

WP9LK2
LED UPGRADE KIT

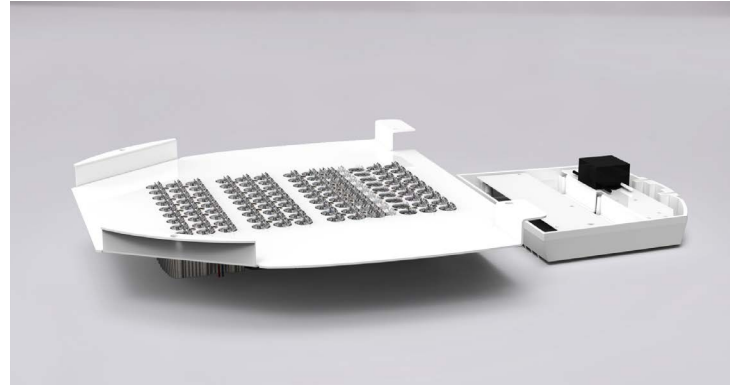
Warp9®

FEATURES

- TIR Strike Optics
- Available in Monochromatic Amber, 2700K, 3000K, 3500K, 4000K and 5000K
- Type 1, 2, 3, 4, 4W, 5Q, L, and R distributions
- 0 - 10V dimming drivers standard
- IP65 optical assembly



3000K and warmer CCTs only



RELATED PRODUCTS

Ouro

Pavilion

PGL8

SPECIFICATIONS

CONSTRUCTION

- One piece die-cast housing, low copper (<0.6% Cu) Aluminum Alloy with integral cooling ribs over the optical chamber and electrical compartment
- All hardware is stainless steel or electro-zinc plated steel
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidic isocyanurate (TGIC) polyester powdercoat

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

OPTICS

- Optical cartridge system consisting of a die cast heat sink, LED Total Internal Reflection (TIR) optics, gasket and bezel plate

OPTICS (CONTINUED)

- 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
- Optional BackLight Control for complete control of unwanted backlight
- IP65 Optical assembly
- Type 1, 2, 3, 4, 4W, 5Q, L, and R standard distributions
- Available in Monochromatic Amber, 2700K, 3000K, 3500K, 4000K and 5000K
- Die-cast, low copper aluminum heat sink modules provide thermal transfer at PCB level
- Anodized aluminum heat sink modules

ELECTRICAL

- Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver
- Modular wiring harness in the service area provides user access to the dimming circuitry
- Optional factory programmed dimming profile
- Surge protection: 10kV surge suppression
- SF for 120, 277, 347 Line volts
DF for 208, 240, 480 Line volts

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet location and 40°C ambient temperatures
- RoHS compliant

WARRANTY

- 5 year warranty

WP9LK2

LED UPGRADE KIT

ORDERING GUIDE

WP9LK2						
Model	LED Engine	CCT/CRI ³	Distribution	Voltage	Fixture Finish	
WP9LK2 Warp9 2.0 Large Kit	81L-550 81 LEDs - 15,000 Lumens	AM^{1,4} Monochromatic Amber	1 Type I	UNV 120-277V	BLS Black Gloss Smooth	
	108L-550 54 LEDs - 20,000 Lumens	27K8² 2700K, 80CRI	2 Type II	347 347V	BLT Black Matte Textured	
	108L-700 81 LEDs - 25,000 Lumens	27K9² 2700K, 90CRI	3 Type III	480 480V	DBS Dark Bronze Gloss Smooth	
	Equivalent WP9L-P35 = 81L-550 WP9L-P70 = 108L-550 WP9L-E35 = 81L-550	3K7 3000K, 70CRI	4 Type IV Forward	4W Type IV Wide		DBT Dark Bronze Matte Textured
		3K8² 3000K, 80CRI	5QM Type V Square Medium	R Corner Right		GTT Graphite Matte Textured
		3K9² 3000K, 90CRI	L Corner Left	LGS Light Grey Gloss Smooth		
		35K8² 3500K, 80CRI		LGT Light Grey Matte Textured		
		35K9² 3500K, 90CRI		PSS Platinum Silver Smooth		
		4K7 4000K, 70CRI		VGT Verde Green Matte Textured		
		4K8² 4000K, 80CRI		WHS White Gloss Smooth		
		4K9² 4000K, 90CRI		WHT White Matte Textured		
		5K7 5000K, 70CRI				
		5K8² 5000K, 80CRI				
	5K9² 5000K, 90CRI					
						Color Option
						CC Custom Color

House Side Shield	Fuse Options
BC¹ Backlight Control	SF 120, 277, 347 Line Volts DF 208, 240, 480 Line Volts

Notes:

- 1 Back Light Control not available for Type 5Q and Type 5W
- 2 See Lumen Multiplier chart on Page 11 for lumen scaling factor. Consult factory for additional details.
- 3 5-step MacAdam Ellipse Binning is standard. Consult factory for 3-step MacAdam Ellipse Binning
- 4 Turtle Friendly.

