LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

BLT Series LED

BLT

1' x 4'
LED

eldoLED nLIGHT

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 (2-3/4") 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 2-3/4" 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 at to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at

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.

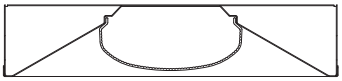
Specifications subject to change without notice.

Specifications

Length: 47-3/4 (121.2)

Width: 11-3/4 (29.8)

Depth: 2-3/4 (6.9)



All dimensions are inches (centimeters) unless otherwise specified.

Multiple Diffuser Options

ADP
Curved Ribbed

ADSM
Curved Smooth

SDP
Square Ribbed

SDSM
Square Smooth

BLT Volumetric Recessed Lighting 1'x4'

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

Example: BTL4 30L ADP EZ1 LP835

BLT4

Series	Air function	Lumens[1]		Diffuser	Voltage	Driver	Color temperature
BLT4 1x4 BLT	(blank) Static	**Standard efficiency (>100 LPW)**	**High efficiency (>130 LPW)**	ADP Curved, Linear Prisms	(blank) MVOLT	EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 82CRI, 3000K
		20L 2000	48LHE 4800	ADSM Curved, Smooth	347 347[2]	SLD Step-level dimming[3]	LP835 82CRI, 3500K
		30L 3000	60LHE 6000	SDP Square, Linear Prisms			LP840 82CRI, 4000K
		40L 4000		SDSM Square, Smooth			LP850 82CRI, 5000K
		48L 4800		**Diffusers w/ trim rings**			LP930 90CRI, 3000K
		60L 6000		ADPT Curved, Linear Prisms			LP935 90CRI, 3500K
				ADSMT Curved, Smooth			LP940 90CRI, 4000K
				SDPT Square, Linear Prisms			LP950 90CRI, 5000K
				SDSMT Square, Smooth			

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	TTwo 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.*

DGA14	Drywall grid adapter for 1x4 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	BLT4 40L ADP LP835	00889804541557	3975	34	116	3500K/82CRI	120-277	39
	BLT4 40L ADP LP840	00889804541571	4062	34	119	4000K/82CRI	120-277	39
MTO	BLT4 40L ADP 347 LP835	00889804569414	3975	34	116	3500K/82CRI	347	39
	BLT4 40L ADP 347 LP840	00889804569438	4062	34	119	4000K/82CRI	347	39

*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 trims 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.

BLT Volumetric Recessed Lighting 1'x4'

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.

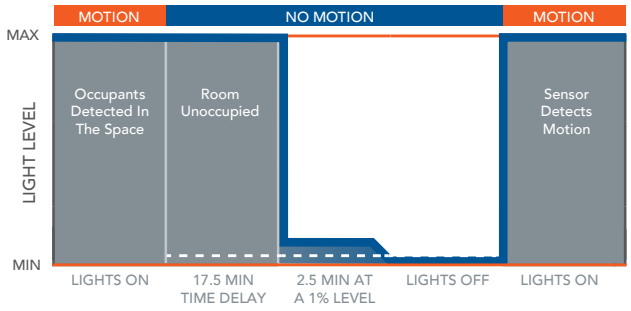
The MSDPDT7ADCX PIR/Microphonics Dual Tech occupancy sensor/automatic dimming photocell is ideal for areas with obstructions and where daylight harvesting is desired. Suggested applications include, but not limited to, open offices, private offices, classrooms, public restrooms, and conference rooms.

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.

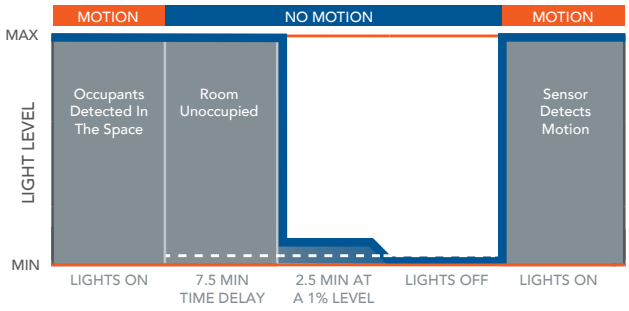
For areas like restrooms, private offices, open offices, conference rooms or any space with obstructions, the nES PDT 7 dual technology sensor is recommended. The nES PDT 7 utilizes both PIR (passive infrared) and Microphonics technologies to detect occupancy. Additionally, the NESPDT7ADCX includes an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

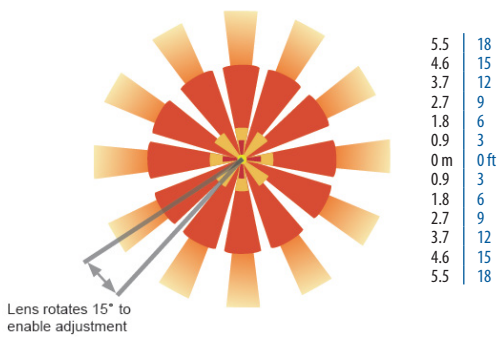


*The presetting on the automatic dimming photocell is 5fc.

