LITHONIA LIGHTING®

LDN4SQ

4" Square Open and WallWash LED
Non-IC
New Construction Downlight

FEATURES & SPECIFICATIONS

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

CONSTRUCTION — Durable square metal reflectors retained by torsion springs.

Galvanized steel mounting/plaster frame; galvanized steel junction box with bottom-hinged access covers and spring latches.

Vertically adjustable mounting brackets with commercial bar hangers provide 3-3/4" total adjustment.

Two combination 1/2"-3/4" and four 1/2" 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. 90 CRI optional.

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.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes.

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 60,000 hours.

LISTINGS — Certified to US and Canadian safety standards. Wet location standard (covered ceiling). IP55 rated. ENERGY STAR® certified product.

WARRANTY — 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions

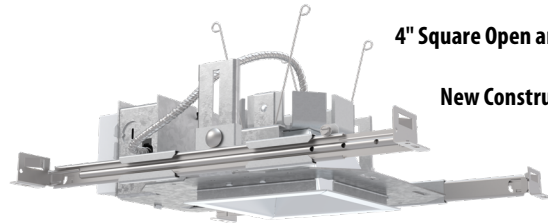**Note:** Actual performance may differ as a result of end-user environment and application.

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**   A+ 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: LDN4SQ 35/15 LS4AR LSS MVOLT EZ1

LDN4SQ							
Series	**Color temperature**	**Lumens[1]**			**Aperture/Trim Color**	**Finish**	**Voltage**
LDN4SQ 4" square	27/ 2700K 30/ 3000K 35/ 3500K 40/ 4000K 50/ 5000K	05 500 lumens 07 750 lumens 10 1000 lumens 15 1500 lumens	20 2000 lumens 25 2500 lumens 30 3000 lumens 40 4000 lumens		LS4 Downlight LSW4 Wallwash	AR Clear WR[2] White BR[2] Black	LSS Semi-specular LD Matte diffuse LS Specular	MVOLT Multi-volt 120 120V 277 277V 347[3] 347V

Driver	**Options**		
GZ10 0-10V driver dims to 10%	SF[4] Single fuse	NPS80EZ[7]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1).
GZ1 0-10V driver dims to 1%	TRW[5] White painted flange	NPS80EZER[7]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1). ER controls fixtures on emergency circuit.
D10 Minimum dimming 10% driver for use with JOT	TRBL[5] Black painted flange		
D1 Minimum dimming 1% driver for use with JOT	EL[6] Emergency battery pack with integral test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	NLTAIR2[8,10]	nLight® Air enabled
EZ10 0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 10%	ELR[6] Emergency battery pack with remote test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	NLTAIRER2[8,10]	nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit, not available with battery pack options
	ELSD[6] Emergency battery pack with self-diagnostics, 10W Constant Power, integral test switch. Not Certified in CA Title 20 MAEDBS	NLTAIREM2[8,10]	nLight® AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection. Available with battery pack options.
EZ1 0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1%	ELRSD[6] Emergency battery pack with self-diagnostics, 10W Constant Power, remote test switch. Not Certified in CA Title 20 MAEDBS	N80[9]	nLight™ Lumen Compensation
	E10WCP[6] Emergency battery pack, 10W Constant Power with integral test switch. Certified in CA Title 20 MAEDB	JOT[13]	Wireless room control with "Just One Touch" pairing
EDAB eldoLED DALI SOLDRIVE dim to dark	E10WCPR[6] Emergency battery pack, 10W Constant Power with remote test switch. Certified in CA Title 20 MAEDB	HAO[11]	High ambient option (40°C)
		CP[12]	Chicago Plenum
	NPP16D[7] nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1).	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.
	NPP16DER[7] nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit.	USPOM	US point of manufacture
		90CRI	High CRI (90+)

