ft (3.0 m)	22 ft × 22 ft (6.7 m × 6.7 m)	484 ft^2 (44.9 m^2)
12 ft (3.7 m)	26 ft × 26 ft (7.9 m × 7.9 m)	676 ft^2 (62.4 m^2)

* 12 ft (3.7 m) is the recommended maximum mounting height

Job Name:	Model Numbers:	
Job Number:		

Pico® Wireless Control (for North, Central, and South America)

The Pico® wireless control is a flexible and easy to use device that allows the user to control Lutron® wireless load-control devices from anywhere in the space. This battery-operated control requires no external power or communication wiring.



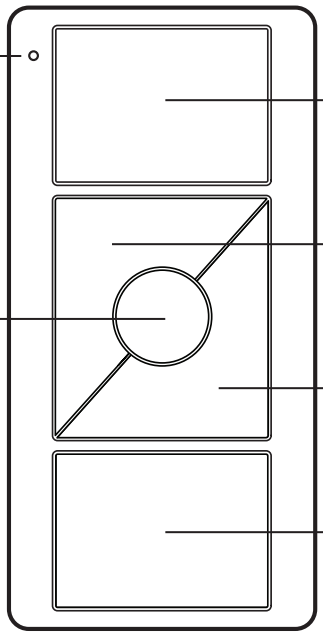
Pico® wireless control

Features

- Provides control for the following:
  - Caséta® Wireless controls
  - Energi Savr Node™, Quantum®, and myRoom™ systems, through the use of a QS sensor module (QSM)
  - Vive™ systems, including:
    - Maestro Wireless® controls
    - PowPak® modules
  - GRAFIK Eye® QS wireless systems
  - HomeWorks® QS wireless systems
  - Maestro Wireless® controls
  - PowPak® modules
  - RadioRA® 2 systems
  - Serena® RF remote control shades
  - Sivoia® QS wireless systems
- Control available in a variety of button marking options.
- Easy reconfiguration for use as:
  - Handheld remote
  - Wall-mount control (with or without faceplate; faceplate adapter kit sold separately)
  - Car visor control (car visor clip sold separately)
  - A table top control (table top pedestal sold separately).
- Battery-powered. Requires no wiring.
- 10 year battery life (one CR2032 battery included).
- Can provide control of blinds, curtains, or lighting devices within a range of 30 ft (9 m) through walls and 60 ft (18 m) line-of-sight.
- BAA-compliant model numbers available. Add a “U” prefix to the model number.

Job Name:	Model Numbers:	
Job Number:		

Operation



Indicator LED
Flashes to indicate a button press or when unit is in programming mode.

Preset Button (3B & 3BRL models only)

Tap once:
Devices go to preset levels/positions. Activates scene 16 when used in scene mode with GRAFIK Eye® QS wireless applications.

Press and hold:
To save new preset level or position, press and hold for 6 seconds.

Top Button
Lights brighten to full intensity and shades/draperies go to open limit. Activates scene 1 when used in scene mode with GRAFIK Eye® QS wireless applications.

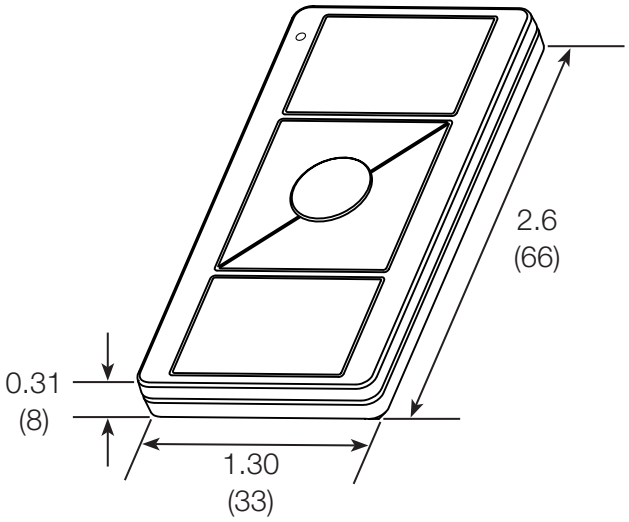
Raise Button (2BRL & 3BRL models only)
Lights increase in intensity and shades/draperies move towards open limit.

Lower Button (2BRL & 3BRL models only)
Lights decrease in intensity and shades/draperies move towards close limit.

Bottom Button
Lights dim to off and shades/draperies go to close limit. Activates "OFF" scene when used in scene mode with GRAFIK Eye® QS wireless applications.

Dimensions

Measurements shown as: in (mm)

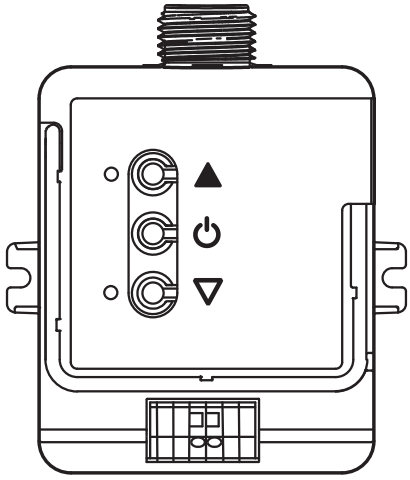


Job Name:	Model Numbers:	
Job Number:		

369918c 1 08.19.16

Vive™ PowPak® Fixture Controls

The PowPak® wireless fixture control is a radio-frequency (RF) device that controls either the Lutron® EcoSystem® or 0–10 V⎓ electronic fluorescent ballasts and LED drivers (depending on model). This is based on RF input from Pico® remote controls, Radio Powr Savr™ wireless sensors, or wired inputs from the PowPak® fixture sensor. The control module mounts to a fixture or a U.S.-style junction box. Communication with RF input devices is accomplished using Lutron® Clear Connect® RF Technology. See **Applications and Selecting the Right Control** for more details on selecting the appropriate controls for your application.



PowPak® Wireless Fixture Control

The PowPak® fixture sensor (optional) mounts to the ceiling or to a fixture and measures light in the space (daylighting) while detecting people moving within an area to determine passive infrared occupancy. The sensor controls the lights to balance light level in the space, combining convenience, exceptional energy savings, and ease of installation. The sensor contains two wires which connect to the PowPak® wireless fixture control.

These products are also compatible with the Vive™ hub which enables a simple setup process using a standard web browser on any Wi-Fi enabled phone, tablet or computer. It also enables control and monitoring of all Vive™ devices. The Vive™ hub can be added at any time and preserves existing system setup by extracting local programming from each device. For a complete list of features supported with the Vive™ hub, see specification submittal 369902.

Note for Replacement: FCJS - the “S” model can replace the non-”S” model.

Models Available

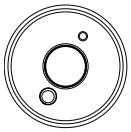
Model Number	Description
FC-SENSOR	PowPak® fixture sensor (occupancy)
FC-VSENSOR	PowPak® fixture sensor (vacancy) [1]
FCJS-010	PowPak® wireless fixture control for 0-10 V⎓ ballasts and drivers
FCJS-ECO	PowPak® wireless fixture control for EcoSystem® ballasts and drivers

[1] Lights do not turn on automatically with a vacancy sensor. A Pico® remote control is needed to turn on the lights.

Job Name:	Model Numbers:	
Job Number:		

The following can be used per each PowPak® wireless fixture control:

Wired:

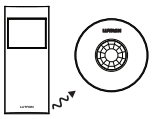


- Maximum of 1 PowPak® fixture sensor.

  Note: Only 1 PowPak® wireless fixture sensor can be wired per PowPak® fixture control. Grouping more than 1 PowPak® wireless fixture sensor to control a group of PowPak® wireless fixture controls requires adding a Vive™ hub.

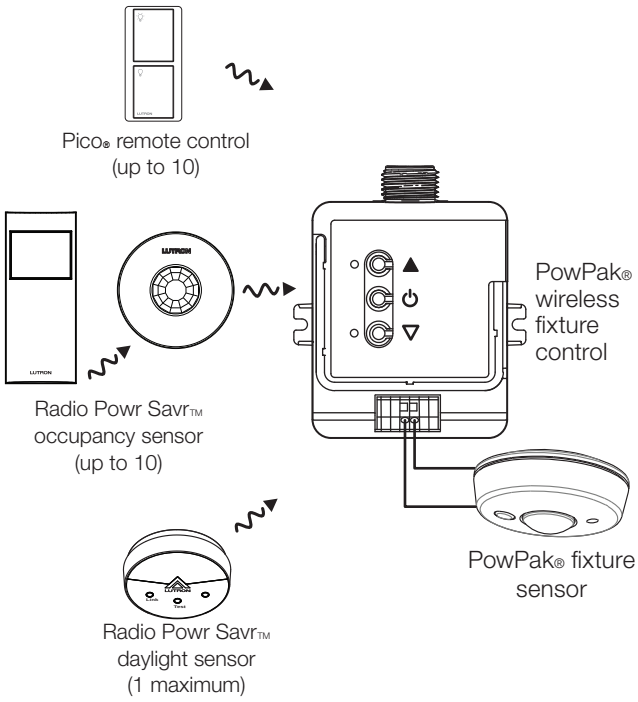
Wireless:

- Maximum of 10 Pico® remote controls



- Maximum of 10 Radio Powr Savr™ occupancy sensors

- Maximum of 1 Radio Powr Savr™ daylight sensor



Notes:

- When using a Radio Powr Savr™ daylight sensor in conjunction with both a PowPak® wireless fixture control and PowPak® fixture sensor, the Radio Powr Savr™ daylight sensor will provide the daylighting input to the control module, and the PowPak® fixture sensor daylighting input will be ignored.
- When using a Radio Powr Savr™ occupancy sensor in conjunction with both a PowPak® wireless fixture control and PowPak® fixture sensor, occupancy data from both sensors is used; either one detecting occupancy will turn the lights on, and the lights turn off only when both sensors have gone vacant (no longer detect occupancy).
- Grouping can be accomplished by following the basic procedure described in the install guide found at www.lutron.com for putting multiple control modules into association mode. This enables a Radio Powr Savr™ occupancy sensor or Radio Powr Savr™ daylight sensor to group and control more than one fixture together.
- Radio Powr Savr™ occupancy sensors can be used with the PowPak® fixture sensor to add coverage area.

Job Name:	Model Numbers:	
Job Number:		

PROJECT NAME	
CATALOG NUMBER	
NOTES	
FIXTURE TYPE	

EM-H Series

UL Listed LED Emergency Driver

Unrivaled emergency solutions for LED Product with internal driver

PRODUCT DESCRIPTION

The OKT'S LED emergency drivers are UL Listed for factory or field installation, unrivaled emergency solutions for LED product with internal driver. It allows the same LED luminaire to be used for normal and emergency operation and works in conjunction with an AC LED driver that convert new or existing LED fixtures into emergency lighting. It adopt a long-life recyclable Lithium battery, and are backed by a 5-Year Warranty. It is available in a variety of wattage, providing solutions for 8, 16 and 25 watt applications.

1.The EM-H08170-XX is for use with an LED load up to 8W at a rated voltage of 170V DC.
2.The EM-H16170-XX is for use with an LED load up to 16W at a rated voltage of 170V DC.
3.The EM-H25170-XX is for use with an LED load up to 25W at a rated voltage of 170V DC.

OPERATION

When AC power fails, OKT'S EM-H Series emergency LED driver immediately switches to the emergency mode, operating the LEDs at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the emergency driver automatically returns to the charging mode.

FEATURES

1. Long life recyclable Lithium battery.
2. Integration of test switch and charge indicator
3. Used for exterior or interior of luminaire
4. THE Power of led luminaire ≤power of emergency driver
5. Self-test function available

Mounting configuration:

Each unit is available in four different mounting configurations to accommodate various performance requirement and fixtures types.

- Single Flex (Standard Version)

Mounts to the junction box and provides flexible conduit for remote mounting of the test accessories.

- Dual Flex (Optional)

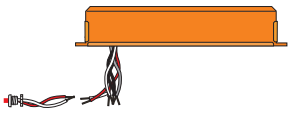
Provides dual flex for wiring to both the fixture or driver compartment and test accessories.

- Integral Non-Flex (Optional)

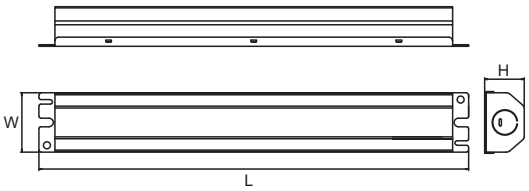
Allows for integral installation within the driver compartment. May also be mounted atop the fixture when used with a TMK cover accessory.

- Top-Mount Non-Flex (Optional)

Top-mounting option for running wires directly into the driver compartment. Test accessories are then installed within the fixture.



Dimensions



Model	L	W	H
EM-H08170-XX	14.80"	2.13"	1.38"
EM-H16170-XX	17.14"	2.13"	1.38"
EM-H25170-XX	17.14"	2.13"	1.57"

EM-H08170-XX

Output Power
8 Watts

Output Voltage
170V DC

Input Current
35 mA (Max)

Input Power
5 Watts (Max)

Input Voltage
100-277VAC, 50-60Hz

Emergency Operation
≥90 Minutes

Operating Temp
0° to 50° C

Battery
Lithium

Recharge
24 Hrs

Dimension
L 14.80" x W 2.13" x H 1.38"

EM-H16170-XX

Output Power
16 Watts

Output Voltage
170V DC

Input Current
50 mA (Max)

Input Power
6 Watts (Max)

Input Voltage
100-277VAC, 50-60Hz

Emergency Operation
≥90 Minutes

Operating Temp
0° to 50° C

Battery
Lithium

Recharge
24 Hrs

Dimension
L 17.14" x W 2.13" x H 1.38"

EM-H25170-XX

Output Power
25 Watts

Output Voltage
170V DC

Input Current
60 mA (Max)

Input Power
8 Watts (Max)

Input Voltage
100-277VAC, 50-60Hz

Emergency Operation
≥90 Minutes

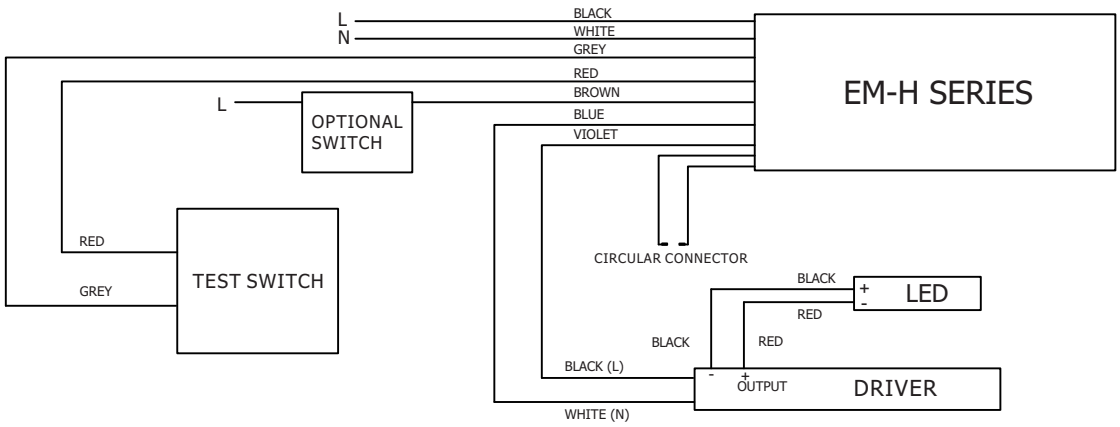
Operating Temp
0° to 50° C

Battery
Lithium

Recharge
36 Hrs

Dimension
L 17.14" x W 2.13" x H 1.57"

TYPICAL WIRING DIAGRAM



Functional Devices, Inc.
101 Commerce Drive
Sharpsville, IN 46068

Toll Free: (800) 888-5538
Office: (765) 883-5538
Fax: (765) 883-7505

Email: sales@functionaldevices.com
Website: www.functionaldevices.com

ESRN and ESRB

Features

Perfect for emergency lighting automatic load control applications.

- Automatic load control override
- Normal control of emergency lighting
- Coil input range: 120 Vac through 277 Vac
- LED indicators for normal voltage, emergency voltage, and load status
- 10 Amp and 20 Amp SPST magnetic ballast and tungsten ratings
- LED rating - Up to 16 Amp electronic ballast rating
- 0-10 Vdc dimmer override
- Remote control/test capability (model ESRTB)
- Nipple mount, wall mount, or ballast channel mount
- Made in the U.S.A.

Applications

By using our Automatic Load Control Relays, you are able to complete your emergency lighting applications.

- High contact ratings allow for multiple loads on a single relay unit.
- Emergency lighting can be controlled under normal conditions using the switch input.
- Under normal operation, emergency light can be controlled by a controller using the dry contact input.
- The dry contact output can be used to override 0-10 V dimmers to full brightness (or for feedback to controllers, etc.)
- The on-board local test button and LEDs allow for installation to be tested immediately.
- A two second self-test of the unit is performed every time the wall switch input is turned off.
- Remote test capability allows for a button, switch, controller, fire alarm panel, etc. to be conveniently mounted anywhere desired. [Class 2 acceptable] See model ESRTB (remote test button).
- Different housings allow for wall or nipple mount (model ESRN), or ballast channel mount (model ESRB).

UL924 Emergency Lighting Automatic Load Control Relays

Quick Reference Chart

		Coil Voltage				Test Procedures					
Model #	UL	AC/DC	AC	Contacts	Resistive	Local Test Button	Self Test	Remote Test	Dimmer Override	Ballast Channel Mount	Nipple Mount
ESRN	•		120-277	SPST	20 A	•	•	•	•		•
ESRB	•		120-277	SPST	10 A	•	•	•	•	•	
ESRTB *	•					•					

UL = UL924; Emergency Lighting

* Remote Test Button accessory available separately.

Functional Devices, Inc.
101 Commerce Drive
Sharpsville, IN 46068

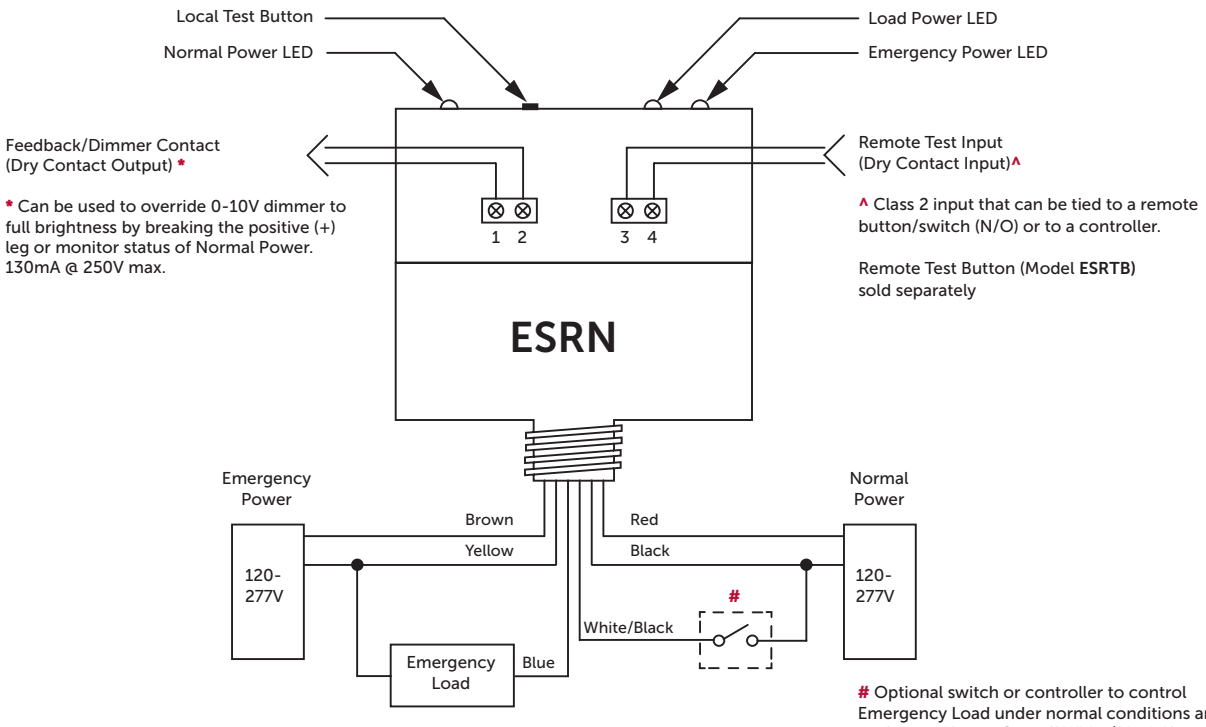
Toll Free: (800) 888-5538
Office: (765) 883-5538
Fax: (765) 883-7505

Email: sales@functionaldevices.com
Website: www.functionaldevices.com

Wiring Information

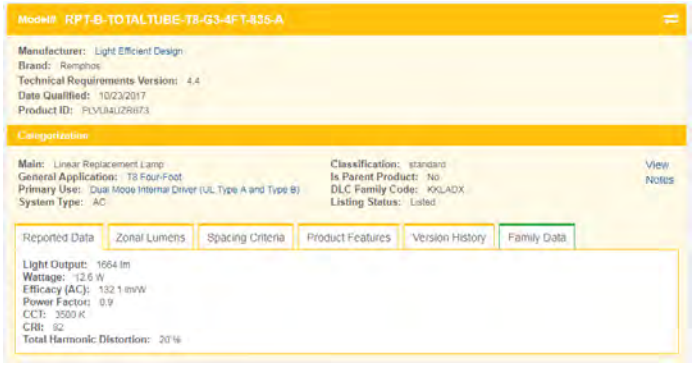
Wiring Descriptions

Wire Color	Description	Notes
BLACK	Normal Hot	Can be different voltage than Emergency.
WHITE/BLACK	Switch Input (Self-Test Input)	WHITE/BLACK wires must be from same branch circuit as BLACK and RED. When switched off, a two second delay keeps the load on to test emergency power. This does not test feedback/dimmer output.
RED	Normal Neutral or other Phase	Can be different voltage than Emergency.
BROWN	Emergency Hot	–
BLUE	Emergency Hot Switched to Load	Switches out the voltage from BROWN
YELLOW	Emergency Neutral or other Phase	–
WHITE/BLUE (ESRB) Terminal Screw 4 (ESRN)	Remote Test Input (Class 2, Dry Contact Input)	When wiring multiple units together, WHITE/BLUE or Terminal Screw 4 must be a shared common. Test is performed when Input is CLOSED.
WHITE/RED (ESRB) Terminal Screw 3 (ESRN)		
VIOLETS (ESRB) Terminal Screws 1, 2 (ESRN)	Feedback/Dimmer Contact (Dry Contact Output) **Switch Input does not test this output.**	Output is OPEN when normal power is absent or Remote Test Input is CLOSED. Output is CLOSED when normal power is present and Remote Test Input is OPEN.

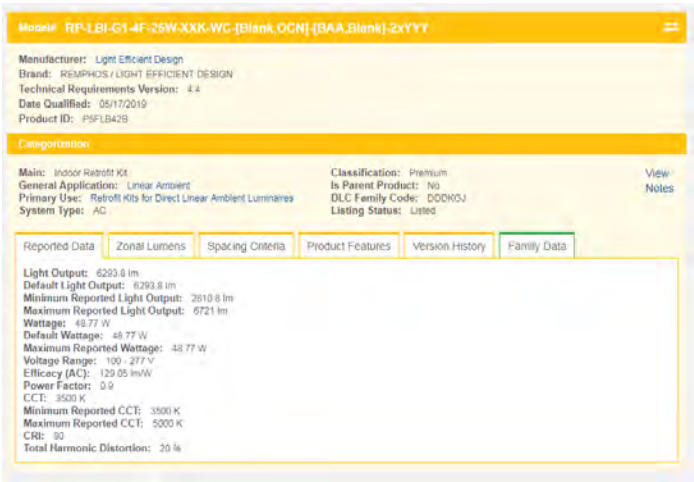


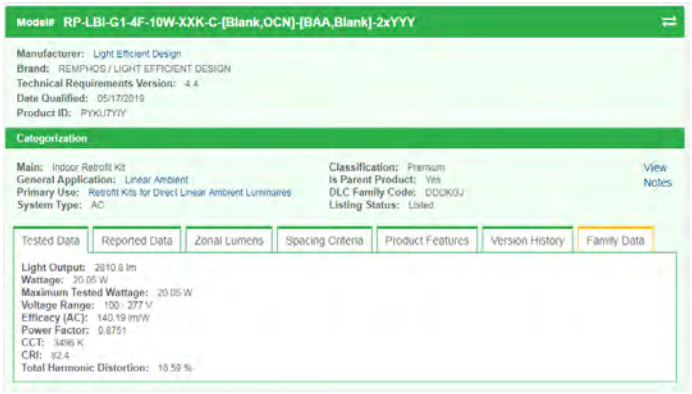
Optional switch or controller to control Emergency Load under normal conditions and perform self-test. Cap off White/Black if not used.

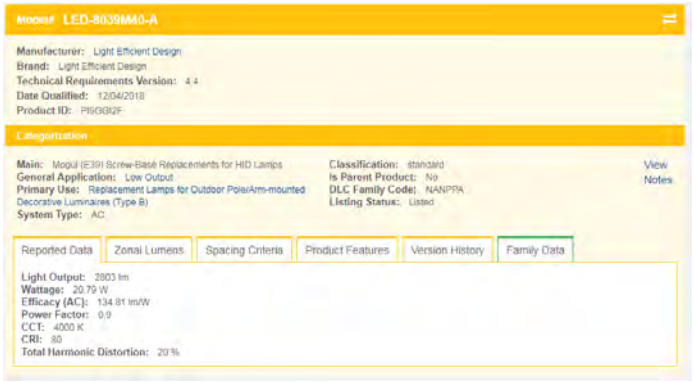
111618

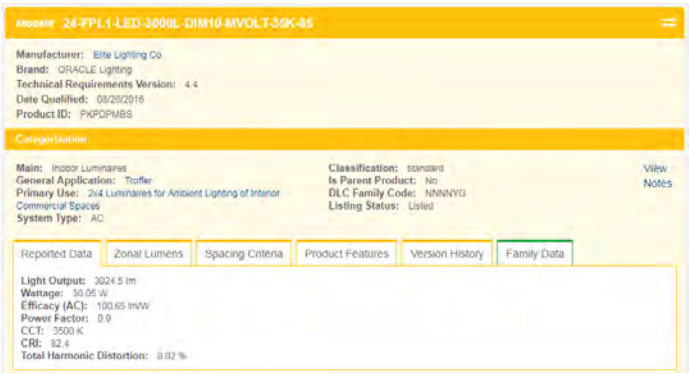

Model# RPT-8-TOTALTUBE-T8-G3-4FT-835-A
Manufacturer: Light Efficient Design
Brand: Remphos
Technical Requirements Version: 4.4
Date Qualified: 10/23/2017
Product ID: PLVU4UZR673
Categorization
Main: Linear Replacement Lamp
General Application: T8 Four-Foot
Primary Use: Dual Mode Internal Driver (UL Type A and Type B)
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: KKLADX
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 1664 lm
Wattage: 12.6 W
Efficacy (AC): 132.1 lm/W
Power Factor: 0.9
CCT: 3500 K
CRI: 82
Total Harmonic Distortion: 20 %

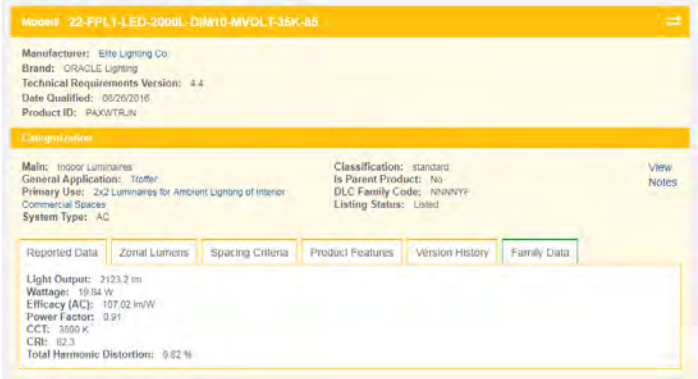

Model# RPT-8-TOTALTUBE-T8-G3-2FT-835-A
Manufacturer: Light Efficient Design
Brand: Remphos
Technical Requirements Version: 4.4
Date Qualified: 10/23/2017
Product ID: PLVR3LCNP3W
Categorization
Main: Linear Replacement Lamp
General Application: T8 Two-Foot
Primary Use: Replacement Lamps (plug and play) (UL Type A)
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: KKLADW
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 1249 lm
Wattage: 10.48 W
Efficacy (AC): 119.2 lm/W
Power Factor: 0.9
CCT: 3500 K
CRI: 82
Total Harmonic Distortion: 20 %


Model# RP-LBI-G1-4F-25W-XXK-WC-[Blank,OCN]-[BAA,Blank]-2xYYY
Manufacturer: Light Efficient Design
Brand: REMPHOS / LIGHT EFFICIENT DESIGN
Technical Requirements Version: 4.4
Date Qualified: 05/17/2019
Product ID: P5FLB42B
Categorization
Main: Indoor Retrofit Kit
General Application: Linear Ambient
Primary Use: Retrofit Kits for Direct Linear Ambient Luminaires
System Type: AC
Classification: Premium
Is Parent Product: No
DLC Family Code: DDDK6J
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 6293.6 lm
Default Light Output: 6293.6 lm
Minimum Reported Light Output: 2610.8 lm
Maximum Reported Light Output: 6721 lm
Wattage: 48.77 W
Default Wattage: 48.77 W
Maximum Reported Wattage: 48.77 W
Voltage Range: 100 - 277 V
Efficacy (AC): 129.05 lm/W
Power Factor: 0.9
CCT: 3500 K
Minimum Reported CCT: 3500 K
Maximum Reported CCT: 5000 K
CRI: 80
Total Harmonic Distortion: 20 %


Model# RP-LBI-G1-4F-10W-XXK-C-[Blank,OCN]-[BAA,Blank]-2xYYY
Manufacturer: Light Efficient Design
Brand: REMPHOS / LIGHT EFFICIENT DESIGN
Technical Requirements Version: 4.4
Date Qualified: 05/17/2019
Product ID: PYKU7YIY
Categorization
Main: Indoor Retrofit Kit
General Application: Linear Ambient
Primary Use: Retrofit Kits for Direct Linear Ambient Luminaires
System Type: AC
Classification: Premium
Is Parent Product: Yes
DLC Family Code: DDDK6J
Listing Status: Listed
View Notes
Tested Data
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 2810.8 lm
Wattage: 20.05 W
Maximum Tested Wattage: 20.05 W
Voltage Range: 100 - 277 V
Efficacy (AC): 140.19 lm/W
Power Factor: 0.8751
CCT: 3496 K
CRI: 82.4
Total Harmonic Distortion: 18.59 %

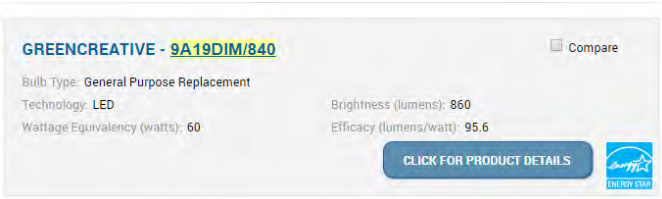

Model# LED-8039M40-A
Manufacturer: Light Efficient Design
Brand: Light Efficient Design
Technical Requirements Version: 4.4
Date Qualified: 12/04/2018
Product ID: P9GGB2F
Categorization
Main: Mogul (E39) Screw-Base Replacements for HID Lamps
General Application: Low Output
Primary Use: Replacement Lamps for Outdoor Pole/Arm-mounted Decorative Luminaires (Type B)
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: NANPPA
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 2803 lm
Wattage: 20.79 W
Efficacy (AC): 134.81 lm/W
Power Factor: 0.9
CCT: 4000 K
CRI: 80
Total Harmonic Distortion: 20 %


Model# 24-FPL1-LED-3000L-DIM10-MVOLT-35K-85
Manufacturer: Elite Lighting Co
Brand: ORACLE Lighting
Technical Requirements Version: 4.4
Date Qualified: 08/26/2016
Product ID: PKPDPMBS
Categorization
Main: Indoor Luminaires
General Application: Troffer
Primary Use: 2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: NNNNYG
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 3024.5 lm
Wattage: 30.05 W
Efficacy (AC): 100.65 lm/W
Power Factor: 0.9
CCT: 3500 K
CRI: 82.4
Total Harmonic Distortion: 8.02 %

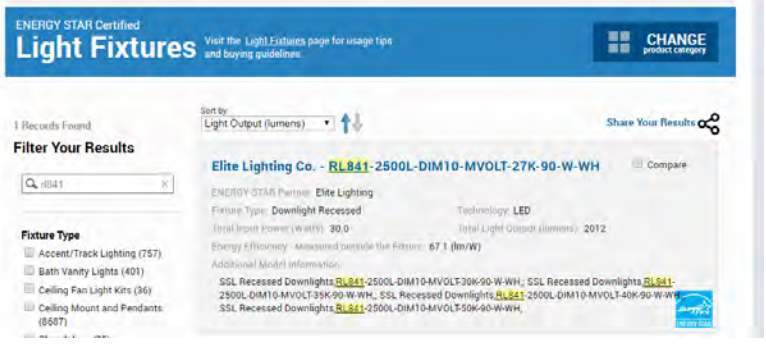

Model# 22-FPL1-LED-2000L-DIM10-MVOLT-35K-85
Manufacturer: Elite Lighting Co
Brand: ORACLE Lighting
Technical Requirements Version: 4.4
Date Qualified: 08/26/2016
Product ID: PAXWTRJN
Categorization
Main: Indoor Luminaires
General Application: Troffer
Primary Use: 2x2 Luminaires for Ambient Lighting of Interior Commercial Spaces
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: NNNNYF
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 2123.2 lm
Wattage: 19.84 W
Efficacy (AC): 107.02 lm/W
Power Factor: 0.91
CCT: 3500 K
CRI: 82.3
Total Harmonic Distortion: 9.82 %


Model# ES40S-A1-17K-4MS-40-80-CL-LV-[All Mounting]-[All OCC Sensors or blank]-[All Cord & Plug or blank]-[EMB, QDC, SRG, BOX, CTRWT, CTRLR, CTOPEND, or WET]-10V
Manufacturer: Flex Lighting Solutions
Brand: FLEX LIGHTING SOLUTIONS
Technical Requirements Version: 4.4
Date Qualified: 11/17/2017
Product ID: PZY4C4LA
Categorization
Main: Indoor Luminaires
General Application: High-Bay
Primary Use: High-Bay Luminaires for Commercial and Industrial Buildings
System Type: AC
Classification: Premium
Is Parent Product: No
DLC Family Code: ODDAMS
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 17295.5 lm
Wattage: 121.90 W
Efficacy (AC): 141.81 lm/W
Power Factor: 0.998
CCT: 4000 K
CRI: 80
Total Harmonic Distortion: 7.8 %


Model# DSXF1 LED P1 40K MFL xxxxx xxxxxxxxx xx x xxxxx (120V-277V)
Manufacturer: Acuity Brands Lighting
Brand: Lithonia Lighting
Technical Requirements Version: 4.4
Date Qualified: 11/10/2016
Product ID: PCVD7D1Y
Categorization
Main: Outdoor Luminaires
General Application: Low Output
Primary Use: Architectural Flood and Spot Luminaires
System Type: AC
Classification: Premium
Is Parent Product: No
DLC Family Code: PPPRLV
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 2692 lm
Wattage: 21 W
Efficacy (AC): 128.1 lm/W
Power Factor: 0.96
CCT: 4000 K
CRI: 70
Total Harmonic Distortion: 8.35 %


GREENCREATIVE - 9A19DIM/840
Compare
Bulb Type: General Purpose Replacement
Technology: LED
Brightness (lumens): 860
Wattage Equivalency (watts): 60
Efficacy (lumens/watt): 95.6
CLICK FOR PRODUCT DETAILS
ENERGY STAR


5 Records Found
Filter Your Results
Sort by:
Brand Name
Share Your Results
Disclaimer
Best Value
ENERGY STAR® Certified LED bulbs for as low as $1
Price
Under $5 (36)
$5-$10 (64)
$10-$15 (56)
$15-$20 (28)
$20-$30 (4)
$30-$50 (0)
$50+ (2)
GREENCREATIVE - 14BR40DIM/830
Compare
Reflector (Flood/Spot)
LED
CLICK FOR PRODUCT DETAILS


ENERGY STAR Certified
Light Fixtures
Visit the Light Fixtures page for usage tips and buying guidelines.
CHANGE product category
1 Records Found
Filter Your Results
Sort by:
Light Output (lumens)
Share Your Results
Fixture Type
Accent/Track Lighting (757)
Bath Vanity Lights (401)
Ceiling Fan Light Kits (36)
Ceiling Mount and Pendants (8687)
Elite Lighting Co. - RL841-2500L-DIM10-MVOLT-27K-90-W-WH
Compare
ENERGY STAR Partner: Elite Lighting
Fixture Type: Downlight Recessed
Technology: LED
Total Input Power (watts): 30.0
Total Light Output (lumens): 2012
Energy Efficiency - Measured per/side the Fixture: 67.1 (lm/W)
Additional Model Information:
SSL Recessed Downlights RL841-2500L-DIM10-MVOLT-30K-90-W-WH, SSL Recessed Downlights RL841-2500L-DIM10-MVOLT-35K-90-W-WH, SSL Recessed Downlights RL841-2500L-DIM10-MVOLT-40K-90-W-WH, SSL Recessed Downlights RL841-2500L-DIM10-MVOLT-50K-90-W-WH,

RISE ENGINEERING

Williamstown Elementary School-1ST FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-1ST FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
135	WES	1	158	STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	2	1000	42	0.08	84	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	1000	24	0.05	48					0.04	36
136	WES	1		CAFETERIA	A2	1X8 4L4' T8 28W/LP PENDANT	21	2520	83	1.74	4,392	RETROFIT RPT 2L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST	21	2520	50	1.05	2646					0.69	1,746
137	WES	1		CAFETERIA	B5	1X4 2L4' T8 28W/LP PENDANT	8	2520	42	0.34	847	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST	8	2520	25	0.20	504					0.14	343
138	WES	1		CAFETERIA	B6	1X4 2L4' T8 28W/LP PENDANT W/ EMG BATTERY	6	2520	42	0.25	635	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	6	2520	25	0.15	378					0.10	257
139	WES	1	157	STAFF	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
140	WES	1	157	STAFF	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	2520	42	0.04	106	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2520	24	0.02	60					0.02	45
141	WES	1		KITCHEN	C1	2X4 3L4' T8 32W/NP RECESSED PRISMATIC	9	2520	63	0.57	1,429	NEW RPT 2X4 34W LED FLAT PANEL 3500K	9	2520	34	0.31	771					0.26	658
142	WES	1		KITCHEN	B3	1X4 2L4' T8 28W/LP WRAP	2	2520	42	0.08	212	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	24	0.05	121					0.04	91
143	WES	1		KITCHEN	C2	2X4 3L4' T8 32W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	2520	63	0.13	318	NEW RPT 2X4 34W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	2520	34	0.07	171					0.06	146
144	WES	1		KITCHEN HOOD	JJ1	18W CFL JELLY JAR-KITCHEN HOOD	3	1000	20	0.06	60	RELAMP 9W LED SCREW-IN ENCLOSED	3	1000	9	0.03	27					0.03	33
145	WES	1		KITCHEN WALK IN COOLERS	JJ1	18W CFL JELLY JAR-KITCHEN HOOD	2	1000	20	0.04	40	RELAMP 9W LED SCREW-IN ENCLOSED	2	1000	9	0.02	18					0.02	22
146	WES	1	156	UNISEX TOILET	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1760	20	0.02	35					0.02	30
147	WES	1	161	STORAGE RM	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	1	1000	42	0.04	42	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	1	1000	20	0.02	20					0.02	22
148	WES	1		VESTIBULE	B5	1X4 2L4' T8 28W/LP PENDANT	2	8760	42	0.08	736	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST	2	8760	25	0.05	438					0.03	298
149	WES	1		VESTIBULE	B6	1X4 2L4' T8 28W/LP PENDANT W/ EMG BATTERY	2	8760	42	0.08	736	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	2	8760	25	0.05	438					0.03	298
150	WES	1		MAIN CORRIDOR	B6	1X4 2L4' T8 28W/LP PENDANT W/ EMG BATTERY	11	4992	42	0.46	2,306	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	11	4992	25	0.28	1373					0.19	934
151	WES	1		MAIN CORRIDOR	WM1	1X4 1L4' F40 BIAX 22" PENDANT DIRECT	4	4992	46	0.18	919	RELAMP RPT 1L22" BIAX 20W LED 3000K/BYPASS BALLAST	4	4992	20	0.08	399					0.10	519
152	WES	1	154/155	RESTROOMS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1760	20	0.04	70					0.03	60
153	WES	1	154/155	RESTROOMS	D2	2X2 2L2' T8 17W/NP RECESSED PRISMATIC	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	2	1760	20	0.04	70					0.03	60
154	WES	1		GYM	G1	1X4 6L4' T8 32W/HL HIF HIGHBAY W/ OCC SENSOR	24	3744	224	5.38	20,128	NEW 1X4 FLEX 122W LED HIGHBAY W/ OCC SENSOR	24	3744	122	2.93	10962					2.45	9,165
155	WES	1	150	GYM STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	3	1000	42	0.13	126	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	1000	24	0.07	72					0.05	54
156	WES	1	152	PHYS ED	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	6	2520	45	0.27	680	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	6	2520	20	0.12	302					0.15	378
157	WES	1		CORRIDOR TO CUSTODIAN	B6	1X4 2L4' T8 28W/LP PENDANT W/ EMG BATTERY	4	4992	42	0.17	839	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	4	4992	25	0.10	499					0.07	339
158	WES	1		VESTIBULE	RC1	1L57W CFL RECESSED CAN 8" W/ EMG BATTERY	1	8760	65	0.07	569	NEW ELITE 25W LED RL841 RECESSED CAN 6" 35K W/ EMG BATTERY BACK UP	1	8760	25	0.03	219					0.04	350
159	WES	1	134	ART	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
160	WES	1	134	ART	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
161	WES	1	134	ART UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18

