LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

BLT Series LED

2BLT

2' x 2'
LED

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. Injection molded diffuser light traps add a finished look to the diffuser ends and help seal the diffuser to the housing end plates. Optional diffuser trim rings provide an attractive mounting for integral sensors as well as adding a decorative element to the luminaire aesthetics.

LED boards are accessible from below; driver is 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. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

Non-Configurable BLT: 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 it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight enabled control devices and the BLT luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission.

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 2 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 2 for the nLight sensor options.

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) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List to confirm which versions are qualified.

WARRANTY — 5-year limited warranty.

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.

Specifications

Length: 23-3/4 (60.3)

Width: 23-3/4 (60.3)

Depth: 2-3/8 (6.0)

All dimensions are inches (centimeters) unless otherwise specified.

Mulitple Diffuser Options

ADP
Curved Ribbed

ADSM
Curved Smooth

SDP
Square Ribbed

SDSM
Square Smooth

2BLT Volumetric Recessed Lighting 2'x2'

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

Example: 2BTL2 33L ADPT EZ1 LP835

2BLT2

Series	Air function	Lumens[1]		Diffuser	Voltage	Driver	Color temperature
2BLT2 2X2 BLT	(blank) Static	**Standard efficiency (>100 LPW)** 20L 2000 33L 3300 40L 4000	**High efficiency (>130 LPW)** 40LHE 4000 48LHE 4800	ADP Curved, Linear Prisms ADSM Curved, Smooth SDP Square, Linear Prisms SDSM Square, Smooth **Diffusers w/ trim rings** ADPT Curved, Linear Prisms ADSMT Curved, Smooth SDPT Square, Linear Prisms SDSMT Square, Smooth	(blank) MVOLT 347 347[2]	EZ1 eldoLED dims to 1% (0-10 volt dimming) SLD Step-level dimming[3]	LP830 82CRI, 3000 K LP835 82CRI, 3500 K LP840 82CRI, 4000 K LP850 82CRI, 5000 K LP930 90CRI, 3000K LP935 90CRI, 3500K LP940 90CRI, 4000K LP950 90CRI, 5000K

Controls

(blank)	No nLight®
N80	nLight® with 80% lumen management
N80EMG	nLight® with 80% lumen management For use with generator supply EM power[4]
N100	nLight® without lumen management
N100EMG	nLight® without lumen management For use with generator supply EM power[4]

Occupancy Control[5]

(blank)	No sensor control
	nLight Wired Networking
NES7	nLight™ nES 7 PIR integral occupancy sensor[6]
NESPDT7	nLight™ nES PDT 7 dual technology integral occupancy control[6]
NES7ADCX	nLight™ nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell[6]
NESPDT7ADCX	nLight™ nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell[6]
	Individual Control
MSD7ADCX	PIR integral occupancy sensor with automatic dimming control photocell[3,7]
MSDPDT7ADCX	PDT integral occupancy sensor with automatic dimming control photocell[3,7]

Options

EL7L	700 lumen battery pack[8]
EL14L	1400 lumen battery pack[8]
CP	Chicago plenum
BGTD	Bodine Generator Transfer Device
PWS1836	6' pre-wire, 3/8" diameter, 18 gauge, 1 circuit
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
PWS1856LV	6' pre-wire, 3/8" diameter, 18 gauge, 1 circuit w/low voltage purple and grey wires
GLR	Fast-blowing fuse[9]
GMF	Slow-blowing fuse[9]
NPLT	Narrow pallet
RRL_	RELOC®-ready luminaire[10]
LATC	Earthquake clip
DWAM	Anti-Microbial paint

Accessories: *Order as separate catalog number.*

DGA22	Drywall grid adapter for 2x2 recessed fixture

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

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX	Wall switch with raise/lower	nWSXPDTLVDX
Photocell controls	**Model number**	**Cat-5 cable bundles (plenum rated)**	**Model number**
On/Off & Dimming	nCM ADCX	10', 15 pieces per bundle	CAT5 10FT
		30', 15 pieces per bundle	CAT5 30FT

Non-Configurable BLT Configurations

Stock/MTO	Catalog Description *	UPC	Lumens	Wattage	LPW	Color Temperature	Voltage	Pallet Qty
Stock	2BLT2 33L ADP LP835	00889804471908	3241	30	108	3500K/82 CRI	120-277	52
	2BLT2 33L ADP LP840	00889804471939	3313	30	111	4000K/82CRI	120-277	52
MTO	2BLT2 33L ADP 347 LP835	00889804569384	3241	30	108	3500K/82 CRI	347	52
	2BLT2 33L ADP 347 LP840	00889804569407	3313	30	111	4000K/82CRI	347	52

*0-10V Dimming to 10%.

