

Warp9®

FEATURES

- TIR Strike Optics
- Patented low profile luminaire
- 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

CONTROL TECHNOLOGY

LIGHT GRID+

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
- Solid barrier wall separates optical and electrical compartments
- Double-thick wall with gussets on the support-arm mounting end
- Housing forms a half cylinder with 55° front face plane providing a recess to allow a flush single-latch detail
- All hardware is stainless steel or electro-zinc plated steel
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat
- One-piece die-cast, low copper (<0.6% Cu) aluminum alloy lens frame with 1" minimum depth around the gasket flange
- Optional clear 1/8" thick tempered glass lens retained by eight steel clips with full silicone gasketing around the perimete
- Optional, fixture supplied with a one-piece flat, clear, UV stabilized polycarbonate, fully gasketed, replacing the standard tempered glass lens. CAUTION: Use only when vandalism is anticipated to be high. Useful life is limited by UV discoloration from sunlight. A program of regular inspection and periodic replacement is highly recommended to maintain optimum fixture performance
- One-piece extruded aluminum arm with internal bolt guides and fully radiussed top and bottom
- Luminaire-to-pole attachment is by internal draw bolts, and includes a pole reinforcing plate with wire strain relief
- Arm is circular cut for specified round pole

CONSTRUCTION (CONTINUED)

- Optional cast, low copper aluminum horizontal slip-fitter with adaptor plate to secure the luminaire to 2" IPS pipe size arms
- Optional cast aluminum wall mount plate assembly. Attaches to the wall over the junction box. Luminaire attaches to the wall plate

OPTICS

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

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

- Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver

**RELATED PRODUCTS**

Ouro

Pavilion

PGL8

ELECTRICAL (CONTINUED)

- 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

CONTROLS

- 7-pin Receptacle and Button Photocell

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet location and 40°C ambient temperature
- IDA approved, 3000K and warmer CCTs only
- ANSI C136.31-2010 3G Vibration tested and compliant
- RoHS compliant
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 6/06/2020. See Buy American Solutions

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	1,783–14,924
Wattage Range	31.6–116.5
Efficacy Range (LPW)	55.8–134.4
Reported Life (Hours)	L70/60,000
Weight	30 lbs 13.6 kg
EPA Side View	.52

ORDERING GUIDE

Example: 1SA-WP9SA2-54L-405-3K7-3-CLR-SQ-UNV-BLT-7PR-SF

CATALOG #

WPS9A2						
Mounting	Model	LED Engine	CCT/CRI ⁶	Distribution	Lens Options	House Side Shield
1SA Single Arm Mount	WP9SA2 Warp9 2.0 Small Fixture	27L-350 27 LEDs - 3,000 Lumens	AM ⁷ Monochromatic Amber	1 Type I	(Blank) No Lens	BC ¹ Backlight Control
1W Wall Mount		54L-405 54 LEDs - 7,500 Lumens	27K8 ² 2700K, 80CRI	2 Type II	CLR Clear Glass Lens	
HSF Horizontal Slipfitter		81L-450 81 LEDs - 12,500 Lumens	27K9 ² 2700K, 90CRI	3 Type III	CP Clear Polycarbonate Lens	
			3K7 3000K, 70CRI	4 Type IV Forward		
			3K8 ² 3000K, 80CRI	4W Type IV Wide		
			3K9 ² 3000K, 90CRI	5QM Type V Square Medium		
			35K8 ² 3500K, 80CRI	R Corner Right		
			35K9 ² 3500K, 90CRI	L Corner Left		
		Equivalent WP9S-P35 = 54L-405 WP9S-P70 = 81L-450 WP9S-E35 = 54L-405	4K7 4000K, 70CRI			
			4K8 ² 4000K, 80CRI			
			4K9 ² 4000K, 90CRI			
			5K7 5000K, 70CRI			
			5K8 ² 5000K, 80CRI			
			5K9 ² 5000K, 90CRI			

Mounting Options	Voltage	Fixture Finish	Photocell Options	Fuse Options	Other Options
VSF ⁸ Vertical Slipfitter Mount for 2" pipe tenon (2-3/8" O.D. x 4" LONG)	UNV 120-277V	BLS Black Gloss Smooth	7PR 7-Pin Photocell Receptacle	SF Single Fuse 120, 277, 347 Line Volts	TPL Tamper Resistant Latch
SVSF ⁸ Vertical Slipfitter Mount square for 2" pipe tenon (2-3/8" O.D. x 4" LONG)	347 347V	BLT Black Matte Textured	PC Button Photocell ⁹	DF Double Fuse 208, 240, 480 Line Volts	
3 Side Arm Mount 3" O.D. Pole	480 480V	DBS Dark Bronze Gloss Smooth			
3.38 Side Arm Mount 3.38" O.D. Pole		DBT Dark Bronze Matte Textured			
3.5 Side Arm Mount 3.5" O.D. Pole		GTT Graphite Matte Textured			
3.75 Side Arm Mount 3.75" O.D. Pole		LGS Light Grey Gloss Smooth			
4 Side Arm Mount 4" O.D. Pole		LGT Light Grey Matte Textured			
4.5 Side Arm Mount 4.5" O.D. Pole		PSS Platinum Silver Smooth			
5 Side Arm Mount 5" O.D. Pole		VGT Verde Green Matte Textured			
6 Side Arm Mount 6" O.D. Pole		WHS White Gloss Smooth			
SQ Side Arm Mount Square Pole		WHT White Matte Textured			
		Color Option			
		CC Custom Color			

Control Options	Control Accessories ³
SCH-R Round Pole Mounted (Occupancy Sensor up to 16' to 30')	WIR-RME-L LightGRID+™ 7-pin Module
SCH-S Square Pole Mounted (Occupancy Sensor up to 16' to 30')	NXOFM-1R1D-UNV NX 7-Pin Twist-Lock® with NX Networked Wireless Radio, Integral Automatic Dimming Photocell, Integral Single Pole Relay with Dimming, and Bluetooth Programming

Notes:

- 1 Back Light Control not available for Type 5Q and Type 5W
- 2 See Lumen Multiplier chart on Page 13 for lumen scaling factor. Consult factory for additional details.
- 3 Not available with other sensor or wireless control options
- 6 5-step MacAdam Ellipse Binning is standard. Consult factory for 3-step MacAdam Ellipse Binning
- 7 Turtle Friendly.
- 8 For all arm configurations, please refer to page 4_VSF/SVSF options ordered separately.
- 9 Not available in 480V

