

UCL2-LK

LED UPGRADE KIT

FEATURES

- Reliable, uniform, glare free illumination
- Types II, III, IV, V and custom distributions
- 3000K, 4000K, 5000K CCT
- 0-10V dimming ready
- Integral surge suppression
- Upgrade Kits ⁵



3000K and warmer CCTs only

SPECIFICATIONS

CONSTRUCTION

- All internal and external hardware are stainless steel
- Luminaire finish consists of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- Optical bezel finish matches the luminaire housing

LED/OPTICS

- Molded silicone gasket ensures a weather-proof seal around each individual LED
- Features revolutionary individual LED optical control based on high performance TIR optical designs

LED/OPTICS CONTINUED

- House Side Shield is available on Standard and Clear Lens options except any Type 5 distribution. House Side Shield is not available for any distribution using a Diffused Lens

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

ELECTRICAL

- Luminaires have integral surge protection, UL recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J

UNIVERSE®



Universe Large LED Deck

RELATED PRODUCTS

θ [UCM2](#)

θ [UCL2LK](#)

θ [UCS](#)

θ [UCB](#)

ELECTRICAL CONTINUED

- Drivers are UL recognized with an inrush current maximum of <20.0 Amps maximum at 230VAC
- 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control
- Driver and surge suppressor are mounted to a prewired tray with quick disconnects that may be removed from the gear compartment

CERTIFICATIONS

- ETL listed under UL 1598 and CSA C22.2 No. 250.0-08 for wet locations

WARRANTY

- See [HLI Standard Warranty](#) for additional information

HOUSING

UCL2-LK												
Housing		LED Quantity		Lumen output		CCT/CRI		Distribution		Finish		
UCL2-LK ⁵	Universe Large Upgrade Kit	72L	76 LED	310	260mA, Microcore Equivalent	5K7	5000K, 70 CRI	1	Type I	BLS	Black Gloss Smooth	
				335	450mA, 10000 Lumens	4K7	4000K, 70 CRI	2	Type II	BLT	Black Matte Textured	
				480	700mA, Microcore Equivalent	3K7	3000K, 70 CRI	3	Type III	DBS	Dark Bronze Gloss Smooth	
				500	500mA, 14000 Lumens	AMB	Amber-595nm Peak ¹	4W	Type IV Wide	DBT	Dark Bronze Matte Textured	
				700	615mA, 19000 Lumens			5Q	Type V Square	GTT	Graphite Matte Textured	
UCL-LK-UPLT ⁵	Downlight with uplight for element illumination, additional 4 watts							5W	Type V Wide	LGS	Light Grey Gloss Smooth	
										LGT	Light Grey Matte Textured	
										PSS	Platinum Silver Gloss Smooth	
										VGT	Verde Green Matte Textured	
										WHS	White Gloss Smooth	
Optional Lens		Options		Voltage		Notes: 1 Turtle friendly 2 Diffused Lens is available only with T3 and T5W distribution 3 House side Shield is available only with T1, T2, T3 and T4W distributions 4 Consult factory for custom color, marine and corrosive finish options 5 Upgrade kits are compatible with fixtures manufactured after 2014. Consult Factory for fixtures manufactured prior to 2014.						
CL	Clear Lens	HS	House Side Shield ³	UNV	120-277V							
DL	Diffused Lens ²	SLC	Solid Lens Cover	347	347V							
		SF	Single Fuse (120, 277, 347)	480	480V							
			DF	Double Fuse (208, 240, 480)								
										Color Option		
										CC ² Custom Color		

