

DESCRIPTION

4 inch LED square recessed 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, 1300, 1800 and 2800 lumens with color temperatures of 2700K, 3000K, 3500K, 4000K. Available with dim-to-warm technology – similar to halogen at full power, the 3000K LED warms smoothly as dimmed to 1850K creating a rich warm glow within the space.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Lower Parabolic Reflector

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

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

Plaster Frame / Collar

Galvanized steel plaster frame with adjustable collar adjusts for up to 2" thick ceilings and rotates +/- 7.5°.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

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. Available in 80 or 90 CRI.

D2W™ – dim-to-warm shifts CCT from 3000K to 1850K as fixture dims mimicking halogen sources.

Driver

Combination 0-10V/trailing edge driver provides flicker free dimming from 100% to 10%.

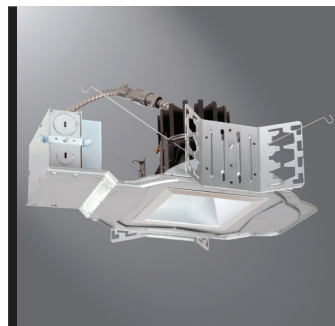
Optional 1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture.

Code Compliance

Thermally protected and cULus listed for protected wet locations. 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. Title 24 Compliant with designated trims. Photometric testing completed in accordance with IES LM 79 standards. LED life testing completed in accordance with LM 80 standards.

Warranty

5-year warranty.

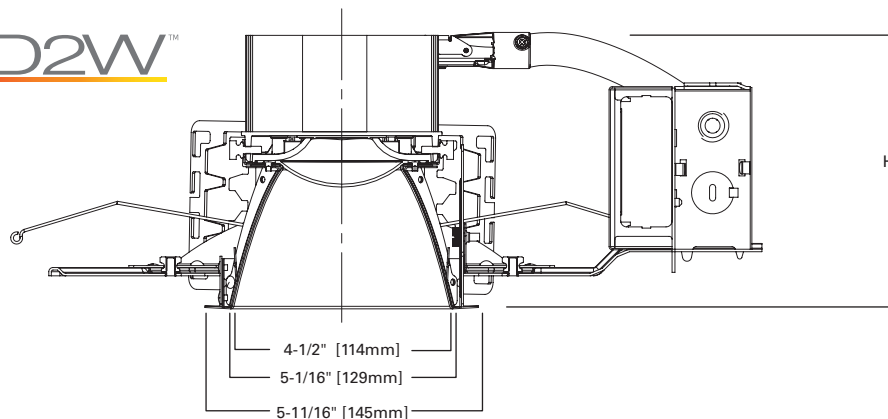


LDSQ4A09
LDSQ4A13
LDSQ4A18
LDSQ4A28
4LSQ

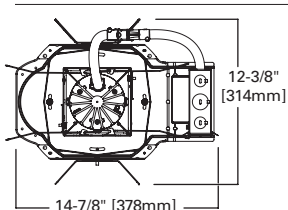
900, 1300 Lumen LED
 1800, 2800 Lumen LED

4-Inch Square
 Downlight

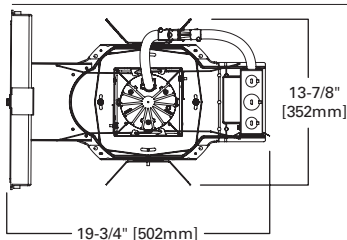
D2W™



TOP VIEW



TOP VIEW WITH BATTERY



		H
900/1300 Lumen	D010TE	5-9/16"
	D010TR	
	DL3	
	DLT	
900/1300 Lumen	D5LT	7-9/16"
	DMX	
	DE010	
1800/2800 Lumen	All	7-9/16"



Refer to ENERGY STAR® Qualified Products List.



