LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — The VT Series Volumetric LED Troffer (VTL) combines the aesthetics and high performance with intelligent LED engines for applications such as offices, schools, retail locations and hospitals. High-efficacy light engines deliver long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable. Multiple lumen packages and driver options provide solutions for all your lighting applications. Featured nLight control system provides design flexibility and ease of installation and optimum energy savings.

CONSTRUCTION — Rugged, one-piece cold-rolled steel coated polyester, painted after fabrication with embossed facets. Impact-modified, single clear acrylic diffuser provides excellent shielding and wide distribution. End plates include integral T-bar clips. Fixture may be mounted and wired in continuous rows. Total fixture height is only 4-3/8".

OPTICS — Volumetric illumination is achieved by creating an optimal mix of light to walls, partitions, vertical and horizontal work surfaces — rendering the interior space, objects and occupants in a more balanced, complementary luminous environment. Linear faceted reflector cavity softens and distributes light into the space while minimizing luminous contrast between the fixture and ceiling. Sloped end plates provide a smooth, luminous transition between fixture and ceiling while enhancing the perception of fixture depth.

High-performance diffuser provides LED concealment, even illumination across the diffuser and improved lumen-per-watt performance.

Now available with two different aesthetics including the standard Acrylic Linear Prismatic Diffuser (**ADP**) and the Acrylic Linear Prismatic Diffuser with Diffuser Trim Rings (**ADPT**).

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).

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, nLight AIR RIO, RES7 occupancy sensors, and photocontrols. Simply connect all the nLight enabled control devices and the VTLED luminaires using standard Cat-5 cabling, or the nLight AIR wireless network. Unique plug-and-play convenience allows devices and luminaires to automatically discover each other and self-commission.

Lumen Management: Unique lumen management system (option N80) provides onboard 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.

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 microphonic (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 3 for more details on the Integrated Smart Sensor.

INSTALLATION — Unique grid interfacing arrangement provides mounting into standard 1" and 9/16" tee bar or screw slot grids. 9/16" allows fixture trim to hang level with architectural ceiling tiles. Drywall ceiling adaptors available. Suitable for damp location.

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 to confirm which versions are qualified.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT.
Please refer to 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/customer-support/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application. A generational electronics upgrade occurred in May 2019. The upgraded VT series LED troffer has a slight visual variation from previous generations.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

VT Series Volumetric LED Troffer

2VTL4

2' x 4'
LED

Buy American

eldoLED

Dimensions

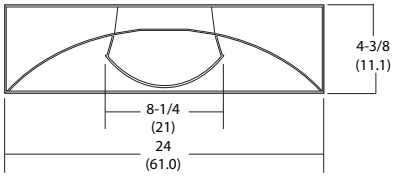
All dimensions are inches (centimeters) unless otherwise specified.

Specifications

Length: 48 (122.0)

Width: 24 (61.0)

Depth: 4-3/8 (11.1)



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® or XPoint™ Wireless control networks when ordered with drivers marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2VTL Volumetric Recessed Lighting 2'x4'

A+ Capable options indicated by this color background.

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

Example: 2VTL4 40L ADPT EZ1 LP840 MSD7ADCX

2VTL4

Series		Air function		Lumens[1]		Diffuser		Voltage		Driver	
2VTL4	2X4 VTL	(blank)	Static	30L	3000 lumens	ADP	Acrylic linear prismatic	(blank)	MVOLT	EZ1	eldoLED dims to 1%, 0-10V
		H	Heat removal	40L	4000 lumens	ADPT	Acrylic linear prismatic with diffuser trim rings	347	347V[3]	EZB	eldoLED dims to 0.1% 0-10V
				48L	4800 lumens					GZ1	Dims to 1% (0-10V dimming)[4]
				60L	6000 lumens					GZ10	Dims to 10% (0-10V dimming)[4]
				72L	7200 lumens					EDB	eldoLED DALI[5]
				85L	8500 lumens					SLD	Step-level dimming[5]
				100L	10000 lumens[2]						
				120L	12000 lumens[2]						

