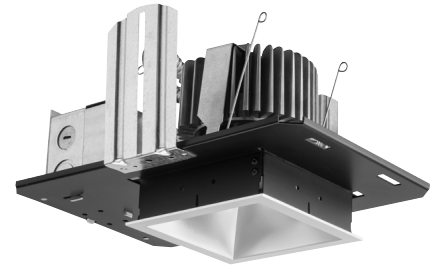


# General Illumination Square Downlight

# 4"



OVERVIEW

## Feature Set

- Bounding Ray™ optical design
- Unitized optics mechanically attach the light engine to the lower reflector for complete optical alignment
- 45° cutoff to source and source image
- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours
- 2.5 MacAdam Ellipse; 85 CRI typical, 90+ CRI optional
- Fixtures are wet location, covered ceiling
- ENERGY STAR® certified product
- Available with 10% dimming, 1% dimming, or dim to dark
- Batwing distribution with feathered edges provides even illumination on horizontal and vertical surfaces
- UGR of zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg per CIE 117-1995 Discomfort Glare in Interior Lighting. [UGR FAQ](#)

## Distribution



## Superior Performance

Nominal Lumens	250	500	750	1000	1500	2000	2500	3000	3500
Delivered Lumens*	271	573	808	1001	1527	1994	2580	3110	3612
Wattage	3.1	7.2	7.9	8.8	13.7	19.5	25.7	31.2	38.4
Lumens per Watt	87.4	79.6	102.3	113.8	111.5	102.3	100.4	99.7	94.1

\*Based on 3500K AR LSS MWD 80CRI

COMPLEMENTARY PRODUCTS

## Coordinated Apertures | Multiple Layers of Light



General Illumination Layer | EVO



High Center Beam Layer | Incito



EVO + Incito — Multiple Layers of Light

### Core



### Healthcare



### Special Applications



ORDERING INFORMATION

Luminaire Type:

Catalog Number:

EXAMPLE: EV04SQ 35/15 AR LSS MVOLT EZ1

Series	Color Temperature	Nominal Lumen Values	Reflector & Flange Color	Trim Style	Finish
EV04SQ	27/ 2700 K	02 250 lumens    20 2000 lumens	AR Clear	(blank) Self-flanged	LSS Semi-specular
	30/ 3000 K	05 500 lumens    25 2500 lumens	PR Pewter	FL Flangeless	LD Matte-diffuse
	35/ 3500 K	07 750 lumens    30 3000 lumens	WTR Wheat		
	40/ 4000 K	10 1000 lumens    35 3500 lumens	GR Gold		
	50/ 5000 K	15 1500 lumens	WR <sup>1</sup> White BR <sup>1</sup> Black WRAMF <sup>1</sup> White anti-microbial TRALTBD <sup>1,2</sup> RAL paint for pricing only TCPC Custom paint color		

Voltage	Driver <sup>5</sup>	
MVOLT	GZ10 0-10V driver dims to 10%	EDXB <sup>6</sup> eldoLED POWERdrive DMX with RDM (remote device management). Square Law dimming to <1%. Includes termination resistor. Minimum 1000 lumens. Refer to DMXR Manual ECOD <sup>6</sup> Lutron Ecosystem digital Hi-Lume 1% soft-on, fade to black
120	GZ1 0-10V driver dims to 1%	
277	EZ10 eldoLED 0-10V ECOdrive. Linear dimming to 10% min.	
347 <sup>3,4</sup>	EZ1 eldoLED 0-10V ECOdrive. Linear dimming to 1% min.	
	EZB eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%. EDAB <sup>6</sup> eldoLED SOLOdrive DALI. Logarithmic dimming to <1%.	