ORDERING INFORMATION

EXAMPLE: LDSQ4A13D010TE ESQ4A13835 4LSQ0LI=4" Square LED Downlight, 1300 Lumen 3,500 K Color with Universal 120 - 277V, 0 - 10 Driver

Housing	Lumens ¹	Driver	Options ^{3,4}	Power Module	CRI	Color
LDSQ4A=4" Square Aperture LDSQ4ACP=4" Square Aperture, Chicago Plenum	09=900 Lumens 13=1300 Lumens 18=1800 Lumens 28=2800 Lumens	900, 1300, 1800 and 2800 Lumen D010TE=120-277V 0-10V 10% Dimming or Trailing Edge 120V Dimming D5LT=Fifth Light™ (DALI) 0% Dimming DE010=1 to 100% Dimming, 120-277V 50/60Hz, 0-10V DL3=1 to 100% Dimming, 120-277V Lutron® Hi-Lume, Ecosystem or 3 Wire DLT=Hi-Lume Forward Phase 2-wire Dimming 120V DMX=DMX 0% Dimming 900, 1300 and 1800 Lumen D010TR=120-277V 0-10V 10% Dimming or Leading Edge 120V Dimming	EMBOD=7W Bodine® Emergency Module with Remote Test Switch EM7=7W Emergency Module with Remote Test Switch EM14=14W Emergency Module with Remote Test Switch	ESQ4A09=4", 900 Lumen Module ESQ4A13=4", 1300 Lumen Module ESQ4A18=4", 1800 Lumen Module ESQ4A28=4", 2800 Lumen Module	8=80 CRI 9=90 CRI	27=2700° K 30=3000° K 35=3500° K 40=4000° K 27CP=2700° K, Chicago Plenum 30CP=3000° K, Chicago plenum 35CP=3500° K, Chicago Plenum 40CP=4000° K, Chiago Plenum 30D2W= Dim to warm 3000° K to 1850° K (2000 lumen and below, 90 CRI)

Reflector	Finish	Options	Accessories
4LSQ0=4" Square Reflector Lens Assembly, Polymer Trim Ring 4LSQ1=4" Square Reflector Lens Assembly, Self-flanged	LI=Specular Clear H=Semi-Specular Clear WMH=Warm Haze G=Specular Gold WH=Wheat WHH=Wheat Haze GP=Graphite GPH=Graphite Haze B=Specular Black W=Gloss White	IP66=IP66 Gasket Self-flanged Only WF=White Painted Flange	H347=347 to 120V Step Down Transformer, 75VA H347200=347 to 120V Step Down Transformer, 200VA HB26=C-channel Bar Hanger, 26" Long, Pair HB50=C-channel Bar Hanger, 50" Long, Pair RMB22=Wood Joist Bar Hanger, 22" Long Pair 4SQPR=Plaster Lathing Ring

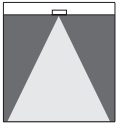
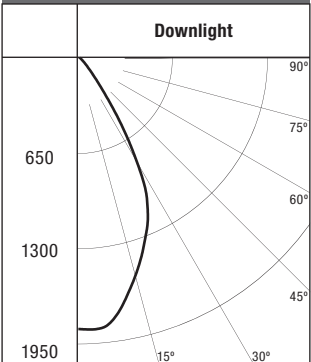
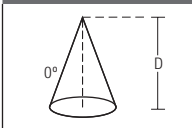
- Notes:** 1 Nominal Lumens will vary depending on selected color, driver and reflector finish.
 2 Order trim with polymer trim ring (Consult specification sheet for color ordering information and options).
 3 Not available with Chicago Plenum.
 4 Not CSA approved.

ENERGY

ENERGY DATA			
Sound Rating: Class A standards (Values at non-dimming line voltage)			
Minimum Starting Temperature: -30°C (-22°F)			
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)			
Input Voltage: UNV (120V - 277V)			
Power Factor: >0.90 (at nominal input 120-277 VAC & 100% of Rated Output Power)			
2800 Lumen D010TE		1800 Lumen D010TE	
Input Power: 43.4W	THD: <17%	Input Power: 31.5W	THD: <20%
120V Input Current: .36A	277V Input Current: .16A	120V Input Current: .27A	277V Input Current: .06A
Maximum Non-IC Ambient Continuous		Maximum Non-IC Ambient Continuous	
Input Frequency: 50/60Hz		Input Frequency: 50/60Hz	
1300 Lumen D010TE		900 Lumen D010TE	
Input Power: 22.4W	THD: <20%	Input Power: 14.1W	THD: <20%
120V Input Current: .12A	277V Input Current: .09A	120V Input Current: .12A	277V Input Current: .06A
Maximum Non-IC Ambient Continuous		Maximum Non-IC Ambient Continuous	
Input Frequency: 50/60Hz		Input Frequency: 50/60Hz	