Color temperature		nLight Interface		Control		Options	
LP830	3000 K, 80CRI	**nLight Wired**		**nLight Wired**		EL7L	700 lumen battery pack, Noncompliant with CA T20
LP835	3500 K, 80CRI	(blank)	No nLight® interface	(blank)	No nLight control	EL14L	1400 lumen battery pack, Noncompliant with CA T20
LP840	4000 K, 80CRI	N80	nLight® with 80% lumen management	NES7	nLight® nES 7 PIR integral occupancy sensor [8,9]	E10WLCP	EM Self-Diagnostic battery pack, 10W Constant Power, Certified in CA Title 20 MAEDBS
LP850	5000 K, 80CRI	N80EMG	nLight® with 80% lumen management. For use with generator supply EM power [6]	NESPDT7	nLight® nES PDT 7 dual technology integral occupancy control [8,9]	BGTD	Bodine Generator Transfer Device[10,11]
LP930	3000 K, 90CRI	N100	nLight® without lumen management	NES7ADCX	nLight® nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell [8,9]	CP	Chicago plenum
LP935	3500 K, 90CRI	N100EMG	nLight® without lumen management. For use with generator supply EM power [6]	NESPDT7ADCX	nLight® nES PDT 7 dual technology integral occupancy sensor with automatic dimming photocell [8,9]	BAA	Buy America(n) Act Compliant
LP940	4000 K, 90CRI	**nLight Wireless**		**nLight Wireless**			
LP950	5000 K, 90CRI	(blank)	No nLight® interface	(blank)	No nLight control		
		NLTAIR2	nLight® Air Generation 2 enabled [7,8]	RES7	nLight® AIR PIR integral occupancy sensor with automatic dimming photocell [7,8]		
				RES7PDT	nLight® AIR microphonics dual technology integral occupancy sensor with automatic dimming photocell [7,8]		
				RIO	nLight® AIR radio module without sensor [7,8]		
				Individual Control			
				MSD7ADCX	PIR integral occupancy sensor with automatic dimming control photocell [8]		
				MSDPDT7ADCX	PDT integral occupancy sensor with automatic dimming control photocell [8]		

Accessories: *Order as separate catalog number.*

2VT4 F916	Trim to adjust fixture mounting flush with 9/16" T-bar; for 2x4 fixture
DGA24 FS/VT	Drywall ceiling adapter with trim kit
2X4SMKSHP PAF	Surface Mount Troffer Kit Post Paint

Notes

1. Approximate lumen output.
2. Not available with SLD, EL7L and EL14L.
3. Not available with SLD, EL7L, EL14L, or E10WLCP.
4. GZ1, GZ10 drivers not available with any Controls or sensor options.
5. Not available with N80, N80EMG, N100, or N100EMG, or NLTAIR2.
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/EZB driver. Not available with 72L, 85L, 100L and 120L.
8. Must specify ADPT diffuser. See sensor section on page 3.
9. Requires N80, N80EMG, N100, or N100EMG.
10. Not available with SLD.
11. Must specify voltage. Requires BSE labeling, voltage specific. Consult factory for options.

nLight® Wired Control Accessories:
Order as separate catalog number. Visit 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

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

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

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ORDERING INFORMATION

rCMS				Example: RCMS PDT 10 AR G2
Series/Detection	**Occupancy Detection**	**Lens (Required)**	**Operating Mode**	**Generation**
RCMS[1] nLight AIR occupancy and daylight sensor	(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 AIR Auxiliary Relay	G2 Generation 2 compatibility

1 RCMS requires low voltage power from either RPP20 DS 24V G2 or PS 150.

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2VTL Volumetric Recessed Lighting 2'x4'

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

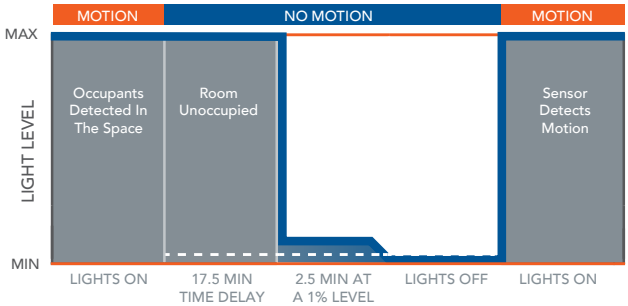
Basic nLight Zone

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.

