

## FEATURES & SPECIFICATIONS

**INTENDED USE** — The BLT bottom access Best-in-Value Low Profile LED luminaire features a popular center basket design that offers a clean, versatile style and volumetric distribution, with access to the light engine and driver without having to access the plenum. High efficacy LED light engines deliver energy savings and low maintenance compared to traditional sources. An extensive selection of configurations and options make the BLT the perfect choice for many lighting applications including schools, offices and other commercial spaces, retail, hospitals and healthcare facilities. The low profile BLTBA design (3.25") also makes it an excellent choice for renovation projects.

**CONSTRUCTION** — BLT 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.

End plates contain easy-to-position integral T-bar clips for securely attaching the luminaire to the T-grid. For additional T-grid security, optional screw on T-bar clips are available.

Diffusers are extruded from impact modified acrylic for increased durability.

LED boards and drivers are accessible from the plenum. The bottom access version of the BLT incorporates the same great features of the traditional BLT while allowing access to the light engine and driver without having to break the plenum.

**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. 80% LED lumen maintenance at 60,000 hours (L80/60,000). Color Variation within 3-step MacAdam ellipse (3SDCM).

**Configurable BLTBA:** 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 below.

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 them 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 RIO, RES7 sensors, or through standard Cat-5 cabling. nLight offers unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission. 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 BLTBA fits into standard 15/16" and narrow 9/16" T-grid ceiling systems.

Suitable for damp location.

For recessed mounting in hard ceiling applications, Drywall Grid Adapters (DGA) are available as an accessory. See Accessories section.

**LISTINGS** — UL/cUL Certified to meet U.S. and Canadian standards. IC rated.

DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

**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](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.

Specifications subject to change without notice.

Catalog Number
Notes
Type

BLTBA Series LED

# 2BLTBA2

2' x 2'  
LED



eldoLED



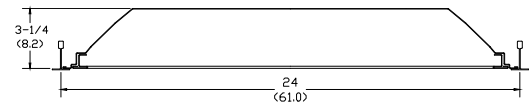
### Specifications

Length: 24 (61.0)

Width: 24 (61.0)

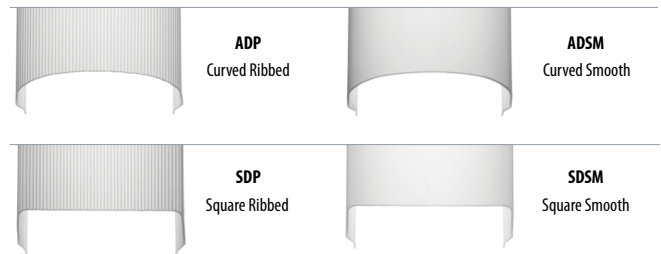
Depth: 3-1/4 (8.2)

Weight: 19 lbs (8.6 kg)



All dimensions are inches (centimeters) unless otherwise indicated.

### Multiple Diffuser Options



### 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](http://www.acuitybrands.com/aplus).

\*See ordering tree for details

# 2BLTBA Volumetric Recessed Lighting 2'x2'

 A+ Capable options indicated by this color background.

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

**Example:** 2BLTBA2 33L ADP GZ10 LP835

2BLTBA2		Lumens <sup>1</sup>		Diffuser	Voltage	Driver	Color temperature
2BLTBA2	2X2	<b>Standard efficiency (&gt;100 LPW)</b>	<b>High efficiency<sup>2</sup> (&gt;130 LPW)</b>	ADP Curved, ribbed	(blank) MVOLT	EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 82CRI, 3000 K
	BLTBA			ADSM Curved, smooth	120 120V		LP835 82CRI, 3500 K
		20L 2000	20LHE 2000	SDP Square, ribbed	277 277V	GZ1 Dims to 1% (0-10V dimming) <sup>3</sup>	LP840 82CRI, 4000 K
		33L 3300	33LHE 3300	SDSM Square, smooth	347 347V <sup>3</sup>	GZ10 Dims to 10% (0-10V dimming) <sup>4</sup>	LP850 82CRI, 5000 K
		40L 4000	40LHE 4000	<b>Diffusers w/ trim rings</b>		SLD Step-level dimming <sup>5</sup>	LP930 90CRI, 3000K
			48LHE 4800	ADPT Curved, ribbed			LP935 90CRI, 3500K
				ADSMT Curved, smooth			LP940 90CRI, 4000K
				SDPT Square, ribbed			LP950 90CRI, 5000K
				SDSMT Square, smooth			