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DELIVERED LUMENS

NO LENS

LED #	Nominal Lumen Package	Drive Current	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
				Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
					B	U	G			B	U	G			B	U	G	
81	15,000	550	1	16511	2	0	1	119.6	17135	2	0	1	124.1	17841	2	0	1	129.3
			1-BC	10571	0	0	1	76.6	10970	0	0	1	79.5	11423	0	0	1	82.8
			2	15496	2	0	2	112.3	16081	2	0	2	116.5	16745	2	0	2	121.3
			2-BC	9870	0	0	2	71.5	10243	0	0	2	74.2	10666	0	0	2	77.3
			3	15369	2	0	3	111.3	15949	2	0	3	115.5	16607	2	0	3	120.3
			3-BC	9555	0	0	2	69.2	9915	0	0	2	71.8	10325	0	0	2	74.8
			4	16147	1	0	3	117.0	16757	1	0	3	121.4	17448	1	0	4	126.4
			4-BC	11679	0	0	3	84.6	12120	0	0	3	87.8	12620	0	0	3	91.4
			4W	15395	2	0	3	111.5	15976	2	0	4	115.7	16635	2	0	4	120.5
			4W-BC	9875	1	0	2	71.5	10248	1	0	2	74.2	10671	1	0	2	77.3
			5Q	15963	4	0	2	115.6	16565	4	0	2	120.0	17249	4	0	2	125.0
			R	15323	2	0	3	111.0	15902	2	0	3	115.2	16558	2	0	3	120.0
			L	15323	2	0	3	111.0	15902	2	0	3	115.2	16558	2	0	3	120.0
108	20,000	550	1	21901	2	0	2	118.5	22728	2	0	2	122.9	23665	2	0	2	128.0
			1-BC	14021	0	0	1	75.8	14551	0	0	1	78.7	15151	0	0	1	81.9
			2	20555	3	0	3	111.2	21331	3	0	3	115.4	22211	3	0	3	120.1
			2-BC	13092	1	0	2	70.8	13587	1	0	2	73.5	14147	1	0	2	76.5
			3	20386	2	0	4	110.3	21155	2	0	4	114.4	22028	2	0	4	119.1
			3-BC	12674	1	0	3	68.5	13152	1	0	3	71.1	13695	1	0	3	74.1
			4	21418	2	0	4	115.8	22227	2	0	4	120.2	23144	2	0	4	125.2
			4-BC	15492	1	0	4	83.8	16076	1	0	4	87.0	16740	1	0	4	90.5
			4W	20420	2	0	4	110.4	21191	2	0	4	114.6	22065	2	0	4	119.3
			4W-BC	13099	1	0	3	70.8	13593	1	0	3	73.5	14154	1	0	3	76.6
			5Q	21173	4	0	2	114.5	21973	4	0	2	118.8	22879	4	0	2	123.7
			R	20325	2	0	3	109.9	21092	2	0	4	114.1	21962	3	0	4	118.8
			L	20325	2	0	3	109.9	21092	2	0	4	114.1	21962	3	0	4	118.8
	25,000	700	1	26376	2	0	2	112.0	27372	2	0	2	116.2	28501	2	0	2	121.1
			1-BC	16887	1	0	2	71.7	17524	1	0	2	74.4	18247	1	0	2	77.7
			2	24755	3	0	3	105.1	25689	3	0	3	109.1	26749	3	0	3	113.9
			2-BC	15768	1	0	2	66.9	16363	1	0	2	69.5	17038	1	0	2	72.6
			3	24551	2	0	4	103.8	25478	2	0	4	107.6	26529	3	0	4	112.3
			3-BC	15263	1	0	3	64.8	15840	1	0	3	67.2	16493	1	0	3	70.5
			4	25795	2	0	4	109.5	26769	2	0	4	113.6	27873	2	0	5	118.3
4-BC			18657	1	0	4	79.2	19361	1	0	4	82.2	20160	1	0	4	85.6	
4W			24593	3	0	4	104.4	25521	3	0	5	108.4	26574	3	0	5	112.9	
4W-BC			15775	1	0	3	67.0	16371	1	0	4	69.5	17046	1	0	4	72.6	
5Q			25500	5	0	2	108.3	26462	5	0	2	112.3	27554	5	0	2	116.5	
R			24478	3	0	4	103.9	25402	3	0	4	107.8	26450	3	0	4	111.8	
L			24478	3	0	4	103.9	25402	3	0	4	107.8	26450	3	0	4	111.8	

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DELIVERED LUMENS (CONTINUED)

