

Date:	Approved:
Type:	
Fixture:	
Project:	

## Multi-Purpose Area Luminaires LS-MPAL

### STANDARD



### FEATURES

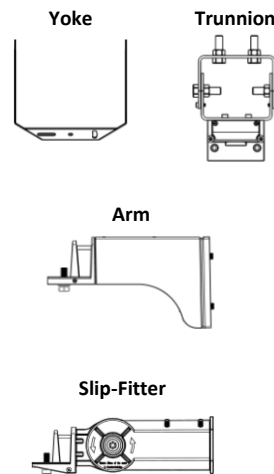
- Available in 4000k (neutral white) and 5000k (cool white) color temperatures.\*
- Long-life LEDs provide 149,000 hours of operation with at least 70% of initial lumen output ( $L_{70}$ ), and 44,000 hours with at least 90% of initial lumen output ( $L_{90}$ ).\*\*
- LED chromaticity based on  $\leq 6$ -step ANSI quadrangles.
- LED color maintenance  $\leq 0.002$  chromaticity shift ( $\Delta u'v'$ ) over the initial 6,000 hours of operation.
- Provides a range of 13,000 to 39,000 nominal lumens and draws 100-300 nominal watts.\*
- IES roadway distributions include types III & V.
- Universal 120-277V (50/60Hz) or 347-480V (50/60Hz) AC voltage with 6-foot incoming power cords.
- 1-10vdc dimming drivers, which provide continuous dimming to 10% of maximum lumen output, are standard.
- Watertight, compression-type electrical connectors.
- Power factor  $\geq 0.90$ .
- Total harmonic distortion  $\leq 20\%$ .
- Color rendering index ( $R_a$ )  $> 80$ . Red color rendering  $> 6$ .
- Optional NEMA photocell receptables & photocells.
- Die cast aluminum housing with dark bronze powder coat finish.
- PMMA lens.
- Bullhorns & wall mounts available. See page 3.
- Easy installation in new construction or retrofit.
  - \* Contact factory for other color temperatures and lumen packages.
  - \*\*  $L_{70}$  hours are IES TM-21-11 calculated hours.



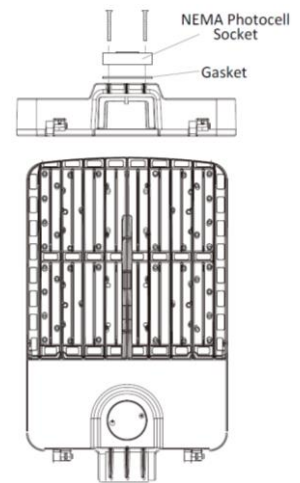
### WARRANTY & LISTINGS

- cULus listed for wet locations in ambient temperatures from  $-40^{\circ}\text{C}$  to  $45^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $113^{\circ}\text{F}$ ).
- DLC premium approved.
- Rated for 3G vibration.
- Lenses are rated IK10.
- Input transient surge protection (6kV).
- Complies with FCC Part 15, class B.
- IP66 rated for ingress protection.
- 5-year warranty of all electronics and housing.

### MOUNTING OPTIONS



### NEMA PHOTOCELL



### ORDERING INFORMATION

Example: LS-MPAL-20L-5K-T3-P

Series	Lumen Output		Color Temperature		Distribution		Input Voltage		NEMA Photocell Receptacle*		Mounting Means (One Required - Order Separately)	
	13L	20L	4K	5K	T3	T5	Blank	UNC	Blank	P	LS-MPAL-ARM-S	LS-MPAL-ARM-R
LS-MPAL	13,000	20,000	4000k	5000k	Type III	Type V	120-277	347-480	No receptacle	3-pin NEMA photocell receptable	LS-MPAL-SF	LS-MPAL-TM
	26,000	31,000									LS-MPAL-YM	
	31,000	39,000										
	26,000	31,000										
	31,000	39,000										

