

DIGITAL NAVIGATION

Ordering Tree nLight Platform Controls Photometrics Performance Data

FEATURES & SPECIFICATIONS

INTENDED USE — The BLTX surface mount LED luminaire features a popular center basket design that offers a clean, versatile style and volumetric distribution. High efficacy LED light engines deliver energy savings and low maintenance compared to traditional sources. An extensive selection of configurations and options make the BLTX the perfect choice for many lighting applications including schools, offices and other commercial spaces, retail, hospitals and healthcare facilities.

CONSTRUCTION — BLTX enclosure components are die-formed for dimensional consistency and painted after fabrication with a polyester powder paint for improved performance and protection.

The reflector is finished with a high reflective matte white powder paint for improved aesthetics and increased light diffusion.

Diffusers are extruded from impact modified acrylic for increased durability.

LED boards and driver are accessible from below.

OPTICS — Volumetric illumination is achieved by creating an optimal mix of light to walls, partitions and vertical and horizontal work surfaces — rendering the interior space, objects and occupants in a more balanced, complimentary luminous environment. High performance extruded acrylic diffusers conceal LEDs and efficiently deliver light in a volumetric distribution. Four diffuser choices available - curved and square designs with linear prisms or a smooth frosted finish.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 70% LED lumen maintenance at 60,000 hours (L70/60,000).

Configurable BLTX: Available in High Efficiency (HE) versions for applications where a lower wattage (over the standard product) is required. The High Efficiency versions deliver >130 LPW and can be specified via the Lumen Package designations in the Ordering Information on page 2.

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Optional integrated nLight™ controls make each luminaire addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Connection to nLight is simple. It can be accomplished with integrated nLight AIR wireless or through standard Cat-5 cabling. nLight offers unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission, while nLight AIR is commissioned easily through an intuitive model app.

Lumen Management: Unique lumen management system (option N80) provides on board intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Step-level dimming option allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

Driver disconnect provided where required to comply with US and Canadian codes.

SENSOR — **Integrated sensor (individual control):** Sensor Switch MSD7ADCX (Passive infrared (PIR)) or MSDPDT7ADCX (PIR/Microphonics Dual Tech (PDT)) integrated occupancy sensor/automatic dimming photocell allows the luminaire to power off when the space is unoccupied or enough ambient light is entering the space. See page 4 for more details on the integrated sensor.

Integrated Sensor (nLight Wired Networking): This sensor is nLight-enabled, meaning it has the ability to communicate over an nLight network. When wired, using CAT-5 cabling, with other nLight-enabled sensors, power packs, or WallPods, an nLight control zone is created. Once linked to a Gateway, directly or via a Bridge, the zone becomes capable of remote status monitoring and control via SensorView software. See page 4 for the nLight sensor options.

Integrated Smart Sensor (nLight AIR Wireless Platform): The rES7 sensor is nLight AIR enabled, meaning it has the ability to communicate over the wireless nLight control platform. It is available with an automatic dimming photocell, and either a digital PIR or a microphonics (PDT) dual technology occupancy sensor. It pairs to other luminaires and wall switches through our mobile app, CLAIRITY, which allows for simple sensor adjustment. See page 4 for more details on the Integrated Smart Sensor.

INSTALLATION — The BLTX is designed to be surface mounted on a level ceiling. The BLTX can be aircraft cable suspended. See Mounting Data section on page 6.

Suitable for damp location.

LISTINGS — UL Listed to meet U.S. and Canadian standards. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/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. The product images shown are for illustration purposes only and may not be an exact representation of the product. Specifications subject to change without notice.

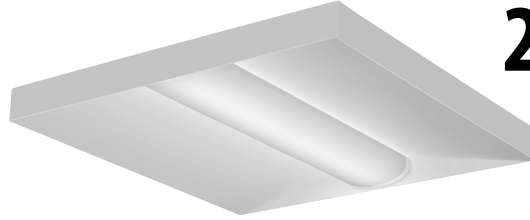
Catalog Number
Notes
Type

BLT Series LED

2BLTX2

Surface Mount

2' x 2'
LED



Specifications

Length: 24 3/4 (62.9)

Width: 24 3/4 (62.9)

Depth: 3 1/2 (8.9)



All dimensions are inches (centimeters) unless otherwise specified.

Embed nLight controls today. Prepare for tomorrow.

