LITHONIA LIGHTING®

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. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

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 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 VTL 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 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.

Catalog Number	
Notes	
Type	

VT Series Volumetric LED Troffer

2VTL

2' x 4' LED

eldoLED

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) 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.

ORDERING INFORMATION

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

Example: 2VTL4 40L ADPT EZ1 LP840 N100 NES7

2VTL4

Series		Air function		Lumens		Diffuser		Voltage		Driver		Color temperature	
2VTL4	2X4 VTL	(blank)	Static	30L	3000[1]	ADP	Acrylic linear prismatic	(blank)	MVOLT	EZ1	eldoLED dims to 1% (0-10 volt dimming)	LP830	82CRI, 3000 K
		H	Heat removal	40L	4000[1]	ADPT	Acrylic linear prismatic with diffuser trim rings	347	347[2]	EZB	eldoLED dims to dark (0-10 volt dimming)	LP835	82CRI, 3500 K
				48L	4800[1]					EDB	eldoLED DALI[3]	LP840	82CRI, 4000 K
				60L	6000[1]					EXB	eldoLED DMX/RDM[3]	LP850	82CRI, 5000 K
				72L	7200[1]					SLD	Step-level dimming[3]		
										EXA1	Dims to 1%, XPoint wireless enabled[4]		
										EXAB	Dims to dark, XPoint wireless enabled[4]		

Controls

(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]

Occupancy Control[6]

(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 photocelll[7]
	Xpoint Wireless Networking
XADS7	Xpoint™ micro 360° PIR occupancy sensor and automatic dimming photocell[4,8,9]
	Individual Control
MSD7ADCX	PIR integral occupancy sensor with automatic dimming control photocell[8,10]
MSDPDT7ADCX	PDT integral occupancy sensor with automatic dimming control photocell[8,10]

Options

EL7L	700 lumen battery pack
EL14L	1400 lumen battery pack
CP	Chicago plenum

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

Notes

1. Approximate lumen output.
2. Consult factory for availability. Not available with SLD,EL7L or EL14 battery packs.
3. Not available with N80, N80EMG, N100 or N100EMG.
4. Gateway not included. Requires on-site commissioning.
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 ADPT diffuser. See sensor section on page 2.
7. Requires N80, N80EMG, N100, or N100EMG.
8. Not available with N80, N80EMG, N100, or N100EMG.
9. Only available with EXA1 or EXAB driver options.
10. Only available with EZ1 driver option. 0-10v dimming wires not accessible via access plate.

2VTL Volumetric Recessed Lighting 2'x4'

Performance Data			
Lumen Package	**Lumens**	**Input Watts[3]**	**LPW**
30L LP830	3168.4	30.76	103.0
30L LP835	3326.1	30.76	108.1
30L LP840	3677.2	30.76	119.5
30L LP850	3665.8	30.76	119.2
40L LP830	3992.1	38.98	102.4
40L LP835	4210.7	38.98	108.0
40L LP840	4315.3	38.98	110.7
40L LP850	4622.6	38.98	118.6
48L LP830	4619.5	46.43	99.5
48L LP835	4879.3	46.43	105.1
48L LP840	4993.3	46.43	107.5
48L LP850	5354.5	46.43	115.3
60L LP830	5069.4	52.15	97.2
60L LP835	5351.3	52.15	102.6
60L LP840	5500.3	52.15	105.5
60L LP850	5867.8	52.15	112.5
72L LP830	6751.8	69.25	97.5
72L LP835	6884.8	69.25	99.4
72L LP840	7394.9	69.25	106.8
72L LP850	7803.7	69.25	112.7

Note: Based on ADP diffuser

Sensor Options					
Option	**Automatic Dimming Photocell**	**Occupancy Sensing**		**nLight Wired Networking**	**Xpoint Wireless Networking**
		PIR	**PDT**		
MSD7ADCX	X	X			
MSDPDT7ADCX	X		X		
NES7		X		X	
NES7ADCX	X	X		X	
NESPDT7			X	X	
NESPDT7ADCX	X		X	X	
XADS7	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.

