

DESCRIPTION

4 inch LED recessed medium beam downlight with 50° cut off specially designed for LED technology. Two-stage reflector system produces smooth distribution with excellent light control and low aperture brightness. Lumen packages include 900 and 1300 delivered lumens with color temperatures of 2700K, 3000K, 3500K, 4000K. Suitable for commercial construction and exceeds high efficacy requirements (with designated trims) for IECC-2009.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Lower Shielding Reflector

Self-flanged, spun .050" thick aluminum lower reflector in combination with a lensed upper optical chamber provides superior lumen output with minimal source brightness. Available in all Portfolio Alzak® finishes.

Trim Retention

Lower reflector is retained with two torsion springs holding the flange tightly to the finished ceiling surface.

Plaster Frame / Collar

New Construction Housing: Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2". Remodel Housing: Galvanized steel plaster ring accommodates up to 1" ceiling thickness.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling (new construction housing only).

Junction Box

(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring.

Thermal

Extruded aluminum heat sink conducts heat away from the LED module for improved performance and longer life.

LED

LED system contains a plurality of high brightness white LED's combined with a high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation. Rated for 50,000 hours at 70% lumen maintenance. Auto resetting, thermally protected, LED's are turned off when safe operating temperatures are exceeded. Color variation within 3-step MacAdam ellipses. Flexible disconnect allows for tool-less replacement of LED engine from below ceiling.

Driver

Driver can be serviced from above or through the aperture.

Environmental

Fixture should not be operated in ambient temperatures above 40° C.

Code Compliance

Thermally protected and cULus listed for protected wet locations. IP54 Certified. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Non-IC rated - Insulation must be kept 3" from top and sides of housing. RoHS Compliant. ARRA Compliant. Photometric testing completed in accordance with IES LM 79 standards. LED life testing completed in accordance with LM 80 standards.

Warranty

5 year warranty.



LD409
LD413
LD4R09
LD4R13

4LM

LED

4 Inch

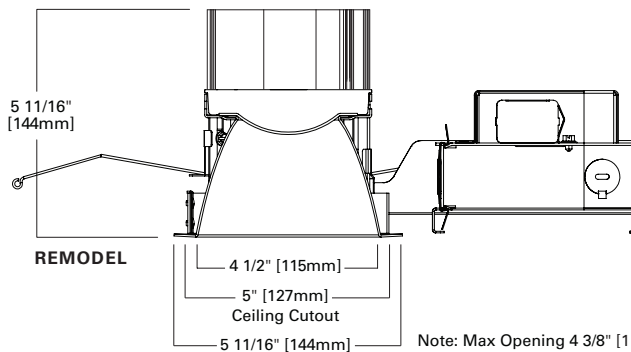
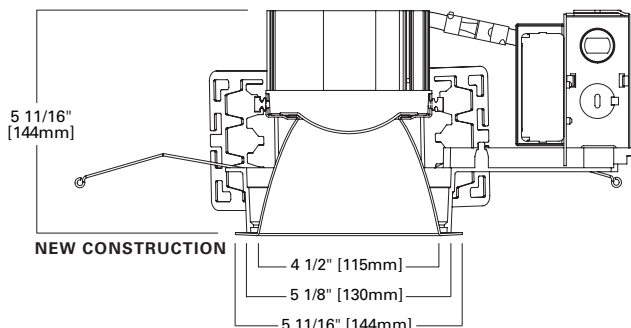
Medium Beam Downlight
New Construction or Remodel



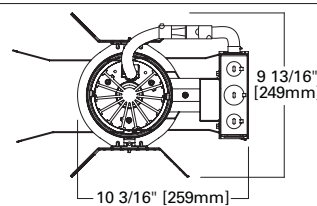
Qualified & Compliant with designated LED modules and trims.

Energy Data

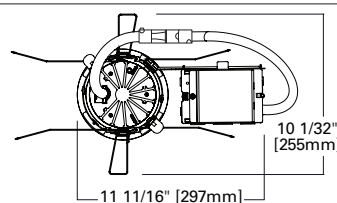
Sound Rating: Class A standards
Operating Temperature: 40°C (104°F)
1300 Lumen
(Values at non-dimming line voltage)
Minimum Starting Temp: -30°C (-22°F)
EMI/RFI: FCC Title 47 CFR, Part 18, Class B
Input Voltage: UNV (90V - 305V)
Power Factor: >0.90 (at nominal input 120/230/240/277 VAC & 100% of Rated Output Power)
Input Power: 24.8W THD: <21%
120V Input Current: .21A 277V Input Current: .09A
Maximum Non-IC Ambient Continuous
Input Frequency: 47-63Hz
Rated Wattage: 24.8W
900 Lumen D120 / D010
(Values at non-dimming line voltage)
Minimum Starting Temp: -30°C (-22°F)
EMI/RFI: FCC Title 47 CFR, Part 18, Class B (Consumer)
Input Voltage: 120/120-305V
Power Factor: >0.90
Input Power: 14.3W THD: <20%
Input Frequency: 50/60Hz
Rated Wattage: 14.3W/17.5W



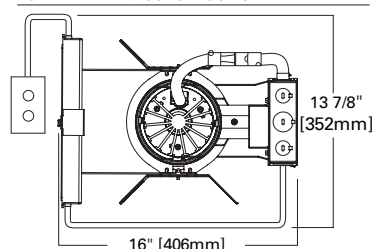
TOP VIEW - NEW CONSTRUCTION



TOP VIEW - REMODEL



TOP VIEW - NEW CONSTRUCTION WITH BATTERY



ORDERING INFORMATION

Example:

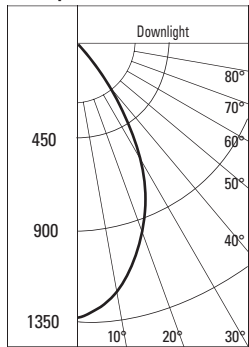
LD413D010 ERM4835 4LM0LI = 4" LED Medium Beam Reflector Lens, 1300 lumen, 3,500 K CCT with Universal 120 - 277V, 0 - 10 Driver

Housing	Delivered Lumens ¹	Driver	Options	Power Module	Color	Reflector	Finish	Options	Accessories
LD4 = 4" aperture LD4CP = 4" aperture, Chicago Plenum LD4R = 4" aperture remodel LD4RCP = 4" aperture remodel, Chicago Plenum	09 = 900 lumens 13 = 1300 lumens	D010 = 10 to 100% dimming, 120-277V, 50/60Hz, 0-10V D120 = 15 to 100% dimming, 120V, 2 wire phase control, (900 lumen only) DLUT = 1 to 100% dimming, 120-277V Lutron Hi-lume	EM = Iota Emergency module with remote test switch ² EMBOD = Bodine Emergency module with remote test switch ^{2,4}	ERM4 = 4" module for medium beam reflector 827 = 80 CRI, 2700° K 830 = 80 CRI, 3000° K 835 = 80 CRI, 3500° K 840 = 80 CRI, 4000° K 827CP = 80 CRI, 2700° K, Chicago Plenum 830CP = 80 CRI, 3000° K, Chicago Plenum 835CP = 80 CRI, 3500° K, Chicago Plenum 840CP = 80 CRI, 4000° K, Chicago Plenum		4LM0 = Medium beam reflector lens assembly with white polymer trim ring 4LM1 = Medium reflector, self flanged (not available with baffles)	LI = Specular Clear H = Semi-Specular Clear WMH = Warm Haze G = Specular Gold WH = Wheat WHH = Wheat Haze GP = Graphite GPH = Graphite Haze CC = Chocolate CCH = Chocolate Haze K = Cognac KH = Cognac Haze B = Specular Black W = Gloss White BB = Black Baffle (4LM0 only) WB = White Baffle (4LM0 only)	WF = White painted flange (self flanged only) HB26 = C Channel Bar Hanger, 26" Long, Pair HB50 = C Channel Bar Hanger, 50" Long, Pair RMB22 = Wood Joist Bar Hanger, 22" Long, Pair H277 = 277 to 120V step down transformer, 300VA H347 = 347 to 120V step down transformer, 75VA H347200 = 347 to 120V step down transformer, 200VA HSA4 = Slope Adapter for 4" Aperture Housings, Specify Slope TRM4P = Metal Trim Ring, White ³ TRM4MB = Metal Trim Ring, Black ³ TRR4 = Rimless Trim Ring ³ LGSKT41P66 = IP66 Gasket Kit	

- Notes:** 1 Nominal delivered Lumens will vary depending on selected CCT, driver and reflector finish.
 2 Not available with Chicago Plenum.
 3 Order trim with polymer trim ring (Consult specification sheet for color ordering information and options).
 4 Not CSA approved.

PHOTOMETRICS

Candlepower Distribution Curve



Test No. P81918
 LD413D010 ERM4835 4LM1H
 Lumens = 1168
 Watts = 24.4 Watts
 LPW = 47.8
 CCT = 3500K
 SC = 0.9

Cone of Light

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
7'	27	6'
8'	21	7'
9'	16	8'
10'	13	8.5'
15'	6	13'

Lumen Output Iota: 438
 Lumen Output Bodine: 260

Candela Distribution

Degrees Vertical	Candela
0	1323
5	1277
15	1081
25	807
35	401
45	107
55	29
65	9
75	2
85	1
90	0

Zonal Lumen Summary

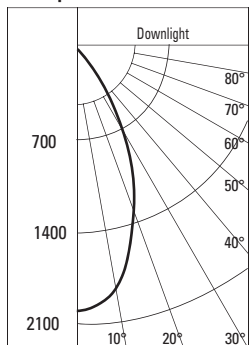
Zone	Lumens	%Fixture
0-30	791	67.8
0-40	1042	89.2
0-60	1155	98.9
0-90	1168	100.0
90-180	0	0.0
0-180	1168	100.0

Luminance

Degrees	Average Candela/M ² Avg. 0° Luminance
45	14673
55	4841
65	2029
75	828
85	1230

PHOTOMETRICS

Candlepower Distribution Curve



Test No. P81778
 LD413D010 ERM4835 4LM1LI
 Lumens = 1321
 Watts = 24.4 Watts
 LPW = 54.1
 CCT = 3500K
 SC = 0.8

Cone of Light

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
7'	41	5'
8'	31	6'
9'	25	7'
10'	20	7.5'
15'	9	12'

Lumen Output Iota: 495
 Lumen Output Bodine: 294

Candela Distribution

Degrees Vertical	Candela
0	2005
5	1952
15	1571
25	966
35	344
45	35
55	4
65	2
75	1
85	0
90	0

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	1061	80.4
0-40	1280	96.9
0-60	1318	99.7
0-90	1321	100.0
90-180	0	0.0
0-180	1321	100.0

Luminance

Degrees	Average Candela/M ² Avg. 0° Luminance
45	4836
55	747
65	507
75	414
85	0