DELIVERED LUMENS

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficacy (Lm/W)	Lumen	Bug Rating			Efficacy (Lm/W)	Lumen	Bug Rating			Efficacy (Lm/W)
72	310	450mA Microcore Equivalent	None	1	8970	1	0	1	128.4	9378	1	0	1	134.2	9755	1	0	1	139.6
				2	8440	1	0	2	120.8	8823	1	0	2	126.3	9178	2	0	2	131.4
				3	8178	1	0	2	117.1	8549	1	0	2	122.4	8893	1	0	2	127.3
				4W	8177	1	0	3	117.0	8548	1	0	3	122.4	8892	1	0	3	127.3
				1-HS	5194	0	0	0	74.3	5430	0	0	0	77.7	5648	0	0	0	80.8
				2-HS	4203	0	0	1	60.2	4394	0	0	1	62.9	4570	0	0	1	65.4
				3-HS	4033	0	0	1	57.7	4216	0	0	1	60.3	4385	0	0	1	62.8
				4W-HS	4039	0	0	1	57.8	4223	0	0	1	60.5	4393	0	0	1	62.9
			Clear	5Q	8550	3	0	1	122.4	8939	3	0	1	128.0	9298	3	0	1	133.1
				5W	8012	3	0	2	114.7	8376	3	0	2	119.9	8713	3	0	2	124.7
				1-CL	7729	1	0	1	110.6	8080	1	0	1	115.7	8405	1	0	1	120.3
				2-CL	7272	1	0	1	104.1	7602	1	0	2	108.8	7908	1	0	2	113.2
				3-CL	7046	1	0	2	100.9	7366	1	0	2	105.4	7662	1	0	2	109.7
				4W-CL	7045	1	0	3	100.8	7365	1	0	3	105.4	7661	1	0	3	109.7
				1-CL-HS	4475	0	0	0	64.1	4678	0	0	0	67.0	4866	0	0	0	69.7
				2-CL-HS	3621	0	0	1	51.8	3786	0	0	1	54.2	3938	0	0	1	56.4
				3-CL-HS	3474	0	0	1	49.7	3632	0	0	1	52.0	3778	0	0	1	54.1
				4W-CL-HS	3480	0	0	1	49.8	3639	0	0	1	52.1	3785	0	0	1	54.2
			Diffused	5Q-CL	7367	2	0	1	105.5	7702	3	0	1	110.2	8011	3	0	1	114.7
				5W-CL	6903	3	0	1	98.8	7217	3	0	1	103.3	7507	3	0	1	107.5
				3-DL	5322	1	0	1	76.2	5564	1	0	1	79.6	5788	1	0	1	82.8
				5W-DL	5214	2	0	1	74.6	5451	2	0	1	78.0	5670	2	0	1	81.2
	335	10000	None	1	9606	1	0	1	126.8	10042	1	0	1	132.6	10446	1	0	1	137.3
				2	9037	1	0	2	119.3	9448	2	0	2	124.7	9828	2	0	2	129.0
				3	8757	1	0	2	115.9	9155	1	0	2	120.8	9523	1	0	2	125.3
				4W	8756	1	0	3	115.6	9154	1	0	3	120.8	9522	1	0	3	125.4
				1-HS	5562	0	0	0	73.4	5814	0	0	0	76.8	6048	0	0	0	80.0
				2-HS	4500	0	0	1	59.4	4705	0	0	1	62.1	4894	0	0	1	64.9
				3-HS	4318	0	0	1	57.0	4515	0	0	1	59.6	4696	0	0	1	62.3
				4W-HS	4326	0	0	1	57.1	4522	0	0	1	59.7	4704	0	0	1	62.3
			Clear	5Q	9156	3	0	1	120.9	9572	3	0	1	126.4	9957	3	0	1	131.5
				5W	8580	3	0	2	113.3	8969	3	0	2	118.4	9330	3	0	2	123.1
				1-CL	8276	1	0	1	109.5	8652	1	0	1	114.5	9000	1	0	1	119.1
				2-CL	7787	1	0	2	103.1	8141	1	0	2	107.7	8468	1	0	2	112.1
				3-CL	7545	1	0	2	99.9	7888	1	0	2	104.4	8205	1	0	2	108.6
				4W-CL	7544	1	0	3	99.8	7887	1	0	3	104.4	8204	1	0	3	108.6
				1-CL-HS	4792	0	0	0	63.4	5010	0	0	0	66.3	5211	0	0	0	69.0
				2-CL-HS	3877	0	0	1	51.3	4054	0	0	1	53.6	4217	0	0	1	55.8
				3-CL-HS	3721	0	0	1	49.2	3890	0	0	1	51.5	4046	0	0	1	53.5
				4W-CL-HS	3727	0	0	1	49.3	3896	0	0	1	51.6	4053	0	0	1	53.6
			Diffused	5Q-CL	7889	3	0	1	104.4	8247	3	0	1	109.2	8579	3	0	1	113.5
				5W-CL	7392	3	0	1	97.8	7728	3	0	1	102.3	8039	3	0	2	106.4
				3-DL	5992	1	0	1	79.2	6264	1	0	1	82.8	6516	1	0	1	86.4
				5W-DL	5297	2	0	1	70.0	5537	2	0	1	73.1	5760	2	0	1	73.6