\*NEMA photocell sold separately JL-205C23-IP65

## Multi-Purpose Area Luminaires

### LS-MPAL

#### ELECTRICAL DATA

Model	Color Temp.	CRI <sup>1</sup>	Luminaire Lumens	Luminaire Watts	Lumens Per Watt	Input Voltage <sup>2</sup>	Input Current (A)			Power Factor	THD <sup>3</sup>	L <sub>70</sub> Hours <sup>4</sup>
							120V	240V 277V	277V 480V			
LS-MPAL-13L-4K-T3	4000k	> 80	13,333	99	135	120-277	0.82	0.41	0.36	> 90%	< 20%	149,000
LS-MPAL-13L-5K-T3	5000k	> 80	13,420	99	136	120-277	0.82	0.41	0.36	> 90%	< 20%	149,000
LS-MPAL-13L-4K-T5	4000k	> 80	13,268	99	134	120-277	0.82	0.41	0.36	> 90%	< 20%	149,000
LS-MPAL-13L-5K-T5	5000k	> 80	13,470	100	135	120-277	0.83	0.42	0.36	> 90%	< 20%	149,000
LS-MPAL-20L-4K-T3	4000k	> 80	19,515	148	132	120-277	1.24	0.62	0.54	> 90%	< 20%	149,000
LS-MPAL-20L-5K-T3	5000k	> 80	20,024	147	137	120-277	1.22	0.61	0.53	> 90%	< 20%	149,000
LS-MPAL-20L-4K-T5	4000k	> 80	19,605	149	132	120-277	1.24	0.62	0.54	> 90%	< 20%	149,000
LS-MPAL-20L-5K-T5	5000k	> 80	19,843	148	134	120-277	1.23	0.62	0.54	> 90%	< 20%	149,000
LS-MPAL-26L-4K-T3	4000k	> 80	26,082	203	129	120-277	1.69	0.84	0.73	> 90%	< 20%	149,000
LS-MPAL-26L-5K-T3	5000k	> 80	26,305	203	129	120-277	1.69	0.85	0.73	> 90%	< 20%	149,000
LS-MPAL-26L-4K-T5	4000k	> 80	26,040	202	129	120-277	1.68	0.84	0.73	> 90%	< 20%	149,000
LS-MPAL-26L-5K-T5	5000k	> 80	26,343	203	130	120-277	1.69	0.85	0.73	> 90%	< 20%	149,000
LS-MPAL-31L-4K-T3	4000k	> 80	30,273	232	131	120-277	1.93	0.97	0.84	> 90%	< 20%	149,000
LS-MPAL-31L-5K-T3	5000k	> 80	31,324	230	136	120-277	1.92	0.96	0.83	> 90%	< 20%	149,000
LS-MPAL-31L-4K-T5	4000k	> 80	31,298	232	135	120-277	1.93	0.97	0.84	> 90%	< 20%	149,000
LS-MPAL-31L-5K-T5	5000k	> 80	32,395	240	135	120-277	2.00	1.00	0.87	> 90%	< 20%	149,000
LS-MPAL-39L-4K-T3	4000k	> 80	39,480	297	133	120-277	2.47	1.24	1.07	> 90%	< 20%	149,000
LS-MPAL-39L-5K-T3	5000k	> 80	39,587	287	138	120-277	2.39	1.20	1.04	> 90%	< 20%	149,000
LS-MPAL-39L-4K-T5	4000k	> 80	39,577	297	133	120-277	2.47	1.24	1.07	> 90%	< 20%	149,000
LS-MPAL-39L-5K-T5	5000k	> 80	39,814	288	138	120-277	2.40	1.20	1.04	> 90%	< 20%	149,000
LS-MPAL-31L-4K-T3-UNC	4000k	> 80	30,100	234	129	277-480	N/A	0.84	0.49	> 90%	< 20%	149,000
LS-MPAL-31L-5K-T3-UNC	5000k	> 80	30,617	231	133	277-480	N/A	0.83	0.48	> 90%	< 20%	149,000
LS-MPAL-31L-4K-T5-UNC	4000k	> 80	30,912	234	132	277-480	N/A	0.84	0.49	> 90%	< 20%	149,000
LS-MPAL-31L-5K-T5-UNC	5000k	> 80	31,614	231	137	277-480	N/A	0.83	0.48	> 90%	< 20%	149,000
LS-MPAL-39L-4K-T3-UNC	4000k	> 80	39,880	311	128	277-480	N/A	1.12	0.65	> 90%	< 20%	149,000
LS-MPAL-39L-5K-T3-UNC	5000k	> 80	40,431	307	132	277-480	N/A	1.11	0.64	> 90%	< 20%	149,000
LS-MPAL-39L-4K-T5-UNC	4000k	> 80	40,155	311	129	277-480	N/A	1.12	0.65	> 90%	< 20%	149,000
LS-MPAL-39L-5K-T5-UNC	5000k	> 80	40,705	307	133	277-480	N/A	1.11	0.64	> 90%	< 20%	149,000

<sup>1</sup> Color rendering index.

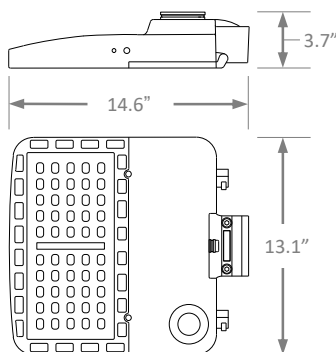
<sup>2</sup> All 50-60Hz.

