



Technical Memorandum

Subject: Site Lighting Report (ID #043)

PWB Project #s: W02229

Date: January 23, 2025

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City of Sandy

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List of Abbreviations

AFF	Above Finished Floor
AFG	Above Finished Grade
AL	Aluminum
AVG	Average
BUG	Backlight/Uplight/Glare (as defined in IES TM-15 <i>Luminaire Classification System for Outdoor Luminaires</i>)
CH:	Channel (lighting control group)
FC	Footcandle
IES	Illuminating Engineering Society
MAX	Maximum
MIN	Minimum
MH:	Mounting Height
TYP	Typical

1.0 Design Parameters for the Site Lighting Model

The purpose of this report is to provide an analysis of the site lighting at the City of Sandy Pump Station. The exterior lighting for the site is necessary for the safe and secure operation of the facility but could, without mitigation, impact the surrounding rural environment. The site lighting has been computer modeled using AGI32 lighting software to calculate the illumination levels in footcandles (fc) during a few operations scenarios. The different usages have been divided into statistical areas to compare the illumination levels with those recommended by the Illuminating Engineering Society (IES).

This Lighting Report covers criteria affecting lighting design, notes to consider about the models, parameters of the lighting report, directions to properly interpret the report, and analysis of the report.

1.1 Criteria Affecting Lighting Design

There are criteria from Multnomah County Code that have affected the lighting design. Most of these address the use of “full cutoff” fixtures (luminaires that do not emit light above the horizontal). The following describes our design intent in meeting the Multnomah County Dark Sky standards.

The analysis demonstrates compliance with the Multnomah County Dark Sky Lighting Standards (MCC 39.6850) Below are the applicable lighting criteria to be met by MCC 39.6850 Dark Sky Lighting Standards.

“Dark Sky Lighting Standards require non-exempt lighting to be fully shielded from the sky and for light to be contained on the property.

C. The following standards apply to all new exterior lighting supporting a new, modified, altered, expanded, or replaced use approved through a development permit and to all existing exterior lighting on property that is the subject of a development permit approval for enlargement of a building by more than 400 square feet of ground coverage.

1. The light source (bulbs, lamps, etc.) must be fully shielded with opaque materials and directed downwards. “Fully shielded” means no light is emitted above the horizontal plane located at the lowest point of the fixture’s shielding. Shielding must be permanently attached.
2. The lighting must be contained within the boundaries of the Lot of Record on which it is located. To satisfy this standard, shielding in addition to the shielding required in paragraph (C)(1) of this section may be required.

1.2 Notes About the Model

This report uses AGI32 version 20.10 software by Lighting Analysts. The model is not sculpted to match the terrain. The building foundation were modeled at the same elevation (0 feet).

2.0 Parameters of the Lighting Reports

Two modes of lighting controls are utilized in an effort to minimize the illumination impact to the surrounding community and environment, AMBIENT – DIMMED and AMBIENT – FULL OUTPUT. Additionally, an EMERGENCY EGRESS scenario confirms that the exterior paths comply with NFPA 101 Life Safety Code. There are some features in the AMBIENT – FULL OUTPUT report:

- Illumination levels use IES recommendations for various areas. The closest application to pump station areas is an Electric Generating Station.

- There is a fixture next to each person door and above each rollup door.
- All the exterior fixtures are full cutoff (no light emitted above the horizontal) and 3000K (warm color temperature).

2.1 AMBIENT – DIMMED Report

The AMBIENT-DIMMED report's illumination levels are measured when the fixtures are at a dimmed output. These fixtures are controlled by photocell and motion sensors. The fixtures are typically in a dimmed state (as shown) and are at full light output when triggered by a motion sensor (AMBIENT – FULL OUTPUT Report) with a time delay back to the dimmed state (as shown).

- This dimmed ambient illumination level is below IES recommendations for the safe operation of the process areas. However, the lower light levels save energy and provide enough illumination to help workers survey their surroundings at a distance. Once they enter an area where their motion is detected, the lighting comes to full brightness (AMBIENT – FULL OUTPUT).
- There is 0 fc at the Bull Run property line.

2.2 AMBIENT – FULL OUTPUT Report

The AMBIENT – FULL OUTPUT report's illumination levels are measured when the fixtures are at full light output. These fixtures will all be controlled by photocell and motion sensors. The fixtures will typically be at a dimmed state (AMBIENT – DIMMED Report) and will be at full light output when triggered by a motion sensor (as shown) with a time delay back to the dimmed state.

- The full output illumination levels target the IES recommendations for the safe operation of the process areas.
- There is 0 fc at the property line.

2.3 EMERGENCY EGRESS Report

The EMERGENCY EGRESS report has all of the fixtures on emergency power at full light output.

- Task lighting is turned on regardless of the lighting controls signals (i.e. switch position, motion sensor trigger, daylight sensor).

3.0 Interpreting the Report

Illumination is measured in footcandles (fc) taken at grade, and the IES has recommended levels for certain tasks or occupancies. This report lists the assumed usage/target fc level per statistical area for comparison against the computer modeled calculated area.

3.1 Illumination Recommendations and Color Code Legends

See page A-2 showing the target footcandle levels listed along with color coding legends for the areas and light levels.

3.2 Overall Site Plan

There is an overall site plan showing the Sandy Pump Station location on page A-4.

3.3 Fixture Types

Each fixture is labeled with the fixture type (keyed on the luminaire schedule, page A-3), channel (CH:), and mounting height (MH:).

3.4 Channels

There are a couple channels (CH:), see descriptions below:

- **EM:** Fixtures as part of the Emergency Egress path lighting
- **N:** Fixtures on normal power.

3.5 Mounting Heights

All the mounting heights (MH:) are based on the elevation in the model.

3.6 Calculation Summaries

Each Process Area has its own Calculation Summary table with statistical areas listed as line items.

- The Descriptions of each statistical area match a line on the ILLUMINATION RECOMMENDATIONS list to indicate the target footcandle level and uniformity.

3.7 Conclusion

The lighting design proposed will meet the operations and maintenance needs of the Pump Station while complying with the Multnomah County Dark Sky Lighting Standards as described above, including the following:

- Except for submerged lights needed for process monitoring, which are exempt from the standard, all lighting will be fully shielded from the sky. All fixtures have full cutoff beam distributions with zero up-light.
- Light will be contained on the property. Light modeling demonstrates that there is 0 footcandle light trespass along all property lines.

Beyond meeting code requirements, the exterior lighting layout has been designed to be mindful of the rural site location, using a control strategy that keeps nighttime illumination levels low, with fixtures dimmed to the minimum needed for security and safety, using motion sensors and manual switches to increase light output when needed.

4.0 Analysis

The main parameters of the site lighting are to minimize the illumination impact on the surrounding environment and to provide safe levels of lighting to operate the facility.

4.1 Illumination

The illumination levels will typically be at the dimmed state (AMBIENT – DIMMED Report) unless triggered by motion to full light output (AMBIENT – FULL OUTPUT Report). The lighting will be controlled so only a small portion of the illumination will be augmented where it is needed. The full light output footcandle levels meet the IES criteria assigned to each statistical area.

In the EMERGENCY EGRESS report, all of the emergency egress paths meet the required light levels. The other area readings are to show the overall effect of the illumination levels during an emergency event. The normal power lighting is on standby generator so all the lighting will be restored in a timely manner.

4.2 Lighting Control

Each door and process area has its own lighting control, either integral to the fixture or mounted remotely. The typical Sequence of operations is to be turned off during daylight hours, set to a dimmed state under normal night conditions with a motion trigger to full light output, and time delay back to the dimmed state.

Attachment A: General Information

Illumination Criteria, Color Coding Page, Luminaire Schedule, and Overall Site Plan.

ILLUMINATION RECOMMENDATIONS

EXTERIOR

IESNA RP-8-18 Roadway and Parking Facility Lighting:
Walkways/Bikeways: Medium pedestrian activity area: 0.5 fc avg at grade, 4:1 avg/min

IESNA RP-7-21 Lighting Industrial Facilities:
Electric Gen Stns-Exterior: Fuel handling, unload: 5 fc avg at task, 5:1 max/min
Electric Gen Stns-Exterior: Transformer yards, genl area: 2 fc avg at task, 10:1 max/min

NFPA 101 Life Safety Code, Section 7.9 Emergency Lighting
Emergency illumination at walking surface: 1 fc avg , 0.1 fc minimum, 40:1 max/min

MULTNOMAH COUNTY MCC 39.6850 DARK SKY LIGHTING STANDARDS
Lighting contained within the boundaries of the Lot of Record.