DELIVERED LUMENS (CONTINUED)

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficacy (Lm/W)	Lumen	Bug Rating			Efficacy (Lm/W)	Lumen	Bug Rating			Efficacy (Lm/W)
72	480	700mA Microcore Equivalent	None	1	13144	1	0	1	118.8	13742	1	0	1	124.2	14294	2	0	1	129.2
				2	12367	2	0	2	111.7	12929	2	0	2	116.8	13448	2	0	2	121.5
				3	11983	2	0	2	108.3	12527	2	0	3	113.2	13031	2	0	3	117.7
				4W	11982	2	0	3	108.3	12526	2	0	3	113.2	13030	2	0	3	117.7
				1-HS	7610	0	0	0	68.8	7956	0	0	0	71.9	8276	0	0	0	74.8
				2-HS	6158	0	0	1	55.6	6438	0	0	1	58.2	6697	0	0	1	60.5
				3-HS	5909	0	0	1	53.4	6178	0	0	2	55.8	6426	0	0	2	58.1
				4W-HS	5919	1	0	2	53.5	6188	1	0	2	55.9	6437	1	0	2	58.2
			Clear	5Q	12529	3	0	1	113.2	13098	3	0	1	118.4	13625	3	0	1	123.1
				5W	11740	4	0	2	106.1	12274	4	0	2	110.9	12767	4	0	2	115.4
				1-CL	11325	1	0	1	102.3	11840	1	0	1	107.0	12316	1	0	1	111.3
				2-CL	10655	2	0	2	96.3	11139	2	0	2	100.7	11587	2	0	2	104.7
				3-CL	10324	2	0	2	93.3	10794	2	0	2	97.5	11227	2	0	2	101.5
				4W-CL	10323	1	0	3	93.3	10792	1	0	3	97.5	11226	1	0	3	101.4
				1-CL-HS	6557	0	0	0	59.2	6855	0	0	0	61.9	7131	0	0	0	64.4
				2-CL-HS	5306	0	0	1	47.9	5547	0	0	1	50.1	5770	0	0	1	52.1
				3-CL-HS	5091	0	0	1	46.0	5323	0	0	1	48.1	5537	0	0	1	50.0
				4W-CL-HS	5100	0	0	1	46.1	5332	1	0	1	48.2	5546	1	0	2	50.1
			Diffused	5Q-CL	10795	3	0	1	97.5	11286	3	0	1	102.0	11739	3	0	1	106.1
				5W-CL	10115	3	0	2	91.4	10575	3	0	2	95.6	11000	4	0	2	99.4
				3-DL	7798	2	0	1	70.4	8153	2	0	2	73.6	8481	2	0	2	76.6
				5W-DL	7640	2	0	1	69.0	7988	3	0	1	72.2	8309	3	0	1	75.1
	500	14000	None	1	13600	1	0	1	117.7	14218	2	0	1	123.0	14790	2	0	1	128.0
				2	12796	2	0	2	110.7	13377	2	0	2	115.7	13915	2	0	2	120.4
				3	12398	2	0	3	107.3	12962	2	0	3	112.2	13483	2	0	3	116.7
				4W	12397	2	0	3	107.3	12961	2	0	3	112.1	13482	2	0	3	116.7
				1-HS	7874	0	0	0	68.1	8232	0	0	0	71.2	8563	0	0	0	74.1
				2-HS	6372	0	0	1	55.1	6661	0	0	1	57.6	6929	0	0	1	60.0
				3-HS	6114	0	0	1	52.9	6392	0	0	2	55.3	6649	0	0	2	57.5
				4W-HS	6124	1	0	2	53.0	6403	1	0	2	55.4	6660	1	0	2	57.6
			Clear	5Q	12964	3	0	1	112.2	13553	3	0	1	117.3	14097	3	0	2	122.0
				5W	12147	4	0	2	105.1	12699	4	0	2	109.9	13210	4	0	2	114.3
				1-CL	11718	1	0	1	101.4	12250	1	0	1	106.0	12743	1	0	1	110.3
				2-CL	11025	2	0	2	95.4	11526	2	0	2	99.7	11989	2	0	2	103.7
				3-CL	10682	2	0	2	92.4	11168	2	0	2	96.6	11617	2	0	2	100.5
				4W-CL	10681	1	0	3	92.4	11167	1	0	3	96.6	11616	2	0	3	100.5
				1-CL-HS	6784	0	0	0	58.7	7093	0	0	0	61.4	7378	0	0	0	63.8
				2-CL-HS	5490	0	0	1	47.5	5739	0	0	1	49.7	5970	0	0	1	51.7
				3-CL-HS	5268	0	0	1	45.6	5507	0	0	1	47.7	5729	0	0	1	49.6
				4W-CL-HS	5277	1	0	1	45.7	5517	1	0	2	47.7	5738	1	0	2	49.7
			Diffused	5Q-CL	11169	3	0	1	96.6	11677	3	0	1	101.0	12146	3	0	1	105.1
				5W-CL	10466	3	0	2	90.6	10942	4	0	2	94.7	11381	4	0	2	98.5
				3-DL	8069	2	0	2	69.8	8436	2	0	2	73.0	8775	2	0	2	75.9
				5W-DL	7905	3	0	1	68.4	8265	3	0	1	71.5	8597	3	0	1	74.4

