LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

BLT Series LED

BLT

1' x 2'
LED

ISO Class 5-9 · A+ CAPABLE · DLC LISTED · 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 — Prior to fabrication, BLT components are coated with a proprietary paint blend and die-formed for dimensional consistency.

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).

The BLT series is 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. 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.

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. Designed for use in NEMA standard Type G (1" & 15/16") , NFG (9/16"), and SS (9/16") grid ceilings. Consult factory about other ceiling types.

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

LISTINGS — CSA Certified to meet U.S. and Canadian standards. IC rated. Tested in accordance with ISO 14644-1; suitable for ISO Class 5-9 positive and negative pressure clean rooms.

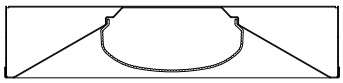
DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

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

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.

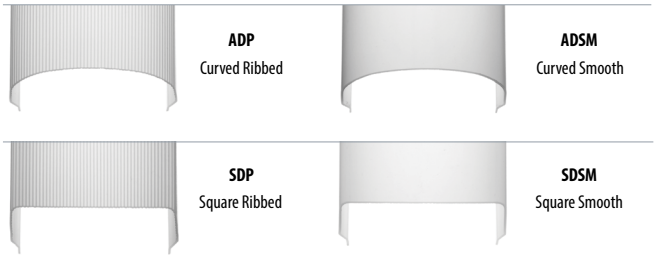
Specifications

Length: 23-3/4 (60.3)
Width: 11-3/4 (29.8)
Depth: 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.

*See ordering tree for details

BLT Volumetric Recessed Lighting 1'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: BLT2 20L ADP GZ10 LP835

BLT2

Series	Air function	Lumens[1]		Diffuser	Voltage	Driver	Color temperature
BLT2 1X2 BLT	(blank) Static	**Standard efficiency (>100 LPW)** 10L 1000 15L 1500 20L 2000 30L 3000 40L 4000	**High Efficiency (>130 LPW)** 40LHE 4000	ADP Curved, linear prisms ADSM Curved, smooth SDP Square, linear prisms SDSM Square, smooth **Includes trim rings to match sensored version** 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) GZ1 Dims to 1% (0-10V dimming)[3] GZ10 Dims to 10% (0-10V dimming([3] SLD Step-level dimming[4]	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	Occupancy Control[6]		Options
(blank) No nLight® N80 nLight® with 80% lumen management N80EMG nLight® with 80% lumen management For use with generator supply EM power[5] N100 nLight® without lumen management N100EMG nLight® without lumen management For use with generator supply EM power[5]	(blank) No sensor control **nLight Wired Networking** NES7 nLight™ nES 7 PIR integral occupancy sensor[7] NESPDT7 nLight™ nES PDT 7 dual technology integral occupancy control[7] NES7ADCX nLight™ nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell[7] NESPDT7ADCX nLight™ nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell[7]	**Individual Control** MSD7ADCX PIR integral occupancy sensor with automatic dimming control photocell[4,8] MSDPDT7ADCX PDT integral occupancy sensor with automatic dimming control photocell[4,8]	**BDP Disconnect Plug** EL7L 700 lumen battery pack (Noncompliant with CA T20) [10] EL14L 1400 lumen battery pack (Noncompliant with CA T20) [10] E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, Certified in CA Title 20 MAEDBS CP Chicago plenum[11] BGTD Bodine Generator Transfer Device[12] 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[13] PWS1856LV 6' pre-wire, 3/8" diameter, 18 gauge, 1 circuit w/low voltage wires[13] GLR Fast-blowing fuse[14] GMF Slow-blowing fuse[14] NPLT Narrow pallet RRL_ RELOC®-ready luminaire[15] LATC Earthquake clip DWAM Anti-Microbial paint

Notes

1 Approximate lumen output.
2 Not available with SLD,EL7L or EL14L battery packs.
3 GZ1, GZ10 drivers not available with any Controls or sensor options.
4 Not available with N80, N80EMG, N100, N100EMG or occupancy control.
5 nLight EMG option requires a connection to existing nLight network. Power is provided from a separate N80 or N100 enabled fixture.
6 Must specify diffuser with trims rings. See sensor options on page 3.
7 Requires N80, N80EMG, N100, or N100EMG.
8 Only available with EZ1 driver option. 0-10v dimming wires not accessible via access plate.
9 When using pre-wire option, use PWS1846 or PWS1846 PWSLV.
10 Not available with N80, N80EMG, N100, N100EMG, PWS1836, PWS1846, PWS1846 PWSLV or PWS1856LV.
11 Must specify voltage. Requires BSE labeling, voltage specific. Consult factory for options.
12 Not available with nLIGHT wired network or individual controls.
13 Must specify voltage, 120 or 277, with GLR and GMF fusing and BGTD.
14 For ordering logic consult: RRL_2013.

