

DESCRIPTION

Recessed 3.5" aperture directional luminaire with lens angle cut shielding reflector utilizing a LED array. Housing is suitable for 2x8 residential or commercial constructions, airtight, can be used in direct contact with insulation and is wet location listed. Housing platform + primary reflector + optical element combination supports various distributions and reflector types providing design flexibility. Use where 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 visually dark interior. Removable access panels allow splice inspection and service of all electrical components including LED module and driver from below the ceiling thru the aperture. Removable hinged top allow 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

Field replaceable module utilizes Cree® MT-G2 LED array 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 accuracy within 2 SDCM and optional 90 CRI provides excellent color. Passive cooling achieves L70 at 40,000 hours.

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 2 inch [50mm] diameter L series 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.

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. Use optional plaster lip

Catalog #		Type
Project		
Comments		Date
Prepared By		

extender for ceilings up to 2" thick.

Junction Box

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

Driver

Integral constant current driver provides noise free operation. Continuous, flicker-free 1% dimming, available with 2 or 3 wire phase cut and EcoSystem/DALI digital control interfaces. The DALI option is Fifth Light compatible.

Emergency Option

Provides 90 minutes of standby lighting meeting most life safety codes for egress lighting. Remote charge indicator and test switch. The maximum battery pack ambient is 50°C.

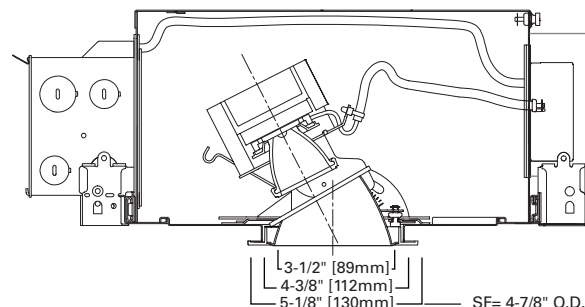
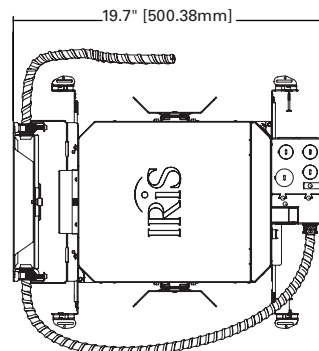
Compliance

Type IC inherently protected, suitable for direct contact with insulation and cULus listed for wet locations. Restrictive airflow per ASTM-E283. EMI/RFI emissions per FCC 47CFR Part 18 consumer limits. Contains no mercury or lead and RoHS compliant. Photometric testing in accordance with IES LM-79-08. Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11. Meets California Title 24 residential fixture program and listed on appliance database. Energy Star listed. Zhaga compliant. Meets EMI/RFI emission per FCC 47CFR Part 18 consumer limits at 120V input. Lighting Facts Labeled.

Warranty

5 year warranty.

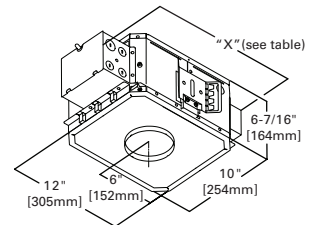
EM OPTION



P3LED09 E3AASR

LED Directional Lens Angle Cut

**3.5" Aperture
900 Lumen Series**



Catalog #	X-Dimension
P3LED09*E	16.4" (416mm)
P3LED09*E010	16.25" (413mm)
P3LED09*E5LT	16.25" (413mm)
P3LED09*EDMX	16.25" (413mm)
P3LED09*1ELTE	16.9" (429mm)
P3LED09*EL3D	16.9" (429mm)

E Driver Option

Input Voltage	120V	277V
Input Current (A)	0.12	0.06
Input Power (W)	14.3	15
Inrush Current (A)	0.17	0.43
THD: ≤ 20%		
PF: ≥ 0.90		
T Ambient: -20 to +40°C		
T Plenum: +65°C Max.		
Sound Rating: Class A		

