LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

LDN6

6" OPEN and WALLWASH LED
Non-IC
New Construction Downlight

FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — Galvanized steel mounting/plaster frame; galvanized steel junction box with bottom-hinged access covers and spring latches. Reflectors are retained by torsion springs.

Vertically adjustable mounting brackets with commercial bar hangers provide 3-3/4" total adjustment. Two combination ½"-3/4" and four ½" knockouts for straight-through conduit runs. Capacity: 8 (4 in, 4 out). No. 12 AWG conductors, rated for 90°C.

Accommodates 12"-24" joist spacing.

Passive cooling thermal management for 25°C standard; high ambient (40°C) option available. Light engine and drivers are accessible from above or below ceiling.

Max ceiling thickness 1-1/2".

OPTICS — LEDs are binned to a 3-step SDCM; 80 CRI minimum.

LED light source concealed with diffusing optical lens.

General illumination lighting with 1.0 S/MH and 55° cutoff to source and source image.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes. Also available in white and black painted reflectors.

ELECTRICAL — Multi-volt (120-277V, 50/60Hz) 0-10V dimming drivers mounted to junction box, 10% or 1% minimum dimming level available.

0-10V dimming fixture requires two (2) additional low-voltage wires to be pulled.

70% lumen maintenance at 50,000 hours.

LISTINGS — Certified to US and Canadian safety standards. Damp location standard (wet location, covered ceiling optional). ENERGY STAR® certified product.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms__and_conditions.aspx

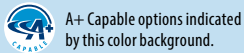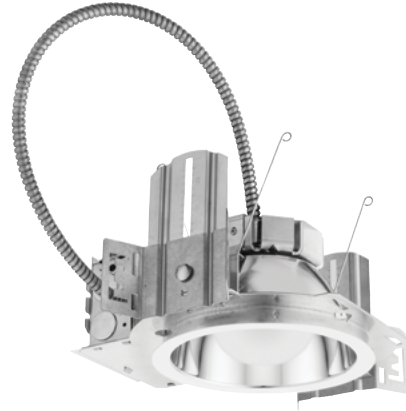**Note:** Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

nLIGHT   WET LOCATION™   DIMMABLE LED

CERTIFIED IN TITLE 20 — battery pack   ENERGY STAR   CA+ CAPABLE

A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LDN6 35/15 L06AR LSS MVOLT EZ10

LDN6										
Series		**Color temperature**		**Lumens[1]**				**Aperture/Trim Color**		**Finish**	**Voltage**

Series	Color temperature		Lumens[1]				Aperture/Trim Color			Finish		Voltage	
LDN6 6" round	27/ 2700K	05 500 lumens	25 2500 lumens	L06 Downlight	AR Clear	LSS Semi-specular	MVOLT Multi-volt
	30/ 3000K	10 1000 lumens	30 3000 lumens	LW6 Wallwash	WR[2] White	LD Matte diffuse	120 120V
	35/ 3500K	15 1500 lumens	40 4000 lumens		BR[2] Black	LS Specular	277 277V
	40/ 4000K	20 2000 lumens	50 5000 lumens				347[3] 347V
	50/ 5000K						

Driver		Options				
GZ10	0-10V driver dims to 10%	SF[4]	Single fuse	N80[7]	nLight™ Lumen Compensation
GZ1	0-10V driver dims to 1%	TRW[5]	White painted flange	NPS80EZ[6]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1).
		TRBL[5]	Black painted flange	NPS80EZER[6]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1). ER controls fixtures on emergency circuit.
EZ10	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 10%	EL	Emergency battery pack with integral test switch. Not Certified in CA Title 20 MAEDBS	HAO[10]	High ambient option
		ELR	Emergency battery pack with remote test switch. Not Certified in CA Title 20 MAEDBS	CP[11]	Chicago Plenum
				WL	Wet Location, specify for exterior use applications
EZ1	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1%	ELSD	Emergency battery pack with self-diagnostics, integral test switch. Not Certified in CA Title 20 MAEDBS	RRL__	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature. Available only in RRLA, RRLB, RRLAE, and RRLC12S.
		ELRSD	Emergency battery pack with self-diagnostics, remote test switch. Not Certified in CA Title 20 MAEDBS		
		E10WCP	Emergency battery pack, 10W Constant Power with integral test switch. Certified in CA Title 20 MAEDB	NLTAIR2[8,9]	nLight® Air enabled
		E10WCPR	Emergency battery pack, 10W Constant Power with integral test switch. Certified in CA Title 20 MAEDB	NLTAIRER2[8,9]	nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit
		NPP16D[6]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1).	USPOM	US point of manufacture
		NPP16DER[6]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit.		

