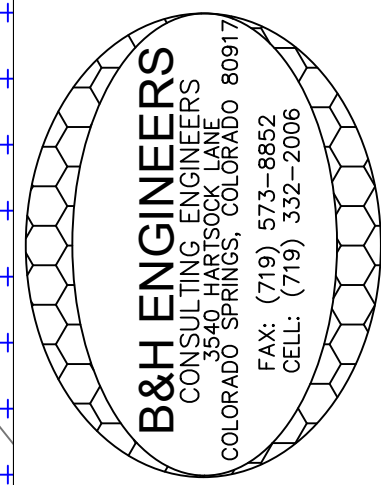
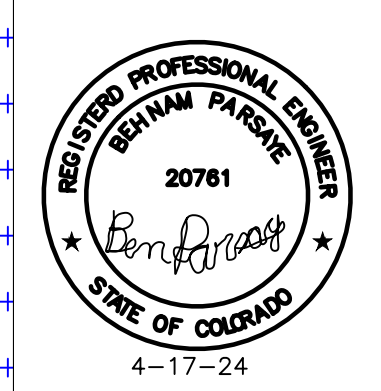


**NORTH**

**PHOTO METRIC PLAN**

SCALE: 1/32" = 1'0"



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 CONSULTING ELECTRICAL, MECHANICAL, & PLUMBING ENGINEERS  
 3540 HARBORWAY LANE  
 COLORADO SPRINGS, COLORADO 80917  
 (719) 332-2006

REVISION/DATE  
 FILE NAME: Photo-Metric-2217-Janitell-Road.dwg

DRAWN BY: B&H  
 CHECKED BY: B.F.P.

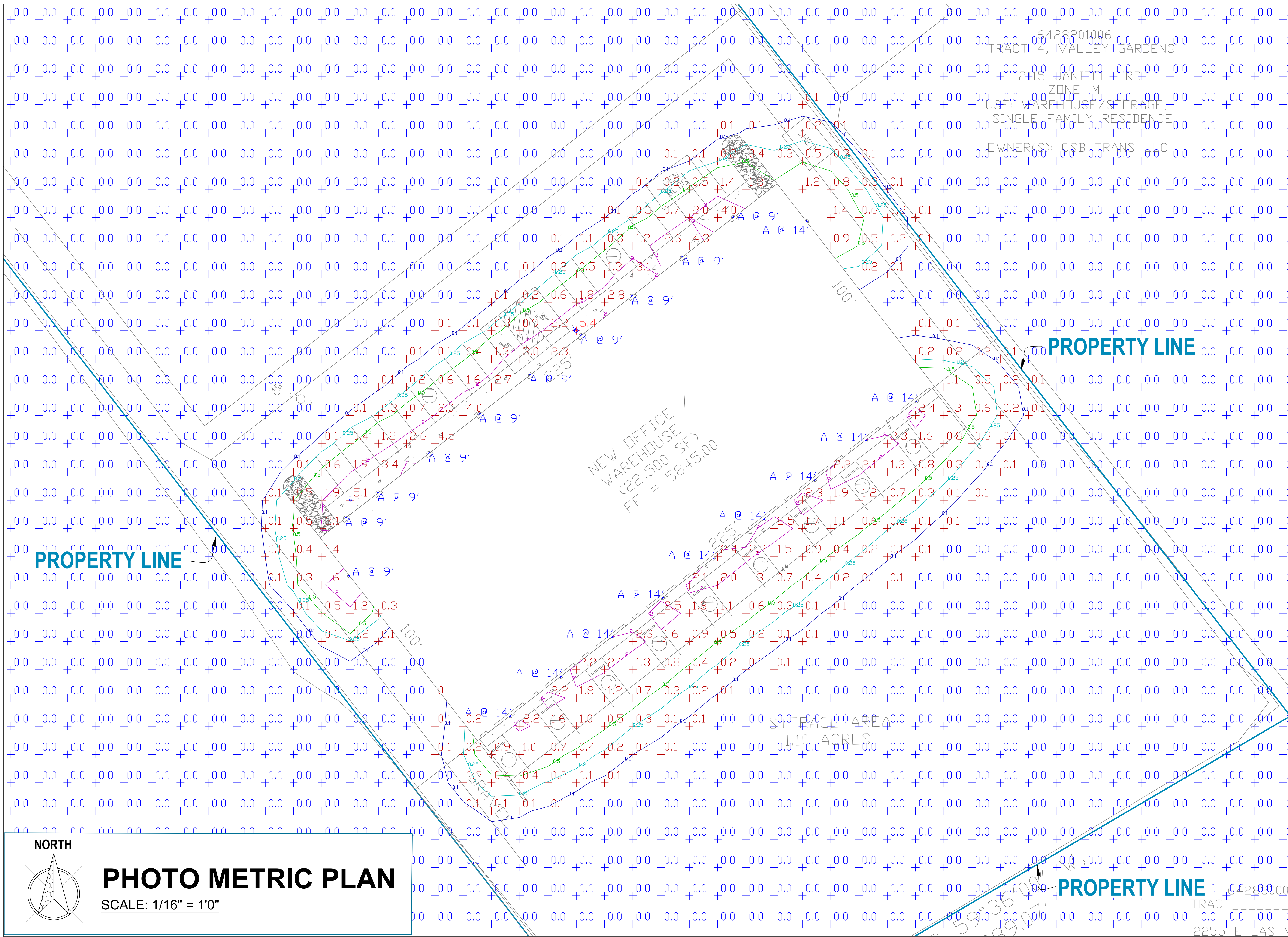
**2217 JANITELL ROAD**  
**COLORADO SPRINGS, COLORADO 80906**