SPECIFICATIONS (CONTINUED)

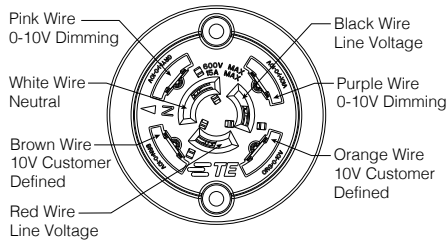
CONTROLS

BUTTON PHOTOCELL

- Factory installed photocell inside housing with a fully gasketed sensor on the side wall. For multiple fixture mountings, one fixture is supplied with a photocell to operate the others

7PR

- Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by-others
- Standard customer operation modes:
 1. Traditional on/off photoelectric control
 2. 5-pin wireless photoelectric control for added dimming feature
 3. 7-pin wireless photoelectric control for dimming and additional I/O connections for customer use



LightGRID+™

- LightGRID+™ wireless control modules allow an individual fixture to be managed, monitored and measured. The modules communicate securely over a robust certified meshed radio signal. The LightGRID+™ modules provide on/off/dim control, external device input, alerts and metering.

WIR-RME-L

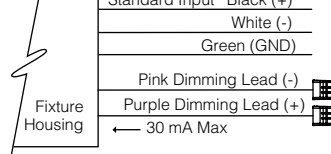
- LightGRID+™ External Module, 120-480V, 1000ft range (LOS), Internal Photocell, 1 Digital Input, Compatible with the A-25-7H option

NX LIGHTING CONTROLS

- NX lighting controls platform utilizes a Distributed Network Architecture (DNA) that connects intelligent devices including luminaires, controllers, panels, occupancy sensors, photocells, wall switches and dimmers, creating a system with an unmatched level of reliability, scalability and simplicity.

DIMMING:

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver



- Modular wiring harness in the service area provides user access to the dimming circuitry
- Dimming circuitry compatible with 0-10V, user-defined control devices
- Optional factory programmed dimming profile

POLE MOUNTED

ROUND POLE-MOUNTED OCCUPANCY SENSOR UP TO 30'

SCH-R

- Round Pole Mounted Occupancy Sensor up to 30' - Outdoor occupancy sensor with 0-10V interface dimming control mounts directly to the pole. Wide 360° pattern. Module colors available Black, Gray, and White. Module is cut for round pole mounting. Pole diameter needed. Pole to be drilled in the field with provided installation instructions
- Ordering Example: SCH-R41/277/BL³

SQUARE POLE-MOUNTED OCCUPANCY SENSOR UP TO 30'

SCH-S

- Square Pole Mounted Occupancy Sensor up to 30' - Outdoor occupancy sensor with 0-10V interface dimming control mounts directly to the pole. Wide 360° pattern. Module colors available Black, Gray, and White. Module is cut for square pole mounting

- Ordering Example: SCH-S/277/BL³

ASTRODIM

- AstroDIM provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times

OPTIONAL FUSING:

- SF for 120, 277, and 347 Line volts
- DF for 208, 240, and 480 Line volts
- High temperature fuse holders factory installed inside the fixture housing
- Fuse is included

CAUTION:

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

Notes:

- 1 Pole diameter
- 2 Voltage
- 3 Color

PRODUCT EXCEPTIONS & DETAILS

Configuration			EPA
	1A	1 Arm Side Mount	0.52
	1W	Single Wall Mount	n/a
	HSF	Horizontal Slipfitter	n/a

VSF/SVSF Configuration			
	1SA		3ST
	2SB		3SY
	2SL		4SC

MOUNTING OPTIONS

SUPPORT ARM:

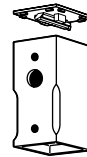
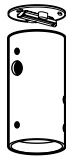
- Die-cast, low copper aluminum alloy, with splice access cover
- Die-cast pole adaptor and an internal reinforcing plate are provided with a wire strain relief
- The arm adapter is square or circular cut for specified pole size and shape
- For field wire connections, a terminal block is mounted in the arm cavity and accessible behind the splice access cover. The block accepts #14 to #8 wire sizes and is factory prewired to the electrical module's quick-disconnect plug inside the electrical compartment

Fixture Drilling Instructions:

For AR, CC, CCS, and ET Fixtures

OPTIONAL VERTICAL SLIP-FITTER (VSF/SVSF):

- Internally accessible slip-fitter attaches to a 2-3/8" x 4" long tenon and allows hands-free wiring and maintenance
- Available for round and square poles



- For VSF arm configurations, please use 4". Mounting option on fixture ordering configuration. The optional VSF/SVSF will need to be ordered separately.
- SVSF use square configuration.

Ordering example for round:

- 2 SA/WP9SA2/54L-500/35K8/3/CLR/**4.00**/UNV/BLT
- 1 VSF-2SB

Ordering example for square:

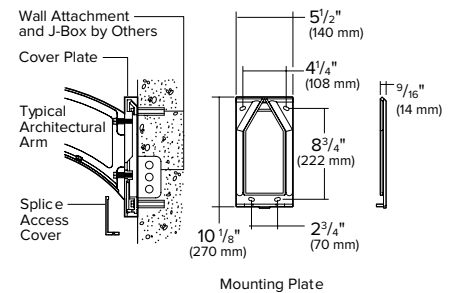
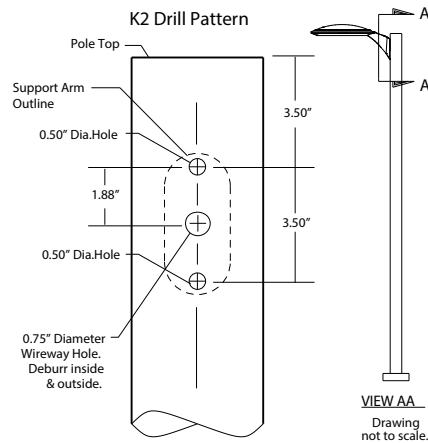
- 2 1SA/WP9SA2/54L-500/35K8/3/CLR/**SQ**/UNV/BLT
- 1 SVSF-2SB

