LITHONIA LIGHTING®

FEATURES & SPECIFICATIONS

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

CONSTRUCTION — Durable square metal trims

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. C-channel T-bar fastener options available.

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℃.

Accommodates 12"-24" joist spacing

Passive cooling thermal management; 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 MacAdam Ellipse; 80 CRI minimum.

Diffusing lens covers optical chamber

General illumination 1.0 S/MH

55° cutoff to source and source image

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

UGR — UGR is zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg, per CIE 117-1996 Discomfort Glare in Interior Lighting.

ELECTRICAL — 1120V TRIAC or ELV dimming and Multi-volt 0-10V dimming available.

0-10V dimming drivers mounted to junction box, 10% or 1% minimum dimming level

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

LUMEN MAINTENANCE — 70% lumen maintenance at 50,000 hours

LISTINGS — Certified to US and Canadian safety standards. Damp location standard (wet location, covered ceiling optional). Drivers are RoHS compliant.

GOVERNMENT PROCUREMENT — BAA – Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.

BABA – Build America Buy America: Product with the BAA option also qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. 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.

LDN8SQ STATIC WHITE

8" Square Open and Wallwash LED
Non-IC
New Construction
Downlight

PERFORMANCE DATA

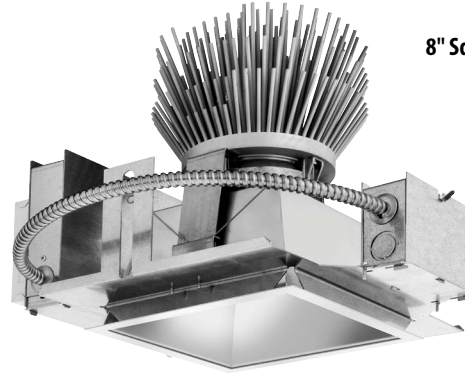| LDN8SQ 3500K AR LS 80CRI			
Nominal Lumens	Delivered Lumens	Wattage	LPW
5000	4844	59.5	81
6000	5724	69.4	82
8000	8022	98.7	81
10,000	9631	116.5	83
12,000	11267	149.7	75
15,000	13861	174.6	79
20,000	18731	253.4	74

Notes

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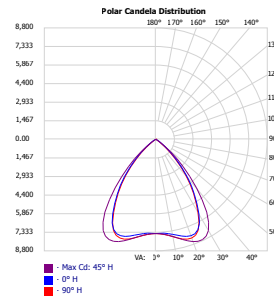- CRI: 80 typical.

Polar Candela Distribution

Open

Polar Candela Distribution

Wallwash

DIMENSIONS

LDN8SQ 5K-6K

15 7/8 [40.4]
16 11/16 [42.4]
7 7/8 [20.1]
8 3/8 [21.3]
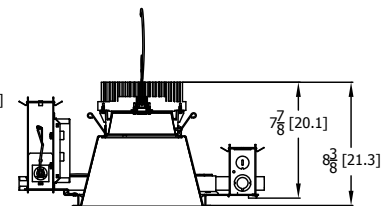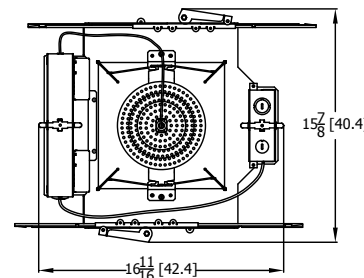
Aperture: 8-3/4 (22.2)
Ceiling Opening: 8-7/8 (22.5)
Overlap Trim: 9-1/2 (24.1)

See page 4 for other fixture dimensions

LDN8SQ

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.　　**Example:** LDN8SQ 35/50 LO8 AR LSS MVOLT EZ1

LDN8SQ							
Series	**Color temperature**	**Lumens**	**Trim Style**	**Trim Color**	**Trim Finish**	**Flange Color ‡**	**Voltage**
LDN8SQ　8" Square	27/　2700K 30/　3000K 35/　3500K 40/　4000K	50　5000 lumens 60　6000 lumens 80　8000 lumens 100　10000 lumens 120　12000 lumens 150　15000 lumens 200　20000 lumens	LS8　Downlight LSW8　Wallwash	AR　Clear WR ‡　White BR ‡　Black TCPC ‡　Custom painted trim TRALTBD ‡　RAL painted trim	LSS　Semi-specular LD　Matte diffuse LS　Specular	TRW　White painted flange TRBL　Black painted flange FCPC　Custom painted flange only FRALTBD　RAL painted flange only	MVOLT　Multi-volt 120　120V 277　277V 347 ‡　347V