Accessories: *Order as separate catalog number.*

EAC ISSM 375	Compact interruptible emergency AC power system
EAC ISSM 125	Compact interruptible emergency AC power system
GRA68 JZ	Oversized trim ring with 8" outside diameter [1]
SCA6	Sloped ceiling adapter. Refer to TECH-SCA for more options.

Notes
1. Overall height varies based on lumen package; refer to dimensional chart on page 3.
2. Not available with finishes.
3. Not available with emergency options.
4. Must specify voltage 120V or 277V.
5. Available with clear (AR) reflector only.
6. Specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
7. Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ10 and EZ1 drivers.
8. Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options.
9. NLTAIR2 and NLTAIRER2 not recommended for metal ceiling installations.
10. Fixture height is 6.5" for all lumen packages with HAO.
11. Must specify voltage for 3000lm. 5000lm with marked spacing 24 L x 24 W x 14 H. Not available with emergency battery pack option.

PHOTOMETRY

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance Data at 30" Above Floor for a Single Luminaire

LDN6 35/10 LO6AR, input watts: 12.75, delivered lumens: 1082, LM/W = 84.86, spacing criterion at 0= 1.02, test no. ISF 30716P31.

Distribution Data

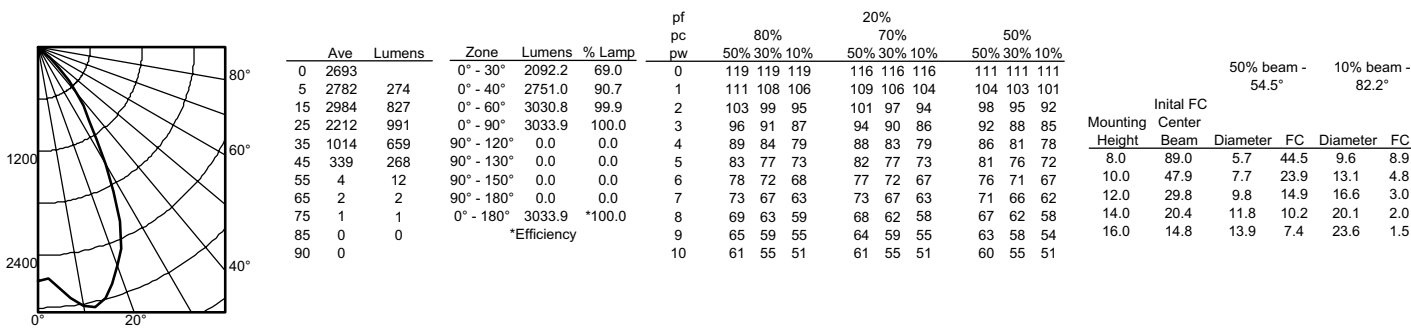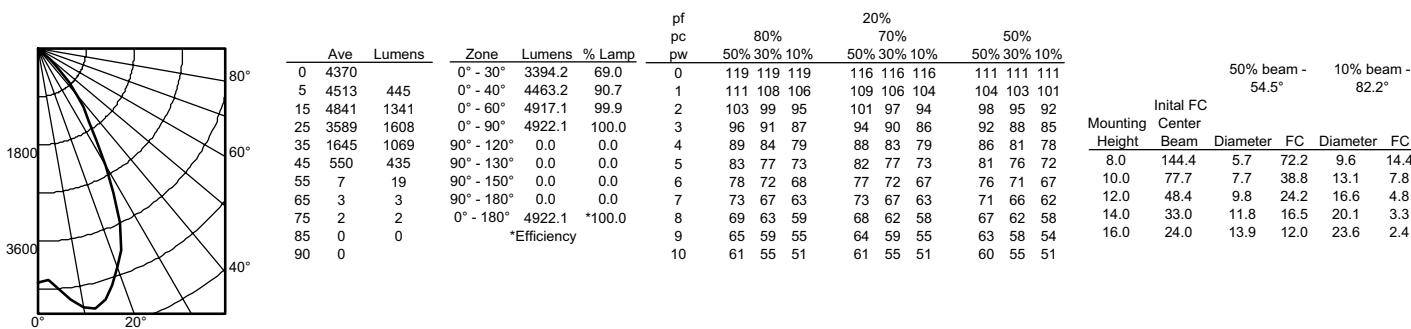|	Ave	Lumens
0	961	
5	992	98
15	1064	295
25	789	353
35	362	235
45	121	96
55	2	4
65	1	1
75	0	0
85	0	0
90	0	

