33: Exterior Lighting (14-526 (d) 6)

- <u>Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)</u>
- Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)

Light fixture cut sheets are included in this section. Lighting will be installed at building entrances along the building faces, as necessary, to provide illumination levels that are safe, comfortable and convenient. Light fixture cut sheets and a photometric plans prepared and provided by Swaney Lighting, this section. The site development abuts residential uses therefore shielding measures are incorporated into the lighting design.

ARCEOS™ ARS SERIES

SURFACE/CEILING/GARAGE

Cat.# Type Job



Approvals

SPECIFICATIONS

Intended Use:

Ceiling applications from eight to eighteen feet for surface, box or pendant mount. Applications include parking garage, walkway or building canopies, corridors, tunnels, large stainwells and other interior applications with ambient 40°C. A wide range of lumen packages and optical distributions are available making the ARS Series luminaire both versatile and functional.

Construction:

- Die cast aluminum housing features vertical fins for two directional air flow that maximizes heat dissipation and ensures long electrical component life and luminaire performance
- · LED light engines and electrical compartment are thermally isolated with an air gap for optimum component performance and long life
- One piece molded silicone gasket ensures weather proof seal around each individual LED: Stamped stainless steel bezel provides mechanical compression to seal the optical assembly; 18L and 24L luminaires include finish (color) matching blanking bezel
- IP65 luminaire rating
- Vandal resistant polycarbonate and low bright-ness acrylic shield accessories available

- · Light engine is hexagonal LED module containing 6 high output LEDs with PMMA acrylic lenses that create precise photometric performance
- Choice of multiple light outputs based on quantity of hexagonal LED arrays: 3 = 18 LEDs, 4 = 24 LEDs or 6 = 36 LEDs hexagonal LED modules, lumen range 4,000-9,700
- Four distribution types: Type V Square (5M), Type V Rectangular (5R), Type V Wide (5W) or Type IV (4)
- Type V Rectangular (5R) lenses provides low brightness "drive aisle optics" solution for low mounting height applications when the lens is oriented perpendicular to the flow of traffic
- · Variety of color temperatures offered: 3000K (70CRI), 4000K (70CRI) or 5000K (70 CRI) CCT
- · Each hexagonal light engine comes with a connector for easy replacement

Electrical:

- •120V-277V 50/60Hz, 42-86 Watts 700mA configurations. Drivers RoHS compliant and IP66
- 0-10V dimming drivers. Up to 113 lumens per watt. Designed and certified for 40°C ambient temperatures
- Thermal management protection device shuts driver/LFD systems off when temperatures are too high. Operating temperature range -30°C/-22°F -40°C/104°F
- Surge protection 20KA; Turns fixture off at end of life; Includes LED for end of life indication (see surge suppressor page 3)

Controls/Ontions:

- · Occupancy Sensors, photocells controls available for on/off or dimming operation
- · wiSCAPE in fixture wireless control module, features dimming, switching motion sensor
- . Up light o ption available in 24L and 36L configurations

Quick disconnect plate mounts over standard junction box and allows for simplified fixture installation. A 3/4" hub provides pendant stem mounting making the fixture adaptable to a variety of applications. Each mounting can be accomplished while maintaining a watertight seal. Four 1/2" conduit hubs allow side access as required. A pattern indicator on the mounting plate allows the installer to properly orient the fixture without energizing the light engines.

Listings:

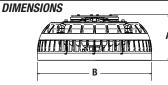
Listed to UL 1598 for use in wet locations, 40° C ambient environments; Meets DesignLights Consortium (DLC) qualifications 4K & 5K models only, Consult DLC website for more details: http://www. designlights.org/QPL; IP65

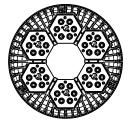
Warranty:

Five year limited warranty (for more information visit: http://www.hubbelllighting.com/resources/warranty/



Shown with motion control option





Α	В	Weight:
5.68"	14.00"	18 lbs
(144.22 mm)	(355.6 mm)	8.16 kg

CARTON DIMENSIONS

L	ength	Width	Height
1	5.88"	15.88"	7.5"

CERTIFICATIONS/LISTINGS



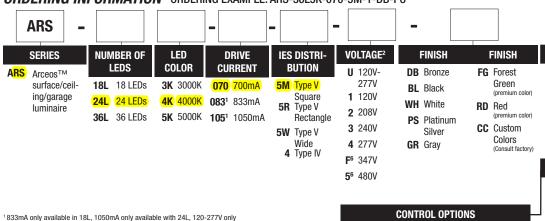
IP65





*3000K and warmer CCTs only

ORDERING INFORMATION ORDERING EXAMPLE: ARS-36L5K-070-5M-1-DB-PC



- Sosnik unity available in Tot. 1 Jostina unity available with 24th, 120-277 vinity

 Specify voltage for voltage specific options

 30-10V fully adjustable dimming with automatic daylight calibration and different time
 delay settings; Must order minimum of one SCP-REMOTE to program dimming settings

 4 One per LED module e.g. 3 18L, 4 24L, and 6 36L luminaires (see page 3)

 PC option not applicable, included in sensor. For SCP, PC function turns on to lower
 setting until motion is detected

 24L and 36L 700mA configuration only, not available with UD or WIRSC options
- See page 2 and 3 for Accessories.

