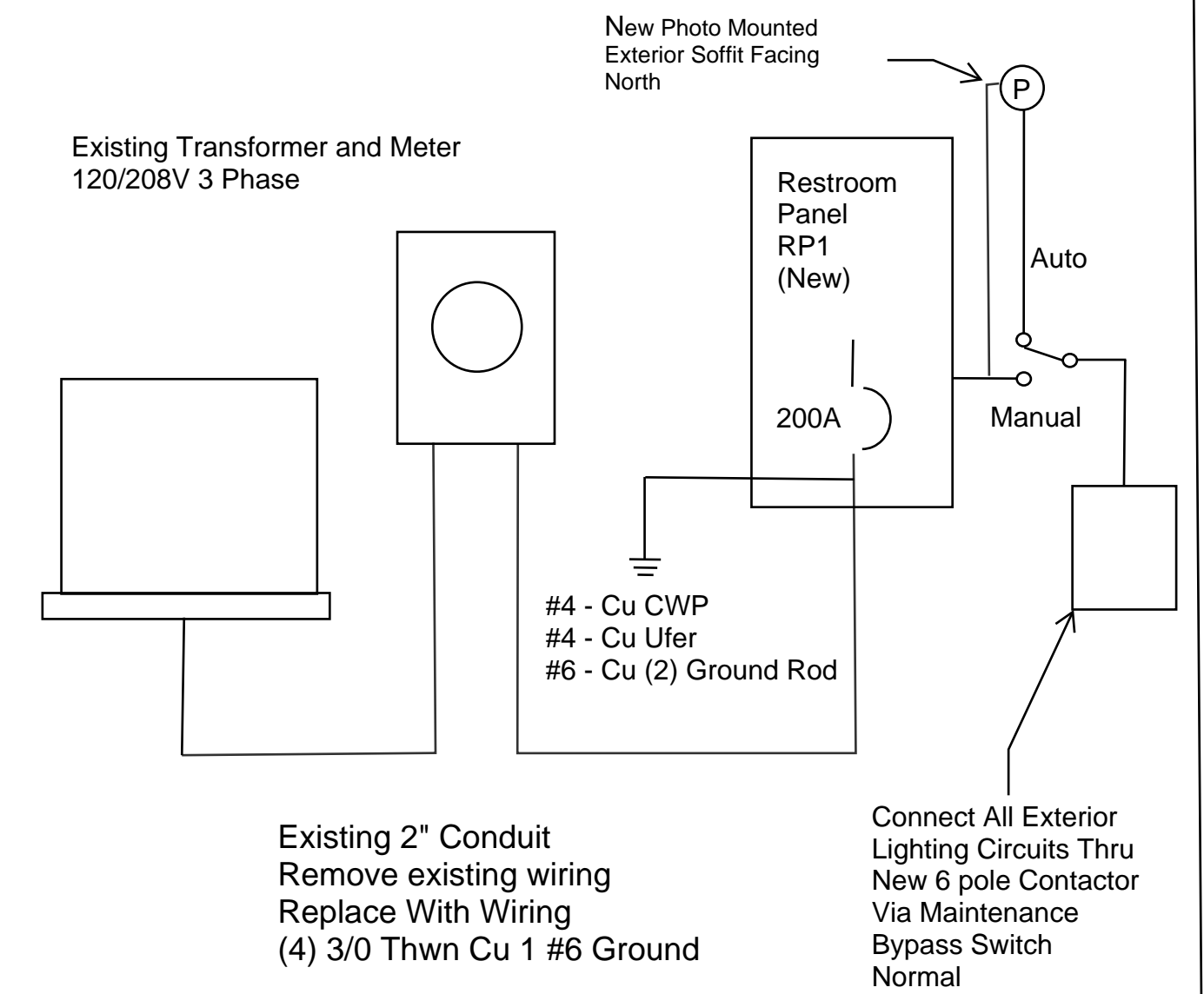




(New) Pedestrian Fixtures - RP1 19-21
1" PVC Conduit 2 #8 Thhn cu - 1#8 Ground

(New) Pedestrian Fixture - Connect to
Existing Parking Lot Light Pole Circuit

PANEL		RP1		NEMA RATING Vema 1		PROJECT		Widefield Park	
MIN BUSS AMP RATING		200		MAIN BKR SIZE		200		MOUNTING	
VOLTAGE		120/208v 3 ph		AIC RATING		10k		COMMENTS	
				Bottom Fed MCB					
BKR	DESCRIPTION	A	B	C	CCT	CCT	A	B	C
20 1P	Receptacles	1200			1	2	1200		
20 1P	Receptacles		1200		3	4		1800	
30 1P	Hand Dryer			2000	5	6			1200
30 1P	Hand Dryer	2000			7	8			
20 1P	Storage Bin Recept		1200		9	10			
20 1P	Building Lights			500	11	12			
20 1P	Building Lights	500			13	14			
30 2P	Water Heater		2000		15	16			
30 2P	Water Heater			2000	17	18			
20 2P	New Park Light Poles	500			19	20			
20 2P	Existing Park Light Poles		500		21	22		500	
20 2P	Existing Park Light Pole	770			23	24			
	Space				27	28			
	Space				29	30			
40 2p	Ceiling Heater 1	3000			31	32	3000		
40 2p	Ceiling Heater 1		3000		33	34		3000	
40 2p	Ceiling Heater 2			3000	35	36		3000	3000
40 2p	Ceiling Heater 2	3000			37	38	3000		3000
40 2p	Wall Heater 1		3000		39	40			
40 2p	Wall Heater 1			3000	41	42			
Connected VA Phase A		18170							
Connected VA Phase B		16200							
Connected VA Phase C		15410							
Connected VA		49840		Demand Factor					
Lighting Total		3540		1.25		4425		Demand load amps	
Receptacles 1st 10 kva		7800		1.00		7800		133.1	
Receptacles Remainder				0.50		0			
Largest Motor (LM)				1.25		0		Spare capacity amps	
Remaining Motors (RM)				1.00		0		66.9	
Appliances (APP)		8800		0.85		5200			
Equipment (ESP)		38500		1.00		38500			
Sub fed panels (SFP)				1.00		0			
Total VA		49840		Total VA		47925			