E010 Driver Option

Input Voltage	120V	277V
Input Current (A)	0.13	0.06
Input Power (W)	14.3	15
Inrush Current (A)	0.6	1
THD: ≤ 20%		
PF: ≥ 0.90		
T Ambient: -20 to +40°C		
T Plenum: +65°C Max.		
Sound Rating: Class A		



Cooper Lighting Solutions is a founding member of the Zhaga Consortium

powered by fifthlight

ORDERING INFORMATION

P3LED E3AASR

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

Example: P3LED09830E RG50SP15 E3AASRH

Platform	Lumens ¹	Distribution	Color	Driver	Options
P3LED					
P3LED = 3.5" Aperture IC, AT LED Housing Platform P3LEDPC = 3.5" Aperture IC, AT LED Housing Platform, CCEA listed for City of Chicago Plenum Requirements	09 = 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 927 = 90 CRI Minimum, 2,700 K CCT 830 = 80 CRI Minimum, 3,000 K CCT 930 = 90 CRI Minimum, 3,000 K CCT 835 = 80 CRI Minimum, 3,500 K CCT 840 = 80 CRI Minimum, 4,000 K CCT	E = 120 – 277V 50/60Hz Leading or Trailing Edge Phase Cut 1% Dimming (phase cut dimming at 120V only) E010 = 120 – 277V 50/60Hz 0 -10V 10% Dimming ED010 = 120 – 277V 50/60Hz 0 -10V 1% Dimming E5LT = 120 – 277V 50/60Hz DALI 1% Dimming EDMX = 120 – 277V 50/60Hz DMX 1% Dimming 1ELTE = 120V 60Hz Leading Edge 1% Dimming, Lutron A-Series EL3D = 120 – 277V 50/60Hz 3-wire and EcoSystem 1% Dimming, Lutron A-Series	EM = Integral Battery Backup with Remote Test Switch and Indicator Light (Not available with 1ELTE and EL3D driver options)

Optical Element	Finishes	Options	Accessories
E3AASR			
E3AASR = 3.5" Aperture Lens Angle Cut Reflector	Alzak® Finishes C = Specular Clear H = Semi-Specular Clear G = Gold WMH = Warm Haze 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 two inch [50mm] diameter L series color filters or beam modifying lens. Attaches directly to RG50 series 50mm Reflectors 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

ENERGY DATA

P3LED E3AASR

1ELTE Driver Option	EL3D Driver Option	E5LT Driver Option	EDMX Driver Option
Input Voltage 120V 277V	Input Voltage 120V 277V	Input Voltage 120V 277V	Input Voltage 120V 277V
Input Current (A) 0.13	Input Current (A) 0.13 0.06	Input Current (A) 0.12 0.06	Input Current (A) 0.13 0.06
Input Power (W) 15.7	Input Power (W) 15.6 16	Input Power (W) 14.3 15.2	Input Power (W) 15.1 16.1
Inrush Current (A) 1.9	Inrush Current (A) 1.9 2	Inrush Current (A) 1.73 1.8	Inrush Current (A) 1.82 1.89
THD: ≤20%	THD ≤20%	THD: ≤20%	THD ≤20%
PF: ≥0.90	PF ≥0.90 ≥0.80	PF: ≥0.90	PF ≥0.90 ≥0.60
T Ambient: -20 to +40°C	T Ambient: -20 to +40°C	T Ambient: -20 to +40°C	T Ambient: -20 to +40°C
T Plenum: +65°C Max.	T Plenum: +65°C Max.	T Plenum: +65°C Max.	T Plenum: +65°C Max.
Sound Rating: Class A	Sound Rating: Class A	Sound Rating: Class A	Sound Rating: Class A