- AREA TYPE LEGEND
- YARD
 - AREA UNDER CANOPY
 - WALKWAY, MEDIUM PEDESTRIAN USE

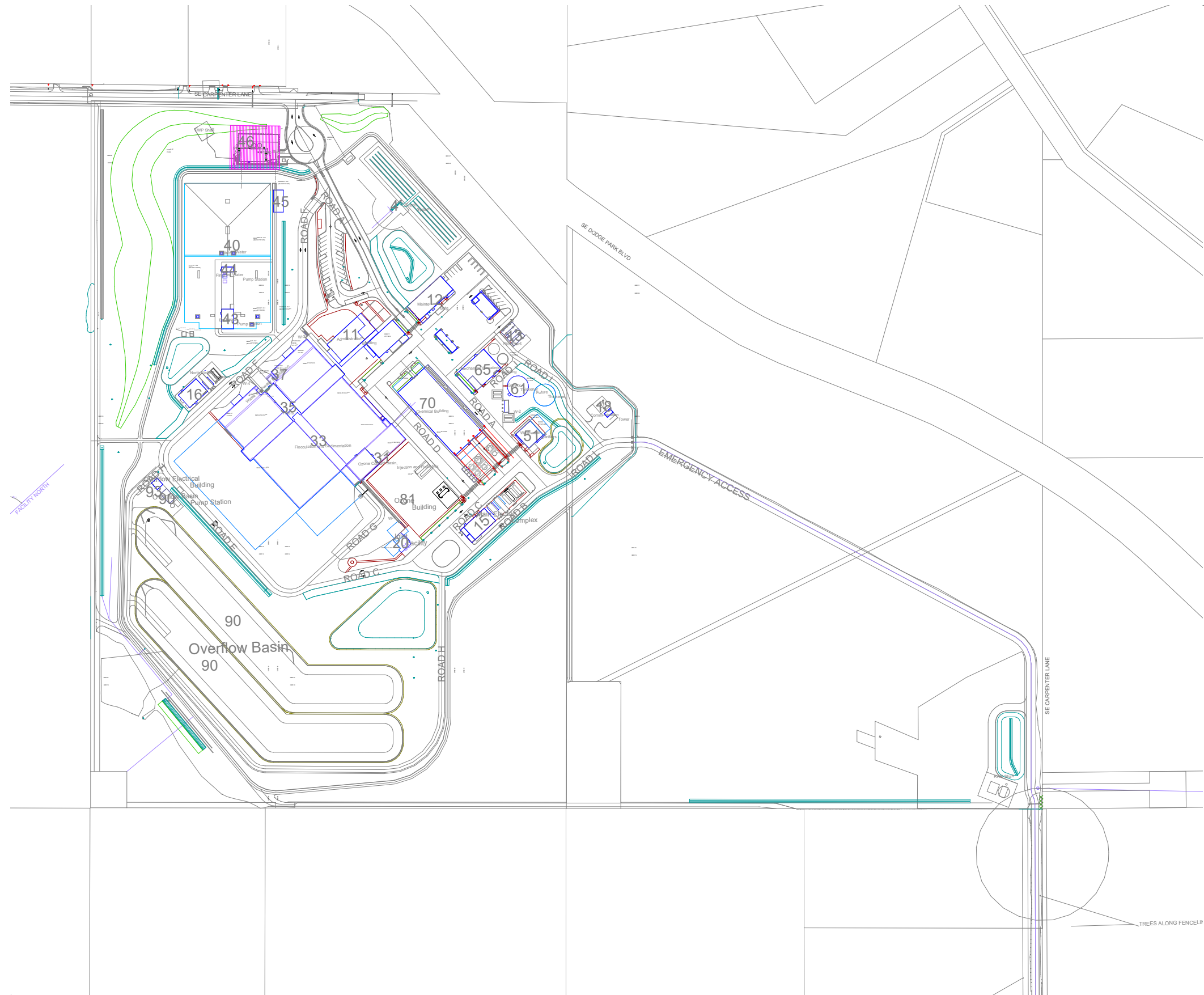
- FOOTCANDLE (FC) LEGEND
- 0.0 FC (NO SPILL LIGHT)
 - 0.01 - 0.09 FC
 - 0.10 - 0.19 FC
 - 0.20 - 0.49 FC (UP TO MEDIUM PEDESTRIAN ACTIVITY AVG)
 - 0.5 - 0.99 FC (MEDIUM PEDESTRIAN ACTIVITY AVG - EMERG. EGRESS AVG)
 - 1.00 - 1.99 (EMERG. EGRESS AVG - TRANSFORMER YARD AVG)
 - 2.00 - 4.99 (TRANSFORMER YARD AVG - FUEL HANDLING AVG)

Luminaire Schedule									
Scene: AMBIENT - FULL OUTPUT									
Symbol	Qty	Arr. Lum. Lumens	Arr. Watts	Tag	Arrangement	LLF	Description	Filename	BUG Rating
	5	2861	9	ZC4S	SINGLE	0.260	birchwood VAN-LED-400-HLO-30-4-FW_1, mullion mt, 2', SLO output	VAN-LED-400-HLO-30-4-FW.ies	B1-U0-G1
	1	1161	10	ZD2F	SINGLE	0.750	lithonia WDGE1 LED P1 30K 80CRI VF	WDGE1_LED_P1_30K_80CRI_VF.ies	B0-U0-G0
	1	3444	44	ZWFB	SINGLE	0.750	cooper GWC-SA1B-830-U-T4FT-HSS	GWC-SA1B-830-U-T4FT-HSS.ies	B1-U0-G1

FIXTURE TYPE/TAG NIC IS PROVIDED BY GENERATOR ENCLOSURE MANUFACTURER AND IS CONSIDERED PART OF THEIR EQUIPMENT.

Bull Run Filtration Facility (BRFF) -
Sandy Pump Station
Elcon #5455-070.00

ELCON ASSOCIATES, INC.
ENGINEERS - CONSULTANTS



Scale: 1 inch= 300 Ft.