Now

- User-friendly install
- Enhanced energy savings
- Code compliance

Tomorrow

- Scalability
- Space configuration
- Future-ready

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.



A+ Capable options indicated by this color background.

ORDERING INFORMATION

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

Example: 2BLTX2 33L ADP EZ1 LP835

2BLTX2													
Series		Lumens ¹		Diffuser		Voltage		Driver		Color temperature			
2BLTX2	2x2 BLTX Surface Mount	Standard efficiency (>100 LPW)	High efficiency^{2,3} (>130 LPW)	ADP	Curved, linear prisms	(blank)	MVOLT	EZ1	eldoLED dims to 1% (0-10 volt dimming)	LP830	82CRI, 3000 K		
				ADSM	Curved, smooth	120	120V			LP835	82CRI, 3500 K		
				SDP	Square, linear prisms	277	277V	GZ1	Dims to 1% (0-10V dimming) ⁵	LP840	82CRI, 4000 K		
				SDSM	Square, smooth	347	347V ⁴			LP850	82CRI, 5000 K		
				Diffusers w/ trim rings						GZ10	Dims to 10% (0-10V dimming) ⁵	LP930	90CRI, 3000K
				ADPT	Curved, linear prisms			SLD	Step-level dimming ⁶	LP935	90CRI, 3500K		
				ADSMT	Curved, smooth					LP940	90CRI, 4000K		
				SDPT	Square, linear prisms					LP950	90CRI, 5000K		
				SDSMT	Square, smooth								
nLight Interface		Control ⁹						Options					
nLight Wired		nLight Wired				Individual Control							
(blank)	no nLight® interface	(blank)	no nLight® control			MSD7ADCX	PIR integral occupancy sensor with automatic dimming control photocell ¹¹			EL7L	700 lumen battery pack ¹²		
N80	nLight with 80% lumen management	NES7	nLight™ nES 7 PIR integral occupancy sensor ^{10,11}							EL14L	1400 lumen battery pack ¹²		
N80EMG	nLight with 80% lumen management For use with generator supply EM power ⁷	NESPDT7	nLight™ nES PDT 7 dual technology integral occupancy control ^{10,11}							E10WLCP	EM Self-Diagnostic battery pack, 10W Constant Power, Certified in CA Title 20 MAEDBS ¹²		
		NES7ADCX	nLight™ nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell ^{10,11}			MSDPDT7ADCX	PDT integral occupancy sensor with automatic dimming control photocell ¹¹			BGTD	Bodine Generator Transfer Device ¹³		
N100	nLight without lumen management	NESPDT7ADCX	nLight™ nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell ^{10,11}							GLR	Fast-blowing fuse ¹⁴		
N100EMG	nLight without lumen management For use with generator supply EM power ⁷									GMF	Slow-blowing fuse ¹⁴		
										DWAM	Anti-microbial paint		
										BAA	Buy America(n) Act Compliant		
nLight Wireless		nLight Wireless											
(blank)	no nLight® interface	(blank)	No nLight® control										
NLTAIR2	nLight AIR Generation 2 enabled ⁸	RES7	nLight AIR PIR integral occupancy sensor with automatic dimming photocell for Networking Capabilities Individual Control										
		RES7PDT	nLight AIR microphonics (PDT) occupancy sensor with automatic dimming photocell for Zone Control										
		RIO	nLight AIR radio module without sensor										
		RES7EM	nLight AIR PIR integral occupancy sensor with automatic dimming photocell and UL924 Emergency Operation, via power interrupt detection ¹⁵										
		RES7PDTEM	nLight AIR microphonics dual technology occupancy sensor with automatic dimming photocell and UL924 Emergency Operation, via power interrupt detection ¹⁵										
		RIOEM	nLight AIR radio module less sensor, with UL924 Emergency Operation, via power interrupt detection ¹⁵										