DELIVERED LUMENS (CONTINUED)

The table below shows the delivered lumens for the various lumen outputs and beam distributions. Use this chart in connection with the lumen factor (LF) capability to deliver any output required.

LED #	Drive Current	Lumen Package	Lens	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	Bug Rating			Efficacy (Lm/W)	Lumen	Bug Rating			Efficacy (Lm/W)	Lumen	Bug Rating			Efficacy (Lm/W)
72	700	19000	None	1	17947	2	0	1	111.9	18762	2	0	1	117.0	19516	2	0	1	121.7
				2	16885	2	0	2	105.3	17652	2	0	2	110.1	18362	3	0	3	114.5
				3	16361	2	0	3	102.0	17104	2	0	3	106.6	17792	2	0	3	110.9
				4W	16359	2	0	4	102.0	17103	2	0	4	106.6	17790	2	0	4	110.9
				1-HS	10391	0	0	0	64.8	10863	1	0	0	67.7	11300	1	0	1	70.4
				2-HS	8408	1	0	1	52.4	8790	1	0	1	54.8	9144	1	0	1	57.0
				3-HS	8068	1	0	2	50.3	8435	1	0	2	52.6	8774	1	0	2	54.7
				4W-HS	8082	1	0	2	50.4	8449	1	0	2	52.7	8789	1	0	2	54.8
				5Q	17106	4	0	2	106.6	17884	4	0	2	111.5	18603	4	0	2	116.0
			5W	16029	4	0	2	99.9	16758	4	0	2	104.5	17431	4	0	2	108.7	
			Clear	1-CL	15463	2	0	1	96.4	16166	2	0	1	100.8	16815	2	0	1	104.8
				2-CL	14548	2	0	2	90.7	15209	2	0	2	94.8	15821	2	0	2	98.6
				3-CL	14096	2	0	3	87.9	14737	2	0	3	91.9	15330	2	0	3	95.6
				4W-CL	14095	2	0	3	87.9	14736	2	0	3	91.9	15328	2	0	3	95.6
				1-CL-HS	8953	0	0	0	55.8	9359	0	0	0	58.4	9736	0	0	0	60.7
				2-CL-HS	7244	1	0	1	45.2	7574	1	0	1	47.2	7878	1	0	1	49.1
				3-CL-HS	6951	0	0	2	43.3	7267	1	0	2	45.3	7559	1	0	2	47.1
				4W-CL-HS	6963	1	0	2	43.4	7280	1	0	2	45.4	7572	1	0	2	47.2
				5Q-CL	14739	3	0	2	91.9	15409	4	0	2	96.1	16028	4	0	2	99.9
			5W-CL	13811	4	0	2	86.1	14438	4	0	2	90.0	15019	4	0	2	93.6	
			Diffused	3-DL	10648	2	0	2	66.4	11132	2	0	2	69.4	11579	2	0	2	72.2
				5W-DL	10432	3	0	2	65.0	10906	3	0	2	68.0	11344	3	0	2	70.7