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. 12.5" of plenum depth or top access required for battery pack maintenance.
7. Specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
8. NLTAIR2, NLTAIRER2 and NLTAIREM2 not recommended for metal ceiling installations.
9. Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ10 and EZ1 drivers.
10. Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options.
11. Fixture height is 5-11/16" for all lumen packages with HAO.
12. Must specify voltage for 3000lm. Not available with emergency battery pack option.
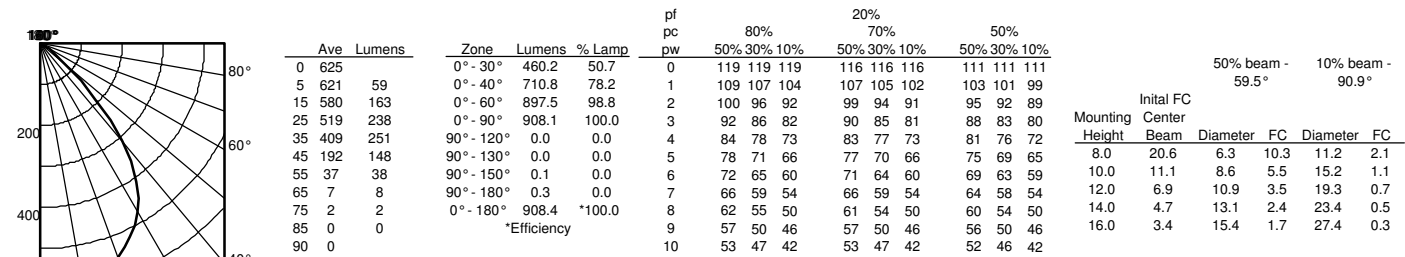13. Must specify D10 or D1 driver. Not available with nLight options. Not available with CP. Not recommended for metal ceiling installation. Not for use with emergency backup power systems other than battery packs.
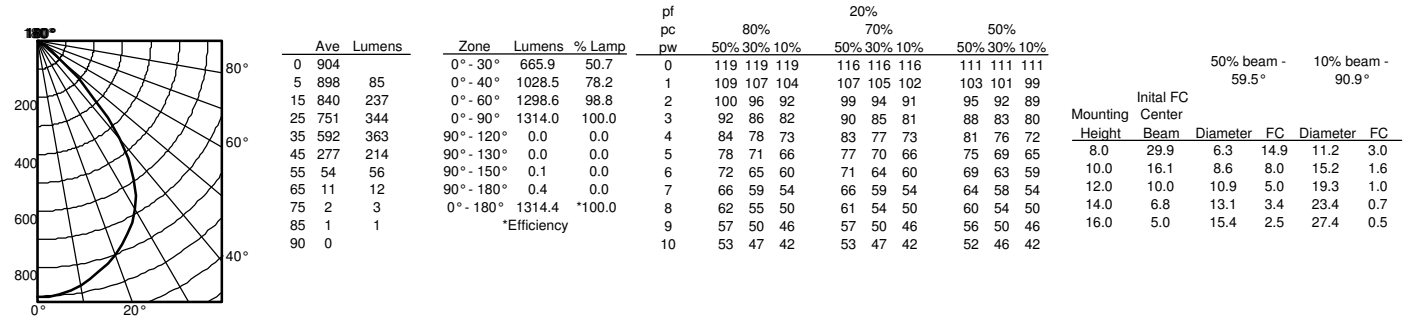
LDN4SQ

PHOTOMETRY

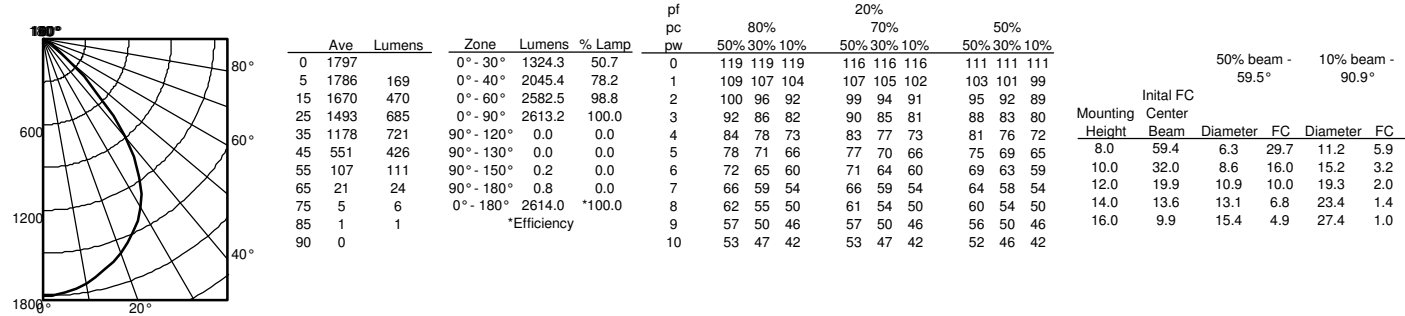| Distribution Curve | Distribution Data | Output Data | Coefficient of Utilization | Illuminance Data at 30" Above Floor for a Single Luminaire |