OVERALL SITE PLAN

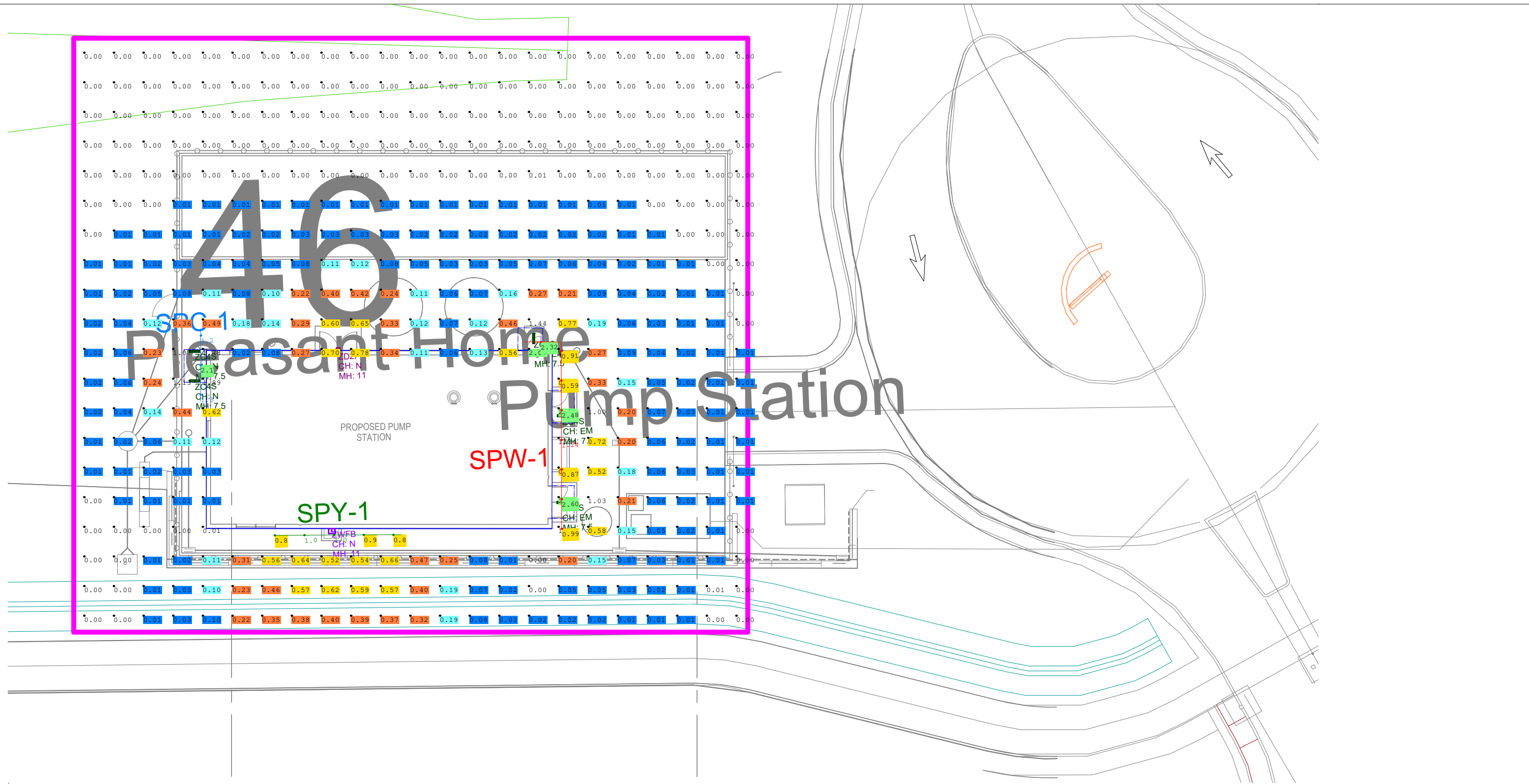


Bull Run Filtration Facility (BRFF) - Sandy Pump Station Elcon #5455-070.00	ELCON ASSOCIATES, INC. ENGINEERS - CONSULTANTS
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Attachment B: AMBIENT - DIMMED Report

Calculation Summaries, Lighting Plans. This scenario is typical for most of the night when no motion sensors are triggered and no task lights are turned on.

Calculation Summary							
Project: STATS- AREA 46- SANDY PUMP STATION							
Scene: AMBIENT - DIMMED							
Label	Description	Units	Avg	Max	Min	Avg/Min	Max/Min
SPC-1	Electric Gen Stns-Exterior: Fuel handling, unload	Fc	1.53	2.1	1.2	1.28	1.75
SPW-1	Walkways/Bikeways: Medium pedestrian activity area	Fc	1.50	2.60	0.59	2.54	4.41
SPY-1	Electric Gen Stns-Exterior: Transformer yards, genl area	Fc	0.90	1.0	0.8	1.13	1.25



Scale: 1 inch= 20 Ft.

SITE ILLUMINATION IN FC - SANDY PUMP STATION



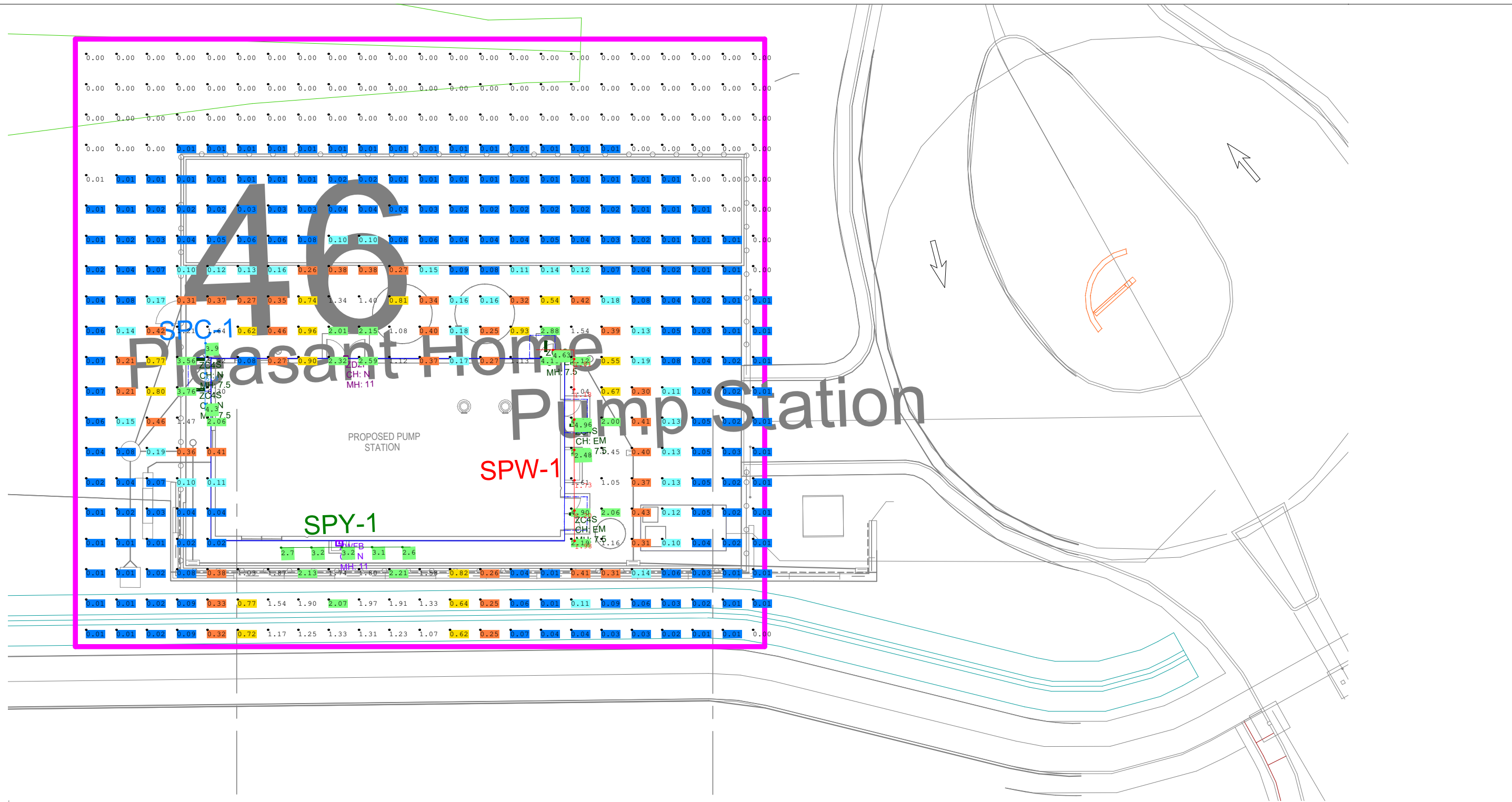
**Bull Run Filtration Facility (BRFF) -
Sandy Pump Station
Elcon #5455-070.00**

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Attachment C: AMBIENT – FULL OUTPUT Report

Calculation Summaries, Lighting Plans. This scenario simulates when all motion sensors are triggered, but no task lights are turned on.

Calculation Summary							
Project: STATS- AREA 46- SANDY PUMP STATION							
Scene: AMBIENT - FULL OUTPUT							
Label	Description	Units	Avg	Max	Min	Avg/Min	Max/Min
SPC-1	Electric Gen Stns-Exterior: Fuel handling, unload	Fc	5.03	6.9	3.9	1.29	1.77
SPW-1	Walkways/Bikeways: Medium pedestrian activity area	Fc	3.00	5.20	1.18	2.54	4.41
SPY-1	Electric Gen Stns-Exterior: Transformer yards, genl area	Fc	2.96	3.2	2.6	1.14	1.23

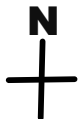


Scale: 1 inch= 20 Ft.