<sup>3</sup> Total harmonic distortion.

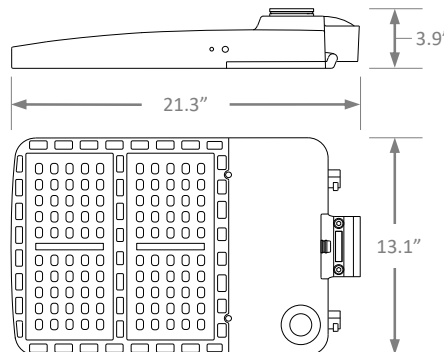
<sup>4</sup> L<sub>70</sub> refers to the number of hours at which lumen output declines to 70% of the initial level. L<sub>70</sub> hours are IES TM-21-11 calculated hours.

#### DIMENSIONS

**13L, 20L, & 26L models (12 lbs)**



**31L & 39L models (17 lbs)**



#### EFFECTIVE PROJECTED AREAS (EPA's)

13L, 20L, & 26L

Front = 0.3 square feet  
Side = 0.3 square feet  
Face = 1.2 square feet

31L & 39L

Front = 0.3 square feet  
Side = 0.3 square feet  
Face = 1.9 square feet

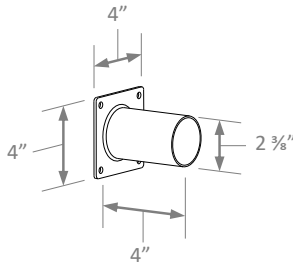
## Multi-Purpose Area Luminaires

### LS-MPAL

#### MOUNTING ACCESSORIES

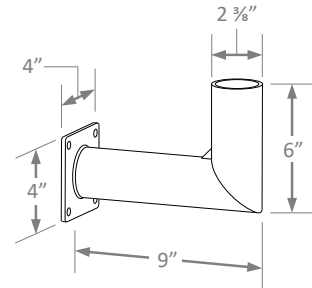
#### Wall Mount Bracket

LEDMPALPRO-WMB



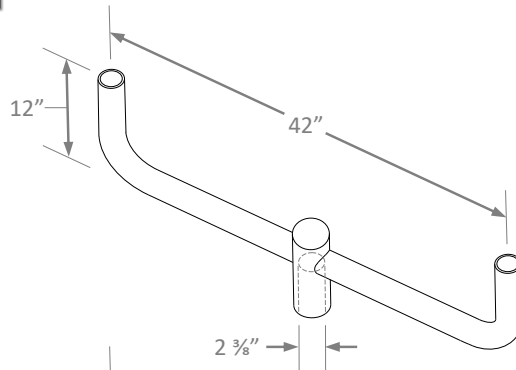
#### Wall Mount Bracket, 90°

LEDMPALPRO-WMB90



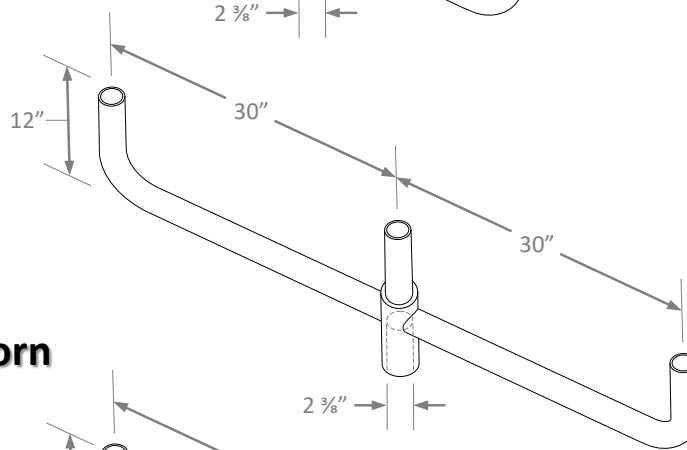
#### Double 180° Bullhorn Mounting Bracket