LDN4SQ 35/10 LS4AR, input watts: 10.58, delivered lumens: 908.4, LM/W = 85.86, spacing criterion at 0= 1.15, test no. ISF 35250P109

	Ave	Lumens
0	625	
5	621	59
15	580	163
25	519	238
35	409	251
45	192	148
55	37	38
65	7	8
75	2	2
85	0	0
90	0	

Zone	Lumens	% Lamp
0°-30°	460.2	50.7
0°-40°	710.8	78.2
0°-60°	897.5	98.8
0°-90°	908.1	100.0
90°-120°	0.0	0.0
90°-130°	0.0	0.0
90°-150°	0.1	0.0
90°-180°	0.3	0.0
0°-180°	908.4	*100.0
	*Efficiency	

pf pc	80%			20% 70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	109	107	104	107	105	102	103	101	99
2	100	96	92	99	94	91	95	92	89
3	92	86	82	90	85	81	88	83	80
4	84	78	73	83	77	73	81	76	72
5	78	71	66	77	70	66	75	69	65
6	72	65	60	71	64	60	69	63	59
7	66	59	54	66	59	54	64	58	54
8	62	55	50	61	54	50	60	54	50
9	57	50	46	57	50	46	56	50	46
10	53	47	42	53	47	42	52	46	42

			50% beam - 59.5°		10% beam - 90.9°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	20.6	6.3	10.3	11.2	2.1
10.0	11.1	8.6	5.5	15.2	1.1
12.0	6.9	10.9	3.5	19.3	0.7
14.0	4.7	13.1	2.4	23.4	0.5
16.0	3.4	15.4	1.7	27.4	0.3

LDN4SQ 35/15 LS4AR, input watts: 17.5, delivered lumens: 1314.4, LM/W = 75.10, spacing criterion at 0= 1.15, test no. ISF 35250P114.

	Ave	Lumens
0	904	
5	898	85
15	840	237
25	751	344
35	592	363
45	277	214
55	54	56
65	11	12
75	2	3
85	1	1
90	0	

Zone	Lumens	% Lamp
0°-30°	665.9	50.7
0°-40°	1028.5	78.2
0°-60°	1298.6	98.8
0°-90°	1314.0	100.0
90°-120°	0.0	0.0
90°-130°	0.0	0.0
90°-150°	0.1	0.0
90°-180°	0.4	0.0
0°-180°	1314.4	*100.0
	*Efficiency	

pf pc	80%			20% 70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	109	107	104	107	105	102	103	101	99
2	100	96	92	99	94	91	95	92	89
3	92	86	82	90	85	81	88	83	80
4	84	78	73	83	77	73	81	76	72
5	78	71	66	77	70	66	75	69	65
6	72	65	60	71	64	60	69	63	59
7	66	59	54	66	59	54	64	58	54
8	62	55	50	61	54	50	60	54	50
9	57	50	46	57	50	46	56	50	46
10	53	47	42	53	47	42	52	46	42

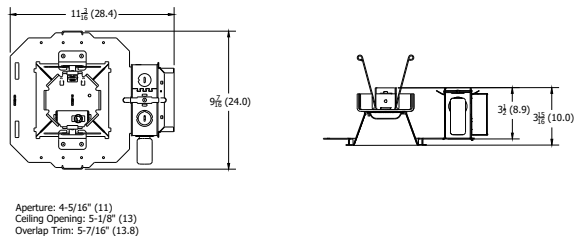|			50% beam - 59.5°		10% beam - 90.9°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	29.9	6.3	14.9	11.2	3.0
10.0	16.1	8.6	8.0	15.2	1.6
12.0	10.0	10.9	5.0	19.3	1.0
14.0	6.8	13.1	3.4	23.4	0.7
16.0	5.0	15.4	2.5	27.4	0.5

LDN4SQ 35/30 LS4AR, input watts: 32.1, delivered lumens: 2614.1, LM/W = 83.78, spacing criterion at 0= 1.15, test no. ISF 31036P129.
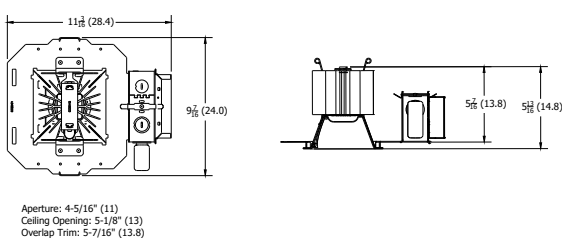
	Ave	Lumens
0	1797	
5	1786	169
15	1670	470
25	1493	685
35	1178	721
45	551	426
55	107	111
65	21	24
75	5	6
85	1	1
90	0	