CLR LENS

LED #	Nominal Lumen Package	Drive Current	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
				Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
					B	U	G			B	U	G			B	U	G	
81	15,000	550	1	14100	1	0	1	102.2	14632	1	0	1	106.0	15236	1	0	1	110.4
			1-BC	9027	0	0	1	65.4	9368	0	0	1	67.9	9754	0	0	1	70.7
			2	13233	2	0	2	95.9	13733	2	0	2	99.5	14300	2	0	2	103.6
			2-BC	8429	0	0	2	61.1	8747	0	0	2	63.4	9108	0	0	2	66.0
			3	13124	2	0	2	95.1	13620	2	0	3	98.7	14182	2	0	3	102.7
			3-BC	8159	0	0	2	59.1	8468	0	0	2	61.3	8817	0	0	2	63.9
			4	13789	1	0	3	99.9	14310	1	0	3	103.7	14900	1	0	3	107.9
			4-BC	9974	0	0	2	72.3	10350	0	0	3	75.0	10777	0	0	3	78.1
			4W	13147	2	0	3	95.2	13643	2	0	3	98.8	14206	2	0	3	102.9
			4W-BC	8433	1	0	2	61.1	8751	1	0	2	63.4	9112	1	0	2	66.0
			5Q	13632	3	0	1	98.8	14146	3	0	1	102.5	14730	3	0	2	106.7
			R	13085	2	0	2	94.8	13579	2	0	2	98.4	14140	2	0	3	102.4
			L	13085	2	0	2	94.8	13579	2	0	2	98.4	14140	2	0	3	102.4
108	20,000	550	1	18703	2	0	1	101.2	19409	2	0	1	105.0	20210	2	0	2	109.3
			1-BC	11974	0	0	1	64.8	12426	0	0	1	67.2	12939	0	0	1	70.0
			2	17553	2	0	2	94.9	18216	2	0	2	98.5	18967	2	0	2	102.6
			2-BC	11181	0	0	2	60.5	11603	0	0	2	62.8	12081	0	0	2	65.3
			3	17409	2	0	3	94.2	18066	2	0	3	97.7	18811	2	0	3	101.7
			3-BC	10823	1	0	2	58.5	11232	1	0	2	60.7	11695	1	0	2	63.3
			4	18290	2	0	4	98.9	18981	2	0	4	102.7	19764	2	0	4	106.9
			4-BC	13229	0	0	3	71.6	13729	0	0	3	74.3	14295	0	0	3	77.3
			4W	17438	2	0	4	94.3	18097	2	0	4	97.9	18843	2	0	4	101.9
			4W-BC	11186	1	0	3	60.5	11608	1	0	3	62.8	12087	1	0	3	65.4
			5Q	18081	4	0	2	97.8	18764	4	0	2	101.5	19538	1	0	2	105.7
			R	17357	2	0	3	93.9	18012	2	0	3	97.4	18755	2	0	3	101.4
			L	17357	2	0	3	93.9	18012	2	0	3	97.4	18755	2	0	3	101.4
	25,000	700	1	22524	2	0	2	95.6	23375	2	0	2	99.2	24339	2	0	2	103.3
			1-BC	14421	0	0	1	61.2	14965	0	0	1	63.5	15582	0	0	1	66.1
			2	21140	3	0	3	89.7	21938	3	0	3	93.1	22843	3	0	3	97.0
			2-BC	13465	1	0	2	57.2	13974	1	0	2	59.3	14550	1	0	2	61.8
			3	20966	2	0	4	89.0	21757	2	0	4	92.4	22655	2	0	3	97.0
			3-BC	13034	1	0	3	55.3	13527	1	0	3	57.4	14085	1	0	3	59.8
			4	22028	2	0	4	93.5	22859	2	0	4	97.0	23802	2	0	4	101.0
			4-BC	15932	1	0	4	67.6	16534	1	0	4	70.2	17216	1	0	4	73.1
			4W	21001	2	0	4	89.1	21794	2	0	4	92.5	22693	2	0	4	96.3
			4W-BC	13471	1	0	3	57.2	13980	1	0	3	59.3	14557	1	0	3	61.8
5Q	21776	4	0	2	92.4	22598	4	0	2	95.9	23530	4	0	2	99.9			
R	20903	2	0	4	88.7	21693	3	0	4	92.1	22588	3	0	4	95.9			
L	20903	2	0	4	88.7	21693	3	0	4	92.1	22588	3	0	4	95.9			

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LED UPGRADE KIT

DELIVERED LUMENS (CONTINUED)