Short Circuit Calculation - 3 Phase (Bussman Calculation Method)

Wire Size	3-0	Length	10	#Runs	1
f =	[1.732 x length x ISC (prev)] / (#runs x wire factor x voltage)				
f =	0.3004959				
M =	1/1 + f				
M =	0.7689434				
ISC =	Avail ISC x M				
ISC =	39985.059				
Wire Size	3-0	Length	220	#Runs	1
f =	[1.732 x length x ISC (prev)] / (#runs x wire factor x voltage)				
f =	5.0832444				
M =	1/1 + f				14410
M =	0.164386				
ISC =	Avail ISC x M				
ISC =	6572.9629				

A-5 CAD-0
55192-00-004
COM1835

New 6 KW Electric Heater with
integral Tstat Typical of 5
Set in place by HVAC Contractor
CH1-CH2 Ceiling Mnt
WH1-WH2-WH3 Wall Mnt
Provide 40A 1ph 208v Circuit to
each heater

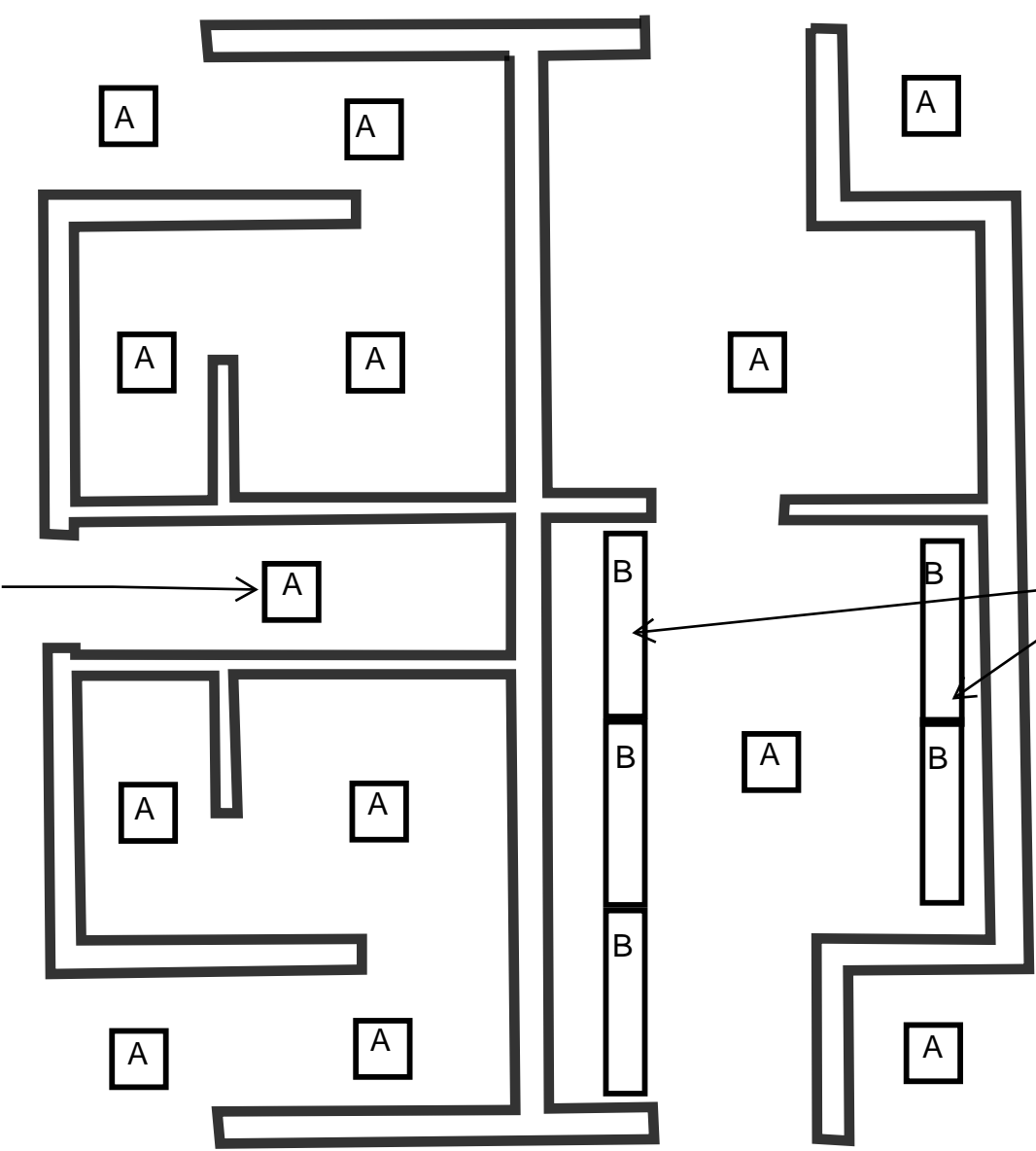
RP1 - Existing 100A
Panel to Be Replaced
with
200 amp 3Phase
120/208V
Reuse Conduit and
Replace Conductors
back to utility
transformer for 200A
Per 1 Line

