

## FEATURES & SPECIFICATIONS

**INTENDED USE** — The BLT Best-in-Value Low Profile 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 BLT the perfect choice for many lighting applications including schools, offices and other commercial spaces, retail, hospitals and healthcare facilities. The low profile BLT design (2-3/8") 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.

**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).

**Non-Configurable BLT:** Generic 0-10 volt dimming driver. Dims to 10%

**Configurable BLT:** 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 BLT's low profile design of only 2-3/8" provides increased installation flexibility especially in restrictive plenum applications. The BLT 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** — CSA 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.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

**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

BLT Series LED



# 2BLT

2' x 2'  
LED



eldoLED



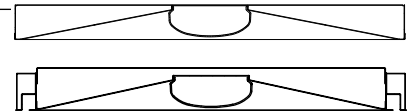
### Specifications

Length: 23-3/4 (60.3)

Width: 23-3/4 (60.3)

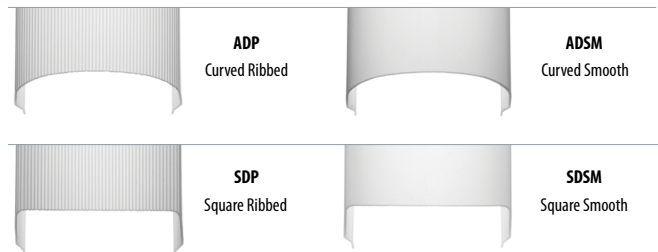
Depth: 2-3/8 (6.0)

Depth with Air supply/return: 2-3/4 (6.9)



All dimensions are inches (centimeters) unless otherwise specified.

## 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

# 2BLT 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:** 2BLT2 33L ADP EZ1 LP835

2BLT2		Air function		Lumens <sup>2</sup>		Diffuser		Voltage		Driver		Color temperature	
2BLT2	2X2 BLT	(blank) Static	Air supply/return <sup>1</sup>	<b>Standard efficiency (&gt;100 LPW)</b>	<b>High efficiency<sup>3,4</sup> (&gt;130 LPW)</b>	ADP Curved, linear prisms	ADSM Curved, smooth	(blank) MVOLT	EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 82CRI, 3000 K			
				20L 2000	20LHE 2000	SDP Square, linear prisms	SDSM Square, smooth	120 120V	GZ1 Dims to 1% (0-10V dimming) <sup>6</sup>	LP835 82CRI, 3500 K			
				33L 3300	33LHE 3300	ADPT Curved, linear prisms	ADSMT Curved, smooth	277 277V	GZ10 Dims to 10% (0-10V dimming) <sup>6</sup>	LP840 82CRI, 4000 K			
				40L 4000	40LHE 4000	SDPT Square, linear prisms	SDSMT Square, smooth	347 347V <sup>5</sup>	SLD Step-level dimming <sup>7</sup>	LP850 82CRI, 5000 K			
					48LHE 4800	<b>Includes trim rings to match sensed version</b>			LE1 Lutron Ecosystem driver dims to 1% <sup>7,8</sup>	LP930 90CRI, 3000K			