**B&H ENGINEERS**

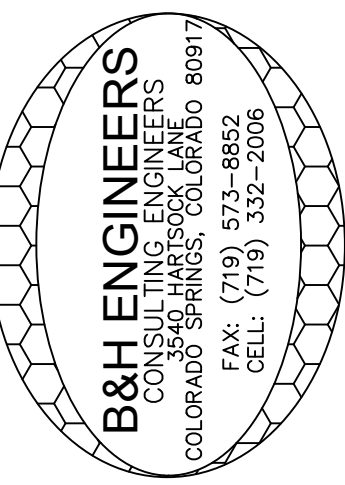
**PHOTO METRIC PLAN**

**PM1**





6428201006  
 TRACT 4, VALLEY GARDENS  
 2115 JANITELL RD  
 ZONE: M  
 USE: WAREHOUSE/STORAGE,  
 SINGLE FAMILY RESIDENCE  
 OWNER(S): CSB TRANS LLC



B&H ENGINEERS  
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 3540 MARSHOCK LANE  
 COLORADO SPRINGS, COLORADO 80917  
 (719) 332-2006  
 REVISION/DATE  
 FILE NAME: Photo-Metric-2217-Janitell-80906

DRAWN BY: B&H  
 CHECKED BY: B.P.

2217 JANITELL ROAD  
 COLORADO SPRINGS, COLORADO 80906

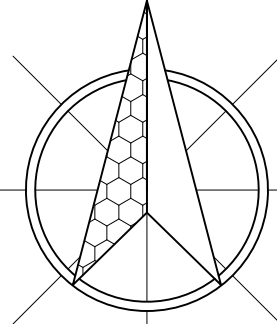
B&H ENGINEERS  
 PHOTO METRIC PLAN  
 PM3

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

NORTH



# PHOTO METRIC PLAN

SCALE: 1/16" = 1'0"

