



General Illumination MRI Square Downlight

6"

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
- Non-ferrous construction for use in MRI
- Remote mount driver(s) for MRI applications
- Fixtures are wet location, covered ceiling
- 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
Delivered	222	444	666	870	1292	1754	2219
Wattage	3.4	6.2	8.2	9.6	14.7	19.7	24.7
Efficacy	65.3	71.6	81.2	90.6	87.9	89.0	89.8

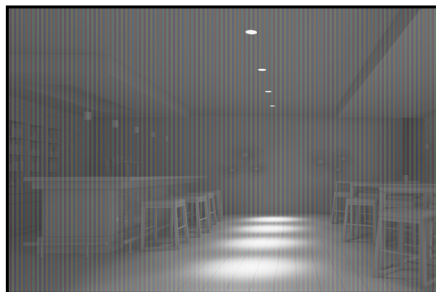
Based on DFF SMO Lens*



Coordinated Apertures | Multiple Layers of Light



General Illumination Layer | EVO



High Center Beam Layer | Incito



EVO + Incito — Multiple Layers of Light

 Downlight	 Open Wallwash	 Lensed Wallwash	 Cylinder	 Downlight	 Adjustable	 Lensed Wallwash	 Cylinder	Core Healthcare Special Applications
 MRI	 Surgical Suite	 Patient Room						
 Dynamic	 Food Service	 Vandal	 Clean Room	 Shower				

Luminaire Type:

Catalog Number:

EXAMPLE: EV06SQM 35/20 AR LSS

Series	Color Temperature	Nominal Lumen Values	Reflector & Flange Color ¹	Lens Setting
EV06SQM	27/ 2700K	02 250 lumens	AR Clear	DFR ² Regressed lensed trim, white flange
	30/ 3000K	05 500 lumens	PR Pewter	DFF ² Flush lensed trim, white flange
	35/ 3500K	07 750 lumens	WTR Wheat	DFRAMF ² Regressed lensed trim with anti-microbial finish, white flange
	40/ 4000K	10 1000 Lumens	GR Gold	DFFAMF ² Flush lensed trim with anti-microbial finish, white flange
	50/ 5000K	15 1500 Lumens	WR ² White painted	
		20 2000 Lumens	BR ² Black painted	
		25 2500 Lumens	WRAMF ² White painted anti-microbial finish	
			TRALTB ² Trim RAL # TBD (TBD for pricing only)	
			TCPC ² Trim Custom Paint Color TBD (TBD for pricing only)	

Finish	Lens ³	Options
LSS Semi-specular	SOL Textured Lens	90CRI 90+ CRI
LD Matte-diffuse	SMO Smooth Lens	TRW ⁴ White painted flange
		TRBL ⁴ Black painted flange
		FRALTB ⁴ Flange RAL # TBD (TBD for pricing only)
		FCPC ⁴ Flange Custom Paint Color TBD (TBD for pricing only)

Remote Driver Box Required (Order Separately)

EXAMPLE: EV0RDB 3DBOX 1000LM MVOLT EZ1

Series	Driver Quantity		Nominal Lumen Values		Voltage		Driver		Control Interface		Zone ⁷				
EVORDB	1DBOX	Driver box includes 1 driver	250LM	250 lumens	MVOLT	Multi volt	GZ10	0-10V driver dims to 10%	NLT ⁵	nLight® dimming pack controls	1Z	One nLight zone			
	2DBOX	Driver box includes 2 drivers	500LM	500 lumens			GZ1	0-10V driver dims to 1%		NLTER ^{5,6}			nLight® dimming pack controls		
	3DBOX	Driver box includes 3 drivers	750LM	750 lumens			EZ1	eldoLED 0-10V ECOdrive. Linear dimming to 1% min.	GTD				nLight® dimming pack controls		
	4DBOX	Driver box includes 4 drivers	1000LM	1000 Lumens									EZB	eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.	emergency circuit
	5DBOX	Driver box includes 5 drivers	1500LM	1500 Lumens											Generator transfer device
	6DBOX	Driver box includes 6 drivers	2000LM	2000 Lumens											
			2500LM	2500 Lumens											

ACCESSORIES — order as separate catalog numbers (shipped separately)

4CHMRIF 4-channel MRI filter (Class 2 100W; 3A/up to 40VDC; insertion loss 100dB between 10Khz-1Ghz)

ORDERING NOTES

- Not available with Lens Setting.
- Not available with "Finish" options.
- Only available with "Lensed Setting" options.
- Not applicable with painted reflectors (ex: BR, WR, WRAMF, TRALTB, TCPC).
- Specify voltage.
- For use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
- Zones only apply when nLight options are ordered. See chart for zone wiring specifications.