Control Interface	Emergency Options	Options
NLT <sup>7</sup> nLight <sup>®</sup> dimming pack controls NLTER <sup>3,7,11</sup> nLight <sup>®</sup> dimming pack controls emergency circuit NLTAIR2 <sup>7,11,14</sup> nLight <sup>®</sup> AIR enabled NLTAIRER2 <sup>3,11,14</sup> nLight <sup>®</sup> AIR enabled emergency NLTAIREM2 <sup>3,14,15</sup> nLight <sup>®</sup> AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit with battery pack options.	EL <sup>10</sup> Emergency battery pack, 10W, with integral test switch ELR <sup>10</sup> Emergency battery pack, 10W, with remote test switch ELSD <sup>10</sup> Emergency battery pack, 10W, with self-diagnostics, integral test switch ELRSD <sup>10</sup> Emergency battery pack, 10W, with self-diagnostics, remote test switch E10WCP <sup>10</sup> Emergency battery pack, 10W Constant Power, CA Title 20 compliant with integral test switch E10WCPR <sup>10</sup> Emergency battery pack, 10W Constant Power, CA Title 20 compliant with remote test switch BGTD Bodine generator transfer device. Specify 120V or 277V.	SF Single fuse. Specify 120V or 277V. TRW <sup>6</sup> White painted flange TRBL <sup>9</sup> Black painted flange FRALTBD <sup>2</sup> Flange ring only RAL color for pricing only FCPC Flange custom paint color N80 <sup>12</sup> nLight <sup>®</sup> Lumen Compensation 90CRI High CRI (90+) CP <sup>13</sup> Chicago Plenum. Specify 120V or 277V with FL option. RRL_ RELOC <sup>®</sup> -ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Available only with RRLA, RRLB, RRLAE, and RRLC12S. Refer to RRL spec sheet on www.acuitybrands.com for RELOC <sup>®</sup> product specifications. Above ceiling access required.

ACCESSORIES — order as separate catalog numbers (shipped separately)
ISD BC 0-10V wallbox dimmer. Refer to ISD-BC.

ORDERING NOTES
<ol style="list-style-type: none"> <li>Not available with finishes.</li> <li>Replace with applicable RAL number and finish when ready to order. See <a href="#">RAL BROCHURE</a> for available color options. Not available with emergency battery pack options.</li> <li>Not available with emergency battery pack options.</li> <li>Supplied with factory installed step down transformer.</li> <li>Refer to <a href="#">TECH-240</a> for compatible dimmers.</li> <li>Not available with nLight<sup>®</sup>.</li> <li>Specify voltage.</li> <li>For use with different reflector finish only (i.e. AR, PR, WTR, GR options). Not applicable with WR (white reflector) or FL option.</li> <li>For use with different reflector finish only (i.e. AR, PR, WTR, GR options). Not applicable with BR (black reflector) or FL option.</li> <li>11" of plenum depth or top access required for battery pack maintenance.</li> <li>ER for use with generator supply power. Will require an emergency hot feed and normal hot feed.</li> <li>Fixture begins at 80% light level. Must be specified with NLT or NLTER. Only available with EZ10 and EZ1 drivers.</li> <li>Not available with battery pack, EXAB, or any nLight<sup>®</sup> AIR dimming options.</li> <li>Not available DALI or DMX drivers. Not available with CP, or N80 options. Not recommended for metal ceiling installations.</li> <li>When combined with the EZ1, EZ10, or EZB option, normal luminaires (non-emergency) can be used as a normal power sensing device for nearby nLight AIR devices and luminaires with EM emergency options.</li> </ol>

**Optical Assembly**

Optical design is a Bounding Ray™ design with 45° cutoff to source and source image. Top-down flash characteristic for superior glare control. Unitized optics shall have mechanical attachment of the light engine to the lower reflector for complete optical alignment.

**Electrical**

The luminaire shall operate from a 50 or 60 Hz ±3 Hz AC line over a voltage ranging from 120 VAC to 277 VAC. The fluctuations of line voltage shall have no visible effect on the luminous output.

The luminaire shall have a power factor of 90% or greater at all standard operating voltages and full luminaire output.

Sound Rated A+. Driver shall be >80% efficient at full load across all input voltages.