## GENERAL NOTES

- ALL WORK SHALL BE DONE IN COMPLIANCE WITH 2021 IBC, 2021 IRC, 2021 IMC, 2018 IPC, 2020 NEC, 2021 IECC, 2019 ASME A17.1, 2021 IFSPSC, 2021 IEBC, 2021 IFGC AND ALL OTHER LOCAL CODES.
- ELECTRICAL CONTRACTOR SHALL VISIT SITE AND EXAMINE DRAWINGS OF OTHER TRADES ON THIS PROJECT, ARCHITECTURAL AND MECHANICAL, TO DETERMINE ANY ADDITIONAL WORK THAT MAY BE REQUIRED FOR A COMPLETE AND FUNCTIONAL ELECTRICAL INSTALLATION AND SHALL INCLUDE AN ALLOWANCE FOR THIS WORK IN HIS BID.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR VERIFICATION OF EXISTING JOB CONDITIONS PRIOR TO BID. NO ADDITIONAL COSTS SHALL BE AWARDED TO THE SUCCESSFUL CONTRACTOR OR HIS SUBCONTRACTORS.

### 5. LAND DEVELOPMENT STANDARDS:

#### 6.2.3. Lighting

##### (A) General

###### (1) Purpose

The purpose of this Section is to address the physical effects of lighting, and the affect that lighting may have on the surrounding neighborhood.

###### (2) Applicability

This Section applies in all zoning districts, except as otherwise provided.

###### (3) Existing Lighting Allowed

Lighting existing at the time of adoption of this Section is not required to be modified to conform to this Section.

###### (4) Lighting Plan to Reflect Standards

A lighting plan for meeting these standards shall be submitted in accordance with submittal requirements for lighting plans described in the Procedures Manual.

##### (B) Design Standards and Requirements

###### (1) Limitations on Extent of Lighted Area

(a) Concealed or Shielded  
Light fixtures shall be arranged and positioned such that the light sources are concealed and fully shielded so that no direct light or reflection creates a nuisance or hazard to any adjacent ownership or right-of-way and that up-light, spill-light, glare, and unnecessary diffusion are minimized. Light fixtures, except as otherwise permitted herein, are required to be full cutoff as defined by the Illuminating Engineers Society of North America (IESNA). The cut-off angle of an exterior light source shall not exceed 90 degrees. Full cut-off fixtures may not be tilted or aimed in a manner that results in light distribution above the horizontal plane. The use of semi-cutoff or cutoff (as opposed to full cutoff) fixtures shall be permitted to illuminate areas other than parking lots provided the pole or mounting point is no more than 10' in height and the maximum lumen output does not exceed 1800 lumens per lamp.

###### (b) Non-Security Lighting During Non-Operating Hours

Exterior lighting, including but not limited to floodlights used to light a building facade, shall be reduced, activated by motion sensor devices, or turned off during the principal use's non-operating hours. Lighting necessary for security shall not be subject to this provision.

###### (c) Upward Lighting

Upward lighting for architectural, landscape or decorative purposes shall have at least 90% of the total distribution pattern within the illuminated structure or feature. Light fixtures used to illuminate flags, statues, or any other objects mounted on a pole, pedestal, or platform, shall use a narrow cone of light that does not extend beyond the illuminated object.

###### (d) Maximum Levels

Maximum on-site lighting levels shall not exceed 10 foot candles, except for loading and unloading platforms where the maximum lighting level shall be 20 foot candles.

###### (e) Measurement at Property Boundaries

Light levels measured at the property line of the development site adjacent to residential property or public right of way shall not exceed 0.1 foot candles as a direct result of the on-site lighting. All light fixtures mounted within 15' of any residential property line of the site shall be classified as IES Type II or Type III, or fixture demonstrated to provide similar distribution patterns and shielding properties. Fixtures shall be fitted with "house side shield" reflectors on the sides facing the residential property line.

###### (f) Light Standards and Fixtures

The style of light standards and fixtures shall be consistent with the style and character of architecture proposed on the site. Poles shall be anodized or coated to minimize glare from the light source. Ballards or similar light fixtures intended to illuminate landscape features or walkways are permitted which do not exceed 4 feet in height, 2 fixtures per ballard and 1 lamp not exceeding 900 lumens per fixture.

###### (g) Lamp Types

All outdoor light fixtures should utilize one of the following lamp types: metal halide, induction lamp, compact fluorescent, incandescent (including tungsten-halogen), or high-pressure sodium. Alternatives are permitted provided they are demonstrated to be more effective for the proposed use based on IESNA recommendations.