VSF	SVSF
VSF-1SA	SVSF-1SA
VSF-2SB	SVSF-2SB
VSF-2SL	SVSF-2SL
VSF-3ST	SVSF-3ST
VSF-3SY	SVSF-3SY
VSF-4SC	SVSF-4SC

WALL MOUNT

1W

- A cast mounting plate of 356 alloy, low-copper (<0.6% Cu) aluminum, is mounted to the wall with bolts (by others). Fixture and arm are mounted to a cast 356 alloy aluminum cover plate before attaching to the wall mounting plate. The fixture-arm-cover plate assembly is hooked to the wall mounting plate, and secured with stainless steel screws provided. After mounting to the wall, field splices are made at the opening in the cover plate, then covered by a cast 356 alloy aluminum plate that blends with the cover plate design. Complete fixture-arm-cover plate assembly can therefore be mounted before field splices are made. Cover plate is finished to match arm and fixture powder coat color
- Optional Wall Mount: (CC is illustration the same for all site area?)
- Optional, cast aluminum mounting plate attaches to a wall over a junction box and the speed mount is bolted to the cover plate. To complete the wiring, the luminaire assembly slides over the mounting plate.



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	
27	3,000	350	1	3806	1	0	0	120.5	3940	1	0	0	124.8	4091	1	0	0	129.5
			1-BC	2483	0	0	0	78.6	2570	0	0	0	81.4	2669	0	0	0	84.5
			2	3614	1	0	1	114.4	3741	1	0	1	118.5	3884	1	0	1	123.0
			2-BC	2322	0	0	0	73.5	2404	0	0	0	76.1	2496	0	0	1	79.0
			3	3604	1	0	1	114.1	3731	1	0	1	118.1	3874	1	0	1	122.7
			3-BC	2227	0	0	1	70.5	2305	0	0	1	73.0	2393	0	0	1	75.8
			4	3761	0	0	1	119.1	3892	0	0	1	123.2	4042	1	0	1	128.0
			4-BC	2753	0	0	1	87.2	2849	0	0	1	90.2	2959	0	0	1	93.7
			4W	3585	1	0	1	113.5	3711	1	0	1	117.5	3853	1	0	2	122.0
			4W-BC	2327	0	0	1	73.7	2409	0	0	1	76.3	2502	0	0	1	79.2
			5Q	3736	2	0	0	118.3	3868	2	0	0	122.5	4016	2	0	0	127.2
			R	3572	1	0	1	113.1	3697	1	0	1	117.1	3839	1	0	1	121.6
			L	3572	1	0	1	113.1	3697	1	0	1	117.1	3839	1	0	1	121.6
			1	8633	1	0	1	125.0	8936	1	0	1	129.4	9279	1	0	1	134.4
54	7,500	405	1-BC	5632	0	0	0	81.6	5830	0	0	1	84.4	6053	0	0	1	87.7
			2	8197	1	0	2	118.7	8485	1	0	2	122.9	8810	1	0	2	127.6
			2-BC	5267	0	0	1	76.3	5452	0	0	1	79.0	5662	0	0	1	82.0
			3	8175	1	0	2	118.4	8462	1	0	2	122.6	8787	1	0	2	127.3
			3-BC	5050	0	0	2	73.2	5228	0	0	2	75.7	5428	0	0	2	78.6
			4	8529	1	0	2	123.5	8828	1	0	2	127.9	9167	1	0	2	132.8
			4-BC	6244	0	0	2	90.4	6463	0	0	2	93.6	6711	0	0	2	97.2
			4W	8131	1	0	2	117.8	8417	1	0	2	121.9	8740	1	0	2	126.6
			4W-BC	5279	0	0	2	76.5	5464	0	0	2	79.1	5674	0	0	2	82.2
			5Q	8475	3	0	1	122.8	8773	3	0	1	127.1	9109	3	0	1	131.9
			R	8101	1	0	2	117.3	8386	1	0	2	121.5	8707	1	0	2	126.1
			L	8101	1	0	2	117.3	8386	1	0	2	121.5	8707	1	0	2	126.1
			1	13885	1	0	1	119.2	14373	1	0	1	123.4	14924	1	0	1	127.5
			1-BC	9058	0	0	1	77.8	9376	0	0	1	80.5	9736	0	0	1	83.5
			2	13183	2	0	2	113.2	13647	2	0	2	117.1	14170	2	0	2	122.0
81	12,500	450	2-BC	8472	0	0	2	72.7	8770	0	0	2	75.3	9106	0	0	2	78.1
			3	13149	2	0	2	112.9	13611	2	0	3	116.8	14133	2	0	3	121.7
			3-BC	8123	0	0	2	69.7	8409	0	0	2	72.2	8731	0	0	2	75.4
			4	13717	1	0	3	117.7	14199	1	0	3	121.9	14744	1	0	3	126.6
			4-BC	10042	0	0	2	86.2	10395	0	0	3	89.2	10794	0	0	3	92.7
			4W	13078	1	0	3	112.3	13538	2	0	3	116.2	14057	2	0	3	120.4
			4W-BC	8491	0	0	2	72.9	8789	0	0	2	75.4	9126	0	0	2	78.2
			5Q	13631	3	0	1	117.0	14110	3	0	1	121.1	14651	3	0	2	126.2
			R	13030	2	0	2	111.8	13488	2	0	2	115.8	14005	2	0	2	120.5
			L	13030	2	0	2	111.8	13488	2	0	2	115.8	14005	2	0	2	120.5