WIR wiSCAPE, In-fixture wireless control module

WIRSC wiSCAPE, In-fixture wireless control module w/ occupancy sensor

OPTIONS

- F2 Fusing (voltage specified and determined by voltage field) Up light option, available in 24L and
- 36L only 700mA configuration only Less moutning bracket (must order
- mounting bracket accessory) Comfort Shield
- SPC Vandal Shield

CONTROL OPTIONS

Photocontrol (must specify voltage not available in 480V)

SCP2,3,5 High/low control - for up to 20' mounting heights user programmable settings

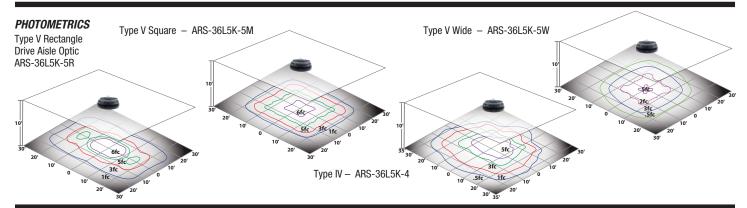
 $\textbf{SCPW}^{2,3,5}$ High/low control - wide lens for up to 8' mounting heights





ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description						
ARS-SPC ⁴	Vandal shield (1 per LED module)						
ARS-BS-XX*	Bird shield						
ARS-CS ⁴	Comfort shield - Reduces source brightness and imagining P95 acrylic with nominal 10% lumen reduction (1 per LED module)						
ARS-MB-XX*	mounting bracket for pre-installation of mounting bracket (accessory for LMB option)						
SCP-REMOTE ³	Remote control for SCP option; order at least on per project to program and control (not applicable for 347/480V)						
	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.						
SWTAB***	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.						
SWBRG+	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.						
93052458	20KA surge protection with an end of life LED indicator						



PERFORMANCE DATA				5K				4K					3К						
				(5000	(5000K nominal, 70 CRI) (4000K nominal, 70 CRI)						(3000K nominal, 70 CRI)								
# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION Type	LUMENS	LPW ¹	В	U	G	LUMENS	LPW ¹	В	U	G	LUMENS	LPW ¹	В	U	G	
			5M	4551	109	2	0	1	4376	105	2	0	1	4026	97	2	0	0	
	700mA	42	5R	4727	113	2	0	2	4511	108	2	0	2	4150	100	2	0	2	
18			5W	4517	108	3	0	1	4182	100	3	0	2	3847	92	3	0	1	
10			5M	5401	100	2	0	1	5024	93	2	0	1	4622	85	2	0	1	
	833mA	54	5R	5541	102	3	0	3	5179	96	2	0	2	4765	88	2	0	2	
			5W	5171	95	3	0	1	4881	90	3	0	2	4491	83	3	0	2	
				5M	6068	109	2	0	1	5835	105	3	0	1	5368	97	2	0	1
	700mA	56	5R	6303	113	3	0	3	6015	108	3	0	3	5534	100	3	0	3	
24			5W	6022	108	3	0	2	5576	100	3	2	3	5130	92	3	0	1	
24			5M	7888	93	3	0	1	7586	89	3	0	1	6979	82	3	0	1	
	1050mA	85	5R	8194	97	3	0	3	7820	92	3	0	3	7194	85	3	0	3	
			5W	7829	92	3	0	2	7249	85	3	0	2	6669	79	3	0	2	
			5M	9391	109	3	0	1	8695	101	3	0	1	7999	93	3	0	1	
36	700mA	86	5R	9741	113	3	0	3	8962	104	3	0	3	8245	96	3	0	3	
			5W	9100	105	4	0	2	8427	98	3	0	2	7753	90	3	0	2	

'Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

FI FCTRICAL ΠΔΤΔ

ELECTRICAL DATA												
# OF LEDS	NUMBER OF Drivers	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)							
	1	700	120	41.7	0.35							
18	!	700	277	41.7	0.15							
10	-1	833	120	54.2	0.45							
	'	033	277	34.2	0.20							
			120		0.46							
	2	700	277	55.6	0.20							
24		700	347	0.00	0.16							
24			480		0.12							
	-1	1050	120	84.8	0.71							
	'	1050	277	04.0	0.31							
			120		0.72							
36	3	700	277	86.3	0.31							
30	3	700	347	00.3	0.25							
			480		0.18							

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMP	ERATURE	LUMEN MULTIPLIER
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).



^{*}XX = Color Options: DB, BL, WH, PS and GR
** When ordering with SiteSync, one of the following interface options must be chosen an ordered separately. Each option contains the SiteSync License, GUI and Bridge Node.
** When ordering SiteSync at least one of these two interface options must be ordered per project.
+ If needed, an additional Bridge Node can be ordered.

PROJECTED LUMEN MAINTENANCE

AMBIENT				¹TM-21-11		Calculated L70
TEMP.	0	25,000	50,000	60,000	100,000	(HOURS)
10°C / 50°F	1.01	1.00	0.99	0.99	0.97	>1,085,000
25°C / 77°F	1.00	0.99	0.98	0.98	0.96	>1,085,000
40°C / 104°F	0.97	0.96	0.96	0.95	0.94	>782,000

¹ Projected per IESNA TM-21-11 Data references the extrapolated performance projections for the ARS-36LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

VERSATILE CONFIGURATIONS







ARS-18LU ARS-24LU ARS-36LU

MOUNTING OPTIONS & ACCESSORIES



Specially designed internal hook and hinge allows easy access to wiring and internal components for easy installation



Pendant mount with 3/4" wiring hub; Bird shield accessory available; J-Box mounting slots and wire way accommodate 3 1/2" and 4" J-Box designs





Four - ½" wiring hubs for surface conduit wiring and photocell option





ARS-CS - Frosted comfort shield installs over each hexagonal LED bezel with 3 provided screws, improved uniformity and reduced LED brightness, specify quantity when ordering:

- 3 for 18L
- 4 for 24L
- 6 for 36L



Optional up light feature provides approximately 300 lumens of ambient light reducing the "cave effect" in parking garage applications (available in 24L and 36L, 700mA versions only)

SURGE PROTECTION

- Field replaceable surge protection device (SPD) provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3
- The SPD is designed with a clamping voltage of 1600V at 20KA using industry standard 8/20µs waveform
- Max surge current = 20,000 Amps (see table)
- LED Indicator Green LED is unlit at end of life

Pulse (8 x 20	Rating µSec)
Strikes	Surge
1	20,000 A
2	15,000 A
15	10,000 A
120	3,000 A

	cRUus	CE
I _n	10KA	5KA



Cat.#

Job



Approvals

SPECIFICATIONS

Construction:

- Stylish vertically finned die-cast solid top housing for maximum heat dissipation; Stops collection of unsightly debris
- Rugged lower die-cast aluminum heat sink optimizes thermal management and optical performance
- One piece die-cut silicone gasket with mechanically compressed stainless steel bezel ensurés weather proof seal around each individual LED for IP65 rating
- . Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions
- Weight 19 pounds, EPA .45 ft²

Optics:

- Choice of 126 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and
- 3000K, 80 CRI; 4000K, 70 CRI; 5000K, 67 CRI, Turtle friendly Amber

Electrical:

- Universal input voltage 120-277 VAC, 50/60
- Ambient operating temperature -40° C to
- Drivers have greater than 90% power factor and less than 10% THD
- 700mA drive current standard, 350mA and 525mA options available with 32L and 48L LED models
- · LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Surge protection 20KA; Turns fixture off at end of life; Includes LÉD for end of life indication (see surge suppressor page 3)
- Optional 0-10VDC continuous dimming to
- · Automatic thermal self-protection
- LED electrical assembly, including PR devices, consumes no power in the 'off' state

Controls:

 Drivers are 0-10V dimming standard. Photocell and occupancy sensors available for complete on/off and dimming control

Installation:

- · Quick-mount plate included for easy installation
- The decorative integral arm houses two stage hinge mechanism
- Safety latch holds luminaire door to prevent 'free swing'

Type

- Quick-connect wiring for simplified, hasslefree installation
- · Suitable for applications requiring 3G testing prescribed by ANSI @136.31

TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

Warranty: Five year limited warranty, for more information visit: http://www.hubbelloutdoor.com/resources/ warranty/

Listings:

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- 700mA models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: http://www.designlights.org/QPL
- IDA approved
- IP66

PRODUCT IMAGE(S)



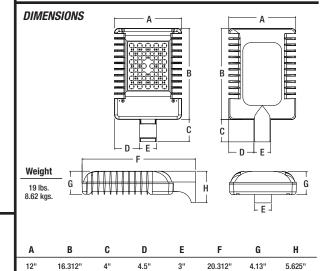
48 LED 3/4 VIEW



16 LED







CERTIFICATIONS/LISTINGS













105mm

143mm

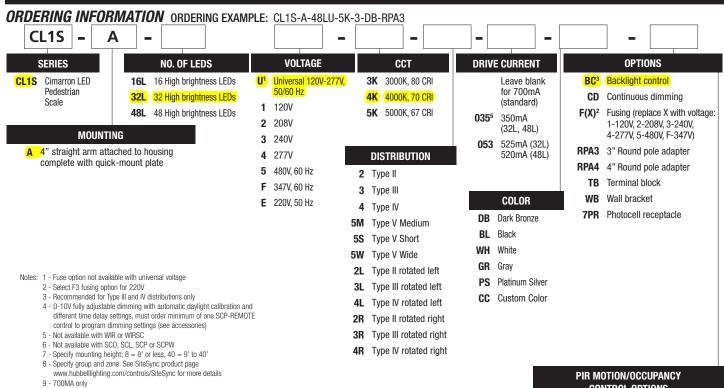
414mm

102mm

114mm

76mm

515mm



Accessories and Services (Ordered Separately)

Catalog Number	Description
SCP-REMOTE	Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
SW7PR+	SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

^{*} When ordering SiteSync at least one of these two interface options must be ordered per project.

+ Available as a SiteSync retrofit solution for fixtures with an existing 7pin receptacle.

Hubbell Control Solutions - Accessories (sold separately)

Catalog Number	Description	HCS System
NXOFM-1R1D-UNV	On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC	NX Distributed Intelligence™
WIR-RME-L	On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC	wiSCAPE® Lighting Control

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

CONTROL OPTIONS

SCO_F^{6,7,9} On/Off control (line voltage device not for use with 7PR receptacle option and external wireless control devices)

SCL_F^{5,7} Add-on occupancy sensor for use with ext. wireless control device connected thru 7PR receptacle. Consult control manufacturer for compatibility.

SCP_F^{4,5,7} Programmable dimming control (line voltage device <u>not</u> for use with 7PR receptacle option and external wireless control devices). A minimum of one SCP-REMOTE accessory remote control required for configuration; (Standard lens with greater sensitivity; motion detection radius equal to .75 X luminaire mounting height (approx. distance)

SWP8,9 SiteSync Pre-Commission

SWPM^{7,8,9} SiteSync Pre-Commission w/ Sensor

WIRELESS CONTROL OPTIONS

WIR⁶ wiSCAPE Fixture Module, in-fixture relay for wireless lighting control

WIRSC⁶ wiSCAPE Fixture Module, in-fixture relay for wireless lighting control and motion/occupancy control

SiteSync 7-Pin Module



- SiteSync Features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- · Available on all products that have a 7-Pin receptacl
- Does not interface with occupancy sensors