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Accessories: *Order as separate catalog number.*

DGA12	Drywall grid adapter for 1x2 recessed fixture
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

nLight® Control Accessories:
Order as separate catalog number. Visit http://www.acuitybrands.com/products/controls/nlight.

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

Replacement Parts: *Order as separate catalog number.*

*249P34	DBLT24 ADP LENS ASSEMBLY	2 ft. replacement lens
*249P3A	DBLT24 SDP LENS ASSEMBLY	2 ft. replacement lens
*249P3F	DBLT24 ADSM LENS ASSEMBLY	2 ft. replacement lens
*249P3K	DBLT24 SDSM LENS ASSEMBLY	2 ft. replacement lens
*239UMP	DBLT24 ADPT LENS ASSEMBLY	2 ft. replacement lens
*239UMV	DBLT24 SDPT LENS ASSEMBLY	2 ft. replacement lens
*239UMX	DBLT24 ADSMT LENS ASSEMBLY	2 ft. replacement lens
*239UN0	DBLT24 SDSMT LENS ASSEMBLY	2 ft. replacement lens
*239HYG	DBLT24 ADPT SENSOR LENS ASSEMBLY	2 ft. replacement lens
*239HYH	DBLT24 SDPT SENSOR LENS ASSEMBLY	2 ft. replacement lens
*239UNE	DBLT24 ADSMT SENSOR LENS ASSEMBLY	2 ft. replacement lens
*239TY2	DBLT24 SDSMT SENSOR LENS ASSEMBLY	2 ft. replacement lens

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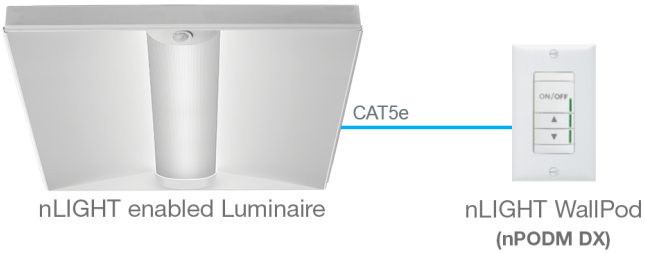
BLT Volumetric Recessed Lighting 1'x2'

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.

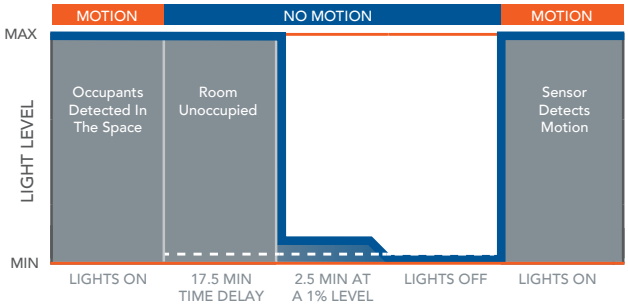
The MSDPDT7ADCX PIR/Microphonics Dual Tech occupancy sensor/automatic dimming photocell is ideal for areas with obstructions and where daylight harvesting is desired. Suggested applications include, but not limited to, open offices, private offices, classrooms, public restrooms, and conference rooms.

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.

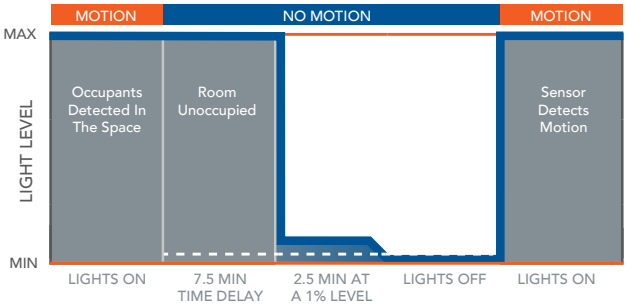
For areas like restrooms, private offices, open offices, conference rooms or any space with obstructions, the nES PDT 7 dual technology sensor is recommended. The nES PDT 7 utilizes both PIR (passive infrared) and Microphonics technologies to detect occupancy. Additionally, the NESPDT7ADCX includes an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

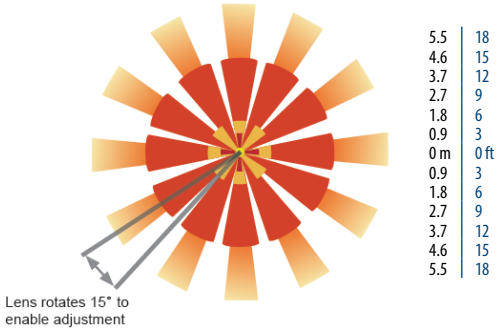


*The presetting on the automatic dimming photocell is 5fc.