SITE ILLUMINATION IN FC - SANDY PUMP STATION

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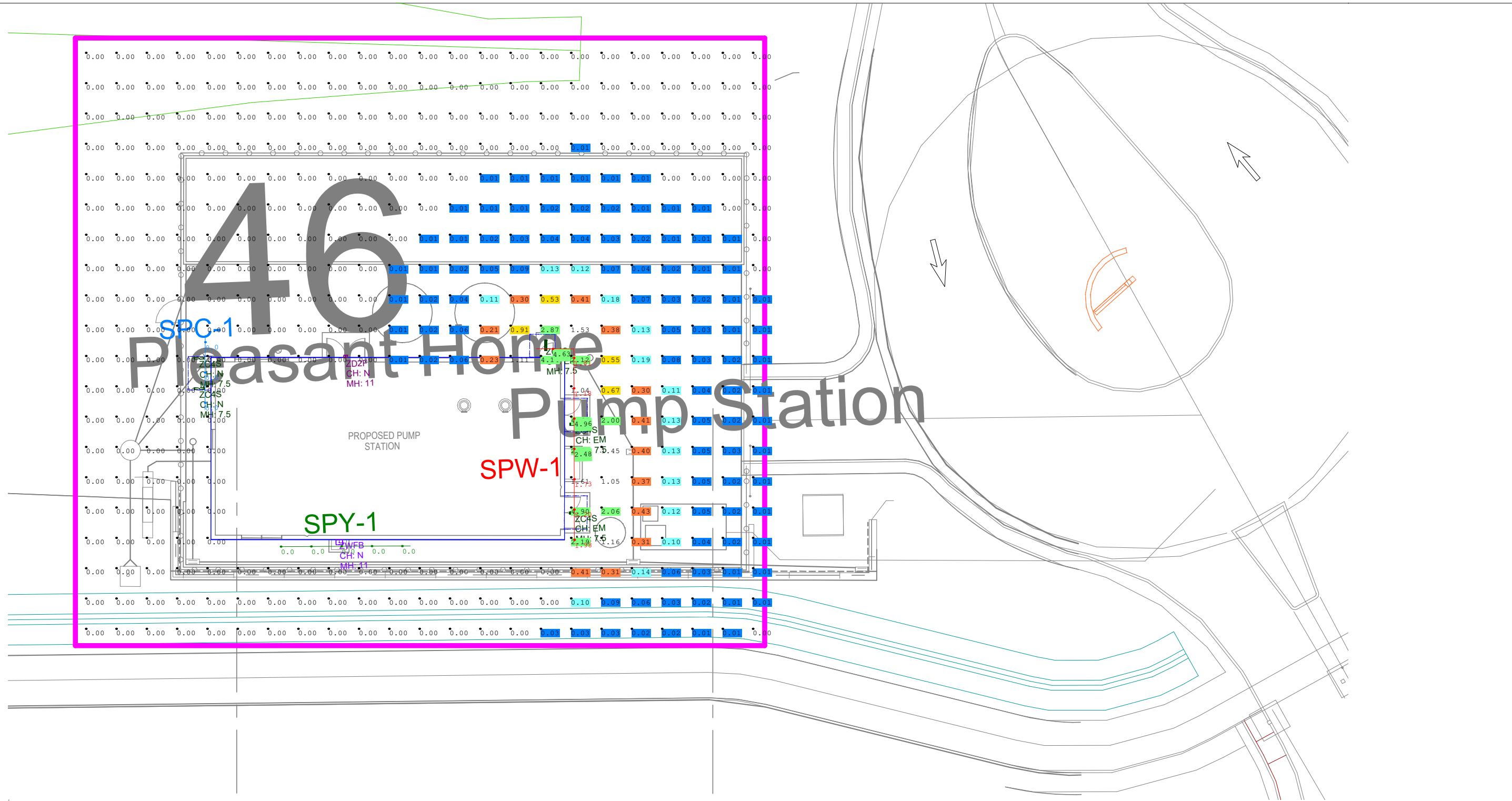
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Elcon #5455-070.00**

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Attachment D: EMERGENCY EGRESS Report

Calculation Summaries, Lighting Plans. This scenario simulates an emergency event where only the fixtures on emergency power are illuminated.

Calculation Summary							
Project: STATS- AREA 46- SANDY PUMP STATION							
Scene: EMERGENCY EGRESS							
Label	Description	Units	Avg	Max	Min	Avg/Min	Max/Min
SPC-1	Electric Gen Stns-Exterior: Fuel handling, unload	Fc	0.00	0.0	0.0	N.A.	N.A.
SPW-1	Walkways/Bikeways: Medium pedestrian activity area	Fc	3.00	5.20	1.18	2.54	4.41
SPY-1	Electric Gen Stns-Exterior: Transformer yards, genl area	Fc	0.00	0.0	0.0	N.A.	N.A.



Scale: 1 inch= 20 Ft.

SITE ILLUMINATION IN FC - SANDY PUMP STATION

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**Bull Run Filtration Facility (BRFF) -
Sandy Pump Station
Elcon #5455-070.00**

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WDGE1 LED

Architectural Wall Sconce



Buy American

Catalog
Number

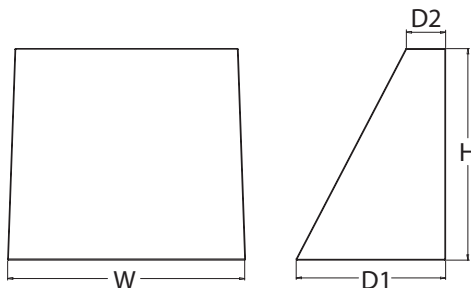
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 5.5"
Depth (D2): 1.5"
Height: 8"
Width: 9"
Weight: 9 lbs
 (without options)



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

ZD2F: WDGE1 LED P1 30K 80CRI VF MVOLT SRM DMG xxxxx PBBW BCE

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P1	27K 2700K	80CRI	VF Visual comfort forward throw	MVOLT 347 ²	Shipped included SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only) ⁵ Shipped separately AWS 3/8inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.
	P2	30K 3000K	90CRI	VW Visual comfort wide		
		35K 3500K				
		40K 4000K				
		50K ¹ 5000K				

Options	Finish
E4WH ³ Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)	DDBXD Dark bronze
PE ⁴ Photocell, Button Type	DBLXD Black
DS Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)	DNAXD Natural aluminum
DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	DWHXD White
BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.	DSSXD Sandstone
BAA Buy America(n) Act Compliant	
	DDBTXD Textured dark bronze DBLTXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

Accessories

Ordered and shipped separately.

WDGEAWS DDBXD WDGE 3/8inch Architectural Wall Spacer (specify finish)
 WDGE1PBBW DDBXD U WDGE1 surface-mounted back box (specify finish)

NOTES

- 50K not available in 90CRI.
- 347V not available with E4WH, DS or PE.
- E4WH not available with PE or DS.
- PE not available with DS.
- Not qualified for DLC. Not available with E4WH.



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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WDGE1 LED
 Rev. 03/01/22

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)					30K (3000K, 80 CRI)					35K (3500K, 80 CRI)					40K (4000K, 80 CRI)					50K (5000K, 80 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P1	10W	VF	1,120	112	0	0	0	1,161	116	0	0	0	1,194	119	0	0	0	1,227	123	0	0	0	1,235	123	0	0	0
		VW	1,122	112	0	0	0	1,163	116	0	0	0	1,196	120	0	0	0	1,229	123	0	0	0	1,237	124	0	0	0
P2	15W	VF	1,806	120	1	0	0	1,872	125	1	0	0	1,925	128	1	0	0	1,978	132	1	0	0	1,992	133	1	0	0
		VW	1,809	120	1	0	0	1,876	125	1	0	0	1,929	128	1	0	0	1,982	132	1	0	0	1,996	133	1	0	0

Electrical Load

Performance Package	System Watts	Current (A)				
		120V	208V	240V	277V	347V
P1	10W	0.082	0.049	0.043	0.038	--
	13W	--	--	--	--	0.046
P2	15W	0.132	0.081	0.072	0.064	--
	18W	--	--	--	--	0.056

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Output in Emergency Mode (4000K, 80 CRI)

Option	Dist. Type	Lumens
E4WH	VF	646
	VW	647

Lumen Ambient Temperature (LAT) Multipliers

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

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

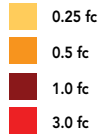
Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91



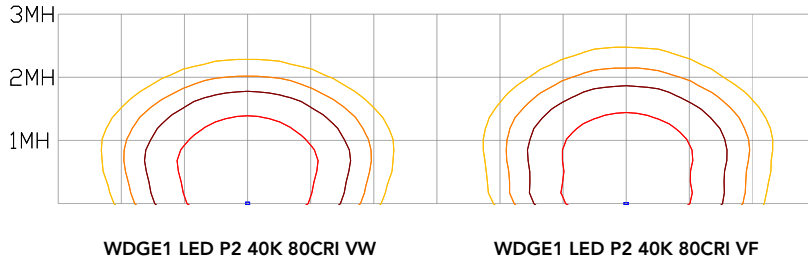
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage.
Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND



MH = 8ft
Grid = 8ft x 8ft



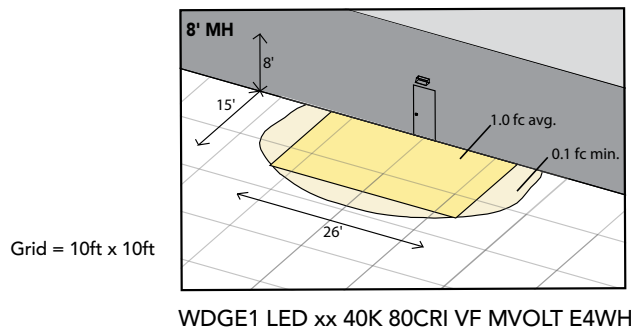
Emergency Egress Options

Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90 minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

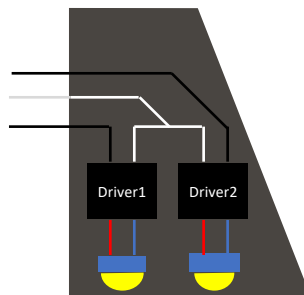
The example below shows illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E4WH and VF distribution.



Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark. This option is typically used with a back generator or inverter providing emergency power.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9





E4WH – 4W Emergency Battery Backup

D = 5.5"

H = 8"

W = 9"



AWS – 3/8inch Architectural Wall Spacer

D = 0.38"

H = 4.4"

W = 7.5"



PBBW – Surface-Mounted Back Box

Use when there is no junction box available.

D = 1.75"

H = 8"

W = 9"

FEATURES & SPECIFICATIONS

INTENDED USE

Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION

The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH

Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS

Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2). Fixture ships standard with 0-10v dimmable driver.

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 2700K and 3000K color temperature only and SRM mounting only.

BUY AMERICAN

Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

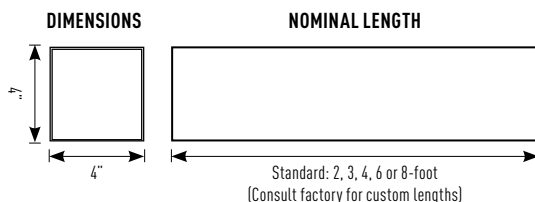
Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

VAN-LED-400 / Surface Mount

VANESSA 4" Square LED Wet Location Luminaire w/ Surface Mount Options

TYPE:

JOB NAME:



Light Output	Nominal Delivered	System Wattage	Efficacy
Frosted White Lens / 4000K / 80 CRI			
SLO	393 lm/ft	4.4 W/ft	89.4 lm/W
ZC4M HLO	756 lm/ft	9 W/ft	84 lm/W

Wattage includes driver and LED Module consumption. Delivered lumen output will vary depending on CCT, CRI and Optic selection.

CONSTRUCTION

Heavy gauge square extruded aluminum housing. Precision-machined aluminum end-caps. Extruded acrylic lenses. Stainless steel hardware. Concealed weather-seal gaskets at end caps, lens and power entry on all stand-alone or continuous run fixtures with an IP65 rating. Feed points accept 1/2" trade size threaded wet location conduit fittings.

MOUNTING OPTIONS

(WM) Wall Mount, (CM) Ceiling Mount, (MM) Mullion Mount or (REC) Recessed

FINISHES

(SL) Silver Matte Texture, (MW) Matte White, or (FB) Flat Black. Other powder coat finishes available. Consult factory for details.

LED LIGHT ENGINE SYSTEM

LED Light Engines are available as HLO (High Lumen Output) and SLO (Standard Lumen Output) providing efficient illumination. CLO (Custom Lumen Output) allows for end user specified lumen output or tailored wattage consumption for certain models. Consult factory for details.

DIMMING

Dimming is available with a variety of control protocols and options. Consult factory for availability and specifications.

ACRYLIC LENS OPTIONS

(FW) Frosted White impact resistant extruded lens.

FIXTURE LENGTH

Fixtures are available in 2', 3', 4', 6' and 8' nominal lengths. Continuous run mounting available featuring water-sealed gaskets within knock-outs for maintaining WL rating. See installation section for more details.

ELECTRICAL

Rated for operation with ambient temperatures not to exceed 40°C. Use specification code "HAT" for applications where ambient will be between 40° and 45°C. The "HAT" option is a thermistor which will control internal temperatures so as not to exceed internal device maximum temperature. At certain temperature thresholds, fixture will dim light output to keep internal temperatures within the acceptable range.

LISTING / WARRANTY

- 5-Year Limited Warranty
- UL listed to US and Canadian standards for wet locations
- IP65 Rated



ZC4M: VAN-LED-400 HLO 30 4 DR MM EFX xx FW 120 D1

ORDERING CODE: (Example: VAN-LED-400-SLO-309-8-DR-WM-STND-MW-FW-120-D1)

1	2	3	4	5	6	7	8	9	10	11	12
1: Model	2: Light Output	3: CCT/CRI	4: Nominal Length	5: Distribution	6: Mounting	7: Power Feed	8: Finishes	9: Lens/Optics	10: Voltage	11: Dimming	12: Options
☐ VAN-LED-400 (VANESSA 4" Square LED Wet Location Luminaire)	☐ -SLO (Standard Lumen Output) ☐ -HLO (High Lumen Output) ☐ -CLO (Custom Lumen Output, See CLO Calculator)	☐ -279 (2700K / 90CRI) ☐ -30 (3000K / 82CRI) ☐ -309 (3000K / 90CRI) ☐ -35 (3500K / 82CRI) ☐ -359 (3500K / 90CRI) ☐ -40 (4000K / 82CRI) ☐ -409 (4000K / 90CRI)	☐ -2 (2ft) ☐ -4 (4ft) ☐ -6' (6ft) ☐ -8' (8ft) ☐ -CR_1 (Continuous Run - Note length in feet)	☐ -DR (Direct)	☐ -WM (Wall Mount) ☐ -CM (Ceiling Mount) ☐ -MM (Mullion Mount) ☐ -REC (Recessed)	☐ -STND (Standard) ☐ -EFL (End Feed Left) ☐ -EFR (End Feed Right) ☐ -EF2 (End Feed Both) ☐ -JBE (J-Box Extender)	☐ -SMT (Silver Matte Textured, Powder Coat) ☐ -MW (Matte White, Powder Coat) ☐ -FB (Flat Black, Powder Coat) ☐ -CUP² (Custom Powder Coat, Consult Factory)	☐ -FW (Frosted White)	☐ -120 (120V) ☐ -277 (277V) ☐ -347 (347V)	☐ -D1 (0-10V Dimming 1%)	☐ -EM³ (Emergency Backup) ☐ -HAT (High Ambient Temperature)

NOTES:

- Specify length in nominal feet
- Contact factory for custom powder coat finish
- EM's are remote mounted along with the test switch in a dry location, Consult factory for more info
- 6' & 8' Lengths are made up with (2) 3' fixtures or (2) 4' fixtures respectively

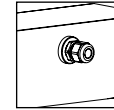
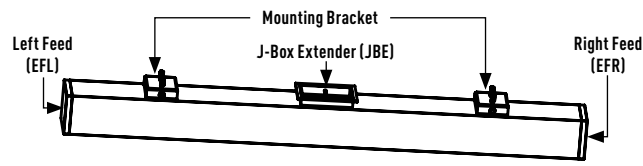
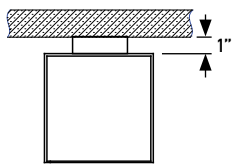
VAN-LED-400 / Surface Mount

VANESSA 4" Square LED Wet Location Luminaire w/ Surface Mount Options

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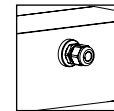
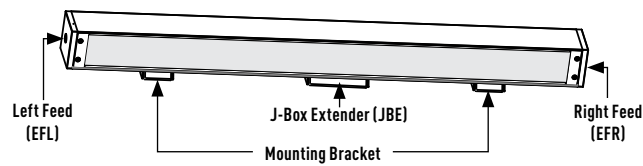
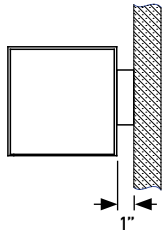
JOB NAME:

CEILING MOUNT



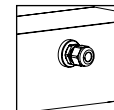
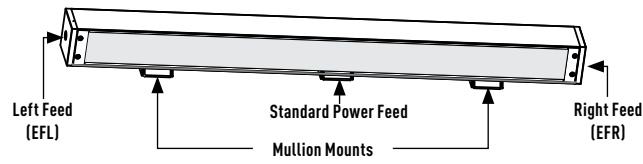
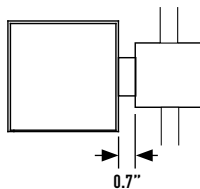
Standard Power Feed
(1/2: NDT Liquid tight
cord grip by others)