Re-feed Existing
Circuits as required

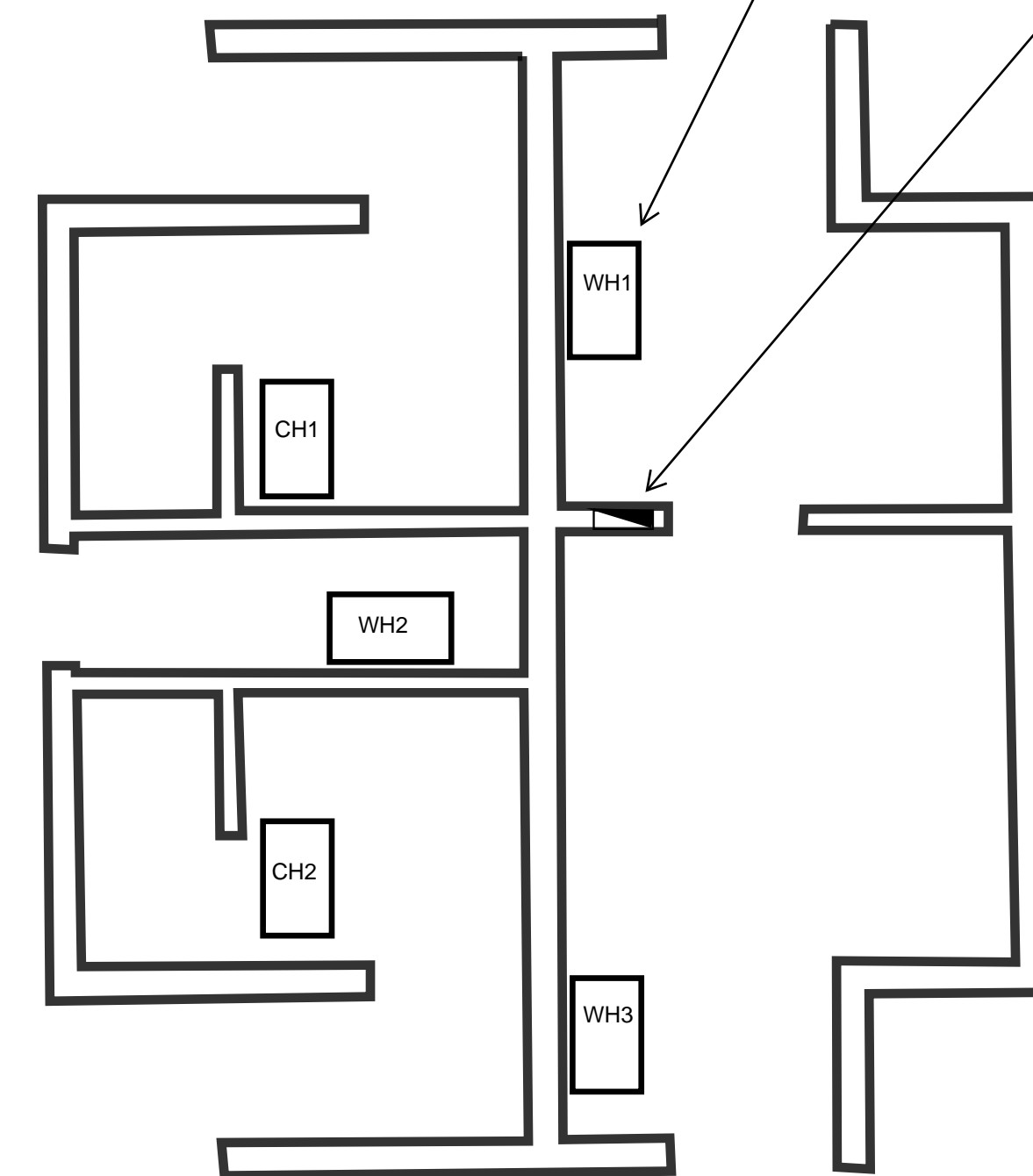
APPROVED
Plan Review
12/26/2018 3:43:13 PM
dsdrangel
EPC Planning & Community
Development Department