RISE ENGINEERING

Williamstown Elementary School-1ST FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-1ST FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
162	WES	1	134D	ART-KILN	D2	2X2 2L2' T8 17W/NP RECESSED PRISMATIC	1	1000	37	0.04	37	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	1000	20	0.02	20					0.02	17
163	WES	1	136	CUSTODIAN	B3	1X4 2L4' T8 28W/LP WRAP	5	1000	42	0.21	210	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	5	1000	24	0.12	120					0.09	90
164	WES	1	149	MECHANICAL RM	B3	1X4 2L4' T8 28W/LP WRAP	3	1000	42	0.13	126	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	1000	24	0.07	72					0.05	54
165	WES	1	149	MECHANICAL RM	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	9	1000	42	0.38	378	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	9	1000	20	0.18	180					0.20	198
166	WES	1	151	RECYCLING	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
167	WES	1	138	ELECTRIC ROOM	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	2	1000	42	0.08	84	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	2	1000	20	0.04	40					0.04	44
168	WES	1	137	STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
169	WES	1		MAIN CORRIDOR TO MAIN ENTRANCE	B5	1X4 2L4' T8 28W/LP PENDANT	11	4992	42	0.46	2,306	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST	11	4992	25	0.28	1373					0.19	934
170	WES	1		MAIN CORRIDOR TO MAIN ENTRANCE	B6	1X4 2L4' T8 28W/LP PENDANT W/ EMG BATTERY	15	4992	42	0.63	3,145	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	15	4992	25	0.38	1872					0.26	1,273
171	WES	1		MAIN CORRIDOR TO MAIN ENTRANCE	WM1	1X4 1L4' F40 BIAX 22" PENDANT DIRECT	4	4992	46	0.18	919	RELAMP RPT 1L22" BIAX 20W LED 3000K/BYPASS BALLAST	4	4992	20	0.08	399					0.10	519
172	WES	1		MAIN CORRIDOR TO MAIN ENTRANCE	RC1	1L57W CFL RECESSED CAN 8" W/ EMG BATTERY	8	4992	65	0.52	2,596	NEW ELITE 25W LED RL841 RECESSED CAN 6" 35K W/ EMG BATTERY BACK UP	8	4992	25	0.20	998					0.32	1,597
173	WES	1		MAIN CORRIDOR TO MAIN ENTRANCE	RC2	1L57W CFL RECESSED CAN 8"	2	4992	65	0.13	649	NEW ELITE 25W LED RL841 RECESSED CAN 6" 35K	2	4992	25	0.05	250					0.08	399
174	WES	1		MAIN CORRIDOR TO MAIN ENTRANCE	P2	2-2L F36 BIAX 16" PENDANT BOWL	4	4992	148	0.59	2,955	RELAMP RPT 4L16" BIAX 15W LED 3000K/BYPASS BALLAST	4	4992	60	0.24	1198					0.35	1,757
175	WES	1		FRONT ENTRANCE VESTIBULE	RC1	1L57W CFL RECESSED CAN 8" W/ EMG BATTERY	2	8760	65	0.13	1,139	NEW ELITE 25W LED RL841 RECESSED CAN 6" 35K W/ EMG BATTERY BACK UP	2	8760	25	0.05	438					0.08	701
176	WES	1		AUDITORIUM STAIRWAY	ST1	1X4 1L4' T8 32W/NP WALL MNT STAIRWAY W/ EMG BATTERY	2	8760	22	0.04	385	RETROFIT RPT 1L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	2	8760	10	0.02	175					0.02	210
177	WES	1		CORRIDOR TO 147	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	3	4992	45	0.14	674	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	3	4992	20	0.06	300					0.08	374
178	WES	1		CORRIDOR TO 147	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	3	4992	45	0.14	674	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	3	4992	20	0.06	300					0.08	374
179	WES	1	140	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
180	WES	1	140	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
181	WES	1	140	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
182	WES	1	139	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
183	WES	1	139	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
184	WES	1	139	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
185	WES	1	146	SMALL GROUP RM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	126	0.25	635	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	72	0.14	363					0.11	272
186	WES	1	146	SMALL GROUP RM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	63	0.13	318	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	36	0.07	181					0.05	136
187	WES	1	144/145	RESTROOMS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1760	20	0.04	70					0.03	60
188	WES	1	142	RESTROOMS-ADULT	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1760	20	0.02	35					0.02	30

RISE ENGINEERING

Williamstown Elementary School-1ST FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-1ST FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
189	WES	1	143	CUSTODIAN	D2	2X2 2L2' T8 17W/NP RECESSED PRISMATIC	1	1000	37	0.04	37	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	1000	20	0.02	20					0.02	17
190	WES	1	148	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
191	WES	1	148	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
192	WES	1	148	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
193	WES	1	147	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
194	WES	1	147	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
195	WES	1	147	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
196	WES	1		STAIRWAY	ST2	1X8 2L4' T8 32W/NP WALL MNT STAIRWAY W/ EMG BATTERY	3	8760	42	0.13	1,104	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	3	8760	20	0.06	526					0.07	578
197	WES	1	141	STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
198	WES	1	135	TECHNOLOGY	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
199	WES	1	135	TECHNOLOGY	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	63	0.13	318	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	36	0.07	181					0.05	136
200	WES	1	131	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	1	2520	126	0.13	318	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2520	72	0.07	181					0.05	136
201	WES	1	131	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	1	2520	63	0.06	159	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2520	36	0.04	91					0.03	68
202	WES	1	132	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
203	WES	1	132	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
204	WES	1	132	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
205	WES	1	133	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	126	0.50	1,270	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	72	0.29	726					0.22	544
206	WES	1	133	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
207	WES	1	133A	STORAGE RM	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
208	WES	1	130	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	1	2520	126	0.13	318	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2520	72	0.07	181					0.05	136
209	WES	1	129	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	1	2520	126	0.13	318	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2520	72	0.07	181					0.05	136
210	WES	1	127/128	RESTROOMS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	2	1760	20	0.04	70					0.03	60
211	WES	1	127/128	RESTROOMS	D2	2X2 2L2' T8 17W/NP RECESSED PRISMATIC	2	1760	37	0.07	130	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	2	1760	20	0.04	70					0.03	60
212	WES	1	126	CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
213	WES	1	126	CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
214	WES	1	126	CLASSROOM UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
215	WES	1	126A	TOILET	D2	2X2 2L2' T8 17W/NP RECESSED PRISMATIC	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	1760	20	0.02	35					0.02	30

RISE ENGINEERING

Williamstown Elementary School-1ST FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-1ST FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
216	WES	1		CLOSET	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
217	WES	1	108	MACHINE	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
218	WES	1	108	MACHINE	B4	1X4 2L4' T8 28W/LP WRAP W/ EMG BATTERY	1	1000	42	0.04	42	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	1	1000	20	0.02	20					0.02	22
219	WES	1	108A	PLANNING	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	4	2080	45	0.18	374	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	4	2080	20	0.08	166					0.10	208
220	WES	1		VESTIBULE	RC1	1L57W CFL RECESSED CAN 8" W/ EMG BATTERY	2	8760	65	0.13	1,139	NEW ELITE 25W LED RL841 RECESSED CAN 6" 35K W/ EMG BATTERY BACK UP	2	8760	25	0.05	438					0.08	701
221	WES	1		STAIRWAY	ST1	1X4 1L4' T8 32W/NP WALL MNT STAIRWAY W/ EMG BATTERY	2	8760	22	0.04	385	RETROFIT RPT 1L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	2	8760	10	0.02	175					0.02	210
222	WES	1	107	HEALTH	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	1	2080	45	0.05	94	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2080	20	0.02	42					0.03	52
223	WES	1	107	HEALTH	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	8	2080	45	0.36	749	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	8	2080	20	0.16	333					0.20	416
224	WES	1	107A	TOILET	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1760	20	0.02	35					0.02	30
225	WES	1	107B	HEALTH	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	1	2080	45	0.05	94	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2080	20	0.02	42					0.03	52
226	WES	1	107B	HEALTH	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	1	2080	45	0.05	94	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	2080	20	0.02	42					0.03	52
227	WES	1	100	ADMINISTRATION	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	5	2080	126	0.63	1,310	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	5	2080	72	0.36	749					0.27	562
228	WES	1	101	CONFERENCE ROOM	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	3	2080	45	0.14	281	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	3	2080	20	0.06	125					0.08	156
229	WES	1		EMPTY OFFICE	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	4	2080	45	0.18	374	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	4	2080	20	0.08	166					0.10	208
230	WES	1		SPED DIRECTOR OFFICE	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	4	2080	45	0.18	374	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	4	2080	20	0.08	166					0.10	208
231	WES	1	104	PRINCIPAL'S OFFICE	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	5	2080	45	0.23	468	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	5	2080	20	0.10	208					0.13	260
232	WES	1	105	BUSINESS OFFICE	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	5	2080	45	0.23	468	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	5	2080	20	0.10	208					0.13	260
233	WES	1	106	WORKROOM	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	2	2080	45	0.09	187	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	2	2080	20	0.04	83					0.05	104
234	WES	1		KITCHEN	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	1	2080	63	0.06	131	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2080	36	0.04	75					0.03	56
235	WES	1	100B	TOILET	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	1	1760	45	0.05	79	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	1	1760	20	0.02	35					0.03	44
236	WES	1	100A	CONFERENCE ROOM	B7A	1X4 2L4' T8 32W/NP PENDANT INDIRECT	7	2080	60	0.42	874	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	7	2080	24	0.17	349					0.25	524
237	WES	1	100A	CONFERENCE ROOM	B7B	1X4 1L4' F40 BIAX 22" PENDANT DIRECT	7	2080	46	0.32	670	RELAMP RPT 1L22" BIAX 20W LED 3000K/BYPASS BALLAST	7	2080	20	0.14	291					0.18	379
238	WES	1		CORRIDOR TO KINDER-1	D3	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC W/ EMG BATTERY	7	4992	45	0.32	1,572	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	7	4992	20	0.14	699					0.18	874
239	WES	1		CORRIDOR TO KINDER-1	D4	2X2 2L4' T8U 30W/NP RECESSED PARABOLIC	7	4992	45	0.32	1,572	NEW ELITE 2X2 20W LED FLAT PANEL 3500K	7	4992	20	0.14	699					0.18	874
240	WES	1		CORRIDOR TO KINDER-1	B5	1X4 2L4' T8 28W/LP PENDANT	3	4992	42	0.13	629	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST	3	4992	25	0.08	374					0.05	255
241	WES	1		CORRIDOR TO KINDER-1	B6	1X4 2L4' T8 28W/LP PENDANT W/ EMG BATTERY	3	4992	42	0.13	629	RETROFIT RPT 1L4' 25W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	3	4992	25	0.08	374					0.05	255
242	WES	1		PRE-KINDER SUITE	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	3	2520	63	0.19	476	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	3	2520	36	0.11	272					0.08	204

RISE ENGINEERING

Williamstown Elementary School-1ST FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-1ST FLOOR

LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
243	WES	1	124	PRE-KINDER CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
244	WES	1	124	PRE-KINDER CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
245	WES	1	124	PRE-KINDER UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
246	WES	1	123	VESTIBULE	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	8760	126	0.25	2,208	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	8760	72	0.14	1261					0.11	946
247	WES	1	123A/B/C	TOILETS	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	3	1760	37	0.11	195	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	3	1760	20	0.06	106					0.05	90
248	WES	1	122	PRE-KINDER CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
249	WES	1	122	PRE-KINDER CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
250	WES	1	122	PRE-KINDER UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
251	WES	1	120	PRIMARY CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	5	2520	126	0.63	1,588	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	5	2520	72	0.36	907					0.27	680
252	WES	1	120	PRIMARY CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
253	WES	1	120	PRIMARY UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
254	WES	1	120A	TOILET	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1760	20	0.02	35					0.02	30
255	WES	1	121	PRIMARY CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	5	2520	126	0.63	1,588	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	5	2520	72	0.36	907					0.27	680
256	WES	1	121	PRIMARY CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	63	0.38	953	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	36	0.22	544					0.16	408
257	WES	1	121	PRIMARY UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
258	WES	1	121A	TOILET	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1760	20	0.02	35					0.02	30
259	WES	1	111	ELECTRIC RM	B3	1X4 2L4' T8 28W/LP WRAP	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
260	WES	1	118	CUSTODIAN	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1000	37	0.04	37	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1000	20	0.02	20					0.02	17
261	WES	1		STAIRWAY	ST2	1X8 2L4' T8 32W/NP WALL MNT STAIRWAY W/ EMG BATTERY	3	8760	42	0.13	1,104	RETROFIT RPT 2L4' 10W LBI INTERNAL DRIVER 3500K/BYPASS BALLAST/REPLACE EMG BATTERY BACK UP	3	8760	20	0.06	526					0.07	578
262	WES	1	116	ACTIVITY ROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	2	2520	126	0.25	635	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	2	2520	72	0.14	363					0.11	272
263	WES	1	116	ACTIVITY ROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	1	2520	63	0.06	159	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	2520	36	0.04	91					0.03	68
264	WES	1	117	TOILET	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	1760	37	0.04	65	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	1760	20	0.02	35					0.02	30
265	WES	1	115	PRIMARY CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
266	WES	1	115	PRIMARY CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
267	WES	1	115	PRIMARY UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
268	WES	1	114	PRIMARY CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
269	WES	1	114	PRIMARY CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272

RISE ENGINEERING

Williamstown Elementary School-1ST FLOOR c/o Mount Greylock Regional School
115 Church Street
Williamstown MA 01267
Rob Wnuk

ECM: LED Lighting Upgrades-1ST FLOOR

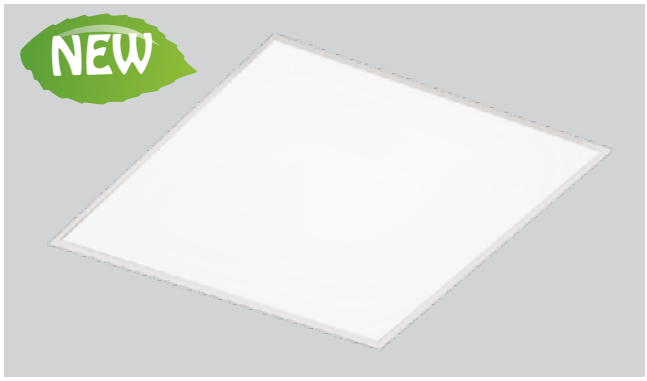
LOCATION						EXISTING CONDITIONS						PROPOSED CONDITIONS						SENSOR DETAIL				ENERGY SAVINGS	
Line Item	Building	Floor	Room Number / Description	Room Name	Fixture Type	Existing Fixture Type	Fixt. Qty	Existing Hours	Watts	kW	kWh	Proposed Fixture Type	Fixt Qty	Proposed Hours	Watts	kW	kWh	Sensor Model #	Sensor Qty	Power Pack Model #	Power Pack Qty	kW Saved	kWh Saved
270	WES	1	114	PRIMARY UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
271	WES	1	114	PRIMARY CLASSROOM	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	2520	37	0.04	93	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2520	20	0.02	50					0.02	43
272	WES	1	112	PRIMARY CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
273	WES	1	112	PRIMARY CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
274	WES	1	112	PRIMARY UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
275	WES	1	112	PRIMARY CLASSROOM	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	2520	37	0.04	93	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2520	20	0.02	50					0.02	43
276	WES	1	113	PRIMARY CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
277	WES	1	113	PRIMARY CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
278	WES	1	113	PRIMARY UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
279	WES	1	113	PRIMARY CLASSROOM	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	2520	37	0.04	93	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2520	20	0.02	50					0.02	43
280	WES	1	109	PRIMARY CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
281	WES	1	109	PRIMARY CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
282	WES	1	109	PRIMARY UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
283	WES	1	109	PRIMARY CLASSROOM	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	2520	37	0.04	93	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2520	20	0.02	50					0.02	43
284	WES	1	110	PRIMARY CLASSROOM	A1	1X8 6L4' T8 28W/LP DIRECT/INDIRECT PENDANT	6	2520	126	0.76	1,905	RELAMP RPT 6L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	6	2520	72	0.43	1089					0.32	816
285	WES	1	110	PRIMARY CLASSROOM	B1	1X4 3L4' T8 28W/LP DIRECT/INDIRECT PENDANT	4	2520	63	0.25	635	RELAMP RPT 3L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	4	2520	36	0.14	363					0.11	272
286	WES	1	110	PRIMARY UNDER CABINET	B2	1X4 2L4' T8 28W/LP WALL MNT/UNDER CABINET	1	1000	42	0.04	42	RELAMP RPT 2L4' T8 12W TOTALTUBE G3 LED 3500K/BYPASS BALLAST	1	1000	24	0.02	24					0.02	18
287	WES	1	110	PRIMARY CLASSROOM	D1	2X2 2L2' T8 17W/NP RECESSED PRISMATIC W/ EMG BATTERY	1	2520	37	0.04	93	NEW ELITE 2X2 20W LED FLAT PANEL 3500K W/ EMG BATTERY BACK UP	1	2520	20	0.02	50					0.02	43
TOTALS							**537**			**40.76**	**121,662**		**537**			**22.30**	**65706**		**0**			**18.47**	**55,957**

Prepared: 6/5/2019

FLAT LED PANEL SERIES

2' X 2' FLAT LED PANEL

Catalog Number	-FPL1-LED
Project Name	
Type	



IC RATED

DLC QPL LISTED

* For list of qualified DLC fixture, please consult factory

2000 LUMENS	3000 LUMENS	4000 LUMENS	5000 LUMENS
20 WATT	30 WATT	39 WATT	50 WATT
According to DLC Test Results	According to DLC Test Results	According to DLC Test Results	

The FPL1-LED flat led panel is DLC listed, delivers an exceptional 85+ CRI, while achieving approximately 115 lumens per watt. It is available in 3000K, 3500K, 4000K and 5000K CCT options and has 0-10V dimming, which is perfect for new construction applications or retrofitting existing fluorescent troffer fixtures with recessed installations, widely used in office spaces, major retail stores, education,government, healthcare, and hospitality.

LED CHIP - Tested and approved under LM-80 SMD standards. Active color management maintains superior color consistency over time and temperature. Every fixture is tuned as a complete system to the optimal color point before shipment,ensuring fixture-to-fixture color consistency.

HEAT SINK - The source and radiator distribution in fixture around, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling.This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

OPTICAL SYSTEM - The proprietary optical system utilizes a unique combination of reflective and refractive optical components to achieve a uniform, aesthetically pleasing appearance. Use of a guide plate laser allows high density pixels to shine, creating an even illumination with no glare, while maintaining high efficacy.

THERMAL MANAGEMENT - LED light engines are attached directly to the housing which keeps the engines cool. Our advanced thermal management system allows the light output of the LED engines to be maintained at 70% of initial lumens at 83,000 hours of operation.

DIMMING - The FPL1-LED comes standard with 0-10V dimming on either 120 or 277V. Dimmable down to 1% of initial lumens. Also available in Lutron dimming options. Consult factory for dimmer compatibility.

ELECTRICAL - Powered by high-quality, constant-current power LED drivers which are rated for 50 to 60Hz at 120-277V input, produce less than 20% THD, and have a power factor of .90 to 1.00.

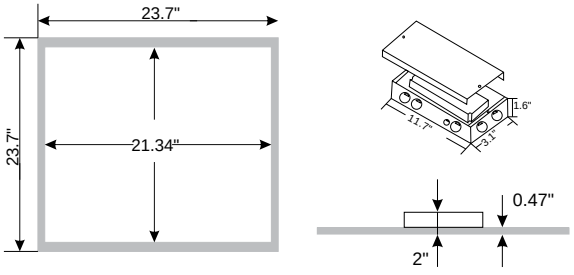
MAINTENANCE - LED engines and driver can be accessed through the bottom by removing hinged door frame and driver box cover. LED engines are removable and upgradable even after fixture installation. Fixture can be regularly and safely wiped down to ensure optimal fixture performance.

OPTIONS - Fixtures can be shipped pre-installed with daylight harvesting controls, occupancy sensors, and/or power pack. Available manufacturer options include Leviton, Wattstopper, Hubble Automation, and others.

QUALITY CONTROL - Every fixture is turned on and rigorously tested by our QC Department before shipping.

LISTING - UL/C-UL listed to US and Canadian standards.
Listed for Damp Location

WARRANTY - Limited 5 Year Warranty



DAMP LOCATION

SAMEDAY SHIPPING
(On selected configuration, consult factory)

PROUDLY ASSEMBLED in AMERICA

Intertek

Ordering Information: Example: 22-FPL1-LED-4000L-DIM10-MVOLT-30K-85

	FPL1	LED							
FIXTURE SIZE	SERIES	TYPE	LUMENS	DIMMING	VOLTAGE	CCT	CRI	EMERGENCY	
22 - 2' X 2'	**FPL1**-Oracle Flat LED Panel	**LED**	**2000L** - (2000 lumens) **3000L** - (3000 lumens) **4000L** - (4000 lumens) **5000L** - (5000 lumens)	**DIM10** - 0-10V Dimming **DIMST** - Step Dimming **LUTH** - Lutron Hilume **OS-OTI** - Osram Optotronic 0-10V Dimming w/ Auxiliary Output **ELD010** - EldoLED 0-10V **ELDODALI** - EldoLED DALI **ELDODMX** - EldoLED DMX	**MVOLT** **347*** * Consult factory for details	**30K** - (3000K) **35K** - (3500K) **40K** - (4000K) **50K** - (5000K)	**85**	**0-EMG-LED**	OTHER OPTIONS **22-FPL1-LED-SMK** - Surface Mount Kit **LMFC-011** - Digital On/Off/0-10V Dimming Fixture Controller **CLM-WCM** - Osram Connected Lighting Module w/ Wireless Control Module

CONTROL OPTIONS

LUTRON

Controls Installed on the Fixture

FCJS-010
Individual
Fixture Control

Fixture Will be Shipped LUTRON VIVE Enabled with LUTRON FCJS-010 0-10V Control Module Installed on the Fixture. Fixtures will be compatible with Lutron FC-SENSOR Occupancy/ Daylight Sensor or FC-VSENSOR Vacancy/Daylight Sensor which can be Added in the Field for Remote Mounting. Fixture May be Controlled with any Vive control systems. Fixtures must be ordered with a 0-10V. Driver.

FCJS-ECO
Individual
Fixture Control

Fixture Will be Shipped LUTRON VIVE Enabled with LUTRON FCJS-ECO EcoSystem Control Module Control Module Installed on the Fixture. Fixtures will be compatible with Lutron FC-SENSOR Occupancy/Daylight Sensor or FC-VSENSOR Vacancy/Daylight Sensor which can be Added in the Field for Remote Mounting. Fixture May be Controlled with any Vive control systems. Fixtures must be ordered with a Lutron Driver.

Controls Provided by Lutron

Lutron
App

Vive Wireless Hub

DayLight
Sensor

Ceiling Mount
Occupancy Sensor

Ceiling Mount
Occupancy/Daylight
Sensor

Wall Mount
Occupancy Sensor

Wall Mount
Switch

Pico
Remote

FPL1-LED SERIES

FLAT LED PANEL SERIES

2' X 4' FLAT LED PANEL

Catalog Number	-FPL1-LED
Project Name	
Type	

IC RATED

DLC QPL LISTED

* For list of qualified DLC fixture, please consult factory

3000 LUMENS	4000 LUMENS	5000 LUMENS	6000 LUMENS
30 WATT	40 WATT	50 WATT	60 WATT
According to DLC Test Results	According to DLC Test Results	According to DLC Test Results	

The FPL1-LED flat led panel is DLC listed, delivers an exceptional 85+ CRI, while achieving approximately 115 lumens per watt. It is available in 3000K, 3500K, 4000K and 5000K CCT options and has 0-10V dimming, which is perfect for new construction applications or retrofitting existing fluorescent troffer fixtures with recessed installations, widely used in office spaces, major retail stores, education,government, healthcare, and hospitality.

LED CHIP - Tested and approved under LM-80 SMD standards. Active color management maintains superior color consistency over time and temperature. Every fixture is tuned as a complete system to the optimal color point before shipment,ensuring fixture-to-fixture color consistency.

HEAT SINK - The source and radiator distribution in fixture around, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling.This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

OPTICAL SYSTEM - The proprietary optical system utilizes a unique combination of reflective and refractive optical components to achieve a uniform, aesthetically pleasing appearance. Use of a guide plate laser allows high density pixels to shine, creating an even illumination with no glare, while maintaining high efficacy.

THERMAL MANAGEMENT - LED light engines are attached directly to the housing which keeps the engines cool. Our advanced thermal management system allows the light output of the LED engines to be maintained at 70% of initial lumens at 83,000 hours of operation.

DIMMING - The FPL1-LED comes standard with 0-10V dimming on either 120 or 277V. Dimmable down to 1% of initial lumens. Also available in Lutron dimming options. Consult factory for dimmer compatibility.

ELECTRICAL - Powered by high-quality, constant-current power LED drivers which are rated for 50 to 60Hz at 120-277V input, produce less than 20% THD, and have a power factor of .90 to 1.00.

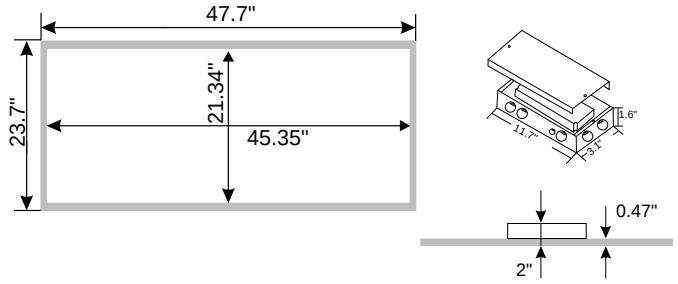
MAINTENANCE - LED engines and driver can be accessed through the bottom by removing hinged door frame and driver box cover. LED engines are removable and upgradable even after fixture installation. Fixture can be regularly and safely wiped down to ensure optimal fixture performance.

OPTIONS - Fixtures can be shipped pre-installed with daylight harvesting controls, occupancy sensors, and/or power pack. Available manufacturer options include Leviton, Wattstopper, Hubble Automation, and others.

QUALITY CONTROL - Every fixture is turned on and rigorously tested by our QC Department before shipping.

LISTING - UL/C-UL listed to US and Canadian standards.
Listed for Damp Location

WARRANTY - Limited 5 Year Warranty



DAMP LOCATION

SAMEDAY SHIPPING (On selected configuration, consult factory)

PROUDLY ASSEMBLED in AMERICA

Intertek

Ordering Information: Example: 24-FPL1-LED-4000L-DIM10-MVOLT-30K-85

	FPL1	LED							
FIXTURE SIZE	SERIES	TYPE	LUMENS	DIMMING	VOLTAGE	CCT	CRI	EMERGENCY	OTHER OPTIONS
24 - 2' X 4'	**FPL1**-Oracle Flat LED Panel	**LED**	**3000L** - (3000 lumens) **4000L** - (4000 lumens) **5000L** - (5000 lumens) **6000L** - (6000 lumens)	**DIM10** - 0-10V Dimming * **DIMST** - Step Dimming * **LUTH** - Lutron Hilume **OS-OTI** - Osram Optotronic 0-10V Dimming w/ Auxiliary Output **ELD010** - EldoLED 0-10V **ELDODALI** - EldoLED DALI **ELDODMX** - EldoLED DMX	**MVOLT** **347*** * Consult factory for details	**30K** - (3000K) **35K** - (3500K) **40K** - (4000K) **50K** - (5000K)	**85**	**0-EMG-LED**	**24-FPL1-LED-SMK** - Surface Mount Kit **LMFC-011** - Digital On/Off/0-10V Dimming Fixture Controller **CLM-WCM** - Osram Connected Lighting Module w/ Wireless Control Module

* DIMST and LUTH dimming options are only available for the fixtures up to 5000 lumens.

CONTROL OPTIONS

LUTRON

Controls Installed on the Fixture

FCJS-010
Individual
Fixture Control

Fixture Will be Shipped LUTRON VIVE Enabled with LUTRON FCJS-010 0-10V Control Module Installed on the Fixture. Fixtures will be compatible with Lutron FC-SENSOR Occupancy/ Daylight Sensor or FC-VSENSOR Vacancy/Daylight Sensor which can be Added in the Field for Remote Mounting. Fixture May be Controlled with any Vive control systems. Fixtures must be ordered with a 0-10V. Driver.

FCJS-ECO
Individual
Fixture Control

Fixture Will be Shipped LUTRON VIVE Enabled with LUTRON FCJS-ECO EcoSystem Control Module Control Module Installed on the Fixture. Fixtures will be compatible with Lutron FC-SENSOR Occupancy/Daylight Sensor or FC-VSENSOR Vacancy/Daylight Sensor which can be Added in the Field for Remote Mounting. Fixture May be Controlled with any Vive control systems. Fixtures must be ordered with a Lutron Driver.

Controls Provided by Lutron

Lutron
App

Vive Wireless Hub

DayLight
Sensor

Ceiling Mount
Occupancy Sensor

Ceiling Mount
Occupancy/Daylight
Sensor

Wall Mount
Occupancy Sensor

Wall Mount
Switch

Pico
Remote

ESSENTIALS SERIES 4.0

LED High Bay Fixtures

Project Name	
Date	
Cat. Number	
Type	

Essentials Series 4.0 provides the highest quality, reliability and performance with extraordinary lumen maintenance and efficacy, delivering superior ROI for your application.

Designed with best-in-class thermal management to perform at ambient temperatures up to 65°C.

APPLICATIONS: Industrial and Commercial Facilities, Warehouses, Manufacturing, Parking Garages, Distribution Centers, Hangars and Indoor Sports.

5 YEAR LUMEN MAINTENANCE WARRANTY

- MULTIPLE PATENTS PENDING -

FEATURES & SPECIFICATIONS

- **Environment:** Dry/Damp, for interior applications (IP4X). Dust rating and Wet Location available. Impact protection (IK08).[20]
- **Ambient Range Operation:** -40°C up to 65°C* (-40°F up to 149°F*). *depending on product line[1].
- **Heat Sinks:** Extruded aluminum heat sinks provide optimal thermal management, decreasing LED junction temperature and ensuring long life and high efficacy.
- **Power Supply Access:** Wireway cover is captured and hinged, opening over 120° for hands-free, easy access and quick wiring. Center hole accepting 3/4" stem and also 1/2" KO near top end of wire way.
- **Mounting:** Fixture is cable ready (CRM) and has a center opening to accept a 3/4" stem mount, cable (CRM), HOOK or surface mount options (with optional MBR). MBR reduces ambient range by 5°C when mounted flush to junction box.
- **Lenses:** UV stable polycarbonate clear and aisle or acrylic (PMMA) frosted available.
- **CCT:** 3500K, 4000K and 5000K standard, other CCT available (extended lead time).[2]
- **Wire Guards:** Optional factory-installed wire guards for the fixture and OCC sensor are available.
- **Warranty:** 5-year standard, up to 10-year optional.
- **Rotatable LED Modules:** Field adjustable rotating modules. Easily adjusted outer modules with stops at 45°, 90° and 135°. Factory set at 0°. Allows for customizing light pattern to suit individual situations.[3,15]
- **Bulk Packaging:** All fixtures come in eco-friendly bulk packaging. Individual boxes are also available.

POWER & CONTROL

- **Power Input:** 120-277V or 347-480 (50/60Hz), Typical, depending on model.
- **Dimming:** 0-10V standard. Capable of dimming down to 10%.
- **Power Factor:** Greater than 0.9 (0.96–0.99 typical).
- **Total Harmonic Distortion:** Less than 20%, 10% typical.
- **Occupancy Sensors:** Optional - factory installed photocell sensors.
- **Emergency Battery Backup (EMB and EMB2):** EMB initial lumen output is ~2200 lumens, thereafter EMB produces ~2000 lumens for a minimum of 90 minutes. EMB2 Initial lumen output is ~3600, thereafter EMB2 produces ~2200 lumens for a minimum of 90 minutes. EMB has 16 watts initial output, EMB2 has 20 watts initial output. Available in LV and HV (EMB only)[1,8,10,15,16,18,25]
- **Surge Protection:** Standard is 6kV for drivers. Additional surge protection is available. All HV orders will have SRG automatically added.
- **Driver Quick Disconnect:** A Driver Quick Disconnect feature is available as an additional option.

LISTINGS & CERTIFICATIONS

- ETL listed (UL 1598) - RoHS Compliant
- DesignLights™ Consortium Premium
- EMI: Title 47 CFR 15 Class A and ICES-005 - CSA 22.2

TECHNICAL SPECIFICATIONS

PERFORMANCE LINE: Highest efficacy and longest life. Up to 65°C (149°F)

Lumen Output[5]	Efficacy	Watts	Frame[6]	Part Number
8291	165	50	2MS	ES40P-A1-08K-2MS
13438	167	81	4MS or 2M	ES40P-A1-13K-4MS (2M)
15544	165	94	4MS or 2M	ES40P-A1-15K-4MS (2M)
17818	164	109	4MS or 2M	ES40P-A1-17K-4MS (2M)
21743	168	129	6MS	ES40P-A1-21K-6MS
24874	167	149	6MS	ES40P-A1-24K-6MS
31088	167	186	4M	ES40P-A1-31K-4M
36044	166	217	4M	ES40P-A1-36K-4M
43486	168	258	6M	ES40P-A1-43K-6M
49749	167	298	6M	ES40P-A1-49K-6M
58933	165	358	6M	ES40P-A1-58K-6M

STANDARD LINE: High efficacy and long life. Up to 55°C (131°F)

Lumen Output[5]	Efficacy	Watts	Frame[6]	Part Number
6453	159	41	2MS	ES40S-A1-06K-2MS
9822	158	62	2MS	ES40S-A1-09K-2MS
12280	152	81	2MS	ES40S-A1-12K-2MS
17295	142	122	4MS or 2M	ES40S-A1-17K-4MS (2M)
20646	161	128	4MS or 2M	ES40S-A1-20K-4MS (2M)
23789	157	151	4MS or 2M	ES40S-A1-23K-4MS (2M)
30969	163	190	6MS	ES40S-A1-30K-6MS
35394	157	227	6MS	ES40S-A1-36K-6MS
43277	160	271	4M	ES40S-A1-43K-4M
49121	156	315	4M	ES40S-A1-49K-4M
73681	159	465	6M	ES40S-A1-73K-6M

VALUE LINE: Lowest cost per lumen. Up to 45°C (113°F)

Lumen Output[5]	Efficacy	Watts	Frame[6]	Part Number
6135	151	41	2MS	ES40V-A1-06K-2MS[24]
13699	150	92	2MS	ES40V-A1-13K-2MS
15378	147	105	4MS or 2M	ES40V-A1-15K-4MS (2M)
27398	151	181	4MS or 2M	ES40V-A1-27K-4MS (2M)
41097	151	271	6MS	ES40V-A1-41K-6MS
54796	154	356	4M	ES40V-A1-54K-4M
70787	157	455	6M	ES40V-A1-70K-6M

2M model available as a variation of 4MS. Consult factory.

[4] LM-79, LM 80 tests and reports are performed in accordance to IESNA standards, per TM-21. Lumen maintenance in hours (L70 via TM-21) based on 24/7 operation. [5] Typical (±10%) at 277V (LV), 25°C, 4000K/5000K, Clear Lens, CRI 80+. Lumen Multipliers: 3500K = 0.93 ; Frosted Lens = 0.98 ; Aisle Lens = 0.96

LUMEN MAINTENANCE[4]

PROJECTED L70 VIA TM-21 (24/7 OPERATION)

25°C Ambient Temp.	65°C Ambient Temp.[1]
309,000 hours	194,000 hours

Ambient	Year 1	Year 5	Year 10
25°C	99.66%	95.60%	90.76%
45°C	99.51%	94.55%	88.68%
55°C	99.34%	93.81%	87.34%
65°C	99.12%	93.00%	85.88%

Ambient	25°C	35°C	45°C	55°C	65°C
Lumen Multiplier	1.00	0.99	0.98[4]	0.98	0.97

PROJECTED L70 VIA TM-21 (24/7 OPERATION)

25°C Ambient Temp.	55°C Ambient Temp.[1]
256,000 hours	184,000 hours

Ambient	Year 1	Year 5	Year 10
25°C	99.60%	94.99%	89.53%
45°C	99.29%	93.63%	87.01%
55°C	99.09%	92.82%	85.55%

Ambient	25°C	35°C	45°C	55°C	65°C
Lumen Multiplier	1.00	0.98	0.97	0.97	X

PROJECTED L70 VIA TM-21 (24/7 OPERATION)

25°C Ambient Temp.	45°C Ambient Temp.[1]
238,000 hours	191,000 hours

Ambient	Year 1	Year 5	Year 10
25°C	99.52%	94.66%	88.92%
45°C	99.19%	93.22%	86.27%

Ambient	25°C	35°C	45°C	55°C	65°C
Lumen Multiplier	1.00	0.98	0.97	X	X

ORDERING EXAMPLES

Base Fixture: ES40P-A1-08K-2MS-50-80-CL-LV-CRM-10V

Base Fixture with Options: ES40P-A1-08K-2MS-50-80-CL-LV-CRM-OCCDIM20-CW-WET-10V

DLC Number: ES40P-A1-08K-2MS-50-80-CL-LV-(xxx)-10V

SELECT ONE

Series-Compliance-Lumens-Frame

ES40S-A1-06K-2MS[7]	ES40V-A1-15K-4MS[7]	ES40S-A1-30K-6MS[7]	ES40S-A1-49K-4M
ES40V-A1-06K-2MS[7,24]	ES40P-A1-17K-4MS[6,7]	ES40P-A1-31K-4M[7]	ES40V-A1-54K-4M[7,21]
ES40P-A1-08K-2MS[7]	ES40S-A1-17K-4MS[6,7]	ES40P-A1-36K-4M	ES40P-A1-58K-6M[21]
ES40S-A1-09K-2MS[7]	ES40S-A1-20K-4MS[6,7]	ES40S-A1-36K-6MS	ES40V-A1-70K-6M[21]
ES40S-A1-12K-2MS[7]	ES40P-A1-21K-6MS[7]	ES40V-A1-41K-6MS[1,8,20,21]	ES40S-A1-73K-6M[7,21]
ES40P-A1-13K-4MS[6,7]	ES40S-A1-23K-4MS[6,7]	ES40P-A1-43K-6M	
ES40V-A1-13K-2MS[7]	ES40P-A1-24K-6MS[7]	ES40S-A1-43K-4M	
ES40P-A1-15K-4MS[6,7]	ES40V-A1-27K-4MS[6,7]	ES40P-A1-49K-6M	

SELECT ONE

Color Temp

35[2]
3500K

40
4000K

50
5000K

Other CCT available upon request

SELECT ONE

CRI

80+
(Standard)

Other CRI available upon request

SELECT ONE

Lens

CL
Clear Lens, Wide Distribution

FR
Frosted Lens, Wide Distribution

AL
Aisle Distribution

SELECT ONE

Voltage

LV
120-277V

HV[27]
347-480V

SELECT ONE

Mounting

CRM[9]
Cable-ready (standard) for suspension mounting or 3/4" stem mount

MBR[10]
Factory installed mounting box and bracket for surface mount applications - adds 1 1/8" to fixture height

HOOK[10]
Field installed mounting kit, includes hook and one pair of leveling cables for hook/loop applications

Plate and **Hanger** mount also available, sold and packaged separately, see Accessories, order as **CRM**.

Other mounting options available, contact factory

SELECT ONE IF APPLICABLE, IF NONE, LEAVE BLANK AND MOVE TO CORD & PLUG

Occupancy Sensors[10] – No OCC sensor (Standard)

OCC8[10,26]
WattStopper OCC Sensor, on/off, w/ photocell, 8' mounting height

OCCDIM8[10,11,26]
WattStopper OCC Sensor, dimmable, w/ photocell, 8' mounting height

MOCCDIM8[10,12,26]
WattStopper OCC Sensor, manual set and photocell, dimmable, 8' mounting height

OCC20[10,26]
WattStopper OCC Sensor, on/off, w/ photocell, 20' mounting height

TOCC20[10,12,13]
IR-TEC OCC Sensor, on/off, w/ photocell, 20' mounting height

OCCDIM20[10,11,26]
WattStopper OCC Sensor, dimmable, w/ photocell, 20' mounting height

MOCCDIM20[10,12,26]
WattStopper OCC Sensor, manual set and photocell, dimmable, 20' mounting height

OCC40[10,26]
WattStopper OCC Sensor, on/off, w/ photocell, 40' mounting height

TOCC40[10,12,13]
IR-TEC OCC Sensor, on/off, w/ photocell, 40' mounting height

OCCDIM40[10,11,26]
WattStopper OCC Sensor, dimmable, w/ photocell, 40' mounting height

MOCCDIM40[10,12,26]
WattStopper OCC Sensor, manual set and photocell, dimmable, 40' mounting height

Other control options available, contact factory

SELECT ONE IF APPLICABLE, IF NONE, LEAVE BLANK, MOVE TO OPTION

Cord & Plug – No cord/plug (Standard) [10,14]

6' 18AWG CORD, WHITE WITH THE FOLLOWING-

CW[10,14]
Cord, 15A, 3-wire, no plug

DW[10,14]
Dimming cord, 15A, 5-wire, no plug

C515[10,14]
Cord, 15A, straight plug 120V (5–15P)

CL515[10,14]
Cord, 15A, locking plug 120V (L5–15P)

CL715[10,14]
Cord, 15A, locking plug 277V (L7–15P)

CL720[10,14]
Cord, 20A, locking plug 277V (L7–20P)

CL2420[10,14]
Cord, 20A, locking plug 347V (L24–20P)

CL820[10,14]
Cord, 20A, locking plug 480V (L8–20P)

CACS[10,16,22]
6' SO Cord whip, ACS Locking System, 277/480V, 2-wire w/ ground

CACSMC[10,16,22]
6' MC Cable, ACS Locking System, 277/480V, 2-wire w/ ground

10' 18AWG CORD, WHITE WITH THE FOLLOWING-

10CW[10,14]
Cord, 15A, 3-wire, no plug

15' 18AWG CORD, WHITE WITH THE FOLLOWING-

15CW[10,14]
Cord, 15A, 3-wire, no plug

15DW[10,14]
Dimming cord, 15A, 5-wire, no plug

15C515[10,14]
Cord, 15A, straight plug 120V (5–15P)

15CL515[10,14]
Cord, 15A, locking plug 120V (L5–15P)

15CL715[10,14]
Cord, 15A, locking plug 277V (L7–15P)

15CL720[10,14]
Cord, 20A, locking plug 277V (L7–20P)

15CL2420[10,14]
Cord, 20A, locking plug 347V (L24–20P)

15CL820[10,14]
Cord, 20A, locking plug 480V (L8–20P)

Other cord options available, contact factory

SELECT AS MANY AS APPLICABLE, SEPARATE EACH WITH "-". IF NONE, LEAVE BLANK, MOVE TO DIMMING

Option [10]

EMB[1,8,10,15,16,18,25]
Emergency battery back-up. Adds 1.25" to fixture height

EMB2[1,8,10,15,16,18,25]
High lumen emergency battery back-up. LV Only. Adds 1.25" to fixture height

QDC[10,15]
Driver Quick Disconnect

SRGOFF[10,16,20,26]
Fixture installed 20kA Surge Suppression Device, Fails to OFF

SRG[10,15,26]
Fixture installed 10kA Surge Protector fails to ON

BOX[10]
Individual box packaging available

CTRWT[7,10]
Counter Balance Weight for MBR and stem mounting (certain fixtures only, see notes for applicable models, contact factory)

CTRL[8,10,12,15,16,26]
Fixture installed EnOcean Control module. 120-277V Wire-in Relay, 16A, 0-10V

CTRLR[10,12,15,16,26]
Control Ready 5-wire harness (factory installed)

WG[10]
Fixture Wire Guard

CTOPEND[8,10,13]
Cord mounted on top edge of wireway

WET[3,10,15,16]
Wet location rated. Only available with no cord or CW or DW cord option.