nLight Interface		Control ⁹		Options	
nLight Wired		nLight Wired		Individual Control	
(blank)	no nLight [®] interface	(blank)	no nLight [®] control	MSD7ADCX	PIR integral occupancy sensor with automatic dimming control photocell ¹¹
N80	nLight with 80% lumen management	NES7	nLight™ nES 7 PIR integral occupancy sensor ^{10,11}	MSDPDT7ADCX	PDT integral occupancy sensor with automatic dimming control photocell ¹¹
N80EMG	nLight with 80% lumen management For use with generator supply EM power ⁷	NESPD7	nLight™ nES PDT 7 dual technology integral occupancy control ^{10,11}		
N100	nLight without lumen management	NES7ADCX	nLight™ nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell ^{10,11}		
N100EMG	nLight without lumen management For use with generator supply EM power ⁷	NESPD7ADCX	nLight™ nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell ^{10,11}		
nLight Wireless		nLight Wireless			
(blank)	no nLight [®] interface	(blank)	No nLight [®] control		
NLTAIR2	nLight AIR Generation 2 enabled ⁸	RES7	nLight AIR PIR integral occupancy sensor with automatic dimming photocell for Networking Capabilities Individual Control		
		RES7PDT	nLight AIR microphonics (PDT) occupancy sensor with automatic dimming photocell for Zone Control		
		RIO	nLight AIR radio module without sensor		
		RES7EM	nLight AIR PIR integral occupancy sensor with automatic dimming photocell and UL924 Emergency Operation, via power interrupt detection ¹⁵		
		RES7PDTEM	nLight AIR microphonics dual technology occupancy sensor with automatic dimming photocell and UL924 Emergency Operation, via power interrupt detection ¹⁵		
		RIOEM	nLight AIR radio module less sensor, with UL924 Emergency Operation, via power interrupt detection ¹⁵		

Accessories next page

Notes

- 1 Approximate lumen output.
- 2 All versions may not achieve 130+ LPW. Refer to photometry on www.acuitybrands.com.
- 3 90 CRI and versions with integral sensor trim rings may not achieve 130 LPW.
- 4 Not available with SLD driver, EL7L or EL14L battery packs.
- 5 GZ1 and GZ10 not available any Control or Sensor options.
- 6 Not available with N80, N80EMG, N100, N100EMG, NLTAIR2, or occupancy control.
- 7 nLight EMG option requires a connection to existing nLight network. Power is provided from a separate N80 or N100 enabled fixture.
- 8 Must order with RES7, RESPD7, or RIO sensor. Only available with EZ1 driver.
- 9 Must specify diffuser with trim rings. See sensor options on page 4.
- 10 Requires N80, N80EMG, N100, or N100EMG.
- 11 Only available with EZ1 driver option. 0-10v dimming wires not accessible via access plate.
- 12 When using pre-wire option, use PWS1846 or PWS1846 PWSLV.
- 13 Requires BSE labeling, voltage specific. Consult factory for options.
- 14 Must specify voltage, 120 or 277 with GLR & GMF fusing and BGTD.
- 15 See UL924 Sequence of Operation chart on page 3.

Multiple Diffuser Options



ADP
Curved Linear Prisms



ADSM
Curved Smooth



SDP
Square Linear Prisms



SDSM
Square Smooth

MOUNTING DATA

For unit installation. Surface mount only. BLTX is to be installed on even surfaces only.

For aircraft cable mount:

one STACG_, STACGF_, or STACGE_ required for each 1/4" suspension point. Suspension Kit Ceiling Types:

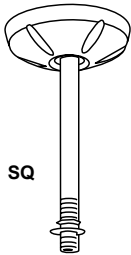
F1 for use with most T-bar and screw slot grid ceiling applications.

Designed for on-grid and off-grid installations.

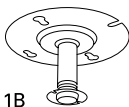
F2 for use with recessed or surface-mount horizontal J-box applications.

Stem-mount: Four stems are recommended per fixture, 1/4" holes require enlarging to 7/8" Diameter. SQ or 1B stem.

See Accessories below:



SQ

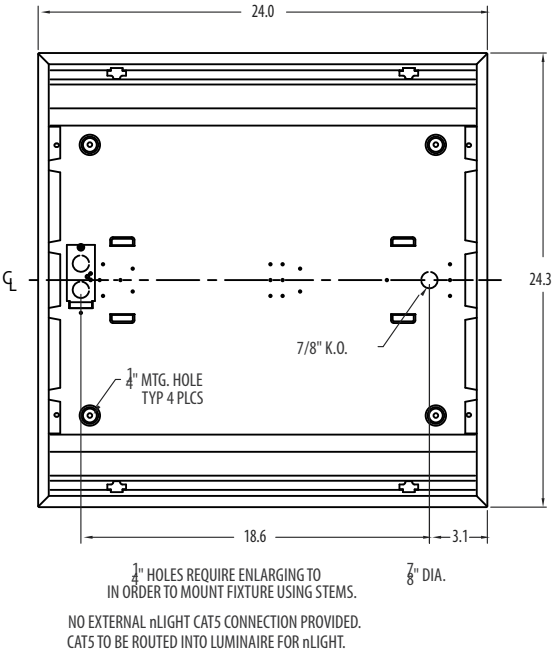


1B

UL924 Sequence of Operation

For 90 minutes following any complete AC power interruption >200 ms:

- Digital dimming is commanded to high end trim level.
- Device ignores wireless lighting control commands.