Optical Assembly

Fully serviceable and upgradeable lensed LED light engine suitable for field maintenance or service from below the ceiling.

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 with anti-microbial flush and re-gressed lenses.

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. All drivers are ROHS compliant.

0-10V dimming drivers available with choice of 10%, 1% or <1% dimming levels.

nLight enabled option for 1 or 2 zones per driver box

48Vdc output to MRI room

Controls

Luminaire shall be equipped with interface for nLight wired 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%.

elddLED 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

Non-ferromagnetic construction suitable for use in rooms containing magnetic resonance equipment.

Maximum 1-1/2" ceiling thickness

Telescopic mounting bars maximum of 27-1/2" and minimum of 20-1/4"

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).

EMI filter required – up to 4 fixtures per filter (ordered separately). See accessory section of this spec sheet for ordering information.

Remote driver box easily mounts to wall outside shielded MRI room, controls up to 6 EVO MRI downlights, and is constructed of 20 gauge black painted steel

Listings

Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling

IP64 rated with lensed trims. Consult installation instruction sheet for details regarding attaining IP65 rating via additional installation steps.

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.

Government Procurement

BAA - Buy America(n) Act: Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations

BABA - Build America Buy America: Product 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 on luminaire. 2-year warranty on 4CHMRIF filter accessory. These are 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.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provided consistent color appearance and out-of-the-box control capability with simple commissioning when used with Acuity Brands controls products.

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

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

Tables of Use

EVO - eldoLED Driver Default Dimming Curve			
Nomenclature	Min Dimming	Driver Dim Curve	Control Dim Curve
EZ1	1%	Linear	Linear/Logarithmic
EZB	<1%	Logarithmic	Linear

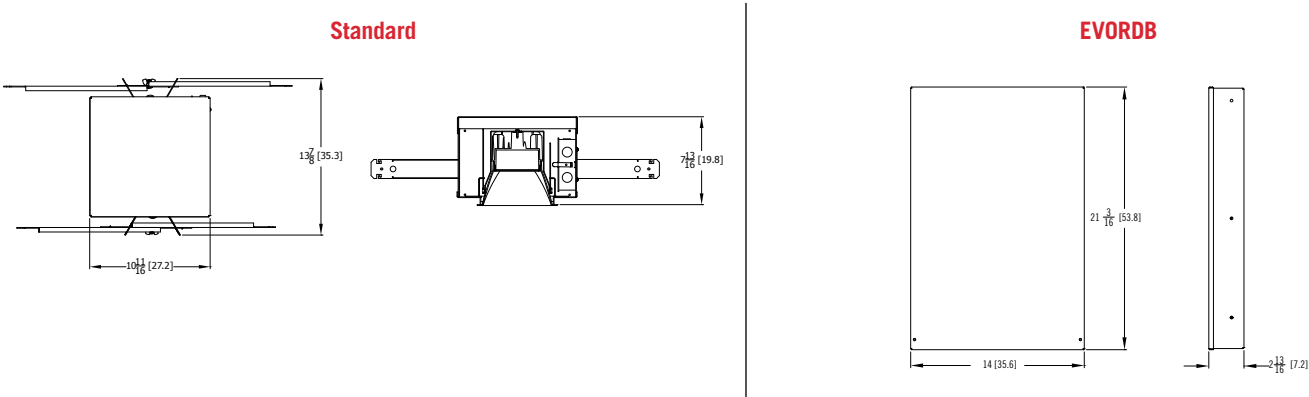
Driver		Control Provided (note: 347V/UVOLT versions provided with 347 option selected)	
Nomenclature	Description	NLT	NLTER
GZ10	0-10V driver dims to 10%	nPP16 D EFP	nPP16 D ER EFP
GZ1	0-10V driver dims to 1%	nPP16 D EFP	nPP16 D ER EFP
EZ1	eldoLED 0-10V ECOdrive	nPS 80 EZ	nPS 80 EZ ER
EZB	eldoLED 0-10V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

nLight 2 Zone Wiring Configuration		
# Drivers	Wired to Upper nPS80EZ	Wired to Lower nPS80EZ
1DBOX	-	-
2DBOX	1	1
3DBOX	2	1
4DBOX	2	2
5DBOX	3	2
6DBOX	3	3