PERFORMANCE DATA		5K					4K					3K							
				(5000K NOMINAL, 70 CRI)			(4000K	NOMINAL,		(3000K NOMINAL, 70 CRI)									
	DRIVE			(0000)				Π	7100017		Ü	···.,	Π	(5555)		,	J,		
NUMBER OF	CURRENT	SYSTEM	DISTRIBUTION								l								
LEDS	(MILLIAMPS)	WATTS	TYPE	LUMENS	LPW*	В	U	G	LUMENS	LPW*	В	U	G	LUMENS	LPW*	В	U	G	
-		-	2	3937	104	1	0	2	3890	102	1	0	2	3096	81	1	0	2	
			3	3971	104	1	0	2	3932	103	1	0	2	3116	82	1	0	1	
16	700mA	2011	4	4021	106	1	0	1	3981	105	1	0	1	3155	83	1	0	1	
16	700ma	38W	5S	4471	118	2	0	0	4427	117	2	0	0	3508	92	2	0	0	
			5M	4430	117	2	0	1	4387	115	2	0	1	3485	89	2	0	0	
			5W	4053	107	3	0	1	4013	106	3	0	1	3461	91	3	0	1	
			2	4142	109	1	0	2	4102	108	1	0	2	3250	86	1	0	2	
			3	4167	110	1	0	2	4126	109	1	0	2	3271	86	1	0	1	
32	350mA	38W	4	4221	111	1	0	1	4179	110	1	0	1	3311	87	1	0	1	
02	00011111		5S	4692	123	2	0	0	4645	122	2	0	0	3682	97	2	0	0	
			5M	4651	122	2	0	1	4604	121	2	0	1	3649	96	2	0	1	
			5W	4255	112	3	0	1	4212	111	3	0	1	3337	88	2	0	1	
			2	5855	105	2	0	3	5797	104	2	0	3	4595	82	1	0	2	
		525mA 56W	3	5889	105	2	0	2	5831	104	2	0	2	4622	83	1	0	2	
32	525mA		4	5963	106	1	0	0	5905	105	1	0	0	4679	84	1	0	0	
			5S 5M	6633 6572	118 117	3	0	1	6567 6507	117 116	3	0	1	5205 5157	93 92	2	0	1	
			5W	6012	107	3	0	2	5954	106	3	0	2	4717	92 84	3	0	1	
			2	6187	112	2	0	3	6126	111	2	0	3	4855	88	1	0	2	
		55W	55W	3	6492	118	2	0	2	6428	117	2	0	2	4885	89	1	0	2
					4	6304	115	1	0	2	6242	113	1	0	2	4946	90	1	0
48	350mA			5S	7010	127	3	0	0	6941	126	3	0	0	5500	100	2	0	0
			5M	6947	126	3	0	1	6878	125	3	0	1	5451	99	3	0	1	
			5W	6353	116	3	0	2	6291	114	3	0	2	5409	98	3	0	2	
			2	7751	102	2	0	3	7674	101	2	0	3	6082	80	2	0	3	
			3	7767	102	2	0	2	7694	100	2	0	2	6119	81	2	0	2	
20	700 4	7014	4	7896	104	1	0	2	7818	103	1	0	2	6196	82	1	0	2	
32	700mA	76W	5S	8780	116	3	0	0	8693	114	3	0	0	6894	91	3	0	0	
			5M	8700	114	3	0	1	8614	113	3	0	1	6827	90	3	0	1	
			5W	7959	105	3	0	2	7881	104	3	0	2	6245	82	3	0	2	
			2	8585	105	2	0	3	8500	104	2	0	3	6736	82	2	0	3	
			3	9010	110	2	0	3	8920	109	2	0	3	6777	83	2	0	2	
48	525mA	82W	4	8747	107	1	0	2	8660	106	1	0	2	6863	84	1	0	2	
	02011111	02.1	5S	9725	119	3	0	0	9629	117	3	0	0	7630	93	3	0	0	
			5M	9637	118	3	0	2	9541	116	3	0	2	7563	92	3	0	1	
			5W	8816	108	4	0	2	8729	106	4	0	2	7506	92	3	0	2	
			2	11713	106	3	0	3	11597	105	3	0	3	9191	84	2	0	3	
			3	12293	112	3	0	3	12171	111	3	0	3	9247	84	2	0	3	
48	700mA	110W	4	11935	108	2	0	3	11816	107	2	0	3	9364	85	2	0	2	
			5S 5M	13269	121	3	0	0	13138	119	3	0	0	10411	95 94	3	0	0	
			5W	13149 12028	120 109	4	0	3	13019 11910	118 108	4	0	3	9409	94 86	3	0	2	
		L	I OW	12020	109	4	U	J	11910	100	4	U	J	9409	00	4	U		

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment, application and inherent performance tolerances of the electrical components.

PROJECTED LUMEN MAINTENANCE

AMBIENT TEMP.	0	25,000	50,000	*TM-21-11 60,000	100,000	CALCULATED L70 (hours)
25°C / 77°F	1.00	0.98	0.96	0.96	0.94	>675,000
40°C / 104°F	0.98	0.96	0.95	0.94	0.92	>556,000

 $^{^{\}star}$ Nichia 219B, 700mA, 85°C Ts, 10,000hrs

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT DATA					
	TEMP LUMEN MULT.				
0°C	32°F	1.02			
10°C	50°F	1.01			
20°C	68°F	1.00			
25°C	77°F	1.00			
30°C	86°F	1.00			
40°C	104°F	0.98			
50°C	122°F	0.98			





ELECTRICAL DATA

NUMBER OF LED's	NUMBER OF DRIVERS	Drive Current [milliamps]	INPUT Voltage (Volts)	OPER. Current [amps]	SYSTEM POWER [WATTS]	IN-RUSH Current (AMPS)
			120	0.32	37.8	
16	1		277	0.15	37.5	
10	ı		347			
			480			
	2	std. (700mA)	120	0.63	75.5	
32			277	0.29	74.8	
32			347			
			480			
			120	0.95	110.5	
48	3		277	0.44	110.9	
40	3		347			
			480			

Consult factory for 350mA and 520mA electrical data

ACCESSORIES/REPLACEMENT PARTS - Order Separately

CATALOG NUMBER	DESCRIPTION	
SCP-REMOTE	Remote control for SCP option. Order at least one per project to program and control	
SWUSB* SiteSync interface software loaded on USB flash drive for use with owner supplie (Windows based only). Includes SiteSync license, software and USB radio bridge no		
SWTAB* Windows tablet and SiteSync interface software. Includes tablet with pre software, SiteSync license and USB radio bridge node.		
SWBRG+ SiteSync USB radio bridge node only. Order if a replacement is requir bridge node is requested.		
93052458	20KA surge protection with an end of life LED indicator	

^{*} When ordering SiteSync at least one of these two interface options must be ordered per project.