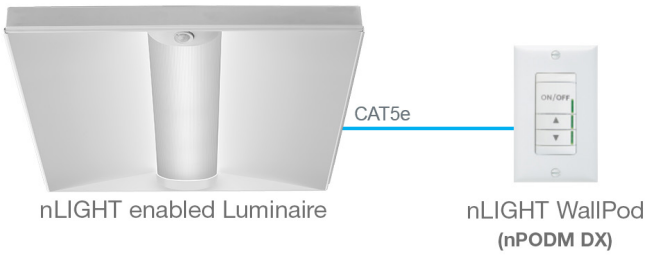
Notes

1 Approximate lumen output.
2 Not available with SLD,EL7L or EL14L battery packs.
3 Not available with N80, N80EMG, N100 N100EMG or occupancy control.
4 nLight EMG option requires a connection to existing nLight network. Power is provided from a separate N80 or N100 enabled fixture.
5 Must specify diffuser with trim rings. See sensor options on page 3.
6 Requires N80, N80EMG, N100, or N100EMG.
7 Only available with EZ1 driver option. 0-10v dimming wires not accessible via access plate.
8 When using pre-wire option, use PWS1846. or PWS1846 PWSLV.
9 Must specify voltage, 120 or 277.
10 For ordering logic consult: RRL_2013.

2BLT Volumetric Recessed Lighting 2'x2'

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

Basic nLight Zone



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.

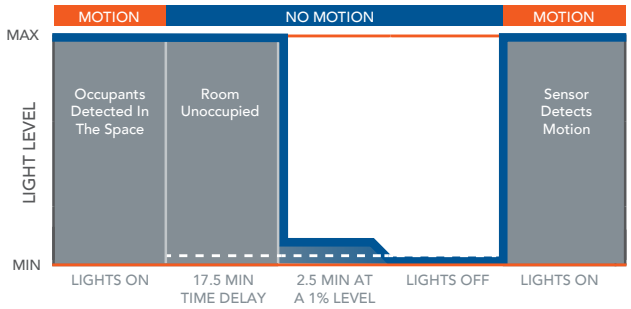
The MSDPDT7ADCX PIR/Microphonics Dual Tech occupancy sensor/automatic dimming photocell is ideal for areas with obstructions and where daylight harvesting is desired. Suggested applications include, but not limited to, open offices, private offices, classrooms, public restrooms, and conference rooms.

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.

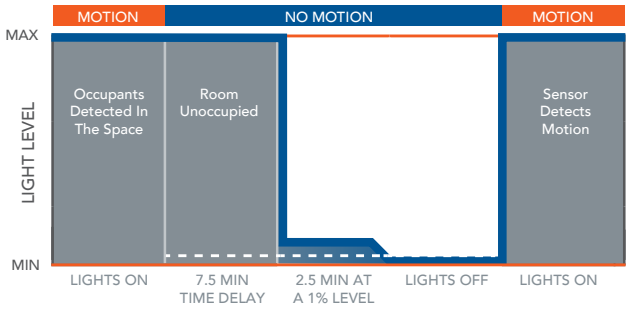
For areas like restrooms, private offices, open offices, conference rooms or any space with obstructions, the nES PDT 7 dual technology sensor is recommended. The nES PDT 7 utilizes both PIR (passive infrared) and Microphonics technologies to detect occupancy. Additionally, the NESPDT7ADCX includes an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

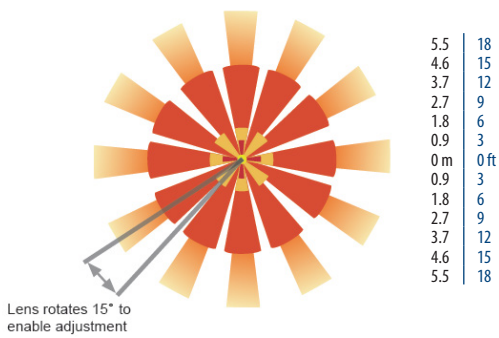


*The presetting on the automatic dimming photocell is 5fc.