LEDMPALPRO-D180BH



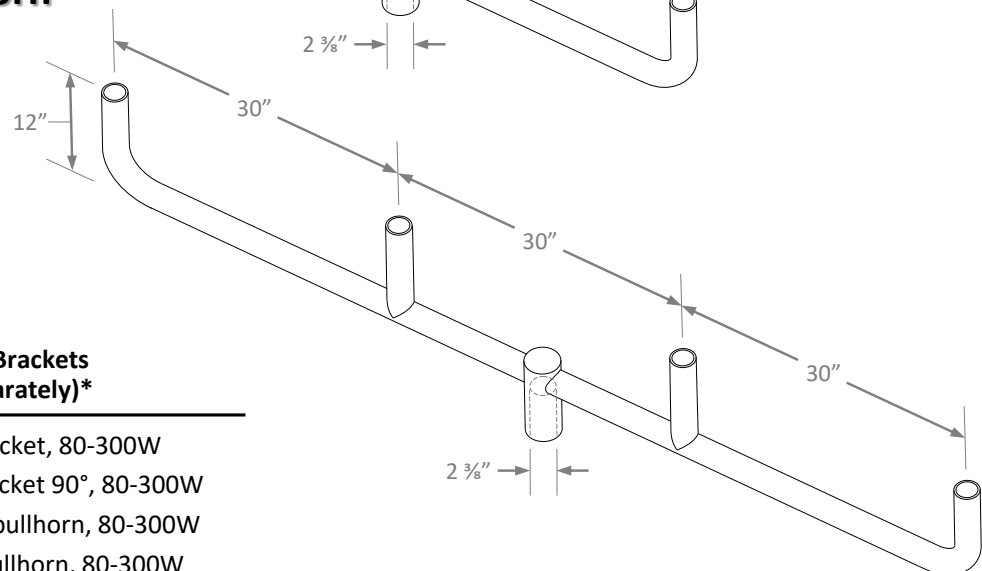
#### Triple 180° Bullhorn Mounting Bracket

LEDMPALPRO-T180BH



#### Quadruple 180° Bullhorn Mounting Bracket

LEDMPALPRO-Q180BH



#### Mounting Brackets (Order Separately)\*

LEDMPALPRO-WMB	Wall Bracket, 80-300W
LEDMPALPRO-WMB90	Wall bracket 90°, 80-300W
LEDMPALPRO-D180BH	Double bullhorn, 80-300W
LEDMPALPRO-T180BH	Triple bullhorn, 80-300W
LEDMPALPRO-Q180BH	Quadruple bullhorn, 80-300W

## Multi-Purpose Area Luminaires

### LS-MPAL

#### PHOTOMETRIC DATA

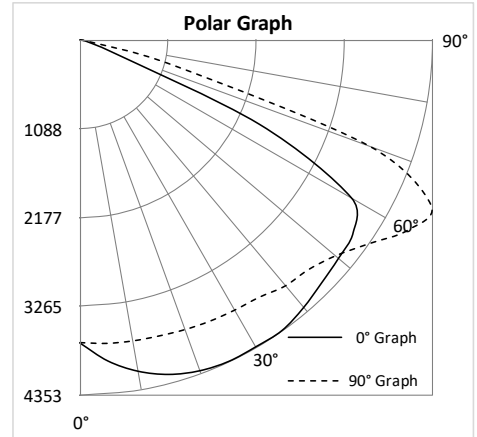
##### LS-MPAL-13L-4K-T3

###### Luminaire Data

Description	Multi Purpose Area Light 13L, 4K
Total Lumens	13,333
Input Wattage	99
Efficacy (lm/W)	135
Max. Cd.	5039.02 (67.5H, 65V)
IES Classification	Type III
Longitudinal Classification	Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	1,722	12.9%
FM 30-60	4,868	36.5%
FH 60-80	2,218	16.6%
FVH 80-90	18	0.1%
BL 0-30	1,258	9.4%
BM 30-60	2,491	18.7%
BH 60-80	735	5.5%
BVH 80-90	22	0.2%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>13,333</b>	<b>100.0%</b>
BUG Rating	B3-U0-G2	



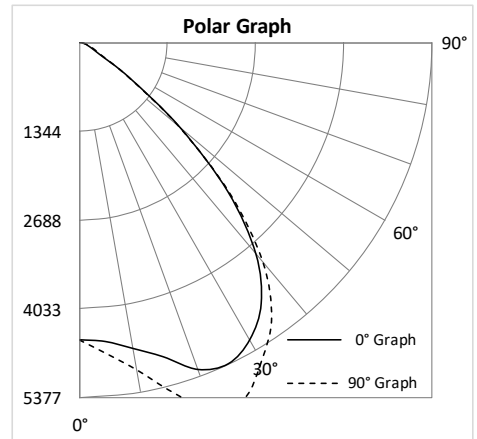
##### LS-MPAL-13L-4K-T5

###### Luminaire Data

Description	Multi Purpose Area Light 13L, 4K
Total Lumens	13,268
Input Wattage	99
Efficacy (lm/W)	134
Max. Cd.	6871.1 (135H, 28V)
IES Classification	Type VS
Longitudinal Classification	Very Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	2,247	16.9%
FM 30-60	3,956	29.8%
FH 60-80	220	1.7%
FVH 80-90	14	0.1%
BL 0-30	2,296	17.3%
BM 30-60	4,270	32.2%
BH 60-80	246	1.9%
BVH 80-90	18	0.1%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>13,268</b>	<b>100.0%</b>
BUG Rating	B3-U0-G1	