PHOTOCONTROL EQUIPMENT

CATALOG NUMBER	DESCRIPTION	
PTL-1	notocontrol - twist-lock cell (120V)	
PTL-8	Photocontrol - twist-lock cell (120-277V)	
PTL-5	Photocontrol - twist-lock cell (480V)	
PTL-6 Photocontrol - twist-lock cell (347V)		
PSC	Shorting cap - twist-lock	

MOUNTING ACCESSORIES

CATALOG NUMBER	DESCRIPTION
CL1S-RPA3-ACC-XX1	Round pole adapter for straight arm (3½ - 3¾")
CL1S-RPA4-ACC-XX1	Round pole adapter for straight arm (3½ - 4½")
WB-AREA-XX	Wall bracket

¹ Replace XX with color choice, eg.: DB for Dark Bronze

TENON TOP POLE BRACKET ACCESSORIES

(2 3/8" OD tenon, RSS version requires 4" round pole adapter)

(2 0/0 OD tonon) noo voroion roqu	2 0/0 02 tollon, not voicion requires 4 round pole dauptor,				
Catalog Number	Description				
SETA2-XX ¹ Square pole tenon adapter (4 at 90 degrees)					
RETA2-XX ¹	Round pole tenon adapter (4 at 90 degrees)				
TETA-XX ¹ Triangular pole tenon adapter (3 at 120 degrees)					

¹ Replace XX with color choice, eg.: DB for Dark Bronze

SURGE PROTECTION

- Field replaceable surge protection device (SPD) provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3
- The SPD is designed with a clamping voltage of 1600V at 20KA using industry standard 8/20µs waveform
- Max surge current = 20,000 Amps (see table)
- LED Indicator Green LED is unlit at end of life

Pulse Rating (8 x 20 μSec)				
Strikes	Surge			
1	20,000 A			
2	15,000 A			
15	10,000 A			
120	3,000 A			

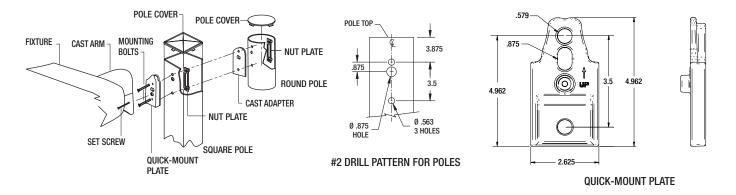
ing		cRUus	CE
ec)	I _n	10KA	5KA
urge			
000 4			





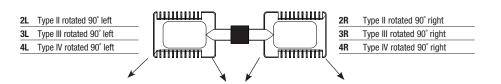
⁺ If needed, an additional Bridge Node can be ordered.

FIXTURE MOUNTING



FIXTURE MOUNTING - FACTORY ROTATED OPTICS

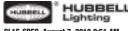
For proper light distribution and performance, rotated optics must be mounted as referenced in illustration. Consult instruction sheet included when mounting.







http://www.youtube.com/user/hubbelloutdoorbrands





High Performance LED Sconce

Catalog Number	
Comments	Туре

FEATURES

Application

The PGN is an indoor or outdoor architectural high performance LED sconce which offers "Normally On" and emergency operation in one fixture. "Normally On" operation is powered by line voltage (120 or 277) that can be switched on/off and used for accent lighting, entrance/exit illumination. Failure of line voltage will result in automatic operation from secondary DC voltage which must be supplied from an external 6-12V DC emergency lighting unit. The PGN includes a field installable full cut-off shield to address "dark sky" compliant requirements.

Construction

Housing and mounting plate are constructed of $^{1}/_{8}$ " die-cast aluminum and sealed with a $^{1}/_{8}$ " closed-cell silicone gasket. The acrylic lens allows 92% light transmission. The reflector is electropolished aluminum with 95% reflectance. Housing finish is powder coated electro-deposition paint available in four colors: dark bronze, white, platinum silver and black. Full cut-off shield constructed of cold-rolled steel, painted to match color as ordered.

Installation

Universal backplate knockouts for mounting to standard $3^{1}/2^{"}$, $4^{"}$ octagonal and $4^{"}$ square electrical boxes. Backplate mounting is performed using installer supplied hardware. An adhesive-backed neoprene gasket is provided to ensure a waterproof seal. A $^{1}/_{2}$ " – $^{1}/_{4}$ NPT threaded conduit opening is provided at the top of the enclosure and sealed with a closure plug. The housing "snaps" to the back plate by a "pin and socket" arrangement, and is secured with two Phillips head screws.

Illumination

The unit is illuminated by 4 high power LED's arranged so that in the event of 1 or 2 LED failures the unit will continue to operate.

Compliances

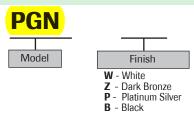
UL 924 Listed UL Wet Location Listed NFPA 101 Life Safety Code NFPA 70 National Electrical Code OSHA

IES full cut-off compliant with application of field installed shield U.S. Patent No. D627,916

Warranty

Three-year warranty for unit and electronics

ORDERING GUIDE









SPECIFICATIONS

Electronics

The PGN has two modes of operation:

Normal mode: In normal mode, power is suppled from 120V or 277V AC source and may be switched on/off allowing the unit to behave like a typical luminaire.

Emergency mode: Upon failure of normal utility power, an external (6-12VDC) emergency power source (supplied separately) having transfer logic will operate the PGN as an emergency unit. In order for the unit to function properly as emergency lighting (NEC 700.12), the DC emergency source must be powered (under normal conditions) from the same AC circuit as that to the unit.

Number of Lamps: Four High Output LEDs LED Lamplife: 48,000 hrs. at 70% of initial

Lamp Configuration: 4 individually driven LEDs provide illumination. In the event of 1 or 2 LED failures, the remaining LED's will continue to function.

Lamp Color: Neutral White, 4000K Color Rendering Index (CRI): 75

Total Lamp Output: 445 Lumens min. initial Input: 120/277VAC, 60 Hz. "Normal"

6-12VDC "Emergency"

Functional Circuitry: Transient surge protection

Operating Temperature Range

-30°C to 50°C (-22°F to 122°F)

Power Consumption:

Normal

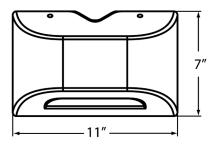
17W @ 120VAC, 17W @277VAC

Emergency

12W @ 6VDC, 13W @12VDC

Power Factor: Average .80 (lagging)

DIMENSIONS





COMPATIBLE EMERGENCY UNITS

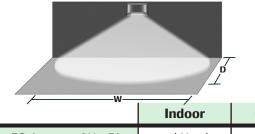
		6 V DC	12V DC	120/277 VAC	Remote Capacity	# of PGN
Combo ⁽¹⁾	HCXURWRC12	√			12 W	1
	HCXURW-0-RC12	√			23 W	1
Unit ⁽¹⁾	LZ30	√			20 W	1
	LZ65	√			55 W	4
	LM33	√			18 W	1
	LM40	√			25 W	2
	LM40-12V		\checkmark		25 W	2
	AS80	√			65 W	5
Inverter	LiteGear® LG125			√	125 Va	6

(1) Each instance assumes standard lamp-heads are used on the unit, except the **HCXURW-0-RC12**, which is supplied without lamp heads.