PHOTOMETRY

UCL2-ANG-72L-700-4K7-1

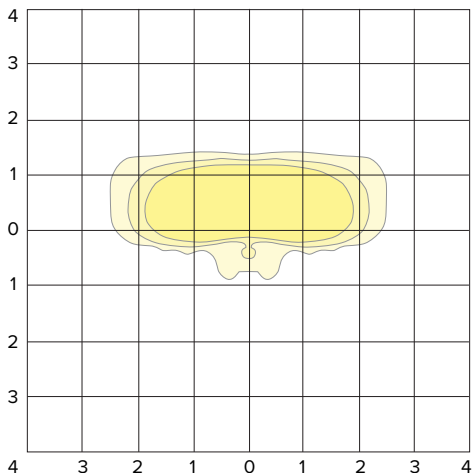
LUMINAIRE DATA

Description	4000 Kelvin, 70CRI
Delivered Lumens	18,762
Watts	160.4
Efficacy	117.0
IES Type	I
BUG Rating	B2-U0-G1
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	16473	88%
Downward House Side	2289	12%
Downward Total	18762	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18762	100%

ISOFOOT CANDLE PLOT



UCL2-ANG-72L-700-4K7-2

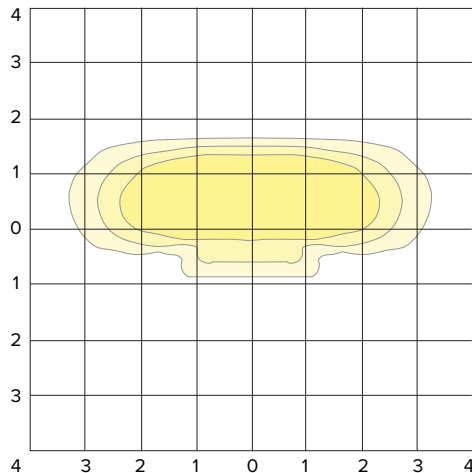
LUMINAIRE DATA

Description	4000 Kelvin, 70CRI
Delivered Lumens	17,652
Watts	160.4
Efficacy	110.0
IES Type	II
BUG Rating	B2-U0-G2
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14521	82%
Downward House Side	3131	18%
Downward Total	17652	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17652	100%

ISOFOOT CANDLE PLOT



UCL2-ANG-72L-700-4K7-3

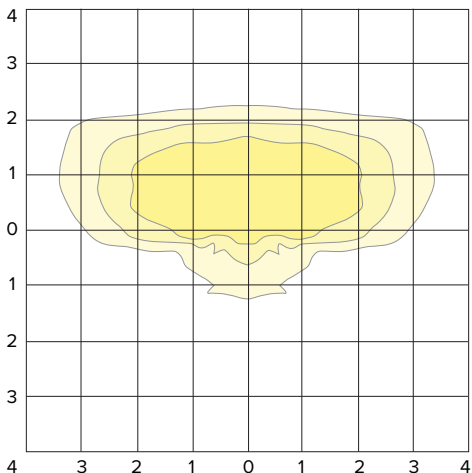
LUMINAIRE DATA

Description	4000 Kelvin, 70CRI
Delivered Lumens	17105
Watts	160.4
Efficacy	106.6
IES Type	III
BUG Rating	B2-U0-G3
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14403	84%
Downward House Side	2702	16%
Downward Total	17105	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17105	100%