PL LENS

LED #	Nominal Lumen Package	Drive Current	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
				Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
					B	U	G			B	U	G			B	U	G	
81	15,000	550	1	12880	1	0	1	93.3	13367	1	0	1	96.8	13918	1	0	1	100.8
			1-BC	8246	0	0	1	59.7	8558	0	0	1	62.0	8911	0	0	1	64.6
			2	12088	2	0	2	87.6	12545	2	0	2	90.9	13062	2	0	2	94.6
			2-BC	7700	0	0	2	55.8	7991	0	0	2	57.9	8320	0	0	2	60.3
			3	11989	1	0	2	86.9	12442	1	0	2	90.1	12955	1	0	2	93.9
			3-BC	7454	0	0	2	54.0	7735	0	0	2	56.0	8054	0	0	2	58.4
			4	12596	1	0	3	91.3	13072	1	0	3	94.7	13611	1	0	3	98.6
			4-BC	9111	0	0	2	66.0	9455	0	0	2	68.5	9845	0	0	2	71.3
			4W	12009	2	0	3	87.0	12463	2	0	3	90.3	12977	2	0	3	94.0
			4W-BC	7703	0	0	2	55.8	7994	0	0	2	57.9	8324	1	0	2	60.3
			5Q	12452	3	0	1	90.2	12922	3	0	1	93.6	13455	3	0	1	97.5
			R	11953	2	0	2	86.6	12405	2	0	2	89.9	12916	2	0	2	93.6
L	11953	2	0	2	86.6	12405	2	0	2	89.9	12916	2	0	2	93.6			
108	20,000	550	1	17085	2	0	1	92.4	17730	2	0	1	95.9	18461	2	0	1	99.8
			1-BC	10938	0	0	1	59.2	11351	0	0	1	61.4	11819	0	0	1	63.9
			2	16034	2	0	2	86.7	16640	2	0	2	90.0	17326	2	0	2	93.7
			2-BC	10213	0	0	2	55.2	10599	0	0	2	57.3	11036	0	0	2	59.7
			3	15903	2	0	3	86.0	16503	2	0	3	89.3	17184	2	0	3	92.9
			3-BC	9887	0	0	2	53.5	10260	0	0	2	55.5	10683	1	0	2	57.8
			4	16708	1	0	3	90.4	17339	1	0	4	93.8	18054	2	0	4	97.6
			4-BC	12085	0	0	3	65.4	12541	0	0	3	67.8	13058	0	0	3	70.6
			4W	15930	2	0	4	86.2	16531	2	0	4	89.4	17213	2	0	4	93.1
			4W-BC	10218	1	0	2	55.3	10604	1	0	2	57.4	11041	1	0	3	59.7
			5Q	16517	4	0	2	89.3	17141	4	0	2	92.7	17848	4	0	2	96.5
			R	15855	2	0	3	85.8	16454	2	0	3	89.0	17133	2	0	3	92.7
	L	15855	2	0	3	85.8	16454	2	0	3	89.0	17133	2	0	3	92.7		
	25,000	700	1	20576	2	0	2	87.3	21353	2	0	2	90.6	22233	2	0	2	94.4
			1-BC	13173	0	0	1	55.9	13670	0	0	1	58.0	14234	0	0	1	60.4
			2	19311	2	0	2	82.0	20040	3	0	3	85.1	20867	3	0	3	88.6
			2-BC	12300	0	0	2	52.2	12765	0	0	2	54.2	13291	1	0	2	56.4
			3	19152	2	0	3	81.3	19875	2	0	4	84.4	20695	2	0	3	88.2
			3-BC	11907	1	0	2	50.5	12356	1	0	3	52.4	12866	1	0	3	54.6
			4	20122	2	0	4	85.4	20882	2	0	4	88.6	21743	2	0	4	92.3
			4-BC	14554	0	0	3	61.8	15104	0	0	3	64.1	15727	1	0	4	66.8
			4W	19184	2	0	4	81.4	19909	2	0	4	84.5	20730	2	0	4	88.0
			4W-BC	12306	1	0	3	52.2	12771	1	0	3	54.2	13297	1	0	3	56.4
			5Q	19892	4	0	2	84.4	20643	4	0	2	87.6	21495	4	0	2	91.2
R			19095	2	0	3	81.1	19816	2	0	3	84.1	20633	2	0	3	87.6	
L	19095	2	0	3	81.1	19816	2	0	3	84.1	20633	2	0	3	87.6			

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PHOTOMETRY

WP9L2-108L-550-4K7-1

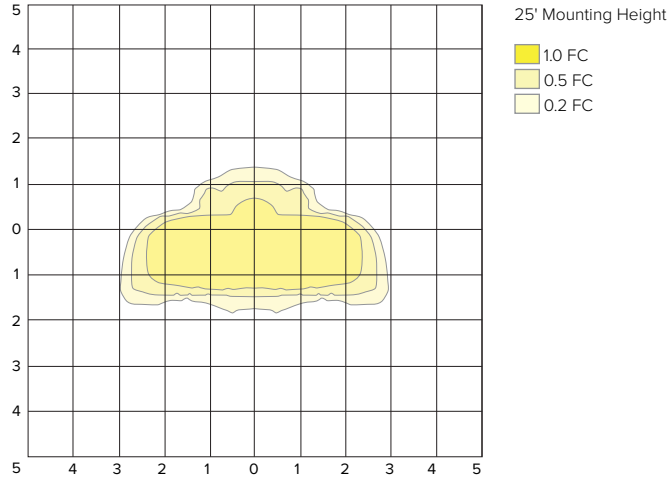
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	22728
Watts	184.89
Efficacy	122.9
IES Type	1
BUG Rating	B2-U0-G2
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	20268	89.2%
Downward House Side	2460	10.8%
Downward Total	22728	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	22728	100%