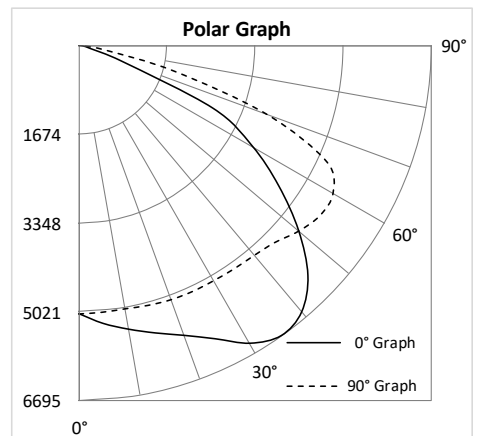
##### LS-MPAL-20L-4K-T3

###### Luminaire Data

Description	Multi Purpose Area Light 20L, 4K
Total Lumens	19,515
Input Wattage	148
Efficacy (lm/W)	132
Max. Cd.	6703.88 (360H, 36V)
IES Classification	Type III
Longitudinal Classification	Very Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	2,368	12.1%
FM 30-60	6,766	34.7%
FH 60-80	3,075	15.8%
FVH 80-90	104	0.5%
BL 0-30	1,878	9.6%
BM 30-60	3,792	19.4%
BH 60-80	1,460	7.5%
BVH 80-90	73	0.4%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>19,515</b>	<b>100.0%</b>
BUG Rating	B3-U0-G3	



## Multi-Purpose Area Luminaires

### LS-MPAL

#### PHOTOMETRIC DATA

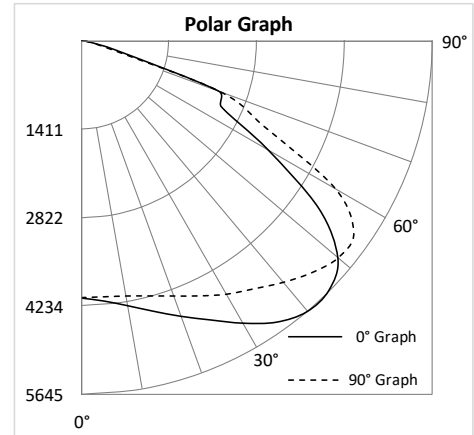
##### LS-MPAL-20L-4K-T5

###### Luminaire Data

Description	Multi Purpose Area Light 20L, 4K
Total Lumens	19,605
Input Wattage	149
Efficacy (lm/W)	132
Max. Cd.	5660.15 (360H, 42V)
IES Classification	Type VS
Longitudinal Classification	Very Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	1,936	9.9%
FM 30-60	5,865	29.9%
FH 60-80	1,997	10.2%
FVH 80-90	64	0.3%
BL 0-30	1,884	9.6%
BM 30-60	5,810	29.6%
BH 60-80	1,971	10.1%
BVH 80-90	78	0.4%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>19,605</b>	<b>100.0%</b>
BUG Rating	B4-U0-G2	



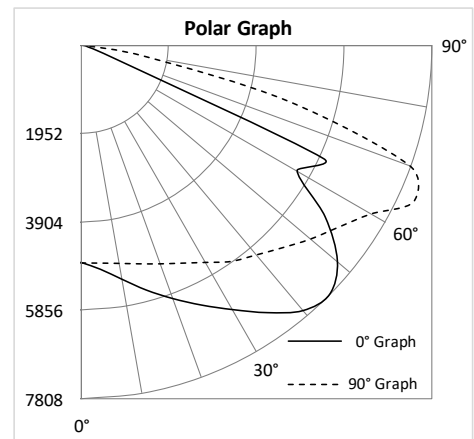
##### LS-MPAL-26L-4K-T3

###### Luminaire Data

Description	Multi Purpose Area Light 26L, 4K
Total Lumens	26,082
Input Wattage	203
Efficacy (lm/W)	129
Max. Cd.	8473.64 (270H, 67V)
IES Classification	Type III
Longitudinal Classification	Medium

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	2,378	9.1%
FM 30-60	8,125	31.1%
FH 60-80	4,481	17.2%
FVH 80-90	216	0.8%
BL 0-30	2,074	8.0%
BM 30-60	5,769	22.1%
BH 60-80	2,990	11.5%
BVH 80-90	48	0.2%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>26,082</b>	<b>100.0%</b>
BUG Rating	B4-U0-G4	