Output Data

Zone	Lumens	% Lamp
0° - 30°	746.1	69.0
0° - 40°	981.1	90.7
0° - 60°	1080.9	99.9
0° - 90°	1082.0	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1082.0	*100.0
*Efficiency		

Coefficient of Utilization

pf pc pw	80% 50% 30% 10%	20% 70% 50% 30% 10%	50% 50% 30% 10%
0	119 119 119	116 116 116	111 111 111
1	111 108 106	109 106 104	104 103 101
2	103 99 95	101 97 94	98 95 92
3	96 91 87	94 90 86	92 88 85
4	89 84 79	88 83 79	86 81 78
5	83 77 73	82 77 73	81 76 72
6	78 72 68	77 72 67	76 71 67
7	73 67 63	73 67 63	71 66 62
8	69 63 59	68 62 58	67 62 58
9	65 59 55	64 59 55	63 58 54
10	61 55 51	61 55 51	60 55 51

Illuminance Data

Mounting Height	Inital FC Center Beam	50% beam - 54.5° Diameter	FC	10% beam - 82.2° Diameter	FC
8.0	31.8	5.7	15.9	9.6	3.2
10.0	17.1	7.7	8.5	13.1	1.7
12.0	10.6	9.8	5.3	16.6	1.1
14.0	7.3	11.8	3.6	20.1	0.7
16.0	5.3	13.9	2.6	23.6	0.5

LDN6 35/30 LO6AR, input watts: 34.69, delivered lumens: 3033.9, LM/W = 87.45, spacing criterion at 0= 1.02, test no. ISF 30716P22.

Distribution Data

	Ave	Lumens
0	2693	
5	2782	274
15	2984	827
25	2212	991
35	1014	659
45	339	268
55	4	12
65	2	2
75	1	1
85	0	0
90	0	

Output Data

Zone	Lumens	% Lamp
0° - 30°	2092.2	69.0
0° - 40°	2751.0	90.7
0° - 60°	3030.8	99.9
0° - 90°	3033.9	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	3033.9	*100.0
*Efficiency		

Coefficient of Utilization

pf pc pw	80% 50% 30% 10%	20% 70% 50% 30% 10%	50% 50% 30% 10%
0	119 119 119	116 116 116	111 111 111
1	111 108 106	109 106 104	104 103 101
2	103 99 95	101 97 94	98 95 92
3	96 91 87	94 90 86	92 88 85
4	89 84 79	88 83 79	86 81 78
5	83 77 73	82 77 73	81 76 72
6	78 72 68	77 72 67	76 71 67
7	73 67 63	73 67 63	71 66 62
8	69 63 59	68 62 58	67 62 58
9	65 59 55	64 59 55	63 58 54
10	61 55 51	61 55 51	60 55 51

Illuminance Data

Mounting Height	Inital FC Center Beam	50% beam - 54.5° Diameter	FC	10% beam - 82.2° Diameter	FC
8.0	89.0	5.7	44.5	9.6	8.9
10.0	47.9	7.7	23.9	13.1	4.8
12.0	29.8	9.8	14.9	16.6	3.0
14.0	20.4	11.8	10.2	20.1	2.0
16.0	14.8	13.9	7.4	23.6	1.5

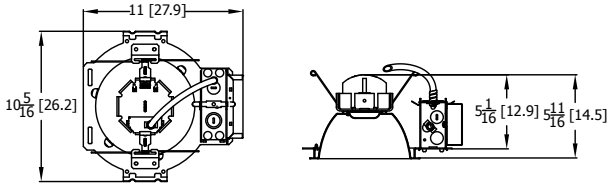### LDN6 35/50 LO6AR, input watts: 55.56, delivered lumens: 4922.1, LM/W = 88.59, spacing criterion at 0= 1.02, test no. ISF 30716P40.