DUST[10]
Dust resistant

INDR[1,3,10,15]
LED modules factory inverted for Indirect lighting

GTD[10,16,21]
Generator transfer device

10V

Dimming

10V
0–10V Interface (Standard)

When submitting for utility incentives and rebates, please use catalog numbers. When ordering OPTIONS, separate each option with a "-". Catalog number always ends with dimming selection "10V"

DIMENSIONS & DRAWINGS

See End Note #19.

Model	Length (in)	Width (in)	Height (in)	Weight (lb)
2MS	23.1	8.28	2.1	~8
4MS	23.1	11.2	2.1	~10
6MS	23.1	14.1	2.1	~14
2M*	43.72	8.28	2.1	~16
4M	43.72	11.2	2.1	~18
6M	43.72	14.1	2.1	~20.6

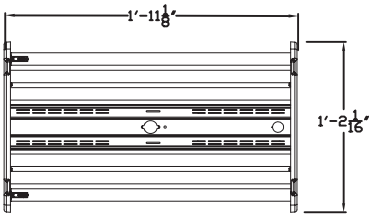
***2M available as a variation of 4MS.** Consult factory.

MBR and EMB mounting options adds 1 ⅛" to fixture height.

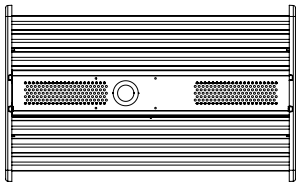
MBR on MS (short) fixtures with EMB adds 1 ¼" to fixture height to fixture height.

Weights are approximate and vary by model, if weight is a concern, please contact factory.

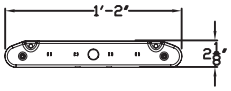
Bottom View



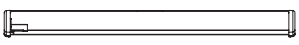
Cable Ready Mount (CRM)



TOP VIEW

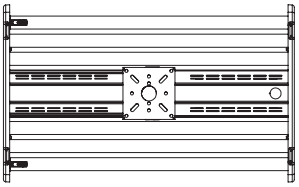


END VIEW

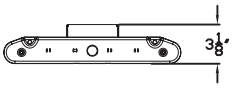


SIDE VIEW

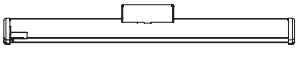
Fixture Mounting Box (MBR)



TOP VIEW

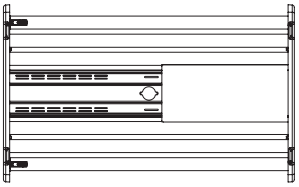


END VIEW

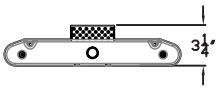


SIDE VIEW

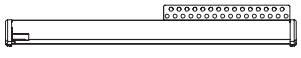
Fixture Mounting Box (EMB)



TOP VIEW



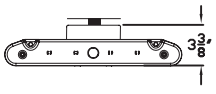
END VIEW



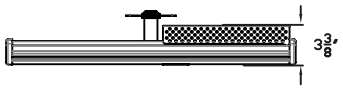
SIDE VIEW

Surface Mount Option

(when ordering **EMB with MBR**)



END VIEW



SIDE VIEW

RL841

8" LED RETROFIT BAFFLE LIGHTING MODULE WITH JUNCTION BOX

ENERGY STAR PENDING

FOR WET LOCATION

CRI	90+
COLOR QUALITY	3-Step MacAdam Ellipses
LUMEN OUTPUT	2500 Lumens
LUMEN PER WATT	Up to 80
CCT	35K, 40K
WARRANTY	5 Years

CERTIFICATIONS
- RoHS
- IECC
- New York state
- Wet Location
- California Title 24
- Washington state
- LM79/LM80

UNIQUELY ENGINEERED FOR NEW AND EXISTING CONSTRUCTION

The RL841 is the newest, most efficient, and advanced LED retrofit modules from ELITE Lighting. It's unique design delivers color quality above a 90 CRI rating. The color matching has never been so close, with a binning as low as 3 MacAdams ellipses. The RL841 LED retrofits meet all new mandatory California Title 24 requirements.

FEATURES

- Over 2500 usable lumens are directed from the luminaire to the work surface
- Greater light output than a 26W CFL or a 65W BR30 while consuming less than 25W of power
- Rated at 90+ CRI to meet California Title-24 strict compliance standards
- Life tested to ensure light output up to 50,000 hours of operation to L70
- High performance optic hides LED chip image but still delivers an even beam of light
- Elite's highly selective LED chips produce zero ultraviolet and virtually no infrared light
- Tested to LM-79 and LM-80 standards

INPUT VOLT.	INPUT FREQ.	THD	POWER FACTOR	INPUT POWER	LUMENS
120	50/60Hz	<20%	>0.9	25W(+/-5%)	2500

DURABILITY

Our die-cast system pulls the heat from the LED chip, allowing the continued cool operation for years. Our LED driver is rated for 50 to 60 Hz at 120V input, and produces less than 20% THD, has a power factor between 0.90 and 1.00 and is thermal protected for additional safety.

DIMMABLE

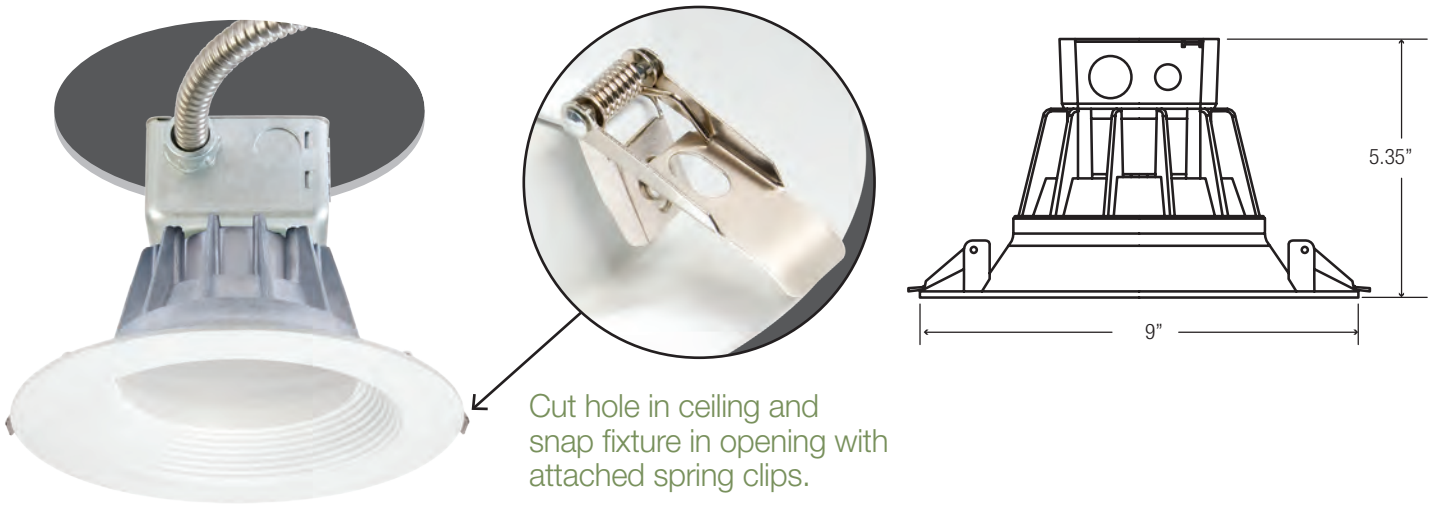
The Elite LED Module is dimmable down to 10% of initial light output with compatible dimmers. Consult factory for complete list of compatible dimming systems.

OUR WORD

The Elite LED lighting system carries a five-year carefree warranty for parts and components. (Labor not included)

RL841

8” LED RETROFIT BAFFLE LIGHTING MODULE WITH JUNCTION BOX



Example: **RL841-2500L-DIM10-MVOLT-35K-90-W-WH**

TYPE	2500L SERIES	CCT	CRI	FINISH
RL841 (Baffle)	❑ 2500L-DIM10-MVOLT	❑ 35K ❑ 40K	❑ 90+	❑ W-WH

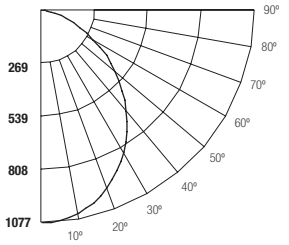
LED

8”

RL841-2500L-DIM10-MVOLT TEST NO.: **EL-113716**

INPUT WATTS: **31.2** LUMENS: **2414** CRI: **90+** EFFICACY: **77** CCT: **3000K** SPACING CRITERIA: **1.22**

Candle Power Distribution (Candelas)



Cone of Light		
4.0	67.3	8.8’
8.0	16.8	17.5’
12.0	7.48	26.4’
16.0	4.21	35.3’
20.0	2.69	44.1’
Distance to Plane	Initial Footcandle at Nadir	Beam diameter

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	388.89	16.10	16.10
0-30	813.42	33.70	33.70
0-40	1301.69	53.90	53.90
0-60	2104.7	87.20	87.20
0-80	2390.77	99.10	99.00
0-90	2414.49	100.00	100.00

Luminance (Average candela/M²)

Angle in Degrees	Average 0°	Average 45°	Average 90°
45	27001	27023	26973
55	20965	21625	23121
65	14321	16022	17110
75	7835	8750	12266
85	5150	8111	12540

Lumens Per Zone

Zone	Lumens
0-10	101.60
10-20	287.29
20-30	424.54
30-40	488.26
40-50	456.45
50-60	346.56
60-70	203.62
70-80	82.45
80-90	23.72

Candela Tabulation

	0
0	1077.37
5	1072.02
15	1023.79
25	925.58
35	794.80
45	607.40
55	382.56
65	192.54
75	64.51
85	14.28
90	0.86

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

	RC	80%			70%				50%			30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
ROOM CAVITY RATIO	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
	1	110	106	102	99	108	104	100	97	100	97	94	96	94	92	92	90	89	87
	2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
	3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64
	4	86	75	67	61	84	74	66	60	71	65	60	69	63	59	67	62	58	56
	5	79	68	59	53	77	66	59	53	64	58	52	62	56	52	61	55	51	49
	6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44
	7	69	56	48	42	67	55	47	42	54	46	41	52	46	41	51	45	41	39
	8	64	51	43	38	62	50	43	37	49	42	37	48	42	37	47	41	37	35
	9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
	10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	35	31	29

***RC** - Ceiling Cavity Reflectance* ***RW** - Wall Reflectance*

8 INCH LED RETROFIT MODULE

LEDBIAX® LINE VOLTAGE | BIAX STYLE LAMP

Easy line voltage (120-277V AC) LED replacement for BIAX™ style fluorescent lamps (4 pin-2G11). Simply remove fluorescent tube and ballast and install LEDBIAX®. Patented fully diffused lens cover for uniform, glare free illumination. Non Dimmable.

PROJECT NAME

PART NUMBER

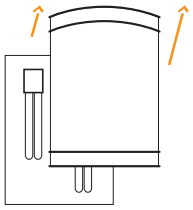
PART NUMBER BUILDER

MANUFACTURER	MODEL NUMBER	LIGHT OUTPUT	COLOR TEMPERATURE	BASE TYPE
RPT	LEDBIAX			2G11
		1500LM (16IN) 2000LM (22IN)	3000K 4000K	

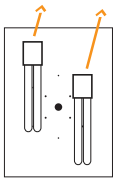
ORDERING EXAMPLE

RPT-LEDBIAX-1500LM-3000K-2G11

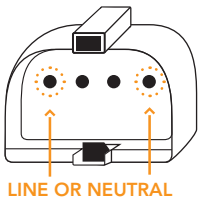
INSTALLATION GUIDE



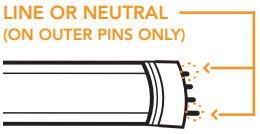
1. Disconnect power at panel & remove fixture lens.



2. Remove existing CFL 2G11 lamp.



3. Remove or bypass the existing ballast. Connect the AC line voltage to the 2G11 socket as shown above.

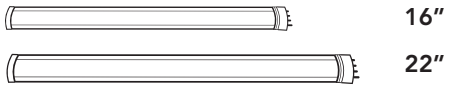


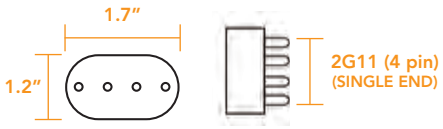
4. Install the LEDBIAX tube into the fixture, place provided warning labels near the appropriate lamp holder. Replace lens.

Simplified instructions. Reference full installation guide for more details. Only qualified personnel should perform installation.

DIMENSIONS

INPUT VOLTAGE	120-277V AC
EFFICACY	>100 lumens/watt
OPERATING TEMP	-30˚C to 45˚C
MAX CASE TEMP	50˚C
POWER FACTOR/THD	>0.90 Power Factor, THD<10%
CRI	83+
WARRANTY	5 years
CERTIFICATIONS	
PERFORMANCE LISTINGS	LM79/LM80 Available





May be protected under the following US patents
US 8,106569 | US 8,882,298 | Additional patents pending.

LEDBIAX® LINE VOLTAGE | BIAX STYLE LAMP

ORDERING GUIDE

QUICK SHIP	DLC E*	PART #	LUMEN OUTPUT (LM)	WATTAGE (W)	CCT (K)	VOLTAGE RANGE (V AC)	WARRANTY (YRS)	TRADITIONAL EQUIVALENT	WATTS SAVED (W)
		RPT-LEDBIAX-1500LM-3000K	1500	15	3000	120-277	5	36W 2G11 FL	21
		RPT-LEDBIAX-1500LM-4000K	1500	15	4000	120-277	5	36W 2G11 FL	21
		RPT-LEDBIAX-2000LM-3000K	2000	20	3000	120-277	5	40W 2G11 FL	20
		RPT-LEDBIAX-2000LM-4000K	2000	20	4000	120-277	5	40W 2G11 FL	20

CONSTRUCTION AND APPLICATION

The "BIAX to LED" LEDBIAX® lamps by RemPhos Technologies offers an economical alternative to upgrade to long lasting LED lighting, while retaining the original fixture. The LED BIAX® series replaces fluorescent 16in. and 22in. lamps. Light is emitted 180 degrees so that the original fixture will be illuminated perfectly and uniformly. Extremely efficient at >100LPW, the LEDBIAX® runs off of a built in driver operating at 120-277VAC through its 2G11 pin base. UL Listed. Multiple lumen output and CCTs are available.

RemPhos Technologies LLC • p 877.997.3674 • www.remphos.com
90 Holten Street • Danvers, MA USA • sales@remphos.com

LEDBARKIT-INTERNAL DRIVER (LBI) THE LINEAR TRANSFORMER

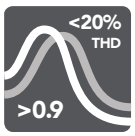
WARRANTY

VOLTAGE

DIMMING

EFFICACY (LIGHT ENGINE)

OPERATING TEMP



PWR FACTOR/THD

CRI

OPTIONAL EMG BATTERY BACKUP


OPTIONAL MOTION SENSOR

one light – unlimited possibilities

available in both BASE & PRO

	PRO	BASE
DIMMABLE	✓ 0-10V	—
CONTROL POWER	✓ 12V	—
FLEX COLOR	✓	—
FLEX WATT	✓	—
WARRANTY	10YR	5YR
L70	>100,000 HRS	50,000 HRS

DEFAULT CONFIGURATIONS

PART #	UPC	DESCRIPTION	WATTAGE	LUMENS	LPW	CCT (K)	DLC PRODUCT CODE
RP-LBI-G1-2F-6W-40K-WC	844006023867	2FT PRO INTERNAL DRIVE LIGHT BAR	**6**/9/12	780-1560	130-135	3500/**4000**/5000	PFLO5RPC
RP-LBI-G1-3F-10W-40K-WC	844006023959	3FT PRO INTERNAL DRIVE LIGHT BAR	**10**/12/15	1400-2100	140-145	3500/**4000**/5000	PTTC4A0W
RP-LBI-G1-4F-15W-40K-WC	844006024079	4FT PRO INTERNAL DRIVE LIGHT BAR	10/**15**/25	1370-3425	137-150	3500/**4000**/5000	PCW0MQPB
RP-LBI-G1-4F-15W-40K-B	844006024215	4FT BASE INTERNAL DRIVE LIGHT BAR	**15**	2325	155	**4000**	

Default settings are above. See pages 7 and 8 for additional styles, lumen packages, color temperatures and options.

DLC PREMIUM · RoHS Compliant · ETL LISTED UL 1598 LISTED FIXTURE · FC CLASS B · BAA SECTION 1605 COMPLIANT OPTIONAL

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBARKIT-INTERNAL DRIVER (LBI) THE LINEAR TRANSFORMER

Usage & Applications

One solution. ETL and DLC listed as both a retrofit kit and a fixture.

Retrofit Kit

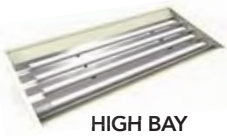
Using the fast install magnetic brackets, light bars fit between any T5, T8 or T12 socketed fixture including

TROFFERS

Example 2x2 and 2x4 retrofitted with 3 light bars.

VAPOR TIGHT

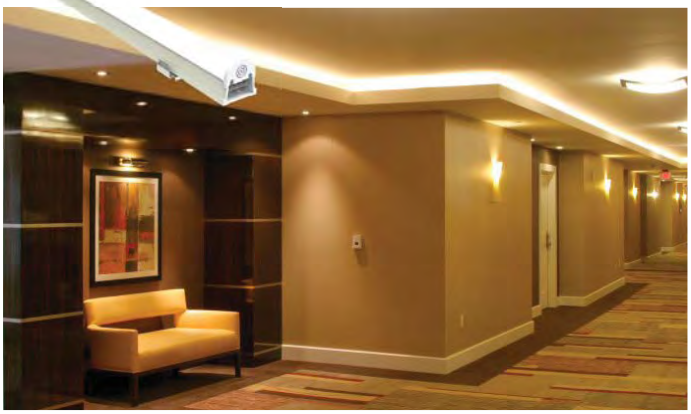
WRAP



HIGH BAY

CONTINUOUS RUNS

UTILITY STRIP



Coming Soon!

RETROFIT MOUNTING KITS

Mount light bar to a Retrofit Mounting Kit for a faster, cleaner install.
- contact us for details.

Fixture

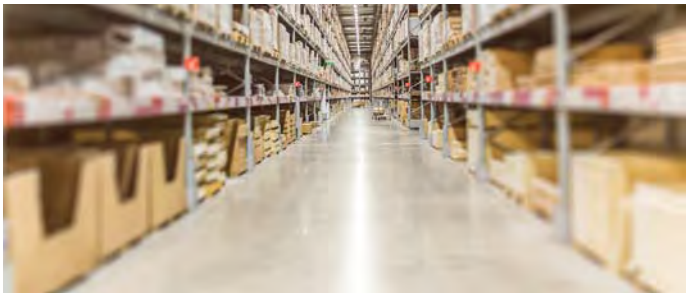
ETL and DLC listed as a fixture under the following categories

STAIRWELL FIXTURE

LINEAR AMBIENT FIXTURE

HIGH BAY FIXTURE (LOW CEILING HEIGHTS)

HIGH BAY FIXTURE (HIGH CEILING HEIGHTS)



Coming Soon!

FIXTURE HOUSING KITS

Mount light bar to a Fixture Housing Kit for a faster, cleaner install.
- contact us for details.

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

The Linear Transformer

With up to 155 lumens per watt, and up to 25 years of virtually maintenance free operation, learn why smart decision makers use the The Linear Transformer when upgrading to LED.

Perfect replacement for

- Linear and general purpose
- Strips & Wraps
- Troffers
- Vapor Tights
- Low bay and High bay
- Coves and Soffits
- Stairwells

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

LEDBarKit-Internal Driver (LBI)

FEATURES

The Linear Transformer is available in both BASE and PRO versions – choose which is best for you!

PRO

9 SKUs in 1 WITH FLEXWATT™ & FLEXCOLOR™ TECHNOLOGY

flexWATT

2FT	6W	9W	12W
3FT	10W	12W	15W
4FT	10W	15W	25W

- Eliminate ordering and stocking multiple wattages and color temperatures. Product offers 9 SKUs in 1 unit which can easily be configured to 3 different wattage packages and 3 different CCTs.

flexCOLOR

- 3500°K NEUTRAL WHITE
- 4000°K NEUTRAL WHITE
- 5000°K COOL WHITE

- Product ships at a default color temp (K) and wattage setting (install as is, or tailor the settings to fit your needs).
- Save on labor costs by having us factory pre-set the wattage and color temperature.

FLEXCONTROL™ TECHNOLOGY

- Order control ready or basic control (integrated high/low and daylight sensor) or advanced controls (such as LG, Philips Easy Sense, Avion Bluetooth or Lutron Vive).
- Optional sensors are directly linkable to the light bars.
- Our basic motion/daylight control (OC2 ordering code) is adjustable via remote control for (1) sensitivity (2)duration of time at high light level before dimming to low (2) duration of time at low light level before turning off (3) ramping up and down light levels based on daylight and (4) the dimmed light level %.

SUITABLE FOR DRY & DAMP LOCATIONS

PASS-THROUGH 0-10V DIMMING & AUXILIARY 12V OUTPUT

- Allows all light bars to be dimmed together as a group.

ADAPTABLE MOUNTING

- Various mounting clip options with integrated rare-earth magnets for easy placement in all style fixtures.
- High Bay pendant chain options available.

CONNECT UP TO 40 LIGHT BARS ON ONE INCOMING POWER CABLE

130-150 LUMENS PER WATT EFFICACY

10 YEAR WARRANTY, L70 >100,000HRS

OPTIONAL EMERGENCY BATTERY BACKUP

OPTIONAL BAA SECTION 1605

BASE

SUITABLE FOR DRY & DAMP LOCATIONS

ADAPTABLE MOUNTING

- Various mounting clip options with integrated rare-earth magnets for easy placement in all style fixtures.
- High Bay pendant chain options for high bay installation.

CONNECT UP TO 40 LIGHT BARS ON ONE INCOMING POWER CABLE

155 LUMENS PER WATT EFFICACY

5 YEAR WARRANTY, L70 >50,000HRS

OPTIONAL EMERGENCY BATTERY BACKUP

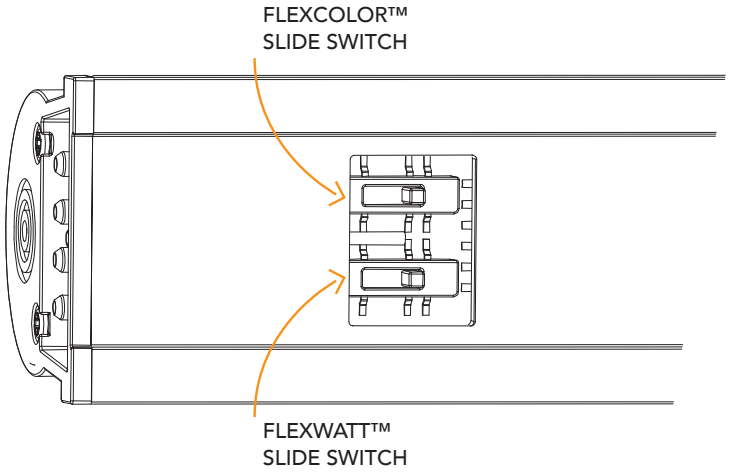
OPTIONAL BAA SECTION 1605

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

LEDBarKit-Internal Driver (LBI)

FLEXWATT + FLEXCOLOR



flexWATT

2FT	6W	9W	12W
3FT	10W	12W	15W
4FT	10W	15W	25W

HOW IT WORKS

Our exclusive LED driver is designed to operate at 90%+ efficiency at each wattage setting. Our competitor's drivers have much lower efficiency (as low as 60%) which results in poor performance and reduced efficacy.

WATTAGE CHOICES

2FT	6W	9W	12W
3FT	10W	12W	15W
4FT	10W	15W	25W

WATTAGE SELECTION

Adjust the 3-position slide switch, no tools required. Can be "locked-out" to prevent field-adjustability, if desired.

flexCOLOR

- 3500°K NEUTRAL WHITE
- 4000°K NEUTRAL WHITE
- 5000°K COOL WHITE

HOW IT WORKS

We select the highest efficacy, multiple color LED diodes from quality suppliers, and mount them on the circuit board. A proprietary LED binning process ensures color consistency between fixtures. The FlexColor technology ensures the desired color is selected, every time.

COLOR CHOICES

FLEXCOLOR SLIDE SWITCH POSITION		
TOP	MIDDLE	BOTTOM
3500K	4000K	5000K

COLOR SELECTION

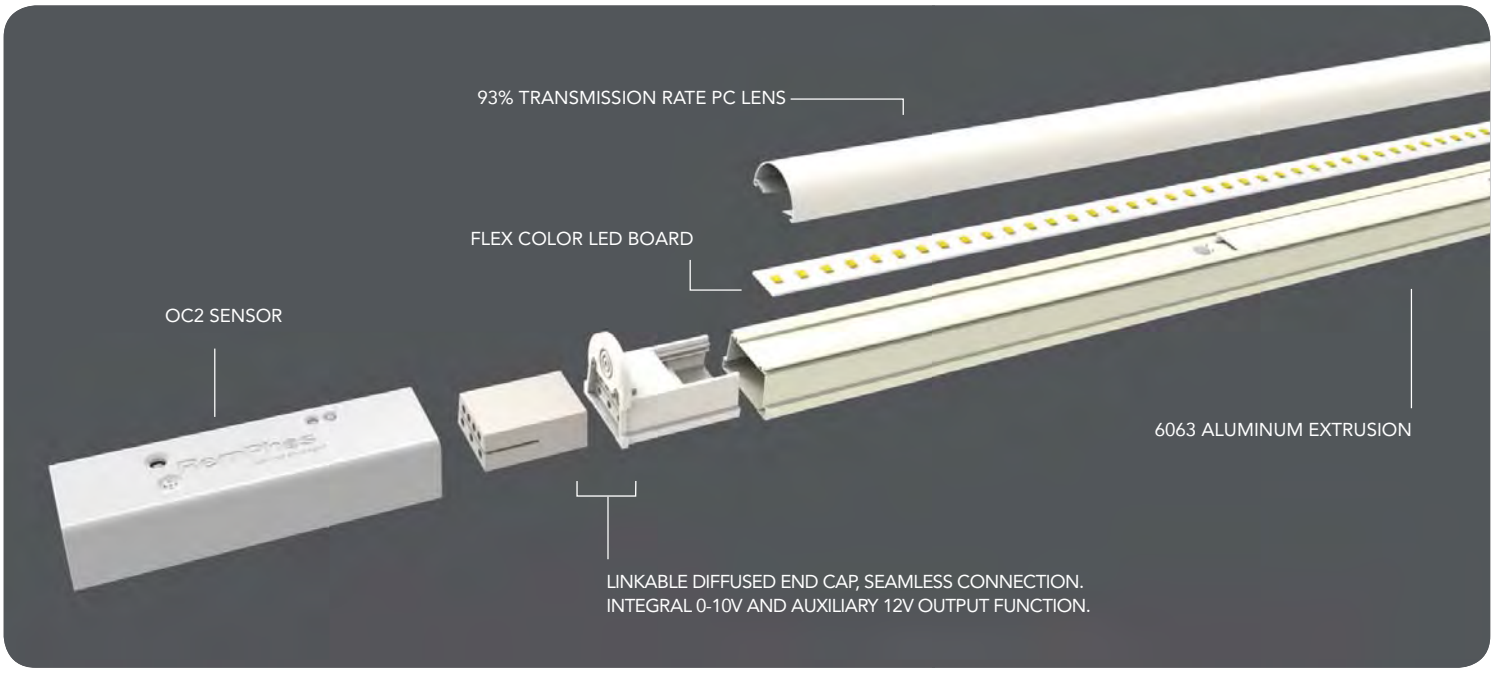
Adjust the 3-position slide switch by hand. Can be "locked-out" to prevent field-adjustability, if desired.

RemPhos by Light Efficient Design
lighting on target

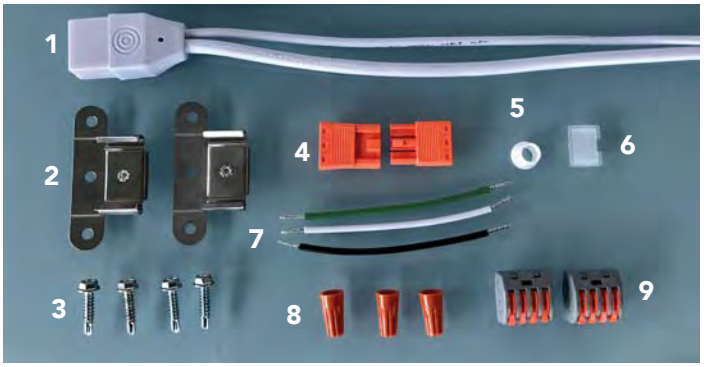
FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

LEDBarKit-Internal Driver (LBI)

EXPLODED CONSTRUCTION VIEW

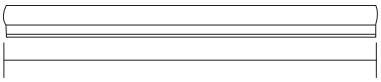


INCLUDED WITH EVERY BAR



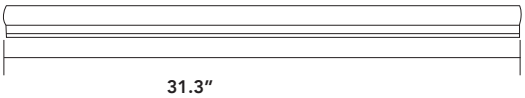
1. Incoming power and control cable
2. (2) Surface mount magnetic clips (with easy bend and break lines)
3. (4) 1/4" hex head - self drilling screws
4. Service disconnect
5. Abrasion protection grommet
6. Flex setting cover
7. Wires for connection between service disconnect and latch connector
8. (3) Wire nuts for low voltage connections (0-10V DIM; 12V Aux power)
9. (2) Latch connectors for parallel wiring (AC power)

DIMENSIONS



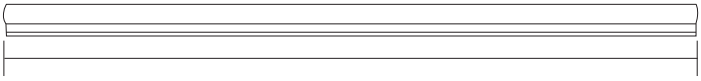
19.3"

RP-LBI-G1-2F-6W-40K-WC



31.3"

RP-LBI-G1-3F-10W-40K-WC



43.3"

RP-LBI-G1-4F-10W-40K-WC | RP-LBI-G1-4F-15W-40K-B

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

LEDBarKit-Internal Driver (LBI)

PRODUCT SELECTION GUIDE

Default lumen package (wattage and CCT) are shown below in bold. There are two ways to achieve a non-default lumen package and/or CCT:
1. You can easily adjust in field via our FlexWatt and FlexColor internal switches. **2**. Have us adjust the FlexWatt and FlexColor at the factory for an additional charge.

		PART #	CCT	Wattage Per Bar	Lumens Per Bar	Total Wattage	Total Lumens	Linear Ambient	High-Bay	Linear Ambient	Troffers
								DLC/QPL (FIXTURE)		DLC/QPL (RETROFIT)	
PRO 1X BAR KITS	2FT	RP-LBI-G1-2F-6W-35K-WC	3500K	6	780	6	780	PFLO5RPC			
		RP-LBI-G1-2F-6W-40K-WC	**4000K**	**6**	**780**	**6**	**780**	**PFLO5RPC**			
		RP-LBI-G1-2F-6W-50K-WC	5000K	6	780	6	780	PFLO5RPC			
		RP-LBI-G1-2F-9W-35K-WC	3500K	9	1170	9	1170	P56G7BMO			
		RP-LBI-G1-2F-9W-40K-WC	4000K	9	1170	9	1170	P56G7BMO			
		RP-LBI-G1-2F-9W-50K-WC	5000K	9	1170	9	1170	P56G7BMO			
		RP-LBI-G1-2F-12W-35K-WC	3500K	12	1560	12	1560	PSZAPJNF			
		RP-LBI-G1-2F-12W-40K-WC	4000K	12	1560	12	1560	PSZAPJNF			
		RP-LBI-G1-2F-12W-50K-WC	5000K	12	1560	12	1560	PSZAPJNF			
	3FT	RP-LBI-G1-3F-10W-35K-WC	3500K	10	1400	10	1400	PTTC4A0W			
		RP-LBI-G1-3F-10W-40K-WC	**4000K**	**10**	**1400**	**10**	**1400**	**PTTC4A0W**			
		RP-LBI-G1-3F-10W-50K-WC	5000K	10	1400	10	1400	PTTC4A0W			
		RP-LBI-G1-3F-12W-35K-WC	3500K	12	1680	12	1680	PO7IL0R7			
		RP-LBI-G1-3F-12W-40K-WC	4000K	12	1680	12	1680	PO7IL0R7			
		RP-LBI-G1-3F-12W-50K-WC	5000K	12	1680	12	1680	PO7IL0R7			
		RP-LBI-G1-3F-15W-35K-WC	3500K	15	2100	15	2100	PFD0B6O2			
		RP-LBI-G1-3F-15W-40K-WC	4000K	15	2100	15	2100	PFD0B6O2			
		RP-LBI-G1-3F-15W-50K-WC	5000K	15	2100	15	2100	PFD0B6O2			
	4FT	RP-LBI-G1-4F-10W-35K-WC	3500K	10	1370	10	1370	P950LG3J			
		RP-LBI-G1-4F-10W-40K-WC	4000K	10	1370	10	1370	P950LG3J			
		RP-LBI-G1-4F-10W-50K-WC	5000K	10	1370	10	1370	P950LG3J			
		RP-LBI-G1-4F-15W-35K-WC	3500K	15	2055	15	2055	PCW0MQPB			
		RP-LBI-G1-4F-15W-40K-WC	**4000K**	**15**	**2055**	**15**	**2055**	**PCW0MQPB**			
		RP-LBI-G1-4F-15W-50K-WC	5000K	15	2055	15	2055	PCW0MQPB			
		RP-LBI-G1-4F-25W-35K-WC	3500K	25	3425	25	3425	PRNWHBGQ			
		RP-LBI-G1-4F-25W-40K-WC	4000K	25	3425	25	3425	PRNWHBGQ			
		RP-LBI-G1-4F-25W-50K-WC	5000K	25	3425	25	3425	PRNWHBGQ			
PRO 2X BAR KITS	2FT	RP-LBI-G1-2F-6W-35K-WC-2X	3500K	6	780	12	1560				
		RP-LBI-G1-2F-6W-40K-WC-2X	**4000K**	**6**	**780**	**12**	**1560**				
		RP-LBI-G1-2F-6W-50K-WC-2X	5000K	6	780	12	1560				
		RP-LBI-G1-2F-9W-35K-WC-2X	3500K	9	1170	18	2340				
		RP-LBI-G1-2F-9W-40K-WC-2X	4000K	9	1170	18	2340				
		RP-LBI-G1-2F-9W-50K-WC-2X	5000K	9	1170	18	2340				
		RP-LBI-G1-2F-12W-35K-WC-2X	3500K	12	1560	24	3120				
		RP-LBI-G1-2F-12W-40K-WC-2X	4000K	12	1560	24	3120				
		RP-LBI-G1-2F-12W-50K-WC-2X	5000K	12	1560	24	3120				
	3FT	RP-LBI-G1-3F-10W-35K-WC-2X	3500K	10	1400	20	2800				
		RP-LBI-G1-3F-10W-40K-WC-2X	**4000K**	**10**	**1400**	**20**	**2800**				
		RP-LBI-G1-3F-10W-50K-WC-2X	5000K	10	1400	20	2800				
		RP-LBI-G1-3F-12W-35K-WC-2X	3500K	12	1680	24	3360				
		RP-LBI-G1-3F-12W-40K-WC-2X	4000K	12	1680	24	3360				
		RP-LBI-G1-3F-12W-50K-WC-2X	5000K	12	1680	24	3360				
		RP-LBI-G1-3F-15W-35K-WC-2X	3500K	15	2100	30	4200				
		RP-LBI-G1-3F-15W-40K-WC-2X	4000K	15	2100	30	4200				
		RP-LBI-G1-3F-15W-50K-WC-2X	5000K	15	2100	30	4200				
	4FT	RP-LBI-G1-4F-10W-35K-WC-2X	3500K	10	1370	20	2740				
		RP-LBI-G1-4F-10W-40K-WC-2X	4000K	10	1370	20	2740				
		RP-LBI-G1-4F-10W-50K-WC-2X	5000K	10	1370	20	2740				
		RP-LBI-G1-4F-15W-35K-WC-2X	3500K	15	2055	30	4110				
		RP-LBI-G1-4F-15W-40K-WC-2X	**4000K**	**15**	**2055**	**30**	**4110**				
		RP-LBI-G1-4F-15W-50K-WC-2X	5000K	15	2055	30	4110				
		RP-LBI-G1-4F-25W-35K-WC-2X	3500K	25	3425	50	6850				
		RP-LBI-G1-4F-25W-40K-WC-2X	4000K	25	3425	50	6850		P4JORD8A		
		RP-LBI-G1-4F-25W-50K-WC-2X	5000K	25	3425	50	6850				

All models on the DLC QPL are premium listed.

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBarKit-Internal Driver (LBI)

PRODUCT SELECTION GUIDE (CONTINUED)

Default lumen package (wattage and CCT) are shown below in bold. There are two ways to achieve a non-default lumen package and/or CCT:
1. You can easily adjust in field via our FlexWatt and FlexColor internal switches. **2**. Have us adjust the FlexWatt and FlexColor at the factory for an additional charge.

		PART #	CCT	Wattage Per Bar	Lumens Per Bar	Total Wattage	Total Lumens	DLC/QPL (FIXTURE) Linear Ambient	DLC/QPL (FIXTURE) High-Bay	DLC/QPL (RETROFIT) Linear Ambient	DLC/QPL (RETROFIT) Troffers
PRO 3X BAR KITS	2FT	RP-LBI-G1-2F-6W-35K-WC-3X	3500K	6	780	18	2340				
		RP-LBI-G1-2F-6W-40K-WC-3X	**4000K**	**6**	**780**	**18**	**2340**				
		RP-LBI-G1-2F-6W-50K-WC-3X	5000K	6	780	18	2340				
		RP-LBI-G1-2F-9W-35K-WC-3X	3500K	9	1170	27	3510				
		RP-LBI-G1-2F-9W-40K-WC-3X	4000K	9	1170	27	3510				
		RP-LBI-G1-2F-9W-50K-WC-3X	5000K	9	1170	27	3510				
		RP-LBI-G1-2F-12W-35K-WC-3X	3500K	12	1560	36	4680				
		RP-LBI-G1-2F-12W-40K-WC-3X	4000K	12	1560	36	4680				
		RP-LBI-G1-2F-12W-50K-WC-3X	5000K	12	1560	36	4680				
	3FT	RP-LBI-G1-3F-10W-35K-WC-3X	3500K	10	1400	30	4200				
		RP-LBI-G1-3F-10W-40K-WC-3X	**4000K**	**10**	**1400**	**30**	**4200**				
		RP-LBI-G1-3F-10W-50K-WC-3X	5000K	10	1400	30	4200				
		RP-LBI-G1-3F-12W-35K-WC-3X	3500K	12	1680	36	5040				
		RP-LBI-G1-3F-12W-40K-WC-3X	4000K	12	1680	36	5040				
		RP-LBI-G1-3F-12W-50K-WC-3X	5000K	12	1680	36	5040				
		RP-LBI-G1-3F-15W-35K-WC-3X	3500K	15	2100	45	6300				
		RP-LBI-G1-3F-15W-40K-WC-3X	4000K	15	2100	45	6300				
		RP-LBI-G1-3F-15W-50K-WC-3X	5000K	15	2100	45	6300				
	4FT	RP-LBI-G1-4F-10W-35K-WC-3X	3500K	10	1370	30	4110				
		RP-LBI-G1-4F-10W-40K-WC-3X	4000K	10	1370	30	4110				
		RP-LBI-G1-4F-10W-50K-WC-3X	5000K	10	1370	30	4110				
		RP-LBI-G1-4F-15W-35K-WC-3X	3500K	15	2055	45	6165				
		RP-LBI-G1-4F-15W-40K-WC-3X	**4000K**	**15**	**2055**	**45**	**6165**				
		RP-LBI-G1-4F-15W-50K-WC-3X	5000K	15	2055	45	6165				
		RP-LBI-G1-4F-25W-35K-WC-3X	3500K	25	3425	75	10275		P0F750MP		
		RP-LBI-G1-4F-25W-40K-WC-3X	4000K	25	3425	75	10275		P0EV8SJB		
		RP-LBI-G1-4F-25W-50K-WC-3X	5000K	25	3425	75	10275		PIPGRRCP		

PRO 4 BAR KITS

Please note we do not sell 4X Bar Kits therefore order as **TWO - 2X BAR KIT** or **FOUR - 1X BAR KIT**

To order for continuous runs, please order "1 Bar Kits" + required accessory connectors (sold separately). Connect up to 40 light bars on one incoming power cable.

