

## EBOL-LKFS

### Round & Square Bollards – Lumen & Kelvin Field Selectable

#### FEATURES

- Field selectable 3000k (warm white), 4000k (neutral white), and 5000k (cool white) color temperatures.\*
- Long-life LEDs provide at least 70% of initial lumen output (L<sub>70</sub>) for ≥ 163,000 hours of operation, and at least 90% of initial lumen output (L<sub>90</sub>) for ≥ 50,000 hours of operation.\*\*
- LED chromaticity based on < 5-step ANSI quadrangles.
- LED color maintenance < 0.003 chromaticity shift (Δu'v') over the initial 6,000 hours of operation.
- Provides a range of 905 to 3,296 nominal lumens and 69 to 148 nominal lumens per watt (lm/W).
- 0-10vdc dimming drivers, are standard.
- Universal 120-277 AC voltage (50-60Hz) is standard.
- Power factor > 0.90.
- Total harmonic distortion < 20%.
- Color rendering index (Ra) > 80.
- Cast aluminum housing with choice of dark bronze or black powder coat finish.
- High-impact, polycarbonate lens.
- Easy installation in new construction or retrofit applications.

#### WARRANTY & LISTINGS

- cULus listed for wet locations in ambient temperatures from -40°C to 55°C (-40°F to 131°F).
- IP65 rated for ingress protection.
- DLC premium approved.\*\*\*
- Complies with FCC Part 15, class A.
- Surge protection = 4kV.
- 5-year warranty of all electronics and housing.

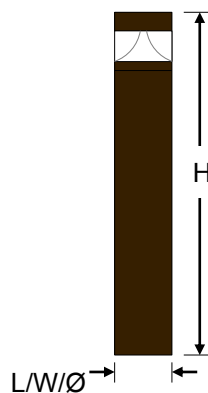
\* Contact factory for other color temperatures and lumen packages.

\*\* L<sub>70</sub> & L<sub>90</sub> hours are IES TM-21-11 calculated hours.

\*\*\* Excluding EBOL-RDL models. EBOL-RDL models are not DLC listed.



#### DIMENSIONS



MODEL	L	W/Ø	H	Weight (lbs)
EBOL-S	6	6	42	12
EBOL-R	6	6	42	15
EBOL-RD	6	6	44	12
EBOL-RDL	6	6	44	13

NOTE: All dimensions measured in inches.

#### ORDERING INFORMATION

Example: EBOL-R-3L-LKFS-BLK

Series	Model		Nominal Lumen Output		Select	Housing Color		Required Mounting Means Order Separately	
	R	S	3L	3,000 lm		BLK	Black	BOL-R-MTGKI	Anchor bolt for round bollard
EBOL	RD	Round Dome			LKFS	Blank	Bronze	BOL-S-MTGKI	Anchor bolt for square bollard
	RDL	Round Dome Louvered	2L	2,000 lm					

## ELECTRICAL DATA

Series	Measurements	Low Lumens			Mid Lumens			High Lumens		
		3000K	4000K	5000K	3000K	4000K	5000K	3000K	4000K	5000K
EBOL-R-3L-LKFS	Lumens	1827	1974	1942	2507	2686	2665	3090	3244	3296
	Watts	13	14	13	18	19	18	23	22	23
	Efficacy	139	144	148	138	145	146	134	145	144
	Input Current (A)	120V = 0.11A	120V = 0.12A	120V = 0.11A	120V = 0.15A	120V = 0.16A	120V = 0.15A	120V = 0.19A	120V = 0.18A	120V = 0.19A
240V = 0.05A		240V = 0.06A	240V = 0.05A	240V = 0.08A	240V = 0.08A	240V = 0.08A	240V = 0.10A	240V = 0.09A	240V = 0.10A	
277V = 0.05A		277V = 0.05A	277V = 0.05A	277V = 0.06A	277V = 0.07A	277V = 0.06A	277V = 0.08A	277V = 0.08A	277V = 0.08A	

Series	Measurements	Low Lumens			Mid Lumens			High Lumens		
		3000K	4000K	5000K	3000K	4000K	5000K	3000K	4000K	5000K
EBOL-S-3L-LKFS	Lumens	1702	1790	1805	2303	2450	2459	2887	3047	3041
	Watts	13	14	13	18	18	19	23	23	23
	Efficacy	128	132	135	125	134	133	125	135	131
	Input Current (A)	120V = 0.11A	120V = 0.12A	120V = 0.11A	120V = 0.15A	120V = 0.15A	120V = 0.16A	120V = 0.19A	120V = 0.19A	120V = 0.19A
240V = 0.05A		240V = 0.06A	240V = 0.05A	240V = 0.08A	240V = 0.08A	240V = 0.08A	240V = 0.10A	240V = 0.10A	240V = 0.10A	
277V = 0.05A		277V = 0.05A	277V = 0.05A	277V = 0.06A	277V = 0.06A	277V = 0.07A	277V = 0.08A	277V = 0.08A	277V = 0.08A	