Distribution Data
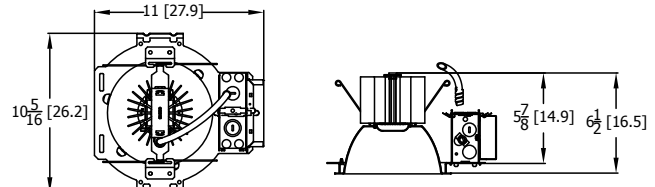
	Ave	Lumens
0	4370	
5	4513	445
15	4841	1341
25	3589	1608
35	1645	1069
45	550	435
55	7	19
65	3	3
75	2	2
85	0	0
90	0	

Output Data

Zone	Lumens	% Lamp
0° - 30°	3394.2	69.0
0° - 40°	4463.2	90.7
0° - 60°	4917.1	99.9
0° - 90°	4922.1	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	4922.1	*100.0
*Efficiency		

Coefficient of Utilization

pf pc pw	80% 50% 30% 10%	20% 70% 50% 30% 10%	50% 50% 30% 10%
0	119 119 119	116 116 116	111 111 111
1	111 108 106	109 106 104	104 103 101
2	103 99 95	101 97 94	98 95 92
3	96 91 87	94 90 86	92 88 85
4	89 84 79	88 83 79	86 81 78
5	83 77 73	82 77 73	81 76 72
6	78 72 68	77 72 67	76 71 67
7	73 67 63	73 67 63	71 66 62
8	69 63 59	68 62 58	67 62 58
9	65 59 55	64 59 55	63 58 54
10	61 55 51	61 55 51	60 55 51

Illuminance Data

Mounting Height	Inital FC Center Beam	50% beam - 54.5° Diameter	FC	10% beam - 82.2° Diameter	FC
8.0	144.4	5.7	72.2	9.6	14.4
10.0	77.7	7.7	38.8	13.1	7.8
12.0	48.4	9.8	24.2	16.6	4.8
14.0	33.0	11.8	16.5	20.1	3.3
16.0	24.0	13.9	12.0	23.6	2.4

LDN6

LDN6 500-1500 LUMEN

11 [27.9]
10 5/16 [26.2]
5 1/16 [12.9] 5 11/16 [14.5]

Aperture: 6-1/4 (15.9)
Ceiling Opening: 7-1/8 (18.1)
Overlap trim: 7-1/2 (19.1)

LDN6 2000-3000 LUMEN

11 [27.9]
10 5/16 [26.2]
5 7/8 [14.9] 6 1/2 [16.5]

Aperture: 6-1/4 (15.9)
Ceiling Opening: 7-1/8 (18.1)
Overlap trim: 7-1/2 (19.1)

LDN6 4000-5000 LUMEN

11 [27.9]
10 5/16 [26.2]
5 7/8 [14.9] 6 1/2 [16.5]
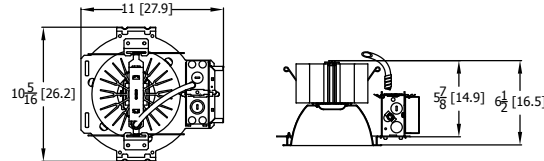
Marked Spacing: 24 x 24 x 10
Aperture: 6-1/4 (15.9)
Ceiling Opening: 7-1/8 (18.1)
Overlap trim: 7-1/2 (19.1)

LDN6 EL-ELR

19 15/16 [50.6]
19 1/8 [48.5]
6 1/2 [16.5]
7 5/8 [14.9]
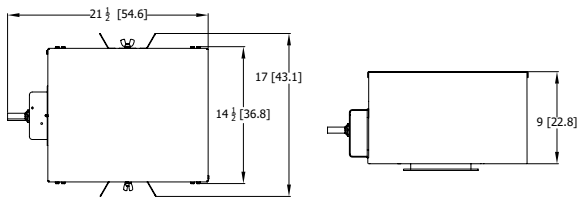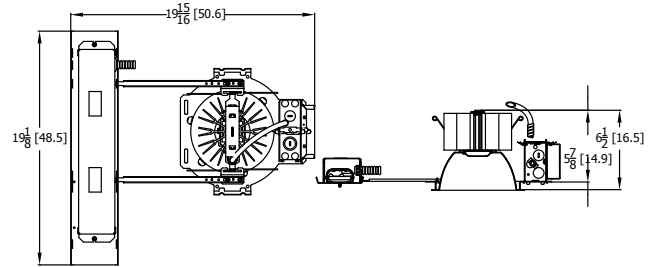
Marked Spacing above 3000 lumen: 24 x 24 x 10
Aperture: 6-1/4 (15.9)
Ceiling Opening: 7-1/8 (18.1)
Overlap trim: 7-1/2 (19.1)