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

nLight Wired Networking

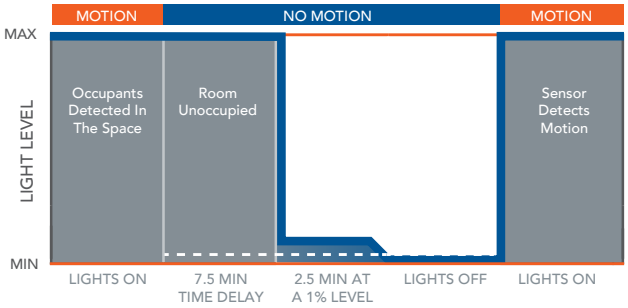
The nES 7 is ideal for small rooms without obstructions or areas with primarily walking motion. Ideal areas include hallways, corridors, storage rooms, and breakrooms. Additionally, the NES7ADCX includes an integrated photocell, which enables daylight harvesting controls.

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.

nLight AIR Wireless

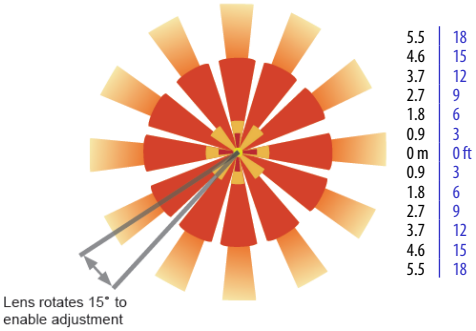
nLight AIR is the ideal solution for retrofit or new construction spaces where adding additional wiring can be labor intensive and costly. nLight AIR is available with or without and integral sensor. The integrated RES7 or RES7PDT smart sensors are part of each luminaire in the nLight AIR network, which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

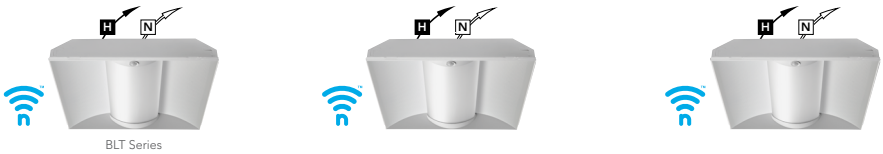
Sequence of Operation



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

9 FT Mounting





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 our CL*AIR*ITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the intended outcome

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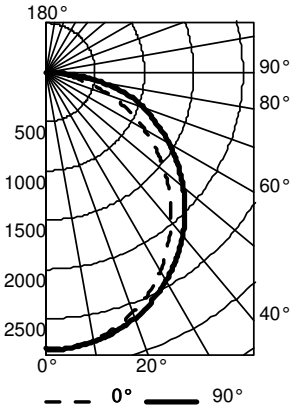
PHOTOMETRICS

2VTL4 85L ADP LP835, 8475 delivered lumens.



CP Summary

	0°	90
0°	2807	2807
5°	2796	2808
15°	2692	2723
25°	2470	2555
35°	2151	2309
45°	1782	1993
55°	1363	1634
65°	924	1245
75°	493	843
85°	117	268
90	8	7

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	108	103	98	100	96	92	96	93	90
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	51
5	75	61	52	60	51	45	58	50	44
6	69	55	46	54	45	39	52	45	39
7	64	50	41	49	41	34	47	40	34
8	59	45	37	45	36	31	43	36	31
9	55	42	33	41	33	28	40	33	27
10	52	38	30	38	30	25	37	30	25

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	2188	25.8	25.8
0° - 40°	3584	42.3	42.3
0° - 60°	6394	75.4	75.4
0° - 90°	8472	100.0	100.0
90° - 120°	2	0.0	0.0
90° - 130°	2	0.0	0.0
90° - 150°	3	0.0	0.0
90° - 180°	3	0.0	0.0
0° - 180°	8474	100.0	100.0

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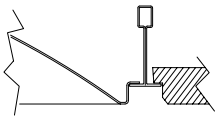
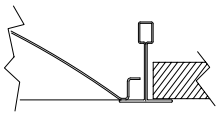
Mounting data

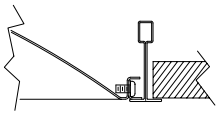
9/16



15/16



9/16 with accessory 2VT4 F916



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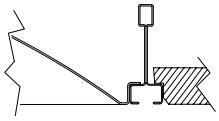