Input wires shall be 18AWG, 300V minimum, solid copper.

**Controls**

Luminaire shall be equipped with interface for nLight wired or wireless network with integral power supply as per specification.

**Dimming**

The luminaire shall be capable of continuous dimming without perceivable stroboscopic flicker as measured by flicker index (ANSI/IES RP-16-10) over a range of 100 – 10%, 100 – 1.0% or 100 – 0.1% of rated lumen output with a smooth shut off function to step to 0%.

eldoLED LED drivers shall conform to IEEE P1789 standards. Alternatively, manufacturers must demonstrate conformance with product literature and testing which demonstrates this performance. Systems that do not meet IEEE P1789 will not be considered.

Driver is inaudible in 24dB environment, and stable when input voltage conditions fluctuate over what is typically experienced in a commercial environment.

**Construction**

Fully serviceable and upgradeable lensed LED light engine, both the driver and light engine are suitable for field maintenance and are serviceable from above or below the ceiling.

Luminaire housing shall be constructed of 16-gauge galvanized steel and have preinstalled telescopic mounting bars with maximum 32" and minimum 15" extension and 4" vertical adjustment.

High-impact polymer trim shall be constructed with a durable, vapor deposition finish.

Patented adjustable aperture allows ¼" adjustments in all directions and up to 5° of rotation for post-installation adjustment to ensure trim-to-trim alignment.

Injection molded mud ring included with flangeless trims. Ships separately. Installs independently of the mounting frame to reduce cracks in plaster due to vibration.

Luminaires shall be suitable for installation in ceilings up to 1½" thick.

Tool-less adjustments shall be possible after installation.

The assembly and manufacturing process for the luminaire shall be designed to assure all internal components are adequately supported to withstand mechanical shock and vibration.

25°C ambient temperature standard (1/2" clearance on all sides from non-combustible materials in non-IC applications, unless marked spacing noted otherwise). For use in insulated ceilings, a 3" clearance on all sides from insulation is required (unless marked spacing noted otherwise).

**Listings**

Fixtures are CSA certified to meet US and Canadian standards: All fixtures manufactured in strict accordance with the appropriate and current requirements of the "Standards for Safety" to UL, wet location covered ceiling. Luminaire configurations are Energy Star certified through testing in EPA-recognized laboratories, with the results reviewed by an independent, accredited certification organization. Visit [www.energystar.gov](http://www.energystar.gov) for specific configurations listed.

**Photometrics**

LEDs tested to LM-80 standards. Measured by IESNA Standard LM-79-08 in an accredited lab. Lumen output shall not decrease by more than 30% over the minimum operational life of 60,000 hours.

Color appearance from luminaire to luminaire of the same type and in all configurations, shall be consistent both initially and at 60,000 hours and operate within a tolerance of <2.5 MacAdam ellipse as defined by a point at the intersection of the CCT line and the black body locus line in CIE chromaticity space.

**BUY AMERICAN ACT**

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to [www.acuitybrands.com/buy-american](http://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](http://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.

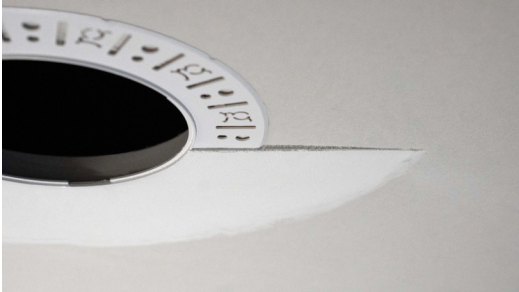
**A+ Capable Luminaire**

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 when used with Acuity Brands controls products.