LDN6 CP

21 1/2 [54.6]
17 [43.1]
14 1/2 [36.8]
9 [22.8]

Aperture: 6-1/4" (15.9)
Ceiling Opening: 7-1/8" (18.1)
Overlap trim: 7-1/2" (19.1)

LDN6			
Target Lumen	**Lumens @ 3500K**	**Wattage**	**LPW**
500	662.2	7.6	87.1
1000	1082.0	12.8	84.5
1500	1606.0	20.5	78.3
2000	2023.0	22.6	89.5
2500	2529.5	27.1	93.3
3000	3034.0	34.7	87.4
4000	3977.5	44.1	90.2
5000	4922.2	55.5	88.7

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
The LPW rating is also available at [Designlight Consortium](#).

LUMEN OUTPUT MULTIPLIERS - FINISH			
	Clear (AR)	**White (WR)**	**Black (BR)**
Specular (LS)	1.0	N/A	N/A
Semi-specular (LSS)	0.950	N/A	N/A
Matte diffuse (LD)	0.85	N/A	N/A
Painted	N/A	0.87	0.73

LUMEN OUTPUT MULTIPLIERS - CCT					
	2700K	**3000K**	**3500K**	**4000K**	**5000K**
80CRI	0.950	0.966	1.000	1.025	1.101

Notes
- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

ADDITIONAL DATA

COMPATIBLE 0-10V WALL-MOUNT DIMMERS		
MANUFACTURER	PART NO.	POWER BOOSTER AVAILABLE
Lutron®	Diva® DVTV	
	Diva® DVSCTV	
	Nova T® NTFTV	
	Nova® NFTV	
Leviton®	AWSMT-7DW	CN100
	AWSMG-7DW	PE300
	AMRMG-7DW	
	Leviton Centura Fluorescent Control System	
	IllumaTech® IP7 Series	
Synergy®	ISD BC	RDMFC
	SLD LPCS	
	Digital Equinox (DEQ BC)	
Douglas Lighting Controls	WPC-5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V)	
	Tap Glide Heatsink TGH1500FAM120 (120V)	
	Oasis 0A2000FAMU	
Honeywell	EL7315A1019	EL7305A1010 (optional)
	EL7315A1009	
HUNT Dimming	Preset slide: PS-010-IV and PS-010-WH	
	Preset slide: PS-010-3W-IV and PS-010-3W-WH	
	Preset slide, controls FD-010: PS-IFC-010-IV and PS-IFC-010-WH-120/277V	
	Preset slide, controls FD-010: PS-IFC-010-3W-IV and PS-IFC-010-3W-WH-120/277V	
	Remote mounted unit: FD-010	
Lehigh Electronic Products	Solitaire	PBX
PDM Electrical Products	WPC-5721	
Starfield Controls	TR61 with DALI interface port	RT03 DALInet Router
WattStopper®	LS-4 used with LCD-101 and LCD-103	