All models on the DLC QPL are premium listed.

BASE VERSION (4FT, 1X BAR KIT) - 15W ONLY

PART #	UPC	DESCRIPTION	WATTAGE	LUMENS	LPW	CCT (K)	DLC PRODUCT CODE
RP-LBI-G1-4F-15W-40K-B	844006024215	4FT BASE INTERNAL DRIVE LIGHT BAR	15	2325	155	4000	

STAIRWELL FIXTURE

PART #	UPC	DESCRIPTION	WATTAGE	LUMENS	LPW	CCT (K)	DLC PRODUCT CODE
RP-LBI-G1-2F-12W-40K-W-OC2	844006024505	2FT INTERNAL DRIVE LIGHT BAR STAIRWELL KIT	12	1560	130	4000	P3QQVAJH
RP-LBI-G1-4F-15W-40K-W-OC2	844006024512	4FT INTERNAL DRIVE LIGHT BAR STAIRWELL KIT	15	2055	137	4000	PS1Q17X9

Kit comes with 1X light Bar + OC2 Motion Sensor Kit.

RemPhos by Light Efficient Design
lighting on ta et

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBarKit-Internal Driver (LBI)

APPLICATION TABLE OF CONTENTS

EMERGENCY BATTERY BACKUP (SOLD SEPARATELY)

RP-LBI-EMG1-25W

Output Power
25 Watts

Input Power
8 Watts (max)

Input Voltage
100-277VAC, 50-60Hz

Emergency Operation3
≥90 Minutes

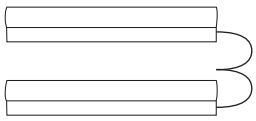
Dimensions
L 17.14" x W 2.13" x H 1.57"

EXAMPLE (2FT)
4X 2FT 6 WATT LIGHT BARS
2X 2FT 12WATT LIGHT BARS

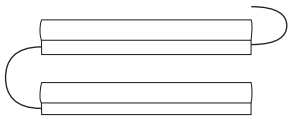
EXAMPLE (4FT)
2X 4FT 10 WATT LIGHT BARS
1X 4FT 25WATT LIGHT BAR

IMPORTANT NOTE ON WIRING METHOD

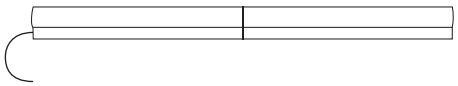
As you will see on the following pages, there are many possible uses for The Linear Transformer. Each light bar comes with its own incoming power cable. If your application calls for multiple light bars in a single fixture, there a 2 possible ways to order and wire (see below).



PARALLEL
This method is the most cost effective. Each light bar comes with its own incoming power cable. Multiple power cables can be grouped together under the ballast cover to make connection to incoming power and controls.



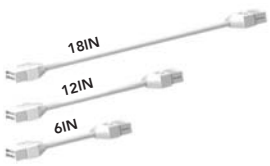
SERIES (WITH LINKING CABLE)
This method is the fastest. The first light bar uses an incoming power cable, additional light bars are linked using "linking cables" which are available in a variety of lengths. Linking cable are sold separately.



SERIES (WITH SEAMLESS CONNECTOR)
This method provides a near seamless appearance between the bars. The first light bar uses an incoming power cable, additional light bars are linked using "seamless connectors" which are sold separately.

LEDBarKit-Internal Driver (LBI)

PARTS & ACCESSORIES



LINKING CABLES

RP-LBI-LC-6IN-DIM-10P
RP-LBI-LC-6IN-NODIM-10P

RP-LBI-LC-12IN-DIM-10P
RP-LBI-LC-12IN-NODIM-10P

RP-LBI-LC-18IN-DIM-10P
RP-LBI-LC-18IN-NODIM-10P

(10 PACK ONLY)

SEAMLESS CONNECTOR

RP-LBI-SSC-DIM-10P
RP-LBI-SSC-NODIM-10P

LINKING CABLES & SEAMLESS CONNECTORS

Use Linking Cables and Seamless Connectors to easily connect the power and control wires from one light bar to another. The **…-DIM** version of the linking cables and seamless connector link all connections (AC power; 12V Aux power; 0-10V DIM signal) from light bar to light bar. Use these items to control all light bars from one sensor or incoming cable connection. The **…-NODIM** version of these items only links the AC power. Use these items to AC power all light bars with a single power feed; but separate control signals into individual groups.

4.7IN SPACER CONNECTOR | RP-LBI-SRC-4.7IN (SINGLE PACK)

Use the 4.7in Spacer Connector to bring the length of the bar system to a standard dimension (24in, 36in, 48in). This is useful when retrofitting linear fixtures of a standard length. It allows for the bar to be centered on each standard-length fixture. Each 4.7in spacer connector comes with (2) Seamless Connector-DIM.

OC2 SENSOR KIT | RP-LBI-OC2 (SINGLE PACK)

Sensor OC2 is a Tri-Level, remote controllable high frequency sensor designed to easily integrate with the light bars. It is totally plug&play! It can dim the light bars down to conserve more energy from both motion and daylight. The OC2 sensor controls the 0-10V DIM signal in both directions from the Sensor unit. Each sensor kit comes with (1) OC2 sensor; (1) surface mount magnetic clip; (2) Seamless Connector-DIM; (1) 12" Linking Cable-DIM. *See RP-LBI-OC2 data sheet for more details.*

SURFACE MOUNT MAGNETIC CLIP | RP-LBI-SMM-10P (10 PACK ONLY)

The Surface Mount Magnetic Clip provides the most universal method for attaching the light bar to a wall, ceiling, or fixture to be retrofitted. The mounting tabs that extend perpendicularly from the light bar can be easily removed by bending and breaking on the pre-scored line. The strong rare-earth magnets are intended to hold light bars in place while installing mechanical fasteners. Not intended for permanent installation with magnets only.
Two of these clips are included in each light bar kit.

SUSPENDED IN-LINE BRACKET | RP-LBI-SIL-10P (10 PACK ONLY)

The Suspended In-Line Bracket is a wide clip that fastens over the junction of 2 light bars to keep them straight in-line and provides mounting points for common suspension methods (air craft cable, drop chain, etc.)

T-BAR CLIP | RP-LBI-T1516-10P (10 PACK ONLY)

The T-Bar Clip is the fastest way to mount a light bar to a T-Bar grid ceiling. Works with standard 15/16" grid only.

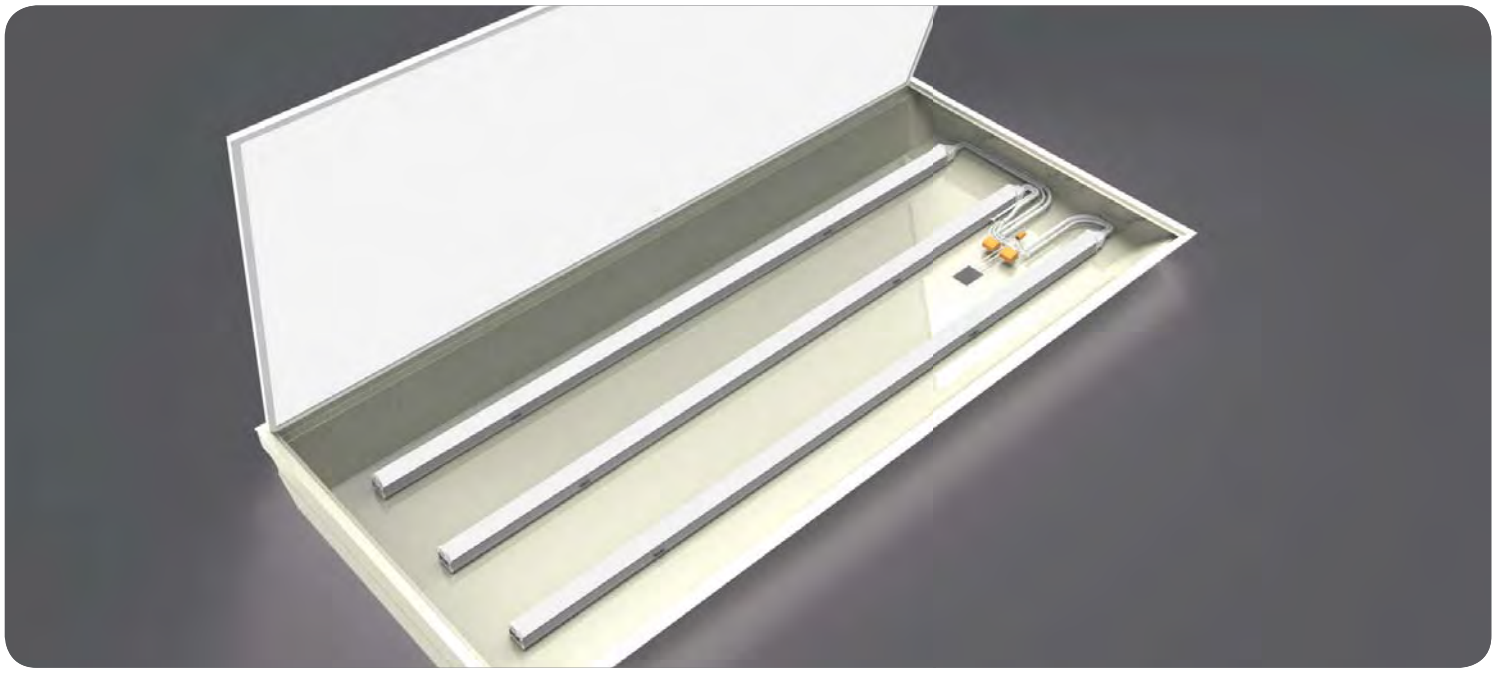
BLADE CLIP | RP-LBI-BLC-10P (10 PACK ONLY)

The Blade Clip is designed to provide a retrofit solution for fixtures that have thin sheet metal or plastic film reflectors commonly found on high bay fixtures. The rotating mounting blade provides a degree of freedom to align the mounting holes on the blade with fastening locations that may not be in-line with the light bar or where the distance between available mounting points is greater than the length of the light bar. It is common to attach the blade to the same point holding the thin reflector to the fixture frame.

RemPhos by Light Efficient Design
lighting on target

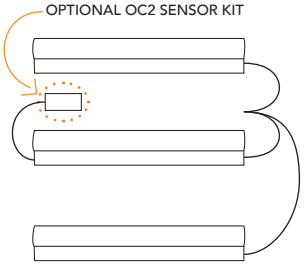
LEDBarKit-Internal Driver (LBI)

RETROFIT TROFFERS*



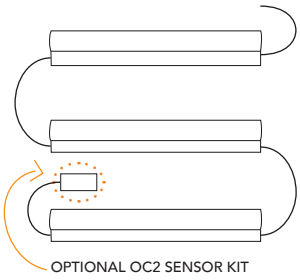
* Example Retrofit. Fixture not included.

RECOMMENDED INSTALLATION



PARALLEL

This method is the most cost effective. Each light bar comes with its own incoming power cable. Multiple incoming power cables are connected together under the ballast cover.

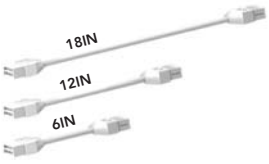


SERIES

This method is the fastest. The first light bar uses an incoming power cable, additional light bars are linked using "linking cables" which are available in a variety of lengths. Linking cables are sold separately.

ACCESSORIES

NO ADDITIONAL ACCESSORIES REQUIRED



LINKING CABLES*

RP-LBI-LC-6IN-DIM
RP-LBI-LC-6IN-NODIM

RP-LBI-LC-12IN-DIM
RP-LBI-LC-12IN-NODIM

RP-LBI-LC-18IN-DIM
RP-LBI-LC-18IN-NODIM

* Choose the appropriate linking cable length based on the dimensions of your fixture.

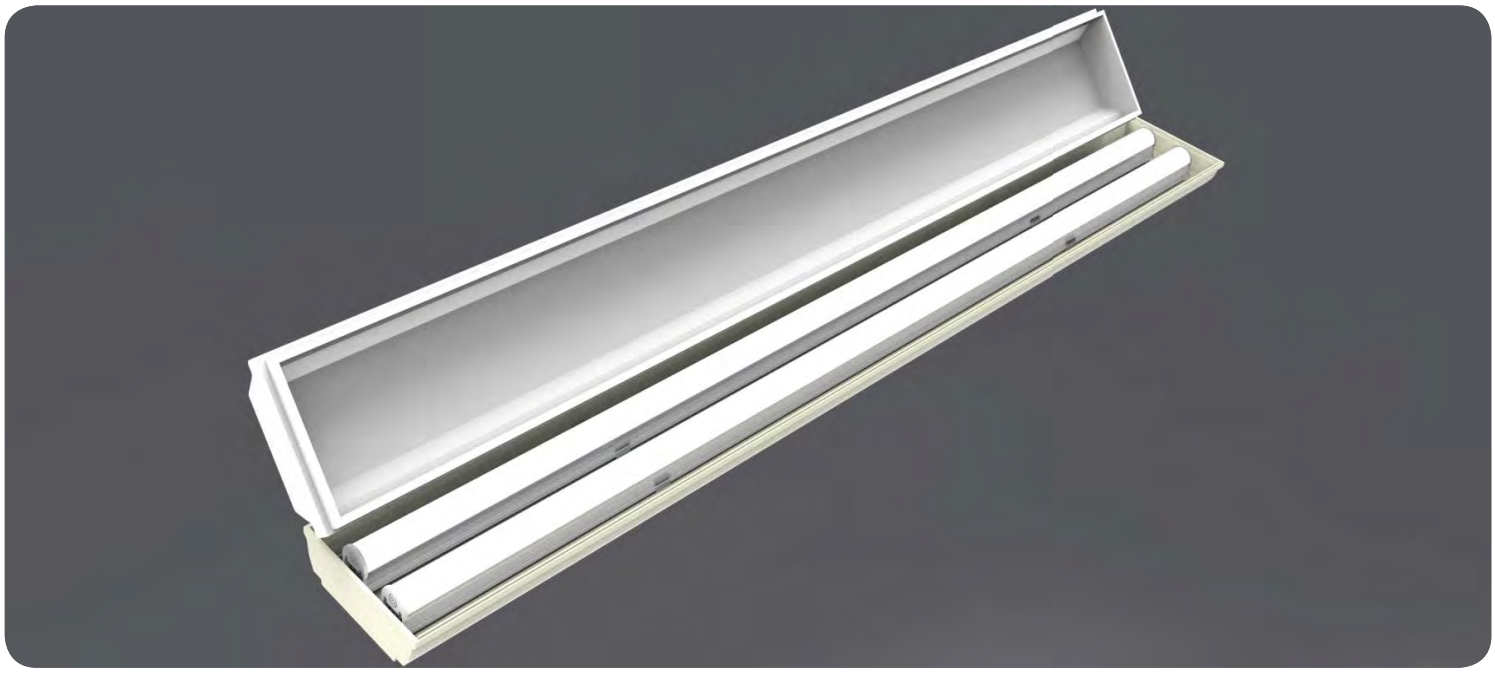
RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

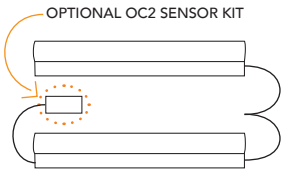
LEDBarKit-Internal Driver (LBI)

RETROFIT LINEAR FIXTURES *



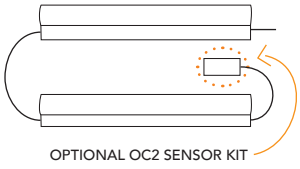
* Example Retrofit. Fixture not included.

RECOMMENDED INSTALLATION



PARALLEL

This method is the most cost effective. Each light bar comes with its own incoming power cable. Multiple incoming power cables are connected together under the ballast cover.

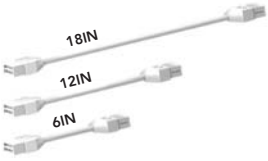


SERIES

This method is the fastest. The first light bar uses an incoming power cable, additional light bars are linked using "linking cables" which are available in a variety of lengths. Linking cables are sold separately.

ACCESSORIES

NO ADDITIONAL ACCESSORIES REQUIRED



LINKING CABLES*

RP-LBI-LC-6IN-DIM
RP-LBI-LC-6IN-NODIM

RP-LBI-LC-12IN-DIM
RP-LBI-LC-12IN-NODIM

RP-LBI-LC-18IN-DIM
RP-LBI-LC-18IN-NODIM

* Choose the appropriate linking cable length based on the dimensions of your fixture.

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

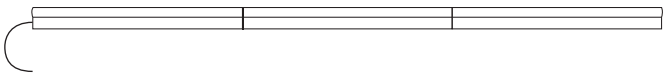
LEDBarKit-Internal Driver (LBI)

CONTINUOUS RUN FIXTURES / RETROFIT*

* Example Retrofit. Fixture not included.

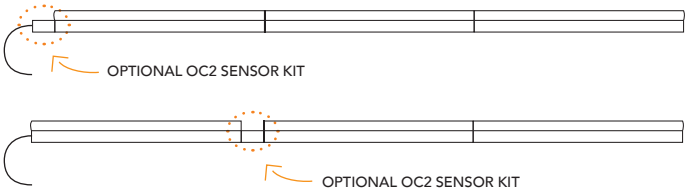
RECOMMENDED INSTALLATION

CONTINUOUS RUN



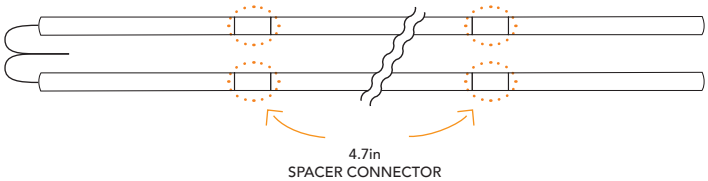
CONTINUOUS RUN WITH OPTIONAL OC2 SENSOR KIT

OC2 Sensor can be installed on either end or in between any bars



CONTINUOUS RUN WITH SPACER CONNECT

Ideal for retrofitting fixtures of standard length



ACCESSORIES

SEAMLESS CONNECTOR*

RP-LBI-SSC-DIM (sold separately)
Links the OCC control signal to all bars.
RP-LBI-SSC-NODIM (sold separately)
Isolates each OCC control group within the continuous run.

*All continuous run installations require seamless connectors.

SURFACE MOUNT MAGNETIC CLIP

RP-LBI-SMM (2x included with bar)

SUSPENDED IN-LINE BRACKET

RP-LBI-SIL (sold separately)
Recommended qty = number of bars + 1

T-BAR CLIP

RP-LBI-T1516 (sold separately)
Recommended qty = 2x per bar

4.7in SPACER CONNECTOR

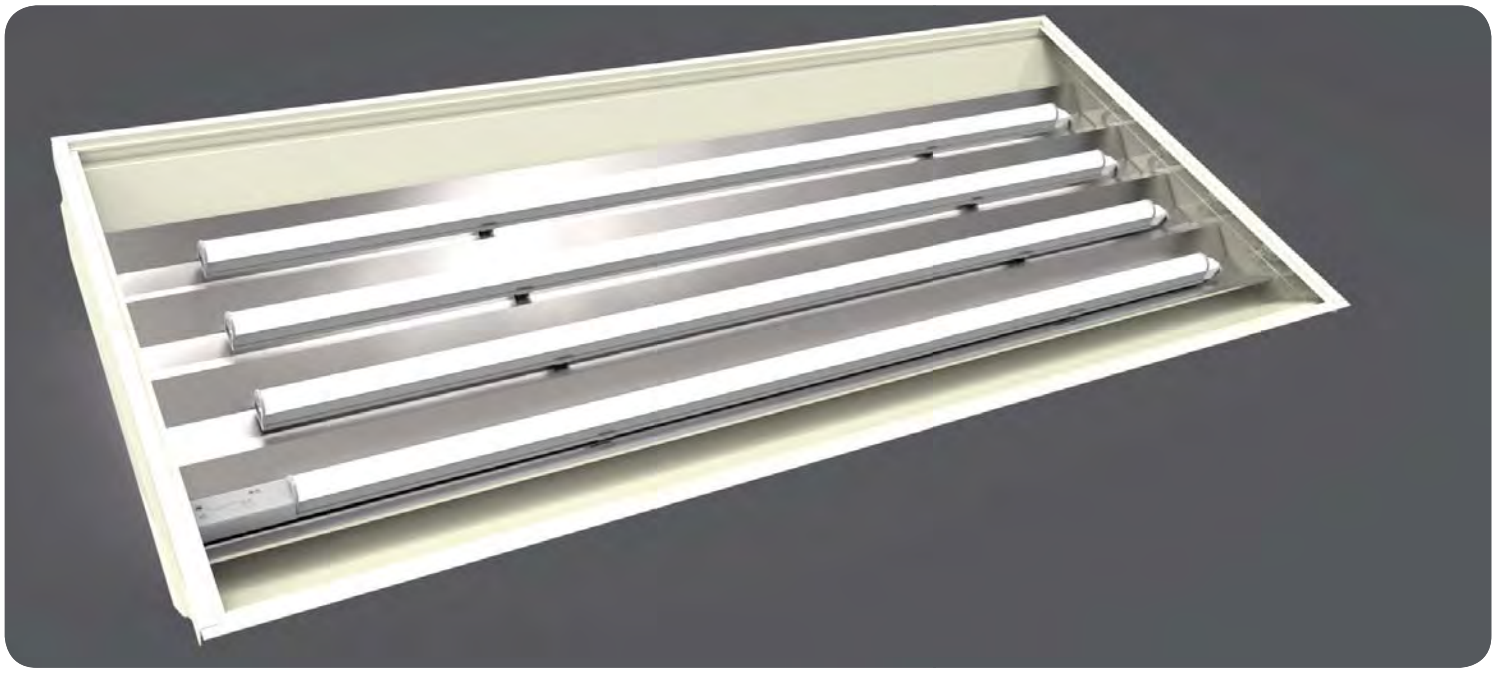
RP-LBI-SRC-4.7IN (sold separately)

RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

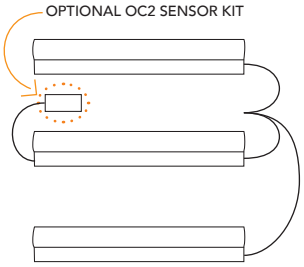
LEDBarKit-Internal Driver (LBI)

HIGH BAY FIXTURE / RETROFIT*



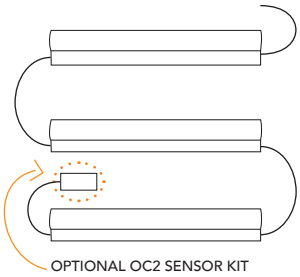
* Example Retrofit. Fixture not included.

RECOMMENDED INSTALLATION



PARALLEL

This method is the most cost effective. Each light bar comes with its own incoming power cable. Multiple incoming power cables are connected together under the ballast cover.



SERIES

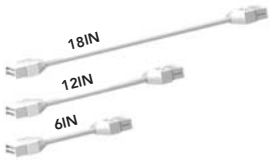
This method is the fastest. The first light bar uses an incoming power cable, additional light bars are linked using "linking cables" which are available in a variety of lengths. Linking cables are sold separately.

ACCESSORIES

BLADE CLIP

RP-LBI-BLC-10P

The Blade Clip is designed to provide a retrofit solution for fixtures that have thin sheet metal or plastic film reflectors commonly found on high bay fixtures. It is common to attach the blade to the same point holding the thin reflector to the fixture frame.



LINKING CABLES*

RP-LBI-LC-6IN-DIM
RP-LBI-LC-6IN-NODIM

RP-LBI-LC-12IN-DIM
RP-LBI-LC-12IN-NODIM

RP-LBI-LC-18IN-DIM
RP-LBI-LC-18IN-NODIM

* Choose the appropriate linking cable length based on the dimensions of your fixture.

Light Bars are DLC listed under the high bay fixture category. You can choose to purchase Light Bars only and hang/mount as a standalone fixture or retrofit an existing high bay fixture housing as shown above.

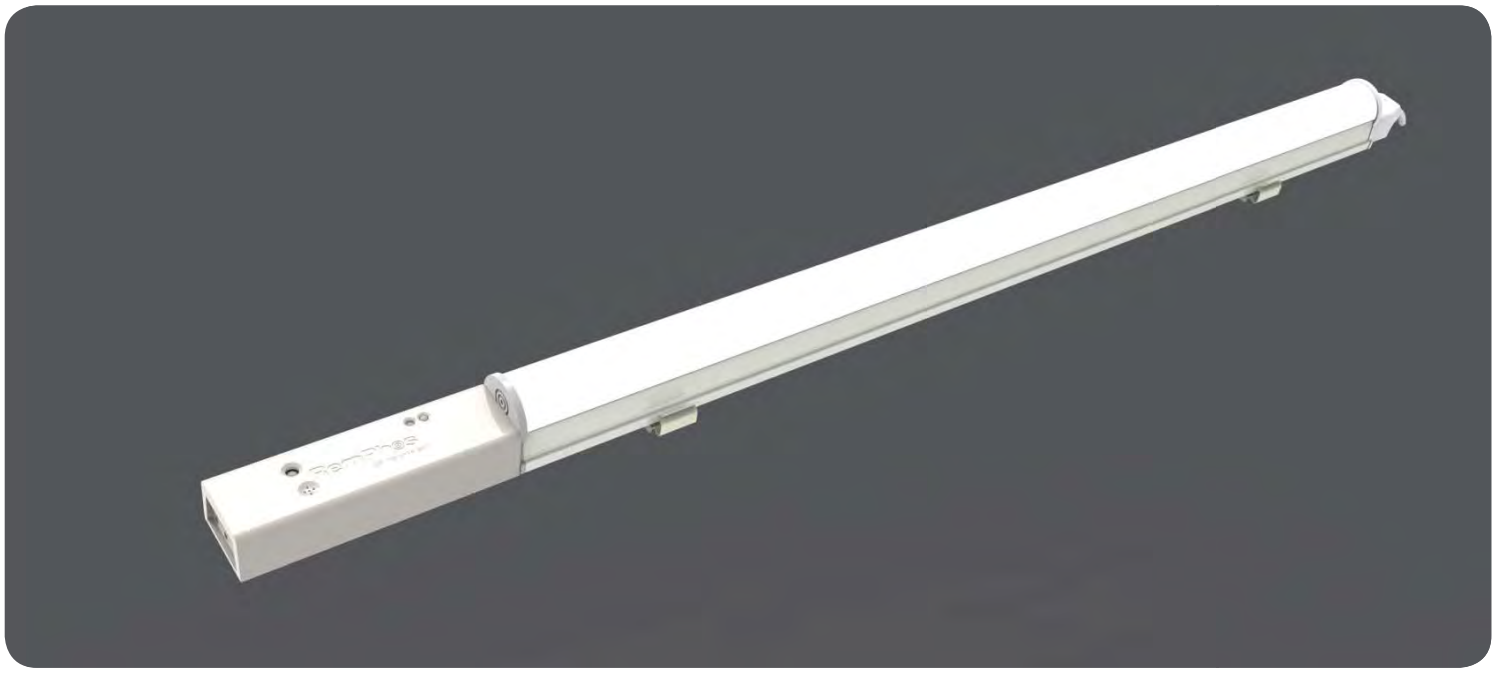
RemPhos by Light Efficient Design
lighting on target

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

03.29.19 Information is subject to change without notice.

LEDBarKit-Internal Driver (LBI)

STAIRWELL FIXTURE KIT / UTILITY FIXTURE*



* Example Retrofit. Fixture not included.

STAIRWELL FIXTURE KIT INCLUDES

ORDERING #
2FT: RP-LBI-2F-12W-40K-W-OC2
4FT: RP-LBI-4F-15W-40K-W-OC2

1 - INTERNAL DRIVE BAR KIT
LEDBAR + Incoming power cable + Magnetic mounting brackets + Power disconnect, connectors and grommet.

1 - OC2 SENSOR KIT
RP-LBI-OC2
Sensor + Seamless Connector-DIM

UTILITY FIXTURE

To use as a standalone utility fixture, purchase 1X Light Bar kit.

Fixture housings to be used as wiring and emergency battery compartment currently in development. Call for more information.

RemPhos by Light Efficient Design
lighting on target

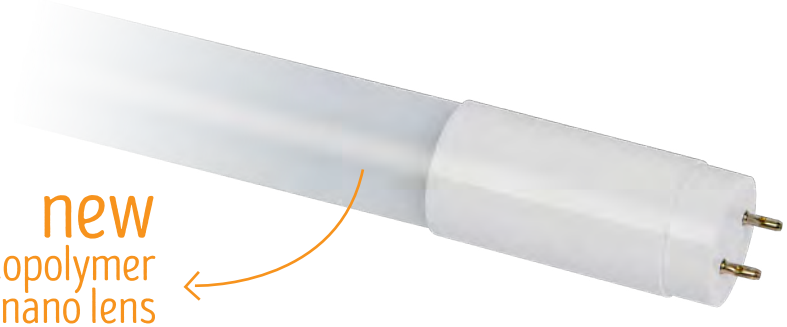
FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

TOTALTUBE® T8 G3 UL TYPE A+B BALLAST COMPATIBLE & LINE VOLTAGE

PRO
BASE

a TOTALLY perfect tube

THE TOTALTUBE T8 G3 IS OUR LATEST GENERATION OF LED TUBE WHICH BUILDS ON OUR PREVIOUS G1 AND G2 MODELS. THE PERFECT "TOTAL" LED TUBE SOLUTION: LOW COST, HIGH EFFICACY, BEAUTIFUL ILLUMINATION AND VERSATILE WITH 2 DIFFERENT METHODS OF INSTALLATION.



new copolymer nano lens material

provides the safest possible installation

NEW HIGH PERFORMANCE NANO LENS MATERIAL

Manufactured from a plastic and glass copolymer. Higher transmission rate, more uniform illumination and increased rigidity compared with plastic lenses without the breakage issues of an all glass tube.

2 METHODS OF INSTALLATION

- UL Type A: plug & play compatible with almost all fluorescent ballasts (see ballast compatibility guide for more details).
- UL Type B Double-End 120-277V: ballast bypass installation using non-shunted or shunted sockets with power applied to both ends of the tube.

SHUNTED NON SHUNTED

NEW 135LPW EFFICACY

Improved driver design, higher efficiency LED chips and high performance NANO lens.

NEW WIDE 240° BEAM ANGLE

Perfect for either direct or direct/indirect applications.

NEW G3 SMARTSENSE-TLED INTELLIGENT SAFETY SYSTEM

Faster installation with our new switch-less technology. This safety system prevents any risk of electricity flowing from one end of the tube and also prevents against "socket to lamp pin"electrical arcing.

AVAILABLE IN 2FT, 3FT, 4FT & UBEND SIZES

Available in multiple CCTs. Available in standard and HO outputs for the 4ft model only. UBend available in 2 widths.

SUITABLE FOR DRY & DAMP LOCATIONS

UL CLASSIFIED RETROFIT KIT LISTED AND DLC QPL LISTED

(See ordering guide for DLC QPL part numbers)

5 YEAR STANDARD WARRANTY, L70 >100,000HRS

OPTIONAL "BAA" BUY AMERICA ACT

Compliant models available, assembled in our state-of-the-art Middleton, MA assembly center. (BAA SECTION 1605 COMPLIANT)

PLEASE NOTE: When installing an LED tube with an existing or new fluorescent ballast, always confirm that: (1) the ballast is compatible with the LED tube by checking the ballast compatibility guide (2) the lamp holders utilized and the wiring diagram are correct for that specific fluorescent ballast, by checking the fluorescent ballast installation guide (for example, DO NOT use non-shunted sockets on instant-start ballasts (3) the lamp holders are in good working condition and are making contact with all of the LED tube pins (for example, DO NOT install an LED tube in a loose lamp holder where there is a visible air gap between the end of the LED tube and the lamp holder) so that there is no risk of arcing.

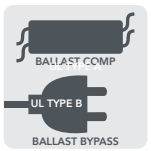
03.01.18 Information is subject to change without notice.

RemPhos • 877.997.3674 • www.remphos.com
30 Log Bridge Road • Building 200 • Middleton, MA 01949 • USA

RemPhos
lighting on target

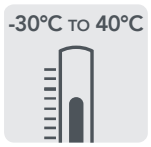
TOTALTUBE® T8 G3 UL TYPE A+B BALLAST COMPATIBLE & LINE VOLTAGE

PRO
BASE



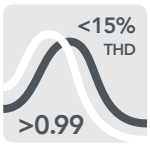
INSTALL METHOD

EFFICACY



OPERATING TEMP

LENS

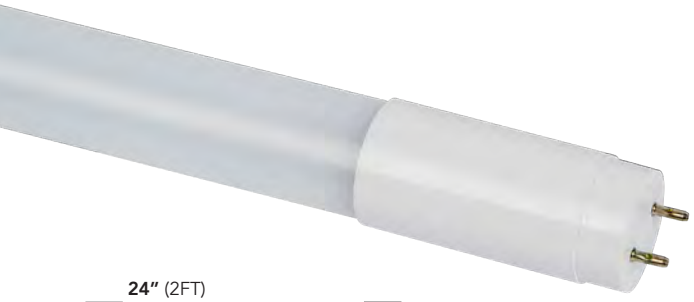


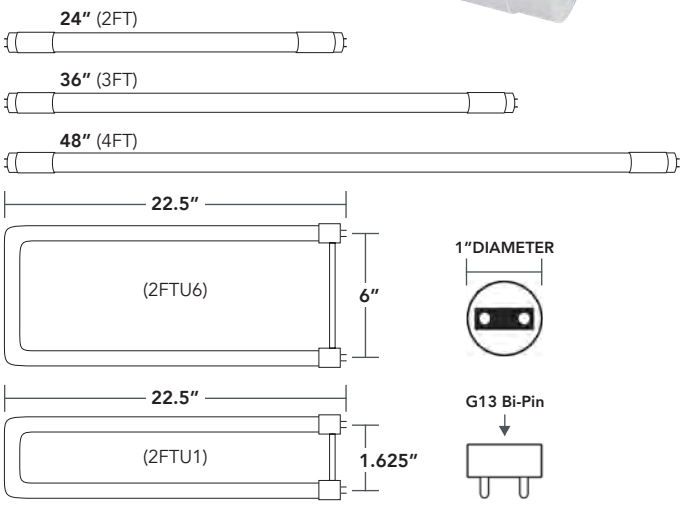
PWR FACTOR/THD

CRI

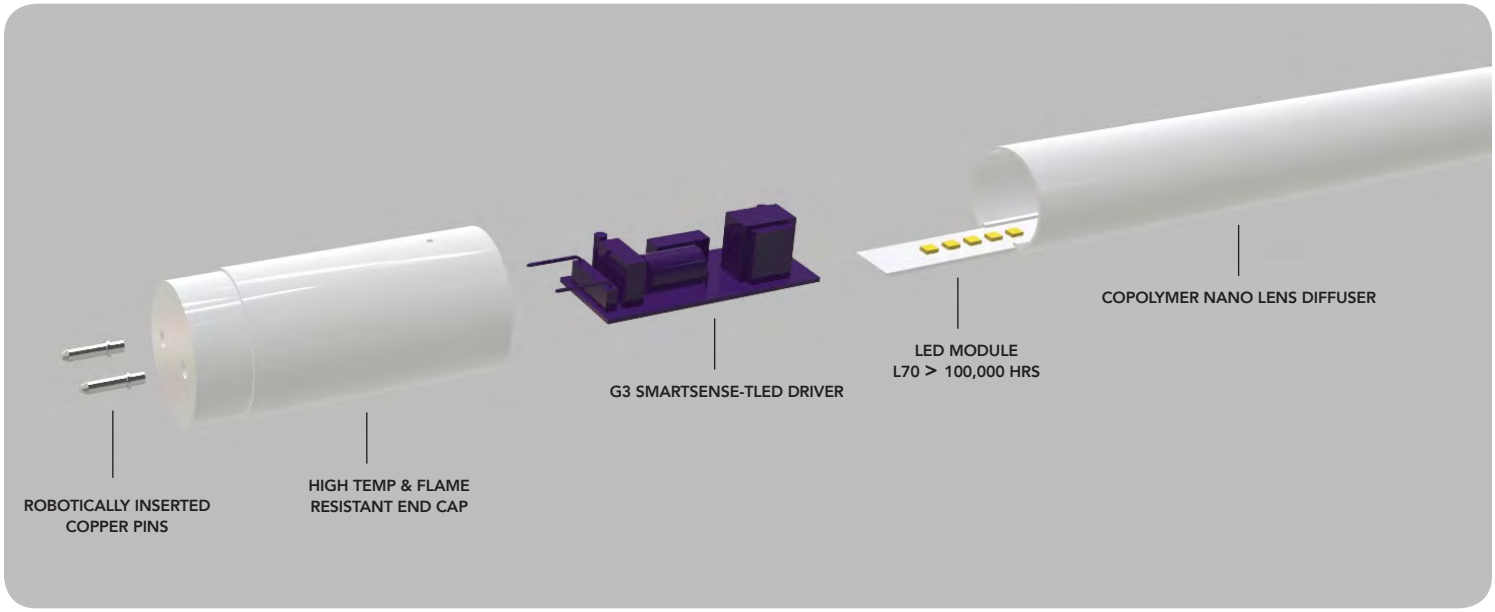
BEAM ANGLE

RATED LIFE





- 2 METHODS OF INSTALLATION (UL TYPE A+B)
- NEW WIDE 240° BEAM ANGLE
- NEW G3 SMARTSENSE-TLED INTELLIGENT SAFETY SYSTEM
- AVAILABLE IN 2FT, 3FT AND 4FT LENGTHS & UBEND SIZES
- SUITABLE FOR DRY & DAMP LOCATIONS
- UL CLASSIFIED RETROFIT KIT LISTED AND DLC QPL LISTED
- 5 YEAR STANDARD WARRANTY, L70 >100,000HRS
- OPTIONAL "BAA" BUY AMERICA ACT
- NEW HIGH PERFORMANCE NANO LENS MATERIAL
- NEW 135LPW EFFICACY DUE TO IMPROVED DRIVER DESIGN, HIGHER EFFICIENCY LED CHIPS AND HIGH PERFORMANCE NANO LENS.



03.01.18 Information is subject to change without notice.

RemPhos • 877.997.3674 • www.remphos.com
30 Log Bridge Road • Building 200 • Middleton, MA 01949 • USA

RemPhos
lighting on target

TOTALTUBE® T8 G3 UL TYPE A+B BALLAST COMPATIBLE & LINE VOLTAGE

PRO
BASE

PART NUMBER BUILDER

MFR	FAMILY	PRODUCT	GEN	SIZE	COLOR	VERSION	BAA
RPT	B	TOTALTUBE-T8	G3			A	
				2FT 3FT 4FT 4FTHO 2FTU1 2FTU6	830=3000K/85CRI 835=3500K/85CRI 840=4000K/85CRI 850=5000K/85CRI		BLANK=NON-BAA BAA=BAA SECTION 1605 COMPLIANT

ORDERING EXAMPLE
RPT-B-TOTALTUBE-T8-G3-2FT-830-A

ORDERING GUIDE

CASE QTY	ENERGY STAR	DLC	PART #	UL TYPE B (LINE VOLTAGE) LUMEN OUTPUT (LM)	WATTAGE (W)	VOLTAGE RANGE (VAC)	WARRANTY (YRS)	TRADITIONAL EQUIVALENT
42		•	RPT-B-TOTALTUBE-T8-G3-2FT-8XX-A	1350	10	120-277	5	17W FL
42			RPT-B-TOTALTUBE-T8-G3-3FT-8XX-A	1350	10	120-277	5	25W FL
42		•	RPT-B-TOTALTUBE-T8-G3-4FT-8XX-A	1860	12	120-277	5	32W FL
42		•	RPT-B-TOTALTUBE-T8-G3-4FTHO-8XX-A	1980	15	120-277	5	32W FL
10			RPT-B-TOTALTUBE-T8-G3-2FTU1-8XX-A	1950	15	120-277	5	32W FL
10			RPT-B-TOTALTUBE-T8-G3-2FTU6-8XX-A	1950	15	120-277	5	32W FL

● DLC STANDARD ▲ DLC PREMIUM

SYSTEM POWER AND LUMINOUS FLUX INFORMATION (WITH A BALLAST)

PART #	AVERAGE SYSTEM POWER (W) LOW BF (0.77)	NORMAL BF (0.88)	HIGH BF (1.18)	AVERAGE LAMP FLUX (LM) LOW BF (0.77)	NORMAL BF (0.88)	HIGH BF (1.18)
RPT-B-TOTALTUBE-T8-G3-2FT-8XX-A	9.2	10.5	12.5	1150	1350	1500
RPT-B-TOTALTUBE-T8-G3-3FT-8XX-A	9.2	10.5	12.5	1150	1350	1500
RPT-B-TOTALTUBE-T8-G3-4FT-8XX-A	12.5	15.5	16.5	1500	1860	1980
RPT-B-TOTALTUBE-T8-G3-4FTHO-8XX-A	14.2	16.5	17.8	1704	1980	2136
RPT-B-TOTALTUBE-T8-G3-2FTU1-8XX-A	12.5	15.5	16.5	1350	1700	1850
RPT-B-TOTALTUBE-T8-G3-2FTU6-8XX-A	12.5	15.5	16.5	1350	1700	1850

NOTE The average system power is calculated by measuring the average system wattage for a single LED tube including the ballast. Average system power was measured at 120V and 277V with multiple ballasts from Philips, Osram, GE, Keystone, Sunpark, Howard.