ISOFOOT CANDLE PLOT



PHOTOMETRY

UCL2-ANG-72L-700-4K7-4W

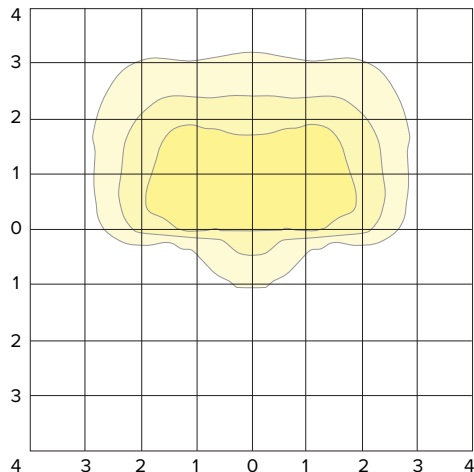
LUMINAIRE DATA

Description	4000 Kelvin, 70CRI
Delivered Lumens	17103
Watts	160.4
Efficacy	106.6
IES Type	IV Wide
BUG Rating	B2-U0-G4
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14997	88%
Downward House Side	2106	12%
Downward Total	17103	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17103	100%

ISOFOOT CANDLE PLOT



30' Mounting Height

1.0 FC
0.5 FC
0.2 FC

UCL2-ANG-72L-700-4K7-5Q

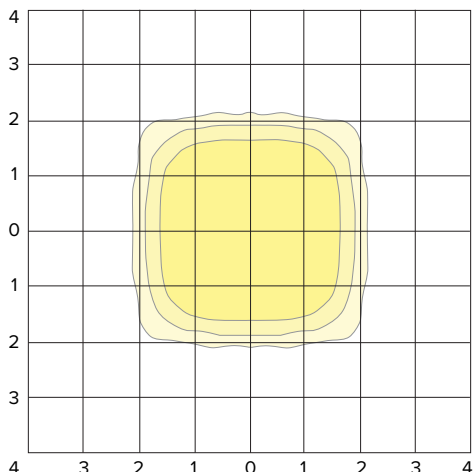
LUMINAIRE DATA

Description	4000 Kelvin, 70CRI
Delivered Lumens	17884
Watts	160.4
Efficacy	111.5
IES Type	VS
BUG Rating	B4-U0-G2
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8942	50%
Downward House Side	8942	50%
Downward Total	17884	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17884	100%

ISOFOOT CANDLE PLOT



30' Mounting Height

1.0 FC
0.5 FC
0.2 FC

UCL2-ANG-72L-700-4K7-5W

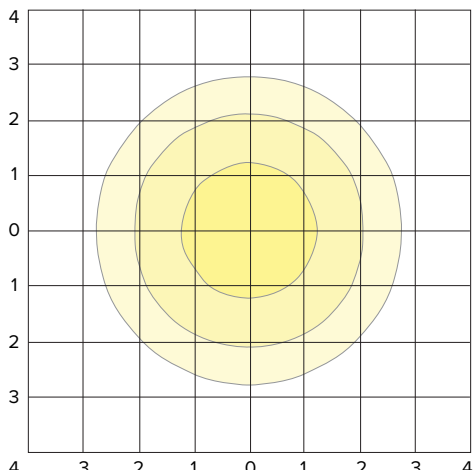
LUMINAIRE DATA

Description	4000 Kelvin, 70CRI
Delivered Lumens	16758
Watts	160.4
Efficacy	104.5
IES Type	VS
BUG Rating	B4-U0-G2
Mounting Height	30 ft
Grid Scale	30 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8379	50%
Downward House Side	8379	50%
Downward Total	16758	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16758	100%