ILLUMINATION PATTERN

Single Unit Coverage

Mounting Height: 9' Outdoor Reflectance: 0/30/10 Indoor Reflectance: 80/50/20



	Indoor	Outdoor
1 FC Average (W x D)	35' X 10'	29' X 10'
1 FC Minimum (W x D)	11' X 10'	10' X 10'

Multiple Unit Spacing

Mounting Height: 9' Illuminated Path Depth: 6' Outdoor Reflectance: 0/30/10 Indoor Reflectance: 80/50/20

Path of Egress
1 FC Average

	Indoor	Outdoor
1 FC Average	49'	37'
1 FC Minimum	19'	16'

Cat.#

Job



HUBBELL Outdoor Lighting

Approvals

SPECIFICATIONS

APPLICATIONS

- · Small sized architectural wallpacks in three stylish shapes with molded contours to accentuate building architecture. Provides excellent illumination in energy-saving LED systems.
- Back box accessory available for surface conduit application.

Construction:

- Housing is made from die-cast aluminum with a hinged back-plate for ease of installation and maintenance.
- The LED bezel and trim-plate are made of stainless steel.
- Five powder coat standard finishes, plus custom color options.
- Wet Location Listed to UL924 and UL1598 Standard.

LED:

- 12 high power LEDs delivering up to 3,000 lumens
- Up to 118 lumens per watt
- Type II, III and IV distributions for a wide variety of applications.
- Zero uplight (UO), dark sky, neighbor friendly

Electrical:

- 120-277 operation, 50/60Hz
- 0-10V dimming driver standard
- 10kA surge protector
- Photocell and occupancy sensor options available for complete on/off and dimming control

Battery Backup:

Intergral Battery Backup provides emergency lighting for the required 90 minute path of egress

Type

- Includes a long-life Lithium Iron Phosphate battery with optional battery heater for cold temperature application.
- Utilizes 4 LEDs in emergency mode with 657 lumens. Each of the 4 LEDs in emergency are designed to function independently in the unlikely event of a single LED malfunction
- Spectron® self-testing/self-diagnostic electronics are included standard
- Independent dedicated driver and LED array for battery/emergency mode operation.

Installation:

- Universal plate for mounting to standard 3 1/2' and 4" square electrical boxes. All connections are made from connections at the rear of the
- · Optional back-box accessory available for surface conduit application. See BB-Geo accessories.

Listings:

- . UL 1598 listed for use in wet locations
- · Drivers IP66 and RoHS compliant
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org

Warranty:

· For more information visit:

CC

4000K

70CRI 5000K

70CRI

3K7

http://www.hubbelloutdoor.com/resources/warranty/

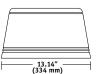
PRODUCT IMAGE(S) **Trapezoid** Round DUAL LITE Quartersphere

DIMENSIONS 6.56" (167 mm)

- 8.49" (216 mm)

6.56" (167 mm)

6.79 (172 mn



Trapezoid (TRP1)

Round

(RDI1)



(332 mm)

Quartersphere (QSP1)

(198 mm) SHIPPING INFORMATION

FINISH

7.81

Cotolou	Woinh	Carton Dimensions						
Catalog Number	Weight (lbs)	Length Inch (cm)	Width Inch (cm)	Height Inch (cm)				
TRP1	11.5	17.0	9.9	10.0				
RDI1	11.5	18.0	11.0	9.25				
QSP1	10.5	17.0	9.6	10.5				

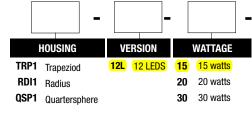






ORDERING INFORMATION

ORDERING EXAMPLE: TRP-12L-20-4K-3-1-BL-SCP-EH



	L	
T/CRI	DIS	STRIBUTIO
3000K,	2	Type II
70CRI	2	Type III

Type III Type IV

VOLTAGE U 120-277 **1** 120 2 208

DR Bronze GR Gray **3** 240 PS Platinum 4 277 WH White CC Custom

BL Black

CONTROL OPTIONS PCU **Button Photocell** SCP2,3 Programmable

Motion Sensor SPECIFY SCP HEIGHT

Up to 8ft mount height Up to 20ft mount height

F⁴ Fusing (only available with STD fixture configuration, 120-277V only) Battery Pack (0°C)

OPTIONS

EH1 Battery Pack (-30°C) with heater

Voltage specific (120 or 277V only)

voltage specinic (120 of 277V only)

Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only

PCU option not applicable, included in sensor

Must specify input voltage (120, 208, 240 or 277)

ACCESSORIES - Order separately

Catalog Number	Description
SCP-REMOTE ²	Remote control for SCP option. Order at least one per project to program and control.
BB-GEO-XX	Back box with 4 - 1/2" threaded conduit holes, specify finish by replacing "XX" with
	finish selection, eg. Dark Bronze "DB"

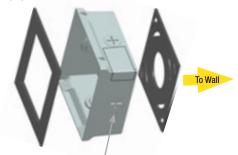
Wust order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120V-277V only





BB-GEO-XX - Mounted to luminaire

BB-GEO-XX



Fixture gasket 4-1/2" conduit entries Wall gasket

PERFORMANCE DATA (AC/Standard Configurations)