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



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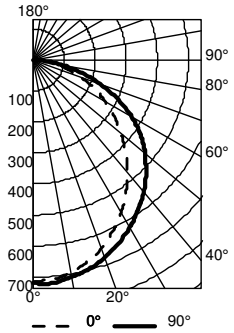
BLT Volumetric Recessed Lighting 1'x2'

PHOTOMETRICS

BLT2 20L ADP LP835, 2064 delivered lumens, test no. ISF35685P19, tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	717	717
5°	709	722
15°	674	697
25°	607	652
35°	521	589
45°	423	514
55°	320	422
65°	215	305
75°	113	164
85°	28	33
90	0	0

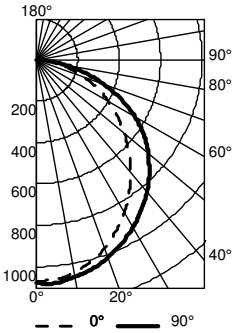
Coefficients of Utilization

pf	20%								
pc	80%			70%			50%		
RCR pw	70%	50%	30%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	109	104	99	101	97	94	97	94	91
2	98	90	83	88	82	76	85	79	74
3	90	79	71	77	70	63	74	68	62
4	82	70	61	68	60	54	66	59	53
5	75	62	53	61	53	46	59	51	46
6	69	56	47	55	46	40	53	46	40
7	64	51	42	50	41	35	48	41	35
8	60	46	38	46	37	32	44	37	31
9	56	42	34	42	34	28	41	33	28
10	52	39	31	39	31	26	38	31	26

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	553	26.8	26.8
0° - 40°	902	43.7	43.7
0° - 60°	1602	77.6	77.6
0° - 90°	2064	100.0	100.0
90° - 120°	0	0.0	0.0
90° - 130°	0	0.0	0.0
90° - 150°	0	0.0	0.0
90° - 180°	0	0.0	0.0
0° - 180°	2064	100.0	100.0

BLT2 30L ADP L835, 3095 delivered lumens, test no. ISF35685P27, tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	1075	1075
5°	1063	1083
15°	1011	1046
25°	911	978
35°	782	884
45°	634	771
55°	480	633
65°	323	457
75°	170	246
85°	42	50
90	0	0

Coefficients of Utilization

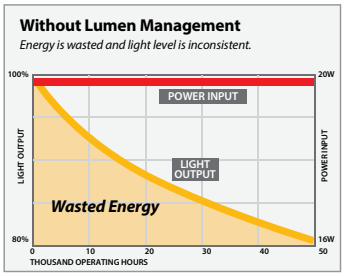
pf	20%								
pc	80%			70%			50%		
RCR pw	70%	50%	30%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	109	104	99	101	97	94	97	94	91
2	98	90	83	88	82	76	85	79	74
3	90	79	71	77	70	63	74	68	62
4	82	70	61	68	60	54	66	59	53
5	75	62	53	61	53	46	59	51	46
6	69	56	47	55	46	40	53	46	40
7	64	51	42	50	41	35	48	41	35
8	60	46	38	46	37	32	44	37	31
9	56	42	34	42	34	28	41	33	28
10	52	39	31	39	31	26	38	31	26

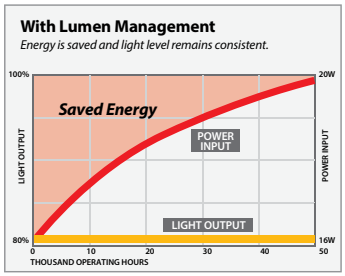
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	829	26.8	26.8
0° - 40°	1353	43.7	43.7
0° - 60°	2403	77.6	77.6
0° - 90°	3095	100.0	100.0
90° - 120°	0	0.0	0.0
90° - 130°	0	0.0	0.0
90° - 150°	0	0.0	0.0
90° - 180°	0	0.0	0.0
0° - 180°	3095	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

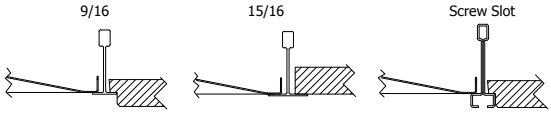
Lumen Package	Lumens	Input Watts	LPW
10L ADP LP830	985	8	123
10L ADP LP835	1020	8	128
10L ADP LP840	1036	8	130
10L ADP LP850	1066	8	133
15L ADP LP830	1393	12	116
15L ADP LP835	1442	12	120
15L ADP LP840	1465	12	122
15L ADP LP850	1506	12	126
20L ADP LP830	1994	18	111
20L ADP LP835	2064	18	115
20L ADP LP840	2097	18	117
20L ADP LP850	2157	18	120
30L ADP LP830	2989	27	111
30L ADP LP835	3095	27	115
30L ADP LP840	3144	27	116
30L ADP LP850	3234	27	120
40L ADP LP830	3881	36	108
40L ADP LP835	4018	36	112
40L ADP LP840	4082	36	113
40L ADP LP850	4199	36	117

HE Performance Data

Lumen Package	Lumens	Input Watts	LPW
40LHE ADP LP830	4039	32	126
40LHE ADP LP835	4182	32	131
40LHE ADP LP840	4249	32	133
40LHE ADP LP850	4370	32	137

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 24-3/4" (Tolerance is +1/8", -0").

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