ISOFOOT CANDLE PLOT



WP9L2-108L-550-4K7-1-BC

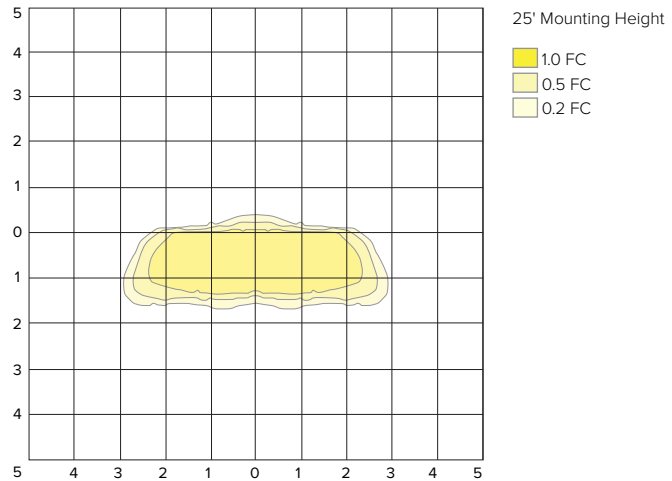
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	14551
Watts	184.89
Efficacy	78.7
IES Type	1
BUG Rating	B0-U0-G1
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14216	97.7%
Downward House Side	335	2.3%
Downward Total	14551	99.9%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	14551	100%

ISOFOOT CANDLE PLOT



WP9L2-108L-550-4K7-2

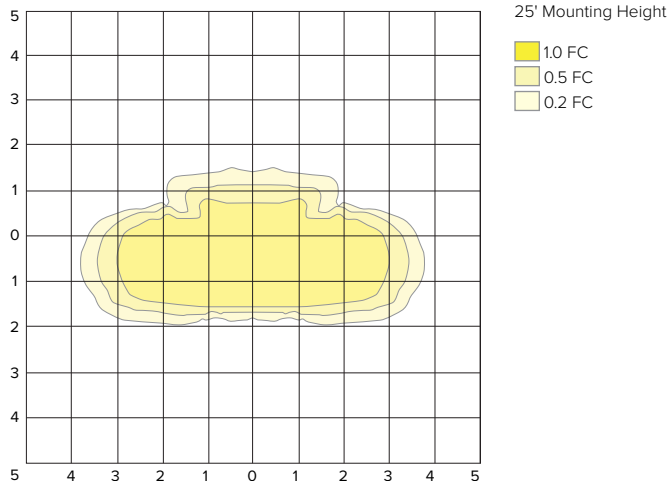
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	21331
Watts	184.89
Efficacy	115.4
IES Type	2
BUG Rating	B3-U0-G3
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	17798	83.4%
Downward House Side	3533	16.6%
Downward Total	21331	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	21331	100%

ISOFOOT CANDLE PLOT



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PHOTOMETRY

WP9L2-108L-550-4K7-2-BC

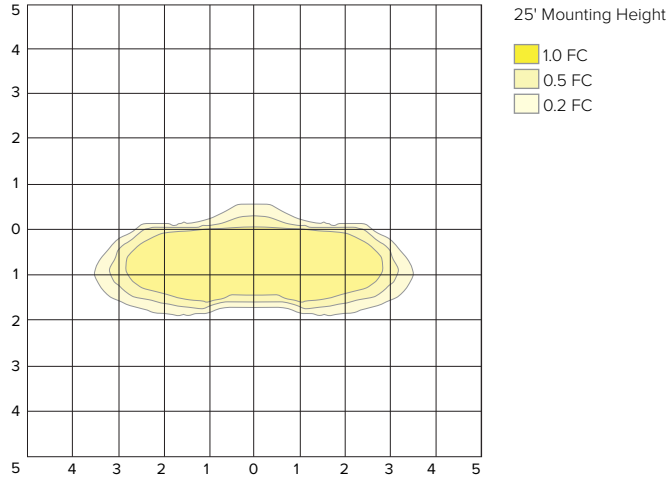
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	13587
Watts	184.89
Efficacy	73.5
IES Type	2
BUG Rating	B1-U0-G2
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	13164	96.9%
Downward House Side	423	3.1%
Downward Total	13587	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	13587	100%

ISOFOOT CANDLE PLOT



WP9L2-108L-550-4K7-3

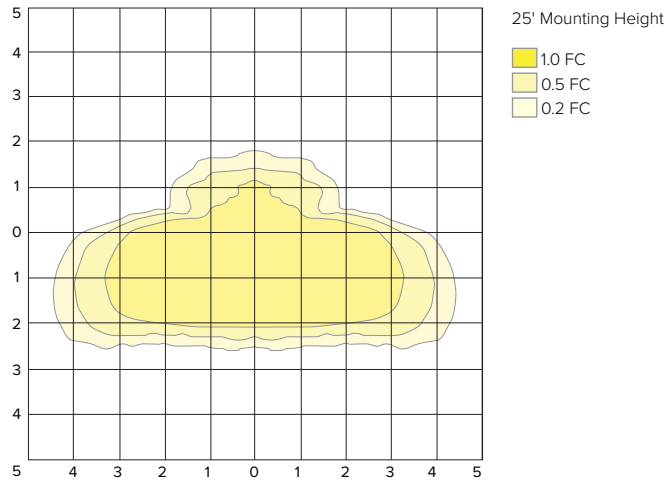
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	21155
Watts	184.89
Efficacy	114.4
IES Type	3
BUG Rating	B2-U0-G4
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	18326	86.6%
Downward House Side	2829	13.3%
Downward Total	21155	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	21155	100%