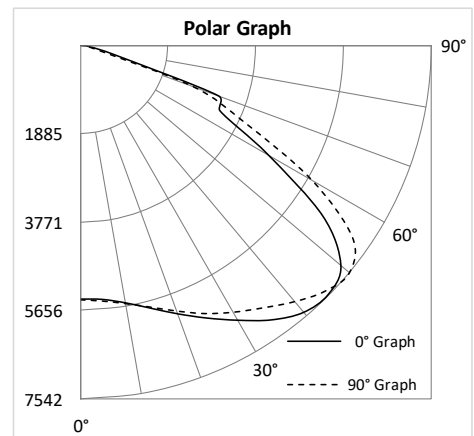
##### LS-MPAL-26L-4K-T5

###### Luminaire Data

Description	Multi Purpose Area Light 26L, 4K
Total Lumens	26,040
Input Wattage	202
Efficacy (lm/W)	129
Max. Cd.	7547.23 (360H, 43V)
IES Classification	Type VS
Longitudinal Classification	Very Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	2,549	9.8%
FM 30-60	7,874	30.2%
FH 60-80	2,602	10.0%
FVH 80-90	101	0.4%
BL 0-30	2,574	9.9%
BM 30-60	7,818	30.0%
BH 60-80	2,434	9.3%
BVH 80-90	89	0.3%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>26,040</b>	<b>100.0%</b>
BUG Rating	B4-U0-G2	



## Multi-Purpose Area Luminaires

### LS-MPAL

#### PHOTOMETRIC DATA

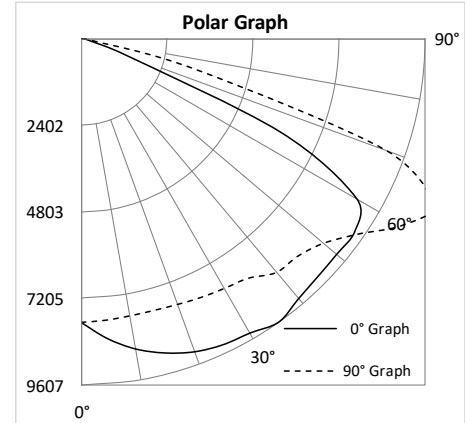
##### LS-MPAL-31L-4K-T3

###### Luminaire Data

Description	Multi Purpose Area Light 31L, 4K
Total Lumens	30,273
Input Wattage	232
Efficacy (lm/W)	131
Max. Cd.	11752.82 (292.5H, 62V)
IES Classification	Type III
Longitudinal Classification	Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	3,696	12.2%
FM 30-60	10,941	36.1%
FH 60-80	5,383	17.8%
FVH 80-90	53	0.2%
BL 0-30	2,791	9.2%
BM 30-60	5,690	18.8%
BH 60-80	1,657	5.5%
BVH 80-90	62	0.2%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>30,273</b>	<b>100.0%</b>
BUG Rating	B4-U0-G3	



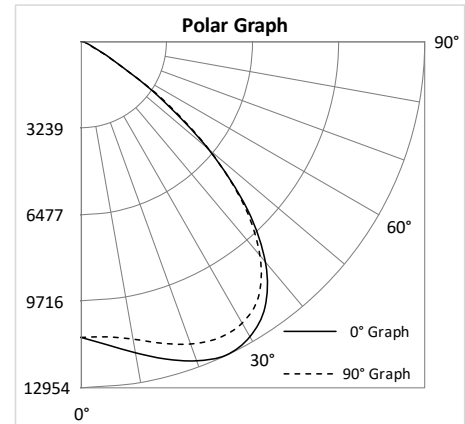
##### LS-MPAL-31L-4K-T5

###### Luminaire Data

Description	Multi Purpose Area Light 31L, 4K
Total Lumens	31,298
Input Wattage	232
Efficacy (lm/W)	135
Max. Cd.	14130.88 (315H, 33V)
IES Classification	Type VS
Longitudinal Classification	Very Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	5,318	17.0%
FM 30-60	10,291	32.9%
FH 60-80	554	1.8%
FVH 80-90	27	0.1%
BL 0-30	4,983	15.9%
BM 30-60	9,599	30.7%
BH 60-80	500	1.6%
BVH 80-90	26	0.1%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>31,298</b>	<b>100.0%</b>
BUG Rating	B5-U0-G1	