ACCESSORIES

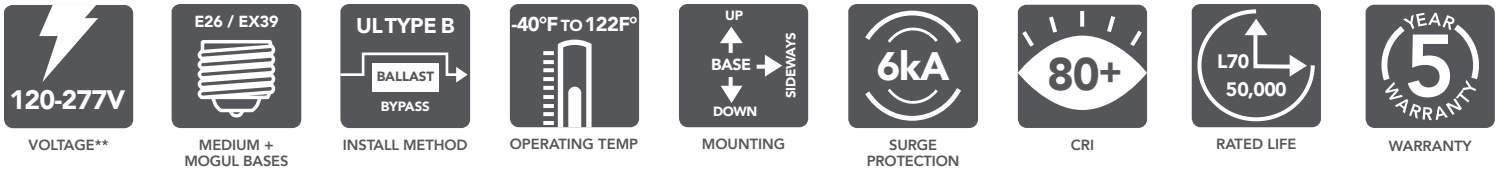
PART #	DESCRIPTION	INPUT VOLTAGE (V AC)	FLUX OUTPUT (LM)	EST. EMG. RUN TIME (MIN)
RPT-ACCESSORY-EMGKIT-HS1-500LM	UL Classified Emergency Kit	120-277	500	145
RPT-ACCESSORY-EMGKIT-HS1-1000LM	UL Classified Emergency Kit	120-277	1000	145

DIMMING AND EMERGENCY OPERATION GUIDE

	UL TYPE A	UL TYPE B
DIMMABILITY	Not recommended (use RemPhos BCTUBE T8 G3)	NO
EMERGENCY OPERATION	YES (see ballast compatibility guide)	See accessories above for EMG Kit

03.01.18 Information is subject to change without notice.

BOLLARD RETROFITS 360° OMNI DIRECTIONAL DESIGN



bright & compact

fits almost anywhere

- Available in 14W, 18W & 24W models replacing up to 150W HID.
- Multi-directional mounting capability & 360° design. Use base down, base up or base sideways without affecting performance.
- Pretested & potted drivers are burnt in 3x prior to shipping and protected against vibration & moisture.
- Expertly engineered to work efficiently in enclosed fixtures & damp environments, while also protected against insects & dust.
- Dual stage MOV protection with integrated 6kA surge.
- USA designed & specified LED driver.

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)*	BASE	DLC PRODUCT CODE
LED-8038E57-A	844006082970	70W	14W	2217	5700K	E26	N/A
LED-8039E57-A	844006080488	100W	18W	2465	5700K	E26	N/A
LED-8039M57-A	844006084394	100W	18W	2465	5700K	EX39	PVNFJNV1
LED-8029E57-A	844006080297	150W	24W	3425	5700K	E26	N/A
LED-8029M57-A	844006081560	150W	24W	3374	5700K	EX39	P17Z7EQS

* See page 2 for additional color temperatures.

** See page 2 for 347 volt options for Canada.

MOGUL OR 120V MEDIUM BASE ONLY

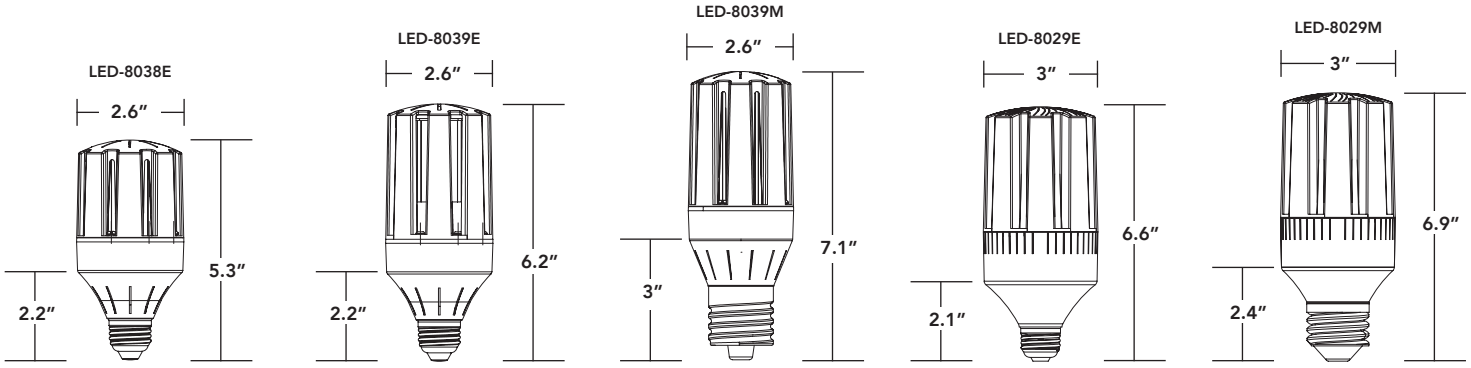
Light Efficient Design

RemPhos

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

02.13.19 Information is subject to change without notice.

BOLLARD RETROFITS 360° OMNI DIRECTIONAL DESIGN



ORDERING GUIDE

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)	BASE	DLC PRODUCT CODE
LED-8038E30-A	844006082956	70W HID	14W	1840	3000K	E26	N/A
LED-8038E40-A	844006082963	70W HID	14W	2065	4000K	E26	N/A
LED-8038E57-A	844006082970	70W HID	14W	2217	5700K	E26	N/A
LED-8039E30-A	844006080495	100W HID	18W	2758	3000K	E26	N/A
LED-8039E40-A	844006080648	100W HID	18W	2983	4000K	E26	N/A
LED-8039E57-A	844006080488	100W HID	18W	2465	5700K	E26	N/A
LED-8039M30-A	844006084356	100W HID	18W	2758	3000K	EX39	PN8CHYH1
LED-8039M40-A	844006084370	100W HID	18W	2983	4000K	EX39	P19GG12F
LED-8039M57-A	844006084394	100W HID	18W	2465	5700K	EX39	PVNFJNV1
LED-8029E30-A	844006080396	150W HID	24W	3024	3000K	E26	N/A
LED-8029E40-A	844006080631	150W HID	24W	3422	4000K	E26	N/A
LED-8029E57-A	844006080297	150W HID	24W	3425	5700K	E26	N/A
LED-8029M30-A	844006081546	150W HID	24W	3431	3000K	EX39	PAKDVMFU
LED-8029M40-A	844006081553	150W HID	24W	3374	4000K	EX39	PN6Y8ECX
LED-8029M57-A	844006081560	150W HID	24W	3374	5700K	EX39	P17Z7EQS

347 VOLT OPTIONS FOR CANADA

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)	BASE	DLC PRODUCT CODE
LED-8038E30C-A	844006082987	70W HID	14W	1789	3000K	E26	N/A
LED-8038E40C-A	844006082994	70W HID	14W	2037	4000K	E26	N/A
LED-8038E57C-A	844006083007	70W HID	14W	2155	5700K	E26	N/A
LED-8039E30C-A	844006082550	100W HID	18W	2919	3000K	E26	N/A
LED-8039E40C-A	844006082567	100W HID	18W	3053	4000K	E26	N/A
LED-8039E57C-A	844006082574	100W HID	18W	2695	5700K	E26	N/A
LED-8039M30C-A	844006084363	100W HID	18W	2919	3000K	EX39	PDYQHD1W
LED-8039M40C-A	844006084387	100W HID	18W	3053	4000K	EX39	PVLHXS0K
LED-8039M57C-A	844006084400	100W HID	18W	2695	5700K	EX39	P2NOX14J
LED-8029E30C-A	844006080952	150W HID	24W	3099	3000K	E26	N/A
LED-8029E40C-A	844006080969	150W HID	24W	3568	4000K	E26	N/A
LED-8029E57C-A	844006080976	150W HID	24W	3426	5700K	E26	N/A
LED-8029M30C-A	844006081721	150W HID	24W	3129	3000K	EX39	P76RARZA
LED-8029M40C-A	844006081714	150W HID	24W	3405	4000K	EX39	PN4K3SC8
LED-8029M57C-A	844006081707	150W HID	24W	3165	5700K	EX39	PA216JKT

Light Efficient Design

RemPhos

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

d"series

D-Series Size 1
LED Flood Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

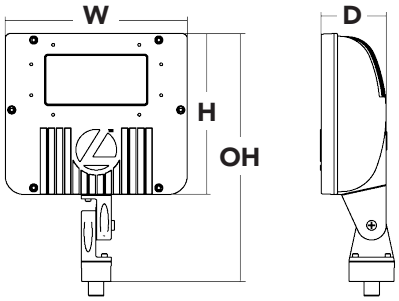
Introduction

The D-Series Size 1 Flood features precision optics to beautifully illuminate a variety of applications while its sleek, compact styling blends seamlessly with the environment.

The D-Series Flood reflector systems and cutting-edge chip-on-board LED technology produce low field-to-beam ratios for minimal spill light and incredible photometric performance. It's the ideal long-life replacement for 50 - 150W metal halide floods, with typical energy savings of 72% and expected service life of over 100,000 hours.

Specifications

EPA:	0.6 ft² *(0.05 m²)*
Depth:	3-1/8" *(8.0 cm)*
Width:	8-7/8" *(22.4 cm)*
Height:	7-3/4" *(19.8 cm)*
Overall Height	12" *(30.5 cm)*
Weight:	7.2 lbs *(3.3 kg)*



Ordering Information

EXAMPLE: DSXF1 LED 2 A530/40K MSP MVOLT THK DDBXD

DSXF1 LED							Catalog Number
Series	**Light Engines**	**Performance Package**	**Distribution**	**Voltage**	**Mounting**	**Options**	**Finish** *(required)*
DSXF1 LED	1 One COB engine 2 Two COB engines	**530 mA options:** A530/30K 3000K A530/40K 4000K A530/50K 5000K	NSP Narrow spot MSP Medium spot MFL Medium flood FL Flood WFL Wide flood WFR Wide flood, rectangular HMF Horizontal flood	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1]	**Shipped included** THK Knuckle with 1/2" NPS threaded pipe IS Integral slipfitter (fits 2-3/8" O.D. tenon) **Shipped separately** [2] DSXF1/2TS Tenon slipfitter (2-3/8" O.D. THK required)	**Shipped installed** PE Photocontrol, button style [3] SF Single fuse (120, 277V) [4] **Shipped separately** [2] UBV Upper/bottom visor (universal) FV Full visor VG Vandal guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
DSXF1 LED 1 A530/40K WFL MVOLT THK DDBXD	**DSXF1 LED 1 40K**
DSXF1 LED 1 A530/50K WFL MVOLT THK DDBXD	**DSXF1 LED 1 50K**
DSXF1 LED 2 A530/40K WFL MVOLT THK DDBXD	**DSXF1 LED 2 40K**
DSXF1 LED 2 A530/50K WFL MVOLT THK DDBXD	**DSXF1 LED 2 50K**

Accessories

Ordered and shipped separately.

DSXF1/2TS DDBXD U	Slipfitter for 1-1/4" to 2-3/8" OD tenons; mates with 1/2" threaded knuckle (specify finish)
FRWB DDBXD U	Radius wall bracket, 2-3/8" OD tenon (specify finish)
FSPB DDBXD U	Steel square pole bracket, 2-3/8" OD tenon (specify finish)
DSXF1UBV DDBXD U	Upper/bottom visor accessory (specify finish)
DSXF1FV DDBXD U	Full visor accessory (specify finish)
DSXF1VG U	Vandal guard accessory

For more mounting options, visit our Floodlighting Accessories pages.

NOTES

1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF option) or photocontrol (PE).
2. Also available as separate accessories; see Accessories information at left.
3. Photocontrol (PE) requires 120, 208, 240 or 277 voltage option.
4. Single fuse (SF) requires 120 or 277 voltage option.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Contact factory for performance data on any configurations not shown here.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	Field Angle		Beam Angle		30K (3000K, 70 CRI)			40K (4000K, 70 CRI)			50K (5000K, 70 CRI)		
					°H	°V	°H	°V	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW
1	530	A530/--K	19W	NSP	48	49	19	19	7062	1408	74	7300	1692	89	7277	1700	89
				MSP	50	48	24	23	6782	1541	81	6740	1923	101	6719	1916	101
				MFL	60	60	47	46	2249	1316	69	2806	1581	83	2797	1588	84
				FL	85	84	63	62	1845	1752	92	1855	2105	111	1849	2115	111
				WFL	106	106	71	72	1301	1739	92	1391	1995	105	1387	2099	110
				WFR	107	88	85	64	1279	1764	93	1386	2119	112	1381	2129	112
				HMF	100	62	80	13	1445	771	41	1259	927	49	1255	931	49
2	530	A530/--K	37W	NSP	48	49	19	19	13,379	2668	72	13,803	3206	87	13,760	3221	87
				MSP	50	48	24	23	12,850	2920	79	12,744	3643	98	12,704	3631	98
				MFL	60	60	47	46	4260	2493	67	5305	2995	81	5288	3009	81
				FL	85	84	63	62	3496	3320	90	3507	3989	108	3496	4008	108
				WFL	106	106	71	72	2465	3294	89	2630	3958	107	2622	3977	107
				WFR	107	88	85	64	2422	3342	90	2620	4015	109	2612	4034	109
				HMF	100	62	80	13	2738	1462	40	2381	1756	47	2374	1764	48

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.07
10°C	50°F	1.04
20°C	68°F	1.02
25°C	**77°F**	**1.00**
30°C	86°F	0.98
40°C	104°F	0.95

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **DSXF1 LED 2 A530** platform based on 8400 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.94	0.90	0.80

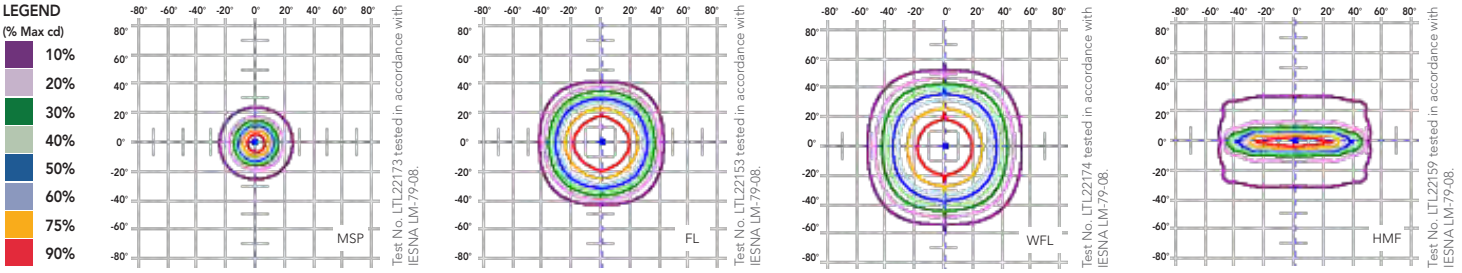
Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1	530	19W	0.16	0.1	0.09	0.08	-	-
2	530	37W	0.32	0.19	0.17	0.15	-	-

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Flood Size 1 homepage.

Isocandela plots for the DSXF1 LED 2 A530/40K.



Mounting, Options and Accessories

THK - Knuckle with 1/2" NPS threaded pipe

IS – Integral slipfitter
H= 2-1/2" (6.3 cm)
ID= 2-3/8" (6.0 cm)
OD= 3-1/2" (8.8 cm)

UBV – Upper/bottom visor
W= 5-1/4" (13.3 cm)
H= 2-1/2" (6.3 cm)
D= 3" (7.6 cm)

FV – Full visor
W= 5-1/4" (13.3 cm)
H= 2-1/2" (6.3 cm)
D= 3" (7.6 cm)

VG – Vandal guard
W= 6-1/2" (16.5 cm)
H= 4" (10.1 cm)

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 Flood reflects the embedded high performance LED technology. It is ideal for landscape, signage and accent lighting in many commercial and residential applications.

CONSTRUCTION
Die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.6 ft^2) for optimized wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS
A variety of precision-molded vacuum-metallized specular reflectors are engineered for superior field-to-beam ratios, uniformity and spacing. Light engines are available in 3000K (70 CRI min.), 4000K (70 CRI min.) or 5000K (70 CRI min.) configurations. Optional visors offer additional versatility.

ELECTRICAL
Light engine(s) consist of chip-on-board (COB) LEDs directly coupled to the housing to maximize heat dissipation and promote long life (100,000 hrs, L80). Single-engine unit uses a Class 2 electronic driver; dual-engine unit uses a Class 1 electronic driver. Both drivers have a power factor >90%, THD <20%, and an expected life of 100,000 hours. Surge protection meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Integral adjustable knuckle with 1/2-14NPS threaded pipe, tenon slipfitter, or integral slipfitter, facilitates quick and easy installation to a variety of mounting accessories. This secure connection enables the D-Series Size 1 to withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications subject to change without notice.

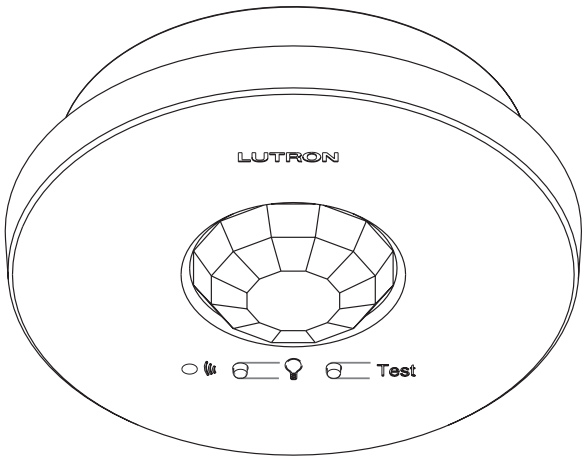
369480h 1 02.16.16

Radio Powr Savr™ Wireless Occupancy/Vacancy Ceiling Sensor

Lutron® Radio Powr Savr™ occupancy/vacancy sensors are wireless, battery-powered, passive infrared (PIR) sensors that automatically control lights via RF communication to compatible dimming and switching devices. These sensors detect the heat (IR radiation of 9.5 µm) from people moving within an area to determine when the space is occupied. The sensors then wirelessly transmit the appropriate commands to the associated dimming and switching devices to turn the lights on or off automatically. They combine both convenience and exceptional energy savings potential along with ease of installation.

Features

- Wireless occupancy sensor has 3 settings available: Auto-On/Auto-Off, Auto-On Low-Light/Auto-Off, and Manual-On/Auto-Off
- Auto-On Low-Light feature will turn lights on automatically only if there is less than approximately 10 Lux (1 fc) of ambient light
- Vacancy-only model available to meet California (U.S.A.) Title 24 requirements
- Uses Clear Connect® technology
- Passive infrared motion detection with exclusive Lutron® XCT™ Technology for fine motion detection
- 360˚ coverage ranges from 324 ft^2 (30.2 m^2) to 676 ft^2 (62.4 m^2), depending on mounting height
- Simple and intuitive adjustments available for Timeout, Auto-On, and Activity settings
- Supports advanced occupancy features, such as dependent occupancy groups and customizable occupied/unoccupied presets in some systems
- Multiple sensors can be added for extended coverage. Refer to product specification submittal of receiving device to determine system limits
- Lens illuminates during test mode to verify ideal locations
- Multiple ceiling-mount methods available for different ceiling materials
- Front accessible test buttons make programming easy
- 10-year battery life design
- RoHS compliant



Models Available

- LRF__-OCR2B-P-WH
  - Color Code
  - Occupancy and Vacancy
  - Frequency/Channel Code
- LRF2-VCR2B-P-WH
  - Vacancy Only
  - Available for Channel Code 2 Only

Frequency/Channel Codes

Available

2 = 431.0–437.0 MHz (U.S.A., Canada, Mexico, Brazil)
3 = 868.125–869.850 MHz (Europe, U.A.E.)
4 = 868.125–868.4755 MHz (China, Singapore)
5 = 865.5–866.5 MHz (India)
6 = 312.3–314.8 MHz (Japan)
7 = 433.05–434.79 MHz (Hong Kong, Macau)

Color Code

WH = White

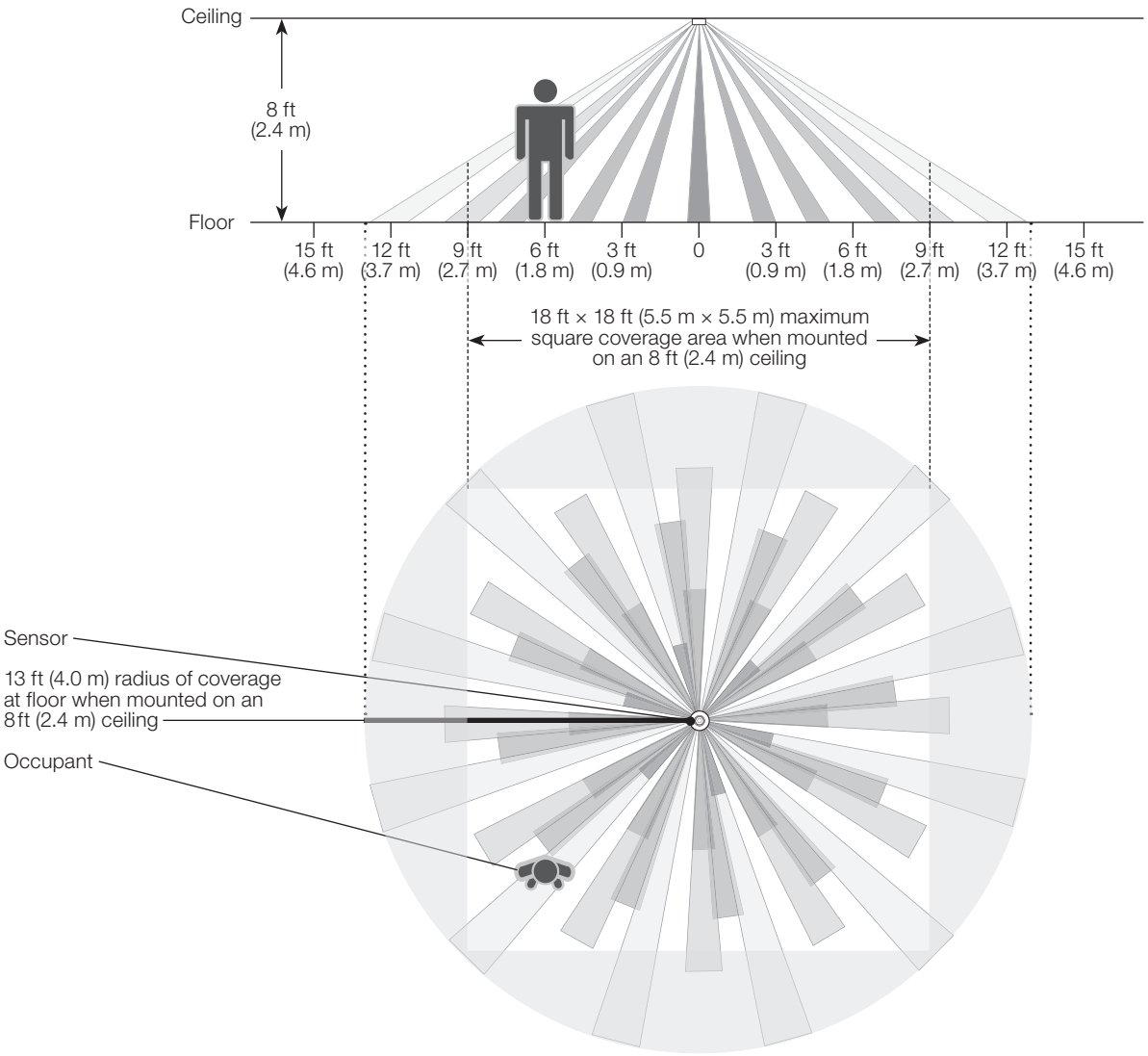
Compatible RF Devices

- For use with Lutron® products only
- Communicates to various wireless Lutron® systems*

* Contact Lutron® Customer Service at www.lutron.com for frequency/channel code compatibility with your particular geographic region, and for integrating with other Lutron® lighting and shading products.

Job Name:	Model Numbers:	
Job Number:		

Range Diagrams



Sensor Coverage Chart (for sensor mounted in center of room)

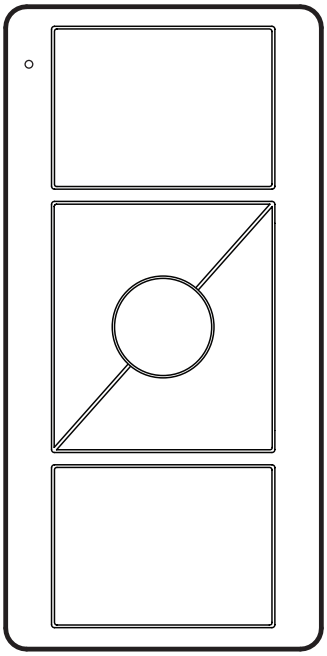
Ceiling Height	Maximum Square Coverage Area*	
8 ft (2.4 m)	18 ft × 18 ft (5.5 m × 5.5 m)	324 ft^2 (30.2 m^2)
9 ft (2.7 m)	20 ft × 20 ft (6.1 m × 6.1 m)	400 ft^2 (37.2 m^2)
10 ft (3.0 m)	22 ft × 22 ft (6.7 m × 6.7 m)	484 ft^2 (44.9 m^2)
12 ft (3.7 m)	26 ft × 26 ft (7.9 m × 7.9 m)	676 ft^2 (62.4 m^2)

* 12 ft (3.7 m) is the recommended maximum mounting height

Job Name:	Model Numbers:	
Job Number:		

Pico® Wireless Control (for North, Central, and South America)

The Pico® wireless control is a flexible and easy to use device that allows the user to control Lutron® wireless load-control devices from anywhere in the space. This battery-operated control requires no external power or communication wiring.



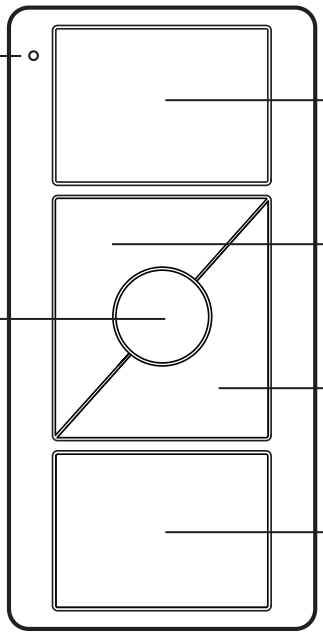
Pico® wireless control

Features

- Provides control for the following:
  - Caséta® Wireless controls
  - Energi Savr Node™, Quantum®, and myRoom™ systems, through the use of a QS sensor module (QSM)
  - Vive™ systems, including:
    - Maestro Wireless® controls
    - PowPak® modules
  - GRAFIK Eye® QS wireless systems
  - HomeWorks® QS wireless systems
  - Maestro Wireless® controls
  - PowPak® modules
  - RadioRA® 2 systems
  - Serena® RF remote control shades
  - Sivoia® QS wireless systems
- Control available in a variety of button marking options.
- Easy reconfiguration for use as:
  - Handheld remote
  - Wall-mount control (with or without faceplate; faceplate adapter kit sold separately)
  - Car visor control (car visor clip sold separately)
  - A table top control (table top pedestal sold separately).
- Battery-powered. Requires no wiring.
- 10 year battery life (one CR2032 battery included).
- Can provide control of blinds, curtains, or lighting devices within a range of 30 ft (9 m) through walls and 60 ft (18 m) line-of-sight.
- BAA-compliant model numbers available. Add a “U” prefix to the model number.

Job Name:	Model Numbers:	
Job Number:		

Operation



Indicator LED
Flashes to indicate a button press or when unit is in programming mode.

Preset Button (3B & 3BRL models only)

Tap once:
Devices go to preset levels/positions. Activates scene 16 when used in scene mode with GRAFIK Eye® QS wireless applications.

Press and hold:
To save new preset level or position, press and hold for 6 seconds.

Top Button
Lights brighten to full intensity and shades/draperies go to open limit. Activates scene 1 when used in scene mode with GRAFIK Eye® QS wireless applications.

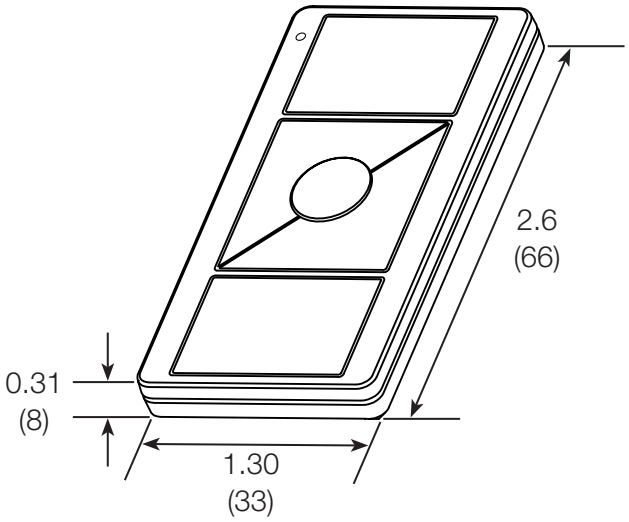
Raise Button (2BRL & 3BRL models only)
Lights increase in intensity and shades/draperies move towards open limit.

Lower Button (2BRL & 3BRL models only)
Lights decrease in intensity and shades/draperies move towards close limit.

Bottom Button
Lights dim to off and shades/draperies go to close limit. Activates "OFF" scene when used in scene mode with GRAFIK Eye® QS wireless applications.

Dimensions

Measurements shown as: in (mm)

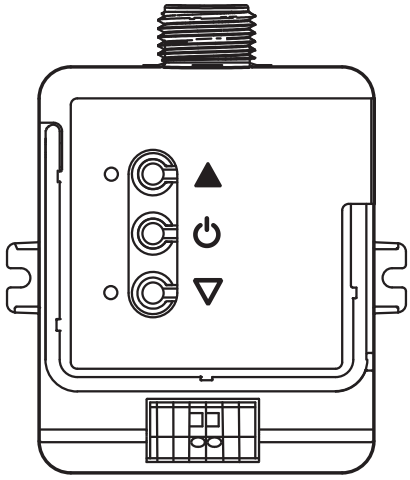


Job Name:	Model Numbers:	
Job Number:		

369918c 1 08.19.16

Vive™ PowPak® Fixture Controls

The PowPak® wireless fixture control is a radio-frequency (RF) device that controls either the Lutron® EcoSystem® or 0–10 V⎓ electronic fluorescent ballasts and LED drivers (depending on model). This is based on RF input from Pico® remote controls, Radio Powr Savr™ wireless sensors, or wired inputs from the PowPak® fixture sensor. The control module mounts to a fixture or a U.S.-style junction box. Communication with RF input devices is accomplished using Lutron® Clear Connect® RF Technology. See **Applications and Selecting the Right Control** for more details on selecting the appropriate controls for your application.



PowPak® Wireless Fixture Control

The PowPak® fixture sensor (optional) mounts to the ceiling or to a fixture and measures light in the space (daylighting) while detecting people moving within an area to determine passive infrared occupancy. The sensor controls the lights to balance light level in the space, combining convenience, exceptional energy savings, and ease of installation. The sensor contains two wires which connect to the PowPak® wireless fixture control.

These products are also compatible with the Vive™ hub which enables a simple setup process using a standard web browser on any Wi-Fi enabled phone, tablet or computer. It also enables control and monitoring of all Vive™ devices. The Vive™ hub can be added at any time and preserves existing system setup by extracting local programming from each device. For a complete list of features supported with the Vive™ hub, see specification submittal 369902.

Note for Replacement: FCJS - the “S” model can replace the non-”S” model.

Models Available

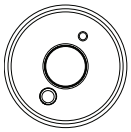
Model Number	Description
FC-SENSOR	PowPak® fixture sensor (occupancy)
FC-VSENSOR	PowPak® fixture sensor (vacancy) [1]
FCJS-010	PowPak® wireless fixture control for 0-10 V⎓ ballasts and drivers
FCJS-ECO	PowPak® wireless fixture control for EcoSystem® ballasts and drivers

[1] Lights do not turn on automatically with a vacancy sensor. A Pico® remote control is needed to turn on the lights.

Job Name:	Model Numbers:	
Job Number:		

The following can be used per each PowPak® wireless fixture control:

Wired:

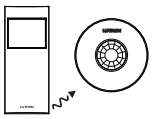


- Maximum of 1 PowPak® fixture sensor.

  Note: Only 1 PowPak® wireless fixture sensor can be wired per PowPak® fixture control. Grouping more than 1 PowPak® wireless fixture sensor to control a group of PowPak® wireless fixture controls requires adding a Vive™ hub.

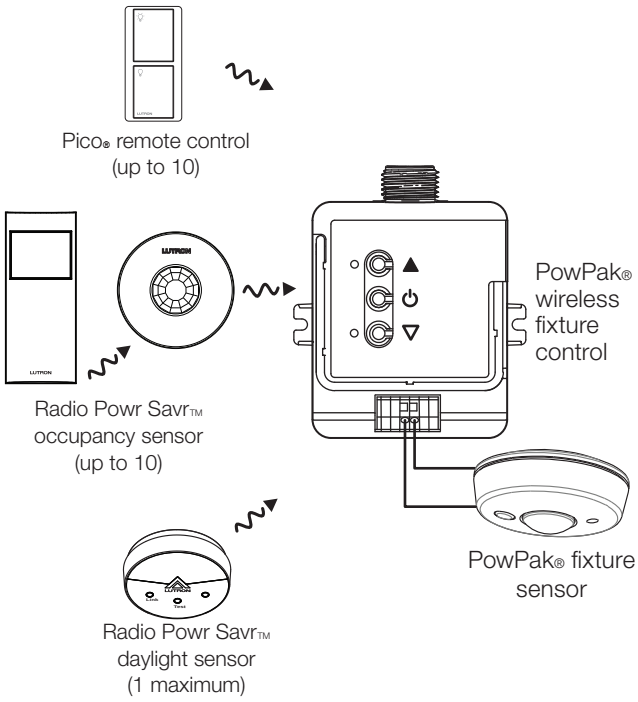
Wireless:

- Maximum of 10 Pico® remote controls



- Maximum of 10 Radio Powr Savr™ occupancy sensors

- Maximum of 1 Radio Powr Savr™ daylight sensor



Notes:

- When using a Radio Powr Savr™ daylight sensor in conjunction with both a PowPak® wireless fixture control and PowPak® fixture sensor, the Radio Powr Savr™ daylight sensor will provide the daylighting input to the control module, and the PowPak® fixture sensor daylighting input will be ignored.
- When using a Radio Powr Savr™ occupancy sensor in conjunction with both a PowPak® wireless fixture control and PowPak® fixture sensor, occupancy data from both sensors is used; either one detecting occupancy will turn the lights on, and the lights turn off only when both sensors have gone vacant (no longer detect occupancy).
- Grouping can be accomplished by following the basic procedure described in the install guide found at www.lutron.com for putting multiple control modules into association mode. This enables a Radio Powr Savr™ occupancy sensor or Radio Powr Savr™ daylight sensor to group and control more than one fixture together.
- Radio Powr Savr™ occupancy sensors can be used with the PowPak® fixture sensor to add coverage area.

Job Name:	Model Numbers:	
Job Number:		

PROJECT NAME	
CATALOG NUMBER	
NOTES	
FIXTURE TYPE	

EM-H Series

UL Listed LED Emergency Driver

Unrivaled emergency solutions for LED Product with internal driver

PRODUCT DESCRIPTION

The OKT'S LED emergency drivers are UL Listed for factory or field installation, unrivaled emergency solutions for LED product with internal driver. It allows the same LED luminaire to be used for normal and emergency operation and works in conjunction with an AC LED driver that convert new or existing LED fixtures into emergency lighting. It adopt a long-life recyclable Lithium battery, and are backed by a 5-Year Warranty. It is available in a variety of wattage, providing solutions for 8, 16 and 25 watt applications.

1.The EM-H08170-XX is for use with an LED load up to 8W at a rated voltage of 170V DC.
2.The EM-H16170-XX is for use with an LED load up to 16W at a rated voltage of 170V DC.
3.The EM-H25170-XX is for use with an LED load up to 25W at a rated voltage of 170V DC.

OPERATION

When AC power fails, OKT'S EM-H Series emergency LED driver immediately switches to the emergency mode, operating the LEDs at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the emergency driver automatically returns to the charging mode.

FEATURES

1. Long life recyclable Lithium battery.
2. Integration of test switch and charge indicator
3. Used for exterior or interior of luminaire
4. THE Power of led luminaire ≤power of emergency driver
5. Self-test function available

Mounting configuration:

Each unit is available in four different mounting configurations to accommodate various performance requirement and fixtures types.

- Single Flex (Standard Version)

Mounts to the junction box and provides flexible conduit for remote mounting of the test accessories.

- Dual Flex (Optional)

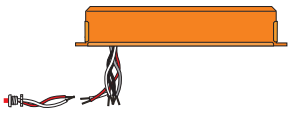
Provides dual flex for wiring to both the fixture or driver compartment and test accessories.

- Integral Non-Flex (Optional)

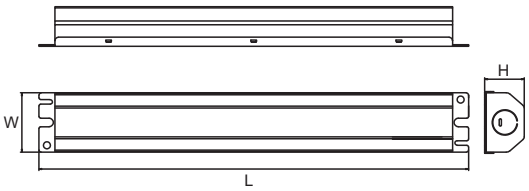
Allows for integral installation within the driver compartment. May also be mounted atop the fixture when used with a TMK cover accessory.

- Top-Mount Non-Flex (Optional)

Top-mounting option for running wires directly into the driver compartment. Test accessories are then installed within the fixture.



Dimensions



Model	L	W	H
EM-H08170-XX	14.80"	2.13"	1.38"
EM-H16170-XX	17.14"	2.13"	1.38"
EM-H25170-XX	17.14"	2.13"	1.57"

EM-H08170-XX

Output Power
8 Watts

Output Voltage
170V DC

Input Current
35 mA (Max)

Input Power
5 Watts (Max)

Input Voltage
100-277VAC, 50-60Hz

Emergency Operation
≥90 Minutes

Operating Temp
0° to 50° C

Battery
Lithium

Recharge
24 Hrs

Dimension
L 14.80" x W 2.13" x H 1.38"

EM-H16170-XX

Output Power
16 Watts

Output Voltage
170V DC

Input Current
50 mA (Max)

Input Power
6 Watts (Max)

Input Voltage
100-277VAC, 50-60Hz

Emergency Operation
≥90 Minutes

Operating Temp
0° to 50° C

Battery
Lithium

Recharge
24 Hrs

Dimension
L 17.14" x W 2.13" x H 1.38"

EM-H25170-XX

Output Power
25 Watts

Output Voltage
170V DC

Input Current
60 mA (Max)

Input Power
8 Watts (Max)

Input Voltage
100-277VAC, 50-60Hz

Emergency Operation
≥90 Minutes

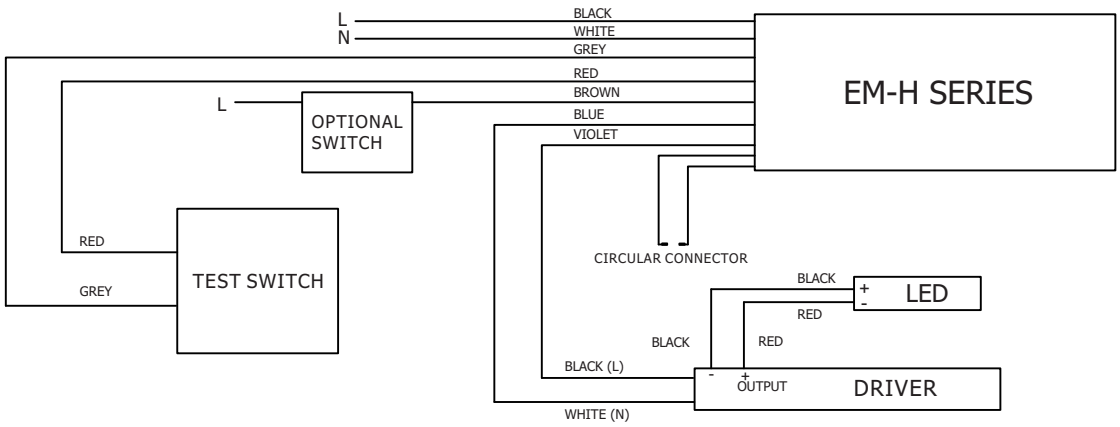
Operating Temp
0° to 50° C

Battery
Lithium

Recharge
36 Hrs

Dimension
L 17.14" x W 2.13" x H 1.57"

TYPICAL WIRING DIAGRAM



Functional Devices, Inc.
101 Commerce Drive
Sharpsville, IN 46068

Toll Free: (800) 888-5538
Office: (765) 883-5538
Fax: (765) 883-7505

Email: sales@functionaldevices.com
Website: www.functionaldevices.com

ESRN and ESRB

Features

Perfect for emergency lighting automatic load control applications.

- Automatic load control override
- Normal control of emergency lighting
- Coil input range: 120 Vac through 277 Vac
- LED indicators for normal voltage, emergency voltage, and load status
- 10 Amp and 20 Amp SPST magnetic ballast and tungsten ratings
- LED rating - Up to 16 Amp electronic ballast rating
- 0-10 Vdc dimmer override
- Remote control/test capability (model ESRTB)
- Nipple mount, wall mount, or ballast channel mount
- Made in the U.S.A.

Applications

By using our Automatic Load Control Relays, you are able to complete your emergency lighting applications.

- High contact ratings allow for multiple loads on a single relay unit.
- Emergency lighting can be controlled under normal conditions using the switch input.
- Under normal operation, emergency light can be controlled by a controller using the dry contact input.
- The dry contact output can be used to override 0-10 V dimmers to full brightness (or for feedback to controllers, etc.)
- The on-board local test button and LEDs allow for installation to be tested immediately.
- A two second self-test of the unit is performed every time the wall switch input is turned off.
- Remote test capability allows for a button, switch, controller, fire alarm panel, etc. to be conveniently mounted anywhere desired. [Class 2 acceptable] See model ESRTB (remote test button).
- Different housings allow for wall or nipple mount (model ESRN), or ballast channel mount (model ESRB).