Driver	**Emergency ‡**		**Control Input ‡**		**Options**	
GZ10　0-10V driver dims to 10% GZ1　0-10V driver dims to 1% EZ1　0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1%	(blank)　No Emergency Needed EL　Battery pack (10W constant power), non-T20 compliant, integral test switch ELR　Battery pack (10W constant power), non-T20 compliant, remote test switch ELSD　Self-diagnostic battery pack (10W constant power), non-T20 compliant, integral test switch ELRSD　Self-diagnostic battery pack (10W constant power), non-T20 compliant, remote test switch E10WCP　Battery pack (10W constant power), T20 compliant, integral test switch E10WCPR　Battery pack (10W constant power), T20 compliant, remote test switch E10WRSTAR　Emergency battery pack, 10W with remote test switch and Iota STAR technology		(blank)　No Control Input Needed JOT　Wireless room control with "Just One Touch" pairing NPP16D　nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). NPP16DER　nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit. NPS80EZ　nLight® dimming pack controls 0-10V eldoLED drivers (EZ1). NPS80EZER　nLight® dimming pack controls 0-10V eldoLED drivers (EZ1). ER controls fixtures on emergency circuit. N80　nLight™ Lumen Compensation NLTAIR2　nLight® Air enabled NLTAIRER2　nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit, not available with battery pack options NLTAIREM2　nLight® AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection. Available with battery pack options.		HAO ‡　High ambient option (40°C) CP ‡　Chicago Plenum 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. BAA　Buy America(n) Act and/or Build America Buy America Qualified SF ‡　Single fuse	

‡ Option Value Ordering Restrictions	
Option value	**Restriction**
LDN8	Marked Spacing for 8000 lumens and above.
WR, BR	Not available with finishes.
347V	347V is 3' x 3' x 6" overhead marked spacing. 347V only available with EZ1 driver options. Supplied with step-down transformer. Not available with emergency options.
SF	Voltage-specific 120, 277V.
TRW, TRBL	Only available with AR finish.
NPP16D, NPP16DER, NPS80EZ, NPS80EZER	specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed. See UL 924 Sequence of Operation table.
N80	Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ1 drivers.
NLTAIR2, NLTAIRER2	Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options. Not recommended for metal ceiling installations.
Reloc® Options	Refer to RRL specification sheet on acuitybrands.com for further details.
RRLAE	Commercial fixtures should disconnect the TSPL before unplugging the RRL so it does not go into discharge mode.
RRLC12S	RRLC12S option is to be used with the OnePass OCU, OCS, OD, OFC and OD for 0-24V integrated single-circuit or 0-10V low voltage controls applications. Not available with integral dimming sensors.
E10WRSTAR	Not available with wet location, EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT. Top access installation or 17.5" plenum clearance required for roomside installation. Not available with integral test switch
TRALTBD, FRALTBD	RALTBD for pricing only. Replace with applicable RAL number and finish when ready to order. See the RAL BROCHURE for available color options.
TCPC, FCPC	CPC options for pricing only. Custom color chip needs to be sent in to your Customer Resolution specialist before order can be processed. Click HERE for more details

Emergency Battery Pack Options - Field Installable

Battery Model Number	Wattage	Runtime (Minutes)	Lumen Output* @ 120 Lumens/Watt	Other
ILB CP07 2H A	7W	120	840	Storm Shelter / 2 Hour Runtime
ILB CP10 A	10W	90	1200	
ILBLP CP10 HE SD A+	10W	90	1200	Title 20, Self Diagnostic
ILBLP CP15 HE SD A+	15W	90	1800	Title 20, Self Diagnostic
ILB CP20 HE A	20W	90	2400	Title 20
ILB CP20 HE SD A	20W	90	2400	Title 20, Self Diagnostic
ILBHI CP10 HE SD A+	10W	90	1200	347-480V AC Input, Title 20, Self Diagnostic
ILBHI CP15 HE SD A+	15W	90	1800	347-480V AC Input, Title 20, Self Diagnostic

All the above are UL Listed products that are certified for field install external/remote to the fixture.

*Minimum delivered lumen output to assist in product selection for increased fixture mounting height.

The CP10 delivered emergency illumination outperforms legacy 1400 lumen fluorescent emergency ballast.

Please contact us at techsupport@iotaengineering.com for any Emergency Battery related questions.