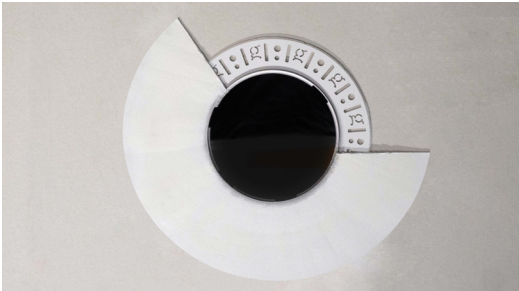
*All configurations of this luminaire are calibrated and tested to meet the Acuity Brands' specifications for chromatic consistency – including color rendering, color fidelity, and color temperature tolerance around standard CIE chromaticity coordinates.*

To learn more about Acuity A+ standards, specifications, and testing, visit [www.acuitybrands.com/aplus](http://www.acuitybrands.com/aplus).

Flangeless



Partially finished mud ring, showing cross-section detail.



An EVO downlight requires only approximately 3" of plaster to finish.



EVO with flangeless trim

**Flangeless Installation**

Gotham's flangeless option utilizes a micro-thin polymer mud ring that minimizes the amount of drywall compound required to finish the ceiling. The end result is a virtually undetectable flangeless downlight installation.

The polymer mud ring is installed independent of the of the recessed frame, therefore floating with the ceiling. This innovation minimizes any surface cracks during reflector installation, ceiling movement and any future service to the recessed frame, wiring, electronics, etc.

EVO - eldoLED Driver Default Dimming Curve			
Nomenclature	Min Dimming	Driver Dim Curve	Control Dim Curve
EZ10	10%	Linear	Linear/Logarithmic
EZ1	1%	Linear	Linear/Logarithmic
EXA1	1%	Linear	Linear/Logarithmic
EZB	<1%	Logarithmic	Linear
EDAB	<1%	Logarithmic	Linear
EXAB	<1%	Logarithmic	Linear
EDXB	<1%	Square	Linear

Driver		Control Provided (note: 347V/UVOLT versions provided with 347 option selected)			
Nomenclature	Description	NLT	NLTER	NLTAIR2	NLTAIRER2
GZ10	0-10V driver dims to 10%	nPP16 D EFP	nPP16 D ER EFP	RPP20 D 24V G2	RPP20 D 24V ER G2
GZ1	0-10V driver dims to 1%	nPP16 D EFP	nPP16 D ER EFP	RPP20 D 24V G2	RPP20 D 24V ER G2
EZ10	eldoLED 0-10V ECOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V G2	RPP20 D 24V ER G2
EZ1	eldoLED 0-10V ECOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V G2	RPP20 D 24V ER G2
EZB	eldoLED 0-10V SOLOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V G2	RPP20 D 24V ER G2

**How to Estimate Delivered Lumens in Emergency Mode**

**Delivered Lumens = 1.25 x P x LPW**

P = Output 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.

\*Dimensions in inches [centimeters]

Aperture: 4-5/16" (11)

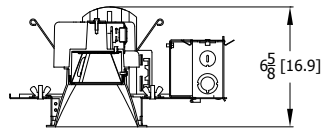
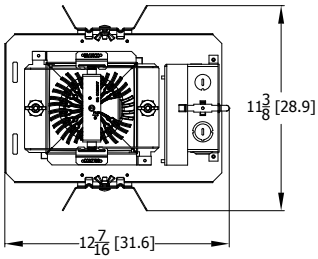
Ceiling Opening: 5-1/8" (13) self-flanged

Overlap trim: 5-7/16" (13.8)

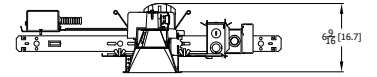
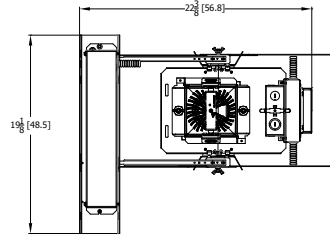
5-1/4" (13.3) flangeless