WALL MOUNT



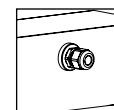
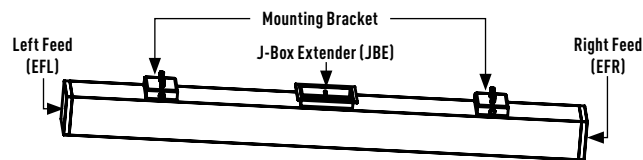
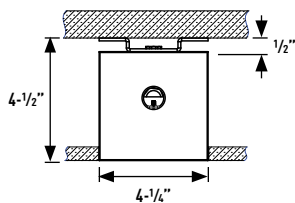
Standard Power Feed
(1/2: NDT Liquid tight
cord grip by others)

MULLION MOUNT



Standard Power Feed
(1/2: NDT Liquid tight
cord grip by others)

RECESSED



Standard Power Feed
(1/2: NDT Liquid tight
cord grip by others)

VAN-LED-400 / Surface Mount

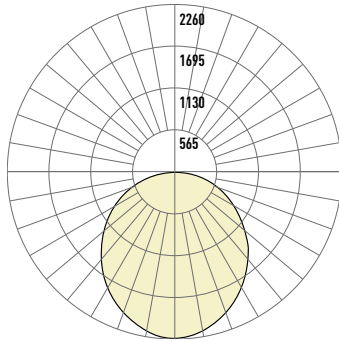
VANESSA 4" Square LED Wet Location Luminaire w/ Surface Mount Options

TYPE:

JOB NAME:

VAN-LED-400-HLO-30-4

PHOTOMETRIC CURVE:



Direct (FW): 1182 lm/ft

Wattage: 36W

Total Lumens (4ft): 4728 lm

CCT/CRI: 3000K / 80CRI

Efficacy: 131 lm/W

LUMINANCE DATA (cd/sq.m):

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7349	4196	7072
55	7103	6939	6820
65	6998	6815	6672
75	6689	6248	5754
85	6314	4330	3208

CANDELA DISTRIBUTION:

	0	10	20	30	40	50	60	70	80	90
0	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022
5	1023	999	1009	1017	1018	1016	1028	1012	1034	1007
10	1006	992	1011	1009	1007	1003	996	999	1006	1008
15	969	971	980	973	970	975	978	967	971	970
20	927	938	945	943	935	932	937	936	934	928
25	889	898	892	901	896	887	884	895	884	883
30	840	845	846	844	841	839	832	835	835	830
35	782	782	785	784	783	775	777	774	773	773
40	724	726	725	718	722	716	714	710	708	711
45	658	660	656	653	644	645	643	643	640	634
50	591	586	583	581	577	575	574	571	571	566
55	516	510	502	508	507	502	495	494	496	496
60	445	443	440	438	434	434	436	433	433	434
65	375	371	367	365	367	362	367	364	360	357
70	298	291	292	291	287	286	283	281	274	270
75	219	213	216	213	209	201	201	196	191	189
80	146	143	139	135	131	125	121	117	113	113
85	70	68	62	57	51	45	41	38	35	35
90	0	0	0	0	0	0	0	0	0	0

ZONAL LUMEN:

Zone	Lumens
0-10	97
10-20	275
20-30	411
30-40	488
40-50	500
50-60	452
60-70	360
70-80	217
80-90	62

CCT SCALING FACTOR

CCT	2700K	3000K	3500K	4000K
80 CRI	-	0.97	1.00	1.02
90 CRI	0.79	0.83	0.86	0.88

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GWC Galleon Wall

Wall Mount Luminaire

Product Features



Product Certifications



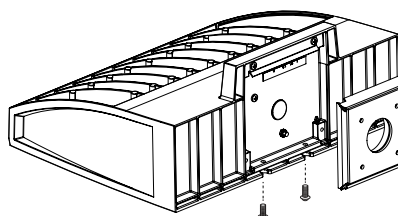
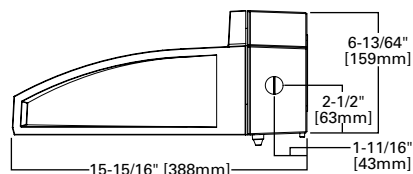
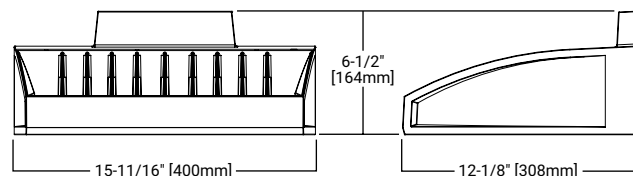
Interactive Menu

- Ordering Information [page 2](#)
- Product Specifications [page 2](#)
- Optical Configurations [page 3](#)
- Energy and Performance Data [page 4](#)
- Control Options [page 6](#)

Quick Facts

- Choice of thirteen high-efficiency, patented AccuLED Optics™
- Downward and inverted wall mounting configurations
- Eight lumen packages from 3,215 up to 17,056
- Efficacies up to 154 lumens per watt

