

UCL2-LK

LED UPGRADE KIT

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

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
- 15 standard powder coat finishes
- Upgrade Kits



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
- 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

UNIVERSE®



Universe Large LED Deck

RELATED PRODUCTS

[UCM2](#)

[UCL2LK](#)

[UCS](#)

[UCB](#)

personal injury.

ELECTRICAL

- Luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J
- Drivers shall be U.L. recognized with an inrush current maximum of <20.0 Amps maximum at 230VAC
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems, approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV

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		LED Quantity		Lumen output		CCT/CRI		Distribution		Finish	
Housing	Mitre Upgrade kit	36L	36 LED	260	260mA, 4000 Lumens	5K7	5000K, 70 CRI	1	Type I	AGN	Antique Green
				325	450mA Microcore Crossover	4K7	4000K, 70 CRI	2	Type II	BL	Black
				420	420mA, 6000 Lumens	3K7	3000K, 70 CRI	3	Type III	BLT	Matte Black
				475	700mA Microcore Crossover	AMB	Amber-595nm Peak ¹	4W	Type IV Wide	CRT	Corton
				615	615mA, 7500 Lumens			5Q	Type V Square	DB	Dark Bronze
								5W	Type V Wide	DGN	Dark Green
										GT	Graphite
										LG	Light Gray
										MAL	Matte Aluminum
										MDB	Metallic Bronze
										MG	Medium Gray
										TT	Titanium
										VBU	Verde Blue
										WDB	Weathered Blue
										WH	White
										CC	Custom Color ⁴

Optional Lens		Options		Voltage	
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)		

Notes:
 1 Wild life 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

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 Crossover	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
			Clear	4W-HS	4039	0	0	1	57.8	4223	0	0	1	60.5	4393	0	0	1	62.9
				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
	Diffused	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		
		5Q-CL	7367	2	0	1	105.5	7702	3	0	1	110.2	8011	3	0	1	114.7		
	335	10000	None	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
				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
			Clear	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	
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	
Diffused	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			
Diffused	4W-CL-HS	3727	0	0	1	49.3	3896	0	0	1	51.6	4053	0	0	1	53.6			
	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 Crossover	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	
				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	
				Clear	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			
	Diffused	4W-CL-HS	5100	0	0	1	46.1	5332	1	0	1	48.2	5546	1	0	2	50.1			
		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		
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		
Clear				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			
		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			
Diffused		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
			Diffused	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
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