ISOFOOT CANDLE PLOT



WP9L2-108L-550-4K7-3-BC

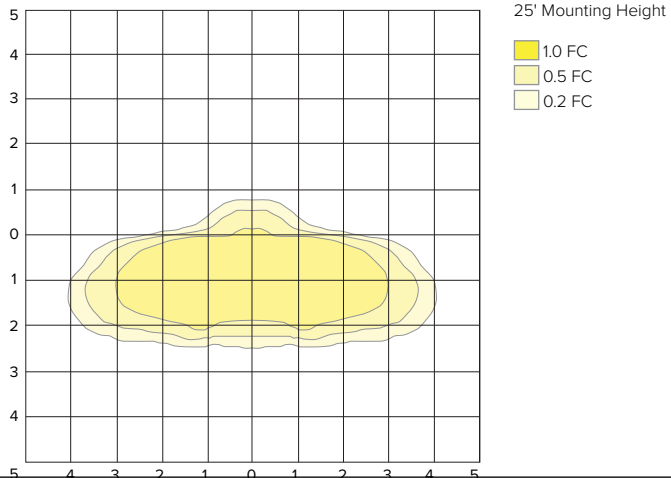
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	13152
Watts	184.89
Efficacy	71.1
IES Type	3
BUG Rating	B1-U0-G3
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	12634	96.0%
Downward House Side	519	3.9%
Downward Total	13152	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	13152	100%

ISOFOOT CANDLE PLOT



WP9LK2

LED UPGRADE KIT

PHOTOMETRY

WP9L2-108L-550-4K7-4

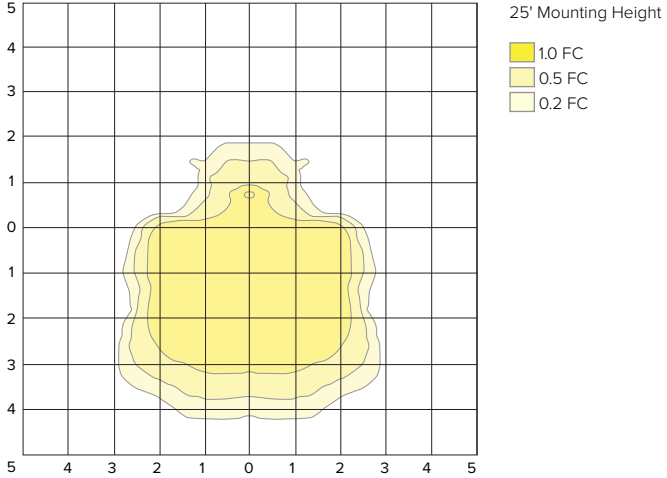
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	22227
Watts	184.89
Efficacy	120.2
IES Type	4
BUG Rating	B2-U0-G4
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	20144	90.6%
Downward House Side	2083	9.4%
Downward Total	22227	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	22227	100%

ISOFOOT CANDLE PLOT



WP9L2-108L-550-4K7-4-BC

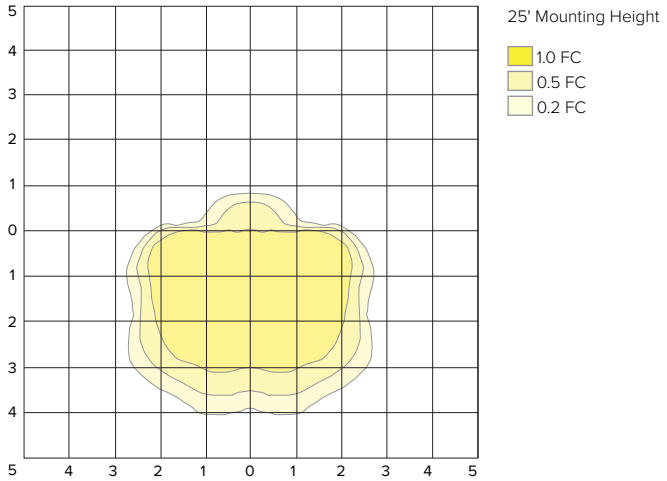
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	16077
Watts	184.89
Efficacy	87.0
IES Type	4
BUG Rating	B1-U0-G4
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15598	97.0%
Downward House Side	480	3.0%
Downward Total	16078	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	16078	100%

ISOFOOT CANDLE PLOT



WP9L2-108L-550-4K7-4W

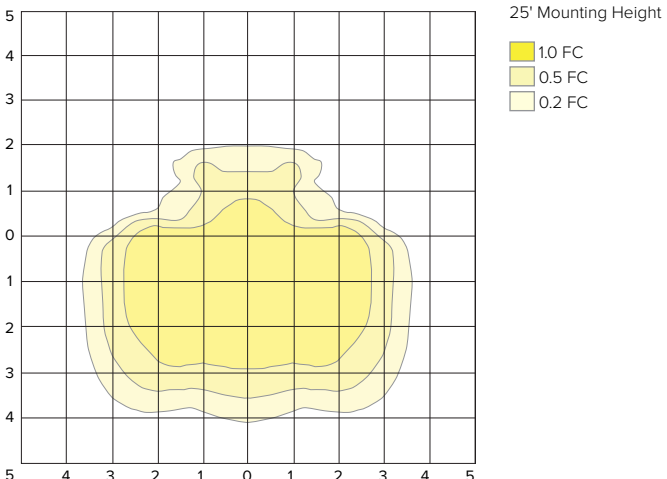
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	21192
Watts	184.89
Efficacy	114.6
IES Type	4
BUG Rating	B2-U0-G4
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	18722	88.4%
Downward House Side	2470	11.6%
Downward Total	21191	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	21191	100%

