

DESCRIPTION

Recessed 3.5" aperture directional luminaire with lens angle cut shielding reflector utilizing an LED array. Housing is suitable for 2x8 residential or commercial constructions, airtight and can be used in direct contact with insulation. Housing platform + primary reflector + optical element combination supports various distributions, providing design flexibility. Use where high efficiency, excellent light control and low aperture brightness are demanded.

SPECIFICATION FEATURES

Frame

Galvanized steel plaster frame with integral bar hanger receivers. Setscrews provide positive horizontal locking. Integral gun sights facilitate the use of guide strings or laser lines. Shipped with overspray protector installed.

Housing

Steel housing painted matte black for a visually dark interior. Removable hinged top allows top access. All fasteners are captive.

Bar Hangers

Captive preinstalled bar hangers adjust from 8-1/2" to 24" wide; pass thru feature allows shortening without removal. Captive nail penetrates standard and engineered lumber. Mounting flange levels platform with ceiling. Integral clip attached directly to tee-bar.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 3" vertically from above the ceiling.

Gaskets

Closed cell gaskets achieve restrictive airflow requirements without additional caulking.

Adjustment Mechanism

Dynamic aiming rotates 365°, tilts 45° and locks in position. Angle markings assist in repeatable settings. Translating center beam optics aligns axis of primary reflector with aperture from nadir to 45°.

LED Module

Philips Fortima SLM with Lumileds Luxeon S LED array is field replaceable and conforms to Zhaga standards for interchangeability. Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation. Color rendering 80 CRI standard, 90 CRI optimal, accuracy within 3 SDCM provides excellent color. Proportional active cooling achieves L70 at 50,000 hours in IC and non IC applications.

Primary Optic

Borosilicate glass segmented optic with > 95% reflective multi-layer hard coating delivers a highly efficient and uniform beam. Various distributions are available and can be interchanged without tools. Elastomeric glare shield accepts theatrical color filters and diffusion films.

Media

Optional media holder accepts one or two 3.0mm thick color filters or beam modifying lens. Order media holder, color filters and lens separately.

Lower Reflector

Spun 0.04" thick aluminum angle cut parabolic contour with integral clear glass lens provides 50° room side cutoff and is available in a wide range of specular and semi-specular Alzak® finishes. Light trap eliminates spill light at edge of flange and reflector. Metal trim ring can be removed for painting and can be installed flush mount with optional flush mount collar accessory.

Catalog

Project

Comments

Prepared By

Type

Date

Trim Retention

Retained with two torsion springs holding the flange tightly to the finished ceiling surface and accommodates ceiling thickness from 1/2 - 1" thick.

Junction Box

(6) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs.

Driver

Integral 120 or 277V 60 Hz constant current driver provides noise free operation. Monitors LED array and reduces power if safe operating temperature of LED's is exceeded. Continuous, flicker-free dimming from 100% to 10%. Available with trailing edge phase cut, 0 -10V and DALI digital control interfaces.

Compliance

Type IC inherently protected, suitable for direct contact to insulation and cULus listed for wet locations. Restrictive airflow per ASTM E283. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/RFI emissions per FCC 47CFR Part 18 consumer limits. Contains no mercury or lead and RoHS compliant. Photometric testing is in accordance with IES LM79. LED life claims are in accordance with IES LM80 testing. Can be used for State of California Title 24 high efficacy luminaire compliance, reference the California Energy Commission Appliance Efficiency Database for current listings. Can also be used for international Energy Conservation Code (IECC) high efficiency luminaire compliance. ENERGY STAR® listed, consult ENERGY STAR® website for applicable combinations. Zhaga compliant luminaire.

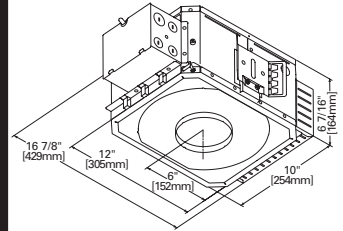
Warranty

5 year warranty.