UL924 Emergency Lighting Automatic Load Control Relays

Quick Reference Chart

		Coil Voltage				Test Procedures					
Model #	UL	AC/DC	AC	Contacts	Resistive	Local Test Button	Self Test	Remote Test	Dimmer Override	Ballast Channel Mount	Nipple Mount
ESRN	•		120-277	SPST	20 A	•	•	•	•		•
ESRB	•		120-277	SPST	10 A	•	•	•	•	•	
ESRTB *	•					•					

UL = UL924; Emergency Lighting

* Remote Test Button accessory available separately.

Functional Devices, Inc.
101 Commerce Drive
Sharpsville, IN 46068

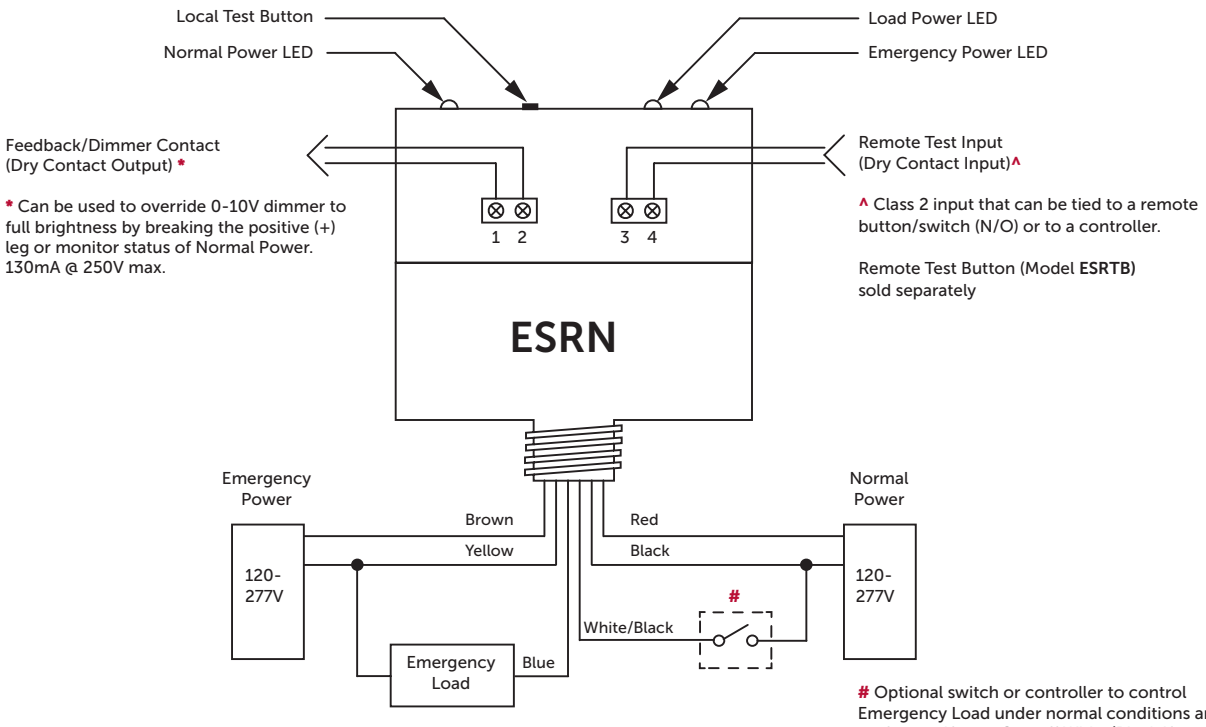
Toll Free: (800) 888-5538
Office: (765) 883-5538
Fax: (765) 883-7505

Email: sales@functionaldevices.com
Website: www.functionaldevices.com

Wiring Information

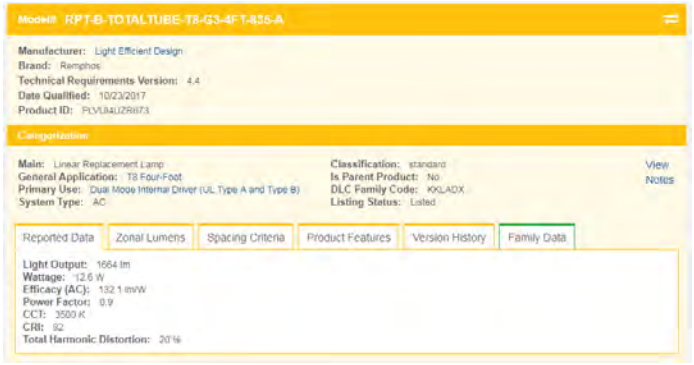
Wiring Descriptions

Wire Color	Description	Notes
BLACK	Normal Hot	Can be different voltage than Emergency.
WHITE/BLACK	Switch Input (Self-Test Input)	WHITE/BLACK wires must be from same branch circuit as BLACK and RED. When switched off, a two second delay keeps the load on to test emergency power. This does not test feedback/dimmer output.
RED	Normal Neutral or other Phase	Can be different voltage than Emergency.
BROWN	Emergency Hot	–
BLUE	Emergency Hot Switched to Load	Switches out the voltage from BROWN
YELLOW	Emergency Neutral or other Phase	–
WHITE/BLUE (ESRB) Terminal Screw 4 (ESRN)	Remote Test Input (Class 2, Dry Contact Input)	When wiring multiple units together, WHITE/BLUE or Terminal Screw 4 must be a shared common. Test is performed when Input is CLOSED.
WHITE/RED (ESRB) Terminal Screw 3 (ESRN)		
VIOLETS (ESRB) Terminal Screws 1, 2 (ESRN)	Feedback/Dimmer Contact (Dry Contact Output) **Switch Input does not test this output.**	Output is OPEN when normal power is absent or Remote Test Input is CLOSED. Output is CLOSED when normal power is present and Remote Test Input is OPEN.

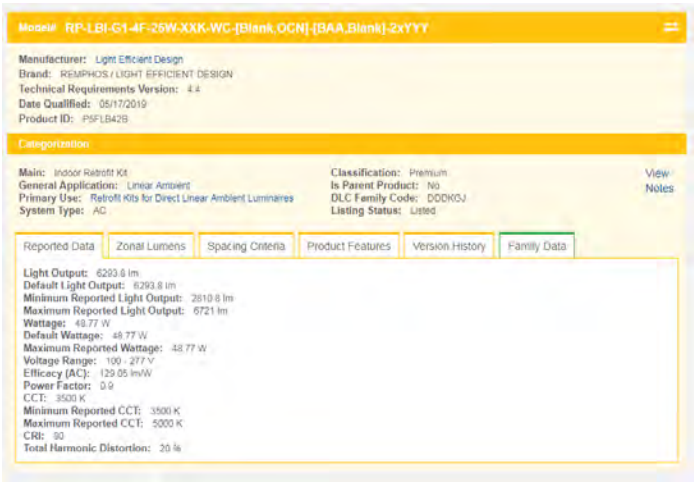


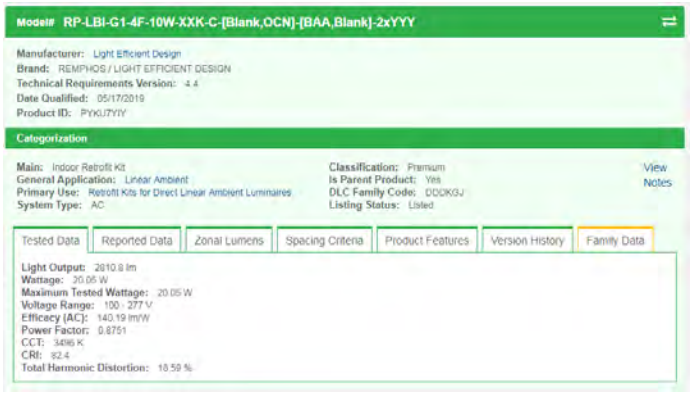
Optional switch or controller to control Emergency Load under normal conditions and perform self-test. Cap off White/Black if not used.

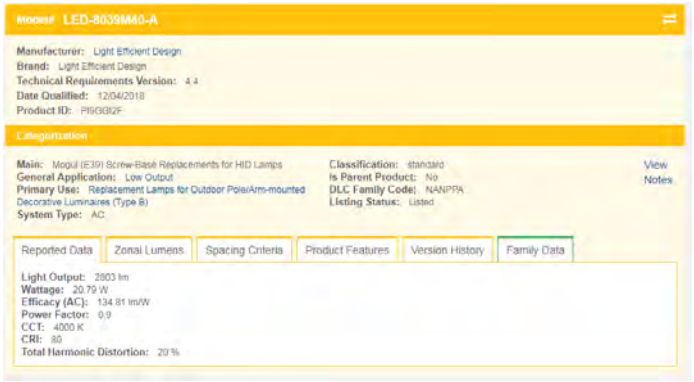
111618

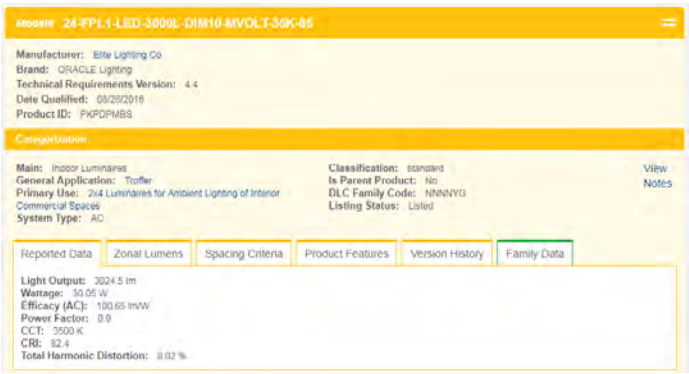

Model# RPT-8-TOTALTUBE-T8-G3-4FT-835-A
Manufacturer: Light Efficient Design
Brand: Remphos
Technical Requirements Version: 4.4
Date Qualified: 10/23/2017
Product ID: PLVU4UZR673
Categorization
Main: Linear Replacement Lamp
General Application: T8 Four-Foot
Primary Use: Dual Mode Internal Driver (UL Type A and Type B)
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: KKLADX
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 1664 lm
Wattage: 12.6 W
Efficacy (AC): 132.1 lm/W
Power Factor: 0.9
CCT: 3500 K
CRI: 82
Total Harmonic Distortion: 20 %

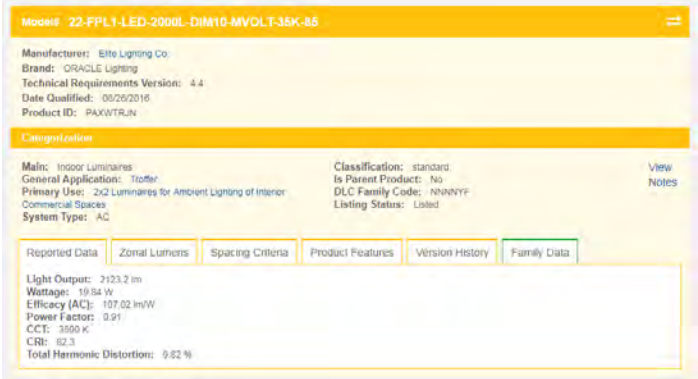

Model# RPT-8-TOTALTUBE-T8-G3-2FT-835-A
Manufacturer: Light Efficient Design
Brand: Remphos
Technical Requirements Version: 4.4
Date Qualified: 10/23/2017
Product ID: PLVR3LCNP3W
Categorization
Main: Linear Replacement Lamp
General Application: T8 Two-Foot
Primary Use: Replacement Lamps (plug and play) (UL Type A)
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: KKLADW
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 1249 lm
Wattage: 10.48 W
Efficacy (AC): 119.2 lm/W
Power Factor: 0.9
CCT: 3500 K
CRI: 82
Total Harmonic Distortion: 20 %


Model# RP-LBI-G1-4F-25W-XXK-WC-[Blank,OCN]-[BAA,Blank]-2xYYY
Manufacturer: Light Efficient Design
Brand: REMPHOS / LIGHT EFFICIENT DESIGN
Technical Requirements Version: 4.4
Date Qualified: 05/17/2019
Product ID: P5FLB42B
Categorization
Main: Indoor Retrofit Kit
General Application: Linear Ambient
Primary Use: Retrofit Kits for Direct Linear Ambient Luminaires
System Type: AC
Classification: Premium
Is Parent Product: No
DLC Family Code: DDDK6J
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 6293.6 lm
Default Light Output: 6293.6 lm
Minimum Reported Light Output: 2610.8 lm
Maximum Reported Light Output: 6721 lm
Wattage: 48.77 W
Default Wattage: 48.77 W
Maximum Reported Wattage: 48.77 W
Voltage Range: 100 - 277 V
Efficacy (AC): 129.05 lm/W
Power Factor: 0.9
CCT: 3500 K
Minimum Reported CCT: 3500 K
Maximum Reported CCT: 5000 K
CRI: 80
Total Harmonic Distortion: 20 %


Model# RP-LBI-G1-4F-10W-XXK-C-[Blank,OCN]-[BAA,Blank]-2xYYY
Manufacturer: Light Efficient Design
Brand: REMPHOS / LIGHT EFFICIENT DESIGN
Technical Requirements Version: 4.4
Date Qualified: 05/17/2019
Product ID: PYKU7YIY
Categorization
Main: Indoor Retrofit Kit
General Application: Linear Ambient
Primary Use: Retrofit Kits for Direct Linear Ambient Luminaires
System Type: AC
Classification: Premium
Is Parent Product: Yes
DLC Family Code: DDDK6J
Listing Status: Listed
View Notes
Tested Data
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 2810.8 lm
Wattage: 20.05 W
Maximum Tested Wattage: 20.05 W
Voltage Range: 100 - 277 V
Efficacy (AC): 140.19 lm/W
Power Factor: 0.8751
CCT: 3496 K
CRI: 82.4
Total Harmonic Distortion: 18.59 %

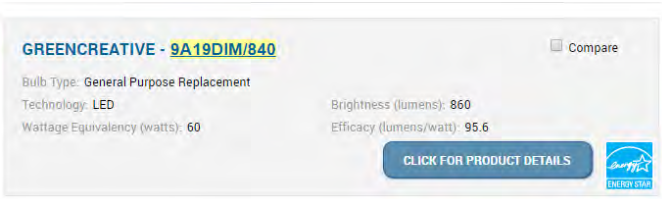

Model# LED-8039M40-A
Manufacturer: Light Efficient Design
Brand: Light Efficient Design
Technical Requirements Version: 4.4
Date Qualified: 12/04/2018
Product ID: P9GGB2F
Categorization
Main: Mogul (E39) Screw-Base Replacements for HID Lamps
General Application: Low Output
Primary Use: Replacement Lamps for Outdoor Pole/Arm-mounted Decorative Luminaires (Type B)
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: NANPPA
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 2803 lm
Wattage: 20.79 W
Efficacy (AC): 134.81 lm/W
Power Factor: 0.9
CCT: 4000 K
CRI: 80
Total Harmonic Distortion: 20 %


Model# 24-FPL1-LED-3000L-DIM10-MVOLT-35K-85
Manufacturer: Elite Lighting Co
Brand: ORACLE Lighting
Technical Requirements Version: 4.4
Date Qualified: 08/26/2016
Product ID: PKPDPMBS
Categorization
Main: Indoor Luminaires
General Application: Troffer
Primary Use: 2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: NNNNYG
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 3024.5 lm
Wattage: 30.05 W
Efficacy (AC): 100.65 lm/W
Power Factor: 0.9
CCT: 3500 K
CRI: 82.4
Total Harmonic Distortion: 8.02 %

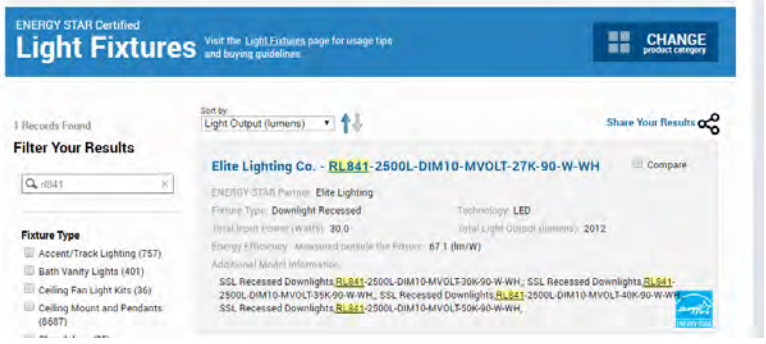

Model# 22-FPL1-LED-2000L-DIM10-MVOLT-35K-85
Manufacturer: Elite Lighting Co
Brand: ORACLE Lighting
Technical Requirements Version: 4.4
Date Qualified: 08/26/2016
Product ID: PAXWTRJN
Categorization
Main: Indoor Luminaires
General Application: Troffer
Primary Use: 2x2 Luminaires for Ambient Lighting of Interior Commercial Spaces
System Type: AC
Classification: standard
Is Parent Product: No
DLC Family Code: NNNNYF
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 2123.2 lm
Wattage: 19.84 W
Efficacy (AC): 107.02 lm/W
Power Factor: 0.91
CCT: 3500 K
CRI: 82.3
Total Harmonic Distortion: 9.82 %


Model# ES40S-A1-17K-4MS-40-80-CL-LV-[All Mounting]-[All OCC Sensors or blank]-[All Cord & Plug or blank]-[EMB, QDC, SRG, BOX, CTRWT, CTRLR, CTOPEND, or WET]-10V
Manufacturer: Flex Lighting Solutions
Brand: FLEX LIGHTING SOLUTIONS
Technical Requirements Version: 4.4
Date Qualified: 11/17/2017
Product ID: PZY4C4LA
Categorization
Main: Indoor Luminaires
General Application: High-Bay
Primary Use: High-Bay Luminaires for Commercial and Industrial Buildings
System Type: AC
Classification: Premium
Is Parent Product: No
DLC Family Code: ODDAMS
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 17295.5 lm
Wattage: 121.90 W
Efficacy (AC): 141.81 lm/W
Power Factor: 0.998
CCT: 4000 K
CRI: 80
Total Harmonic Distortion: 7.8 %


Model# DSXF1 LED P1 40K MFL xxxxx xxxxxxxxx xx x xxxxx (120V-277V)
Manufacturer: Acuity Brands Lighting
Brand: Lithonia Lighting
Technical Requirements Version: 4.4
Date Qualified: 11/10/2016
Product ID: PCVD7D1Y
Categorization
Main: Outdoor Luminaires
General Application: Low Output
Primary Use: Architectural Flood and Spot Luminaires
System Type: AC
Classification: Premium
Is Parent Product: No
DLC Family Code: PPPRLV
Listing Status: Listed
View Notes
Reported Data
Zonal Lumens
Spacing Criteria
Product Features
Version History
Family Data
Light Output: 2692 lm
Wattage: 21 W
Efficacy (AC): 128.1 lm/W
Power Factor: 0.96
CCT: 4000 K
CRI: 70
Total Harmonic Distortion: 8.35 %


GREENCREATIVE - 9A19DIM/840
Compare
Bulb Type: General Purpose Replacement
Technology: LED
Brightness (lumens): 860
Wattage Equivalency (watts): 60
Efficacy (lumens/watt): 95.6
CLICK FOR PRODUCT DETAILS
ENERGY STAR


5 Records Found
Filter Your Results
Sort by:
Brand Name
Share Your Results
Disclaimer
Best Value
ENERGY STAR® Certified LED bulbs for as low as $1
Price
Under $5 (36)
$5-$10 (64)
$10-$15 (56)
$15-$20 (28)
$20-$30 (4)
$30-$50 (0)
$50+ (2)
GREENCREATIVE - 14BR40DIM/830
Compare
Reflector (Flood/Spot)
LED
CLICK FOR PRODUCT DETAILS


ENERGY STAR Certified
Light Fixtures
Visit the Light Fixtures page for usage tips and buying guidelines.
CHANGE product category
1 Records Found
Filter Your Results
Sort by:
Light Output (lumens)
Share Your Results
Fixture Type
Accent/Track Lighting (757)
Bath Vanity Lights (401)
Ceiling Fan Light Kits (36)
Ceiling Mount and Pendants (8687)
Elite Lighting Co. - RL841-2500L-DIM10-MVOLT-27K-90-W-WH
Compare
ENERGY STAR Partner: Elite Lighting
Fixture Type: Downlight Recessed
Technology: LED
Total Input Power (watts): 30.0
Total Light Output (lumens): 2012
Energy Efficiency - Measured per/side the Fixture: 67.1 (lm/W)
Additional Model Information:
SSL Recessed Downlights RL841-2500L-DIM10-MVOLT-30K-90-W-WH, SSL Recessed Downlights RL841-2500L-DIM10-MVOLT-35K-90-W-WH, SSL Recessed Downlights RL841-2500L-DIM10-MVOLT-40K-90-W-WH, SSL Recessed Downlights RL841-2500L-DIM10-MVOLT-50K-90-W-WH,

Mount Greylock Regional School District

Procedures and Guidelines
Governing Use of School Facilities

Dear Community Member:

This packet contains all the information needed to reserve school facilities in the Mount Greylock Regional School District. The School Committee supports the use of school facilities by community groups (after normal use by students and faculty) and believes that such use enriches the quality of life for everyone in the community.

These procedures and guidelines represent the efforts of the School Committee to encourage the use of school facilities and bring consistency to the regulations and fee structure associated with the program.

Mount Greylock Regional School District has wonderful school facilities that have been used by community groups for meetings and events. The School Committee wishes to continue its partnership with the community and extends an invitation for you to hold your events with us.

Sincerely,

Kimberley Grady
Superintendent of Schools

Mount Greylock Regional School District

Use of School Facilities

Philosophy

The Mount Greylock Regional School Committee encourages the use of school facilities for educational, charitable, recreational and civic purposes, sponsored by recognized, responsible organizations. The Mount Greylock Regional School District is committed to ensuring that all of its programs and facilities are accessible to the public. We do not discriminate on the basis of age, color, disability, national origin, race, religion, sex or sexual orientation.

The Mount Greylock Regional School District neither endorses, supports, nor sponsors any of the activities which may occur as a result of the use of the school facilities.

The use of school facilities must be consistent with the district's energy conservation program and fees associated with the use will vary contingent upon the nature of the sponsoring group, activity, and time of use. It is not the intent of the committee that for-profit groups be subsidized by public funds. Such groups shall incur additional charges for the use of school buildings.

The Superintendent and/or designee shall serve as the School Committee's representative in processing applications, approving use, and enforcing regulations. Any request to waive or change fees must be approved by the Superintendent.

General Guidelines for Use

1. For non-school related activities, all costs shall be borne by the user group. Fees will include the direct costs associated with the activity such as rental fees and personnel costs.

2. The School Department requires that adequate staff be scheduled to ensure the security of the building and to provide for expedient cleaning. The terms of existing labor contracts will be consulted when assigning custodial and cafeteria fees.

3. All user groups shall save and hold harmless the Mount Greylock Regional School District and its officers and employees and assume responsibility for all liabilities arising from incidents as a result of use.

4. A Certificate of Insurance must be submitted as evidence of insurance coverage and must designate both, the using organization and Mount Greylock Regional School District, as insured and not merely as certified holders.

5. The group categories and the fee schedules will be agreed to prior to usage approval.

Fees taken from Facility Use Forms

Current Facility Fees for Williamstown:

Custodial Fee:

Time & a Half ($30/hr) @_hrs

Double Time ($40/hr) @_hrs

Grounds/Aud/Gym/Cafeteria:

Single Use: $30

Event (3+ hrs) w/Admission $225

Event (3+ hrs) w/o Admission $125

Add'll Auditorium Usage Fee:

Single Use w/Stage Lighting: +$30

Total Fee Charged: $_____

** $50 charge will be incurred if an additional garbage pick-up is necessary for your event.*

Current Facility Fees For MGRS:

Custodial Fee:

Time and a Half ($30/hr) @ hrs.

Double Time ($40/hr) @ hrs.

Grounds/Aud/Gym/Classroom/Café: Single Practice/Usage: $30

Seasonal (8+) Practice/Usage: $225

Event (3+hrs) w/ Admission: $225

Event (3+hrs) w/o Admission: $125

Additional Auditorium Usage Fee:

Single Use w/ Stage Lighting: +$30

Seasonal Use w/ Stage Lighting: +$125

Total Fee Charged: $_____

**Late Forms may receive a late custodial notification fee.*

**A $50 charge will be incurred if an additional garbage pick-up is necessary for your event.*

Rental Group Categories

Group A: Recognized school or civic groups based in the Williamstown-Lanesborough community, but not necessarily established as non-profit organization (i.e., PTO, School Councils, Town Recreation / Youth Groups.

Group B: Non-profit groups with a majority of the participants residing in Regional member Towns (i.e., youth groups, churches and charities). Groups are required to provide proof of tax-exempt status at the time the Application for Use of School Facilities is submitted.

Group C: For-profit groups (i.e., private dance schools, theater groups) and non-profit groups that have fewer than half of the participants residing in District.

School Facilities Rental Fee Schedule

(Rates subject to change per approval of School Committee)

Facility	Group A Rate	Group B Rate	Group C Rate
Auditorium – MGRS Auditorium – WES	N/A	$100/day $75/day	$500/day $250/day
Gymnasium	N/A	?	$250/day $40/hour (weekdays) Weekend/Holiday/School Not in Session – gym is only rented out in half day intervals at $125/half day (4 hours max)
Cafeteria w/o Kitchen Cafeteria w/ Kitchen	N/A Contact Us	N/A Contact Us	$250/day Contact Us
Regular Classrooms	N/A	N/A	$75/day
	(max. of $225/day if multiple classrooms are requested.)		
Lab Classrooms	N/A	N/A	$150/day
Library	N/A	N/A	$250/day
Athletic Fields	N/A	N/A	$200/day $40/hour (min. 2 hours)

Personnel Fees

(Regardless of Group Category)

Custodial Staff: A custodian must be on the premises at all times. Custodial fees will be added to above rates for any use beyond 10:00 p.m. Monday through Friday, anytime on Saturday or Sunday, and any day that school is not in session. If the Superintendent determines that more than the regularly scheduled staff is needed, these costs will also be added to the facility rates. Current custodial rates are $30-40/hour per staff member.

Kitchen Staff: Access to the kitchen is not available unless a cafeteria worker is present. This person will have full authority over all kitchen equipment and may restrict access to certain equipment.

MGRS Audio/Visual Equipment: Access to the audio/visual system in the MGRS is only permitted by the Director of Operantions or his designee. This person will have full authority over the a/v system and may restrict access to certain equipment.

Police Officers: All organizations must arrange and pay for police services directly through the local Police Department if deemed necessary.

Outside Restrooms: Organizations requesting Athletic Field use are required to provide portable restroom facilities per playing field being used.

Guidelines for Scheduling/Approvals

1. The Superintendent, in attempting to make the school facilities available to the maximum number of persons/organizations in the community will consider applications for use in the following order whenever feasible and practical:

    - Mount Greylock Regional School District Students
    - Mount Greylock Affiliated Groups (Committee, Councils, PTO, Etc.)
    - Member Town Recreation/Youth Groups
    - Adult Recreation
    - Local Non-Profit Organizations

    The Superintendent will be the final determining agent regarding any scheduling conflicts.

2. **Event Requests Requiring Special Instructions** – must be made, at least, two weeks prior to the event.

Regulations Governing Use of School Facilities

1. Mass. General Law requires obtaining **Criminal Offender Record Information** (CORI) for all volunteers and others who may have direct and unmonitored contact with children. This includes all volunteers, chaperones, coaches, etc. who may be assisting you. All organizations are responsible for adhering to these requirements and obtaining CORIs when needed.

2. Mass. General Law prohibits smoking or alcoholic beverages on school property.

3. Participants shall not be restricted from participation for reasons of race, religion, age, sex, sexual orientation, creed, national origin or disability conditions. However the School Committee is not prohibited from allowing the use of school premises by independent groups with restrictive membership.

4. In compliance with Massachusetts General Laws, the School Committee prohibits firearms and other dangerous weapons in schools and adopts the statutory definitions of a firearm and other dangerous weapons in addition to any definitions it may include in its student-parent handbook.

5. Hazing of students is prohibited by state law, and is defined as any conduct or method of initiation into any student organization that willfully or recklessly endangers the physical or mental health of the student.

6. Food and drinks shall occur only in authorized areas.

7. No other area than that approved for use on the application shall be used. No school material or furniture may be used without permission of the Superintendent. For any major function requiring use of a stage with scenery, the facility must be requested with additional time to allow setting up and dismantling of the scenery.

8. Users will assume full responsibility for the proper use of the facilities and for payment of damages.

9. If school is closed due to inclement weather or other emergency, all events and activities will be cancelled. It is the organization's responsibility to reschedule.

10. School personal properties, such as projectors, recorders, amplifying units, etc., are not included in the rental contract.

11. A letter of determination from the IRS or other documentation to verify tax-exempt status must accompany this application before an organization will be considered non-profit for fee setting purposes.

12. Thirty-six hours notice will be required in the event of cancellation; otherwise, the applicant will be responsible for the custodial and facility rental fees.

13. The Mount Greylock Regional School District is not responsible for any personal property present or left on the premises.

15. The Superintendent reserves the right to refuse the use of facilities to any group that has violated any condition, rule, regulation, or guideline concerning use of the premises in the past, or which has otherwise abused this privilege.

PLEASE REFER TO THE PREVIOUS PAGES FOR RENTAL RATES, PERSONNEL CHARGES, AND RELATED INFORMATION

The individual signing the request form hereby assumes responsibility for any accidents, injury or damages that may occur to the building or equipment made available to him/her and for any repairs required as a result of same. Accidents or damages that occur during the use of a school facility must be reported to the Superintendent or designee within 24 hours. In consideration for the use of facilities owned or operated by the Mount Greylock Regional School District, the undersigned organization hereby releases and holds harmless the Mount Greylock Regional School District and its employees, agents, and volunteers (collectively, "the District") from and against any and all injuries, damages, liabilities, actions, suits, proceedings, claims, demands, losses, costs and expenses (including reasonable attorneys' fees) that may arise out of or in connection with the use of such facilities by the undersigned organization or its employees, agents, or volunteers, and further agrees to indemnify the District from and against any and all injuries, damages, liabilities, actions, suits, proceedings, claims, demands, losses, costs and expenses (including reasonable attorneys' fees) by third parties arising out of or in connection with the organization's or its employees', agents', or volunteers' activities on or about the rented premises. Please familiarize yourself and your group members with this School Rental Contract and its attachments, sign and return. No reservation will be made until this application is returned to you with an approved signature.

I have read this Contract, including attachments, and the regulations for the use of the Mount Greylock Regional School District property, and accept the responsibility for payment of bills, the observance of all regulations, and all terms hereof. I will finalize all arrangements with the building office one week prior to specified date and earlier to the extent required above.

_____ _____

*Applicant's Signature Date

*This constitutes your digital/electronic signature.

APPLICATION FOR THE USE OF SCHOOL FACILITIES

INSTRUCTIONS:
Internal: District/School Personnel completing this form to reserve space for school-related activities / clubs are asked to fill out the form and send to the appropriate main office secretary.
External: Requests from public entities wishing to use school facilities: Please, fill out form completely, sign, and e-mail to Stacie Vigiard in the Superintendent's office at svigiard@mgrhs.org.

☐ **PLEASE ATTACH** a current Certificate of Insurance which lists the District as an additional insured and not merely as a certificate holder.

☐ **PLEASE ATTACH** proof of nonprofit status (if applicable).

Name of Organization: _____ Date: _____

Applicant's Name: _____ Phone No.: _____

Address: _____

E-mail Address: _____

*Date(s) of Event: _____

If you are requesting **multiple event dates, please indicate when event will be over (i.e., Meetings to be held every Monday during the month of January; or meetings to be held on the 1st Monday of each month until the end of December).*

Time of Event: _____ to _____ (Specify AM or PM)

Requested Custodial Start Time: _____ to _____

Description of Event: _____

Estimated Number of Participants: _____ Spectators: _____

Rental Group Category (refer to page 2 of Procedures & Guidelines): ☐ Group A ☐ Group B ☐ Group C

FACILITY REQUESTED:	
Lanesborough Elementary School:	Click here to MAKE SELECTION
Williamstown Elementary School:	Click here to MAKE SELECTION
Mount Greylock Regional School:	Click here to MAKE SELECTION
Special Instructions:	