Zone	Lumens	% Lamp
0°-30°	1324.3	50.7
0°-40°	2045.4	78.2
0°-60°	2582.5	98.8
0°-90°	2613.2	100.0
90°-120°	0.0	0.0
90°-130°	0.0	0.0
90°-150°	0.2	0.0
90°-180°	0.8	0.0
0°-180°	2614.1	*100.0
	*Efficiency	

pf pc	80%			20% 70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	109	107	104	107	105	102	103	101	99
2	100	96	92	99	94	91	95	92	89
3	92	86	82	90	85	81	88	83	80
4	84	78	73	83	77	73	81	76	72
5	78	71	66	77	70	66	75	69	65
6	72	65	60	71	64	60	69	63	59
7	66	59	54	66	59	54	64	58	54
8	62	55	50	61	54	50	60	54	50
9	57	50	46	57	50	46	56	50	46
10	53	47	42	53	47	42	52	46	42

			50% beam - 59.5°		10% beam - 90.9°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	59.4	6.3	29.7	11.2	5.9
10.0	32.0	8.6	16.0	15.2	3.2
12.0	19.9	10.9	10.0	19.3	2.0
14.0	13.6	13.1	6.8	23.4	1.4
16.0	9.9	15.4	4.9	27.4	1.0

LITHONIA LIGHTING®

LDN4SQ

* All dimensions are inches (centimeters) unless otherwise noted.

LDN4 500 - 1500 LUMENS

Aperture: 4-5/16" (11)
Ceiling Opening: 5-1/8" (13)
Overlap Trim: 5-7/16" (13.8)

LDN4 2000 - 3000 LUMENS

Aperture: 4-5/16" (11)
Ceiling Opening: 5-1/8" (13)
Overlap Trim: 5-7/16" (13.8)

LDN4 CP

Aperture: 4-5/16" (11)
Ceiling Opening: 5-1/8" (13)
Overlap Trim: 5-7/16" (13.8)

LDN4 EL

Aperture: 4-5/16" (11)
Ceiling Opening: 5-1/8" (13)
Overlap Trim: 5-7/16" (13.8)
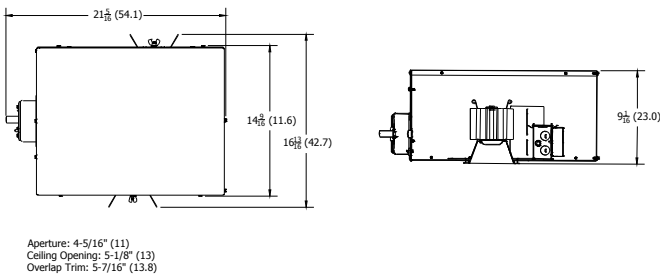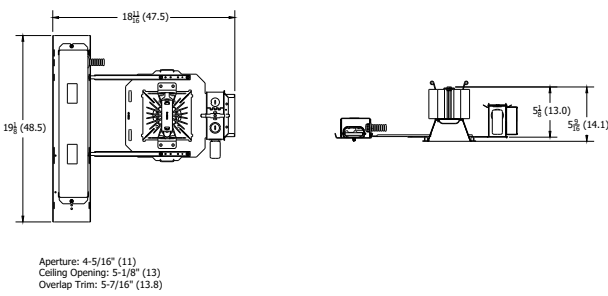
LDN4SQ			
Nominal	Lumens	Wattage	Lm/W
500	432.5	5.7	75.3
750	620	8.6	72.1
1000	863	10.6	81.6
1500	1249	17.5	71.4
2000	1657	22.1	74.9
2500	2218	26.1	85.0
3000	2483	32.1	77.4
4000	3479	43.0	80.9

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.

LITHONIA LIGHTING®

ADDITIONAL DATA

JOT
JUST ONE TOUCH

The Sensor Switch JOT enabled solution offers a wireless, app-free approach to single room lighting control. JOT enabled products use Bluetooth® Low Energy (BLE) technology to enable wireless dimming and switching.