###### (h) Canopy Lighting

Light fixtures associated with canopies, including but not limited to fuel islands, seasonal outdoor sites areas, shopping malls, theaters, bank drive-thrus, and hotels shall be full cutoff or mounted so that the bottom of the lens is recessed or flush with the bottom surface of the canopy. All light emitted from the canopy shall be substantially confined to the ground directly beneath the perimeter of the canopy. No lighting of any kind, except as permitted by sign regulations, shall be allowed on the top or sides of a canopy. The design of the canopy in terms of height above grade, and the spacing between the fixtures within the canopy, shall be such that the illuminance level under the canopy does not exceed 20 foot-candles.

###### (i) Consideration of Pilots

No lighting shall make it difficult for pilots to distinguish airport lights from others, result in glare in the eyes of the pilots using an aviation facility, impair visibility in the vicinity of an aviation facility or, in any way create a hazard or endanger the landing, take-off, or maneuvering of aircrafts intending to use an aviation facility.

###### (2) Height

No freestanding light fixtures shall be mounted higher than 15 feet, except parking lot light fixtures which shall be mounted no higher than 20 feet unless an alternative lighting proposal is approved in accordance with this Code.

###### (3) Requirements for Outdoor Recreation Facilities

Ball diamonds, playing fields, tennis courts, and other outdoor recreational uses shall be required to meet the following standards:

###### (a) Maximum Pole Height

The maximum light pole height shall be 80 feet.

###### (b) Cut-Off Angle

The cut-off angle from a lighting source that illuminates an outdoor recreational use may exceed 90 degrees provided the light source is shielded to prevent light and glare from spilling to adjacent residential properties.

###### (c) Hours of Use

Exterior lighting for an outdoor recreational use shall be extinguished no later than 10:00 p.m. or immediately after the conclusion of the final event of the day, whichever is later.

###### (C) Prohibited Lighting

The following are considered prohibited lighting:

- Site lighting that may be confused with warning, emergency or traffic signals, except as authorized by a federal, State or County government;
- Any fixed light not designed for roadway illumination that produces incident or reflected light that could be disturbing to the operator of a vehicle;
- Blinking, flashing or changing intensity lights and lighted signs, except for temporary holiday displays or lighting required by the FAA for air traffic control and warning purposes;
- The use of laser source light or any similar high intensity light for outdoor advertising or entertainment when projected above the horizontal;
- The private operation of searchlights; and
- The nighttime use of white lighting or white strobe lighting in communication tower lighting.

###### (D) Exemptions

The following lighting shall be exempt from the requirements of this Section:  
Holiday lights in the nature of decorations, clearly incidental and customary and commonly associated with any national, local or religious holiday. Holiday lights may be of any type, number, area, height, location, illumination or animation, except that they shall not produce incident or reflected light that may be confused with or construed as a traffic control device;  
Any lighting required by the FAA for air traffic control, navigation, and warning purposes;  
Emergency lighting as required by law enforcement or emergency services personnel to protect life or property provided the lighting is temporary and is discontinued immediately on abatement of the emergency necessitating the lighting;  
Road lighting;  
Construction lighting provided the lighting is temporary and is discontinued immediately on completion of the construction work;  
Traffic control signals and devices;  
Vehicular lights;  
Temporary use of low wattage or low voltage lighting for public festivals, celebrations, and carnivals approved as a temporary use; and  
Single family residential lighting, except as prohibited herein

###### (E) Alternative Lighting Proposal

(1) Authority  
The PCD Director may approve a proposal that offers an alternative approach for meeting the standards of this Section. A lighting plan proposing an alternative approach for meeting these standards shall be submitted in accordance with submittal requirements for lighting plans described in the Procedures Manual. The plan shall clearly identify and discuss the modifications and alternatives proposed and describe how the proposal would better accomplish the purpose of this Section.