Type A
Replace Existing Fixture with LED Canopy
Light Fixture
Typical of 15

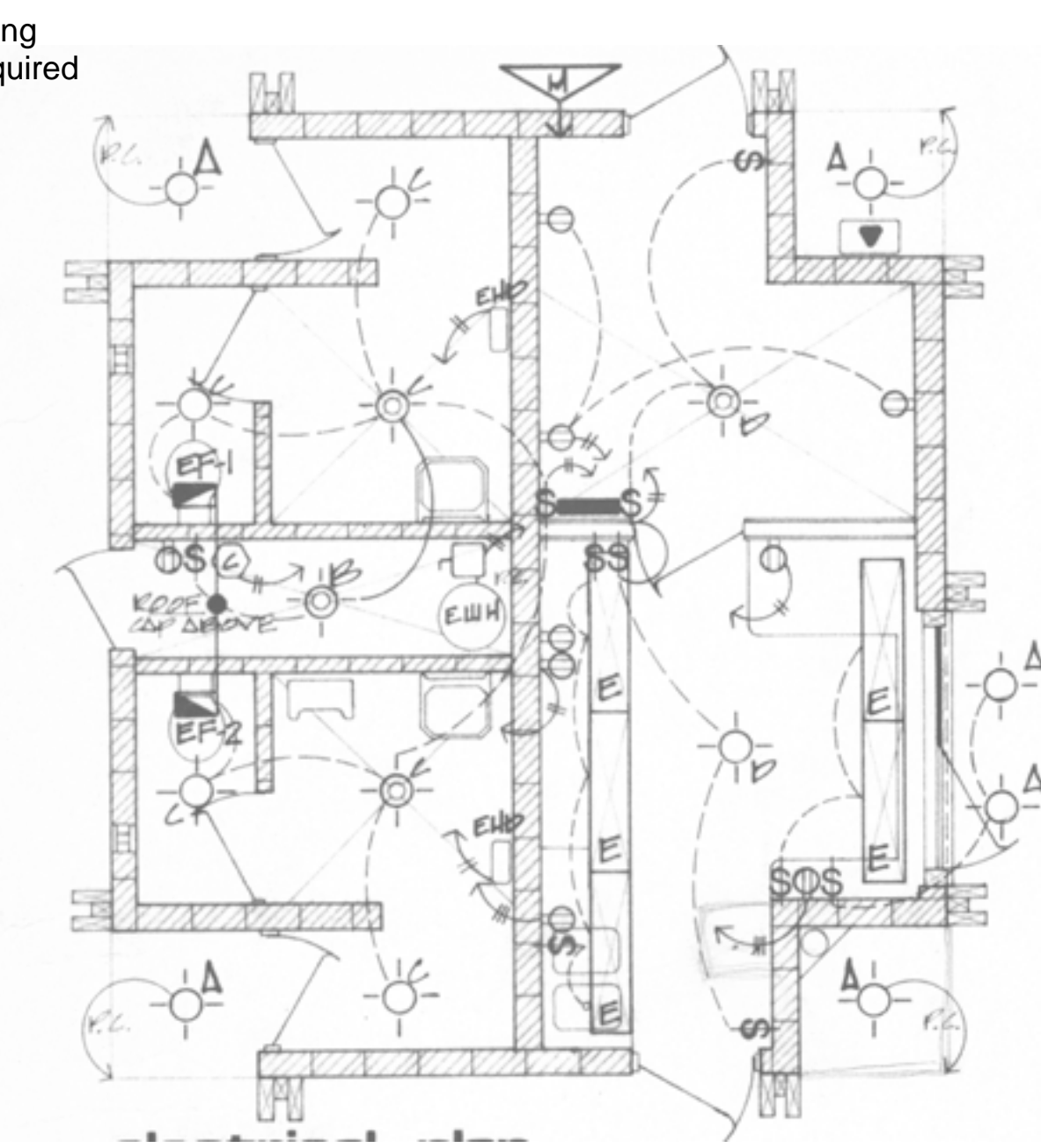
Type B
Replace Existing Florescent Fixtures
With Equivalent Lensed LED Strip
Fixture Typical of 5



Restroom Lighting Plan



Restroom Power Plan



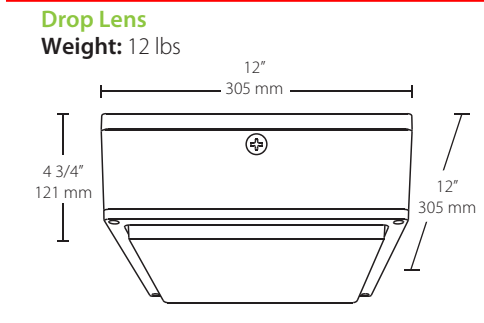
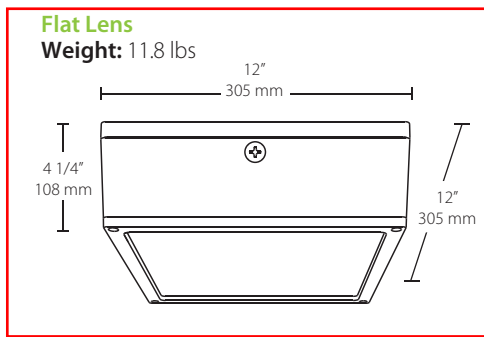
Existing Electrical Plan

VANLED™ Specifications

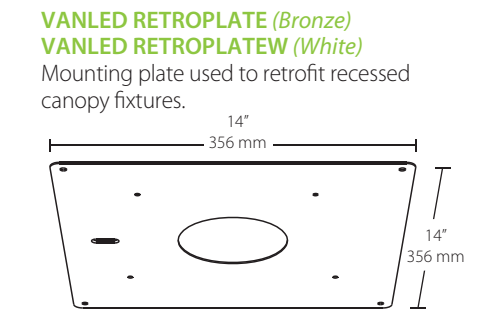
Type A

UL Listing: Suitable for wet locations
LEDs: Long-life, high-efficiency surface mount LEDs
Drivers:
 10W: Class 2, Constant Current, 100-277V, 50-60Hz, 120V: 0.30A, 208V: 0.20A, 240V: 0.17A, 277V: 0.15A, 280mA
 20W: Class 2, Constant Current, 100-277V, 50-60Hz, 120V: 0.30A, 208V: 0.20A, 240V: 0.17A, 277V: 0.15A, 500mA
40W: Class 2, Constant Current, 100-277V and 480V, 50-60Hz, 120V: 0.60A, 208V: 0.19A, 240V: 0.17A, 277V: 0.14A, 1050mA
 52W: Class 2, Constant Current, 100-277V and 480V, 50-60Hz, 120V: 0.80A, 208V: 0.26A, 240V: 0.23A, 277V: 0.20A, 1400mA
 65W: Class 2, 100-277V, 50-60Hz, 120V: 0.64A, 208V: 0.40A, 240V: 0.35A, 277V: 0.30A, 1650mA
 75W: Class 2, 100-277V, 50-60Hz, 120V: 0.85A, 208V: 0.53A, 240V: 0.46A, 277V: 0.40A, 1980mA
IP Rating: IP66, protected against dust and water ingress
Nominal Watts @120V **10W** **20W** **40W** **52W** **65W** **75W**
Color Temperature (CCT) **5000K** **5000K** **5000K** **5000K** **5000K** **5000K**
Input Watts* 13 22 38 52 63 74
Output Lumens* 1681 2740 5095 6647 7775 8705
HID Replacement* 50W 70W 100W 150W 175W 200W
Lumens Per Watt* 128 126 134 126 123 118
Color Accuracy (CRI)* 78 78 78 78 78 78