WP9SA2

ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

CLR LENS

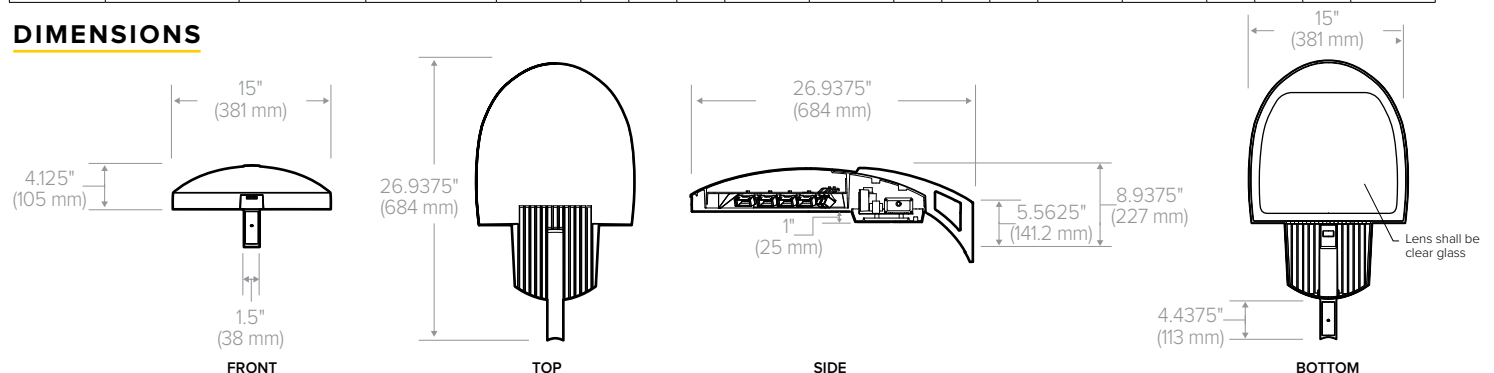
LED #	Nominal Lumen Package	Drive Current	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
				Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
					B	U	G			B	U	G			B	U	G	
27	3,000	350	1	3354	0	0	0	106.2	3472	0	0	0	109.9	3605	1	0	0	114.2
			1-BC	2188	0	0	0	69.3	2265	0	0	0	71.7	2352	0	0	0	74.5
			2	3185	1	0	1	100.8	3297	1	0	1	104.4	3423	1	0	1	108.4
			2-BC	2047	0	0	0	64.8	2118	0	0	0	67.1	2200	0	0	0	69.7
			3	3176	1	0	1	100.6	3288	1	0	1	104.1	3414	1	0	1	108.1
			3-BC	1962	0	0	1	62.1	2031	0	0	1	64.3	2109	0	0	1	66.8
			4	3314	1	0	1	104.9	3430	1	0	1	108.6	3562	0	0	1	112.8
			4-BC	2426	0	0	1	76.8	2511	0	0	1	79.5	2607	0	0	1	82.6
			4W	3159	1	0	1	100.0	3270	1	0	1	103.6	3396	1	0	1	107.5
			4W-BC	2051	0	0	1	64.9	2123	0	0	1	67.2	2205	0	0	1	69.8
			5Q	3293	2	0	0	104.3	3408	2	0	0	107.9	3539	2	0	0	112.1
			R	3148	1	0	1	99.7	3258	1	0	1	103.2	3383	1	0	1	107.1
			L	3148	1	0	1	99.7	3258	1	0	1	103.2	3383	1	0	1	107.1
54	7,500	405	1	7608	1	0	1	110.2	7875	1	0	1	114.1	8177	1	0	1	118.4
			1-BC	4963	0	0	0	71.9	5138	0	0	0	74.4	5335	0	0	0	77.3
			2	7223	1	0	2	104.6	7477	1	0	2	108.3	7764	1	0	2	112.5
			2-BC	4642	0	0	1	67.2	4805	0	0	1	69.6	4989	0	0	1	72.3
			3	7205	1	0	2	104.4	7458	1	0	2	108.0	7744	1	0	2	112.2
			3-BC	4451	0	0	1	64.5	4607	0	0	2	66.7	4784	0	0	2	69.3
			4	7516	1	0	2	108.9	7780	1	0	2	112.7	8079	1	0	2	117.0
			4-BC	5502	0	0	2	79.7	5696	0	0	2	82.5	5914	0	0	2	85.7
			4W	7166	1	0	2	103.8	7418	1	0	2	107.4	7702	1	0	2	111.6
			4W-BC	4652	0	0	2	67.4	4816	0	0	2	69.8	5000	0	0	2	72.4
			5Q	7469	2	0	1	108.2	7731	3	0	1	112.0	8028	3	0	1	116.3
			R	7139	1	0	2	103.4	7390	1	0	2	107.0	7674	1	0	2	111.1
			L	7139	1	0	2	103.4	7390	1	0	2	107.0	7674	1	0	2	111.1
81	12,500	450	1	12236	1	0	1	105.0	12666	1	0	1	108.7	13152	1	0	1	112.9
			1-BC	7983	0	0	1	68.5	8263	0	0	1	70.9	8580	0	0	1	73.6
			2	11618	2	0	2	99.7	12026	2	0	2	103.2	12488	2	0	2	107.2
			2-BC	7466	0	0	2	64.1	7728	0	0	2	66.3	8025	0	0	2	68.9
			3	11588	1	0	2	99.5	11995	1	0	2	103.0	12455	1	0	2	106.9
			3-BC	7159	0	0	2	61.4	7410	0	0	2	63.6	7694	0	0	2	66.0
			4	12089	1	0	3	103.8	12514	1	0	3	107.4	12993	1	0	3	111.5
			4-BC	8850	0	0	2	76.0	9161	0	0	2	78.6	9512	0	0	2	81.7
			4W	11526	1	0	3	98.9	11930	1	0	3	102.4	12388	1	0	3	106.3
			4W-BC	7483	0	0	2	64.2	7745	0	0	2	66.5	8042	0	0	2	69.0
			5Q	12013	3	0	1	103.1	12435	3	0	1	106.7	12911	3	0	1	110.8
			R	11483	2	0	2	98.6	11886	2	0	2	102.0	12342	2	0	2	105.9
			L	11483	2	0	2	98.6	11886	2	0	2	102.0	12342	2	0	2	105.9