###### (2) Review Criteria

The PCD Director shall find the alternative lighting proposal accomplishes the purposes of this Section as well as a lighting plan that complies with this Section. The PCD Director will consider the extent to which the proposed design protects natural areas from light intrusion; how it enhances neighborhood continuity and connectivity; how it fosters non-vehicular access; and how it demonstrates innovative design and use of fixtures or other elements.

## Schedule

Symbol	Label	Image	QTY	Manufacturer	Description	Number Lamps	Lamp Output	LLF	Catalog	Input Power	Polar Plot
	A		33	Lithonia Lighting	WPX1 LED wallpack 1500lm 5000K color temperature 120-277 Volts	1	1602	1	WPX1 LED P1 50K Mvolt 11.39		

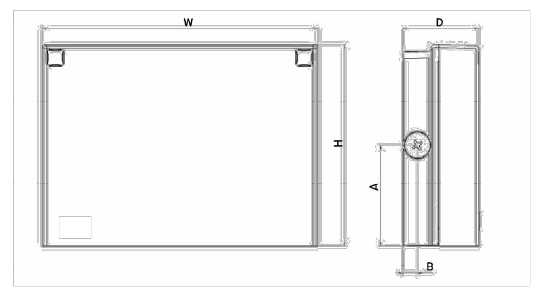
## Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.0 fcd	5.4 fcd	0.0 fcd	N/A	N/A

## WPX LED Wall Packs



### Specifications



Luminaire	Height (H)	Width (W)	Depth (D)	Side Conduit Location	Weight
WPX1	8.1" (20.6 cm)	11.1" (28.3 cm)	3.2" (8.1 cm)	4.0" (10.3 cm)	6.1 lbs (2.8kg)
WPX2	9.1" (23.1 cm)	12.3" (31.1 cm)	4.1" (10.5 cm)	4.3" (11.3 cm)	8.2 lbs (3.7kg)
WPX3	9.5" (24.1 cm)	13.0" (33.0 cm)	5.5" (13.7 cm)	4.7" (12.0 cm)	11.0 lbs (5.0kg)

### Ordering Information

Series	Color Temperature	Voltage	Options	Finish
WPX1 LED P1	30K 3000K	MVOLT 120V - 277V	(blank) None	DDBK Dark bronze
WPX1 LED P2	40K 4000K	347 347V <sup>1</sup>	E4WH Emergency battery backup, CEC compliant (4WH, 0% min) <sup>2</sup>	DWHD White
WPX2 LED	50K 5000K		E14WC Emergency battery backup, CEC compliant (14W, -20% min) <sup>2</sup>	DBKD Black
WPX3 LED			PE Photocell <sup>3</sup>	

Note: The lumen output and input power shown in the ordering tree are average representations of all configuration options. Specific values are available on request.

### FEATURES & SPECIFICATIONS

#### INTENDED USE

The WPX LED wall packs are designed to provide a cost-effective, energy-efficient solution for the one-for-one replacement of existing HID wall packs. The WPX1, WPX2 and WPX3 are ideal for replacing up to 150W, 250W, and 400W HID luminaires respectively. WPX luminaires deliver a uniform, wide distribution. WPX is rated for -40°C to 40°C.

#### CONSTRUCTION

WPX feature a die-cast aluminum main body with optimal thermal management that both enhances LED efficacy and extends component life. The luminaires are IP66 rated, and sealed against moisture or environmental contaminants.

#### ELECTRICAL

Light engine(s) configurations consist of high-efficiency LEDs and LED lumen maintenance of 100/100,000 hours. Color temperature (CCT) options of 3000K, 4000K, and 5000K with minimum CRI of 70. Electronic drivers ensure system power factor >90% and THD <20%. All luminaires have 6kV surge protection (Note: WPX1 LED P1 package comes with a standard surge protection rating of 2.5kV. It can be ordered with an optional 6kV surge protection).

All photocell (PE) operate on MVOLT (120V - 277V) input.  
Note: The standard WPX LED wall pack luminaires come with field-adjustable drive current feature. This feature allows tuning the output current of the LED drivers to adjust the lumen output to dim the luminaire.