Series	Measurements	Low Lumens			Mid Lumens			High Lumens		
		3000K	4000K	5000K	3000K	4000K	5000K	3000K	4000K	5000K
EBOL-RD-3L-LKFS	Lumens	1819	1818	1895	2512	2530	2614	3103	3249	3251
	Watts	13	12	13	18	17	18	23	22	23
	Efficacy	140	148	146	138	147	144	136	146	143
	Input Current (A)	120V = 0.11A	120V = 0.10A	120V = 0.11A	120V = 0.15A	120V = 0.14A	120V = 0.15A	120V = 0.19A	120V = 0.18A	120V = 0.19A
240V = 0.05A		240V = 0.05A	240V = 0.05A	240V = 0.08A	240V = 0.07A	240V = 0.08A	240V = 0.10A	240V = 0.09A	240V = 0.10A	
277V = 0.05A		277V = 0.04A	277V = 0.05A	277V = 0.06A	277V = 0.06A	277V = 0.06A	277V = 0.08A	277V = 0.08A	277V = 0.08A	

Series	Measurements	Low Lumens			Mid Lumens			High Lumens		
		3000K	4000K	5000K	3000K	4000K	5000K	3000K	4000K	5000K
EBOL-RDL-2L-LKFS	Lumens	905	973	983	1263	1351	1359	1573	1692	1687
	Watts	13	12	13	18	17	18	23	22	23
	Efficacy	71	79	77	71	78	76	69	76	74
	Input Current (A)	120V = 0.11A	120V = 0.10A	120V = 0.11A	120V = 0.15A	120V = 0.14A	120V = 0.15A	120V = 0.19A	120V = 0.18A	120V = 0.19A
240V = 0.05A		240V = 0.05A	240V = 0.05A	240V = 0.08A	240V = 0.07A	240V = 0.08A	240V = 0.10A	240V = 0.09A	240V = 0.10A	
277V = 0.05A		277V = 0.04A	277V = 0.05A	277V = 0.06A	277V = 0.06A	277V = 0.06A	277V = 0.08A	277V = 0.08A	277V = 0.08A	

## PHOTOMETRIC DATA

### EBOL-R-3L-LKFS

#### Luminaire

<b>Data Description</b>	BOLLARD (ROUND) 3L 5K - LKFS
Total Lumens	3,296
Input Wattage	23
Efficacy (lm/W)	144
Max. Cd.	815.81 (67.5H, 53V)
IES Classification	Type VS
Longitudinal Classification	Short

#### Zonal Lumen Summary

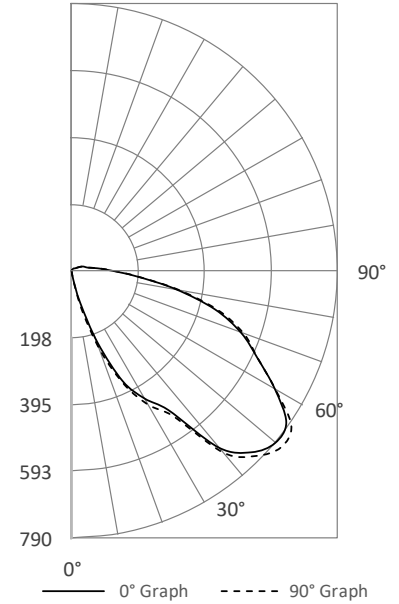
Zone	Lumens	%Fixt
0-30°	201	6.1%
0-60°	1,823	55.3%
0-80°	2,890	87.7%
80-90°	225	6.8%
0-90°	3,115	94.5%
90-110°	134	4.1%
110-180°	0	0.0%
0-180°	3,296	100.0%

#### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	99	3.0%
FM 30-60	813	24.7%
FH 60-80	540	16.4%
FVH 80-90	116	3.5%
BL 0-30	101	3.1%
BM 30-60	809	24.5%
BH 60-80	527	16.0%
BVH 80-90	109	3.3%
UL 90-100	89	2.7%
UH 100-180	93	2.8%
<b>Total</b>	<b>3,296</b>	<b>100.0%</b>
BUG Rating	B2-U3-G2	

Photometrics calculated at 5000k - high lumens setting

#### 180° Polar Graph



### EBOL-S-3L-LKFS

#### Luminaire Data

<b>Description</b>	BOLLARD (SQUARE) 3L 5K - LKFS
Total Lumens	3,041
Input Wattage	23
Efficacy (lm/W)	132
Max. Cd.	843.54 (270H, 53V)
IES Classification	Type VS
Longitudinal Classification	Short