Accessories & Replacement Parts

Replacement Parts: Order as separate catalog number.

2DBLTX24 ADP LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 SDP LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 ADSM LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 SDSM LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 ADPT LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 SDPT LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 ADSMT LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 SDSMT LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 ADPT SENSOR LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 SDPT SENSOR LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 ADSMT SENSOR LENS ASSEMBLY	2 ft. replacement lens with trim rings
2DBLTX24 SDSMT SENSOR LENS ASSEMBLY	2 ft. replacement lens with trim rings

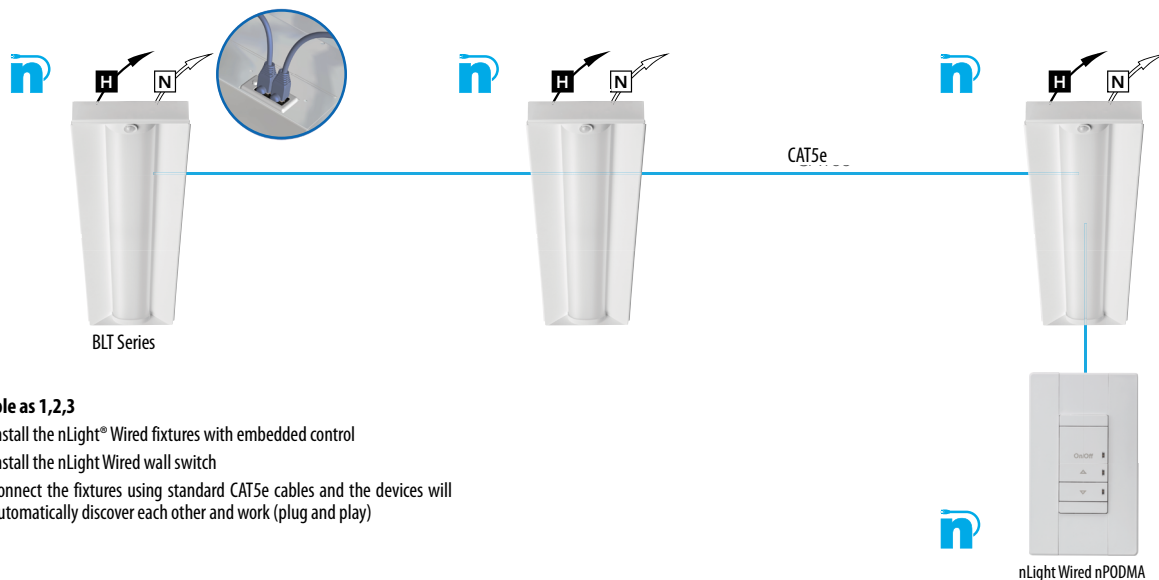
nLight Platform

nLight embedded fixtures offer:	Customers get:
Manual Dimming	Convenience and visual comfort for occupants
Motion Sensing and/or Daylight Harvesting	Energy savings and code compliance
Fixture or Group Level Control	Ability to configure lighting to the space requirements
Flexibility	Ease of fixture moves, adds and changes
Wireless Wall Switch (nLight AIR Only)	Ease and flexibility of placement
Astronomical and Time of Day Scheduling	Energy savings and building security
Scalable Solution	nLight controls to grow with your business
Future-Ready	nLight platform to set foundation for future upgrades and capabilities