P3LED E3AASR

**LED Directional Lens Angle Cut
3.5" Aperture
900 Lumen Series**

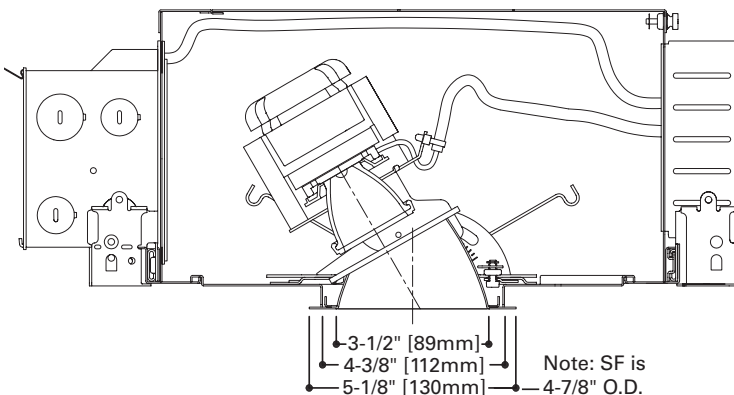


Energy Data

Lumens	900 Series	
Input Voltage (V)	120	277
Input Current (A)	0.18	0.09
Input Power (W)	20.4	22
THD: ≤ 20%		
PF: ≥ 0.90		
T Ambient -20 to +40°C		
Sound Rating: A		



Cooper Lighting is a founding member of the Zhaga Consortium



ORDERING INFORMATION

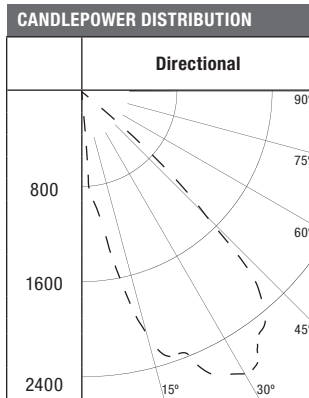
Complete luminaire consists of a housing platform and optical element. Housing platform can be ordered without primary optic. Order primary optics separately.

Example: P3LED9NFL258301E0-10V/TE = 3.5" aperture LED housing platform, 900 lumens nominal, 25° narrow flood 3,000°K, 85 CRI, 120V 60Hz, 0 – 10V and trailing edge 10% dimming
E3AASRH = 3.5" aperture lens angle cut reflector, Semi-specular clear, matte white metal trim ring

Platform	Lumens	Distribution	Color	Driver	Optical Element	Finish	Flange Style	Accessories
P3LED					E3AASR			
P3LED = 3.5" aperture LED housing platform	9 = 900 lumens (nominal)	[blank] = omit primary optic NSP10 = 10° beam SP15 = 15° beam NFL25 = 25° beam FL40 = 40° beam	827 = 80 CRI Minimum, 2,700 K CCT 830 = 80 CRI Minimum, 3,000 K CCT 930 = 90 CRI Minimum, 3,000 K CCT 840 = 80 CRI Minimum, 4,000 K CCT	1E 0-10V/TE = 120V 60Hz 0 – 10V and trailing edge 10% dimming 2E 0-10V = 277V 60Hz 0 – 10V – 10% dimming 1E DALI = 120V 60Hz DALI – 10% dimming	E3AASR = 3.5" aperture lens angle cut reflector	Finishes Alzak® Finishes C = Specular Clear H = Semi-Specular Clear WMH = Warm Haze G = Gold WH = Wheat WHH = Wheat Haze GP = Graphite GPH = Graphite Haze K = Cognac KH = Cognac Haze CC = Chocolate CCH = Chocolate Haze B = Black Painted Finishes MW = Matte white W = Gloss white	[Blank] = Metal trim ring, matte white SF = Self flanged SFWF = Self flanged, matte white flange	RG50NSP10 = 10° beam glass reflector, 50mm RG50SP15 = 15° beam glass reflector, 50mm RG50NFL25 = 25° beam glass reflector, 50mm RG50FL40 = 40° beam glass reflector, 50mm RG50MH = Media holder for 50mm reflector FMC3 = Flush mount collar accessory PLE3 = Plaster lip extender for up to 2" thick ceilings ZLM03 = Replacement LED module, see specification sheet for catalog number and performance data ZLE03 = LED light engine, Zhaga Book 3 compliant

PHOTOMETRICS

P3LED E3AASRC

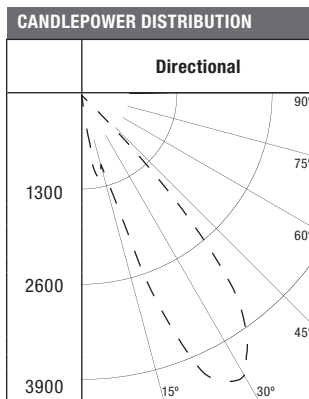


Test Number	P21964
Platform	P3LED
Element	E3AASRC RG50FL40
Lumens	928
Efficacy	48.3 Lm/W

ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-30	469	50.5
0-40	763	82.2
0-60	925	99.7
0-90	928	100.0
90-180	0	0.0
0-180	928	100.0

30° HORIZONTAL PLANE						30° VERTICAL PLANE					
	D	FC	L	W	CB		D	FC	L	W	CB
	6'	55	4.5'	3.9'	3.5'		4'	40'	3.6'	3.6'	6.9'
	7'	40	5.2'	4.5'	4'		6'	18'	5.4'	5.3'	10.4'
	8'	31	5.9'	5.1'	4.6'		8'	10'	7.2'	7.1'	13.9'
	10'	20	7.4'	6.4'	5.8'		10'	6'	9'	8.9'	17.3'
	12'	14	8.9'	7.7'	6.9'		12'	4'	10.7'	10.7'	20.8'

SINGLE UNIT FOOTCANDLES							
3' FROM WALL (Distance From Fixture Along Wall)							
DD	●	1'	2'	3'	4'	5'	6'
1'	0	0	0.1	0	0	0	0
2'	1.1	0.4	0.1	0	0	0	0
3'	60	22.1	0.8	0.1	0	0	0
4'	59.1	46.7	13.2	0.2	0.1	0	0
5'	40.9	33.9	15	0.3	0.1	0	0
6'	26.1	22.9	12.8	2.5	0.1	0	0
7'	16.8	16	10	3.7	1	0.1	0
8'	11.2	12	7.6	3.7	1.5	0.3	0
9'	8.1	8.7	5.9	3.1	1.5	0.5	0.1
10'	5.9	5.9	4.6	2.6	1.4	0.6	0.2

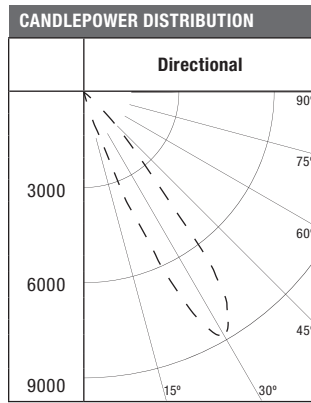


Test Number	P21963
Platform	P3LED
Element	E3AASRC RG50NFL25
Lumens	894
Efficacy	46.6 Lm/W

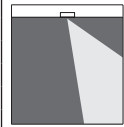
ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-30	503	56.3
0-40	807	90.3
0-60	890	99.6
0-90	894	100.0
90-180	0	0.0
0-180	894	100.0

30° HORIZONTAL PLANE						30° VERTICAL PLANE					
	D	FC	L	W	CB		D	FC	L	W	CB
	6'	85	3'	2.7'	3.5'		4'	46	3.8'	2.7'	6.9'
	7'	62	3.5'	3.2'	4'		6'	20	5.7'	4.1'	10.4'
	8'	48	4'	3.6'	4.6'		8'	11	7.6'	5.4'	13.9'
	10'	31	5'	4.5'	5.8'		10'	7	9.5'	6.8'	17.3'
	12'	21	6'	5.5'	6.9'		12'	5	11.4'	8.1'	20.8'

SINGLE UNIT FOOTCANDLES							
3' FROM WALL (Distance From Fixture Along Wall)							
DD	●	1'	2'	3'	4'	5'	6'
1'	0	0.1	0.1	0	0	0	0
2'	0.4	0.4	0.1	0	0	0	0
3'	28.8	10.9	0.3	0.1	0	0	0
4'	81.5	35.6	5.5	0.2	0.1	0	0
5'	62.5	41.1	8.7	0.8	0.1	0	0
6'	42.4	31.1	7.4	3.1	0.4	0	0
7'	27	21.3	6.2	3.1	1.2	0.2	0
8'	16.2	13.5	4.9	2.6	1.3	0.5	0.1
9'	9.2	8	3.8	2.1	1.1	0.5	0.1
10'	5.3	4.5	3.1	1.7	0.9	0.5	0.2



Test Number	P21962
Platform	P3LED
Element	E3AASRC RG50SP15
Lumens	972
Efficacy	50.6 Lm/W



ZONAL LUMEN SUMMARY

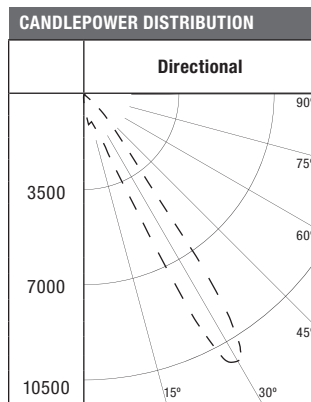
Zone	Lumens	%Fixture
0-30	498	51.2
0-40	879	90.4
0-60	969	99.6
0-90	972	100.0
90-180	0	0.0
0-180	972	100.0