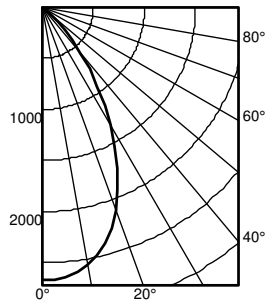
DIMENSIONAL DATA

*Dimensions in inches [centimeters]

Aperture: 6 1/4" [15.9]	Ceiling Opening: 7 1/8" [18.1] self-flanged
Overlap trim: 7 1/2" [19.1]	7 1/4" [18.4] flangeless



EVO6SQM 35/25 AR LSS 80CRI INPUT WATTS: 24.7W, DELIVERED LUMENS: 2586.5LM, LPW = 104.7, 0.91 S/MH, TEST NO: LTL27900P527

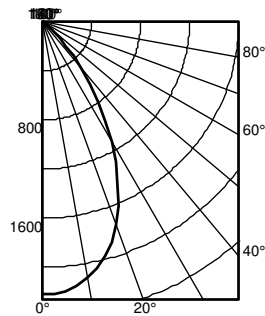


Ave	Lumens	Zone	Lumens	% Lamp
0	2672	0° - 30°	1702.4	65.8
5	2649	0° - 40°	2287.3	88.4
15	2388	0° - 60°	2583.3	99.9
25	1736	0° - 90°	2586.4	100.0
35	940	90° - 180°	0.0	0.0
45	313	0° - 180°	2586.4	*100.0
55	38			
65	3			
75	1			
85	0			
90	0			

*Efficiency

Initial FC					
Mounting Center					
Height	Beam	Diameter	FC	Diameter	FC
8.0	88.3	5.0	44.2	9.2	8.8
10.0	47.5	6.8	23.8	12.6	4.8
12.0	29.6	8.7	14.8	15.9	3.0
14.0	20.2	10.5	10.1	19.3	2.0
16.0	14.7	12.3	7.3	22.6	1.5

EVO6SQM 35/25 DFF SMO 80CRI INPUT WATTS: 24.7W, DELIVERED LUMENS: 2219.5LM, LPW = 90, 0.87 S/MH, TEST NO: LTL29890P89

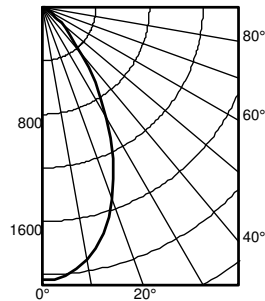


Ave	Lumens	Zone	Lumens	% Lamp
0	2222	0° - 30°	1420.1	64.0
5	2200	0° - 40°	1915.2	86.3
15	1980	0° - 60°	2192.7	98.8
25	1456	0° - 90°	2218.6	100.0
35	795	90° - 120°	0.0	0.0
45	274	90° - 130°	0.0	0.0
55	56	90° - 150°	0.3	0.0
65	16	90° - 180°	0.9	0.0
75	7	0° - 180°	2219.5	*100.0
85	2			
90	0			

*Efficiency

Initial FC					
Mounting Center					
Height	Beam	Diameter	FC	Diameter	FC
8.0	73.5	5.0	36.7	9.3	7.3
10.0	39.5	6.9	19.7	12.6	3.9
12.0	24.6	8.7	12.3	16.0	2.5
14.0	16.8	10.5	8.4	19.4	1.7
16.0	12.2	12.4	6.1	22.7	1.2

EVO6SQM 35/25 DFF SOL 80CRI INPUT WATTS: 24.7W, DELIVERED LUMENS: 2124.7LM, LPW = 86, 0.96 S/MH, TEST NO: LTL29889P89



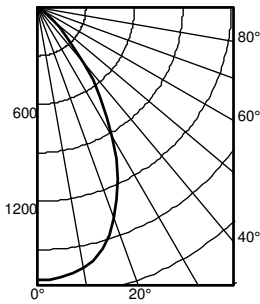
Ave	Lumens	Zone	Lumens	% Lamp
0	2040	0° - 30°	1243.3	58.5
5	2015	0° - 40°	1673.6	78.8
15	1752	0° - 60°	2013.1	94.7
25	1247	0° - 90°	2124.7	100.0
35	688	90° - 180°	0.0	0.0
45	292	0° - 180°	2124.7	*100.0
55	116			
65	62			
75	36			
85	10			
90	2			