nLight Interface		Control <sup>11</sup>		Options	
<b>nLight Wired</b>		<b>nLight Wired</b>		<b>Individual Control</b>	
(blank) no nLight <sup>®</sup> interface	(blank) No sensor control	MSD7ADCX PIR integral occupancy sensor with automatic dimming control photocell <sup>7,13</sup>	MSD7ADCX PIR integral occupancy sensor with automatic dimming control photocell <sup>7,13</sup>	EL7L 700 lumen battery pack (non-CEC compliant) <sup>14</sup>	
N80 nLight with 80% lumen management	NES7 nLight™ nES 7 PIR integral occupancy sensor <sup>12</sup>	MSDPDT7ADCX PDT integral occupancy sensor with automatic dimming control photocell <sup>7,13</sup>	MSDPDT7ADCX PDT integral occupancy sensor with automatic dimming control photocell <sup>7,13</sup>	EL14L 1400 lumen battery pack (non-CEC compliant) <sup>14</sup>	
N80EMG nLight with 80% lumen management For use with generator supply EM power <sup>9</sup>	NESPDT7 nLight™ nES PDT 7 dual technology integral occupancy control <sup>12</sup>			EL14LSD 1400 lumen battery pack with self-diagnostic testing feature (non-CEC compliant) <sup>14,15</sup>	
N100 nLight without lumen management	NES7ADCX nLight™ nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell <sup>12</sup>			E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant <sup>14</sup>	
N100EMG nLight without lumen management For use with generator supply EM power <sup>9</sup>	NESPDT7ADCX nLight™ nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell <sup>12</sup>			CP Chicago plenum <sup>16</sup>	
<b>nLight Wireless</b>		<b>nLight Wireless</b>		CP Bodine Generator Transfer Device <sup>17</sup>	
(blank) no nLight <sup>®</sup> interface	RES7 nLight AIR PIR integral occupancy sensor with automatic dimming photocell for Networking Capabilities <sup>13</sup>			BGTD 6' pre-wire, 3/8" diameter, 18 gauge, 1 circuit	
NLTAIR2 nLight AIR Generation 2 enabled <sup>10</sup>	RES7PDT nLight AIR microphonics dual technology occupancy sensor with automatic dimming photocell <sup>13</sup>			PWS1836 6' pre-wire, 3/8" diameter, 18 gauge, 2 circuit	
	RIO nLight AIR radio module without sensor			PWS1846 6' pre-wire, 3/8" diameter, 18 gauge, 2 circuit	
				PWS1846 PWSLV Two cables: one 6' pre-wire, 3/8" diameter, 18 gauge, 2 circuits; one 6' pre-wire, 3/8" diameter, 18 gauge, purple and gray <sup>18</sup>	
				PWS1856LV 6' pre-wire, 3/8" diameter, 18 gauge, 1 circuit w/low voltage purple and grey wires <sup>18</sup>	
				GLR Fast-blowing fuse <sup>19</sup>	
				GMF Slow-blowing fuse <sup>19</sup>	
				NPLT Narrow pallet	
				RRL_ RELOC <sup>®</sup> -ready luminaire <sup>20</sup>	
				LATC Earthquake clip	
				DWAM Anti-Microbial paint	
				JP32 Job packaging	
				IP5X Gasketed diffuser compartment to meet IP5X rating <sup>21</sup>	

Non-Configurable BLT								
Stock/MTO	Catalog Description *	UPC	Lumens	Wattage	LPW	Color Temperature	Voltage	Pallet Qty
Stock	2BLT2 33L ADP LP835	00190887529708	3241	30	108	3500K/82 CRI	120-277	52
	2BLT2 33L ADP LP840	00190887529739	3313	30	111	4000K/82CRI	120-277	52
	2BLT2 33L ADP EL14L LP835	00190887529890	3241	30	108	3500K/82CRI	120-277	52
	2BLT2 33L ADP EL14L LP840	00190887529937	3313	30	111	4000K/82CRI	120-277	52
MTO	2BLT2 33L ADP 347 LP835		3241	30	108	3500K/82 CRI	347	52
	2BLT2 33L ADP 347 LP840		3313	30	111	4000K/82CRI	347	52

\*Generic 0-10V Dimming to 10%.