Performance Data			
Lumen Package	**Lumens**	**Input Watts[2]**	**LPW**
2VTL4 30L ADP LP830	3224	23.2	139
2VTL4 30L ADP LP835	3280	23.2	141
2VTL4 30L ADP LP840	3335	23.2	144
2VTL4 30L ADP LP850	3335	23.2	144
2VTL4 30L ADP LP930	2668	23.2	115
2VTL4 30L ADP LP935	2780	23.2	120
2VTL4 30L ADP LP940	2835	23.2	122
2VTL4 30L ADP LP950	2835	23.2	122
2VTL4 40L ADP LP830	4138	31.4	132
2VTL4 40L ADP LP835	4210	31.4	134
2VTL4 40L ADP LP840	4281	31.4	137
2VTL4 40L ADP LP850	4281	31.4	137
2VTL4 40L ADP LP930	3425	31.4	109
2VTL4 40L ADP LP935	3568	31.4	114
2VTL4 40L ADP LP940	3639	31.4	116
2VTL4 40L ADP LP950	3639	31.4	116
2VTL4 48L ADP LP830	5149	38.4	134
2VTL4 48L ADP LP835	5238	38.4	136
2VTL4 48L ADP LP840	5326	38.4	139
2VTL4 48L ADP LP850	5326	38.4	139
2VTL4 48L ADP LP930	4261	38.4	111
2VTL4 48L ADP LP935	4439	38.4	116
2VTL4 48L ADP LP940	4528	38.4	118
2VTL4 48L ADP LP950	4528	38.4	118
2VTL4 60L ADP LP830	6194	47.7	130
2VTL4 60L ADP LP835	6301	47.7	132
2VTL4 60L ADP LP840	6407	47.7	134
2VTL4 60L ADP LP850	6407	47.7	134
2VTL4 60L ADP LP930	5126	47.7	107
2VTL4 60L ADP LP935	5340	47.7	112
2VTL4 60L ADP LP940	5446	47.7	114
2VTL4 60L ADP LP950	5446	47.7	114
2VTL4 72L ADP LP830	7316	59.0	124
2VTL4 72L ADP LP835	7442	59.0	126
2VTL4 72L ADP LP840	7568	59.0	128
2VTL4 72L ADP LP850	7568	59.0	128
2VTL4 72L ADP LP930	6055	59.0	103
2VTL4 72L ADP LP935	6307	59.0	107
2VTL4 72L ADP LP940	6433	59.0	109
2VTL4 72L ADP LP950	6433	59.0	109
2VTL4 85L ADP LP830	8331	67.7	123
2VTL4 85L ADP LP835	8475	67.7	125
2VTL4 85L ADP LP840	8618	67.7	127
2VTL4 85L ADP LP850	8618	67.7	127
2VTL4 85L ADP LP930	6895	67.7	102
2VTL4 85L ADP LP935	7182	67.7	106
2VTL4 85L ADP LP940	7326	67.7	108
2VTL4 85L ADP LP950	7326	67.7	108
2VTL4 100L ADP LP830	10153	82.2	123
2VTL4 100L ADP LP835	10328	82.2	126
2VTL4 100L ADP LP840	10503	82.2	128
2VTL4 100L ADP LP850	10503	82.2	128
2VTL4 100L ADP LP930	8402	82.2	102
2VTL4 100L ADP LP935	8752	82.2	106
2VTL4 100L ADP LP940	8928	82.2	109
2VTL4 100L ADP LP950	8928	82.2	109
2VTL4 120L ADP LP830	12543	98.1	128
2VTL4 120L ADP LP835	12760	98.1	130
2VTL4 120L ADP LP840	12976	98.1	132
2VTL4 120L ADP LP850	12976	98.1	132
2VTL4 120L ADP LP930	10381	98.1	106
2VTL4 120L ADP LP935	10813	98.1	110
2VTL4 120L ADP LP940	11029	98.1	112
2VTL4 120L ADP LP950	11029	98.1	112

Note: Based on ADP diffuser

How to Estimate Delivered Lumens in Emergency Mode

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput 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.

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