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	
27	3,000	350	1	3048	0	0	0	96.5	3155	0	0	0	99.9	3276	0	0	0	103.7
			1-BC	1989	0	0	0	63.0	2058	0	0	0	65.2	2137	0	0	0	67.7
			2	2894	1	0	1	91.6	2996	1	0	1	94.9	3111	1	0	1	98.5
			2-BC	1860	0	0	0	58.9	1925	0	0	0	61.0	1999	0	0	0	63.3
			3	2887	1	0	1	91.4	2988	1	0	1	94.6	3103	1	0	1	98.2
			3-BC	1783	0	0	1	56.5	1846	0	0	1	58.5	1917	0	0	0	60.7
			4	3012	0	0	1	95.4	3117	0	0	1	98.7	3237	0	0	1	102.5
			4-BC	2205	0	0	1	69.8	2282	0	0	1	72.3	2370	0	0	1	75.0
			4W	2871	0	0	1	90.9	2972	1	0	1	94.1	3086	1	0	1	97.7
			4W-BC	1864	0	0	1	59.0	1929	0	0	1	61.1	2003	0	0	1	63.4
			5Q	2992	1	0	0	94.8	3098	2	0	0	98.1	3216	2	0	0	101.8
			R	2860	1	0	1	90.6	2961	1	0	1	93.8	3075	1	0	1	97.4
			L	2860	1	0	1	90.6	2961	1	0	1	93.8	3075	1	0	1	97.4
54	7,500	405	1	6914	1	0	0	100.1	7157	1	0	1	103.7	7431	1	0	1	107.6
			1-BC	4510	0	0	0	65.3	4669	0	0	0	67.6	4848	0	0	0	70.2
			2	6565	1	0	1	95.1	6795	1	0	1	98.4	7056	1	0	1	102.2
			2-BC	4219	0	0	1	61.1	4367	0	0	1	63.3	4534	0	0	1	65.7
			3	6547	1	0	2	94.8	6778	1	0	2	98.2	7037	1	0	2	101.9
			3-BC	4045	0	0	1	58.6	4187	0	0	1	60.6	4348	0	0	1	63.0
			4	6831	1	0	2	98.9	7071	1	0	2	102.4	7342	1	0	2	106.3
			4-BC	5001	0	0	2	72.4	5176	0	0	2	75.0	5375	0	0	2	77.9
			4W	6512	1	0	2	94.3	6741	1	0	2	97.6	7000	1	0	2	101.4
			4W-BC	4228	0	0	2	61.2	4376	0	0	2	63.4	4544	0	0	2	65.8
			5Q	6787	2	0	1	98.3	7026	2	0	1	101.8	7295	2	0	1	105.7
			R	6488	1	0	2	94.0	6716	1	0	2	97.3	6974	1	0	2	101.0
			L	6488	1	0	2	94.0	6716	1	0	2	97.3	6974	1	0	2	101.0
81	12,500	450	1	11120	1	0	1	95.5	11511	1	0	1	98.8	11953	1	0	1	102.6
			1-BC	7255	0	0	1	62.3	7509	0	0	1	64.5	7797	0	0	1	66.9
			2	10558	2	0	2	90.6	10929	2	0	2	93.8	11349	2	0	2	97.4
			2-BC	6785	0	0	2	58.2	7024	0	0	2	60.3	7293	0	0	2	62.6
			3	10531	1	0	2	90.4	10901	1	0	2	93.6	11319	1	0	2	97.3
			3-BC	6506	0	0	2	55.8	6734	0	0	2	57.8	6993	0	0	2	60.0
			4	10986	1	0	2	94.3	11372	1	0	3	97.6	11808	1	0	3	101.4
			4-BC	8043	0	0	2	69.0	8326	0	0	2	71.5	8645	0	0	2	74.2
			4W	10474	1	0	3	89.9	10842	1	0	3	93.1	11258	1	0	3	96.6
			4W-BC	6800	0	0	2	58.4	7039	0	0	2	60.4	7309	0	0	2	62.7
			5Q	10917	3	0	1	93.7	11300	3	0	1	97.0	11734	3	0	1	100.7
			R	10436	1	0	2	89.6	10802	2	0	2	92.7	11216	2	0	2	96.3
			L	10436	1	0	2	89.6	10802	2	0	2	92.7	11216	2	0	2	96.3

DIMENSIONS



WP9SA2

ARCHITECTURAL AREA/SITE

PHOTOMETRY

WP9S-54L-405-4K7-1

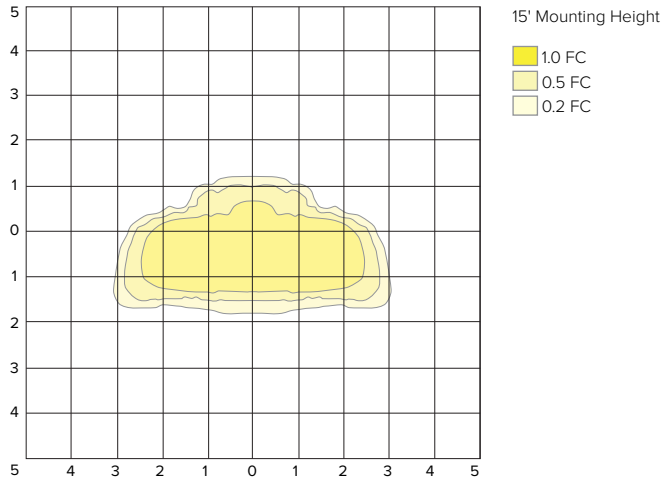
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	8936
Watts	69
Efficacy	129.5
IES Type	I
BUG Rating	B1-U0-G1
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	7988	89.3%
Downward House Side	949	10.7%
Downward Total	8936	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	8936	100%

ISOFOOT CANDLE PLOT



WP9S-54L-405-4K7-1-BC

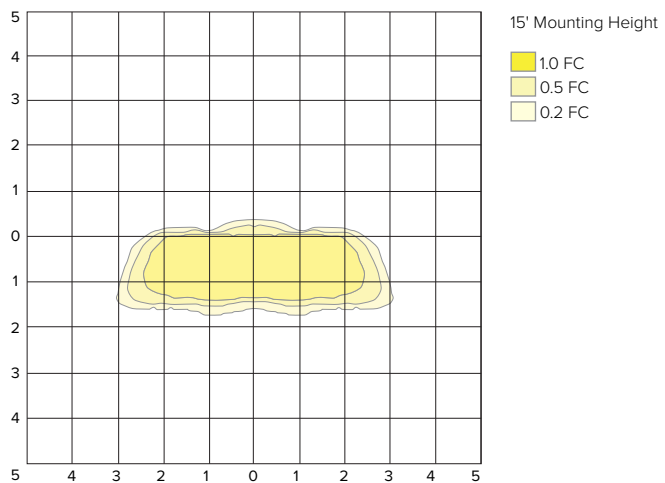
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	5830
Watts	69
Efficacy	84.5
IES Type	II
BUG Rating	B0-U0-G2
Mounting Height	15 ft
Grid Scale	15 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5687	97.5%
Downward House Side	143	2.5%
Downward Total	5830	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	5830	100%