Notes and Accessories next page

# 2BLT Volumetric Recessed Lighting 2'x2'

## Notes

- 1 Consult factory for airflow data.
- 2 Approximate lumen output.
- 3 All versions may not achieve 130+ LPW. Refer to photometry on [www.acuitybrands.com](http://www.acuitybrands.com).
- 4 Air supply/return option, 90 CRI, and versions with integral sensor trim rings may not achieve 130 LPW.
- 5 Not available with SLD EL7L, or EL14L options.
- 6 GZ1 and GZ10 not available with any Control or Sensor options
- 7 Not available with N80, N80EMG, N100, N100EMG, NLTAIR, or occupancy control.
- 8 Not available with controls, occupancy controls, or PWS options. Consult factory for Hi-Lume dimming.
- 9 nLight EMG option requires a connection to existing nLight network. Power is provided from a separate N80 or N100 enabled fixture.
- 10 Must order with RES7, RES7PDT or Rio module. Must order with EZ1 driver.
- 11 Must specify diffuser with trim rings. See sensor options on page 4.
- 12 Requires N80, N80EMG, N100, or N100EMG.
- 13 Only available with EZ1 driver option. 0-10v dimming wires not accessible via access plate.
- 14 When using pre-wire option, use PWS1846 or PWS1846 PWSLV.
- 15 For more information, please see the [PSSD2 specification sheet](#).
- 16 Not available with N80, N80EMG, N100, or N100EMG.
- 17 Must specify voltage. Requires BSE labeling, voltage specific. Consult factory for options.
- 18 Not available with nLight wired/wireless network or individual controls.
- 19 Must specify voltage, 120 or 277, with GLR and GFM fusing.
- 20 For ordering logic consult [RRL\\_2013](#).
- 21 Not available with air supply/return or Wired Networking (NES\_) and Individual Control (MSD\_) sensors.

Accessories: Order as separate catalog number.	
DGA22	Drywall grid adapter for 2x2 recessed fixture
2X2SMK	Surface Mount Troffer Kit

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> .			
<b>WallPod stations</b>	<b>Model number</b>	<b>Occupancy sensors</b>	<b>Model number</b>
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]
<b>Photocell controls</b>	<b>Model number</b>	<b>Cat-5 cable (plenum rated)</b>	<b>Model number</b>
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> .	
<b>Wall switches</b>	<b>Model number</b>
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		

Replacement Parts: Order as separate catalog number.		
*247WJV	2DBLT24 ADP LENS ASSEMBLY	2 ft. replacement lens
*249P2P	2DBLT24 SDP LENS ASSEMBLY	2 ft. replacement lens
*249P2W	2DBLT24 ADSM LENS ASSEMBLY	2 ft. replacement lens
*249P32	2DBLT24 SDSM LENS ASSEMBLY	2 ft. replacement lens
*237LT1	2DBLT24 ADPT LENS ASSEMBLY	2 ft. replacement lens
*237LT3	2DBLT24 SDPT LENS ASSEMBLY	2 ft. replacement lens
*237LT5	2DBLT24 ADSMT LENS ASSEMBLY	2 ft. replacement lens
*237LT7	2DBLT24 SDSMT LENS ASSEMBLY	2 ft. replacement lens
*237LT9	2DBLT24 ADPT SENSOR LENS ASSEMBLY	2 ft. replacement lens
*237M4Y	2DBLT24 SDPT SENSOR LENS ASSEMBLY	2 ft. replacement lens
*237M57	2DBLT24 ADSMT SENSOR LENS ASSEMBLY	2 ft. replacement lens
*237M5H	2DBLT24 SDSMT SENSOR LENS ASSEMBLY	2 ft. replacement lens

## Notes

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



# 2BLT 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
RESPDT7	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.

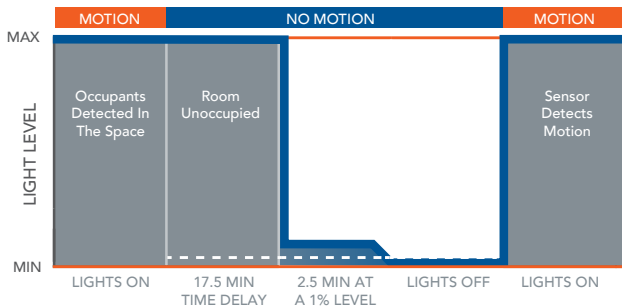


## nLight Wired Networking

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.