⟪A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency

- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*

- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

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

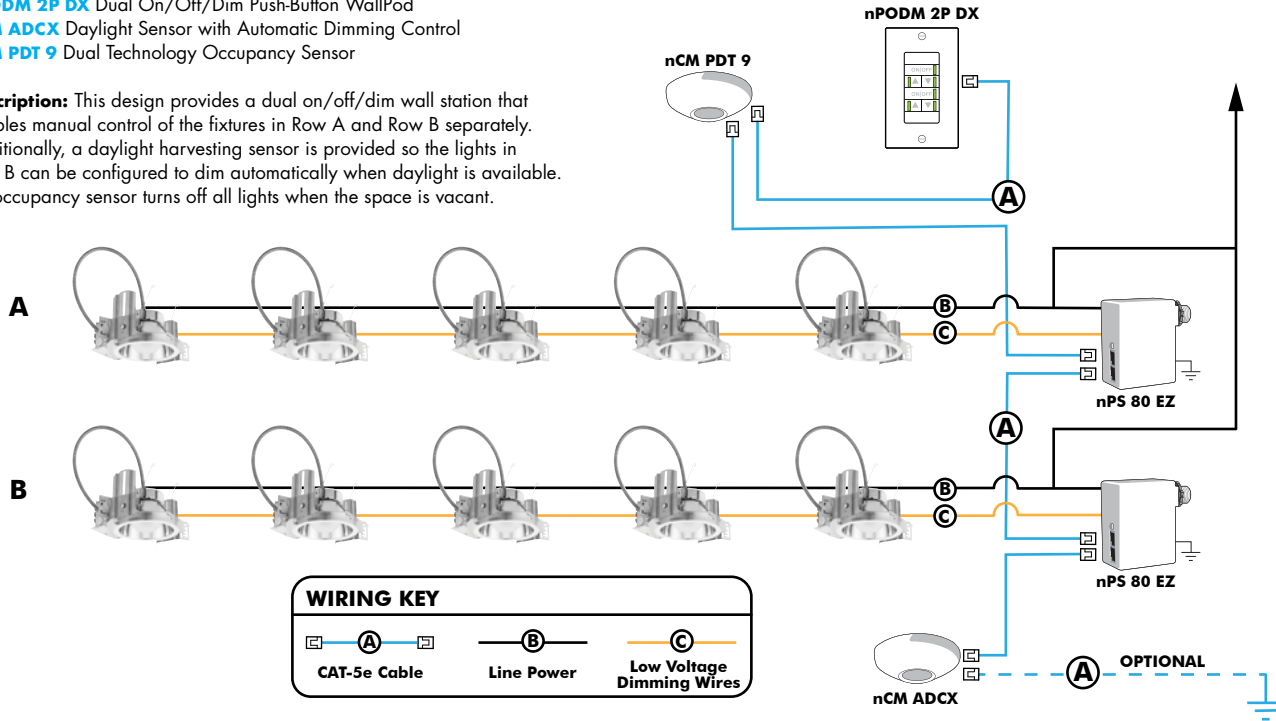*See ordering tree for details

LITHONIA LIGHTING®

LDN6

EXAMPLE
Group Fixture Control*
*Appiication diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty: 2 required)
nPODM 2P DX Dual On/Off/Dim Push-Button WallPod
nCM ADCX Daylight Sensor with Automatic Dimming Control
nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in Row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.

nPODM 2P DX

nCM PDT 9

nPS 80 EZ

nCM ADCX

OPTIONAL

WIRING KEY

(A)	(B)	(C)
CAT-5e Cable	Line Power	Low Voltage Dimming Wires

Choose Wall Controls
nLight offers multiple styles of wall controls - each with varying features and user experience.

Push-Button Wallpod
Traditional tactile buttons and LED user feedback

Graphic Wallpod
Full color touch screen provides a sophisticated look and feel

nLight® Wired Controls Accessories:

Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight for complete listing of nLight controls.

WallPod Stations	Model number	Occupancy sensors	Model Number
On/Off	nPODM (Color)	Small motion 360º, ceiling (PIR/dual Tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPOD DX (Color)	Large motion 360º, ceiling (PIR/dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX (Color)	Wide View (PIR/dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model Number**	Wall Switch w/ Raise/Lower (PIR/dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model Number**
		10', CAT5 10FT	CAT5 10FT J1
		15, CAT5 15FT	CAT5 15FT J1

nLight® AIR Control Accessories:
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.

Wall switches	Model number
On/Off single pole	rPODB [color]
On/Off two pole	rPODB 2P [color]
On/Off & raise/lower single pole	rPODB DX [color]
On/Off & raise/lower two pole	rPODB 2P DX [color]
On/Off & raise/lower single pole	rPODBZ DX WH[1]

Notes
1   Can only be ordered with the RES7Z zone control sensor version.

nLight AIR

nLight AIR is the ideal solution for retrofit or new construction spaces where adding communication is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each Lithonia LDN Luminaire. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome

nLight AIR rPODB 2P DX

Mobile Device

LITHONIA LIGHTING®