Diagram
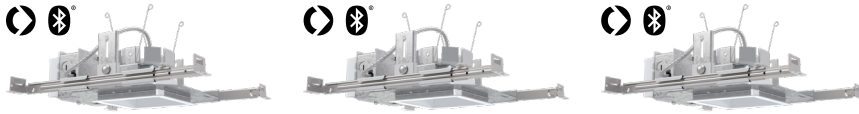
LDN4SQ Series

Sensor Switch
WSXA JOT

1. **Power:** Install JOT enabled fixtures and controls as instructed.
2. **Pair:** Insert the pairing tool into the pinhole on the wall switch; press and hold any button for 6 seconds.
3. **Play:** Once paired, each fixture will individually dim down to 10% brightness. All products will be fully functional.

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	
	SLD LPCS	RDMFC
	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®

LDN4SQ

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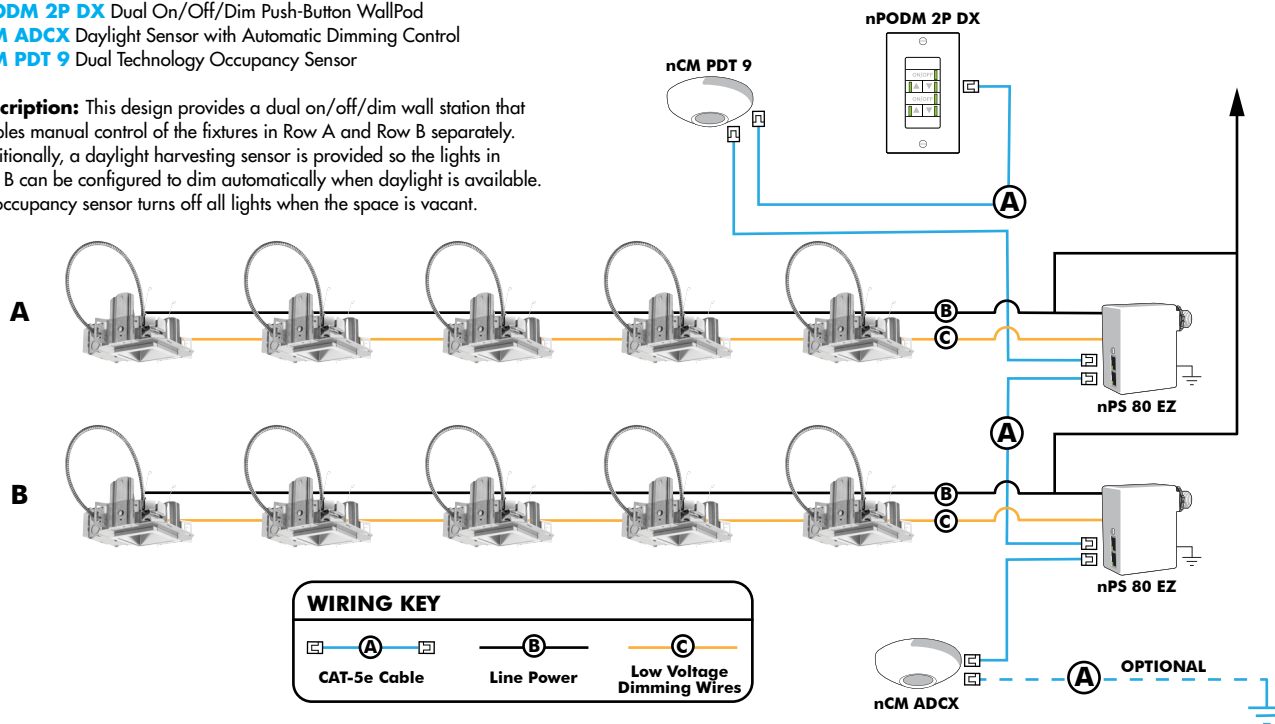*Application diagram applies for fixtures with eldoLED drivers only.

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

nPS 80 EZ

nCM ADCX — OPTIONAL

WIRING KEY

(A) CAT-5e Cable   (B) Line Power   (C) 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 360°, ceiling (PIR/dual Tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPOD DX (Color)	Large motion 360°, 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.
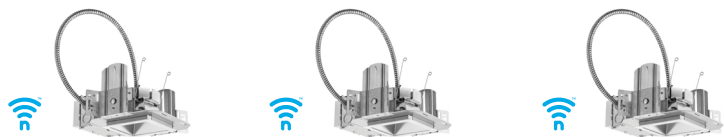
Simple as 1,2,3

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®