_____ _____
Applicant's Signature Date

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
10000.070.3050.5210.1110.02.30	SCHOOL COMMITTEE RECORDER SAl	$6,500.00	$4,327.00	$4,327.00	$2,173.00	$173.00	$2,000.00	30.77%
10000.070.3050.6120.1110.06.60	SCHOOL COMMITTEE DUES	$6,162.00	$6,162.00	$6,162.00	$0.00	$0.00	$0.00	0.00%
10000.070.3050.6125.1110.06.60	SCHOOL COMMITTEE PD	$505.92	$0.00	$0.00	$505.92	$0.00	$505.92	100.00%
10000.070.3050.6126.1110.06.60	SCHOOL COMMITTEE TRAVEL	$500.00	$0.00	$0.00	$500.00	$0.00	$500.00	100.00%
10000.070.3050.6535.1110.05.54	SCHOOL COMMITTEE SUPPLIES	$200.00	$192.05	$192.05	$7.95	$0.00	$7.95	3.98%
10000.070.3050.6575.1110.05.54	SCHOOL COMMITTEE OTHER	$7,800.00	$10,532.53	$10,532.53	($2,732.53)	$0.00	($2,732.53)	-35.03%
	Func: School Committee - 1110	$21,667.92	$21,213.58	$21,213.58	$454.34	$173.00	$281.34	1.30%
10000.070.3060.6110.1210.04.40	DISTRICT LEGAL ADS & NOTICES	$6,963.01	$6,963.01	$6,963.01	$0.00	$0.00	$0.00	0.00%
10000.070.3060.6115.1210.05.54	DISTRICT OFFICE POSTAGE	$3,481.36	$2,921.87	$2,921.87	$559.49	$359.02	$200.47	5.76%
10000.070.3070.6535.1210.05.54	SUPERINTENDENT OFFICE SUPPLIES	$18.64	$18.64	$18.64	$0.00	$0.00	$0.00	0.00%
10000.070.3060.6538.1210.05.53	DISTRICT EQUIPMENT	$3,400.00	$1,481.91	$1,481.91	$1,918.09	$285.56	$1,632.53	48.02%
10000.080.3070.5110.1210.01.10	SUPERINTENDENT SALARY	$158,593.00	$148,557.75	$148,557.75	$10,035.25	$5,942.25	$4,093.00	2.58%
10000.080.3070.5210.1210.02.30	DISTRICT HR SALARY	$7,161.53	$23,610.00	$23,610.00	($16,448.47)	$2,466.79	($18,915.26)	-264.12%
10000.080.3070.5211.1210.02.30	DISTRICT OFFICE MANAGER SALARY	$52,000.00	$44,551.53	$44,551.53	$7,448.47	$1,941.08	$5,507.39	10.59%
10000.080.3070.6120.1210.06.60	SUPERINTENDENT DUES	$3,150.00	$3,150.00	$3,150.00	$0.00	$0.00	$0.00	0.00%
10000.080.3070.6125.1210.06.60	SUPERINTENDENT PD	$3,979.76	$3,979.76	$3,979.76	$0.00	$0.00	$0.00	0.00%
10000.080.3070.6130.1210.06.60	SUPERINTENDENT OFFICE TRAVEL	$350.00	$1,253.06	$1,253.06	($903.06)	$0.00	($903.06)	-258.02%
10000.080.3070.6314.1210.05.53	DISTRICT OFFICE EQUIPMENT MAIN	$4,191.00	$4,191.00	$4,191.00	$0.00	$0.00	$0.00	0.00%
10000.080.3070.6535.1210.05.54	DISTRICT OFFICE SUPPLIES	$8,111.15	$7,152.97	$7,152.97	$958.18	$0.00	$958.18	11.81%
10000.080.3070.6539.1210.05.53	DISTRICT MAINTENANCE EQUIPMENT	$0.00	($1,773.00)	($1,773.00)	$1,773.00	$333.00	$1,440.00	0.00%
	Func: Superintendent - 1210	$251,399.45	$246,058.50	$246,058.50	$5,340.95	$11,327.70	($5,986.75)	-2.38%
10000.070.3100.5210.1410.02.30	FINANCIAL ASSTS SALARY	$109,499.35	$106,821.95	$106,821.95	$2,677.40	$4,194.46	($1,517.06)	-1.39%
10000.070.3100.5310.1410.03.30	TREASURERS SALARY	$20,230.65	$11,450.00	$11,450.00	$8,780.65	$0.00	$8,780.65	43.40%
10000.070.3100.6126.1410.06.60	BUSINESS OFFICE TRAVEL	$205.17	$132.43	$132.43	$72.74	$0.00	$72.74	35.45%
10000.070.3100.6362.1410.04.40	AUDITING SERVICES	$36,536.99	$3,750.00	$3,750.00	$32,786.99	$21,500.00	$11,286.99	30.89%
10000.070.3100.6363.1410.04.40	BUSINESS CONTRACTED SERVICES	$151,280.47	$118,820.00	$118,820.00	$32,460.47	$0.00	$32,460.47	21.46%
10000.070.3100.6535.1410.05.54	BUSINESS OFFICE SUPPLIES	$134.85	$134.85	$134.85	$0.00	$0.00	$0.00	0.00%
10000.080.3100.6125.1410.06.60	BUSINESS OFFICE PD	$147.15	$147.15	$147.15	$0.00	$0.00	$0.00	0.00%
10000.080.3100.6363.1410.04.40	DISTRICT BUS. OFFICE CONT SERV	$0.00	$8,245.00	$8,245.00	($8,245.00)	$0.00	($8,245.00)	0.00%
	Func: Finance and Business - 1410	$318,034.63	$249,501.38	$249,501.38	$68,533.25	$25,694.46	$42,838.79	13.47%
10000.070.3060.6360.1430.04.40	MG LEGAL SERVICES	$18,925.00	$14,259.80	$14,259.80	$4,665.20	$0.00	$4,665.20	24.65%
10000.071.3060.6360.1430.04.40	LES LEGAL SERVICES	$13,065.00	$13,065.00	$13,065.00	$0.00	$0.00	$0.00	0.00%
10000.075.3060.6360.1430.04.40	WES LEGAL SERVICES	$12,000.00	$8,020.00	$8,020.00	$3,980.00	$3,980.00	$0.00	0.00%
	Func: Legal Services for School Committee - 1430	$43,990.00	$35,344.80	$35,344.80	$8,645.20	$3,980.00	$4,665.20	10.61%
10000.070.3100.6531.1450.04.62	BUSINESS OFFICE SOFTWARE MAINT	$6,500.00	$0.00	$0.00	$6,500.00	$0.00	$6,500.00	100.00%
10000.070.3060.6532.1450.05.52	DISTRICT HARDWARE under $5000	$2,000.00	$1,286.00	$1,286.00	$714.00	$0.00	$714.00	35.70%
	Func: District Information Technology - 1450	$8,500.00	$1,286.00	$1,286.00	$7,214.00	$0.00	$7,214.00	84.87%
10000.050.2100.5210.2110.02.30	PUPIL SERVICES ADMIN ASSISTANT	$75,000.00	$56,808.04	$56,808.04	$18,191.96	$2,236.16	$15,955.80	21.27%
10000.050.2100.6120.2110.06.60	SPED OFFICE DUES	$850.00	$0.00	$0.00	$850.00	$0.00	$850.00	100.00%
10000.050.2100.6125.2110.06.60	SPED OFFICE PD	$11,748.00	$0.00	$0.00	$11,748.00	$0.00	$11,748.00	100.00%
10000.050.2100.6360.2110.04.40	MG SPED LEGAL SERVICES	$7,300.00	$6,612.00	$6,612.00	$688.00	$588.00	$100.00	1.37%
10000.050.2100.6535.2110.05.54	MG SPED OFFICE SUPPLIES	$4,783.35	$7.20	$7.20	$4,776.15	$0.00	$4,776.15	99.85%
10000.050.2100.6538.2110.05.53	MG SPED OFFICE EQUIPMENT	$1,900.00	$1,107.68	$1,107.68	$792.32	$428.34	$363.98	19.16%
10000.051.2100.6360.2110.04.40	LES SPED LEGAL SERVICES	$5,230.00	$6,594.00	$6,594.00	($1,364.00)	$606.00	($1,970.00)	-37.67%
10000.055.2100.6360.2110.04.40	WES SPED LEGAL SERVICES	$7,200.00	$4,794.00	$4,794.00	$2,406.00	$2,406.00	$0.00	0.00%
10000.080.2100.5110.2110.01.10	DIRECTOR OF PUPIL SERVICES	$110,000.00	$89,903.84	$89,903.84	$20,096.16	$3,596.16	$16,500.00	15.00%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
10000.080.2100.5112.2110.01.10	STUDENT SERVICES COORDINATOR	$69,276.00	$2,664.50	$2,664.50	$66,611.50	$0.00	$66,611.50	96.15%
	Func: Curriculum Directors - 2110	$293,287.35	$168,491.26	$168,491.26	$124,796.09	$9,860.66	$114,935.43	39.19%
10000.010.1010.5110.2210.01.10	LES PRINCIPAL SALARY	$93,000.00	$95,245.08	$95,245.08	($2,245.08)	$9,399.07	($11,644.15)	-12.52%
10000.010.1010.5111.2210.01.10	LES PRINCIPAL SUB WAGES	$800.00	$0.00	$0.00	$800.00	$0.00	$800.00	100.00%
10000.010.1010.5210.2210.02.30	LES PRINCIPAL SECRETARY SALARY	$38,674.00	$35,094.31	$35,094.31	$3,579.69	$1,615.34	$1,964.35	5.08%
10000.010.1010.5311.2210.03.30	LES PARA NON TEACHING DUTIES	$4,397.00	$6,661.62	$6,661.62	($2,264.62)	$0.00	($2,264.62)	-51.50%
10000.010.1010.6115.2210.05.63	LES POSTAGE	$2,222.37	$296.10	$296.10	$1,926.27	$896.10	$1,030.17	46.35%
10000.010.1010.6125.2210.06.60	LES PRINCIPAL OFFICE TRAVEL	$1,500.00	$0.00	$0.00	$1,500.00	$0.00	$1,500.00	100.00%
10000.010.1010.6535.2210.05.54	LES PRIN OFFICE SUPPLIES	$5,644.12	$5,561.62	$5,561.62	$82.50	$469.22	($386.72)	-6.85%
10000.010.1010.6538.2210.05.53	LES PRIN OFFICE EQUIPMENT	$8,299.60	$8,358.61	$8,358.61	($59.01)	$122.04	($181.05)	-2.18%
10000.015.1010.5110.2210.01.10	WES PRINCIPAL SALARY	$98,175.00	$94,399.01	$94,399.01	$3,775.99	$3,775.99	$0.00	0.00%
10000.015.1010.5111.2210.01.10	WES ASST PRINCIPAL SALARY	$76,944.00	$72,448.06	$72,448.06	$4,495.94	$2,897.94	$1,598.00	2.08%
10000.015.1010.5114.2210.01.12	WES TEAM MEETINGS	$5,400.00	$0.00	$0.00	$5,400.00	$0.00	$5,400.00	100.00%
10000.015.1010.5210.2210.02.30	WES PRINCIPAL SECRETARY SALARY	$37,500.00	$36,250.19	$36,250.19	$1,249.81	$1,538.50	($288.69)	-0.77%
10000.015.1010.5311.2210.03.30	WES PARA NON-TEACHING DUTIES	$31,370.47	$17,156.64	$17,156.64	$14,213.83	$0.00	$14,213.83	45.31%
10000.015.1010.6115.2210.05.63	WES POSTAGE	$3,136.48	$1,571.24	$1,571.24	$1,565.24	$925.24	$640.00	20.41%
10000.015.1010.6120.2210.06.60	WES PRIN OFFICE DUES	$900.00	$300.00	$300.00	$600.00	$0.00	$600.00	66.67%
10000.015.1010.6125.2210.06.60	WES PRIN OFFICE TRAVEL	$2,800.00	$0.00	$0.00	$2,800.00	$215.00	$2,585.00	92.32%
10000.015.1010.6535.2210.05.54	WES PRIN OFFICE SUPPLIES	$10,347.56	$9,490.67	$9,490.67	$856.89	$803.21	$53.68	0.52%
10000.015.1010.6538.2210.05.53	WES PRIN OFFICE EQUIPMENT	$14,525.96	$12,276.94	$12,276.94	$2,249.02	$3,384.00	($1,134.98)	-7.81%
10000.040.1010.5110.2210.01.10	MG PRINCIPAL SALARY	$110,408.00	$106,161.52	$106,161.52	$4,246.48	$4,246.48	$0.00	0.00%
10000.040.1010.5111.2210.01.10	MG ASST PRINCIPALS SALARY	$52,037.11	$47,270.97	$47,270.97	$4,766.14	$3,436.53	$1,329.61	2.56%
10000.040.1010.5111.2210.02.10	MG SCHOOL RESOURCE OFFICER	$5,000.00	$3,480.54	$3,480.54	$1,519.46	$0.00	$1,519.46	30.39%
10000.040.1010.5114.2210.01.12	MG TEAM MEETINGS	$15,225.00	$16,075.00	$16,075.00	($850.00)	$0.00	($850.00)	-5.58%
10000.040.1010.5210.2210.02.30	MG PRINCIPALS SECRETARY SALARY	$58,140.00	$55,903.84	$55,903.84	$2,236.16	$2,236.16	$0.00	0.00%
10000.040.1010.5211.2210.02.30	MG OFFICE SUPPORT PARA	$35,032.00	$32,108.33	$32,108.33	$2,923.67	$1,359.08	$1,564.59	4.47%
10000.040.1010.5311.2210.03.30	MG PARA NON TEACHING DUTIES	$4,440.63	$4,697.76	$4,697.76	($257.13)	$0.00	($257.13)	-5.79%
10000.040.1010.6115.2210.05.63	MG POSTAGE	$5,314.97	$4,653.98	$4,653.98	$660.99	$64.02	$596.97	11.23%
10000.040.1010.6120.2210.06.60	MG PRIN OFFICE DUES	$1,700.00	$0.00	$0.00	$1,700.00	$0.00	$1,700.00	100.00%
10000.040.1010.6535.2210.05.54	MG PRINCIPAL OFFICE SUPPLIES	$2,000.00	$1,014.88	$1,014.88	$985.12	$99.33	$885.79	44.29%
10000.040.1010.6538.2210.05.53	MG PRIN OFFICE EQUIPMENT	$11,336.00	$10,245.77	$10,245.77	$1,090.23	$771.78	$318.45	2.81%
10000.040.1010.6548.2210.05.53	MG PUBLICATION PRINTING	$500.00	$212.50	$212.50	$287.50	$0.00	$287.50	57.50%
	Func: Principals - 2210	$736,770.27	$676,935.18	$676,935.18	$59,835.09	$38,255.03	$21,580.06	2.93%
10000.015.1010.6531.2250.05.52	WES PRIN OFFICE SOFTWARE	$4,000.00	$0.00	$0.00	$4,000.00	$0.00	$4,000.00	100.00%
	Func: Blding Tech Non-Instructional - 2250	$4,000.00	$0.00	$0.00	$4,000.00	$0.00	$4,000.00	100.00%
10000.010.1100.5110.2305.01.11	LES REG ED TEACHERS SALARY	$781,570.13	$629,856.97	$629,856.97	$151,713.16	$178,372.98	($26,659.82)	-3.41%
10000.010.1600.5110.2305.01.11	LES SPECIALS SALARY	$155,583.24	$120,626.94	$120,626.94	$34,956.30	$34,956.30	$0.00	0.00%
10000.015.1100.5110.2305.01.11	WES REG ED TEACHERS SALARY	$1,842,088.93	$1,508,301.88	$1,508,301.88	$333,787.05	$414,528.73	($80,741.68)	-4.38%
10000.015.1500.5110.2305.01.11	WES SPECIALS SALARY	$270,966.20	$221,224.30	$221,224.30	$49,741.90	$49,741.90	$0.00	0.00%
10000.040.1100.5110.2305.01.11	MG ENGLISH TEACHERS	$156,389.60	$63,584.40	$63,584.40	$92,805.20	$92,805.20	$0.00	0.00%
10000.040.1200.5110.2305.01.11	MG MATH FACULTY	$258,212.00	$296,990.85	$296,990.85	($38,778.85)	$113,359.68	($152,138.53)	-58.92%
10000.040.1300.5110.2305.01.11	MG SCIENCE FACULTY	$311,042.00	$374,781.69	$374,781.69	($63,739.69)	$83,339.61	($147,079.30)	-47.29%
10000.040.1400.5110.2305.01.11	MG SOCIAL STUDIES FACULTY	$464,471.00	$371,814.63	$371,814.63	$92,656.37	$92,656.37	$0.00	0.00%
10000.040.1500.5110.2305.01.11	MG WORLD LANGUAGE FACULTY	$355,547.00	$288,615.01	$288,615.01	$66,931.99	$75,780.92	($8,848.93)	-2.49%
10000.040.1600.5110.2305.01.11	MG ART TEACHER SALARY	$114,697.62	$82,461.83	$82,461.83	$32,235.79	$32,235.79	$0.00	0.00%
10000.040.1615.5110.2305.01.11	MG PERFORMING ARTS/MUSIC FACUI	$169,075.90	$159,119.89	$159,119.89	$9,956.01	$9,956.01	$0.00	0.00%
10000.040.1700.5110.2305.01.11	MG WELLNESS FACULTY	$324,676.89	$301,883.36	$301,883.36	$22,793.53	$38,110.74	($15,317.21)	-4.72%
10000.040.1800.5110.2305.01.11	MG BUS ED/COMPUTERS FACULTY	$92,343.00	$127,966.87	$127,966.87	($35,623.87)	$20,314.19	($55,938.06)	-60.58%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
	Func: Classroom Teachers - 2305	$5,296,663.51	$4,547,228.62	$4,547,228.62	$749,434.89	$1,236,158.42	($486,723.53)	-9.19%
10000.050.2200.5110.2310.01.11	MG SPED TEACHER SALARIES	$386,234.72	$321,367.61	$321,367.61	$64,867.11	$64,952.11	($85.00)	-0.02%
10000.051.2200.5110.2310.01.11	LES SPED TEACHER SALARIES	$161,555.55	$132,112.58	$132,112.58	$29,442.97	$40,041.06	($10,598.09)	-6.56%
10000.051.2301.5110.2310.01.11	LES SPED SUMMER FACULTY SALARI	$10,312.40	$10,312.40	$10,312.40	$0.00	$0.00	$0.00	0.00%
10000.055.2200.5110.2310.01.11	WES SPED TEACHER SALARIES	$373,411.34	$299,150.86	$299,150.86	$74,260.48	$74,260.48	$0.00	0.00%
	Func: Specialist Teachers (small groups) - 2310	$931,514.01	$762,943.45	$762,943.45	$168,570.56	$179,253.65	($10,683.09)	-1.15%
10000.010.1900.5110.2315.01.11	LES ESL FACULTY	$23,658.68	$17,206.24	$17,206.24	$6,452.44	$6,452.44	$0.00	0.00%
10000.040.1050.5110.2315.01.12	MG CURRICULUM LEADERS	$33,000.00	$31,167.12	$31,167.12	$1,832.88	$1,832.88	$0.00	0.00%
10000.040.1900.5110.2315.01.11	MG ELL TEACHER SALARY	($0.20)	($329.96)	($329.96)	$329.76	$4,715.86	($4,386.10)	1930 50.00%
	Func: Instructional Coordinators/Team Leaders - 2315	$56,658.48	$48,043.40	$48,043.40	$8,615.08	$13,001.18	($4,386.10)	-7.74%
10000.050.2300.5110.2320.01.11	MG SPEECH PATHOLOGIST SALARY	$23,545.00	$15,103.46	$15,103.46	$8,441.54	$6,472.92	$1,968.62	8.36%
10000.050.2200.5310.2320.03.30	MG SUMMER OT/PT/SLP	$261.32	$261.32	$261.32	$0.00	$0.00	$0.00	0.00%
10000.050.2300.5310.2320.01.11	MG SPED BEHAVORIAL SPECIALIST	$5,670.68	$1,879.65	$1,879.65	$3,791.03	$0.00	$3,791.03	66.85%
10000.050.2300.5311.2320.01.11	MG OCCUPATIONAL THERAPIST	$23,545.20	$18,111.67	$18,111.67	$5,433.53	$5,433.53	$0.00	0.00%
10000.050.2300.5312.2320.01.11	MG SPED PHYSICAL THERAPIST	$19,647.28	$9,944.75	$9,944.75	$9,702.53	$497.24	$9,205.29	46.85%
10000.050.3120.6165.2320.00.07	DISTRICT SPED TRAVEL	$933.00	$0.00	$0.00	$933.00	$0.00	$933.00	100.00%
10000.050.2300.6363.2320.04.40	MG SPED CONT SERV	$12,093.75	$12,093.75	$12,093.75	$0.00	$0.00	$0.00	0.00%
10000.050.2301.6363.2320.04.40	MG SPED SUMMER CONT SERV	$300.00	$300.00	$300.00	$0.00	$0.00	$0.00	0.00%
10000.051.2300.5110.2320.01.11	LES SPEECH PATHOLOGIST SALARY	$74,732.00	$57,486.16	$57,486.16	$17,245.84	$17,245.84	$0.00	0.00%
10000.051.2200.5310.2320.03.30	LES SUMMER OT/PT/SLP	$3,437.62	$3,437.62	$3,437.62	$0.00	$0.00	$0.00	0.00%
10000.051.2300.5311.2320.01.11	LES SPED OCCUPATIONAL THERAPIS	$52,659.00	$40,506.90	$40,506.90	$12,152.10	$12,152.10	$0.00	0.00%
10000.051.2300.5312.2320.01.11	LES SPED PHYSICAL THERAPIST	$7,396.53	$7,044.31	$7,044.31	$352.22	$352.22	$0.00	0.00%
10000.051.2300.6363.2320.04.40	LES SPED CONT SERV	$15,003.98	$28,336.88	$28,336.88	($13,332.90)	$6,415.00	($19,747.90)	-131.62%
10000.051.2301.6363.2320.04.40	LES SPED SUMMER CONT SERV	$250.00	$250.00	$250.00	$0.00	$0.00	$0.00	0.00%
10000.055.2300.5110.2320.01.11	WES SPED SPEECH PATHOLOGIST SA	$126,892.20	$97,609.39	$97,609.39	$29,282.81	$29,282.81	$0.00	0.00%
10000.055.2200.5310.2320.03.30	WES SUMMER OT/PT/SLP	$3,818.18	$3,818.18	$3,818.18	$0.00	$0.00	$0.00	0.00%
10000.055.2300.5311.2320.01.11	WES SPED OCCUPATIONAL THERAPIS	$54,939.00	$42,260.77	$42,260.77	$12,678.23	$12,678.23	$0.00	0.00%
10000.055.2300.5312.2320.01.11	WES SPED PHYSICAL THERAPIST	$25,669.98	$24,447.59	$24,447.59	$1,222.39	$1,222.39	$0.00	0.00%
10000.055.2300.6363.2320.04.40	WES SPED CONTRACTED SERVICES	$58,430.00	$15,856.16	$15,856.16	$42,573.84	$3,100.00	$39,473.84	67.56%
10000.055.2301.6363.2320.04.40	WES SPED SUMMER CONT SERV	$755.00	$485.00	$485.00	$270.00	$0.00	$270.00	35.76%
10000.080.3070.6363.2320.04.40	SUPERINTENDENT OFFICE CONT SER	$2,300.00	$659.87	$659.87	$1,640.13	$0.00	$1,640.13	71.31%
	Func: Medical/Therapeutic Services (OT, PT) - 2320	$512,279.72	$379,893.43	$379,893.43	$132,386.29	$94,852.28	$37,534.01	7.33%
10000.010.1050.5120.2325.03.35	LES SUBSTITUTE WAGES	$31,665.94	$49,839.37	$49,839.37	($18,173.43)	$0.00	($18,173.43)	-57.39%
10000.015.1050.5120.2325.03.35	WES SUBSTITUTE WAGES	$49,589.48	$52,668.48	$52,668.48	($3,079.00)	$0.00	($3,079.00)	-6.21%
10000.040.1050.5120.2325.03.35	MG SUBSTITUE WAGES	$41,814.78	$46,157.50	$46,157.50	($4,342.72)	$0.00	($4,342.72)	-10.39%
10000.050.2200.5120.2325.03.35	MG SPED SUBSTITUTE WAGES	$18,245.00	$19,475.00	$19,475.00	($1,230.00)	$0.00	($1,230.00)	-6.74%
10000.051.2200.5120.2325.03.35	LES SPED SUBSTITUTE WAGES	$12,762.00	$19,249.50	$19,249.50	($6,487.50)	$0.00	($6,487.50)	-50.83%
10000.055.2200.5120.2325.03.35	WES SPED SUBSTITUTE WAGES	$18,609.88	$21,759.88	$21,759.88	($3,150.00)	$0.00	($3,150.00)	-16.93%
	Func: Teacher Substitutes LT and ST - 2325	$172,687.08	$209,149.73	$209,149.73	($36,462.65)	$0.00	($36,462.65)	-21.11%
10000.010.1900.5211.2330.03.30	LES REG ED TUTORS	$288.75	$918.75	$918.75	($630.00)	$0.00	($630.00)	-218.18%
10000.015.1900.5211.2330.03.30	WES PARA WAGES	$119,937.93	$115,867.97	$115,867.97	$4,069.96	$4,831.86	($761.90)	-0.64%
10000.040.1900.5211.2330.03.30	MG REG ED TUTORS	$4,532.00	$4,528.65	$4,528.65	$3.35	$0.00	$3.35	0.07%
10000.050.2200.5310.2330.03.30	MG PARA WAGES	$481,857.12	$291,391.38	$291,391.38	$190,465.74	$14,102.99	$176,362.75	36.60%
10000.050.2200.6363.2330.03.40	MG SPED TUTOR SERVICES	$437.50	$437.50	$437.50	$0.00	$0.00	$0.00	0.00%
10000.051.2200.5310.2330.03.30	LES SPED PARA WAGES	$166,378.28	$147,982.08	$147,982.08	$18,396.20	$26,069.09	($7,672.89)	-4.61%
10000.051.2200.6363.2330.03.40	LES SPED TUTOR SERVICES	$0.00	$375.00	$375.00	($375.00)	$0.00	($375.00)	0.00%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
10000.055.2200.5310.2330.03.30	WES SPED PARA WAGES	$267,822.39	$255,689.67	$255,689.67	$12,132.72	$12,141.93	($9.21)	0.00%
10000.055.2200.6363.2330.03.40	WES SPED TUTOR SERVICES	$5,135.75	$5,549.81	$5,549.81	($414.06)	$0.00	($414.06)	-8.06%
	Func: Teacher Aides/ Para's - 2330	$1,046,389.72	$822,740.81	$822,740.81	$223,648.91	$57,145.87	$166,503.04	15.91%
10000.050.2200.5310.2331.03.30	MG SUMMER SPED PARA	$3,314.52	$3,314.52	$3,314.52	$0.00	$0.00	$0.00	0.00%
10000.051.2200.5310.2331.03.30	LES SUMMER SPED PARA	$6,713.44	$6,713.44	$6,713.44	$0.00	$0.00	$0.00	0.00%
10000.055.2200.5310.2331.03.30	WES SUMMER SPED PARA	$8,776.24	$8,776.24	$8,776.24	$0.00	$0.00	$0.00	0.00%
	Func: SPED PARA SUMMER - 2331	$18,804.20	$18,804.20	$18,804.20	$0.00	$0.00	$0.00	0.00%
10000.010.3150.5110.2340.01.11	LES LIBRARIAN SALARY	$26,004.95	$20,325.73	$20,325.73	$5,679.22	$5,679.22	$0.00	0.00%
10000.015.3150.5110.2340.01.11	WES LIBRARIAN SALARY	$93,267.00	$71,743.83	$71,743.83	$21,523.17	$21,523.17	$0.00	0.00%
10000.015.3150.6535.2340.05.54	WES LIBRARY SUPPLIES	$0.00	($938.68)	($938.68)	$938.68	$937.29	$1.39	0.00%
10000.040.3150.5110.2340.01.11	MG LIBRARIAN SALARY	$52,210.20	$49,723.98	$49,723.98	$2,486.22	$2,486.22	$0.00	0.00%
10000.040.3150.5310.2340.02.30	MG LIBRARY SUPPORT WAGES	$27,637.00	$25,804.80	$25,804.80	$1,832.20	$1,290.20	$542.00	1.96%
	Func: Librarians and Media Center Directors - 2340	$199,119.15	$166,659.66	$166,659.66	$32,459.49	$31,916.10	$543.39	0.27%
10000.040.1010.5110.2353.01.11	MG PRINCIPAL PD	$2,500.00	$0.00	$0.00	$2,500.00	$0.00	$2,500.00	100.00%
	Func: Instructional Staff/PD days Beyond 180 - 2353	$2,500.00	$0.00	$0.00	$2,500.00	$0.00	$2,500.00	100.00%
10000.010.1010.5114.2357.01.12	LES MENTORS	$1,200.00	$1,200.00	$1,200.00	$0.00	$0.00	$0.00	0.00%
10000.010.1055.6120.2357.06.60	LES CONTRACTUAL TUITION REIMB	$1,390.88	$1,390.88	$1,390.88	$0.00	$0.00	$0.00	0.00%
10000.010.1055.6130.2357.06.60	LES PD TRAVEL	$952.17	$952.17	$952.17	$0.00	$0.00	$0.00	0.00%
10000.015.1010.5114.2357.01.12	WES MENTORS	$4,400.00	$4,400.00	$4,400.00	$0.00	$0.00	$0.00	0.00%
10000.015.1055.6130.2357.06.60	WES PD TRAVEL	$36.40	$36.40	$36.40	$0.00	$0.00	$0.00	0.00%
10000.075.1055.6130.2357.06.60	WES CONTRACTUAL PD	$2,000.00	$0.00	$0.00	$2,000.00	$0.00	$2,000.00	100.00%
	Func: PROF. DEV.-TRAINERS & CONSULTANTS - 2357	$9,979.45	$7,979.45	$7,979.45	$2,000.00	$0.00	$2,000.00	20.04%
10000.010.1055.6363.2358.04.40	LES CONTRACTUAL PD	$1,000.00	$1,000.00	$1,000.00	$0.00	$0.00	$0.00	0.00%
	Func: PROFESSIONAL DEV.-OTHER - 2358	$1,000.00	$1,000.00	$1,000.00	$0.00	$0.00	$0.00	0.00%
10000.015.1100.6570.2410.05.51	WES TEXTBOOKS	$22,500.00	$20,535.92	$20,535.92	$1,964.08	$0.00	$1,964.08	8.73%
10000.040.1100.6570.2410.05.51	MG ENGLISH TEXTBOOKS	$2,031.83	$2,031.83	$2,031.83	$0.00	$0.00	$0.00	0.00%
10000.040.1200.6570.2410.05.51	MG MATH TEXTBOOKS	$5,968.17	$1,559.38	$1,559.38	$4,408.79	$2,850.00	$1,558.79	26.12%
10000.040.1300.6570.2410.05.51	MG SCIENCE TEXTBOOKS	$11,494.41	$5,855.25	$5,855.25	$5,639.16	$0.00	$5,639.16	49.06%
10000.040.1400.6570.2410.05.51	MG SOCIAL STUDIES TEXTBOOKS	$4,000.00	$127.97	$127.97	$3,872.03	$0.00	$3,872.03	96.80%
10000.040.1500.6570.2410.05.51	MG WORLD LANGUAGES TEXTBOOKS	$1,899.34	$1,899.34	$1,899.34	$0.00	$0.00	$0.00	0.00%
10000.070.1050.6570.2410.04.40	MG CONSUMABLE TEXTBOOK REPLA(	$400.00	$0.00	$0.00	$400.00	$0.00	$400.00	100.00%
10000.071.1050.6570.2410.04.40	LES CONSUMABLE TEXTBOOK REPLA	$2,980.00	$2,980.00	$2,980.00	$0.00	$0.00	$0.00	0.00%
	Func: Textbooks and Related Software - 2410	$51,273.75	$34,989.69	$34,989.69	$16,284.06	$2,850.00	$13,434.06	26.20%
10000.040.1050.6545.2415.05.54	MG PRIN INSTRUCTIONAL MATERIAL	$34.80	$34.80	$34.80	$0.00	$0.00	$0.00	0.00%
10000.040.3150.6575.2415.05.54	MG BOOKS/PERIODICALS	$2,525.43	$2,479.34	$2,479.34	$46.09	$50.00	($3.91)	-0.15%
	Func: Other Instructional Materials - 2415	$2,560.23	$2,514.14	$2,514.14	$46.09	$50.00	($3.91)	-0.15%
10000.010.1050.6314.2420.04.40	LES INSTRUCTIONAL EQUIP MAINT	$308.19	$0.00	$0.00	$308.19	$0.00	$308.19	100.00%
10000.010.1615.6550.2420.05.53	LES PERFORMING ARTS/MUSIC EQUI	$95.75	$3.25	$3.25	$92.50	$0.00	$92.50	96.61%
10000.015.1615.6550.2420.05.53	WES PERFORMING ARTS/MUSIC EQUI	$6,811.95	$311.95	$311.95	$6,500.00	$6,500.00	$0.00	0.00%
10000.040.1300.6315.2420.04.40	MG SCIENCE EQUIPMENT	$1,000.00	$0.00	$0.00	$1,000.00	$0.00	$1,000.00	100.00%
10000.040.1200.6550.2420.05.53	MG MATH EQUIPMENT	$119.64	$109.90	$109.90	$9.74	$0.00	$9.74	8.14%
10000.040.1600.6550.2420.05.53	MG ART EQUIPMENT	$10,886.44	$10,886.44	$10,886.44	$0.00	$0.00	$0.00	0.00%
10000.040.1615.6550.2420.05.53	MG PERFORMING ARTS/MUSIC EQUIP	$2,000.00	$3,123.00	$3,123.00	($1,123.00)	$0.00	($1,123.00)	-56.15%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
10000.040.1700.6550.2420.05.53	MG WELLNESS EQUIPMENT	$7,380.36	$6,763.65	$6,763.65	$616.71	$656.45	($39.74)	-0.54%
10000.040.3150.6550.2420.05.53	MG LIBRARY EQUIPMENT	$439.77	$391.40	$391.40	$48.37	$39.60	$8.77	1.99%
10000.070.1050.6550.2420.05.53	MG INSTRUCTIONAL EQUIPMENT	$4,459.00	$3,628.02	$3,628.02	$830.98	$329.82	$501.16	11.24%
10000.071.1050.6550.2420.05.53	LES INSTRUCTIONAL EQUIPMENT	$272.48	$272.48	$272.48	$0.00	$0.00	$0.00	0.00%
10000.090.4400.6550.2420.05.53	MG GROUNDS EQUIPMENT	$1,938.44	$1,938.44	$1,938.44	$0.00	$0.00	$0.00	0.00%
10000.091.4500.6550.2420.05.53	LES BLDG MAINT EQUIPMENT	$0.00	$723.95	$723.95	($723.95)	$0.00	($723.95)	0.00%
	Func: Instructional Equipmt - 2420	$35,712.02	$28,152.48	$28,152.48	$7,559.54	$7,525.87	$33.67	0.09%
10000.010.1045.6545.2430.05.54	LES GENERAL CLASS MATERIALS	$426.56	$426.56	$426.56	$0.00	$0.00	$0.00	0.00%
10000.010.1050.6545.2430.05.54	LES GENERAL CLASS SUPPLIES	$20,186.35	$18,467.74	$18,467.74	$1,718.61	$1,718.61	$0.00	0.00%
10000.015.1800.6535.2430.05.54	WES DIGITAL TECHNOLOGY SUPPLIE	$3,378.16	$3,194.70	$3,194.70	$183.46	$183.46	$0.00	0.00%
10000.015.3150.6535.2430.05.54	WES LIBRARY SUPPLIES	$3,531.16	$3,234.34	$3,234.34	$296.82	$0.00	$296.82	8.41%
10000.015.3160.6543.2430.05.54	WES TECH INSTR SUPPLIES	$0.00	$175.50	$175.50	($175.50)	$0.00	($175.50)	0.00%
10000.015.1045.6545.2430.05.54	WES GENERAL CLASS MATERIALS	($1,000.00)	($1,578.04)	($1,578.04)	$578.04	$0.00	$578.04	-57.80%
10000.015.1050.6545.2430.05.54	WES GENERAL CLASS SUPPLIES	$9,759.36	$9,317.28	$9,317.28	$442.08	$0.00	$442.08	4.53%
10000.015.1600.6545.2430.05.54	WES ART SUPPLIES	$183.43	$183.43	$183.43	$0.00	$0.00	$0.00	0.00%
10000.040.1800.6535.2430.05.54	MG DIGITAL TECHNOLOGY SUPPLIES	$2,009.55	$2,009.55	$2,009.55	$0.00	$0.00	$0.00	0.00%
10000.040.2200.6535.2430.05.54	MG ELL SUPPLIES	$340.51	$128.00	$128.00	$212.51	$0.00	$212.51	62.41%
10000.040.3150.6535.2430.05.54	MG LIBRARY SUPPLIES	$747.13	$708.07	$708.07	$39.06	$33.24	$5.82	0.78%
10000.040.3160.6543.2430.05.54	MG TECH INST SUPPLIES	$10,000.00	$7,365.90	$7,365.90	$2,634.10	$0.00	$2,634.10	26.34%
10000.040.1045.6545.2430.05.54	MG GENERAL CLASS MATERIALS	($2,144.90)	($4,417.70)	($4,417.70)	$2,272.80	$101.25	$2,171.55	-101.24%
10000.040.1050.6545.2430.05.54	MG GENERAL CLASS SUPPLIES	$11,888.12	$11,786.26	$11,786.26	$101.86	$101.86	$0.00	0.00%
10000.040.1100.6545.2430.05.04	MG ENGLISH SUPPLIES	$200.00	$193.87	$193.87	$6.13	$0.00	$6.13	3.07%
10000.040.1200.6545.2430.05.54	MG MATH SUPPLIES	$760.81	$764.29	$764.29	($3.48)	$0.00	($3.48)	-0.46%
10000.040.1300.6545.2430.05.54	MG SCIENCE SUPPLIES	$11,013.93	$7,755.04	$7,755.04	$3,258.89	$300.00	$2,958.89	26.86%
10000.040.1400.6545.2430.05.54	MG SOC STUDIES SUPPLIES	$467.35	$452.27	$452.27	$15.08	$0.00	$15.08	3.23%
10000.040.1500.6545.2430.05.54	MG WORLD LANG SUPPLIES	$329.25	$63.67	$63.67	$265.58	$0.00	$265.58	80.66%
10000.040.1600.6545.2430.05.54	MG ART SUPPLIES	$5,113.56	$5,051.70	$5,051.70	$61.86	$0.00	$61.86	1.21%
10000.040.1615.6545.2430.05.54	MG PERFORMIING ARTS/MUSIC SUPP	$1,410.00	$1,557.00	$1,557.00	($147.00)	$0.00	($147.00)	-10.43%
10000.040.1700.6545.2430.05.54	MG WELLNESS SUPPLIES	$150.00	$0.00	$0.00	$150.00	$0.00	$150.00	100.00%
10000.050.2200.6545.2430.05.54	MG SPED GENERAL SUPPLIES	$27.65	$27.65	$27.65	$0.00	$0.00	$0.00	0.00%
10000.055.2200.6545.2430.05.54	WES SPED GENERAL SUPPLIES	$78.73	$78.73	$78.73	$0.00	$0.00	$0.00	0.00%
	Func: General Teaching Supplies - 2430	$78,856.71	$66,945.81	$66,945.81	$11,910.90	$2,438.42	$9,472.48	12.01%
10000.040.1615.6373.2440.04.40	MG PERFORMING ARTS/MUSIC INST	$290.00	$240.00	$240.00	$50.00	$0.00	$50.00	17.24%
	Func: Other Instruct Services/ Field Trips - 2440	$290.00	$240.00	$240.00	$50.00	$0.00	$50.00	17.24%
10000.010.3160.6542.2451.05.52	LES TECH INST HARDWARE	$22,005.44	$22,005.44	$22,005.44	$0.00	$0.00	$0.00	0.00%
10000.015.3160.6542.2451.05.52	WES TECH INST HARDWARE	$51,077.21	$51,077.21	$51,077.21	$0.00	$0.00	$0.00	0.00%
	Func: Classroom(LAB) Instruct Tech - 2451	$73,082.65	$73,082.65	$73,082.65	$0.00	$0.00	$0.00	0.00%
10000.010.1050.6541.2455.05.52	LES INSTRUCTIONAL SOFTWARE	$147.00	$147.00	$147.00	$0.00	$0.00	$0.00	0.00%
10000.010.3160.6541.2455.05.52	LES TECH INST SOFTWARE	$9,793.31	$9,793.31	$9,793.31	$0.00	$0.00	$0.00	0.00%
10000.015.1050.6541.2455.05.52	WES INSTRUCTIONAL SOFTWARE	$1,530.00	$1,530.00	$1,530.00	$0.00	$0.00	$0.00	0.00%
10000.015.3160.6541.2455.05.52	WES TECH INST SOFTWARE	$19,015.75	$19,015.75	$19,015.75	$0.00	$0.00	$0.00	0.00%
10000.040.3160.6541.2455.05.52	MG TECH INST SOFTWARE	$35,825.00	$26,656.30	$26,656.30	$9,168.70	$3,610.00	$5,558.70	15.52%
10000.040.1045.6551.2455.05.52	MG INSTRUCTIONAL SOFTWARE	$52.50	$52.50	$52.50	$0.00	$0.00	$0.00	0.00%
	Func: Instructional Software - 2455	$66,363.56	$57,194.86	$57,194.86	$9,168.70	$3,610.00	$5,558.70	8.38%
10000.060.3200.5110.2710.01.11	MG SOCIAL WORKER SALARY	$40,000.00	$31,714.39	$31,714.39	$8,285.61	$1,761.90	$6,523.71	16.31%
10000.060.3200.5111.2710.01.11	MG GUIDANCE COUNSELOR SALARIE	$266,378.00	$203,664.96	$203,664.96	$62,713.04	$50,359.87	$12,353.17	4.64%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
10000.060.3200.5210.2710.02.30	MG GUIDANCE SECRETARY WAGES	$30,172.00	$30,172.00	$30,172.00	$0.00	$0.00	$0.00	0.00%
10000.060.3200.6535.2710.05.54	MG GUIDANCE SUPPLIES/MATERIALS	$2,100.00	$1,670.16	$1,670.16	$429.84	$167.26	$262.58	12.50%
10000.060.3200.6538.2710.05.53	MG GUIDANCE OFFICE EQUIPMENT	$1,839.00	$1,677.19	$1,677.19	$161.81	$142.78	$19.03	1.03%
10000.061.3200.5110.2710.01.11	LES ADJUSTMENT COUNSELOR SALA	$32,732.01	$25,178.47	$25,178.47	$7,553.54	$7,553.54	$0.00	0.00%
10000.065.3200.5110.2710.01.11	WES ADJUSTMENT COUNSELOR SAL/	$37,306.86	$28,697.61	$28,697.61	$8,609.25	$8,609.25	$0.00	0.00%
	Func: Guidance - 2710	$410,527.87	$322,774.78	$322,774.78	$87,753.09	$68,594.60	$19,158.49	4.67%
10000.050.2300.6363.2720.04.40	MG SPED OTHER EVALUATIONS	$1,500.00	$0.00	$0.00	$1,500.00	$0.00	$1,500.00	100.00%
	Func: Testing and Assessment - 2720	$1,500.00	$0.00	$0.00	$1,500.00	$0.00	$1,500.00	100.00%
10000.050.2300.5110.2800.01.11	MG SPED PSYCH SALARY	$94,191.00	$89,705.70	$89,705.70	$4,485.30	$4,485.30	$0.00	0.00%
10000.051.2300.5110.2800.01.11	LES SPED PSYCH SALARY	$32,731.99	$25,178.45	$25,178.45	$7,553.54	$7,553.54	$0.00	0.00%
10000.055.2300.5110.2800.01.11	WES SPED PSYCH SALARY	$55,960.14	$43,046.27	$43,046.27	$12,913.87	$12,913.87	$0.00	0.00%
10000.055.2300.6365.2800.04.40	WES SPED PSYCH EVALUATIONS	$3,825.00	$3,825.00	$3,825.00	$0.00	$0.00	$0.00	0.00%
	Func: Psychological Services - 2800	$186,708.13	$161,755.42	$161,755.42	$24,952.71	$24,952.71	$0.00	0.00%
10000.010.1050.5120.3200.03.35	LES SUBSTITUTE NURSE WAGES	$1,500.00	$2,835.36	$2,835.36	($1,335.36)	$0.00	($1,335.36)	-89.02%
10000.015.1050.5120.3200.03.35	WES SUBSTITUTE NURSE WAGES	$2,550.40	$2,802.40	$2,802.40	($252.00)	$0.00	($252.00)	-9.88%
10000.040.1050.5120.3200.03.35	MG SUBSTITUTE NURSE WAGES	$2,769.00	$2,925.00	$2,925.00	($156.00)	$0.00	($156.00)	-5.63%
10000.051.2200.5310.3200.03.30	LES SUMMER NURSE	$3,978.40	$3,978.40	$3,978.40	$0.00	$0.00	$0.00	0.00%
10000.055.2200.5310.3200.03.30	WES SUMMER NURSE	$160.68	$160.68	$160.68	$0.00	$0.00	$0.00	0.00%
10000.070.3300.5310.3200.01.30	MG NURSE SALARY	$52,206.00	$48,902.86	$48,902.86	$3,303.14	$2,445.14	$858.00	1.64%
10000.070.3300.6535.3200.05.54	MG MEDICAL/MISC SUPPLIES	$1,200.00	$1,181.04	$1,181.04	$18.96	$0.00	$18.96	1.58%
10000.071.3300.5310.3200.01.30	LES NURSE SALARY	$72,107.92	$58,481.51	$58,481.51	$13,626.41	$13,754.33	($127.92)	-0.18%
10000.071.3300.6535.3200.05.54	LES MEDICAL/MISC SUPPLIES	$713.61	$483.67	$483.67	$229.94	$0.00	$229.94	32.22%
10000.075.3300.5310.3200.01.30	WES NURSE SALARY	$75,637.20	$58,624.02	$58,624.02	$17,013.18	$17,013.18	$0.00	0.00%
10000.075.3300.6535.3200.05.54	WES MEDICAL/MISC SUPPLIES	$1,600.00	$817.22	$817.22	$782.78	$0.00	$782.78	48.92%
	Func: Student Health Services - 3200	$214,423.21	$181,192.16	$181,192.16	$33,231.05	$33,212.65	$18.40	0.01%
10000.050.3600.6371.3300.04.40	MG SPED TRANSPORTATION	$51,425.99	$46,096.75	$46,096.75	$5,329.24	$8,516.04	($3,186.80)	-6.20%
10000.051.2301.6371.3300.04.40	LES SPED SUMMER PROGRAM TRANS	$1,700.00	$1,700.00	$1,700.00	$0.00	$0.00	$0.00	0.00%
10000.051.3600.6371.3300.04.40	LES SPED TRANSPORTATION	$0.00	$18,380.24	$18,380.24	($18,380.24)	$9,982.26	($28,362.50)	0.00%
10000.055.2200.5310.3300.03.30	WES SUMMER VAN DRIVER	$1,111.80	$1,111.80	$1,111.80	$0.00	$0.00	$0.00	0.00%
10000.055.3600.6371.3300.04.40	WES SPED TRANSPORTATION	$13,300.00	$8,213.60	$8,213.60	$5,086.40	$0.00	$5,086.40	38.24%
10000.070.3600.6371.3300.04.40	MG REG ED TRANSPORTATION	$407,334.62	$375,798.42	$375,798.42	$31,536.20	$7,582.50	$23,953.70	5.88%
10000.071.3600.6371.3300.04.40	LES REG ED TRANSPORTATION	$144,513.20	$144,513.20	$144,513.20	$0.00	$0.00	$0.00	0.00%
10000.075.3600.6371.3300.04.40	WES REG ED TRANSPORTATION	$149,973.20	$149,973.20	$149,973.20	$0.00	$0.00	$0.00	0.00%
	Func: Student Transportation To/Frm school - 3300	$769,358.81	$745,787.21	$745,787.21	$23,571.60	$26,080.80	($2,509.20)	-0.33%
10000.050.3600.6371.3301.04.40	MG SPED SUMMER TRANSPORTATIOI	$3,530.38	$3,530.38	$3,530.38	$0.00	$0.00	$0.00	0.00%
	Func: SPED SUMMER TRANSPORTATION - 3301	$3,530.38	$3,530.38	$3,530.38	$0.00	$0.00	$0.00	0.00%
10000.050.3600.6371.3302.04.40	MG SPED TRANSPORTATION OOD	$22,818.42	$20,809.71	$20,809.71	$2,008.71	$445.00	$1,563.71	6.85%
	Func: SPED Out-District Transportation - 3302	$22,818.42	$20,809.71	$20,809.71	$2,008.71	$445.00	$1,563.71	6.85%
10000.010.3450.5320.3400.01.30	LES FOOD SERVICE WAGES	$25,000.00	$25,000.00	$25,000.00	$0.00	$0.00	$0.00	0.00%
10000.015.3450.5320.3400.01.30	WES FOOD SERVICE WAGES	$14,766.00	$14,766.00	$14,766.00	$0.00	$0.00	$0.00	0.00%
10000.040.3450.5320.3400.01.30	MG FOOD SERVICE WAGES	$59,160.00	$56,884.61	$56,884.61	$2,275.39	$2,275.39	$0.00	0.00%
10000.080.3450.6539.3400.08.00	DISTRICT FOOD SERVICE EQUIPMEN	$0.00	$4,385.54	$4,385.54	($4,385.54)	$0.00	($4,385.54)	0.00%
	Func: Student Food Services/Lunch - 3400	$98,926.00	$101,036.15	$101,036.15	($2,110.15)	$2,275.39	($4,385.54)	-4.43%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
10000.040.3350.5110.3510.01.11	MG ATHLETIC DIRECTORS SALARY	$43,303.00	$41,637.51	$41,637.51	$1,665.49	$1,665.49	$0.00	0.00%
10000.040.3350.5310.3510.03.12	MG ATHLETIC STIPENDS	$92,864.00	$60,626.00	$60,626.00	$32,238.00	$60,462.00	($28,224.00)	-30.39%
10000.040.3350.6120.3510.06.60	MG ATHLETIC DUES	$6,742.00	$8,037.00	$8,037.00	($1,295.00)	$0.00	($1,295.00)	-19.21%
10000.040.3350.6125.3510.06.60	MG ATHLETIC STAFF DEVELOPMENT	$1,260.00	$0.00	$0.00	$1,260.00	$0.00	$1,260.00	100.00%
10000.040.3350.6315.3510.04.40	MG ATHLETIC EQUIP MAINT	$1,599.21	$2,125.15	$2,125.15	($525.94)	$0.00	($525.94)	-32.89%
10000.040.3350.6365.3510.04.40	MG ATHLETIC OFFICIALS	$65,095.00	$53,500.02	$53,500.02	$11,594.98	$0.00	$11,594.98	17.81%
10000.040.3350.6372.3510.04.40	MG ATHLETIC TRANSPORTATION	$64,904.71	$46,682.64	$46,682.64	$18,222.07	$37,288.12	($19,066.05)	-29.38%
10000.040.3350.6546.3510.04.40	MG ATHLETIC SUPPLIES/EQUIPMENT	$9,346.95	$13,055.10	$13,055.10	($3,708.15)	$747.84	($4,455.99)	-47.67%
	Func: Athletics - 3510	$285,114.87	$225,663.42	$225,663.42	$59,451.45	$100,163.45	($40,712.00)	-14.28%
10000.010.3400.5310.3520.03.12	LES STAFF CO-CURRICULAR STIPEN	$6,350.00	$1,000.00	$1,000.00	$5,350.00	$2,500.00	$2,850.00	44.88%
10000.010.3400.6365.3520.04.40	LES-CO-CURRIC-CONTRACTED SERVI	$0.00	$3,200.00	$3,200.00	($3,200.00)	$0.00	($3,200.00)	0.00%
10000.015.3400.5310.3520.03.12	WES CO-CURRICULAR STIPENDS	$13,224.41	$13,406.30	$13,406.30	($181.89)	$0.00	($181.89)	-1.38%
10000.040.3400.5110.3520.01.11	MG CO-CURRICULAR DIRECTOR SALA	$43,303.00	$41,637.51	$41,637.51	$1,665.49	$1,665.49	$0.00	0.00%
10000.040.3400.5310.3520.03.12	MG CO-CURRICULAR STIPENDS	$45,000.00	$42,277.00	$42,277.00	$2,723.00	$0.00	$2,723.00	6.05%
10000.040.3400.6365.3520.04.40	MG CO-CURRICULAR CONT SERV	$11,093.86	$17,917.72	$17,917.72	($6,823.86)	$0.00	($6,823.86)	-61.51%
10000.040.3400.6546.3520.05.54	MG VISUAL/PERFORMING ARTS SUPP	$29,000.00	$2,887.98	$2,887.98	$26,112.02	$0.00	$26,112.02	90.04%
10000.040.3400.6547.3520.05.54	MG GRADUATION SUPPLIES	$2,500.00	$1,142.06	$1,142.06	$1,357.94	$157.60	$1,200.34	48.01%
	Func: Other Student Activities/ Extra-Curricular - 3520	$150,471.27	$123,468.57	$123,468.57	$27,002.70	$4,323.09	$22,679.61	15.07%
10000.090.4100.5310.4110.01.10	MG CUSTODIAL SUPERVISOR	$4,500.00	$4,326.75	$4,326.75	$173.25	$173.25	$0.00	0.00%
10000.090.4100.5310.4110.03.30	MG CUSTODIAL WAGES	$204,096.48	$195,344.40	$195,344.40	$8,752.08	$8,420.72	$331.36	0.16%
10000.090.4100.5311.4110.03.30	MG CUSTODIAL SUBS	$13,386.43	$12,594.84	$12,594.84	$791.59	$0.00	$791.59	5.91%
10000.090.4100.5330.4110.03.30	MG CUSTODIAL OVERTIME	$5,836.90	$6,209.68	$6,209.68	($372.78)	$0.00	($372.78)	-6.39%
10000.090.4100.6125.4110.03.60	MG CUSTODIAL TRAVEL	$574.52	$574.52	$574.52	$0.00	$0.00	$0.00	0.00%
10000.090.4100.6125.4110.06.60	MG CUSTODIAL PD	$500.00	$0.00	$0.00	$500.00	$0.00	$500.00	100.00%
10000.090.4100.6310.4110.04.40	MG CUSTODIAL CONT SERV	$4,431.78	$1,433.33	$1,433.33	$2,998.45	$2,998.45	$0.00	0.00%
10000.090.4100.6510.4110.05.53	MG CUSTODIAL EQUIPMENT	$5,000.00	$88.14	$88.14	$4,911.86	$14.97	$4,896.89	97.94%
10000.090.4100.6510.4110.05.54	MG CUSTODIAL SUPPLIES	$23,000.00	$14,825.53	$14,825.53	$8,174.47	$5,055.23	$3,119.24	13.56%
10000.091.4100.5310.4110.01.10	LES CUSTODIAL SUPERVISOR	$41,728.91	$35,379.83	$35,379.83	$6,349.08	$0.00	$6,349.08	15.22%
10000.091.4100.5310.4110.03.30	LES CUSTODIAL WAGES	$41,761.47	$46,626.61	$46,626.61	($4,865.14)	$3,113.74	($7,978.88)	-19.11%
10000.091.4100.5311.4110.03.30	LES CUSTODIAL SUBS	$4,002.75	$4,002.75	$4,002.75	$0.00	$0.00	$0.00	0.00%
10000.091.4100.5330.4110.03.30	LES CUSTODIAL OVERTIME	$798.87	$827.73	$827.73	($28.86)	$0.00	($28.86)	-3.61%
10000.091.4100.6125.4110.03.60	LES CUSTODIAL TRAVEL	$71.94	$71.94	$71.94	$0.00	$0.00	$0.00	0.00%
10000.091.4100.6310.4110.04.40	LES CUSTODIAL CONT SERV	$0.00	$1,959.08	$1,959.08	($1,959.08)	$971.00	($2,930.08)	0.00%
10000.091.4100.6510.4110.05.53	LES CUSTODIAL EQUIPMENT	$676.29	$676.29	$676.29	$0.00	$0.00	$0.00	0.00%
10000.091.4100.6510.4110.05.54	LES CUSTODIAL SUPPLIES	$10,002.00	$8,865.46	$8,865.46	$1,136.54	$1,136.54	$0.00	0.00%
10000.095.4100.5310.4110.01.10	WES CUSTODIAL SUPERVISOR	$1,656.80	$1,656.80	$1,656.80	$0.00	$0.00	$0.00	0.00%
10000.095.4100.5310.4110.03.30	WES CUSTODIAL WAGES	$134,125.20	$121,655.96	$121,655.96	$12,469.24	$4,971.23	$7,498.01	5.59%
10000.095.4100.5311.4110.03.30	WES CUSTODIAL SUBS	$2,000.00	$1,093.50	$1,093.50	$906.50	$0.00	$906.50	45.33%
10000.095.4100.5330.4110.03.30	WES CUSTODIAL OVERTIME	$4,000.00	$1,033.97	$1,033.97	$2,966.03	$0.00	$2,966.03	74.15%
10000.095.4100.6510.4110.05.53	WES CUSTODIAL EQUIPMENT	$2,350.94	$9,612.53	$9,612.53	($7,261.59)	$0.00	($7,261.59)	-308.88%
10000.095.4100.6510.4110.05.54	WES CUSTODIAL SUPPLIES	$9,945.31	$8,664.95	$8,664.95	$1,280.36	$1,280.36	$0.00	0.00%
	Func: Custodial Services - 4110	$514,446.59	$477,524.59	$477,524.59	$36,922.00	$28,135.49	$8,786.51	1.71%
10000.090.4200.6350.4120.05.54	MG BUILDING HEAT	$180,173.05	$75,075.31	$75,075.31	$105,097.74	$2,270.15	$102,827.59	57.07%
10000.091.4200.6350.4120.05.54	LES BUILDING HEAT	$61,427.39	$48,654.93	$48,654.93	$12,772.46	$19,968.88	($7,196.42)	-11.72%
10000.095.4200.6350.4120.05.54	WES BUILDING HEAT	$58,700.00	$50,330.76	$50,330.76	$8,369.24	$6,050.64	$2,318.60	3.95%
	Func: Heating of Buildings - 4120	$300,300.44	$174,061.00	$174,061.00	$126,239.44	$28,289.67	$97,949.77	32.62%
10000.080.4200.6341.4130.04.40	DISTRICT OFFICE TELEPHONE	$805.00	$0.00	$0.00	$805.00	$780.00	$25.00	3.11%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
10000.090.4200.6341.4130.04.40	MG TELEPHONE	$10,570.24	$10,108.87	$10,108.87	$461.37	$461.37	$0.00	0.00%
10000.090.4200.6342.4130.04.40	MG ELECTRICITY	$130,000.00	$76,665.19	$76,665.19	$53,334.81	$27,337.97	$25,996.84	20.00%
10000.090.4200.6343.4130.04.40	MG SEWER FEES	$5,721.98	$4,672.83	$4,672.83	$1,049.15	$483.51	$565.64	9.89%
10000.090.4200.6344.4130.04.40	MG WATER	$8,000.00	$6,109.00	$6,109.00	$1,891.00	$609.50	$1,281.50	16.02%
10000.090.4200.6345.4130.05.54	MG PROPANE/NATURAL GAS	$9,000.00	$4,268.53	$4,268.53	$4,731.47	$4,731.47	$0.00	0.00%
10000.090.4200.6346.4130.04.40	MG RUBBISH/RECYCLING SERVICE	$10,400.00	$6,266.09	$6,266.09	$4,133.91	$0.00	$4,133.91	39.75%
10000.091.4200.6341.4130.04.40	LES TELEPHONE	$2,940.06	$2,829.28	$2,829.28	$110.78	$110.78	$0.00	0.00%
10000.091.4200.6342.4130.04.40	LES ELECTRICITY	$41,763.18	$47,393.87	$47,393.87	($5,630.69)	$10,226.13	($15,856.82)	-37.97%
10000.091.4200.6343.4130.04.40	LES SEWER FEES	$4,350.00	$2,950.00	$2,950.00	$1,400.00	$1,400.00	$0.00	0.00%
10000.091.4200.6344.4130.04.40	LES WATER	$3,061.48	$3,658.05	$3,658.05	($596.57)	$0.00	($596.57)	-19.49%
10000.091.4200.6345.4130.05.54	LES PROPANE/NATURAL GAS	$968.79	$968.79	$968.79	$0.00	$0.00	$0.00	0.00%
10000.091.4200.6346.4130.04.40	LES RUBBISH/RECYCLING SERVICE	$5,294.26	$4,653.23	$4,653.23	$641.03	$641.03	$0.00	0.00%
10000.095.4200.6341.4130.04.40	WES TELEPHONE	$7,848.00	$3,525.45	$3,525.45	$4,322.55	$0.00	$4,322.55	55.08%
10000.095.4200.6342.4130.04.40	WES ELECTRICITY	$34,978.10	$24,973.06	$24,973.06	$10,005.04	$7,220.39	$2,784.65	7.96%
10000.095.4200.6343.4130.04.40	WES SEWER FEES	$9,621.00	$5,349.66	$5,349.66	$4,271.34	$2,573.33	$1,698.01	17.65%
10000.095.4200.6344.4130.04.40	WES WATER	$2,898.01	$2,526.70	$2,526.70	$371.31	$371.31	$0.00	0.00%
10000.095.4200.6346.4130.04.40	WES RUBBISH/RECYCLING SERVICE	$4,500.00	$3,820.18	$3,820.18	$679.82	$0.00	$679.82	15.11%
	Func: Utility Services - 4130	$292,720.10	$210,738.78	$210,738.78	$81,981.32	$56,946.79	$25,034.53	8.55%
10000.090.4400.5310.4210.03.30	MG GROUNDS MAINT WAGES	$17,686.27	$5,136.09	$5,136.09	$12,550.18	$0.00	$12,550.18	70.96%
10000.090.4400.6365.4210.04.40	MG GROUNDS MAINT CONT SERV	$29,200.00	$27,549.70	$27,549.70	$1,650.30	$20,770.00	($19,119.70)	-65.48%
10000.090.4400.6510.4210.05.54	MG GROUNDS SUPPLIES	$10,000.00	$7,483.45	$7,483.45	$2,516.55	$716.10	$1,800.45	18.00%
10000.091.4400.6365.4210.04.40	LES GROUNDS MAINT CONT SERV	$3,167.17	$3,167.17	$3,167.17	$0.00	$0.00	$0.00	0.00%
10000.095.4400.6365.4210.04.40	WES GROUNDS MAINT CONT SERV	$2,804.35	$370.93	$370.93	$2,433.42	$0.00	$2,433.42	86.77%
10000.095.4400.6510.4210.05.54	WES GROUNDS SUPPLIES	$2,822.42	$2,505.01	$2,505.01	$317.41	$317.41	$0.00	0.00%
	Func: Grounds Maintenance - 4210	$65,680.21	$46,212.35	$46,212.35	$19,467.86	$21,803.51	($2,335.65)	-3.56%
10000.090.4500.5310.4220.03.30	MG MAINTENANCE WAGES	$86,137.62	$85,331.34	$85,331.34	$806.28	$6,667.96	($5,861.68)	-6.81%
10000.090.4500.6310.4220.04.40	MG BLDG MAINT CONT SERV	$11,624.00	$21,525.44	$21,525.44	($9,901.44)	$808.80	($10,710.24)	-92.14%
10000.090.4500.6510.4220.05.40	MG BUILDING MAINT SUPPLIES	$14,000.00	$10,222.40	$10,222.40	$3,777.60	$1,851.75	$1,925.85	13.76%
10000.091.4500.6310.4220.04.40	LES BLDG MAINT CONT SERV	$31,401.37	$34,250.83	$34,250.83	($2,849.46)	$115.44	($2,964.90)	-9.44%
10000.091.4500.6510.4220.05.40	LES BUILDING MAINT SUPPLIES	$4,143.41	$3,962.53	$3,962.53	$180.88	$281.28	($100.40)	-2.42%
10000.095.4500.6310.4220.04.40	WES BLDG MAINT CONT SERV	$24,789.65	$21,892.66	$21,892.66	$2,896.99	$2,896.99	$0.00	0.00%
10000.095.4500.6510.4220.05.40	WES BUILDING MAINT SUPPLIES	$5,389.58	$3,768.37	$3,768.37	$1,621.21	$930.55	$690.66	12.81%
	Func: Building Maintenance - 4220	$177,485.63	$180,953.57	$180,953.57	($3,467.94)	$13,552.77	($17,020.71)	-9.59%
10000.090.4500.6310.4225.04.40	MG BUILDING SECURITY SERVICES	$3,000.00	$2,789.90	$2,789.90	$210.10	$191.02	$19.08	0.64%
10000.091.4500.6310.4225.04.40	LES BUILDING SECURITY SERVICES	$7,483.70	$7,483.70	$7,483.70	$0.00	$0.00	$0.00	0.00%
10000.091.4500.6510.4225.05.54	LES BUILDING SECURITY SUPPLIES	($2,216.10)	($2,216.10)	($2,216.10)	$0.00	$0.00	$0.00	0.00%
10000.095.4500.6310.4225.04.40	WES BUILDING SECURITY SERVICES	$9,998.88	$9,998.88	$9,998.88	$0.00	$0.00	$0.00	0.00%
	Func: Building Security System - 4225	$18,266.48	$18,056.38	$18,056.38	$210.10	$191.02	$19.08	0.10%
10000.040.1300.6315.4230.04.40	MG SCIENCE EQUIP MAINT	($123.87)	$4,797.40	$4,797.40	($4,921.27)	$0.00	($4,921.27)	3972.93%
10000.040.1615.6315.4230.04.40	MG PERFORMING ARTS/MUSIC EQUIP	$1,055.00	$1,105.00	$1,105.00	($50.00)	$75.00	($125.00)	-11.85%
10000.040.1700.6315.4230.04.40	MG WELLNESS EQUIP MAINT	$1,023.87	$1,023.87	$1,023.87	$0.00	$0.00	$0.00	0.00%
10000.040.1800.6315.4230.04.40	MG DIGITAL TECHNOLOGY EQUIP MA	$2,045.00	$0.00	$0.00	$2,045.00	$0.00	$2,045.00	100.00%
10000.090.4500.6315.4230.04.40	MG GROUNDS EQUIPMENT MAINT	$2,000.00	$1,659.16	$1,659.16	$340.84	$0.00	$340.84	17.04%
10000.091.4500.6315.4230.04.40	LES GROUNDS EQUIP MAINT CONT S	$1,685.59	$1,685.59	$1,685.59	$0.00	$0.00	$0.00	0.00%
	Func: Equipmt Maintenance - 4230	$7,685.59	$10,271.02	$10,271.02	($2,585.43)	$75.00	($2,660.43)	-34.62%
10000.090.4500.6315.4235.04.40	MG SNOW REMOVAL	$60,400.00	$60,400.00	$60,400.00	$0.00	$0.00	$0.00	0.00%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
	Func: Snow Removal - 4235	$60,400.00	$60,400.00	$60,400.00	$0.00	$0.00	$0.00	0.00%
10000.090.4500.6100.4300.04.40	MG EXTRAORDINARY MAINTENANCE	$50,876.00	$50,876.00	$50,876.00	$0.00	$0.00	$0.00	0.00%
10000.091.4500.6310.4300.04.40	LES EXTRAORDINARY MAINTENANCE	$0.00	$0.00	$0.00	$0.00	$1,800.00	($1,800.00)	0.00%
10000.091.4500.6315.4300.04.40	LES BUILDING EQUIPMENT MAINT	$3,922.48	$10,400.56	$10,400.56	($6,478.08)	$0.00	($6,478.08)	-165.15%
	Func: Extraordinary Maintenance over $5000 - 4300	$54,798.48	$61,276.56	$61,276.56	($6,478.08)	$1,800.00	($8,278.08)	-15.11%
10000.070.3160.6315.4400.04.40	MG NETWORK/TELECOMMUNICATION	$91,338.49	$82,586.30	$82,586.30	$8,752.19	$5,952.71	$2,799.48	3.06%
10000.071.3160.6315.4400.04.40	LES NETWORK/TELECOMMUNICATIOI	$30,575.51	$30,144.47	$30,144.47	$431.04	$0.00	$431.04	1.41%
10000.075.3160.6315.4400.04.40	WES NETWORK/TELECOMMUNICATIO	$50,818.60	$49,881.64	$49,881.64	$936.96	$0.00	$936.96	1.84%
	Func: Net Working & Telecommunications - 4400	$172,732.60	$162,612.41	$162,612.41	$10,120.19	$5,952.71	$4,167.48	2.41%
10000.010.3160.5110.4450.01.11	LES INSTRUCTIONAL TECH SALARY	$1,033.06	$1,033.06	$1,033.06	$0.00	$0.00	$0.00	0.00%
10000.015.3160.5110.4450.01.11	WES INSTRUCTIONAL TECH SALARY	$31,620.00	$6,533.02	$6,533.02	$25,086.98	$0.00	$25,086.98	79.34%
10000.015.3160.5310.4450.03.30	WES BLDG TECH SPECIALIST	$32,473.00	$9,297.98	$9,297.98	$23,175.02	$0.00	$23,175.02	71.37%
10000.040.3160.5110.4450.01.11	MG WEBMASTER SALARY	$5,000.00	$5,000.00	$5,000.00	$0.00	$0.00	$0.00	0.00%
10000.040.3160.5310.4450.03.30	MG BLDG TECH SPECIALIST	$92,500.00	$88,638.84	$88,638.84	$3,861.16	$3,861.16	$0.00	0.00%
10000.070.3160.6312.4450.04.40	MG TECHNOLOGY MAINTENANCE	$27,687.56	$27,687.56	$27,687.56	$0.00	$0.00	$0.00	0.00%
10000.071.3160.6312.4450.04.40	LES TECHNOLOGY MAINTENANCE	$1,474.99	$1,474.99	$1,474.99	$0.00	$0.00	$0.00	0.00%
10000.075.3160.6312.4450.04.40	WES TECHNOLOGY MAINTENANCE	$41,766.00	$250.00	$250.00	$41,516.00	$0.00	$41,516.00	99.40%
	Func: Building Operational TECH Maint - 4450	$233,554.61	$139,915.45	$139,915.45	$93,639.16	$3,861.16	$89,778.00	38.44%
10000.070.5100.6804.5100.06.65	MG LONGEVITY	$27,800.00	$16,300.00	$16,300.00	$11,500.00	$3,200.00	$8,300.00	29.86%
10000.070.5100.6805.5100.06.65	MG RETIREMENT/SEVERENCE/VACAT	$84,978.32	$52,478.32	$52,478.32	$32,500.00	$0.00	$32,500.00	38.25%
10000.070.5100.6806.5100.06.65	MG RETIREMENT	$291,633.29	$291,633.29	$291,633.29	$0.00	$0.00	$0.00	0.00%
10000.071.5100.6804.5100.06.65	LES LONGEVITY	$26,675.00	$21,601.21	$21,601.21	$5,073.79	$3,998.79	$1,075.00	4.03%
10000.075.5100.6804.5100.06.65	WES LONGEVITY	$61,850.00	$61,850.00	$61,850.00	$0.00	$0.00	$0.00	0.00%
10000.075.5100.6806.5100.06.65	WES RETIREMENT	$214,682.00	$199,489.74	$199,489.74	$15,192.26	$0.00	$15,192.26	7.08%
	Func: Employee Retirement - 5100	$707,618.61	$643,352.56	$643,352.56	$64,266.05	$7,198.79	$57,067.26	8.06%
10000.070.5200.6801.5200.06.65	MG FICA/MEDICARE	$178,420.09	$152,703.18	$152,703.18	$25,716.91	$26,691.45	($974.54)	-0.55%
10000.070.5200.6820.5200.06.65	MG HEALTH INSURANCE	$1,194,657.91	$981,644.86	$981,644.86	$213,013.05	$8,164.70	$204,848.35	17.15%
10000.070.5200.6822.5200.06.65	MG LIFE INSURANCE	$4,147.56	$4,129.42	$4,129.42	$18.14	$18.14	$0.00	0.00%
10000.070.5200.6823.5200.06.65	MG DENTAL INSURANCE	$36,390.55	$36,131.05	$36,131.05	$259.50	$259.50	$0.00	0.00%
10000.070.5200.6824.5200.06.65	MG UNEMPLOYMENT COMP	$30,000.00	$15,358.43	$15,358.43	$14,641.57	$1,911.91	$12,729.66	42.43%
10000.070.5200.6825.5200.06.65	MG WORKERS COMP INSURANCE	$57,093.95	$57,093.95	$57,093.95	$0.00	$0.00	$0.00	0.00%
10000.071.5200.6820.5200.06.65	LES HEALTH INSURANCE	$578,909.46	$429,836.18	$429,836.18	$149,073.28	$2,910.70	$146,162.58	25.25%
10000.071.5200.6822.5200.06.65	LES LIFE INSURANCE	$3,200.00	$1,745.11	$1,745.11	$1,454.89	$54.89	$1,400.00	43.75%
10000.071.5200.6823.5200.06.65	LES DENTAL INSURANCE	$26,698.00	$21,386.40	$21,386.40	$5,311.60	$256.80	$5,054.80	18.93%
10000.071.5200.6824.5200.06.65	LES UNEMPLOYMENT COMP	$21,000.00	$0.00	$0.00	$21,000.00	$4,000.00	$17,000.00	80.95%
10000.071.5200.6825.5200.06.65	LES WORKERS COMP INSURANCE	$25,000.00	$16,361.80	$16,361.80	$8,638.20	$0.00	$8,638.20	34.55%
10000.075.5200.6820.5200.06.65	WES HEALTH INSURANCE	$841,086.63	$582,482.60	$582,482.60	$258,604.03	$7,646.50	$250,957.53	29.84%
10000.075.5200.6822.5200.06.65	WES LIFE INSURANCE	$3,200.00	$2,233.62	$2,233.62	$966.38	$46.38	$920.00	28.75%
10000.075.5200.6823.5200.06.65	WES DENTAL INSURANCE	$20,035.60	$18,367.50	$18,367.50	$1,668.10	$842.50	$825.60	4.12%
10000.075.5200.6824.5200.06.65	WES UNEMPLOYMENT COMP	$17,427.00	$0.00	$0.00	$17,427.00	$1,000.00	$16,427.00	94.26%
10000.075.5200.6825.5200.06.65	WES WORKERS COMP INSURANCE	$29,970.75	$29,970.75	$29,970.75	$0.00	$0.00	$0.00	0.00%
	Func: Health, Life, WC Insurance - 5200	$3,067,237.50	$2,349,444.85	$2,349,444.85	$717,792.65	$53,803.47	$663,989.18	21.65%
10000.070.5250.6828.5250.06.65	MG RETIREE INSURANCE	$642,682.00	$588,274.23	$588,274.23	$54,407.77	$23,457.68	$30,950.09	4.82%
	Func: Insurance for Retired School Employees - 5250	$642,682.00	$588,274.23	$588,274.23	$54,407.77	$23,457.68	$30,950.09	4.82%