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

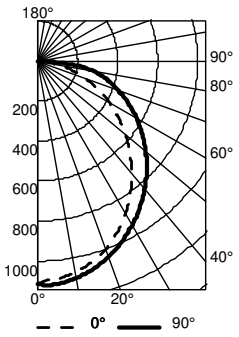
9 FT Mounting



2BLT Volumetric Recessed Lighting 2'x2'

PHOTOMETRICS

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



CP Summary

	0°	90
0°	1114	1114
5°	1092	1118
15°	1042	1075
25°	943	996
35°	808	891
45°	653	770
55°	492	638
65°	334	501
75°	177	359
85°	44	147
90	5	2

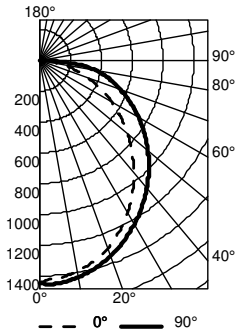
Coefficients of Utilization

RCR	pf	80%			20%			70%			50%		
	pc												
	pw	70%	50%	30%	50%	30%	10%	50%	30%	10%	50%	30%	10%
0		119	119	119	116	116	116	111	111	111			
1		108	103	98	100	96	92	96	92	89			
2		98	89	82	87	80	75	83	78	73			
3		89	78	69	76	68	62	73	66	61			
4		81	69	60	67	59	52	65	57	52			
5		75	61	52	60	52	45	58	50	44			
6		69	55	46	54	46	39	52	45	39			
7		64	50	41	49	41	35	48	40	34			
8		59	46	37	45	37	31	44	36	31			
9		56	42	34	41	33	28	40	33	28			
10		52	39	31	38	30	25	37	30	25			

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	852	26.3	26.3
0° - 40°	1385	42.7	42.7
0° - 60°	2440	75.3	75.3
0° - 90°	3242	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	3242	100.0	100.0

2BLT2 40L ADP L835, 4210 delivered lumens, test no. LTL28918P5, tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	1447	1447
5°	1419	1452
15°	1354	1396
25°	1224	1294
35°	1050	1158
45°	849	1001
55°	640	829
65°	434	650
75°	230	466
85°	57	191
90	7	3

Coefficients of Utilization

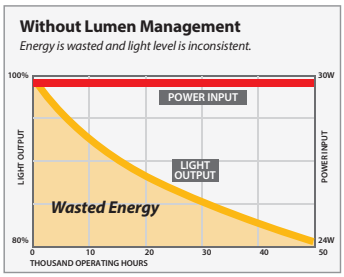
RCR	pf	80%			20%			70%			50%		
	pc												
	pw	70%	50%	30%	50%	30%	10%	50%	30%	10%			
0		119	119	119	116	116	116	111	111	111			
1		108	103	98	100	96	92	96	92	89			
2		98	89	82	87	80	75	83	78	73			
3		89	78	69	76	68	62	73	66	61			
4		81	69	60	67	59	52	65	57	52			
5		75	61	52	60	52	45	58	50	44			
6		69	55	46	54	46	39	52	45	39			
7		64	50	41	49	41	35	48	40	34			
8		59	46	37	45	37	31	44	36	31			
9		56	42	34	41	33	28	40	33	28			
10		52	39	31	38	30	25	37	30	25			

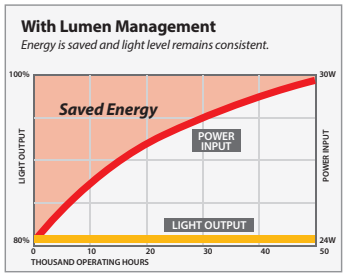
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	1107	26.3	26.3
0° - 40°	1799	42.7	42.7
0° - 60°	3169	75.3	75.3
0° - 90°	4211	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	4211	100.0	100.0

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.

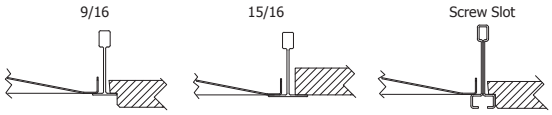




Performance Data			
Lumen Package	**Lumens**	**Input Watts**	**LPW**
20L ADP LP830	2157	20	110
20L ADP LP835	2213	20	113
20L ADP LP840	2261	20	116
20L ADP LP850	2373	20	121
33L ADP LP830	3160	30	106
33L ADP LP835	3241	30	108
33L ADP LP840	3313	30	111
33L ADP LP850	3476	30	116
40L ADP LP830	4103	39	106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

HE Performance Data			
Lumen Package	**Lumens**	**Input Watts**	**LPW**
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*



*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").