LITHONIA LIGHTING®

PHOTOMETRY

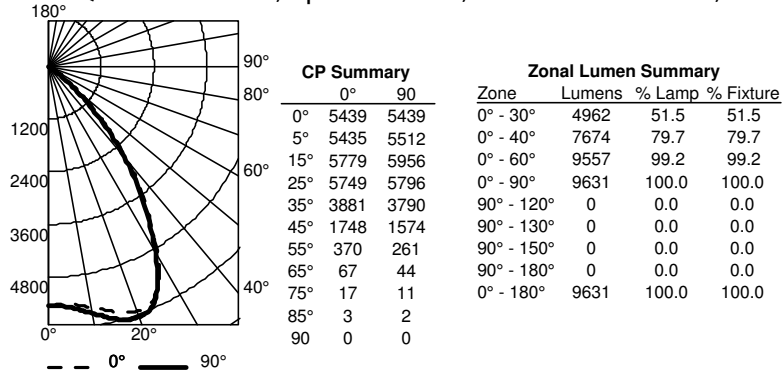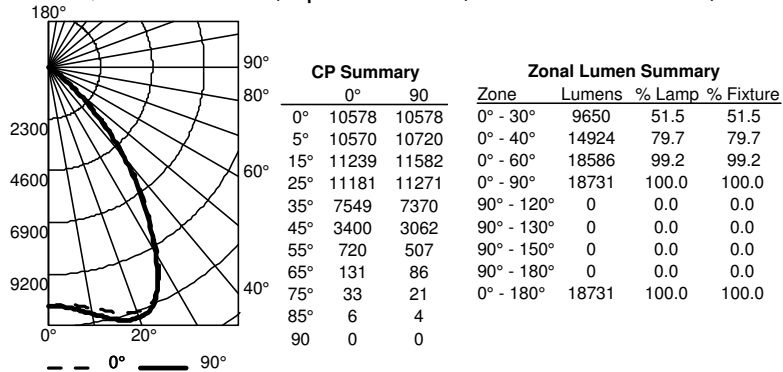| Distribution Curve	Distribution Data	Output Data	Illuminance Data at 30" Above Floor for a Single Luminaire

LDN8SQ 35/50 LS8AR LS, input watts: 59.5, delivered lumens: 4705.9, LM/W = 79.09, spacing criterion at 0 = 1.26, test no. ISF32878P61.

CP Summary

	0°	90
0°	2736	2736
5°	2734	2772
15°	2907	2995
25°	2892	2915
35°	1952	1906
45°	879	792
55°	186	131
65°	34	22
75°	8	5
85°	1	1
90	0	0

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	2496	51.5	51.5
0° - 40°	3860	79.7	79.7
0° - 60°	4807	99.2	99.2
0° - 90°	4844	100.0	100.0
90° - 120°	0	0.0	0.0
90° - 130°	0	0.0	0.0
90° - 150°	0	0.0	0.0
90° - 180°	0	0.0	0.0
0° - 180°	4844	100.0	100.0
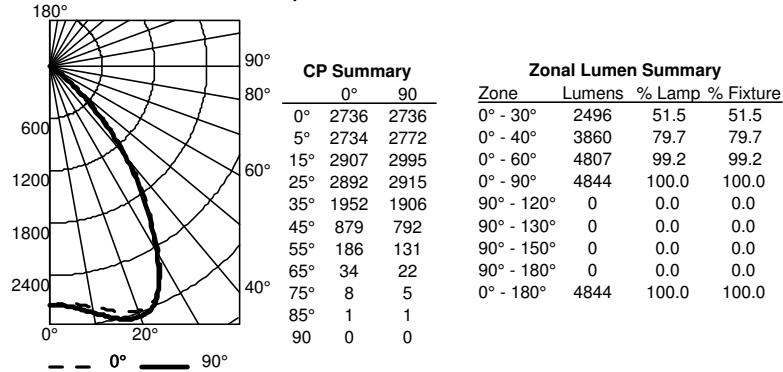
LDN8SQ 35/100 LS8AR LS, input watts: 116.5, delivered lumens: 9631.3, LM/W = 82.67, spacing criterion at 0 = 1.26, test no. 32878P31.

CP Summary

	0°	90
0°	5439	5439
5°	5435	5512
15°	5779	5956
25°	5749	5796
35°	3881	3790
45°	1748	1574
55°	370	261
65°	67	44
75°	17	11
85°	3	2
90	0	0

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	4962	51.5	51.5
0° - 40°	7674	79.7	79.7
0° - 60°	9557	99.2	99.2
0° - 90°	9631	100.0	100.0
90° - 120°	0	0.0	0.0
90° - 130°	0	0.0	0.0
90° - 150°	0	0.0	0.0
90° - 180°	0	0.0	0.0
0° - 180°	9631	100.0	100.0

LDN8SQ 35/200 LS8AR LS, input watts: 253.4, delivered lumens: 18731, LM/W = 73.91, spacing criterion at 0 = 1.26, test no. 32878P22.