ISOFOOT CANDLE PLOT

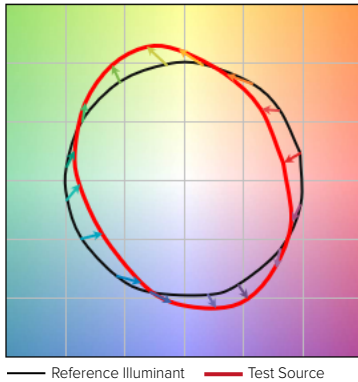


30' Mounting Height

1.0 FC
0.5 FC
0.2 FC

TM-30 DATA

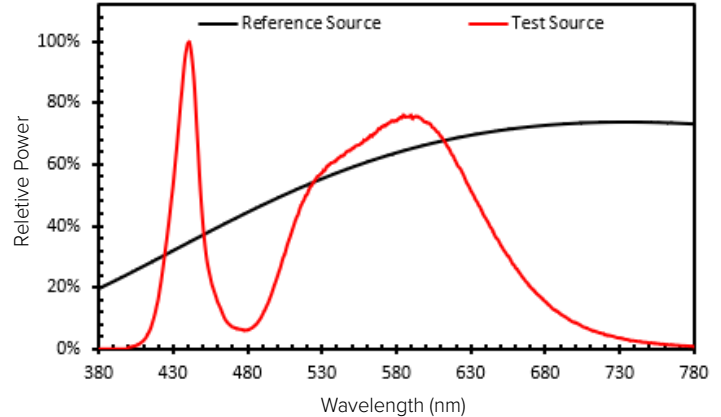
COLOR VECTOR GRAPHIC



TEST SOURCE

MBM TEST RESULTS	
CCT (K)	3947
CIE Ra	72
Duv	0.0004
x	0.3831
y	0.3793
Rf	68
Rg	99

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Electrical												Dimming					
Light Engine	System Current	System Watts	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	HZ	120	208	240	277	347	480				Min	Max	Min	Max
72	310 mA	69.9	120-480	50/60	0.58	0.34	0.29	0.25	0.20	0.15	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	335 mA	75.7			0.63	0.36	0.32	0.27	0.22	0.16							
	480 mA	110.7			0.92	0.53	0.46	0.40	0.32	0.23							
	500 mA	115.6			0.96	0.56	0.48	0.42	0.33	0.24							
	700 mA	160.4			1.34	0.77	0.67	0.58	0.46	0.33							

TM-21 LIFETIME CALCULATION - PROJECTED LUMEN MAINTENANCE (25°C / 77°F)						
HOURS	0	25,000	36,000	50,000	100,000	REPORTED L70
Projected Lumen Maintenance	100%	98.0%	96.9%	95.5%	90.7%	> 60,000

AMBER MULTIPLIER	
CCT	MULTIPLIER
5000K	1
AM	0.1727

2700K MULTIPLIER	
CCT	MULTIPLIER
5000K	1
2700K	0.897

LENS OPTION MULTIPLIER	
CLEAR LENS	DIFFUSED LENS
0.8615	0.7098

ADDITIONAL INFORMATION

PHOTOCELL / EGRESS ADAPTERS

- Adapter(s) shall slip over a 4"/100mm DIA. pole with the luminaire or arm slipping over the adapter to add a total of 4.5"/114mm to the overall height. Adapter(s) shall be prewired, independently rotatable 359°, and have a cast access cover with an integral lens and lanyard.
- Photocell adapter shall include an internal twist lock receptacle. Photocell by others.
- Egress adapter shall require an auxiliary 120 volt supply for operation of an integral MR16 lamp in the event of emergency. The lamp may be aimed and locked into position with an adjustment range of 15°-45°. Adapter shall have a socket that accepts miniature bi-pin MR16 lamps up to 50 watts, lamp by others.