ISOFOOT CANDLE PLOT



WP9S-54L-405-4K7-2

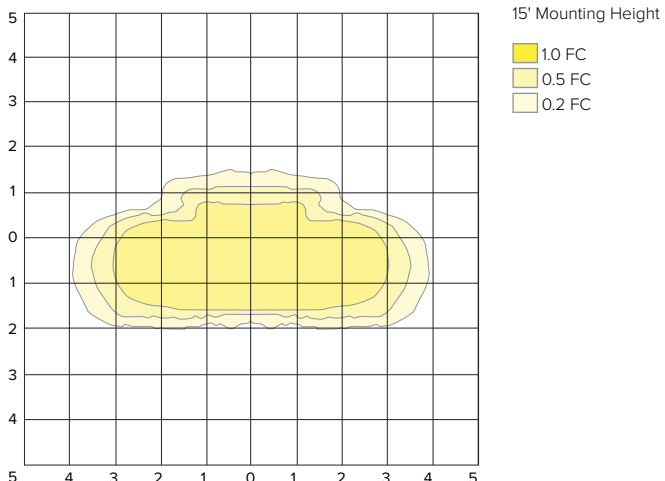
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	8484
Watts	69
Efficacy	123.0
IES Type	II
BUG Rating	B1-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	7083	83.5%
Downward House Side	1401	16.5%
Downward Total	8484	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	8484	100%

ISOFOOT CANDLE PLOT



WP9SA2

ARCHITECTURAL AREA/SITE

PHOTOMETRY

WP9S-54L-405-4K7-2-BC

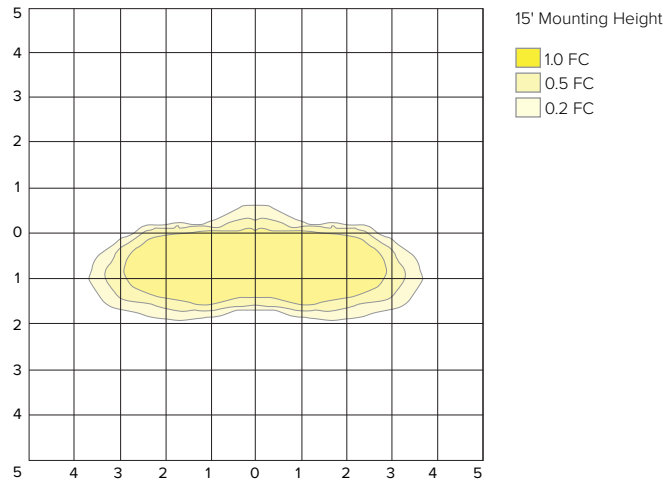
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	5452
Watts	69
Efficacy	79.0
IES Type	II
BUG Rating	B0-U0-G1
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5277	96.8%
Downward House Side	175	3.2%
Downward Total	5452	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	5452	100%

ISOFOOT CANDLE PLOT



WP9S-54L-405-4K7-3

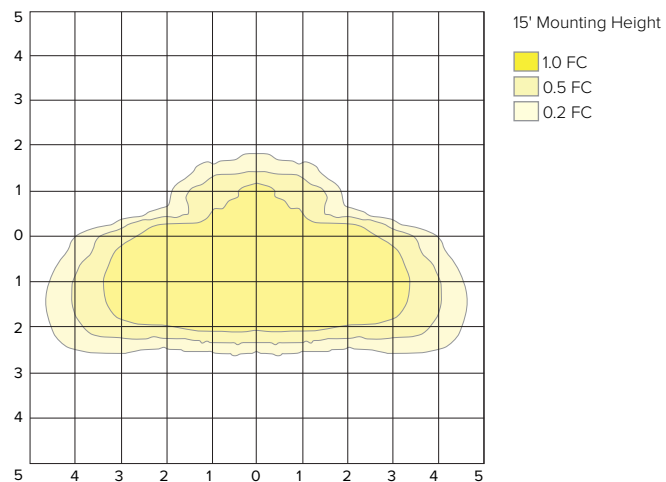
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	8462
Watts	69
Efficacy	122.6
IES Type	III
BUG Rating	B1-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	7316	86.5%
Downward House Side	1146	13.5%
Downward Total	8462	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	8462	100%

ISOFOOT CANDLE PLOT



WP9S-54L-405-4K7-3-BC

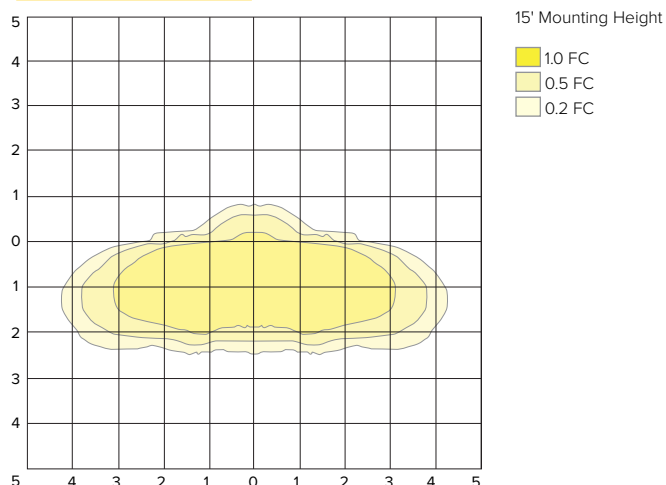
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	5228
Watts	69
Efficacy	75.8
IES Type	III
BUG Rating	B0-U0-G2
Mounting Height	15 ft
Grid Scale	15 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5030	96.2%
Downward House Side	199	3.8%
Downward Total	5228	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	5228	100%

ISOFOOT CANDLE PLOT



WP9SA2

ARCHITECTURAL AREA/SITE

PHOTOMETRY

WP9S-54L-405-4K7-4

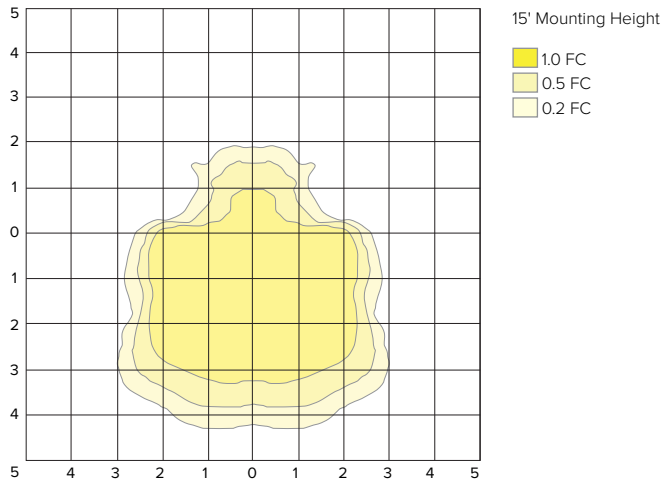
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	8829
Watts	69
Efficacy	128.0
IES Type	IV
BUG Rating	B1-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	7904	89.5%
Downward House Side	926	10.5%
Downward Total	8830	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	8830	100%