CP Summary

	0°	90
0°	10578	10578
5°	10570	10720
15°	11239	11582
25°	11181	11271
35°	7549	7370
45°	3400	3062
55°	720	507
65°	131	86
75°	33	21
85°	6	4
90	0	0

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	9650	51.5	51.5
0° - 40°	14924	79.7	79.7
0° - 60°	18586	99.2	99.2
0° - 90°	18731	100.0	100.0
90° - 120°	0	0.0	0.0
90° - 130°	0	0.0	0.0
90° - 150°	0	0.0	0.0
90° - 180°	0	0.0	0.0
0° - 180°	18731	100.0	100.0

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

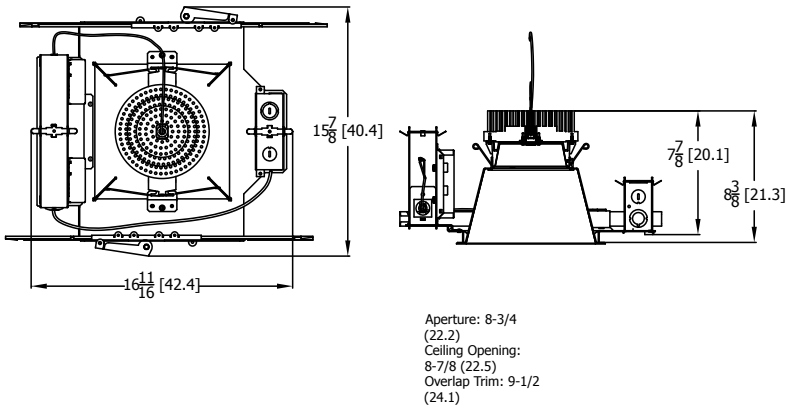| Specular (LS)	1.0
Semi-specular (LSS)	0.95
Matte diffuse (LD)	0.85
White	0.87
Black	0.73

LUMEN OUTPUT MULTIPLIERS - CRI

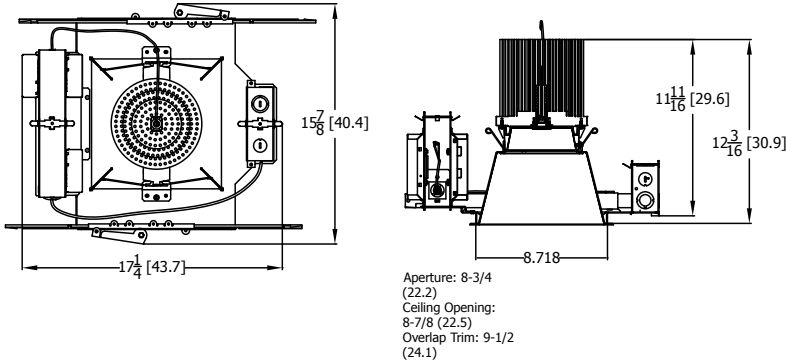| 80	1.0
90	0.874

LUMEN OUTPUT MULTIPLIERS - CCT

	2700K	3000K	3500K	4000K
80CRI	0.950	0.966	1.000	1.101

Notes
- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%.
- CRI: 80 typical.

LITHONIA LIGHTING

LDN8SQ

LDN8SQ

DIMENSIONAL DRAWINGS

LDN8SQ 5K-6K

15 7/8 [40.4]

16 11/16 [42.4]

7 7/8 [20.1]

8 3/8 [21.3]

Aperture: 8-3/4
(22.2)
Ceiling Opening:
8-7/8 (22.5)
Overlap Trim: 9-1/2
(24.1)

LDN8SQ 8K-12K

15 7/8 [40.4]

17 1/4 [43.7]

11 11/16 [29.6]

12 3/16 [30.9]

8.718

Aperture: 8-3/4
(22.2)
Ceiling Opening:
8-7/8 (22.5)
Overlap Trim: 9-1/2
(24.1)

LDN8SQ 15K-20K

15 7/8 [40.4]

17 1/4 [43.7]

11 11/16 [29.6]

12 3/16 [30.9]