30° HORIZONTAL PLANE						30° VERTICAL PLANE					
	D	FC	L	W	CB		D	FC	L	W	CB
	6'	165	2.2'	1.8'	3.5'		4'	84	3.4'	1.9'	6.9'
	7'	121	2.6'	2.1'	4'		6'	37	5.1'	2.8'	10.4'
	8'	93	2.9'	2.4'	4.6'		8'	21	6.8'	3.7'	13.9'
	10'	59	3.7'	3'	5.8'		10'	13	8.5'	4.7'	17.3'
	12'	41	4.4'	3.6'	6.9'		12'	9	10.3'	5.6'	20.8'

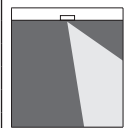
SINGLE UNIT FOOTCANDLES

3' FROM WALL
(Distance From Fixture Along Wall)

DD	●	1'	2'	3'	4'	5'	6'
1'	0	0	0	0	0	0	0
2'	3.7	0.6	0.1	0	0	0	0
3'	31.6	8	1.5	0.1	0	0	0
4'	119.7	28.3	6.7	0.1	0	0	0
5'	132.5	38.3	9.8	0.7	0.1	0	0
6'	82.5	30.7	10.1	2.6	0.3	0	0
7'	40.2	17.9	7.9	2.6	1	0.1	0
8'	16.4	10.3	5.4	2.1	1	0.4	0
9'	7.6	6	3.8	1.6	0.9	0.4	0.1
10'	4	3.4	2.8	1.3	0.7	0.4	0.1



Test Number	P21961
Platform	P3LED
Element	E3AASRC RG50NSP10
Lumens	951
Efficacy	49.5 Lm/W



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	514	54.1
0-40	853	89.7
0-60	948	99.7
0-90	951	100.0
90-180	0	0.0
0-180	951	100.0

30° HORIZONTAL PLANE						30° VERTICAL PLANE					
	D	FC	L	W	CB		D	FC	L	W	CB
	6'	191	1.6'	1.4'	3.5'		4'	97	2.7'	1.4'	6.9'
	7'	141	1.8'	1.6'	4'		6'	43	4.1'	2.1'	10.4'
	8'	108	2.1'	1.9'	4.6'		8'	24	5.4'	2.8'	13.9'
	10'	69	2.6'	2.3'	5.8'		10'	15	6.8'	3.6'	17.3'
	12'	48	3.1'	2.8'	6.9'		12'	11	8.1'	4.3'	20.8'

SINGLE UNIT FOOTCANDLES

3' FROM WALL
(Distance From Fixture Along Wall)

DD	●	1'	2'	3'	4'	5'	6'
1'	0	0	0	0	0	0	0
2'	0.2	0.1	0	0	0	0	0
3'	32.4	14.1	0.2	0	0	0	0
4'	71.1	27.5	8.4	0.1	0	0	0
5'	165.1	27.5	10.5	1.6	0	0	0
6'	95.7	21.4	9.5	3.5	0.7	0	0
7'	26.9	13.6	7.2	3.5	1.3	0.3	0
8'	10.2	9	5.3	2.7	1.4	0.5	0.1
9'	5.5	5.8	4	2.2	1.2	0.5	0.1
10'	3.4	3.5	3.2	1.7	1	0.5	0.2

LED lighting facts®
A Program of the U.S. DOE

Light Output (Lumens) 1025
Watts 20.4
Lumens per Watt (Efficacy) 50

Color Accuracy 82
Color Rendering Index (CRI)

Light Color 3100 (Bright White)
Correlated Color Temperature (CCT)

Warm White 2700K 3000K 4500K 6500K Bright White Daylight

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-YFCH2W (2/24/2012)
Model Number: P3LED98301E0-10V/TEE3*[all Alzak Finishes]*
Type: Recessed downlight

LED lighting facts®
A Program of the U.S. DOE

Light Output (Lumens) 1000
Watts 20.4
Lumens per Watt (Efficacy) 49

Color Accuracy 82
Color Rendering Index (CRI)

Light Color 3100 (Bright White)
Correlated Color Temperature (CCT)

Warm White 2700K 3000K 4500K 6500K Bright White Daylight

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-YRZXM2 (2/24/2012)
Model Number: P3LED98301E0-10V/TEE3*[all Paint Finishes]*
Type: Recessed downlight