nLight Air Wireless



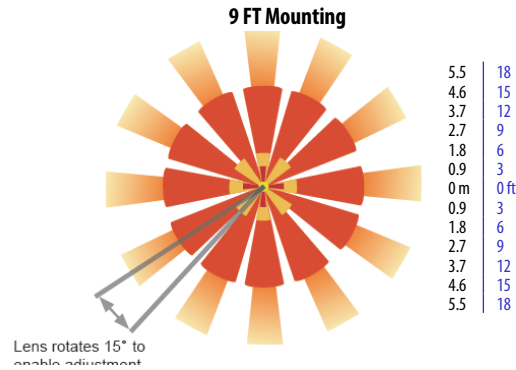
nLight Wired Networking



Sensor Options					
Option	Automatic Dimming Photocell	Occupancy Sensing		nLight Wired Networking	nLight AIR Networking
		PIR	PDT		
MSD7ADCX	X	X			
MSDPDT7ADCX	X		X		
NES7		X		X	
NES7ADCX	X	X		X	
NESPDT7			X	X	
NESPDT7ADCX	X		X	X	
RES7	X	X			X
RESPDT7	X	X	X		X

Sensor Coverage Pattern Mini 360° Lens

- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m)
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and
- 1.75x up to 20 ft (6.10 m).
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m)
- Initial detection will occur earlier when walking across sensor's field of view than when walking directly at sensor



Integrated Sensor with Individual Control

The MSD7ADCX PIR occupancy sensor/automatic dimming photocell is ideal for areas without obstructions and where daylight harvesting may be desired. Suggested applications include, but not limited to, hallways, corridors, storage rooms, and breakrooms or other areas where people are typically moving.

The MSDPDT7ADCX PIR/Microphonics Dual Tech occupancy sensor/automatic dimming photocell is ideal for areas with obstructions and where daylight harvesting is desired. Suggested applications include, but not limited to, open offices, private offices, classrooms, public restrooms, and conference rooms.

nLight AIR Wireless

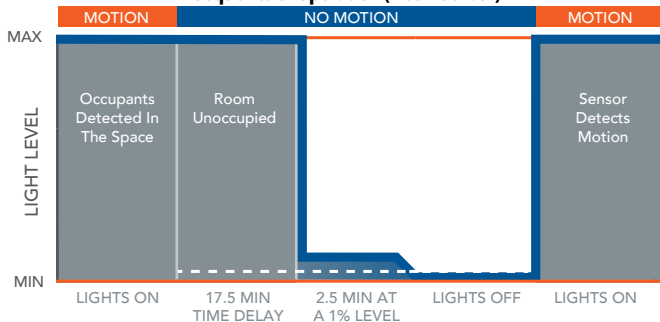
nLight AIR is the ideal solution for retrofit or new construction spaces where adding additional wiring can be labor intensive and nLight AIR is available with or without an integral sensor. The integrated rES7 or rES7PDT smart sensors are part of each luminaire in the nLight AIR network, which can be grouped to control multiple luminaires. The granularity of control with the digital PIR occupancy detection and daylight sensing makes a great solution for any application.

nLight Wired Networking

The nES7 is ideal for small rooms without obstructions or areas with primarily walking motion. Ideal areas include hallways, corridors, storage rooms, and breakrooms. Additionally, the nES7ADCX includes an integrated photocell, which enables daylight harvesting controls.

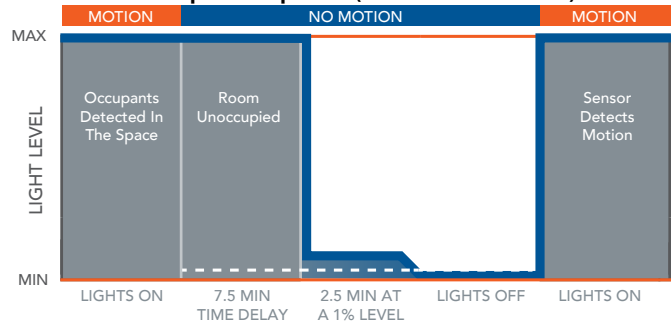
For areas like restrooms, private offices, open offices, conference rooms or any space with obstructions, the nESPDT7 dual technology sensor is recommended. The nESPDT7 utilizes both PIR (passive infrared) and Microphonics technologies to detect occupancy. Additionally, the nESPDT7ADCX includes an integrated photocell, which enables daylight harvesting controls which is ideal for areas where windows are present.

Sequence of Operation (MSD7 Sensor)



*The presetting on the automatic dimming photocell is 5fc.

Sequence of Operation (nES7 and rES7 and Sensor)



*The presetting on the automatic dimming photocell is 5fc (nES7) and 10fc (rES7).