						5K			4K			3K						
				(5	000K non	ninal, 7	D CRI)		(4	000K non	ninal, 7	D CRI)		(3000K nominal, 70 CRI)				
# OF	DRIVE	SYSTEM	DIST.															
LEDS	CURRENT	WATTS	TYPE	LUMENS	LPW ¹	В	U	G	LUMENS	LPW ¹	В	U	G	LUMENS	LPW ¹	В	U	G
			2	1635	118	1	1	1	1577	113	1	1	1	1497	108	1	1	1
	350mA	13.9	3	1613	116	1	0	1	1556	112	1	0	1	1477	106	1	0	1
			4	1607	116	0	0	1	1550	111	0	0	1	1471	106	0	0	1
			2	2268	114	1	1	1	2176	109	1	1	1	2077	104	1	1	1
12	500mA	19.9	3	2245	113	1	0	1	2140	108	1	0	1	2049	103	1	0	1
			4	2229	112	0	0	1	2150	108	0	0	1	2041	103	0	0	1
			2	2942	104	1	1	1	2885	102	1	1	2	2721	96	1	1	1
	700mA	28.2	3	2912	103	1	0	1	2836	101	1	0	1	2685	95	1	0	1
			4	2892	103	1	0	1	2789	99	1	0	1	2674	95	1	0	1

Electrical Data

Input Power Consumption

Drive Current (mA)	Input Voltage (V)	System Power (w)	Current (Amps)	Ar				
350mA	120	13.9	0.12	25°				
Souma	277	13.9	0.05	40°				
500mA	120	19.9	0.17	40				
OUUIIIA	277	19.9	0.07					
700 1	120	00.0	0.24					
700mA	277	28.2	0.10					
Battery backup units consume additional power during charging (maximum 32.2 watts for E, 50.7 watts for EH)								

Projected Lumen Maintenance

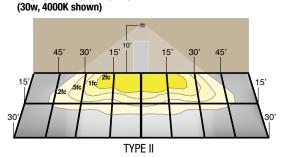
		Operating Hours								
Ambient				TM-21-11 ¹		L70				
Temp.	0	25,000	50,000	60,000	100,000	(hours)				
25°C/77°F	1.00	0.98	0.97	0.95	0.91	>345,000				
40°C/104°F	1.00	0.96	0.95	0.92	0.87	>268,000				

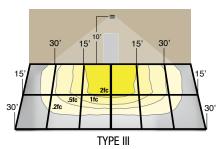
LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

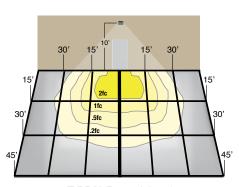
AMBIENT TEMP	ERATURE	LUMEN MULTIPLIER
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99
50° C	122° F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PHOTOMETRIC REPORTS







TYPE IV (Forward throw)

GeoPak - Battery Back Up

Functional Circuitry: Transient surge protection device on AC input. Upon failure of the normal utility power, an LED driver is automatically activated to power the emergency LEDs. Upon resumption of normal utility power, the LED driver is turned off, and the battery is recharged through a micro-controller based 3-stage charger. The battery is a maintenance-free Lithium Iron Phosphate (LiFePo) type. A low voltage battery disconnect (LVD) feature protects the battery from severe damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. The optional heater features a heating wrap and thermostat to maintain optimal battery temperature during charge or discharge. The GeoPak includes the following features:

- · Battery re-charge within 24 hours
- · AC Lock-out circuit
- Self-diagnostics monitors LED status, LED driver circuit, battery capacity and charger function and displays any fault detection by means of a flashing code.

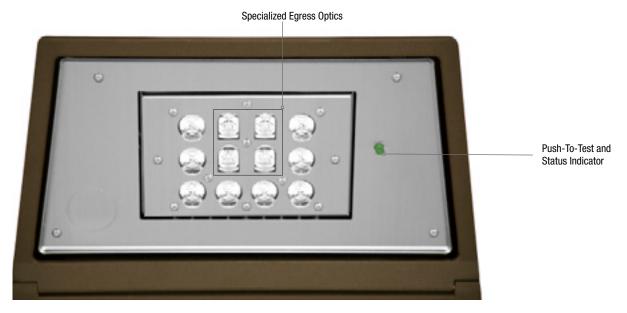
Emergency Photometric Performance (1 fc average .1 fc minimum)

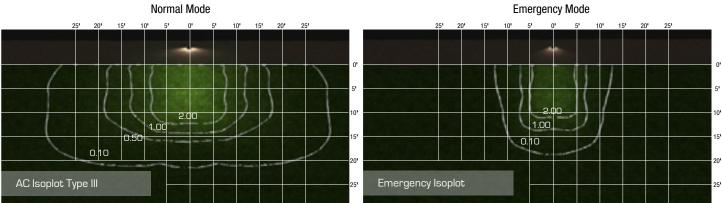
28' multi-unit spacing at 10' MH with 0/30/10 reflectances on a 6' path

26' x 10' single unit coverage at 10' MH with 0/30/10 reflectances

6' x 19' forward throw coverage at 10' MH with 0/30/10 reflectances

- Self-Test feature runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status.
- User initiated 1, or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions (below 80% of nominal AC input voltage).
- Battery backup units consume 6 watts when charging a dead battery and 2 watts during maintenance charging. EH (units with a heater) consume up to an additional 8 watts when charging if the battery temp is lower than 10°C





Provides Life Safety Code average illuminance of 1.0 fc. Assumes open space with no obstructions. Diagrams for illustration purposes only, please consult factory for application layout.



Calculation Summa	ry				
Label	Avg	Max	Min	Avg/Min	Max/Min
PUMPS	10.18	12.1	6.3	1.6	1.9
SITE	0.81	10.9	0.0	N.A.	N.A.
RETAIL PARK	0.77	2.1	0.3	2.6	7.0

PUMP	CANOPY	LIGHTS	"ON'
Olvii	CANCII	LICITIO	011

Luminaire Schedule (note fixture cataloge numbers are not complete)									
Type	Qty	Lum. Lumens	LLF	Lum. Watts	Description				
CA	16	4915	0.900	55.6	ARS-24L4K-070-5M-CS				
S3B	1	3561	0.900	56	CL1S-32L-4K-3-053-BC				
S4B	7	2801	0.900	38	CL1S-32L-4K-4-035-BC				
S4	1	5905	0.900	56	CL1S-32L-4K-4-053				
W1	3	413	0.900	17.7	PGN WITH Full Cutoff Visor				
W4	15	1550	0.900	13.9	TRP1-12L15-4K7-4				

NOTES:

1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.