Dimensional Details



Connected Systems

- WaveLinx
- Enlighted

Ordering Information

ZWFB: GWC SA1B 830 U T4FT xx HSS MS/DIM-L20

SAMPLE NUMBER: GWC-SA2C-740-U-T4FT-GM

Product Family ¹	Light Engine		Color Temperature	Voltage	Distribution	Finish
	Configuration	Drive Current				
GWC =Galleon Wall BAA-GWC =Galleon Wall Buy American Act Compliant ³⁵ TAA-GWC =Galleon Wall Trade Agreements Act Compliant ³⁵	SA1 =1 Square SA2 =2 Squares ²	A =615mA B =800mA C =1000mA D =1200mA ⁴	722 =70CRI, 2200K 727 =70CRI, 2700K 730 =70CRI, 3000K 735 =70CRI, 3500K 740 =70CRI, 4000K 750 =70CRI, 5000K 760 =70CRI, 6000K 827 =80CRI, 2700K 830 =80CRI, 3000K AMB =Amber, 590nm ^{3, 4}	U =120-277V 1 =120V 2 =208V 3 =240V 4 =277V 8 =480V ^{6,7} 9 =347V ⁶	T2 =Type II T3 =Type III T4FT =Type IV Forward Throw T4W =Type IV Wide SL2 =Type II w/Spill Control SL3 =Type III w/Spill Control SL4 =Type IV w/Spill Control SLL =90° Spill Light Eliminator Left SLR =90° Spill Light Eliminator Right RW =Rectangular Wide Type I 5NQ =Type V Square Narrow 5MQ =Type V Square Medium 5WQ =Type V Square Wide	AP =Grey BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Met =Metallic WH =White
Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)			Accessories (Order Separately) ³⁶		
F =Single Fused (120, 277 or 347V. Must Specify Voltage) FF =Double Fused (208, 240 or 480V. Must Specify Voltage) 10K =10kV Surge Module 20K =Series 20kV UL 1449 Surge Protective Device DIM =External 0-10V Dimming Leads ^{9, 10} CBP =Battery Pack with Back Box, Cold Weather Rated ^{2, 4, 14, 33} CBP-CEC =Battery Pack with Back Box, Cold Weather Rated, CEC compliant ^{2, 4, 14} L90 =Optics Rotated 90° Left R90 =Optics Rotated 90° Right HSS =Factory Installed House Side Shield ²³ GRSBK =Factory Installed Glare Shield, BK ^{4, 27} GRSWH =Factory Installed Glare Shield, WH ^{4, 27} UPL =Uplight Housing ¹³ HA =50°C High Ambient ¹² LCF =Light Square Trim Plate Painted to Match Housing ²² MT =Factory Installed Mesh Top CC =Coastal Construction finish ⁵ CE =CE Marking and Small Terminal Block ²⁴ AHD145 =After Hours Dim, 5 Hours ¹⁶ AHD245 =After Hours Dim, 6 Hours ¹⁶ AHD255 =After Hours Dim, 7 Hours ¹⁶ AHD355 =After Hours Dim, 8 Hours ¹⁶ DALI =DALI Driver ¹¹	BPC =Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) PR =NEMA 3-PIN Twistlock Photocontrol Receptacle PR7 =NEMA 7-PIN Twistlock Photocontrol Receptacle ¹⁵ SPB1 =Dimming Occupancy Sensor with Bluetooth Interface, <8' Mounting ^{19, 34} SPB2 =Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting ^{19, 34} SPB4 =Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting ^{19, 34} MS-LXX =Motion Sensor for On/Off Operation ^{17, 18, 19} MS/DIM-LXX =Motion Sensor for Dimming Operation ^{17, 18, 19} ZW =WaveLinX-enabled 4-PIN Twistlock Receptacle ^{29, 30} ZD =WaveLinX Module with DALI driver and 4-PIN Receptacle ^{29, 30} SWPD4XX =WaveLinX Sensor Only, 7'-15' ^{31, 32} SWPD5XX =WaveLinX Sensor Only, 15'-40' ^{31, 32} WOBXX =WaveLinX Sensor with Bluetooth, 7'-15' ^{31, 32} WOFXX =WaveLinX Sensor with Bluetooth, 15'-40' ^{31, 32} LWR-LW =Enlightened Wireless Sensor, Wide Lens for 8'-16' Mounting Height ^{19, 20, 21} LWR-LN =Enlightened Wireless Sensor, Narrow Lens for 16'-40' Mounting Height ^{19, 20, 21}			OA/RA1013 =Photocontrol Shorting Cap ²⁸ OA/RA1016 =NEMA Photocontrol - Multi-Tap 105-285V ²⁸ OA/RA1201 =NEMA Photocontrol - 347V ²⁸ OA/RA1027 =NEMA Photocontrol - 480V ²⁸ MA1252 =10kV Circuit Module Replacement MA1059XX =Thru-branch Back Box (Must Specify Color) LS/HSS =Field Installed House Side Shield ^{23, 25} LS/GRSBK =Glare Shield, Black ^{8, 25, 27} LS/GRSWH =Glare Shield, White ^{8, 25, 27} LS/PFS =Perimeter Shield, Black FSIR-100 =Wireless Configuration Tool for Occupancy Sensor ¹⁷ WOLC-7P-10A =WaveLinX Outdoor Control Module (7-pin) ^{26, 29} SWPD4-XX =WaveLinX Wireless Sensor, 7' – 15' Mounting Height ^{29, 30, 31, 32} SWPD5-XX =WaveLinX Wireless Sensor, 15' – 40' Mounting Height ^{29, 30, 31, 32}		
NOTES: 1. DesignLight Consortium® Qualified. Refer to www.designlights.org, Qualified Products List under Family Models for details. 2. Two light squares with CBP options limited to 25°C. Not available in combination with sensor options at 1200mA. 3. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option. 4. Not available with HA option. 5. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. 6. Require the use of a step down transformer. Not available in combination with sensor options at 1200mA. 7. 480V must use Wye system only. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems). 8. Reserved. 9. Cannot be used with other control options. 10. Low voltage control leads extended 18" from fixture. 11. Not available in 1200mA. When used with CBP or HA options, only available with single light square. 12. Not available in 1200mA, UPL or CBP options. Available with single light square. 13. Not available with SL2, SL3, SL4, HA, CBP, PR or PR7 options. 14. Operates a single light square only. Operates at -20°C to +40°C. Backbox is non-IP rated. Control option limited to BPC. 15. Compatible with standard 3-PIN photocontrols, 5-PIN or 7-PIN ANSI controls. 16. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information. 17. The FSIR-100 configuration tool is required to adjust parameters such as high and low modes, sensitivity, time delay and cutoff. Consult your lighting representative at Cooper Lighting Solutions for more information. 18. Replace LXX with L08 (<8' mounting), L20 (8'-20' mounting) or L40W (21'-40' mounting). 19. Includes integral photosensor. 20. Enlightened wireless sensors are factory installed requiring network components in appropriate quantities. 21. White sensor shipped on all housing color options. 22. Not available with HSS or GRS options. 23. Not for use with 5NQ, 5MQ, 5WQ or RW optics. The light square trim plate is painted black when the HSS option is selected. 24. CE is not available with the 1200, DALI, LWR, MS, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only. 25. One required for each light square. 26. Requires PR7. 27. Not for use with T4FT, T4W or SL4 optics. 29. Cannot be used in conjunction with additional photocontrol or other controls systems (BPC, PR, PR7, MS, LWR). 30. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. 31. Requires ZW or ZD receptacle. 32. Replace XX with sensor color (WH, BZ, or BK). 33. Specify 120V or 277V. 34. Smart device with mobile application required to change system defaults. See controls section for details. 35. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. 36. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.						

Product Specifications

Construction

- Driver enclosure thermally isolated from optics for optimal thermal performance
- Die-cast aluminum heat sinks
- IP66 rated housing
- 1.5G vibration rated

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 13 optical distributions
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED driver assembly mounted for ease of maintenance
- Standard with 0-10V dimming
- Optional 10kV or 20kV surge module
- Suitable for operation in -40C to 40C ambient environments. Optional 50C high ambient (HA) configuration.

Mounting

- Gasketed and zinc plated rigid steel mounting attachment
- "Hook-N-Lock" mechanism for easy installation

Finish

- Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

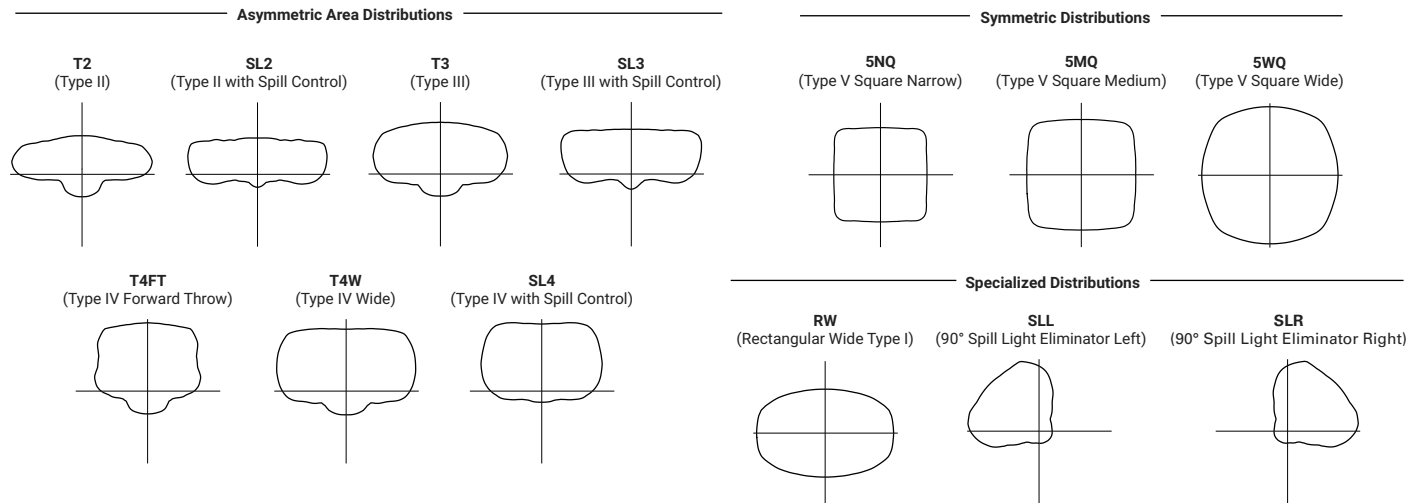
Typical Applications

- Exterior Wall, Walkway

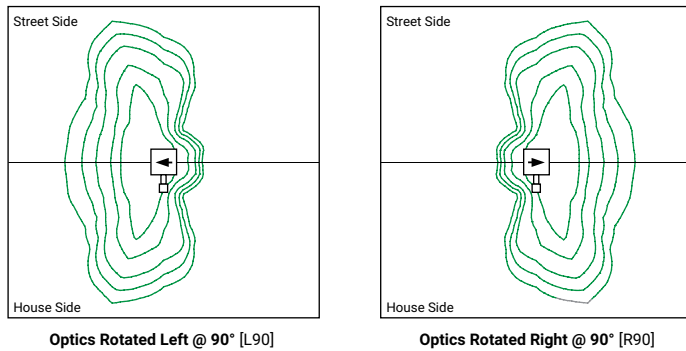
Warranty

- Five-year warranty

Optical Distributions



Optic Orientation



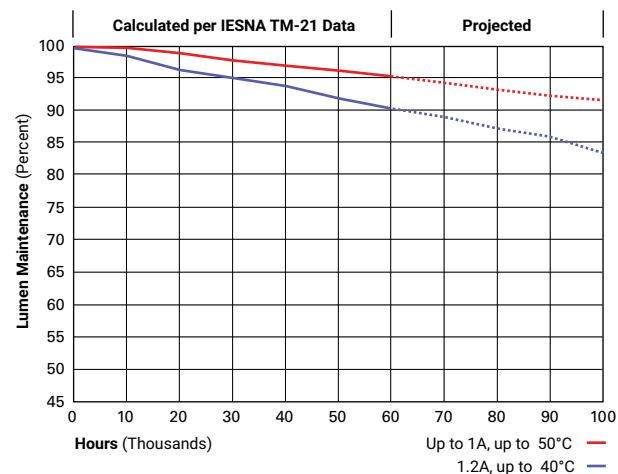
Energy and Performance Data

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

Lumen Maintenance

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	> 416,000
1.2A	Up to 40°C	> 90%	> 205,000