*Efficiency

Initial FC					
Mounting Center					
Height	Beam	Diameter	FC	Diameter	FC
8.0	67.4	4.8	33.7	9.3	6.7
10.0	36.3	6.6	18.1	12.6	3.6
12.0	22.6	8.3	11.3	16.0	2.3
14.0	15.4	10.1	7.7	19.4	1.5
16.0	11.2	11.8	5.6	22.7	1.1

EV06SQM 35/25 DFR SMO 80CRI INPUT WATTS: 24.7W, DELIVERED LUMENS: 1820.8LM, LPW = 73.7, 0.9 S/MH, TEST NO: LTL29892P93

Photometry

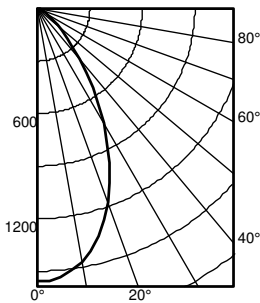


Ave	Lumens	Zone	Lumens	% Lamp
0	1690	0° - 30°	1123.6	61.7
5	1677	0° - 40°	1547.6	85.0
15	1550	0° - 60°	1800.7	98.9
25	1172	0° - 90°	1820.8	100.0
35	683	90° - 180°	0.0	0.0
45	251	0° - 180°	1820.8	*100.0
55	50			
65	12			
75	6			
85	1			
90	0			

*Efficiency

Mounting Height	Initial Center Beam	50% beam - 51.0°		10% beam - 82.4°	
		Diameter	FC	Diameter	FC
8.0	55.9	5.2	27.9	9.6	5.6
10.0	30.0	7.1	15.0	13.1	3.0
12.0	18.7	9.1	9.4	16.6	1.9
14.0	12.8	11.0	6.4	20.1	1.3
16.0	9.3	12.9	4.6	23.6	0.9

EV06SQM 35/25 DFR SOL 80CRI INPUT WATTS: 24.7W, DELIVERED LUMENS: 1655LM, LPW = 67, 0.85 S/MH, TEST NO: LTL29891P89



Ave	Lumens	Zone	Lumens	% Lamp
0	1560	0° - 30°	962.8	58.2
5	1539	0° - 40°	1309.3	79.1
15	1349	0° - 60°	1586.5	95.9
25	972	0° - 90°	1655.0	100.0
35	554	90° - 180°	0.0	0.0
45	242	0° - 180°	1655.0	*100.0
55	93			
65	44			
75	20			
85	2			
90	0			

*Efficiency

Mounting Height	Initial Center Beam	50% beam - 47.8°		10% beam - 81.4°	
		Diameter	FC	Diameter	FC
8.0	51.6	4.9	25.8	9.5	5.2
10.0	27.7	6.6	13.9	12.9	2.8
12.0	17.3	8.4	8.6	16.3	1.7
14.0	11.8	10.2	5.9	19.8	1.2
16.0	8.6	12.0	4.3	23.2	0.9

Lumen Output Multiplier		
CRI	CCT	Multiplier
80	2700K	0.96
	300K	1.00
	3500K	1.00
	4000K	1.01
	5000K	1.07
90	2700K	0.80
	300K	0.83
	3500K	0.85
	4000K	0.87
	5000K	0.91

Reflector Finish Multiplier	
Reflector Finish	Multiplier
LS - Specular	1
LSS - Semi Specular	0.956
WR - White	0.87
LD - Matte Diffuse	0.85
BR - Black	0.73

DFF SMO - Flush Clear							
Nominal Lumens	250	500	750	1000	1500	2000	2500
Delivered	222	444	666	870	1292	1754	2219
Wattage	3.4	6.2	8.2	9.6	14.7	19.7	24.7
Efficacy	65.3	71.6	81.2	90.6	87.9	89.0	89.8