Dimensions and weight



Accessories



Dimming: On/off driver or 0-10V dimming available for 20, 40 and 52W models
Cold Weather Starting: The minimum starting temperature is -40°C.
Heating: Die-cast aluminum housing and lens frame with (4) 1/2" NPS side conduit entries and weathertight rear wire plug and access plate
Reflector: Semi-specular, vacuum-metallized polycarbonate
Lens: Vandal-resistant polycarbonate textured opaque for low glare
Mounting: Ceiling mount to recessed junction with knockout template or directly to ceiling surface, utilizing side conduit entry points.
Gaskets: High-temperature silicone gaskets
Finish: Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.
Color Stability: LED color temperature warranted not to shift more than 200K in CCT in 5 years
Color Uniformity: RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2011.
Green Technology: Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.
IESNA LM-79 & LM-80 Testing: RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.
California Title 24: 10 and 20 Watt VANLED models equipped with a swivel photocell or mini-sensor comply with 2013 California Title 24 building and electrical codes as a commercial outdoor non-pole-mounted fixture <30 Watts.
 *Values shown for 5000K temperature only, with a drop lens. Visit rabweb.com for 4000K and 3000K performance, as well as flat lens performance.

Ordering information

Product Family	Wattage	Color Temp	Lens	Motion Sensor & Finish	Driver Options	Photocell Options
VANLED	40	Blank	F	Blank	Blank	Blank
	10	Blank	Drop Lens	Blank	On/Off driver	120W Swivel
	20	Blank	Flat Lens	Blank	0-10V dimming††	277V Swivel
	40	Blank	Flat Lens	MS	480V HHT	480V Swivel
	52	Blank	Flat Lens	MSW	480V w/0-10V dimming††	480V Swivel
	65	Blank	Flat Lens	MSW	480V w/0-10V dimming††	480V Swivel
	75	Blank	Flat Lens	MSW	480V w/0-10V dimming††	480V Swivel

† Mini sensor not available with 40/10 models, 480 models or models with swivel photocell.
 †† 0-10V dimming not available for 10W models.
 ††† 480V not available for 10 or 20W models.
 †††† 480V with 0-10V dimming not available for 10 or 20W models.

Columbia LIGHTING

Type B

CWP Wrap Luminaire

DESCRIPTION
 An efficient 4' LED wrap style fixture that provides an economical solution for exceptional light distribution in general areas.

FEATURES

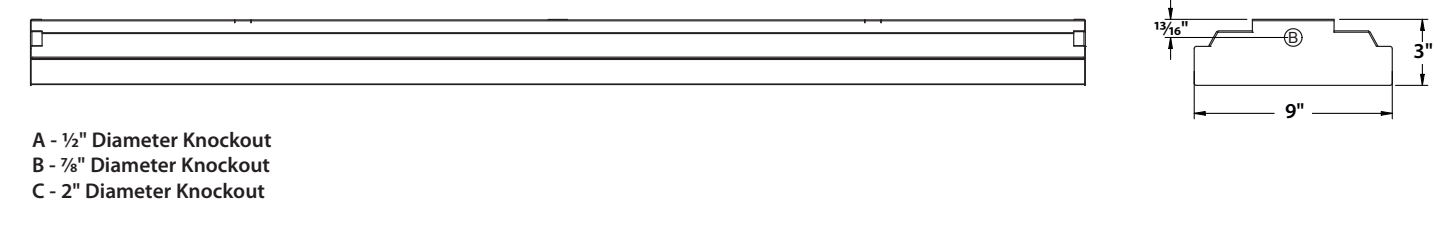
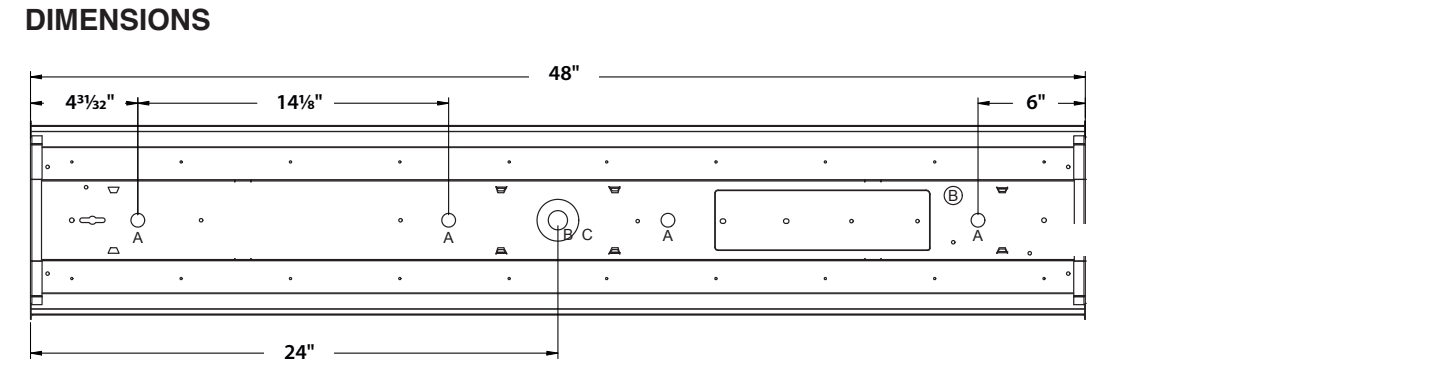
- 4,000 nominal lumens
- 54,000 hour LEDs at L70 for reduced maintenance
- Up to 124 lumens per watt
- Choice of two color temperatures
- 0-10V dimming, standard
- Fully assembled for quick installation
- Frosted acrylic lens
- Wide range of applications
- Universal Voltage (120-277V)
- 80+ CRI
- DLC® (DesignLights Consortium) Qualified - see www.designlights.org

STANDARDS, CERTIFICATION AND COMPLIANCE
 All luminaires are built to UL1598 standards and bear appropriate UL labels. Damp location label standard. DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

WARRANTY
 Five year warranty. Terms and conditions apply.