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

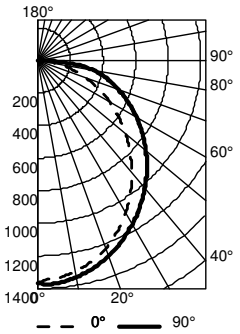
9 FT Mounting



BLT Volumetric Recessed Lighting 1'x4'

PHOTOMETRICS

BLT4 40L ADP LP835, 3975 delivered lumens, test no. LTL28918P61, tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	1366	1366
5°	1340	1371
15°	1278	1318
25°	1156	1222
35°	991	1093
45°	801	945
55°	604	783
65°	410	614
75°	218	440
85°	54	180
90	6	3

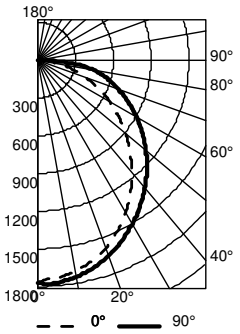
Coefficients of Utilization

	pf			20%								
	pc	80%			70%			50%				
	pw	70%	50%	30%	50%	30%	10%	50%	30%	10%		
RCR	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°	1045	26.3	26.3
0° - 40°	1698	42.7	42.7
0° - 60°	2993	75.3	75.3
0° - 90°	3977	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	3977	100.0	100.0

BLT4 48L ADP L835, 5148 delivered lumens, test no. LTL28918P65, tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	1769	1769
5°	1735	1776
15°	1655	1707
25°	1497	1582
35°	1284	1416
45°	1038	1224
55°	782	1013
65°	531	795
75°	282	570
85°	70	233
90	8	3

Coefficients of Utilization

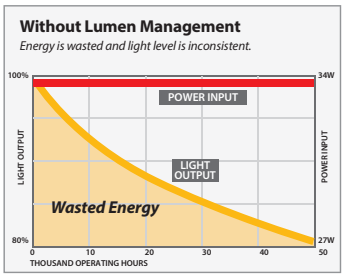
	pf			20%								
	pc	80%			70%			50%				
	pw	70%	50%	30%	50%	30%	10%	50%	30%	10%		
RCR	0	119	119	119	116	116	116	111	111	111		
	1	108	103	98	100	96	92	96	92	89		
	2	98	89	82	87	80	75	83	78	73		
	3	89	78	69	76	68	62	73	66	61		
	4	81	69	60	67	59	52	65	57	52		
	5	75	61	52	60	52	45	58	50	44		
	6	69	55	46	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		

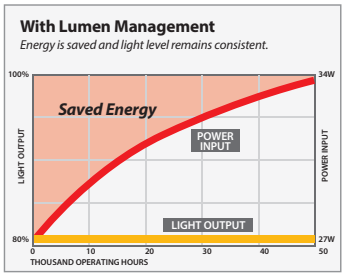
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	1353	26.3	26.3
0° - 40°	2200	42.7	42.7
0° - 60°	3875	75.3	75.3
0° - 90°	5150	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	5150	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

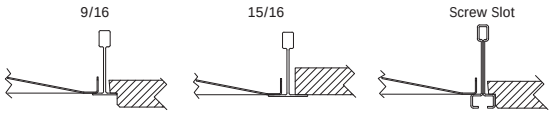
Lumen Package	Lumens	Input Watts	LPW
20L ADP LP830	2231	19	120
20L ADP LP835	2289	19	123
20L ADP LP840	2339	19	126
20L ADP LP850	2454	19	132
30L ADP LP830	3311	29	113
30L ADP LP835	3397	29	116
30L ADP LP840	3471	29	119
30L ADP LP850	3642	29	124
40L ADP LP830	3875	34	113
40L ADP LP835	3975	34	116
40L ADP LP840	4062	34	119
40L ADP LP850	4262	34	125
48L ADP LP830	5018	46	110
48L ADP LP835	5148	46	112
48L ADP LP840	5261	46	115
48L ADP LP850	5520	46	121
60L ADP LP830	5969	53	112
60L ADP LP835	6124	53	115
60L ADP LP840	6258	53	117
60L ADP LP850	6566	53	123

HE Performance Data

Lumen Package	Lumens	Input Watts	LPW
48LHE ADP LP830	4701	36	129
48LHE ADP LP835	4822	36	132
48LHE ADP LP840	4929	36	135
48LHE ADP LP850	5171	36	142
60LHE ADP LP830	5400	42	128
60LHE ADP LP835	5540	42	132
60LHE ADP LP840	5662	42	134
60LHE ADP LP850	5941	42	141

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 12-3/4" x 48-3/4" (Tolerance is +1/8", -0").