*Lumen output for CRI80 - 3500K

DFF SOL - Flush Textured							
Nominal Lumens	250	500	750	1000	1500	2000	2500
Delivered	213	425	638	833	1238	1680	2125
Wattage	3.4	6.2	8.2	9.6	14.7	19.7	24.7
Efficacy	62.6	68.5	77.8	86.8	84.2	85.3	86.0

*Lumen output for CRI80 - 3500K

DFR SMO - Regressed Clear							
Nominal Lumens	250	500	750	1000	1500	2000	2500
Delivered	182	364	546	714	1061	1440	1821
Wattage	3.4	6.2	8.2	9.6	14.7	19.7	24.7
Efficacy	53.5	58.7	66.6	74.4	72.2	73.1	73.7

*Lumen output for CRI80 - 3500K

DFR SOL - Regressed Textured							
Nominal Lumens	250	500	750	1000	1500	2000	2500
Delivered	166	331	497	649	964	1309	1655
Wattage	3.4	6.2	8.2	9.6	14.7	19.7	24.7
Efficacy	48.8	53.4	60.6	67.6	65.6	66.4	67.0

*Lumen output for CRI80 - 3500K

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

A+ Capable Luminaire

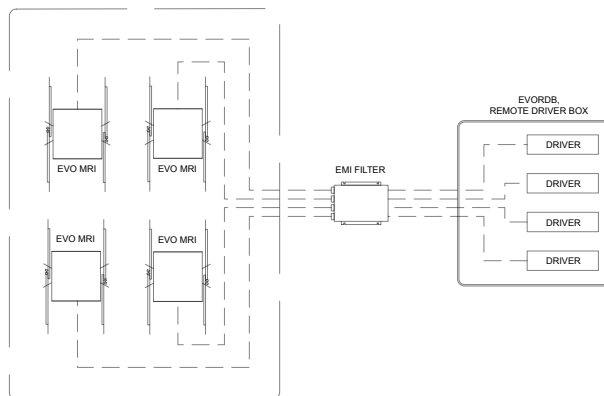
This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- 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***

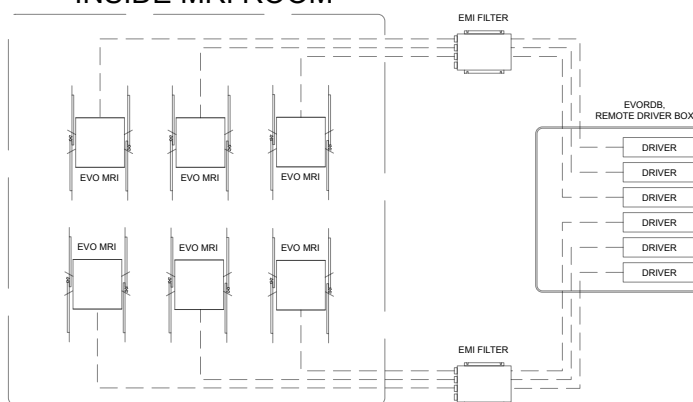
To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

INSIDE MRI ROOM



INSIDE MRI ROOM



EXAMPLE

nPS 80 EZ Dimming/Control Pack installed in remote driver box (example shows 1 and 2 zone configuration)

nPDM 2P DX Dual On/Off/Dim Push-Button WallPod

Description: This design provides a dual on/off/dim wall station that enables manual control of one or two nLight zones from outside the MRI room. Utilizing a WallPod in the control room gives the MRI technician the ability to control multiple zones of light to maximize patient comfort during the scan as well as provide higher levels of light for exams that require greater visual acuity.

nLight® Control Accessories:

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

WallPod stations

On/Off

Model number

nPDM [color]

On/Off & Raise/Lower

nPDM DX [color]

Graphic Touchscreen

nPOD GFX [color]

Photocell controls

Dimming

Model number

nCM ADCX

Occupancy sensors

Small motion 360°, ceiling (PIR / dual tech)

Large motion 360°, ceiling (PIR / dual tech)

Wide view (PIR / dual tech)

Wall Switch w/ Raise/Lower (PIR / dual tech)

Cat-5 cables (plenum rated)

10', CAT5 10FT

15', CAT5 15FT

Model number

nCM 9 / nCM PDT 9

nCM 10 / nCM PDT 10

nWV 16 / nWV PDT 16

nWSX LV DX / nWSX PDT LV DX

Model number

CAT5 10FT J1

CAT5 15FT J1