2) CALCULATIONS MAY or MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.

3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE

WITHOUT REFLECTIONS OR OBSTRUCTIONS UNLESS OTHERWISE INDICATED.
4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.
5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ

PINE STATE FAMILY MARY PORTLAND, ME SITE LIGHTING LAYOUT

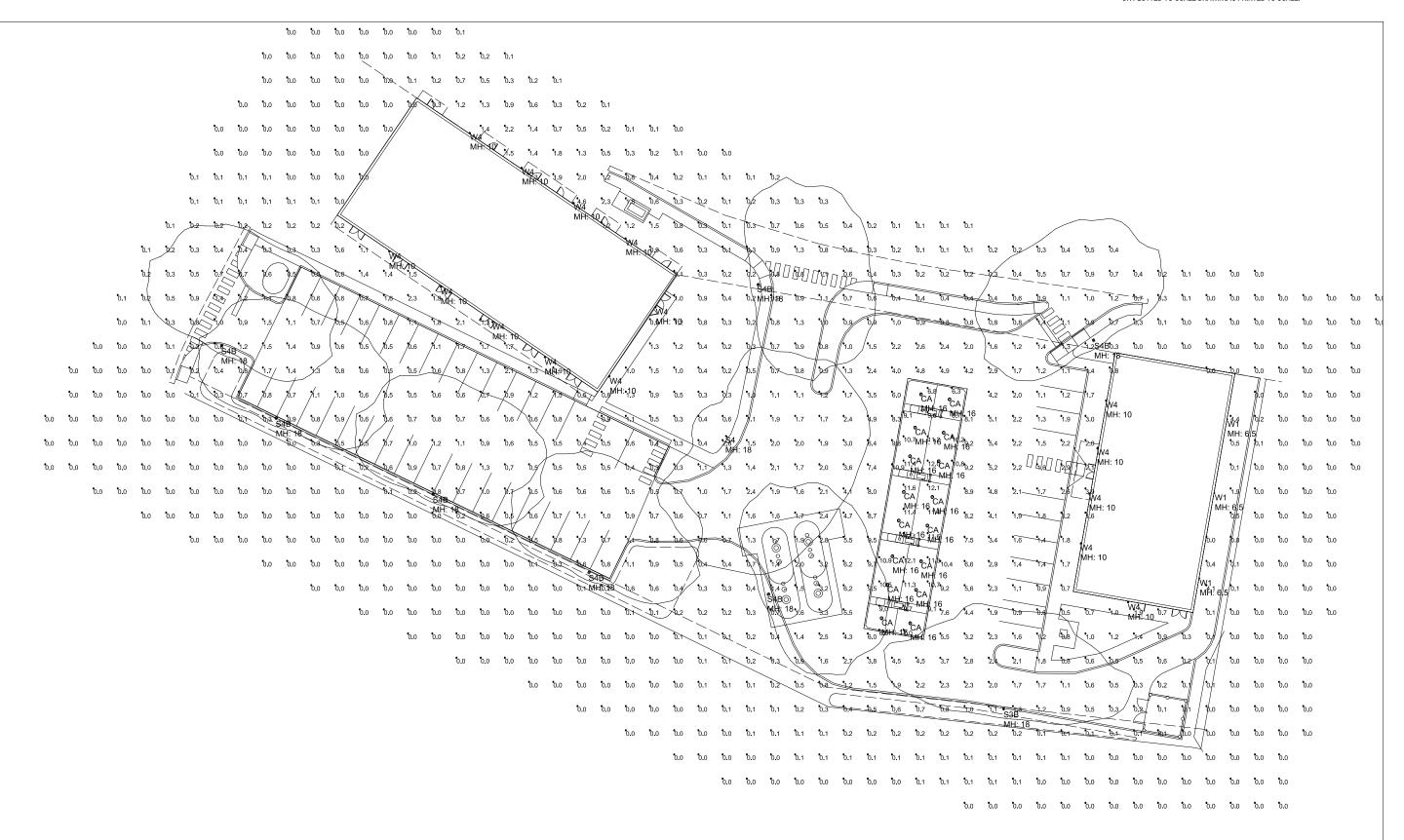
WANEY LIGHTING ASSOCIATES, INC

5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY I ARE THE RESPONSIBILITY OF THE OWNER AND/DOR THE OWNER'S REPRESENTATIVE.

6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.

7) DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES.

IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED. CASCALE OF DAMAING IS PRINTED TO SCALE. OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.



Calculation Summary					
Label	Avg	Max	Min	Avg/Min	Max/Min
PUMPS	0.15	0.4	0.1	1.5	4.0
SITE	0.40	4.6	0.0	N.A.	N.A.
RETAIL PARK	0.77	2.1	0.3	2.6	7.0

PUMP	CANOPY	LIGHTS	"OFF"
	0, 11 10 1		0

Туре	Qty	Lum. Lumens	LLF	Lum. Watts	Description
CA	16	4915	0.900	55.6	ARS-24L4K-070-5M-CS
S3B	1	3561	0.900	56	CL1S-32L-4K-3-053-BC
S4B	7	2801	0.900	38	CL1S-32L-4K-4-035-BC
S4	1	5905	0.900	56	CL1S-32L-4K-4-053
W1	3	413	0.900	17.7	PGN WITH Full Cutoff Visor
W4	15	1550	0.900	13.9	TRP1-12L15-4K7-4

NOTES:

1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.

2) CALCULATIONS MAY or MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.

3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE

WITHOUT REFLECTIONS OR OBSTRUCTIONS UNLESS OTHERWISE INDICATED.
4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.
5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ

PINE STATE FAMILY MART PORTLAND, ME SITE LIGHTING LAYOUT

WANEY LIGHTING ASSOCIATES, INC

5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY IT ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

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