ORDERING GUIDE

Catalog Number	Description	Lumens	Watts	LPW	Qty on Pallet
CWP4-4035	4ft LED Wrap, 4,000 Lumens, 3500K, 0-10V dimming	4584	36.9	124	33
CWP4-4040	4ft LED Wrap, 4,000 Lumens, 4000K, 0-10V dimming	4584	36.9	124	33



CCI - [931] Commercial Ceiling Heater CH1 INDEECO

Catalog Number: 931U08000VW-D1T1
 Description: CCI - [931] Commercial Ceiling Heater 6000W, 208V, 1Phase, 29.2A, 40lbs.

Color: White

X	Almond
	White
	Metallic Silver (Additional Charge)
	Aluminum (Additional Charge)
	Black (Additional Charge)
	Bronze (Additional Charge)
	Metallic Charcoal (Additional Charge)

Job Name: Widefield Community Park

Quote #	Line #	Qty	Tag
277830	1	2	ECH

Selected Factory Installed Options:

Option Code	Description
D1	Disconnect Switch, 600V, Three-pole, 32 Amp
T1	Tamperproof Thermostat

Selected Field and Thermostat Options:

Line #	Qty	Catalog Number	Description	Tag
2	2	931-158213W	Surface Mounting Box (6000-8000 W)	ECH

Columbia LIGHTING

Type B

CWP Wrap Luminaire

PHOTOMETRIC DATA

LUMINAIRE DATA

Luminaire	CWP4-4035
Ballast	tradeSELECT™ CWP Wraps
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4584
Watts	36.86
Mounting	Surface
Spreading Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.17 90° = 1.11
Luminaire Opening in Feet	Length: 4.00 Width: 0.75 Height: 1.69

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1841	29.3	29.3
0-60	2761	43.9	43.9
0-90	3681	75.3	75.3
0-180	4584	100.0	100.0

ENERGY DATA

Total Lumens per Watt	124
Total Lumens per Watt	124
ES&B Efficacy (lm/W)	124
ES&B Efficacy (lm/W)	124
ES&B Efficacy (lm/W)	124

INDOOR CANDELA PLOT

PHOTOMETRIC DATA

LUMINAIRE DATA

Luminaire	CWP4-4040
Ballast	tradeSELECT™ CWP Wraps
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4584
Watts	36.86
Mounting	Recessed
Spreading Angle	0° = 90° 90° = 90°
Spacing Criterion	0° = 1.17 90° = 1.11
Luminaire Opening in Feet	Length: 4.00 Width: 0.75 Height: 1.69

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1841	29.3	29.3
0-60	2761	43.9	43.9
0-90	3681	75.3	75.3
0-180	4584	100.0	100.0

ENERGY DATA

Total Lumens per Watt	124
Total Lumens per Watt	124
ES&B Efficacy (lm/W)	124
ES&B Efficacy (lm/W)	124
ES&B Efficacy (lm/W)	124

INDOOR CANDELA PLOT

WCI - [932] Commercial Wall Heater WH1 INDEECO

Catalog Number: 932U08000VW-D1
 Description: WCI - [932] Commercial Wall Heater 6000W, 208V, 1Phase, 29.2A, 50lbs.

Color: White

X	Almond
	White
	Metallic Silver (Additional Charge)
	Aluminum (Additional Charge)
	Black (Additional Charge)
	Bronze (Additional Charge)
	Metallic Charcoal (Additional Charge)

Job Name: Widefield Community Park

Quote #	Line #	Qty	Tag
277830	3	3	EWI

Selected Factory Installed Options:

Option Code	Description
D1	Disconnect Switch, 600V, Three-pole, 32 Amp

Selected Field and Thermostat Options:

Line #	Qty	Catalog Number	Description	Tag
4	3	932-158211W	Surface Mounting Box (6000-8000 W)	EWI

C&R Electrical Contractors Inc
 10475 Irma Dr #13
 Northglenn CO 80233

Widefield Park
 Electrical Upgrades

Project:
 Wide Field Park
 1118 Drury Lane,
 Colorado Springs, CO, 80911

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A	10	Lithonia Lighting	KAD LED 20C 530 30K R3 PVDLT	KAD LED 20 LED 530mA MOST DRIVER, 3000K, TYPE 3 OPTICS	LED	1	KAD_LED_20C_530_30K_R3_H_VOLT.lvs	4123	0.85	35

Luminaire Locations											
Location											
No.	Label	X	Y	Z	Height	Orientation	TIH	X	Y	Z	Aim
2	A	244.09	652.67	14.00	14.00	319.40	0.00	243.28	653.52	0.00	
3	A	673.60	756.60	14.00	14.00	335.97	0.00	673.09	757.74	0.00	
4	A	898.17	846.72	14.00	14.00	338.12	0.00	897.71	847.88	0.00	
5	A	1142.50	955.95	14.00	14.00	315.42	0.00	1141.13	956.84	0.00	
6	A	1271.06	1151.36	14.00	14.00	304.01	0.00	1270.03	1152.06	0.00	
7	A	1415.24	1336.28	14.00	14.00	310.28	0.00	1414.29	1337.08	0.00	
8	A	1400.15	1644.77	14.00	14.00	121.38	0.00	1401.21	1644.12	0.00	
9	A	1506.42	1907.44	14.00	14.00	237.03	0.00	1505.37	1906.76	0.00	
10	A	1352.09	2045.84	14.00	14.00	200.20	0.00	1351.66	2044.67	0.00	
11	A	1927.63	1795.83	14.00	14.00	131.47	0.00	1928.57	1799.00	0.00	