ISOFOOT CANDLE PLOT



WP9LK2

LED UPGRADE KIT

PHOTOMETRY

WP9L2-108L-550-4K7-4W-BC

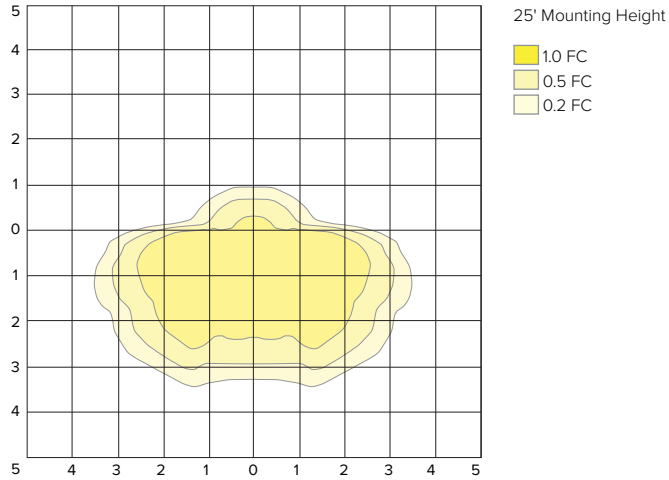
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	13594
Watts	184.89
Efficacy	73.5
IES Type	4
BUG Rating	B1-U0-G3
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	12923	95.1%
Downward House Side	670	4.9%
Downward Total	13594	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	13594	100%

ISOFOOT CANDLE PLOT



WP9L2-108L-550-4K7-5Q

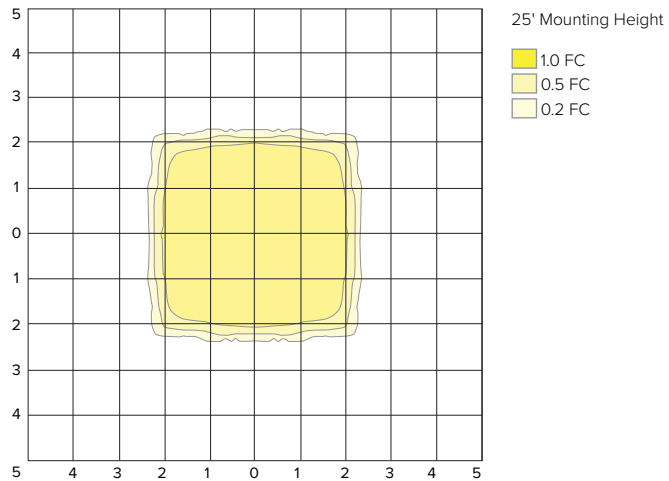
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	21973
Watts	184.89
Efficacy	118.8
IES Type	5
BUG Rating	B4-U0-G2
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	10987	50.0%
Downward House Side	10987	50.0%
Downward Total	21974	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	21974	100%

ISOFOOT CANDLE PLOT



WP9L2-108L-550-4K7-L

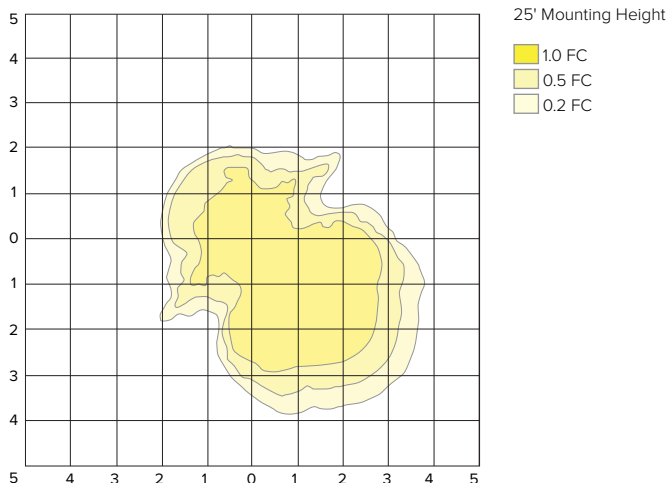
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	21092
Watts	184.89
Efficacy	114.1
IES Type	L
BUG Rating	B2-U0-G4
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	3339	15.8%
Downward House Side	17753	84.2%
Downward Total	21092	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	21092	100%