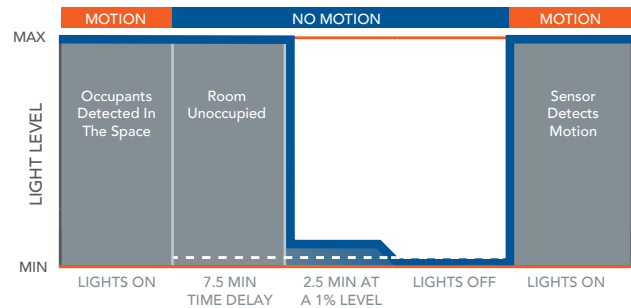
For areas like restrooms, private offices, open offices, conference rooms or any space with obstructions, the nES PDT 7 dual technology sensor is recommended. The nES PDT 7 utilizes both PIR (passive infrared) and Microphonics technologies to detect occupancy. Additionally, the NESPDT7ADCX includes an 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.

## Sequence of Operation

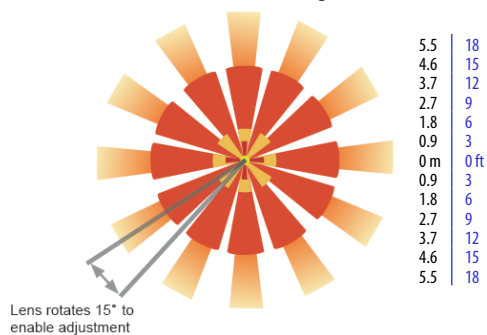


\*The presetting on the automatic dimming photocell is 5fc.

## Sensor Coverage Pattern Mini 360° Lens

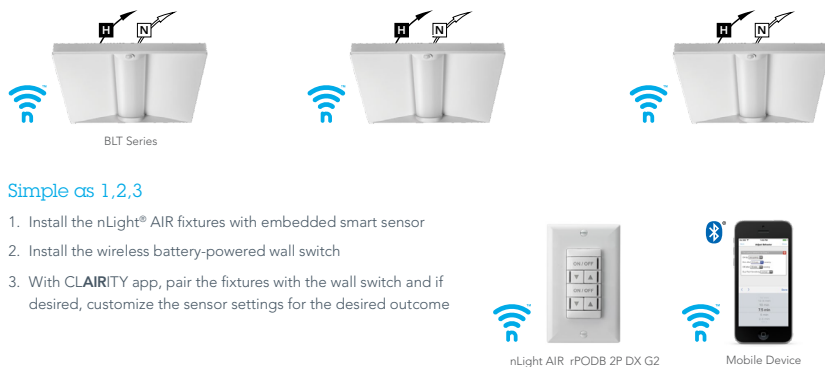
- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m)
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and
- 1.75x up to 20 ft (6.10 m).
- Provides 12 ft (3.66 m) radial detection of 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



## nLight AIR Wireless

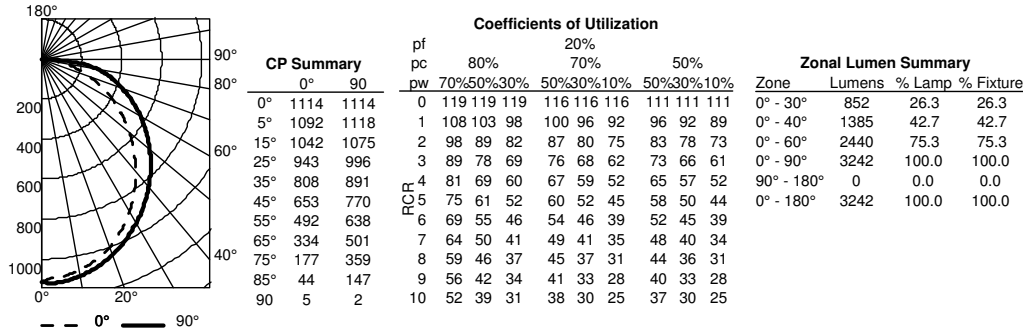
nLight AIR is the ideal solution for retrofit or new construction spaces where adding additional wiring can be labor intensive and nLight AIR is available with or without an integral sensor. The integrated RES7 or RES7PDT smart sensors are part of each luminaire in the nLight AIR network, which can be 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.