#### Zonal Lumen Summary

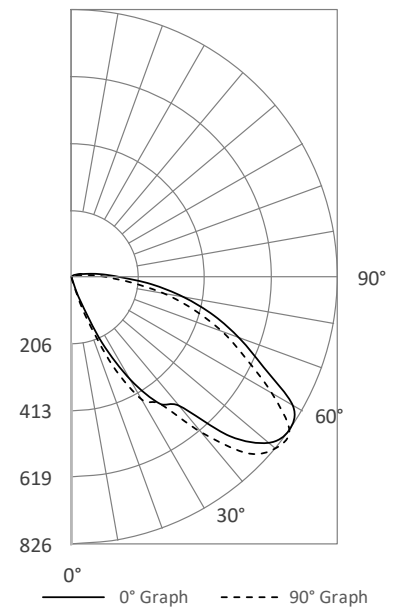
Zone	Lumens	%Fixt
0-30°	114	3.8%
0-60°	1,611	53.0%
0-80°	2,646	87.0%
80-90°	230	7.6%
0-90°	2,876	94.6%
90-110°	126	4.1%
110-180°	0	0.0%
0-180°	3,041	100.0%

#### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	47	1.6%
FM 30-60	738	24.3%
FH 60-80	552	18.2%
FVH 80-90	132	4.3%
BL 0-30	67	2.2%
BM 30-60	760	25.0%
BH 60-80	482	15.9%
BVH 80-90	98	3.2%
UL 90-100	89	2.9%
UH 100-180	76	2.5%
<b>Total</b>	<b>3,041</b>	<b>99.9%</b>
BUG Rating	B1-U3-G2	

Photometrics calculated at 5000k - high lumens setting

#### 180° Polar Graph



## PHOTOMETRIC DATA

### EBOL-RD-3L-LKFS

#### Luminaire Data

Description	BOLLARD (ROUND DOME) 3L 5K - LKFS
Total Lumens	3,251
Input Wattage	23
Efficacy (lm/W)	143
Max. Cd.	765.57 (45H, 52V)
IES Classification	Type VS
Longitudinal Classification	Very Short

#### Zonal Lumen Summary

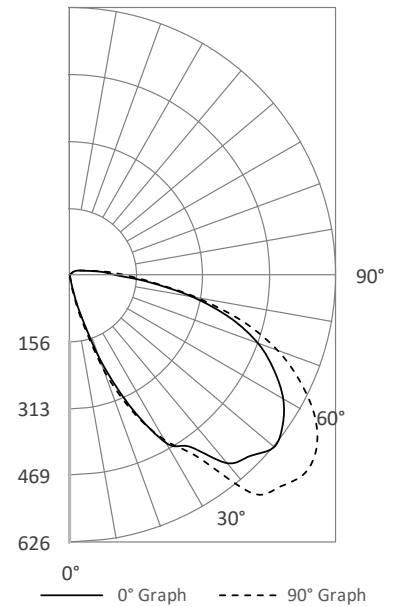
Zone	Lumens	%Fixt
0-30°	200	6.2%
0-60°	1,724	53.0%
0-80°	2,790	85.8%
80-90°	240	7.4%
0-90°	3,030	93.2%
90-110°	161	5.0%
110-180°	0	0.0%
0-180°	3,251	100.0%

#### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	96	3.0%
FM 30-60	756	23.3%
FH 60-80	539	16.6%
FVH 80-90	124	3.8%
BL 0-30	104	3.2%
BM 30-60	768	23.6%
BH 60-80	528	16.2%
BVH 80-90	116	3.6%
UL 90-100	110	3.4%
UH 100-180	111	3.4%
<b>Total</b>	<b>3,251</b>	<b>100.0%</b>
BUG Rating	B2-U3-G2	

Photometrics calculated at 5000k - high lumens setting

#### 180° Polar Graph



### EBOL-RDL-2L-LKFS

#### Luminaire Data

Description	BOLLARD (RDL) 2L 5K - LKFS
Total Lumens	1,688
Input Wattage	23
Efficacy (lm/W)	74
Max. Cd.	292.72 (225H, 67V)
IES Classification	Type VS
Longitudinal Classification	Short

#### Zonal Lumen Summary

Zone	Lumens	%Fixt
0-30°	61	3.6%
0-60°	455	27.0%
0-80°	959	56.8%
80-90°	231	13.7%
0-90°	1,190	70.5%
90-110°	345	20.4%
110-180°	0	0.0%
0-180°	1,688	100.0%

#### Luminaire Classification Systems (LCS)

LCS Zone	Lumens	%Lum
FL 0-30	32	1.9%
FM 30-60	201	11.9%
FH 60-80	253	15.0%
FVH 80-90	115	6.8%
BL 0-30	29	1.7%
BM 30-60	192	11.4%
BH 60-80	250	14.8%
BVH 80-90	116	6.9%
UL 90-100	202	12.0%
UH 100-180	296	17.5%
<b>Total</b>	<b>1,688</b>	<b>100.0%</b>
BUG Rating	B1-U3-G2	

Photometrics calculated at 5000k - high lumens setting

#### 180° Polar Graph