Note
1.file=visual-files-oct2018-widfieldpark4.vsl

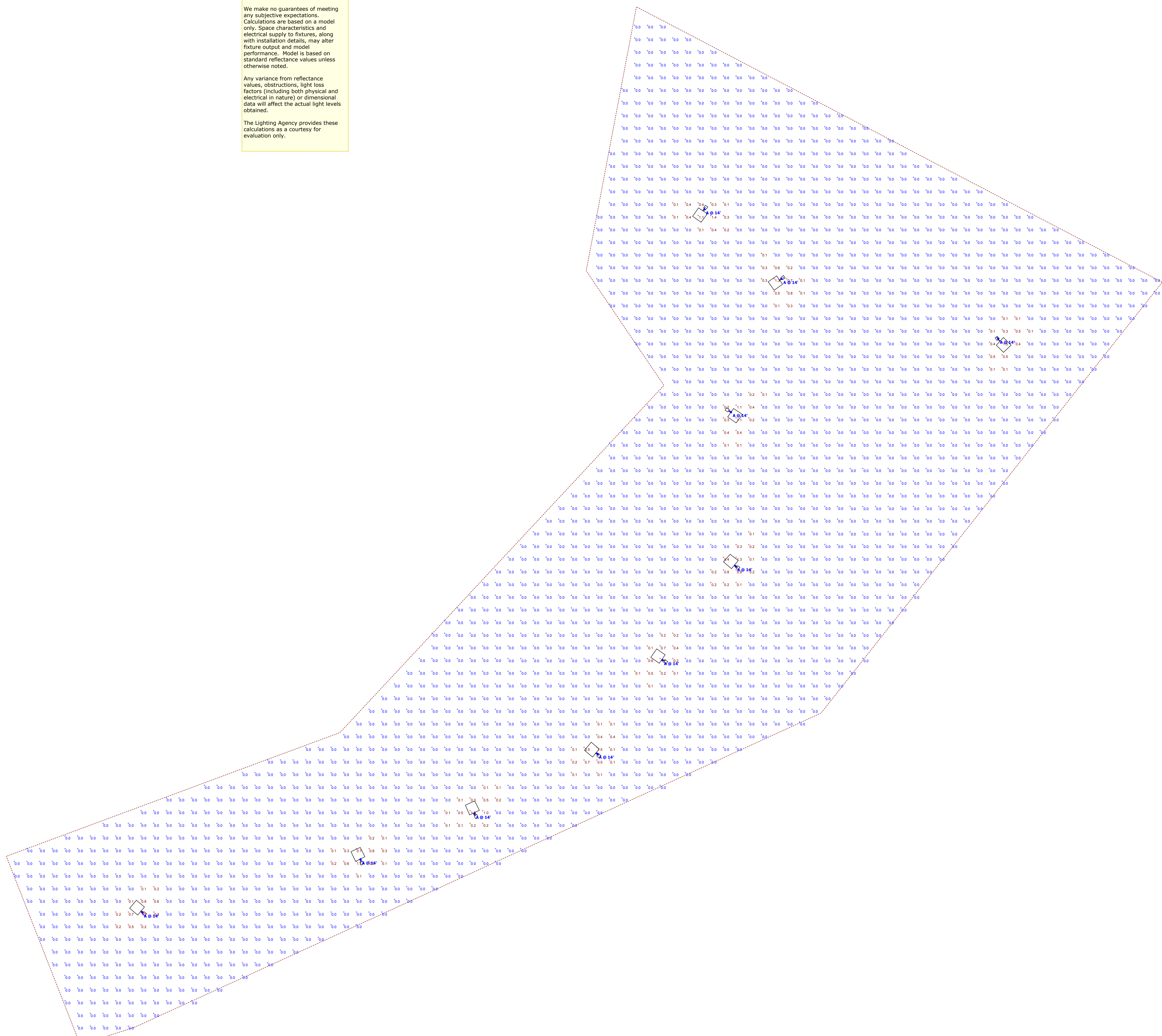
Note
Lighting calculation software is for estimating purposes only, not generating exact values.

These calculations are for the use and adoption by our clients and theirs' solely at their discretion. This includes evaluation of the calculated lighting levels and model by the Architect, Engineer, Lighting Designer or Owner for adherence to the project's lighting specifications for levels and uniformity.

We make no guarantees of meeting any subjective expectations. Calculations are based on a model only. Space characteristics and electrical supply to fixtures, along with installation details, may alter fixture output and model performance. Model is based on standard reflectance values unless otherwise noted.

Any variance from reflectance values, obstructions, light loss factors (including both physical and electrical in nature) or dimensional data will affect the actual light levels obtained.

The Lighting Agency provides these calculations as a courtesy for evaluation only.