nLight Interface	Control <sup>8</sup>	Options
<b>nLight Wired</b> (blank) no nLight <sup>®</sup> interface N80 nLight with 80% lumen management N80EMG nLight with 80% lumen management For use with generator supply EM power <sup>6</sup> N100 nLight without lumen management N100EMG nLight without lumen management For use with generator supply EM power <sup>6</sup> <b>nLight Wireless</b> (blank) no nLight <sup>®</sup> interface NLTAIR2 nLight AIR Generation 2 enabled <sup>7</sup>	<b>nLight Wired</b> (blank) No sensor control NES7 nLight™ nES 7 PIR integral occupancy sensor <sup>9</sup> NESPDT7 nLight™ nES PDT 7 dual technology integral occupancy control <sup>9</sup> NES7ADCX nLight™ nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell <sup>9</sup> NESPDT7ADCX nLight™ nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell <sup>9</sup> <b>nLight Wireless</b> RES7 nLight AIR control with PIR integral occupancy sensor and automatic dimming photocell <sup>14</sup> RES7PDT nLight AIR control with PDT dual technology integral occupancy sensor and automatic dimming photocell <sup>14</sup> RIO nLight AIR radio module without sensor <sup>14</sup>	<b>Individual Control</b> MSD7ADCX PIR integral occupancy sensor with automatic dimming control photocell <sup>10</sup> MSDDPT7ADCX PDT integral occupancy sensor with automatic dimming control photocell <sup>10</sup> BDP Disconnect Plug EL7L 700 lumen battery pack EL14L 1400 lumen battery pack E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, Certified in CA Title 20 MAEDBS BGTD Bodine Generator Transfer Device <sup>11</sup> GLR Fast-blowing fuse <sup>12</sup> GMF Slow-blowing fuse <sup>12</sup> FAO Field adjustable output <sup>13</sup> BAA Buy America(n) Act and/or Build America Buy America Qualified

Accessories next page

### Notes

- 1 Approximate lumen output.
- 2 All versions may not achieve 130+ LPW. Refer to photometry on [www.acuitybrands.com](http://www.acuitybrands.com).
- 3 Not available with EL7L or EL14L battery packs.
- 4 GZ1, GZ10 not available with any Control or Sensor options.
- 5 Not available with N80, N80EMG, N100, N100EMG, NLTAIR2, or occupancy control.
- 6 nLight EMG option requires a connection to existing nLight network. Power is provided from a separate N80 or N100 enabled fixture.
- 7 Must order with RES7, RES7PDT, or RIO sensor. Only available with EZ1 driver.
- 8 Must specify diffuser with trim rings. See sensor options on page 4.
- 9 Requires N80, N80EMG, N100, or N100EMG.
- 10 Only available with EZ1 driver option. 0-10v dimming wires not accessible via access plate. Not available with Controls options.
- 11 Requires BSE labeling.
- 12 Must specify voltage, 120 or 277 with GLR & GMF fusing.
- 13 Must specify EZ1 driver. FAO restricts use of external dimming controls. See chart on page 3 for additional details.
- 14 See UL 924 Sequence of Operation chart on page 5. When combined with the EZ1 option, can be used as a normal power sensing device for nLight AIR devices and luminaires with EM emergency options.

# 2BLTBA Volumetric Recessed Lighting 2'x2'

Accessories: Order as separate catalog number.	
DGA22	Drywall grid adapter for 2x2 recessed fixture

BSE Labeling Options	
BSE10	Drivers load transfer relay installed per manufacturer's instructions. Voltage, BGTD and BSE10 called out.
BSE14	One voltage fixture with driver load control relay supplied with one prewire (PWS option). Prewire wired for normal circuit, the control relay for emergency circuit left unconnected. Voltage, BGTD, BSE14 and prewire called out, in the description.

\*For configurations with Reloc or two voltages an RFA modification is required

nLight® Wired Control Accessories: Order as separate catalog number. Visit <a href="http://www.acuitybrands.com/products/controls/nlight">www.acuitybrands.com/products/controls/nlight</a> .			
WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 RJB / nCM PDT 9 RJB
On/Off & raise/lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM10 RJB / nCM PDT 10 RJB
Graphic touchscreen	nPOD GFX [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 <a href="http://www.acuitybrands.com/products/controls/nlightair">www.acuitybrands.com/products/controls/nlightair</a> .	
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
On/Off & raise/lower single pole	rPODBZ DX WH G2

rCMS <sup>1</sup>						Example: RCMS PDT 10 AR G2	
Series / Detection	Power Supply <sup>1</sup>	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.