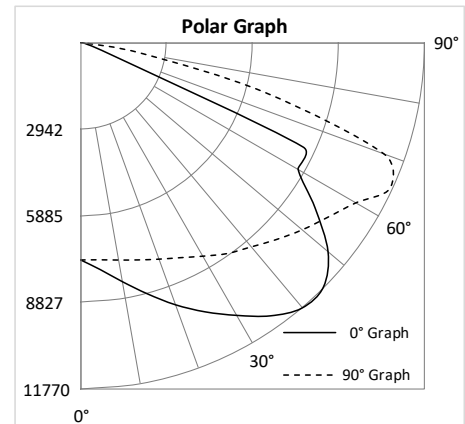
##### LS-MPAL-39L-4K-T3

###### Luminaire Data

Description	Multi Purpose Area Light 39L, 4K
Total Lumens	39,480
Input Wattage	297
Efficacy (lm/W)	133
Max. Cd.	12478.89 (270H, 67V)
IES Classification	Type III
Longitudinal Classification	Medium

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	3,716	9.4%
FM 30-60	12,304	31.2%
FH 60-80	6,608	16.7%
FVH 80-90	354	0.9%
BL 0-30	3,104	7.9%
BM 30-60	8,566	21.7%
BH 60-80	4,733	12.0%
BVH 80-90	95	0.2%
UL 90-100	0	0.0%
UH 100-180	0	0.0%
<b>Total</b>	<b>39,480</b>	<b>100.0%</b>
BUG Rating	B5-U0-G4	



## Multi-Purpose Area Luminaires

### LS-MPAL

#### PHOTOMETRIC DATA

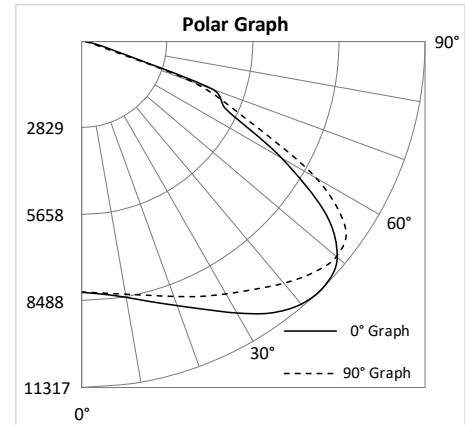
##### LS-MPAL-39L-4K-T5

###### Luminaire Data

Description	Multi Purpose Area Light 39L, 4K
Total Lumens	39,577
Input Wattage	297
Efficacy (lm/W)	133
Max. Cd.	11321.97 (360H, 44V)
IES Classification	Type VS
Longitudinal Classification	Very Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
<b>FL</b> 0-30	3,813	9.6%
<b>FM</b> 30-60	11,770	29.7%
<b>FH</b> 60-80	4,160	10.5%
<b>FVH</b> 80-90	124	0.3%
<b>BL</b> 0-30	3,749	9.5%
<b>BM</b> 30-60	11,692	29.5%
<b>BH</b> 60-80	4,121	10.4%
<b>BVH</b> 80-90	147	0.4%
<b>UL</b> 90-100	0	0.0%
<b>UH</b> 100-180	0	0.0%
<b>Total</b>	<b>39,577</b>	<b>100.0%</b>
BUG Rating	B5-U0-G2	



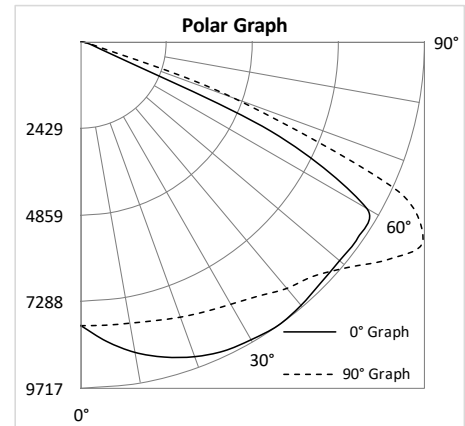
##### LS-MPAL-31L-4K-T3-UNC

###### Luminaire Data

Description	Multi Purpose Area Light 31L, 4K
Total Lumens	30,100
Input Wattage	234
Efficacy (lm/W)	129
Max. Cd.	12417.05 (67.5H, 64V)
IES Classification	Type III
Longitudinal Classification	Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
<b>FL</b> 0-30	3,757	12.5%
<b>FM</b> 30-60	11,283	37.5%
<b>FH</b> 60-80	5,113	17.0%
<b>FVH</b> 80-90	46	0.2%
<b>BL</b> 0-30	2,846	9.5%
<b>BM</b> 30-60	5,557	18.5%
<b>BH</b> 60-80	1,448	4.8%
<b>BVH</b> 80-90	50	0.2%
<b>UL</b> 90-100	0	0.0%
<b>UH</b> 100-180	0	0.0%
<b>Total</b>	<b>30,100</b>	<b>100.0%</b>
BUG Rating	B4-U0-G3	