DIMENSIONAL DATA

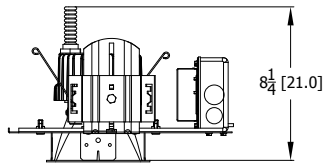
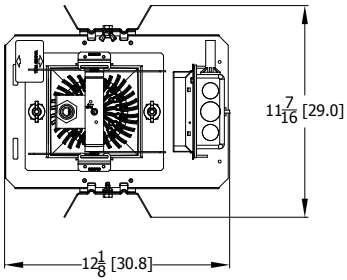
**Standard**



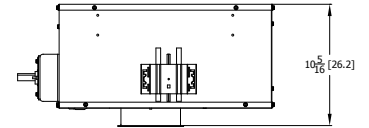
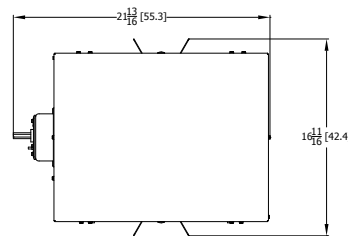
**Battery Pack**



**CP Standard**

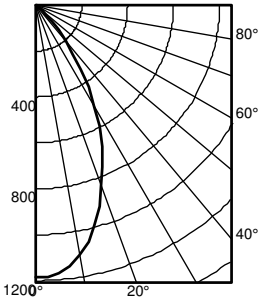


**CP Enclosed For Use With Flangeless & nLight**



Photometry

**EVO4SQ 35/10 AR LSS INPUT WATTS: 8.8W, DELIVERED LUMENS: 1002LM, LPW= 113.9LM 0.87 S/MH, TEST NO. LTL27794P85**

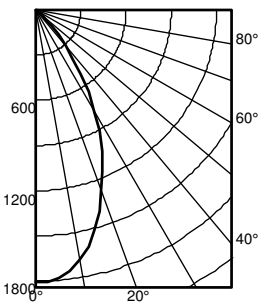


Ave Lumens	Zone Lumens	% Lamp
0 1187	0° - 30° 693.9	69.3
5 1172	0° - 40° 908.0	90.6
15 991	0° - 60° 1001.8	100.0
25 682	0° - 90° 1001.9	100.0
35 342	90° - 180° 0.0	0.0
45 102	0° - 180° 1001.9	*100.0
55 8		
65 0		
75 0		
85 0		
90 0		

\*Efficiency

Mounting Height	Initial FC			
	Center Beam	Diameter	FC	FC
8.0	39.2	4.6	19.6	8.7
10.0	21.1	6.3	10.5	11.9
12.0	13.2	8.0	6.6	15.0
14.0	9.0	9.6	4.5	18.2
16.0	6.5	11.3	3.3	21.3

**EVO4SQ 35/15 AR LSS INPUT WATTS: 13.7W, DELIVERED LUMENS: 1527LM, LPW= 111.5LM 0.87 S/MH, TEST NO. LTL27794P89**

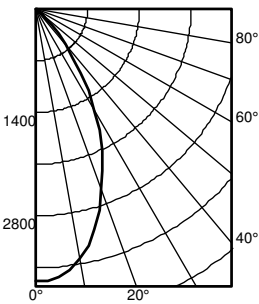


Ave Lumens	Zone Lumens	% Lamp
0 1809	0° - 30° 1057.8	69.3
5 1787	0° - 40° 1384.2	90.6
15 1511	0° - 60° 1527.2	100.0
25 1039	0° - 90° 1527.3	100.0
35 521	90° - 180° 0.0	0.0
45 156	0° - 180° 1527.3	*100.0
55 13		
65 0		
75 0		
85 0		
90 0		

\*Efficiency

Mounting Height	Initial FC			
	Center Beam	Diameter	FC	FC
8.0	59.8	4.6	29.9	8.7
10.0	32.2	6.3	16.1	11.9
12.0	20.0	8.0	10.0	15.0
14.0	13.7	9.6	6.8	18.2
16.0	9.9	11.3	5.0	21.3