ISOFOOT CANDLE PLOT



WP9S-54L-405-4K7-4-BC

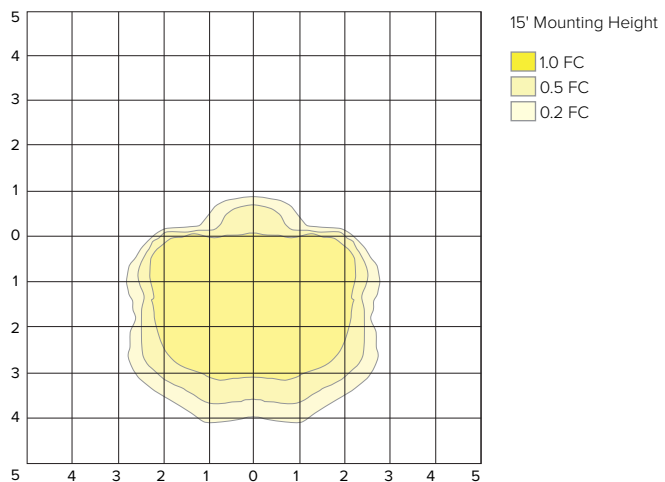
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	6463
Watts	69
Efficacy	93.7
IES Type	IV
BUG Rating	B0-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	6187	95.7%
Downward House Side	277	4.3%
Downward Total	6464	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	6464	100%

ISOFOOT CANDLE PLOT



WP9S-54L-405-4K7-4W

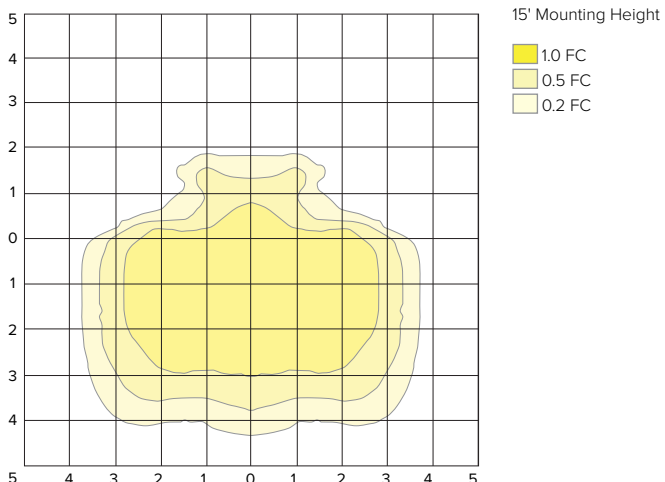
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	8417
Watts	69
Efficacy	122.0
IES Type	IV
BUG Rating	B1-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	7533	89.5%
Downward House Side	884	10.5%
Downward Total	8417	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	8417	100%

ISOFOOT CANDLE PLOT



WP9SA2

ARCHITECTURAL AREA/SITE

PHOTOMETRY

WP9S-54L-405-4K7-4W-BC

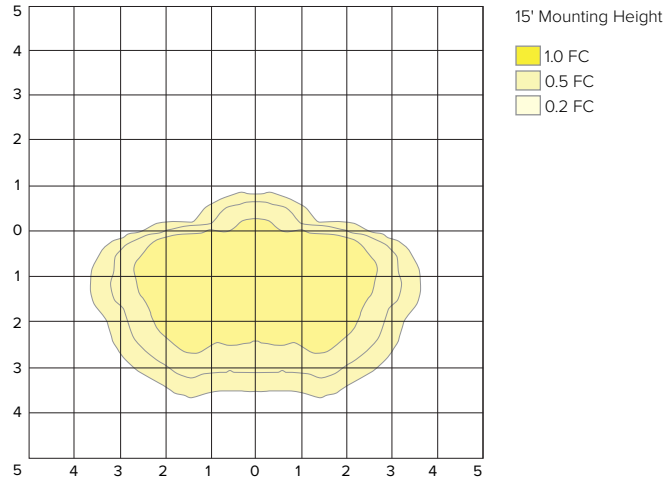
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	5464
Watts	69
Efficacy	79.2
IES Type	III
BUG Rating	B0-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	5229	95.7%
Downward House Side	235	4.3%
Downward Total	5464	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	5464	100%

ISOFOOT CANDLE PLOT



WP9S-54L-405-4K7-5Q

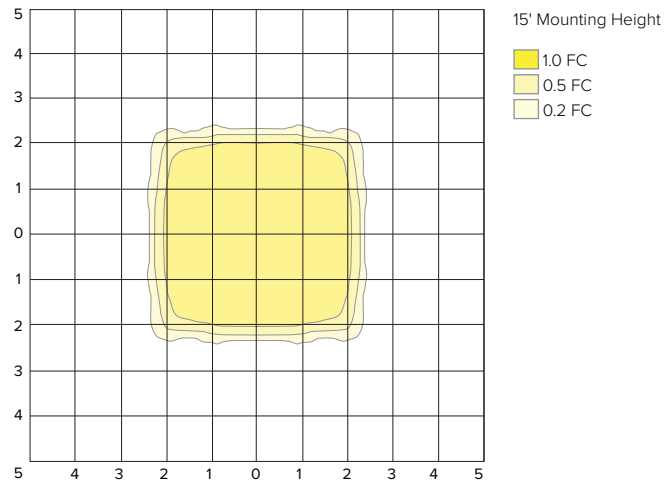
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	8773
Watts	69
Efficacy	127.1
IES Type	VS
BUG Rating	B3-U0-G1
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	4387	50.0%
Downward House Side	4387	50.0%
Downward Total	8773	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	8773	100%