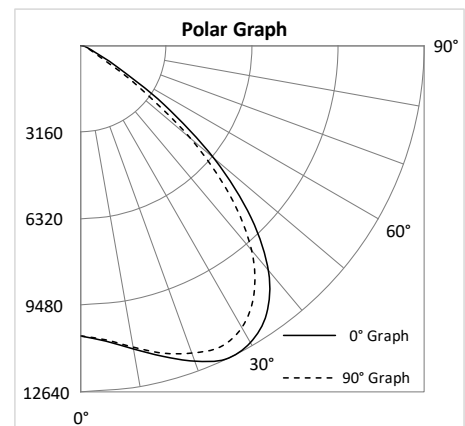
##### LS-MPAL-31L-4K-T5-UNC

###### Luminaire Data

Description	Multi Purpose Area Light 31L, 4K
Total Lumens	30,912
Input Wattage	234
Efficacy (lm/W)	132
Max. Cd.	13822.08 (45H, 33V)
IES Classification	Type VS
Longitudinal Classification	Very Short

###### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
<b>FL</b> 0-30	5,129	16.6%
<b>FM</b> 30-60	10,202	33.0%
<b>FH</b> 60-80	616	2.0%
<b>FVH</b> 80-90	34	0.1%
<b>BL</b> 0-30	4,935	16.0%
<b>BM</b> 30-60	9,466	30.6%
<b>BH</b> 60-80	499	1.6%
<b>BVH</b> 80-90	31	0.1%
<b>UL</b> 90-100	0	0.0%
<b>UH</b> 100-180	0	0.0%
<b>Total</b>	<b>30,912</b>	<b>100.0%</b>
BUG Rating	B5-U0-G1	



## Multi-Purpose Area Luminaires

### LS-MPAL

#### PHOTOMETRIC DATA

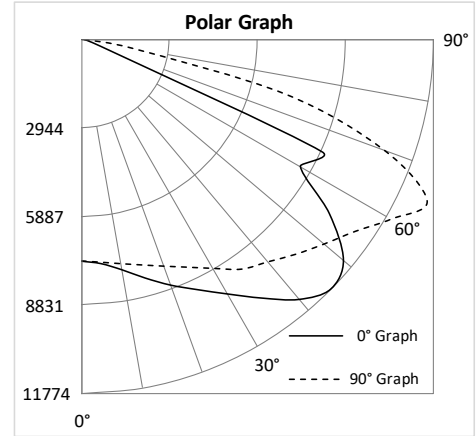
##### LS-MPAL-39L-4K-T3-UNC

###### Luminaire Data

Description	Multi Purpose Area Light 39L, 4K
Total Lumens	39,880
Input Wattage	311
Efficacy (lm/W)	128
Max. Cd.	13216.58 (270H, 68V)
IES Classification	Type III
Longitudinal Classification	Medium

###### Luminaire Classification Systems (LCS)

LCS Zone		Lumens	%Lum
FL	0-30	3,521	8.8%
FM	30-60	12,191	30.6%
FH	60-80	6,880	17.3%
FVH	80-90	365	0.9%
BL	0-30	3,248	8.1%
BM	30-60	9,062	22.7%
BH	60-80	4,533	11.4%
BVH	80-90	81	0.2%
UL	90-100	0	0.0%
UH	100-180	0	0.0%
<b>Total</b>		<b>39,880</b>	<b>100.0%</b>
BUG Rating		B5-U0-G4	



##### LS-MPAL-39L-4K-T5-UNC

###### Luminaire Data

Description	Multi Purpose Area Light 39L, 4K
Total Lumens	40,155
Input Wattage	311
Efficacy (lm/W)	129
Max. Cd.	11602.39 (180H, 45V)
IES Classification	Type VS
Longitudinal Classification	Very Short

###### Luminaire Classification Systems (LCS)

LCS Zone		Lumens	%Lum
FL	0-30	3,806	9.5%
FM	30-60	11,968	29.8%
FH	60-80	4,145	10.3%
FVH	80-90	127	0.3%
BL	0-30	3,830	9.5%
BM	30-60	12,006	29.9%
BH	60-80	4,110	10.2%
BVH	80-90	162	0.4%
UL	90-100	0	0.0%
UH	100-180	0	0.0%
<b>Total</b>		<b>40,155</b>	<b>100.0%</b>
BUG Rating		B5-U0-G2	