**EVO4SQ 35/30 AR LSS INPUT WATTS: 31.2W, DELIVERED LUMENS: 3110LM, LPW= 99.7LM 0.87 S/MH, TEST NO. LTL27794P101**



Ave Lumens	Zone Lumens	% Lamp
0 3685	0° - 30° 2154.4	69.3
5 3639	0° - 40° 2819.2	90.6
15 3077	0° - 60° 3110.5	100.0
25 2117	0° - 90° 3110.7	100.0
35 1061	90° - 180° 0.0	0.0
45 318	0° - 180° 3110.7	*100.0
55 26		
65 0		
75 0		
85 0		
90 0		

\*Efficiency

Mounting Height	Initial FC			
	Center Beam	Diameter	FC	FC
8.0	121.8	4.6	60.9	8.7
10.0	65.5	6.3	32.8	11.9
12.0	40.8	8.0	20.4	15.0
14.0	27.9	9.6	13.9	18.2
16.0	20.2	11.3	10.1	21.3

Lumen Output Multiplier		
CRI	CCT	Multiplier
80	2700K	0.96
	3000K	1.00
	3500K	1.00
	4000K	1.01
	5000K	1.07
90	2700K	0.80
	3000K	0.83
	3500K	0.85
	4000K	0.87
	5000K	0.91

Reflector Finish Multiplier	
Reflector Finish	Multiplier
LSS - Semi Specular	0.956
WR - White	0.87
LD - Matte Diffuse	0.85
BR - Black	0.73

NLIGHT AIR

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

**nLight® AIR Control Accessories**  
Order as separate catalog number. Visit [nLight AIR](#).

Wall Switches	Model Number
On/Off single pole	rPODB (color) G2
On/Off two pole	rPODB 2P (color) G2
On/Off & raise/lower single pole	rPODB DX (color) G2
On/Off & raise/lower two pole	rPODB 2P DX (color) G2

**nLight® AIR Control Accessories (cont.)**

Occupancy Sensors (PIR/dual tech)	Model Number
Small motion 360°, ceiling	rCMS 9 / rCMS PDT 9
Large motion 360°, ceiling	rCMS 10 / rCMS PDT 10

**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® The nLight® solution is a digital networked lighting control system that provides both energy savings and increased user configurability by cost effectively integrating time-based, daylight-based, sensor-based and manual lighting control schemes.

**nLight® Wired Control Accessories**  
Order as separate catalog number. Visit [nLight](#).

Wall Switches	Model Number
On/Off single pole	nPODM XX
On/Off two pole	nPODM 2P XX
On/Off & raise/lower single pole	nPOD DX XX
On/Off & raise/lower two pole	nPODM 2P DX XX
Graphic touchscreen	nPOD GFX XX

Photocell Controls	Model Number
Dimming	nCM ADCX

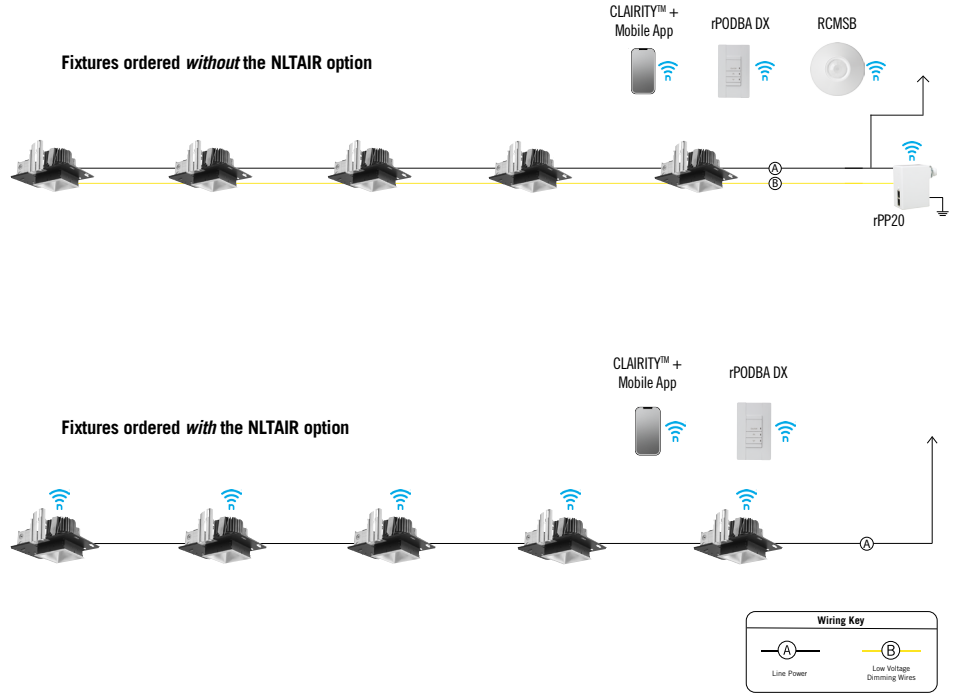
**nLight® Wired Control Accessories (cont.)**