PHOTOMETRICS

P3LED E3AASR

CANDLEPOWER DISTRIBUTION

Directional

650
1300
1950

90°
75°
60°
45°
15°
30°

LEGEND:
0-deg: - - - - -
90-deg: = = = = =
180-deg: - - - - -

Test Number P106578
Platform P3LED09830E
Element E3AASRC RG50FL40
Lumens 939 Lm
Efficacy 65.7 Lm/W

30° HORIZONTAL PLANE

MH	FC	L	W	CB
5.5'	20.1	5.9	4	3.2
7'	12.4	7.5	5	4
8'	9.5	8.5	5.8	4.6
9'	7.5	9.6	6.6	5.2
10'	6.1	10.7	7.2	5.8
12'	4.2	12.8	8.8	6.9

30° VERTICAL PLANE

D	FC	L	W	CB
5.5'	49.5	3.3	3.4	9.5
7'	30.6	4.3	4.4	12.1
8'	23.4	4.9	5.2	13.9
9'	18.5	5.5	5.8	15.6
10'	15	6.1	6.4	17.3
12'	10.4	7.3	7.8	20.8

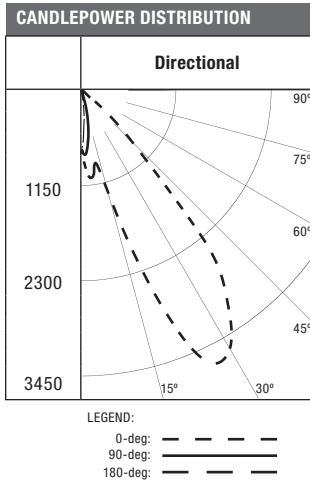
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30	449	51.4
0-40	702	80.4
0-60	872	99.8
0-90	873	100
90-180	0	0
0-180	873	100

SINGLE UNIT FOOTCANDLES

3' FROM WALL
(Distance From Fixture Along Wall)

DD	1'	2'	3'	4'	5'	6'
1'	0.1	0	0	0	0	0
2'	11.5	6.4	0.1	0	0	0
3'	44.9	19.7	5.9	0.1	0	0
4'	46	33.5	9.7	2.7	0.4	0
5'	31.3	25.9	12.7	3.3	1.2	0.2
6'	21.1	17.9	10.3	4.5	1.4	0.5
7'	13.6	12.4	7.7	4.2	1.9	0.6
8'	8.6	9	5.6	3.5	1.9	0.8
9'	5.8	6.1	4.2	2.8	1.7	0.9
10'	4.1	4.1	3.3	2.2	1.4	0.8



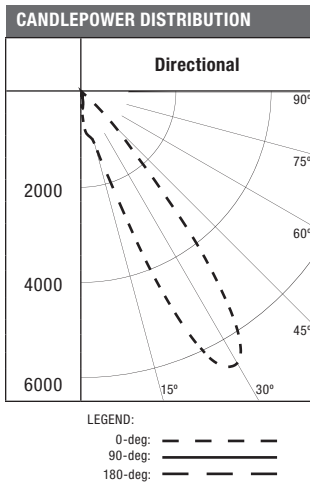
Test Number	P106590	
Platform	P3LED09830E	
Element	E3AASRC RG50NFL25	
Lumens	953 Lm	
Efficacy	67.1 Lm/W	

ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-30	523	59
0-40	809	91.3
0-60	885	99.8
0-90	887	100
90-180	0	0
0-180	887	100

30° HORIZONTAL PLANE					
	D	FC	L	W	CB
	5.5'	25.2	7.2	4	3.2
	7'	15.6	9.1	5	4
	8'	11.9	10.5	5.8	4.6
	9'	9.4	11.8	6.6	5.2
	10'	7.6	13.1	7.2	5.8
	12'	5.3	15.8	8.8	6.9