Controls Accessories

nLight® Wired Control Accessories:

Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight.

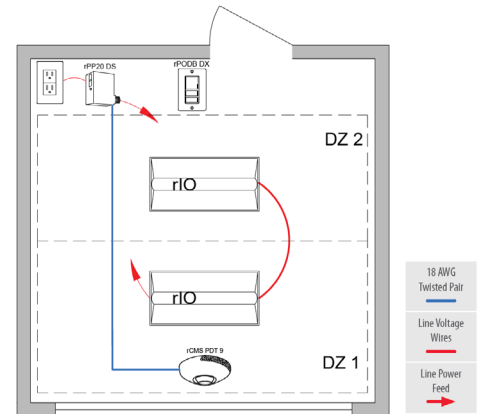
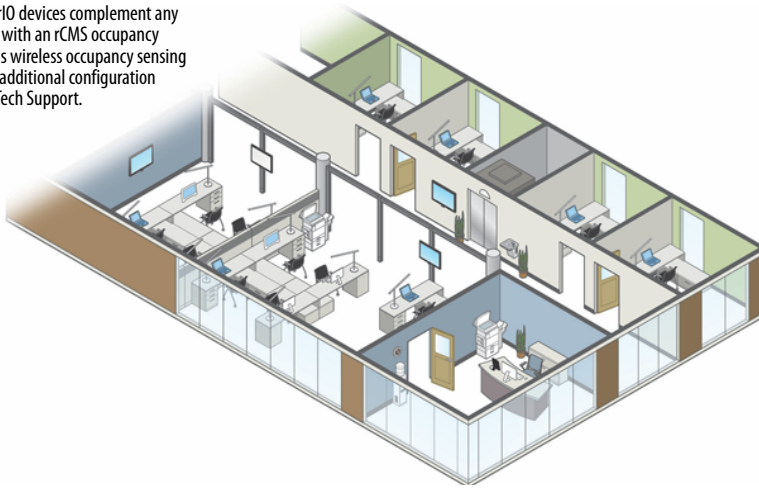
WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODMA [Color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 RJB / nCM PDT 9 RJB
On/Off & raise/lower	nPODMA DX [Color]	Large motion 360°, ceiling (PIR / dual tech)	nCM10 RJB / nCM PDT 10 RJB
Graphic touchscreen	nPOD TOUCH [Color]	Wall switch with raise/lower	nWSX PDT LV DX [color]
Photocell controls	Model number	Cat-5 cable (plenum rated)	Model number
Full range dimming	nCM ADCX RJB	10' cable	CAT5 10FT J1
		30' cable	CAT5 30FT 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	rPODBA [color] G2
On/Off two pole	rPODB A2P [color] G2
On/Off & raise/lower single pole	rPODBA DX [color] G2
On/Off & raise/lower two pole	rPODBA 2P DX [color] G2

BLT fixtures with integrated rIO devices complement any small office space. Pair them with an rCMS occupancy sensor and the space now has wireless occupancy sensing and dimming capability. For additional configuration options please consult with Tech Support.



rCMS¹

Example: RCMS PDT 10 AR G2

Series / Detection	Power Supply ¹	Occupancy Detection	Lens (Required)	Operating Mode	Generation
RCMS nLight AIR occupancy and daylight sensor	[blank] Power Supply ordered separately PS 150 Standard 150 mA Power Supply	[blank] PIR Detection PDT Dual Tech PIR/ Microphonics	10 Large Motion/ Extended Range 360° 9 Small Motion/ Extended Range 360° 6 High Bay 360° Lens	[BLANK] None AR Auxiliary Relay	G2 Generation 2 compatibility

Notes

1 RCMS requires low voltage power from either RPP20 DS 24V G2 or PS150.



[Sensor Switch WSX](#)



[nLight WIRED nPOD UNITOUCH](#)



[nLight WIRED nPODMA DX](#)



[nLight AIR rPODBA](#)



[BLT with rIO](#)



[rPODBA](#)