Occupancy Sensors (PIR/dual tech)	Model Number
Small motion 360°, ceiling	nCM 9 / nCM PDT 9
Large motion 360°, ceiling	nCM 10 / nCM PDT 10
Wide View	nWV 16 / nWV PDT 16
Wall switch with raise/lower	nWSX LV DX / nWSX PDT LV DX

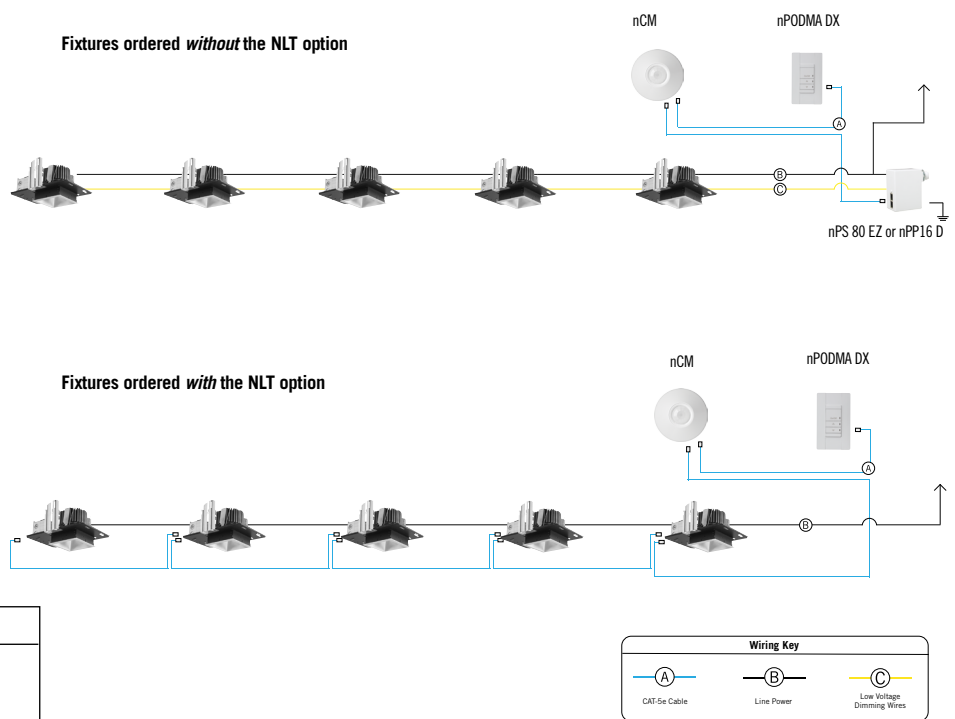
  

Cat-5 Cables (plenum rated)	Model Number
10', CAT5	CAT5 10FT J1
15', CAT5	CAT5 15FT J1

**Possibilities for nLight® AIR**



**Possibilities for nLight® wired**



NLIGHT