Replacement Parts: Order as separate catalog number.	
DBLTR24 ADP LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 SDP LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 ADSM LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 SDSM LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 ADPT LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 SDPT LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 ADSMT LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 SDSMT LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 ADPT SENSOR LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 SDPT SENSOR LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 ADSMT SENSOR LENS ASSEMBLY	2 ft. replacement lens (trims included)
DBLTR24 SDSMT SENSOR LENS ASSEMBLY	2 ft. replacement lens (trims included)
U10528B	2 ft. replacement troffer trim strip
RK8BDP 2P U	Disconnect Plug (BDP), 2 Pole, Package of 1
RK8BDP 3P U	Disconnect Plug (BDP), 3 Pole, Package of 1
RK8BDP 2P J10	Disconnect Plug (BDP), 2 Pole, Package of 10
RK8BDP 2P J40	Disconnect Plug (BDP), 2 Pole, Package of 40



# 2BLTBA Volumetric Recessed Lighting 2'x2'

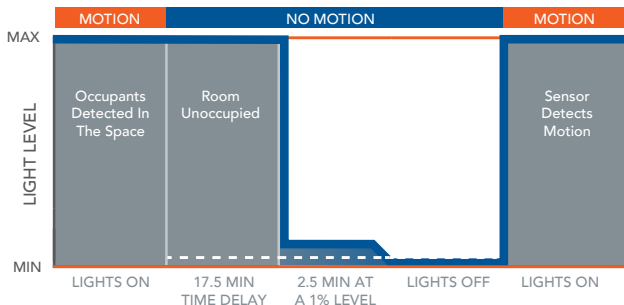
Sensor Options					
Option	Automatic Dimming Photocell	Occupancy Sensing		nLight Wired Networking	nLight AIR Networking
		PIR	PDT		
MSD7ADCX	X	X			
MSDPDT7ADCX	X		X		
NES7		X		X	
NES7ADCX	X	X		X	
NESPDT7			X	X	
NESPDT7ADCX	X		X	X	
RES7	X	X			X
RES7PDT	X	X	X		X

## 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.

## Sequence of Operation

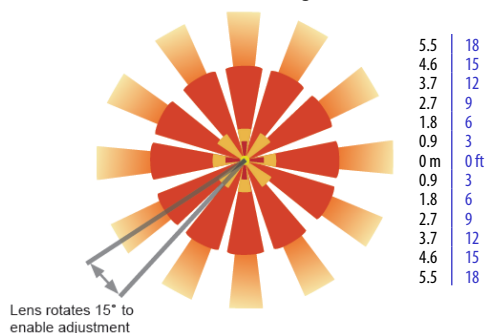


\*The presetting on the automatic dimming photocell is 5fc.

## 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

## 9 FT Mounting



## Basic nLight Zone

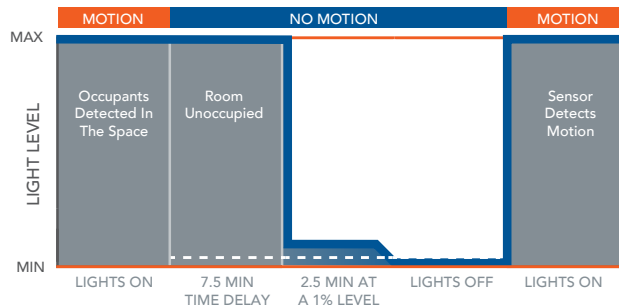


## nLight Wired Networking

The nES 7 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 nES PDT 7 dual technology sensor is recommended. The nES PDT 7 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



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

## 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.



## Simple as 1,2,3

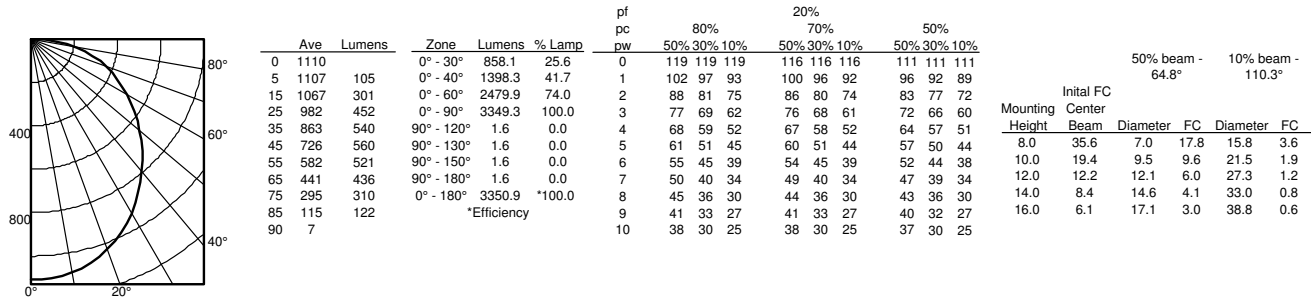
1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CLAIRITY+ app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome



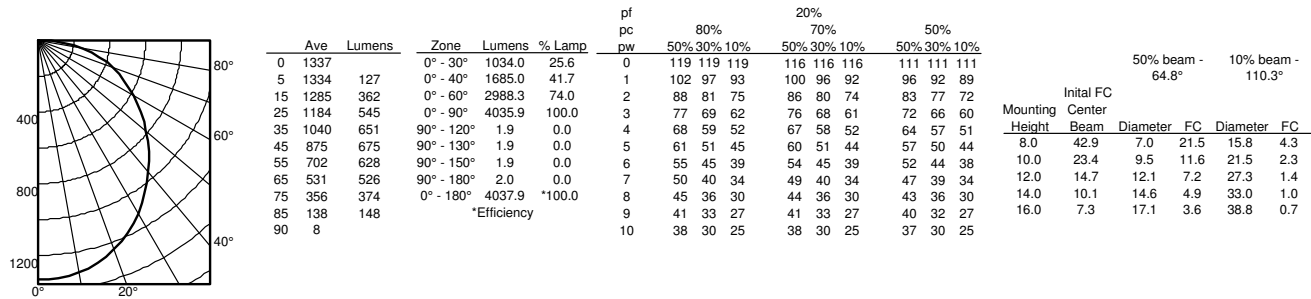
# 2BLTBA Volumetric Recessed Lighting 2'x2'

## PHOTOMETRICS

2BLTBA2 33L ADP LP835, 3351 delivered lumens.

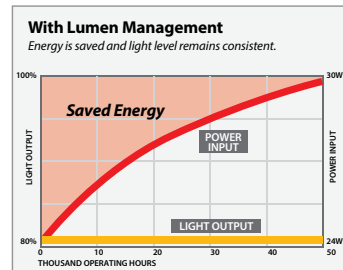
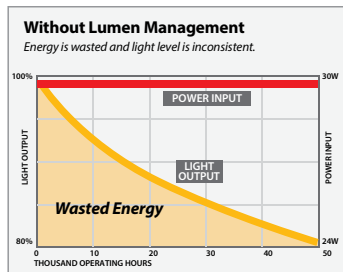


2BLTBA2 40L ADP LP835, 4038 lumens delivered.

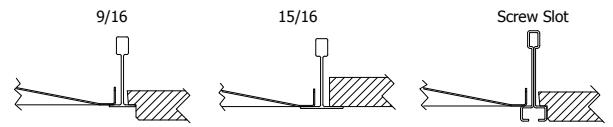


## Constant Lumen Management

Enabled by the embedded nLight control, the BLT 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.



MOUNTING DATA	
Ceiling Type	Appropriate Trim Type
Exposed grid tee (1' and 9/16")	G
Concealed grid tee	G
Plaster or plasterboard	G*



\*DGA accessory available to provide ceiling trim flange and fixture support for plaster or plasterboard ceiling. Recommended rough-in dimensions for DGA installation is 24-3/4" x 24-3/4" (Tolerance is +1/8", -0").

### 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.

### 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 rP20, 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.

## 2BLTBA Volumetric Recessed Lighting 2'x2'

Performance Data			
Lumen Package	Lumens	Input Watts	LPW
20L ADP LP830	1981	16	127
20L ADP LP835	2051	16	132
20L ADP LP840	2084	16	134
20L ADP LP850	2143	16	138
33L ADP LP830	3237	26	125
33L ADP LP835	3351	26	130
33L ADP LP840	3404	26	132
33L ADP LP850	3502	26	135
40L ADP LP830	3900	31	125
40L ADP LP835	4038	31	130
40L ADP LP840	4102	31	132
40L ADP LP850	4220	31	136

HE Performance Data			
Lumen Package	Lumens	Input Watts	LPW
20LHE ADP LP830	2008	16	129
20LHE ADP LP835	2079	16	134
20LHE ADP LP840	2112	16	136
20LHE ADP LP850	2173	16	140
33LHE ADP LP830	3068	24	128
33LHE ADP LP835	3176	24	133
33LHE ADP LP840	3227	24	135
33LHE ADP LP850	3319	24	139
40LHE ADP LP830	3797	29	129
40LHE ADP LP835	3931	29	133
40LHE ADP LP840	3994	29	135
40LHE ADP LP850	4108	29	139
48LHE ADP LP830	4532	36	126
48LHE ADP LP835	4692	36	130
48LHE ADP LP840	4767	36	132
48LHE ADP LP850	4903	36	136