#### NOTES

- All WPX wall packs come with 6kV surge protection standard, except WPX1 LED P1 package which comes with 2.5kV surge protection standard. Add SP6KV option to get WPX1 LED P1 with 6kV surge protection.
- Battery pack options only available on WPX1 and WPX2.
- Battery pack options not available with 347V or PE options.

#### INSTALLATION

WPX can be mounted directly over a standard electrical junction box. Three 1/2 inch conduit ports on three sides allow for surface conduit wiring. A port on the back surface allows poke-through conduit wiring on surfaces that don't have an electrical junction box. Wiring can be made in the integral wiring compartment in all cases. WPX is only recommended for installations with LEDs, facing downwards.

#### LISTINGS

CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. IP66 Rated. DesignLights Consortium (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/DLC](http://www.designlights.org/DLC) 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 3000K color temperature only.

#### 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.lithonia.com/CustomersResources/terms\\_and\\_conditions.aspx](http://www.lithonia.com/CustomersResources/terms_and_conditions.aspx)  
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.



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WPX LED  
Rev. 04/12/24

### Performance Data

#### Electrical Load

Luminaire	Input Power (W)	120V	208V	240V	277V	347V
WPX1 LED P1	11W	0.09	0.05	0.05	0.04	0.03
WPX1 LED P2	24W	0.20	0.12	0.10	0.09	0.07
WPX2	47W	0.39	0.23	0.20	0.17	0.14
WPX3	69W	0.58	0.33	0.29	0.25	0.20

#### Projected LED Lumen Maintenance

Data references the extrapolated performance projections in a 25°C ambient, based on 6,000 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	50,000	75,000	100,000
Lumen Maintenance Factor	>0.94	>0.92	>0.90

#### HID Replacement Guide

Luminaire	Equivalent HID Lamp	WPX Input Power
WPX1 LED P1	100W	11W
WPX1 LED P2	150W	24W
WPX2	250W	47W
WPX3	400W	69W

#### Lumen Output

Luminaire	Color Temperature	Lumen Output
WPX1 LED P1	3000K	1,537
	4000K	1,568
	5000K	1,602
WPX1 LED P2	3000K	2,748
	4000K	2,912
	5000K	2,954
WPX2	3000K	5,719
	4000K	5,896
	5000K	6,201
WPX3	3000K	8,984
	4000K	9,269
	5000K	9,393

#### Lumen Ambient Temperature (LAT) Multipliers

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

Ambient	Ambient	Lumen Multiplier
0°C	32°F	1.05
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