30° VERTICAL PLANE					
	D	FC	L	W	CB
	5.5'	76.9	2.8	2.6	9.5
	7'	47.5	3.5	3.4	12.1
	8'	36.3	4.1	4	13.9
	9'	28.7	4.5	4.4	15.6
	10'	23.3	5.1	5	17.3
	12'	16.2	6.1	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'	0.3	0.2	0.1	0	0	0	0
3'	26.6	8.7	0.2	0.1	0	0	0
4'	65.9	30.4	6.7	0.2	0.1	0	0
5'	52.7	35.4	12.1	1.4	0.1	0	0
6'	36.7	27.4	12	3.6	0.6	0	0
7'	23.6	18.8	9.5	3.4	1.4	0.3	0
8'	14.1	12.4	7	2.8	1.4	0.5	0.1
9'	8.3	7.7	5.1	2.2	1.2	0.6	0.2
10'	5	4.6	3.8	1.8	1.1	0.5	0.2



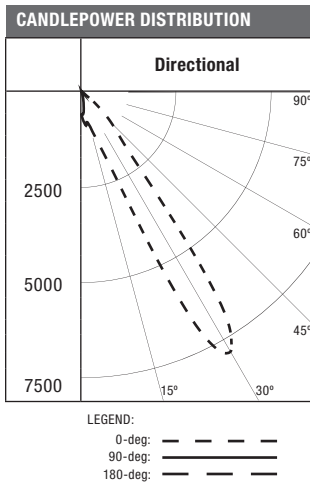
Test Number	P106770	
Platform	P3LED09830E	
Element	E3AASRC RG50SP15	
Lumens	1082 Lm	
Efficacy	75.1 Lm/W	

ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-30	518	51.5
0-40	887	88.1
0-60	990	98.4
0-90	1006	100
90-180	0	0
0-180	1006	100

30° HORIZONTAL PLANE					
	MH	FC	L	W	CB
	5.5'	37	4.8	2.8	3.2
	7'	22.8	6.2	3.6	4
	8'	17.5	7.1	4.2	4.6
	9'	13.8	7.9	4.8	5.2
	10'	11.2	8.8	5.2	5.8
	12'	7.8	10.7	6.4	6.9

30° VERTICAL PLANE					
	D	FC	L	W	CB
	5.5'	145.5	2.1	1.8	9.5
	7'	89.8	2.7	2.4	12.1
	8'	68.8	3.2	2.8	13.9
	9'	54.4	3.6	3	15.6
	10'	44	3.9	3.4	17.3
	12'	30.6	4.8	4.2	20.8

SINGLE UNIT FOOTCANDLES							
3' FROM WALL (Distance From Fixture Along Wall)							
DD	●	1'	2'	3'	4'	5'	6'
1'	0	0.7	0.1	0.1	0.1	0.1	0.1
2'	3.1	0.1	0.1	0	0.1	0.1	0.1
3'	33.6	9.9	1.2	0.3	0	0	0
4'	105.2	33.1	8	0.2	0	0.1	0
5'	98.9	40.8	11.6	0.9	0.1	0	0
6'	63.3	33	11.7	2.9	0.4	0.1	0
7'	34.7	20.3	9.2	3	1.2	0.2	0.1
8'	16.7	11.9	6.5	2.4	1.2	0.5	0
9'	8.1	7.2	4.4	1.9	1.1	0.4	0.2
10'	4.4	4.3	3.2	1.5	0.9	0.4	0.2



Test Number	P106902	
Platform	P3LED09830E	
Element	E3AASRC RG50NSP10	
Lumens	985	
Efficacy	67.9 Lm/W	

ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-30	480	50.6
0-40	816	85.9
0-60	932	98.2
0-90	950	100
90-180	0	0
0-180	950	100

30° HORIZONTAL PLANE					
	D	FC	L	W	CB
	5.5'	37.5	4	2.2	3.2
	7'	23.2	5.1	2.8	4
	8'	17.7	5.8	3.2	4.6
	9'	14	6.5	3.6	5.2
	10'	11.4	7.1	4.2	5.8
	12'	7.9	8.5	5	6.9