Lumens	120V		277V	
	Inrush (A)	Duration (ms)	Inrush (A)	Duration (ms)
900/1000	0.486	0.4	0.848	0.182
1300/1500	0.717	1.58	0.531	1.24
1800/2000	0.832	0.405	1.25	0.788
2800/3000	1.09	0.3	1.23	0.294

PHOTOMETRICS

Test Number P135074 Platform LDSQ4A13D010TE Element ESQ4A13835 4LSQ1LI Lumens 1506 Efficacy 66.6 Lm/W SC 0.9 	CANDLEPOWER DISTRIBUTION 	CONE OF LIGHT  <table border="1"> <thead> <tr> <th>D</th> <th>FC</th> <th>L</th> <th>W</th> </tr> </thead> <tbody> <tr> <td>5.5'</td> <td>60</td> <td>4.6</td> <td>4.6</td> </tr> <tr> <td>7'</td> <td>37</td> <td>6</td> <td>6</td> </tr> <tr> <td>8'</td> <td>29</td> <td>6.8</td> <td>6.8</td> </tr> <tr> <td>9'</td> <td>23</td> <td>7.6</td> <td>7.6</td> </tr> <tr> <td>10'</td> <td>18</td> <td>8.6</td> <td>8.6</td> </tr> <tr> <td>12'</td> <td>13</td> <td>10.2</td> <td>10.2</td> </tr> </tbody> </table>	D	FC	L	W	5.5'	60	4.6	4.6	7'	37	6	6	8'	29	6.8	6.8	9'	23	7.6	7.6	10'	18	8.6	8.6	12'	13	10.2	10.2	CANDELA TABLE <table border="1"> <thead> <tr> <th>Degrees Vertical</th> <th>Candela</th> </tr> </thead> <tbody> <tr><td>0</td><td>1827</td></tr> <tr><td>5</td><td>1827</td></tr> <tr><td>15</td><td>1508</td></tr> <tr><td>25</td><td>1106</td></tr> <tr><td>35</td><td>353</td></tr> <tr><td>45</td><td>64</td></tr> <tr><td>55</td><td>14</td></tr> <tr><td>65</td><td>5</td></tr> <tr><td>75</td><td>2</td></tr> <tr><td>85</td><td>0</td></tr> <tr><td>90</td><td>0</td></tr> </tbody> </table>	Degrees Vertical	Candela	0	1827	5	1827	15	1508	25	1106	35	353	45	64	55	14	65	5	75	2	85	0	90	0	ZONAL LUMEN SUMMARY <table border="1"> <thead> <tr> <th>Zone</th> <th>Lumens</th> <th>%Fixture</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>1097</td><td>72.9</td></tr> <tr><td>0-40</td><td>1407</td><td>93.4</td></tr> <tr><td>0-60</td><td>1500</td><td>99.6</td></tr> <tr><td>0-90</td><td>1506</td><td>100.0</td></tr> <tr><td>90-180</td><td>0</td><td>0.0</td></tr> <tr><td>0-180</td><td>1506</td><td>100.0</td></tr> </tbody> </table>	Zone	Lumens	%Fixture	0-30	1097	72.9	0-40	1407	93.4	0-60	1500	99.6	0-90	1506	100.0	90-180	0	0.0	0-180	1506	100.0	LUMINANCE <table border="1"> <thead> <tr> <th>Average Candela Degrees</th> <th>Average 0° Luminance</th> </tr> </thead> <tbody> <tr><td>45</td><td>6906</td></tr> <tr><td>55</td><td>1922</td></tr> <tr><td>65</td><td>869</td></tr> <tr><td>75</td><td>473</td></tr> <tr><td>85</td><td>0</td></tr> </tbody> </table>	Average Candela Degrees	Average 0° Luminance	45	6906	55	1922	65	869	75	473	85	0
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0-30	2019	72.9																																																																																								
0-40	2588	93.4																																																																																								
0-60	2759	99.6																																																																																								
0-90	2771	100.0																																																																																								
90-180	0	0.0																																																																																								
0-180	2771	100.0																																																																																								
Average Candela Degrees	Average 0° Luminance																																																																																									
45	12708																																																																																									
55	3523																																																																																									
65	1594																																																																																									
75	858																																																																																									
85	0																																																																																									

EM MULTIPLIER DATA

LUMENS	EM MULTIPLIER	
	7	14
900/1000	0.50	0.99
1300/1500	0.29	0.57
1800/2000	0.22	0.44
2800/3000	0.16	0.32