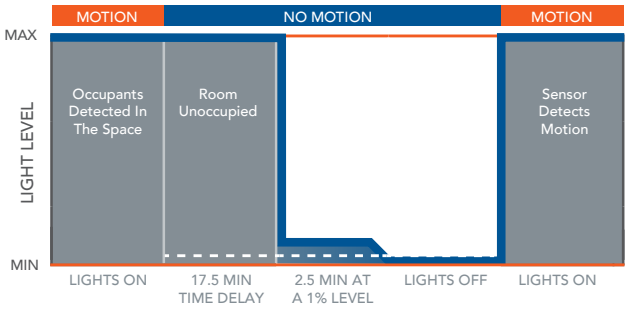
The MSDPDT7ADCX PIR/Microphonics Dual Tech occupancy sensor/automatic dimming photocell is ideal for areas with obstructions and where daylight harvesting is desired. Suggested applications include, but not limited to, open offices, private offices, classrooms, public restrooms, and conference rooms.

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.

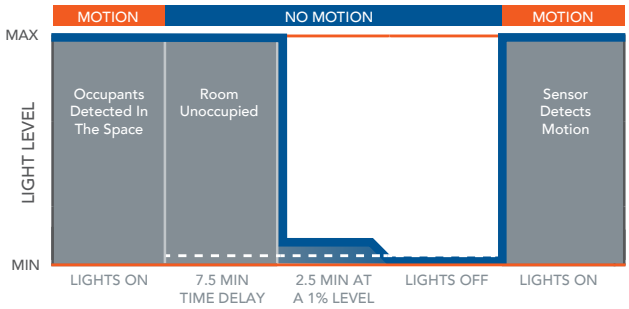
For areas like restrooms, private offices, open offices, conference rooms or any space with obstructions, the nES PDT 7 dual technology sensor is recommended. The nES PDT 7 utilizes both PIR (passive infrared) and Microphonics technologies to detect occupancy. Additionally, the NESPDT7ADCX includes an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

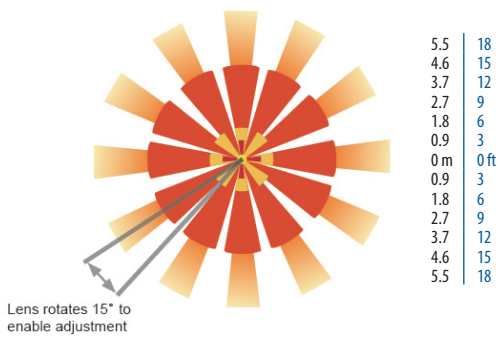


*The presetting on the automatic dimming photocell is 5fc.

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

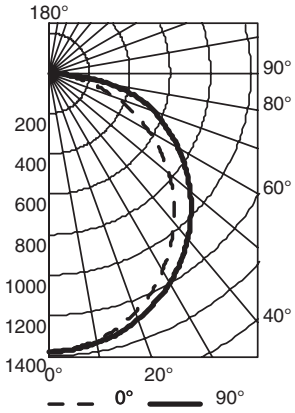
9 FT Mounting



2VTL Volumetric Recessed Lighting 2'x4'

PHOTOMETRICS

2VTL4 40L ADP LP835, 4211 delivered lumens, test no. LTL24782P4, tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	1380	1380
5°	1369	1374
15°	1309	1334
25°	1199	1252
35°	1050	1139
45°	873	994
55°	676	829
65°	464	649
75°	243	447
85°	53	146
90	4	9