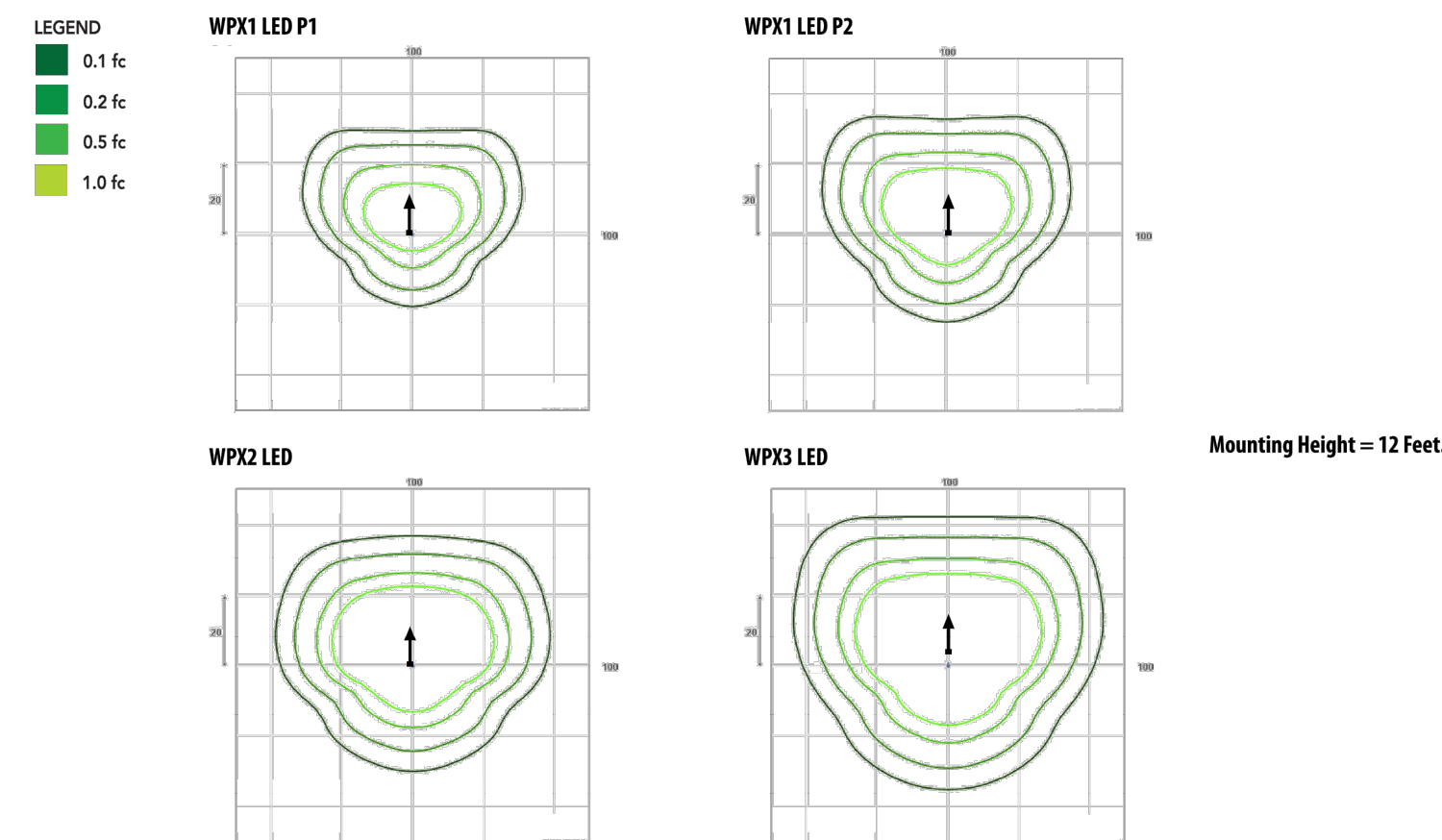
#### Emergency Egress Battery Packs

The emergency battery backup is integral to the luminaire — no external housing or back box is required. The emergency battery will power the luminaire for a minimum duration of 90 minutes and deliver minimum initial output of 550 lumens. Both battery pack options are CEC compliant.

Battery Type	Minimum Temperature Rating	Power (Watts)	Controls Option	Ordering Example
Standard	0°C	4W	E4WH	WPX2 LED 40K MVOLT E4WH DDBKD
Cold Weather	-20°C	14W	E14WC	WPX2 LED 40K MVOLT E14WC DDBKD

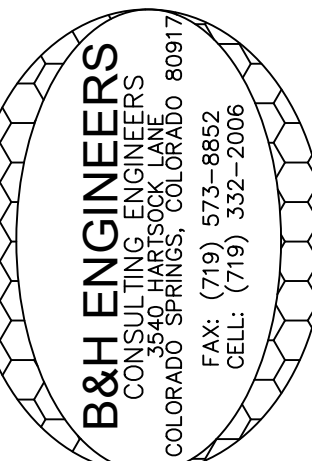
### Photometric Diagrams

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



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WPX LED  
Rev. 04/12/24



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COLORADO SPRINGS, COLORADO 80917  
(719) 332-2006

REVISION/DATE

FILE NAME: Photo-Metric-2024-04-12.dwg

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CHECKED BY: B.P.

2217 JANITELL ROAD & 3760 EAST BOULDER  
COLORADO SPRINGS, COLORADO 80906

B&H ENGINEERS

PHOTO METRIC  
SCHEDULES

PM4