Plan View
Scale: 1" = 80'

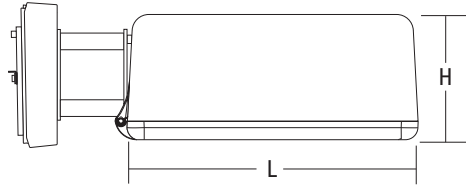


KAD LED LED Area Luminaire



Specifications

EPA:	1.2 ft ² (0.11 m ²)
Length:	17-1/2" (44.5 cm)
Width:	17-1/2" (44.5 cm)
Height:	7-1/8" (18.1 cm)
Weight (max):	36 lbs. (16.4 kg)



Catalog Number

Notes

Type

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

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL[®] controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability¹
- This luminaire is part of an A+ Certified solution for ROAM[®]2 or XPoint[™] Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background¹

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: [Link to Roam](#); [Link to DTL DLL](#)

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: KAD LED 40C 1000 40K R5 MVOLT SPD04 DDBXD

KAD LED										
Series	LEDs	Drive current		CCT	Distribution		Voltage		Mounting ³	
KAD LED	20C ¹ 20 LEDs	530	530 mA ¹	30K 3000 K	R2	Type II	MVOLT	277 ²	Shipped included	
	30C ¹ 30 LEDs	700	700 mA	40K 4000 K	R3	Type III	120 ²	347 ¹	SPUMBAK ^{__}	Square pole universal mounting adaptor ⁴
	40C 40 LEDs	1000	1000 mA	50K 5000 K	R4	Type IV	208 ²	480 ¹	RPUMBAK ^{__}	Round pole universal mounting adaptor ⁴
	60C 60 LEDs				R5	Type V	240 ²		SPD ^{__}	Square pole
									RPD ^{__}	Round pole
									WBD ^{__}	Wall bracket
									WWD ^{__}	Wood pole or wall
									04	4" arm
									06	6" arm
									09	9" arm ³
									12	12" arm ³
									DAD12P	Degree arm (pole)
									DAD12WB	Degree arm (wall)
									KMA	Mast arm external fitter

Options							Finish (required)											
Shipped installed							Shipped separately¹¹											
PER5	NEMA twist-lock five-wire receptacle only (no controls) ²			PIR1FC3V	Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc ^{6,7}		PNMTDD3	Part night, dim till dawn ^{7,10}		WG	Wire guard		DDBXD	Dark bronze		DDBTXD	Textured dark bronze	
PER7	Seven-wire receptacle only (no controls) ⁵			PIRH1FC3V	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc ^{6,7}		PNMT5D3	Part night, dim 5 hrs ^{7,10}				DBLXD	Black		DBLBXD	Textured black		
SF	Single fuse (120, 277, 347V) ²						PNMT6D3	Part night, dim 6 hrs ^{7,10}				DNAXD	Natural aluminum		DNATXD	Textured natural aluminum		
DF	Double fuse (208, 240, 480V) ²			BL30	Bi-level switched dimming, 30% ^{7,8,9}		PNMT7D3	Part night, dim 7 hrs ^{7,10}				DWHXD	White		DWHGXD	Textured white		
PIR	Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc ^{6,7}			BL50	Bi-level switched dimming, 50% ^{7,8,9}		HS	Houseside shield ¹¹										
PIRH	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc ^{6,7}																	





SSP

Square Non-Tapered Steel Poles



Pole Shaft

The pole shaft is one piece construction, being fabricated from a weldable grade carbon steel structural tubing which has a uniform wall thickness of 11 gauge (0.1196"). The pole shaft material shall conform to ASTM A500 Grade C with a minimum yield strength of 50,000 psi. The pole shaft has a full length longitudinal resistance weld and is uniformly square in cross-section with flat sides, small corner radii and excellent torsional properties.

Base Plate

The anchor base is fabricated from a structural quality hot rolled carbon steel plate that meets or exceeds a minimum yield strength of 36,000 psi. The anchor base telescopes the pole shaft and is circumferentially welded top and bottom. All welds are performed in accordance with the American Welding Society specification AWS D1.1, latest edition.

Bolt Circle: 8.00 (in.) **Dimension :** 8.00 (in.) **Thickness:** 0.75 (in.) **Conduit Opening:** 3"
Consult KW representative for non-standard dimensions.

Anchor Bolts

Anchor bolts are fabricated from commercial quality hot rolled carbon steel bar that meets or exceeds a minimum yield strength of 55,000 psi. Four properly sized anchor bolts, each with two regular hex nuts and washers, are furnished and shipped with all poles unless otherwise specified. Anchor bolts shall have the threaded end galvanized a minimum of 8 inches in accordance with ASTM A153. Fully galvanized anchor bolts are available upon request.

Handhole

An oval reinforced gasketed handhole, having a nominal 3 " x 5 " inside opening, located 1' - 6" above base, is standard on all poles. A grounding provision is located inside the handhole ring.

Finish

Standard - The exterior surface is cleaned with an alkaline rinse to remove surface contaminants and shot blasted to specifications as published by the Steel Structures Painting Council Standards SSPC-SP10 (near white). The exterior surface is chemically pretreated with an iron phosphate conversion coating then rinsed with ambient fresh water containing special surfactants and sealers forming a dry tight micro-crystalline coating. A polyester thermosetting powder coating applied to the surface of the substrate to a minimum of 3 mils is standard on all color finishes. The internal surface including the powder coated area at the base-end is coated with **K-SEAL**, a thermoplastic hydrocarbon resin system specially formulated for application over untreated steel surfaces, to a thickness of 3 mils. The internal coating shall contain special corrosion inhibitors and is capable of passing 1000 hours of salt spray exposure (ASTM B117).

Series: **SSP** - Square Non-Tapered Steel Poles

Nominal Height: **14'** Base Diameter: **4.0"** Gauge: **11**

Finish: **BRZ** - Standard - Bronze

Mounting Designation: **OTC** - Open Top includes Pole Cap

Options: **BC** - Base Cover

Height (ft.)	Pole Shaft (in.) x (ft.)	Gauge	Handhole Size (in.)	Anchor Bolt (in.) x (in.) x (in.)	Bolt Circle (in.)	80 MPH (ft. ÷ 1/2)	90 MPH (ft. ÷ 1/2)	100 MPH (ft. ÷ 1/2)	Ship WT. (lbs.)
14	4.0 x 14.0	11	3 x 5	0.75 x 17 x 3	8	27.4	21.5	17.1	113

SSP14-4.0-11-BRZ-OTC-BC

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