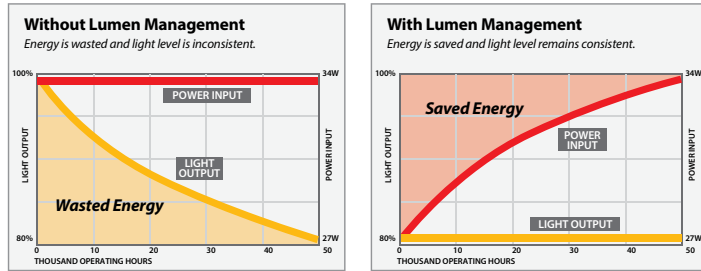
[rPODBA](#)



[RCMS](#)

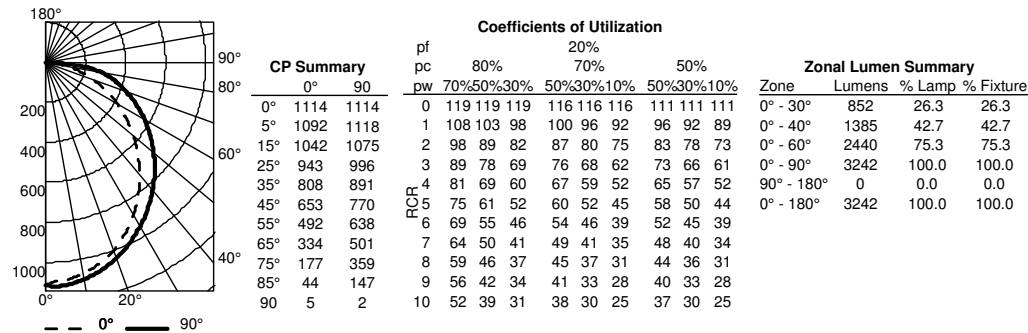
Constant Lumen Management

Enabled by the embedded nLight control, the BLTX actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.

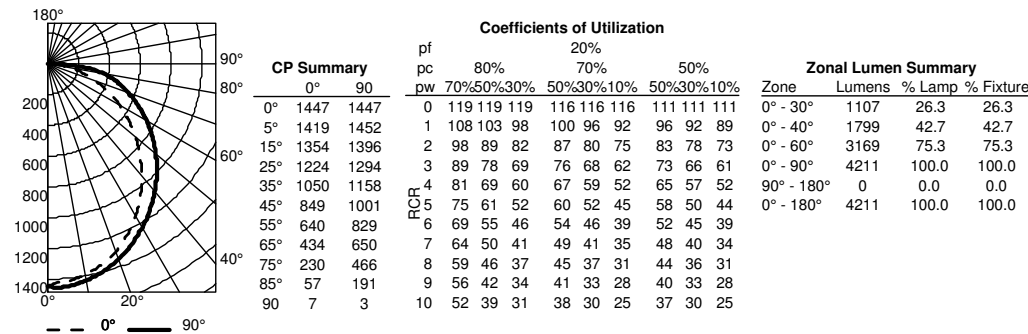


PHOTOMETRICS

2BLTX2 33L ADP LP835, 3241 delivered lumens, test no. LTL28918P704, tested in accordance to IESNA LM-79



2BLTX2 40L ADP LP835, 4210 delivered lumens, test no. LTL28918P705, tested in accordance to IESNA LM-79



HE Performance Data

Lumen Package	Lumens	Input Watts	LPW
33LHE ADP LP830	3537	28	126
33LHE ADP LP835	3628	28	130
33LHE ADP LP840	3708	28	132
33LHE ADP LP840	3708	28	139
40LHE ADP LP830	4118	32	127
40LHE ADP LP835	4224	32	131
40LHE ADP LP840	4317	32	134
40LHE ADP LP850	4530	32	140
48LHE ADP LP830	4699	37	128
48LHE ADP LP835	4820	37	131
48LHE ADP LP840	4927	37	134
48LHE ADP LP850	5169	37	140

How to Estimate Delivered Lumens in Emergency Mode

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

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

P = Output power of emergency driver. P = 10W for E10WLCP option.

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet. LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

Performance Data

Lumen Package	Lumens	Input Watts	LPW
20L ADP LP830	2157	20	110
20L ADP LP835	2213	20	113
20L ADP LP840	2261	20	116
20L ADP LP850	2373	20	121
33L ADP LP830	3160	30	106
33L ADP LP835	3241	30	108
33L ADP LP840	3313	30	111
33L ADP LP850	3476	30	116
40L ADP LP830	4103	39	106
40L ADP LP835	4209	39	108
40L ADP LP840	4302	39	111
40L ADP LP850	4514	39	116