Aperture: 8-3/4
(22.2)
Ceiling Opening:
8-7/8 (22.5)
Overlap Trim: 9-1/2
(24.1)
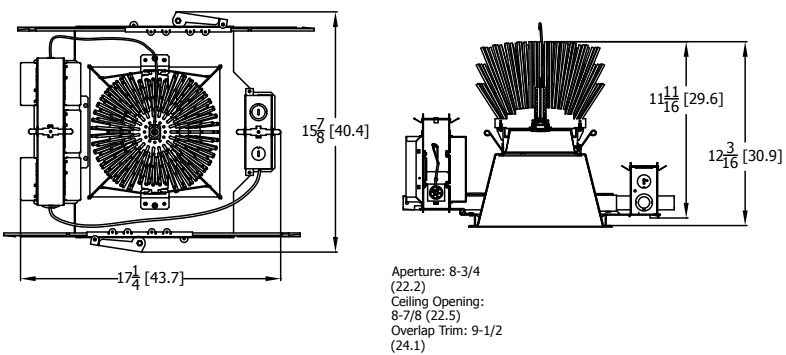
ADDITIONAL DATA

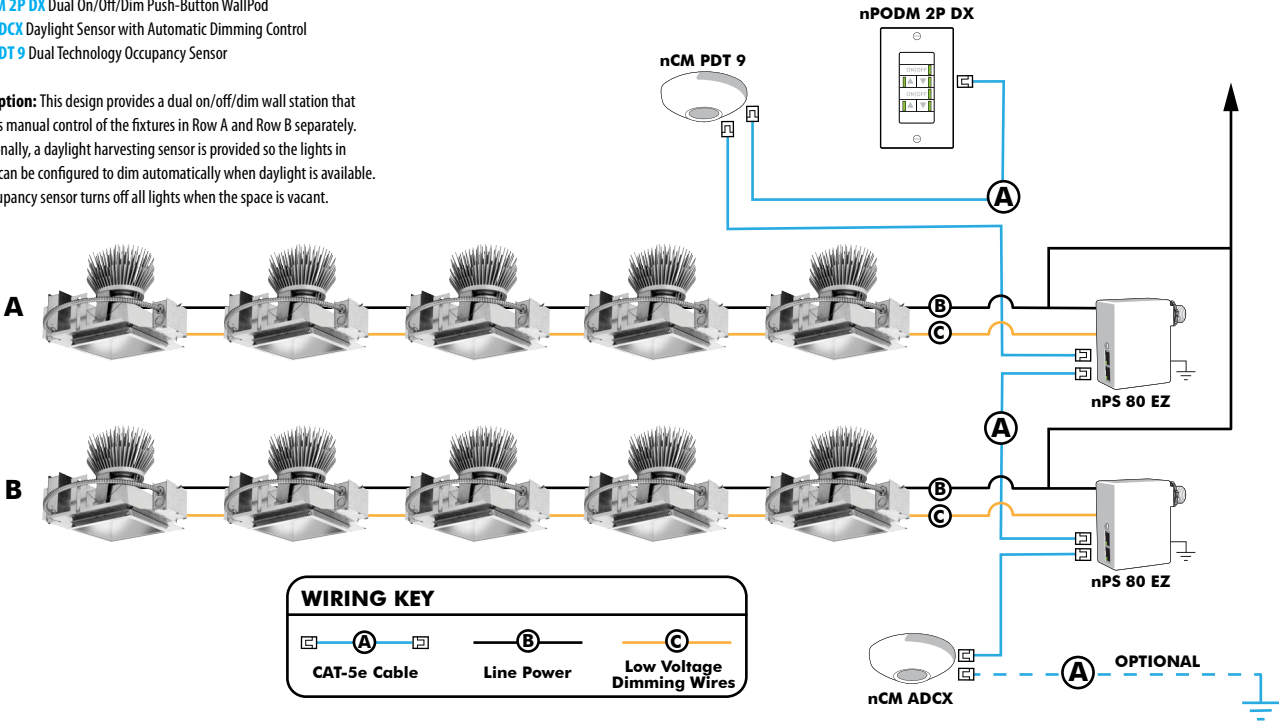| COMPATIBLE 0-10V WALL-MOUNT DIMMERS		
MANUFACTURER	PART NO.	POWER BOOSTER AVAILABLE
Lutron®	Diva® DVTV	
	Diva® DVSCTV	
	Nova T® NTFTV	
	Nova® NFTV	
Leviton®	AWSMT-7DW	CN100
	AWSMG-7DW	PE300
	AMRMG-7DW	
	Leviton Centura Fluorescent Control System	
	IllumaTech® IP7 Series	
Synergy®	ISD BC	RDMFC
	SLD 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	

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

A

B

nPS 80 EZ

nPS 80 EZ

nCM ADCX — OPTIONAL

WIRING KEY

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

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

<table>
<tr><td colspan="2">nLight® AIR Control Accessories:
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.</td></tr>
</table>

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.

UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CLAIRITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

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