ISOFOOT CANDLE PLOT



WP9S-54L-405-4K7-L

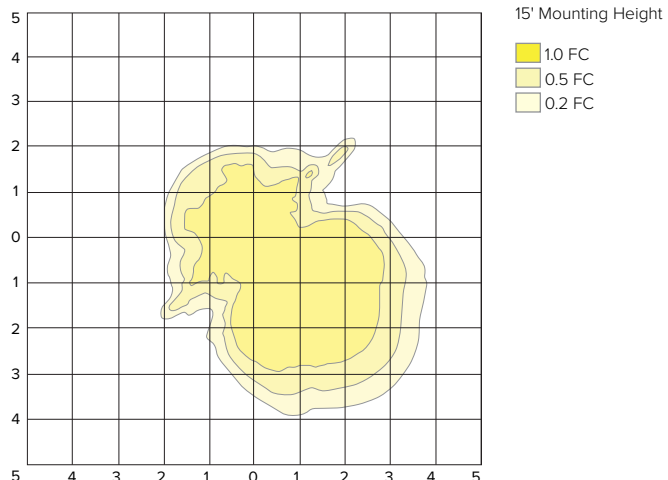
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	8386
Watts	69
Efficacy	121.5
IES Type	I
BUG Rating	B1-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1299	15.5%
Downward House Side	7087	84.5%
Downward Total	8386	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	8386	100%

ISOFOOT CANDLE PLOT



DATE:

LOCATION:

TYPE:

PROJECT:

CATALOG #:

PHOTOMETRY

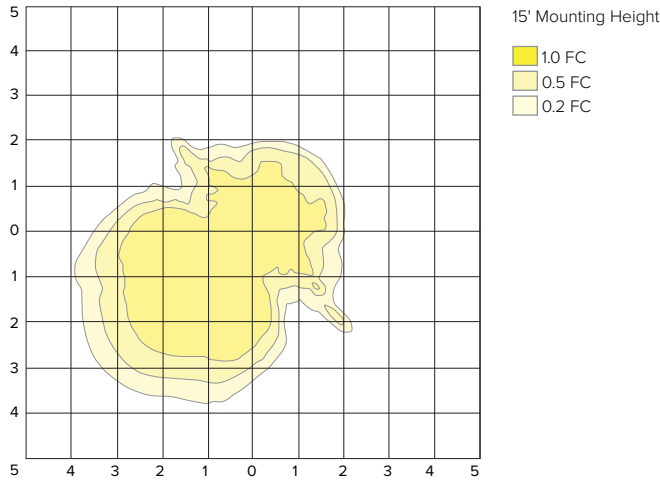
WP9S-54L-405-4K7-R
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	8386
Watts	69
Efficacy	121.5
IES Type	NA
BUG Rating	B1-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	6975	83.2%
Downward House Side	1411	16.8%
Downward Total	8386	100.0%
Upward Street Side	0	0.0%
Upward House Side	0	0.0%
Upward Total	0	0.0%
Total Flux	8386	100%

ISOFOOT CANDLE PLOT

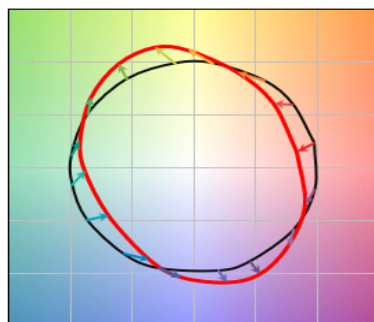


WP9SA2

ARCHITECTURAL AREA/SITE

TM-30 DATA

COLOR VECTOR GRAPHIC

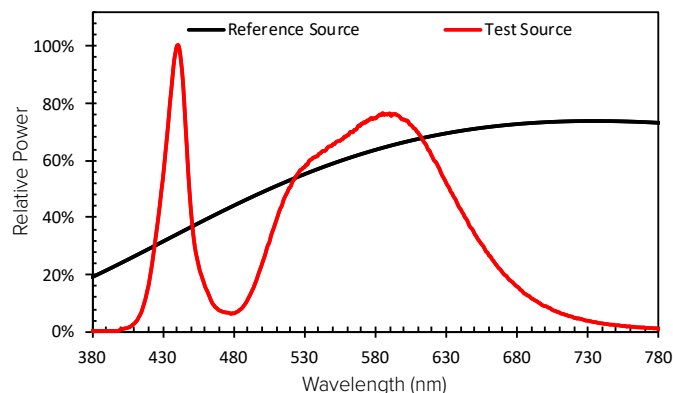


— Reference Illuminant — Test Source

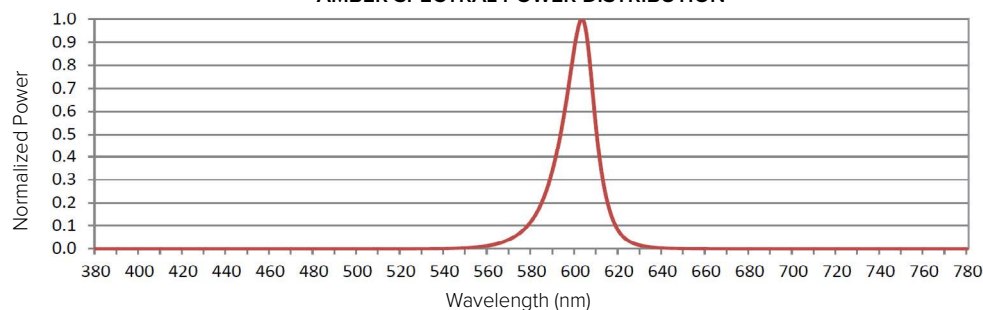
TEST SOURCE

R _f	68
R _a	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
27 LEDs	31.6	350 mA	120-480	50/60	0.26	0.15	0.13	0.11	0.09	0.07	>0.9	20	10% to 100%	0mA	1mA	0V	10V
54 LEDs	69.0	405 mA			0.58	0.33	0.29	0.25	0.20	0.14							
81 LEDs	116.5	450 mA			0.97	0.56	0.49	0.42	0.34	0.24							

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%	96.14%	94.99%	93.54%	88.55%	>60khrs

CRI Lumen Multiplier for 80 and 90 CRI

CCT	80 CRI	90 CRI
2700K	0.859	0.655
3000K	0.9119	.7033
3500K	0.906	0.732
4000K	0.8941	.734
5000K	0.879	.7712
Scaling factor of 5000K 70CRI lumen packages		