Energy and Performance Data

 View GWC Galleon Wall IES files

4000K/5000K/6000K CCT, 70 CRI

Number of Light Squares		1				2			
Drive Current		615mA	800mA	1050mA	1.2A	615mA	800mA	1050mA	1.2A
Nominal Power (Watts)		34	44	59	67	66	86	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (A)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (A)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	Lumens	4,883	5,989	7,412	8,131	9,543	11,703	14,485	15,891
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
	Lumens per Watt	144	136	126	121	145	136	128	123
T3	Lumens	4,978	6,105	7,556	8,288	9,729	11,929	14,764	16,196
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	146	139	128	124	147	139	131	126
T4FT	Lumens	5,008	6,140	7,599	8,337	9,783	11,998	14,850	16,290
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	147	140	129	124	148	140	131	126
T4W	Lumens	4,942	6,060	7,502	8,229	9,658	11,843	14,658	16,080
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
	Lumens per Watt	145	138	127	123	146	138	130	125
SL2	Lumens	4,874	5,979	7,399	8,117	9,528	11,684	14,461	15,863
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3
	Lumens per Watt	143	136	125	121	144	136	128	123
SL3	Lumens	4,976	6,104	7,555	8,287	9,727	11,927	14,763	16,194
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	146	139	128	124	147	139	131	126
SL4	Lumens	4,729	5,799	7,178	7,873	9,239	11,333	14,025	15,387
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4
	Lumens per Watt	139	132	122	118	140	132	124	119
5NQ	Lumens	5,134	6,296	7,793	8,547	10,033	12,303	15,226	16,704
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	Lumens per Watt	151	143	132	128	152	143	135	129
5MQ	Lumens	5,228	6,412	7,935	8,705	10,216	12,529	15,508	17,011
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	154	146	134	130	155	146	137	132
5WQ	Lumens	5,242	6,428	7,956	8,728	10,244	12,563	15,548	17,056
	BUG Rating	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	154	146	135	130	155	146	138	132
SLL/SLR	Lumens	4,373	5,365	6,640	7,283	8,547	10,481	12,973	14,231
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	129	122	113	109	130	122	115	110
RW	Lumens	5,087	6,238	7,721	8,472	9,941	12,190	15,088	16,553
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	150	142	131	126	151	142	134	128

* Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.

3000K CCT, 80 CRI

Number of Light Squares		1				2			
Drive Current		615mA	800mA	1050mA	1.2A	615mA	800mA	1050mA	1.2A
Nominal Power (Watts)		34	44	59	67	66	86	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (A)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (A)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	Lumens	3,880	4,759	5,890	6,461	7,583	9,300	11,510	12,628
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	114	108	100	96	115	108	102	98
T3	Lumens	3,956	4,851	6,004	6,586	7,731	9,479	11,732	12,870
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
	Lumens per Watt	116	110	102	98	117	110	104	100
T4FT	Lumens	3,980	4,879	6,038	6,625	7,774	9,534	11,800	12,945
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	117	111	102	99	118	111	104	100
T4W	Lumens	3,927	4,816	5,961	6,539	7,675	9,411	11,648	12,778
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	116	109	101	98	116	109	103	99
SL2	Lumens	3,873	4,751	5,880	6,450	7,571	9,285	11,491	12,605
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	114	108	100	96	115	108	102	98
SL3	Lumens	3,954	4,851	6,004	6,585	7,729	9,478	11,731	12,868
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	116	110	102	98	117	110	104	100
SL4	Lumens	3,758	4,608	5,704	6,256	7,342	9,006	11,145	12,227
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3
	Lumens per Watt	111	105	97	93	111	105	99	95
5NQ	Lumens	4,080	5,003	6,193	6,792	7,973	9,776	12,099	13,274
	BUG Rating	B2-U0-G0	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens per Watt	120	114	105	101	121	114	107	103
5MQ	Lumens	4,154	5,095	6,305	6,917	8,118	9,956	12,323	13,518
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	122	116	107	103	123	116	109	105
5WQ	Lumens	4,166	5,108	6,322	6,936	8,140	9,983	12,355	13,553
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	123	116	107	104	123	116	109	105
SLL/SLR	Lumens	3,475	4,263	5,276	5,787	6,792	8,329	10,309	11,309
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	102	97	89	86	103	97	91	88
RW	Lumens	4,042	4,957	6,135	6,732	7,900	9,687	11,990	13,154
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	Lumens per Watt	119	113	104	100	120	113	106	102

* Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.

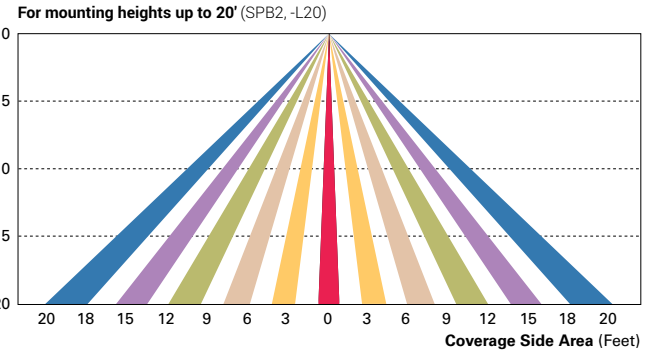
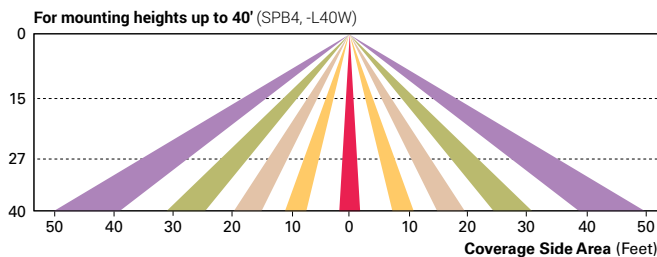
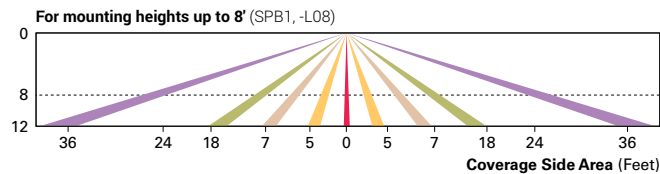
Control Options

0-10V This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

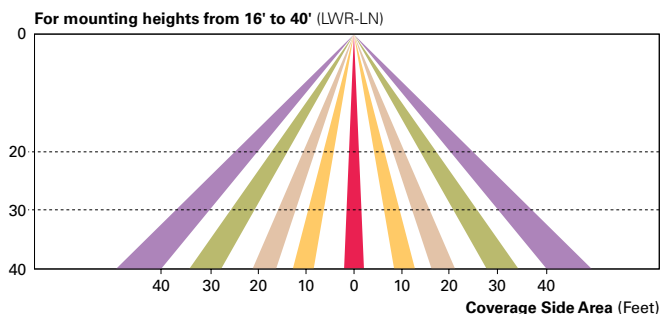
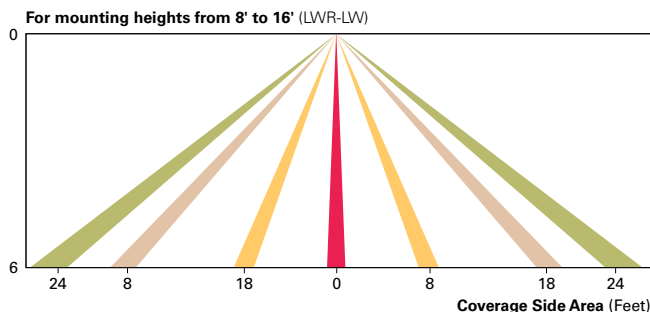
Photocontrol (BPC, PR, and PR7) Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD) This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a “dusk-to-dawn” period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX and MS-LXX) These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.



Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN) The Enlighted control system is a connected lighting solution, combining LED luminaires with an integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes while collecting valuable data about building performance and use. Software applications utilizing energy dashboards maximize data inputs to help optimize the use of other resources beyond lighting.



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A) The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.