30° VERTICAL PLANE					
	D	FC	L	W	CB
	5.5'	173	1.4	1.4	9.5
	7'	106.8	1.9	1.8	12.1
	8'	81.8	2.2	2	13.9
	9'	64.6	2.4	2.2	15.6
	10'	52.3	2.7	2.4	17.3
	12'	36.3	3.3	3	20.8

SINGLE UNIT FOOTCANDLES							
3' FROM WALL (Distance From Fixture Along Wall)							
DD	●	1'	2'	3'	4'	5'	6'
1'	0.5	0.4	0	0.1	0.2	0.2	0.1
2'	0.3	0.2	0.2	0	0.2	0.1	0
3'	42.6	16.6	0.6	0.1	0.1	0.1	0
4'	83.2	29	9.6	0.1	0.1	0	0
5'	118.2	28	11.4	2.3	0.1	0	0.1
6'	66.2	20.6	9.7	3.9	1	0.1	0
7'	21.2	12.6	7.1	3.5	1.5	0.4	0.1
8'	8.7	8.6	5.2	2.8	1.5	0.6	0.1
9'	5.1	5.4	4.1	2.1	1.4	0.6	0.2
10'	3.3	3.4	3.2	1.8	1.1	0.6	0.2

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

Light Output (Lumens)	799
Watts	14.4
Lumens per Watt (Efficacy)	55

Color Accuracy Color Rendering Index (CRI)	90
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Light Color
Correlated Color Temperature (CCT) **3000 (Bright White)**

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

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: FAQJ-24D1H2 (8/16/2013)
Model Number: P3LED09SP15930E E3AASRC [30° 18]
Type: Luminaire - Downlight

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

Light Output (Lumens)	710
Watts	14.4
Lumens per Watt (Efficacy)	49

Color Accuracy Color Rendering Index (CRI)	90
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Light Color
Correlated Color Temperature (CCT) **2700 (Warm White)**

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

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: FAQJ-6698L0 (8/15/2013)
Model Number: P3LED09SP15937E E3AASRC [30° 18]
Type: Luminaire - Downlight

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

Light Output (Lumens)	1165
Watts	14.4
Lumens per Watt (Efficacy)	80

Color Accuracy Color Rendering Index (CRI)	80
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Light Color
Correlated Color Temperature (CCT) **4000 (Bright White)**

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

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: FAQJ-382RL7 (8/16/2013)
Model Number: P3LED09SP15945E E3AASRC [30° 18]
Type: Luminaire - Downlight

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

Light Output (Lumens)	1060
Watts	14.4
Lumens per Watt (Efficacy)	73

Color Accuracy Color Rendering Index (CRI)	80
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Light Color
Correlated Color Temperature (CCT) **3500 (Bright White)**

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

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: FAQJ-PC16Z1 (8/16/2013)
Model Number: P3LED09SP15830E E3AASRC [30° 18]
Type: Luminaire - Downlight

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

Light Output (Lumens)	1006
Watts	14.4
Lumens per Watt (Efficacy)	69

Color Accuracy Color Rendering Index (CRI)	80
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Light Color
Correlated Color Temperature (CCT) **3000 (Bright White)**

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

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: FAQJ-AKZXB6 (9/9/2013)
Model Number: P3LED09SP15830E E3AASRC [30° 18]
Type: Luminaire - Downlight

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

Light Output (Lumens)	949
Watts	14.4
Lumens per Watt (Efficacy)	65

Color Accuracy Color Rendering Index (CRI)	80
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Light Color
Correlated Color Temperature (CCT) **2700 (Warm White)**

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

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: FAQJ-1JKRD6 (8/14/2013)
Model Number: P3LED09SP15827E E3AASRC [30° 18]
Type: Luminaire - Downlight

Please see LightingFacts.com for a complete listing of products.