ISOFOOT CANDLE PLOT



WP9LK2
LED UPGRADE KIT

PHOTOMETRY

WP9L2-108L-550-4K7-R

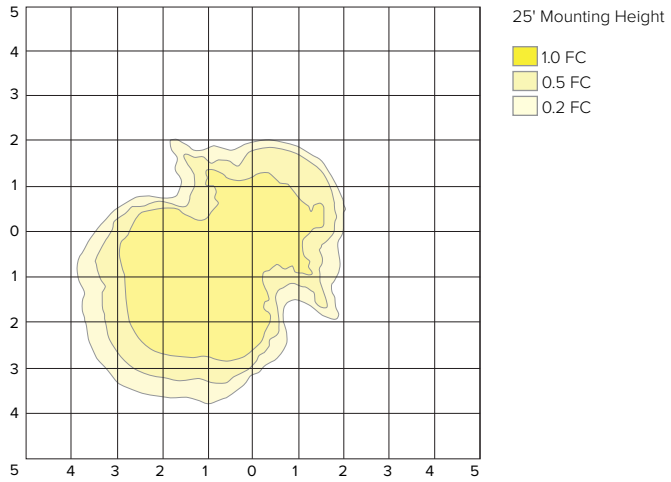
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	21092
Watts	184.89
Efficacy	114.1
IES Type	R
BUG Rating	B2-U0-G4
Mounting Height	25 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	17618	83.6%
Downward House Side	3474	16.4%
Downward Total	21092	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	21092	100%

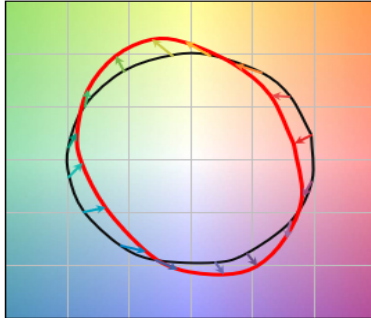
ISOFOOT CANDLE PLOT



WP9LK2
LED UPGRADE KIT

TM-30 DATA

COLOR VECTOR GRAPHIC

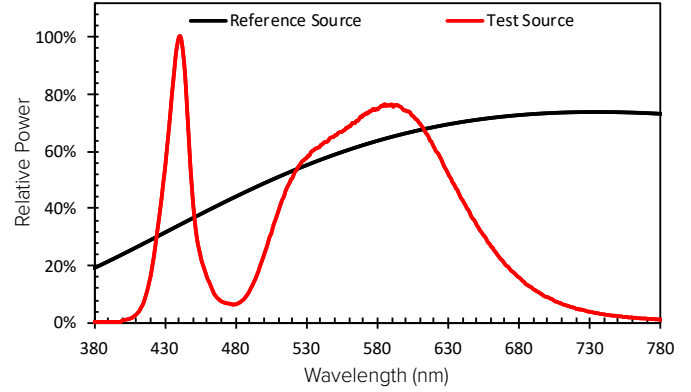


— Reference Illuminant — Test Source

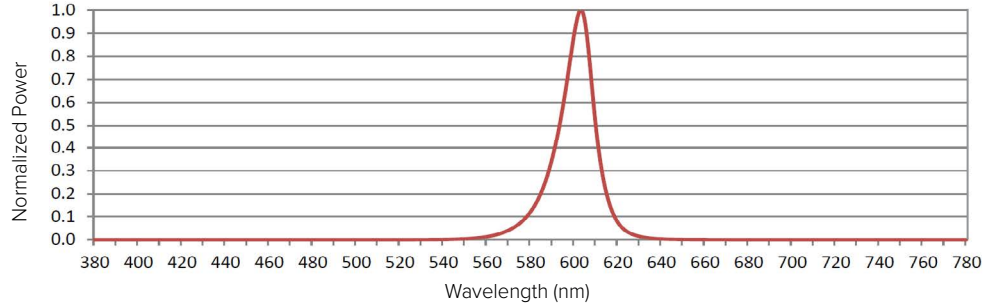
TEST SOURCE

R _f	68
R _g	99
CCT(K)	3947
D _{uv}	0.0004
x	0.3831
y	0.3793
CIE R _a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



AMBER SPECTRAL POWER DISTRIBUTION



ELECTRICAL DATA

LED Count	System Watts	Current	Line Voltage		Amps AC						Min Power Factor	Max. THD (%)	Dimming				
			VAC	Hz	120	208	240	277	347	480			Dimming Range	Source Current Out		Absolute Voltage	
														Min	Max	Min	Max
81 LEDs	138.0	550 mA	120-480	50/60	1.15	0.66	0.58	0.50	0.40	0.29	>0.9	20	10% to 100%	0mA	1mA	0V	10V
108 LEDs	184.9	550 mA			1.54	0.89	0.77	0.67	0.53	0.39							
	235.6	700 mA			1.96	1.13	0.98	0.85	0.68	0.49							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Ambient Temp.	0	25,000	36,000	50,000	100,000	Reported L70
25°C / 77°F	100%	93.41%	91.12%	88.30%	78.90%	>60khrs

CRI Lumen Multiplier for 80 and 90 CRI		
CCT	80 CRI	90 CRI
2700K	0.859	0.655
3000K	0.919	.7033
3500K	0.906	0.732
4000K	0.8941	.734
5000K	0.879	.7712
Scaling factor of 5000K 70CRI lumen packages		