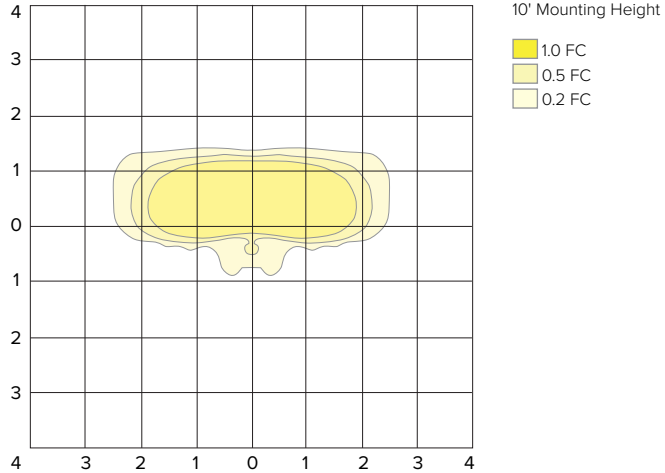
LUMINAIRE DATA

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

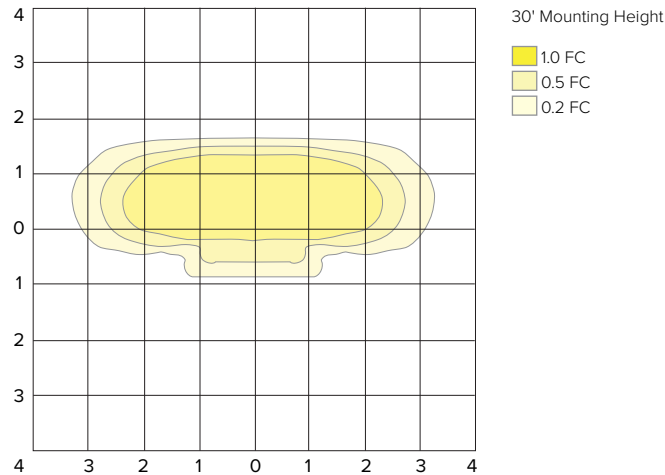
LUMINAIRE DATA

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

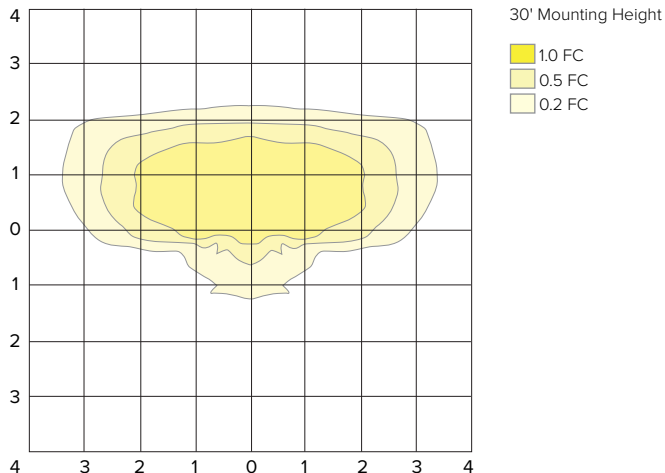
LUMINAIRE DATA

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

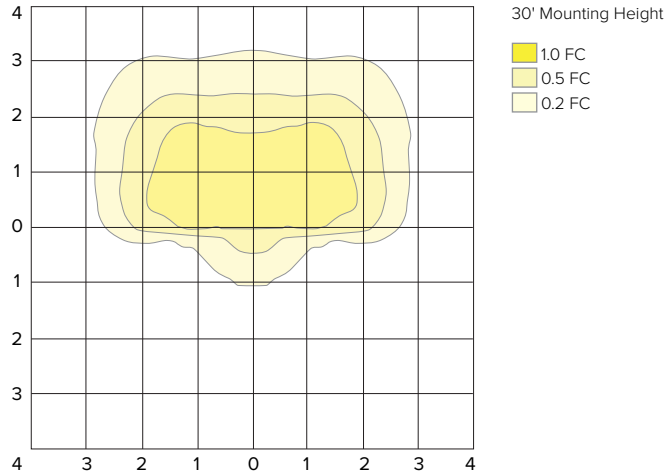
LUMINAIRE DATA

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



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

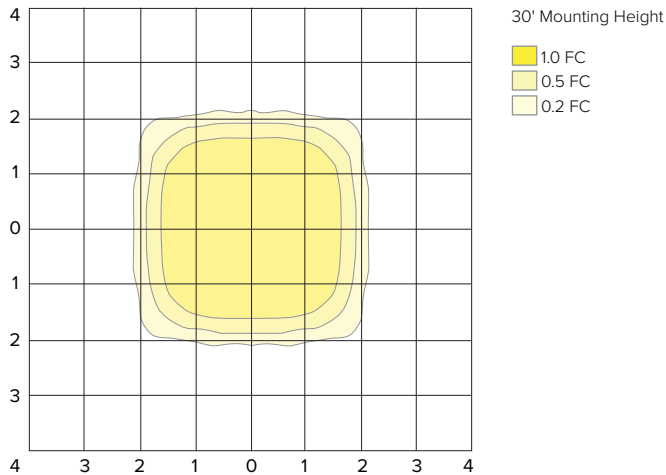
LUMINAIRE DATA

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



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

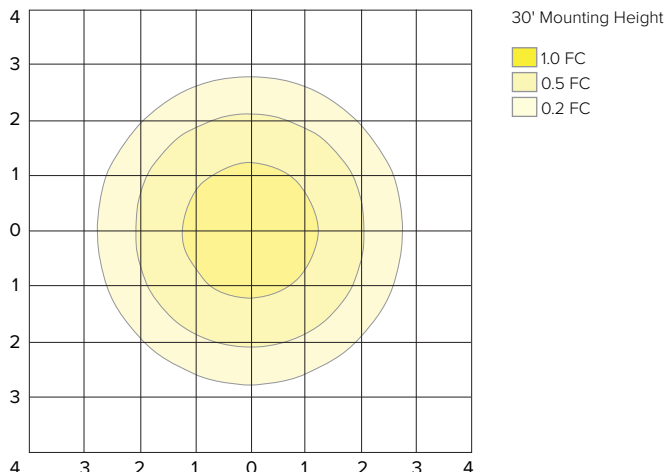
LUMINAIRE DATA

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

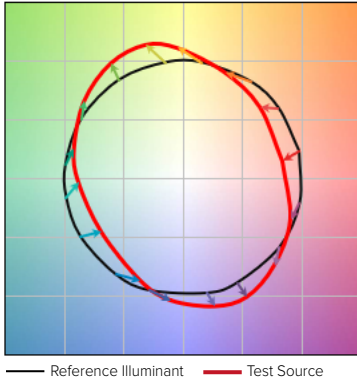
Zone	Lumens	% Luminaire
Downward Street Side	8379	50%
Downward House Side	8379	50%
Downward Total	16758	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16758	100%

ISOFOOT CANDLE PLOT



TM-30 DATA

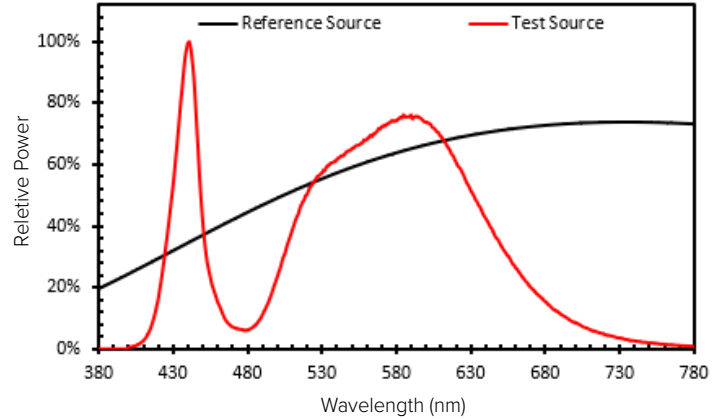
COLOR VECTOR GRAPHIC



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

Light Engine	Electrical										Dimming						
	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.