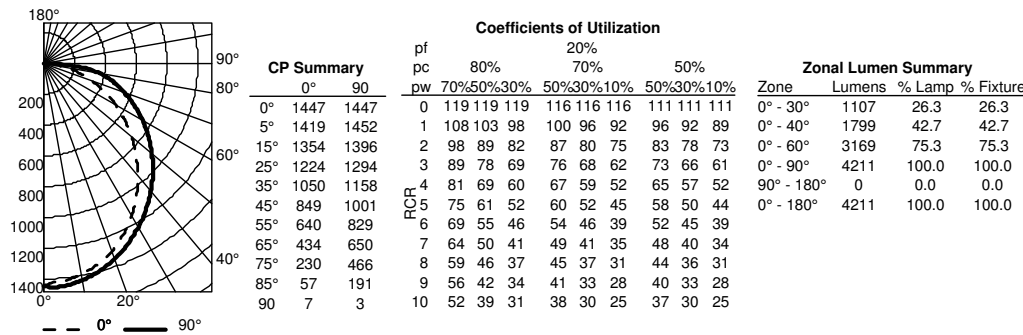
# 2BLT Volumetric Recessed Lighting 2'x2'

## PHOTOMETRICS

2BLT2 33L ADP LP835, 3241 delivered lumens, test no. LTL28918P4, tested in accordance to IESNA LM-79



2BLT2 40L ADP LP835, 4210 delivered lumens, test no. LTL28918P5, tested in accordance to IESNA LM-79

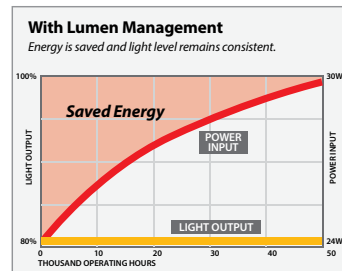
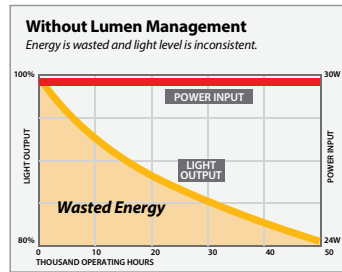


\*DGA accessory available to provide ceiling trim flange and fixture support for plaster or plasterboard ceiling. Recommended rough-in dimensions for DGA installation is 24-3/4" x 24-3/4" (Tolerance is +1/8", -0").

# 2BLT Volumetric Recessed Lighting 2'x2'

## Constant Lumen Management

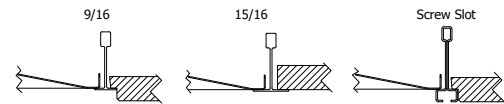
Enabled by the embedded nLight control, the BLT actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



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	
AIR 20L ADP LP830	2019	20	103	
AIR 20L ADP LP835	2060	20	105	
AIR 20L ADP LP840	2116	20	108	
AIR 20L ADP LP850	2134	20	109	
AIR 33L ADP LP830	2957	28	104	
AIR 33L ADP LP835	3017	28	107	
AIR 33L ADP LP840	3099	28	109	
AIR 33L ADP LP850	3126	28	110	
AIR 40L ADP LP830	3841	39	99	
AIR 40L ADP LP835	3919	39	101	
AIR 40L ADP LP840	4025	39	104	
AIR 40L ADP LP850	4060	39	104	

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 LP850	3891	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	

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



### 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.

\*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").