Detail Expenditure Report

From Date: 7/1/2018 To Date: 6/30/2019

Fiscal Year: 2018-2019 ☐ Subtotal by Collapse Mask ☑ Include pre encumbrance ☐ Print accounts with zero balance ☐ Filter Encumbrance Detail by Date Range

☐ Exclude Inactive Accounts with zero balance

Account Number	Description	GL Budget	Range To Date	YTD	Balance	Encumbrance	Budget Balance	% Bud
10000.070.3100.6853.5260.06.65	MG BOND - TREASURER/ASST	$2,715.00	$1,544.00	$1,544.00	$1,171.00	$0.00	$1,171.00	43.13%
10000.070.3060.6854.5260.06.65	MG LIABILITY - GENERAL	$69,495.75	$71,995.75	$71,995.75	($2,500.00)	$0.00	($2,500.00)	-3.60%
10000.075.3060.6854.5260.06.65	WES LIABILITY - GENERAL	$56,145.50	$56,145.50	$56,145.50	$0.00	$0.00	$0.00	0.00%
Func:	Non-Employee Insurances/ Property/Liability - 5260	$128,356.25	$129,685.25	$129,685.25	($1,329.00)	$0.00	($1,329.00)	-1.04%
10000.050.2100.6540.5500.05.54	MG MEDICAID BILLING	$3,000.00	$1,368.72	$1,368.72	$1,631.28	$1,631.28	$0.00	0.00%
10000.051.2100.6540.5500.05.54	LES MEDICAID BILLING	$0.00	$1,398.44	$1,398.44	($1,398.44)	$301.56	($1,700.00)	0.00%
10000.055.2100.6540.5500.05.54	WES MEDICAID BILLING	$0.00	$1,016.92	$1,016.92	($1,016.92)	$983.08	($2,000.00)	0.00%
Func:	Other Chgs- Bank Chgs/Medicaid Billing - 5500	$3,000.00	$3,784.08	$3,784.08	($784.08)	$2,915.92	($3,700.00)	-123.33%
10000.055.3600.6590.5550.03.30	WES CROSSING GUARDS	$0.00	$6,107.49	$6,107.49	($6,107.49)	$0.00	($6,107.49)	0.00%
Func:	OTHER CHARGES-TRANS. - 5550	$0.00	$6,107.49	$6,107.49	($6,107.49)	$0.00	($6,107.49)	0.00%
10000.010.1050.6550.7300.05.40	LES SCHOOL FURNISHINGS	$421.00	$421.00	$421.00	$0.00	$0.00	$0.00	0.00%
Func:	Acquisition, Improvemt of Equipmt over $7500 - 7300	$421.00	$421.00	$421.00	$0.00	$0.00	$0.00	0.00%
10000.070.6000.6862.8100.06.65	MG SCHOOL RECONSTRUCTION BONI	$985,000.00	$985,000.00	$985,000.00	$0.00	$0.00	$0.00	0.00%
Func:	LT Debt Retiremt/School Construction Principal - 8100	$985,000.00	$985,000.00	$985,000.00	$0.00	$0.00	$0.00	0.00%
10000.070.6000.6862.8200.06.65	MG SCHOOL RECONSTRUCTION BONI	$1,032,445.13	$972,325.00	$972,325.00	$60,120.13	$0.00	$60,120.13	5.82%
Func:	LTD Interest Bonds - 8200	$1,032,445.13	$972,325.00	$972,325.00	$60,120.13	$0.00	$60,120.13	5.82%
10000.010.2400.5761.9000.04.40	LES SCHOOL CHOICE SENDING	$43,275.60	$0.00	$0.00	$43,275.60	$0.00	$43,275.60	100.00%
10000.015.2400.5761.9000.04.40	WES SCHOOL CHOICE SENDING	$15,927.00	$0.00	$0.00	$15,927.00	$0.00	$15,927.00	100.00%
10000.040.2400.5761.9000.04.40	MG SCHOOL CHOICE SENDING	$224,155.00	$224,155.00	$224,155.00	$0.00	$0.00	$0.00	0.00%
10000.040.1940.6751.9000.04.40	MG PROG/CHARTER SCHOOLS	$335,935.96	$245,832.00	$245,832.00	$90,103.96	$0.00	$90,103.96	26.82%
10000.050.2301.6751.9000.04.40	MG SPED SUMMER SCHOOL/CAMP TU	$1,188.96	$1,188.96	$1,188.96	$0.00	$0.00	$0.00	0.00%
10000.050.2400.6751.9000.04.40	MG PROG/OTHER MA SCHOOLS	$42,965.04	$29,822.10	$29,822.10	$13,142.94	$13,142.94	$0.00	0.00%
10000.050.2400.6753.9000.04.40	MG PROG/NON PUBLIC SCHOOLS	$113,705.00	$93,359.60	$93,359.60	$20,345.40	$20,345.40	$0.00	0.00%
10000.051.2400.6753.9000.04.40	LES PROG/NON PUBLIC SCHOOLS	$53,965.40	$37,201.68	$37,201.68	$16,763.72	$16,763.72	$0.00	0.00%
10000.055.2400.6751.9000.04.40	WES PROG/OTHER MA SCHOOLS	$44,255.00	$13,880.67	$13,880.67	$30,374.33	$0.00	$30,374.33	68.63%
Func:	Programs with Other School Districts - 9000	$875,372.96	$645,440.01	$645,440.01	$229,932.95	$50,252.06	$179,680.89	20.53%
Grand Total:		$21,716,967.00	$18,378,267.46	$18,378,267.46	$3,338,699.54	$2,276,376.37	$1,062,323.17	4.89%

End of Report

Mount Greylock Regional School District			
FY19 Expense Line Transfers			
From:	SC Travel	10000.070.3050.6126.1110.06.60	$ 500.00
To:	SC Other	10000.070.3050.6575.1110.05.54	$ 500.00
From:	SC PD	10000.070.3050.6125.1110.06.60	$ 500.00
To:	SC Other	10000.070.3050.6575.1110.05.54	$ 500.00
From:	Business Contracted Services	10000.070.3100.6363.1410.04.40	$10,000.00
To:	District HR Salary	10000.080.3070.5210.1210.02.30	$10,000.00
From:	Auditing Services	10000.070.3100.6362.1410.04.40	$ 8,915.26
To:	District HR Salary	10000.080.3070.5210.1210.02.30	$ 8,915.26
From:	District Maint Equip	10000.080.3070.6539.1210.05.53	$ 903.06
To:	Superintendent Office Travel	10000.080.3070.6130.1210.06.60	$ 903.06
From:	Treasurer Salary	10000.070.3100.5310.1410.03.30	$ 1,517.06
To:	Financial Assistants Salary	10000.070.3100.5210.1410.02.30	$ 1,517.06
From:	Treasurer Salary	10000.070.3100.5310.1410.03.30	$ 4,385.54
To:	District Food Service Equip	10000.080.3450.6539.3400.08.00	$ 4,385.54
From:	Treasurer Salary	10000.070.3100.5310.1410.03.30	$ 1,732.53
To:	SC Other	10000.070.3050.6575.1110.05.54	$ 1,732.53
From:			
To:			
From:			
To:			
From:			

Mount Greylock Regional School District			
FY19 Expense Line Transfers			
From:	MG Office Para/Support	10000.040.1010.5211.2210.02.30	$ 257.13
To:	MG Para Non Teaching Duties	10000.040.1010.5311.2210.03.30	$ 257.13
From:	MG Asst Principal Salary	10000.040.1010.5111.2210.01.10	$ 850.00
To:	MG Team Meetings	10000.040.1010.5114.2210.01.12	$ 850.00
From:	MG Health Insurance	10000.070.5200.6820.5200.06.65	$ 4,342.72
To:	MG Sub Wages	10000.040.1050.5120.2325.03.35	$ 4,342.72
From:	MG Health Insurance	10000.070.5200.6820.5200.06.65	$ 156.00
To:	MG Sub Nurse Wages	10000.040.1050.5120.3200.03.35	$ 156.00
From:	MG Health Insurance	10000.070.5200.6820.5200.06.65	$152,138.53
To:	MG Math Faculty	10000.040.1200.5110.2305.01.11	$152,138.53
From:	MG Math Equip	10000.040.1200.6550.2420.05.53	$ 3.48
To:	MG Math Supplies	10000.040.1200.6545.2430.05.54	$ 3.48
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$147,079.30
To:	MG Science Faculty	10000.040.1300.5110.2305.01.11	$147,079.30
From:	MG Health Insurance	10000.070.5200.6820.5200.06.65	$ 4,921.27
To:	MG Science Equip Maint	10000.040.1300.6315.4230.04.40	$ 4,921.27
From:	MG Health Insurance	10000.070.5200.6820.5200.06.65	$ 8,848.93
To:	MG World Language Faculty	10000.040.1500.5110.2305.01.11	$ 8,848.93
From:	MG Library Equipment	10000.040.3150.6550.2420.05.53	$ 3.91
To:	MG Books/Periodicals	10000.040.3150.6575.2415.05.54	$ 3.91
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 147.00

To:	MG Perf Arts/Music Supplies	10000.040.1615.6545.2430.05.54	$ 147.00
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 125.00
To:	MG Perf Arts/Music EquipMaint	10000.040.1615.6315.4230.04.40	$ 125.00
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 1,123.00
To:	MG Performing Arts Equip	10000.040.1615.6550.2420.05.53	$ 1,123.00
From:	MG Health Insurance	10000.070.5200.6820.5200.06.65	$ 15,317.21
To:	MG Wellness Faculty	10000.040.1700.5110.2305.01.11	$ 15,317.21
From:	MG Visual/Perf Arts Supplies	10000.040.3400.6546.3520.05.54	$ 6,823.86
To:	MG CoCurricular Cont Serv	10000.040.3400.6365.3520.05.54	$ 6,823.86
From:	MG Athletic Staff Dev	10000.040.3350.6125.3510.06.60	$ 525.94
To:	MG Athletic Equip Maint	10000.040.3350.6315.3510.04.40	$ 525.94
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 39.74
To:	MG Wellness Equipment	10000.040.1700.6550.2420.05.53	$ 39.74
From:	MG Prog/Charter Schools	10000.040.1940.6751.9000.04.40	$ 55,938.06
To:	MG Business Ed/Comp Faculty	10000.040.1800.5110.2305.01.11	$ 55,938.06
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 4,386.10
To:	MG ELL Teacher Salary	10000.040.1900.5110.2315.01.11	$ 4,386.10
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 85.00
To:	MG Sped Teacher Salaries	10000.050.2200.5110.2310.01.11	$ 85.00
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 1,230.00
To:	MG SPED Sub Wages	10000.050.2200.5120.2325.03.35	$ 1,230.00
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 3,186.80
To:	MG Sped Transportation	10000.050.3600.6371.3300.04.40	$ 3,186.80

From:	MG Health Insurance	10000.070.5200.6820.5200.06.65	$ 10,710.24
To:	MG Bldg Maint Cont Serv	10000.090.4500.6310.4220.04.40	$ 10,710.24
From:	MG Grounds Supplies	10000.090.4400.6510.4210.05.54	$ 1,119.70
To:	MG Grounds Upkeep Cont Serv	10000.090.4400.6365.4210.04.40	$ 1,119.70
From:	MG Grounds Maint Wages	10000.090.4400.5310.4210.03.30	$ 11,000.00
To:	MG Grounds Upkeep Cont Serv	10000.090.4400.6365.4210.04.40	$ 11,000.00
From:	MG Custodial Equipment	10000.090.4100.6510.4110.05.53	$ 4,000.00
To:	MG Grounds Upkeep Cont Serv	10000.090.4400.6365.4210.04.40	$ 4,000.00
From:	MG Custodial Supplies	10000.090.4100.6510.4110.05.54	$ 3,000.00
To:	MG Grounds Upkeep Cont Serv	10000.090.4400.6365.4210.04.40	$ 3,000.00
From:	MG Custodial Equipment	10000.090.4100.6510.4110.05.53	$ 372.78
To:	MG Custodial OT	10000.090.4100.5330.4110.03.30	$ 372.78
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 2,500.00
To:	MG Liability - General	10000.070.3060.6854.5260.06.65	$ 2,500.00
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 974.54
To:	MG FICA/Medicare	10000.070.5200.6801.5200.06.65	$ 974.54
From:	MG Paraprofessional Wages	10000.050.2200.5310.2330.03.30	$ 5,861.68
To:	MG Maintenance Wages	10000.090.4500.5310.4220.03.30	$ 5,861.68
From:			
To:			
From:			
To:			

Mount Greylock Regional School District			
FY19 Expense Line Transfers			
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 1,970.00
To:	LES Sped Legal Services	10000.051.2100.6360.2110.04.40	$ 1,970.00
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 2,264.62
To:	LES Para Non Teaching Duties	10000.010.1010.5311.2210.03.30	$ 2,264.62
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 26,659.82
To:	LES Regular Ed Teacher Salary	10000.010.1100.5110.2305.01.11	$ 26,659.82
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 10,598.09
To:	LES Sped Teacher Salaries	10000.051.2200.5110.2310.01.11	$ 10,598.09
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 19,747.90
To:	LES Sped Cont Serv	10000.051.2300.6363.2320.04.40	$ 19,747.90
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 18,173.43
To:	LES Sub Wages	10000.010.1050.5120.2325.03.35	$ 18,173.43
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 6,487.50
To:	LES Sped Sub Wages	10000.051.2200.5120.2325.03.35	$ 6,487.50
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 630.00
To:	LES Reg Ed Tutors	10000.010.1900.5211.2330.03.30	$ 630.00
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 7,672.89
To:	LES Sped Para Wages	10000.051.2200.5310.2330.03.30	$ 7,672.89
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 375.00
To:	LES Sped Tutor Services	10000.051.2200.6363.2330.03.40	$ 375.00
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$ 1,335.36

To:	LES Sub Nurse Wages	10000.010.1050.5120.3200.03.35	$	1,335.36
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$	127.92
To:	LES Nurse Salary	10000.071.3300.5310.3200.01.30	$	127.92
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$	28,362.50
To:	LES Sped Transportation	10000.051.3600.6371.3300.04.40	$	28,362.50
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$	3,200.00
To:	LES Co-Curricular Cont Serv	10000.010.3400.6365.3520.04.40	$	3,200.00
From:	LES Staff Cocurricular Stipends	10000.010.3400.5310.3520.03.12	$	2,500.00
To:	LES Custodial Wages	10000.091.4100.5310.4110.03.30	$	2,500.00
From:	LES School Choice Sending	10000.010.2400.5761.9000.04.40	$	5,478.88
To:	LES Custodial Wages	10000.091.4100.5310.4110.03.30	$	5,478.88
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$	2,930.08
To:	LES Custodial Cont Serv	10000.091.4100.6310.4110.04.40	$	2,930.08
From:	LES Health Insurance	10000.071.5200.6820.5200.06.65	$	7,196.42
To:	LES Building Heat	10000.091.4200.6350.4120.05.54	$	7,196.42
From:	LES School Choice Sending	10000.010.2400.5761.9000.04.40	$	5,856.82
To:	LES Electricity	10000.091.4200.6342.4130.04.40	$	5,856.82
From:	LES Unemployment Comp	10000.071.5200.6824.5200.06.65	$	10,000.00
To:	LES Electricity	10000.091.4200.6342.4130.04.40	$	10,000.00
From:	LES Unemployment Comp	10000.071.5200.6824.5200.06.65	$	596.57
To:	LES Water	10000.091.4200.6344.4130.04.40	$	596.57
From:	LES Unemployment Comp	10000.071.5200.6824.5200.06.65	$	2,964.90
To:	LES Bldg Maint Cont Serv	10000.091.4500.6310.4220.04.40	$	2,964.90

From:	LES Unemployment Comp	10000.071.5200.6824.5200.06.65	$	100.40
To:	LES Bldg Upkeep Supplies	10000.091.4500.6510.4220.05.40	$	100.40
From:	LES Workers Comp Ins	10000.071.5200.6825.5200.06.65	$	6,478.08
To:	LES Equip Maint Building	10000.091.4500.6315.4300.04.40	$	6,478.08
From:	LES School Choice Sending	10000.010.2400.5761.9000.04.40	$	1,700.00
To:	LES Medicaid Billing	10000.051.2100.6540.5550.05.54	$	1,700.00
From:	LES School Choice Sending	10000.010.2400.5761.9000.04.40	$	11,644.15
To:	LES Principal Salary	10000.010.1010.5110.2210.01.10	$	11,644.15

Mount Greylock Regional School District			
FY19 Expense Line Transfers			
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$80,741.68
To:	WES Reg Ed Teachers	10000.015.1100.5110.2305.01.11	$80,741.68
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 288.69
To:	WES Principal Secretary Salary	10000.015.1010.5210.2210.02.30	$ 288.69
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 2,000.00
To:	WES Medicaid Billing	10000.055.2100.6540.5500.05.54	$ 2,000.00
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 1,134.98
To:	WES Prin Office Equipment	10000.015.1010.6538.2210.05.53	$ 1,134.98
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 3,079.00
To:	WES Sub Wages	10000.015.1050.5120.2325.03.35	$ 3,079.00
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 3,150.00
To:	WES SPED Sub Wages	10000.055.2200.5120.2325.03.35	$ 3,150.00
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 761.90
To:	WES Reg Ed Para Wages	10000.015.1900.5211.2330.03.30	$ 761.90
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 9.21
To:	WES SPED Para Wages	10000.055.2200.5310.2330.03.30	$ 9.21
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 414.06
To:	WES SPED Tutor Services	10000.055.2200.6363.2330.03.40	$ 414.06
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 175.50
To:	WES Tech Inst Supplies	10000.015.3160.6543.2430.05.54	$ 175.50
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 252.00

To:	WES Sub Nurse Wages	10000.015.1050.5120.3200.03.35	$ 252.00
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 181.89
To:	WES Co Curricular Stipends	10000.015.3400.5310.3520.03.12	$ 181.89
From:	WES Health Ins	10000.075.5200.6820.5200.06.65	$ 7,261.59
To:	WES Custodial Equip	10000.095.4100.6510.4110.05.53	$ 7,261.59
From:			
To:			
From:			
To:			
From:			
To:			
From:			
To:			
From:			
To:			
From:			
To:			
From:			
To:			
From:			
To:			
From:			
To:			