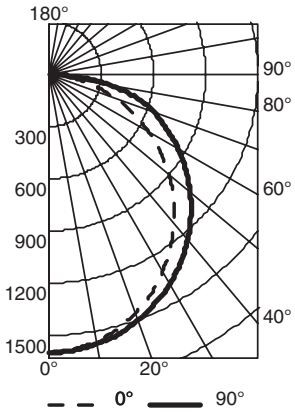
Coefficients of Utilization

	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	97	89	81	87	80	74	83	78	73
	3	89	77	69	76	68	61	73	66	60
	4	81	68	59	67	58	52	64	57	51
	5	74	61	52	60	51	44	58	50	44
	6	69	55	46	54	45	39	52	44	38
	7	63	50	41	49	40	34	47	39	34
	8	59	45	36	44	36	30	43	36	30
	9	55	41	33	41	33	27	40	32	27
	10	52	38	30	38	30	25	37	30	25

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	1070	25.4	25.4
0° - 40°	1756	41.7	41.7
0° - 60°	3152	74.8	74.8
0° - 90°	4212	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	4212	100.0	100.0

2VTL4 48L ADP LP835, 4879 delivered lumens, test no. LTL24782P8, tested in accordance to IESNA LM-79



CP Summary

	0°	90
0°	1599	1599
5°	1586	1592
15°	1517	1546
25°	1389	1451
35°	1217	1320
45°	1012	1152
55°	784	961
65°	537	752
75°	282	517
85°	62	169
90	5	11

Coefficients of Utilization

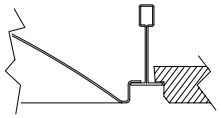
	pf	20%								
	pc	80%			70%			50%		
	pw	70%	50%	30%	50%	30%	10%	50%	30%	10%
RCR	0	119	119	119	116	116	116	111	111	111
	1	108	103	98	100	96	92	96	92	89
	2	97	89	81	87	80	74	83	78	73
	3	89	77	69	76	68	61	73	66	60
	4	81	68	59	67	58	52	64	57	51
	5	74	61	52	60	51	44	58	50	44
	6	69	55	46	54	45	39	52	44	38
	7	63	50	41	49	40	34	47	39	34
	8	59	45	36	44	36	30	43	36	30
	9	55	41	33	41	33	27	40	32	27
	10	52	38	30	38	30	25	37	30	25

Zonal Lumen Summary

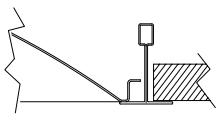
Zone	Lumens	% Lamp	% Fixture
0° - 30°	1240	25.4	25.4
0° - 40°	2035	41.7	41.7
0° - 60°	3653	74.8	74.8
0° - 90°	4881	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	4881	100.0	100.0

Mounting data

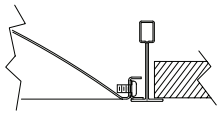
9/16



15/16



9/16 with accessory 2VT4 F916



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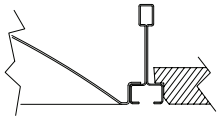


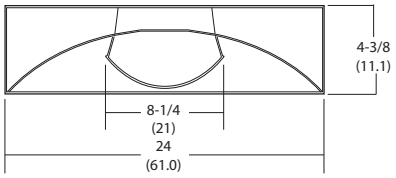
nLight® Control Accessories:
Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.

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

Dimensions

All dimensions are inches (centimeters) unless otherwise specified.

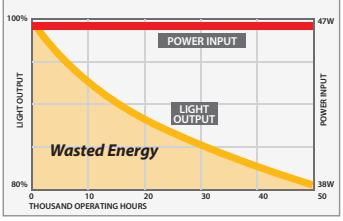
Specifications
Length: 48 (122.0)
Width: 24 (61.0)
Depth: 4-3/8 (11.1)



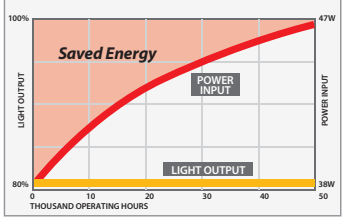
Constant Lumen Management

Enabled by the embedded nLight control, the VTL 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.

Without Lumen Management
Energy is wasted and light level is inconsistent.



With Lumen Management
Energy is saved and light level remains consistent.



LITHONIA LIGHTING®
An AcuityBrands Company

2VTL-2X4

LED:

Rev. 09/23/15