

## 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 VTLED 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.

**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 both a digital PIR occupancy sensor/automatic dimming photocell. 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) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/CustomResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomResources/Terms_and_conditions.aspx)

**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.

Catalog Number
Notes
Type

### VT Series Volumetric LED Troffer

# 2VTL

2' x 2'  
LED



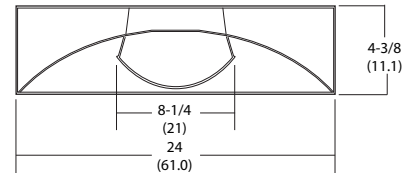
eldoLED



### Dimensions

All dimensions are inches (centimeters) unless otherwise specified.

*Specifications*  
Length: 24 (61.0)  
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](http://www.acuitybrands.com/aplus).

\*See ordering tree for details

# 2VTL Volumetric Recessed Lighting 2'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:** 2VTL2 40L ADPT EZ1 LP840 MSD7ADCX

Series	Air function	Lumens <sup>1</sup>	Diffuser	Voltage	Driver
2VTL2 2X2 VTL	(blank) Static H Heat removal	20L 2000 lumens 33L 3000 lumens 40L 4000 lumens	ADP Acrylic linear prismatic ADPT Acrylic linear prismatic with diffuser trim rings	(blank) MVOLT 347 347V <sup>2</sup>	EZ1 eldoLED dims to 1%, 0-10V EZB eldoLED dims to dark, 0-10V EDB eldoLED DALI <sup>3</sup> EXB eldoLED DMX/RDM <sup>3</sup> SLD Step-level dimming <sup>3</sup> EXA1 Dims to 1%, XPoint wireless enabled <sup>4</sup> EXAB Dims to dark, XPoint Wireless enabled <sup>4</sup>

Color temperature	Controls	Occupancy Control	Options
LP830 3000 K, 80 CRI LP835 3500 K, 80 CRI LP840 4000 K, 80 CRI LP850 5000 K, 80 CRI LP930 3000 K, 90 CRI LP935 3500 K, 90 CRI LP940 4000 K, 90 CRI LP950 5000 K, 90 CRI	(blank) No nLight <sup>®</sup> N80 nLight <sup>®</sup> with 80% lumen management N80EMG nLight <sup>®</sup> with 80% lumen management for use with generator supply EM power <sup>5</sup> N100 nLight <sup>®</sup> without lumen management N100EMG nLight <sup>®</sup> without lumen management for use with generator supply EM power <sup>5</sup> NLTAIR nLight AIR enabled <sup>6</sup>	(blank) No sensor control <b>nLight Wired Networking</b> NES7 nLight <sup>®</sup> nES 7 PIR integral occupancy sensor <sup>7,10</sup> NESPDT7 nLight <sup>®</sup> nES PDT 7 dual technology integral occupancy control <sup>7,10</sup> NES7ADCX nLight <sup>®</sup> nES 7 ADCX PIR integral occupancy sensor with automatic dimming photocell <sup>7,10</sup> NESPDT7ADCX nLight <sup>®</sup> nES 7 PDT 7 dual technology integral occupancy sensor with automatic dimming photocell <sup>7,10</sup> <b>Individual Control</b> MSD7ADCX PIR integral occupancy sensor with automatic dimming control photocell <sup>3,7,11</sup> MSDPDT7ADCX PDT integral occupancy sensor with automatic dimming control photocell <sup>3,7,11</sup> <b>Xpoint Wireless</b> XADS7 XPoint™ wireless controller and micro 360° PIR occupancy and photocell sensor <sup>3,4,9</sup> <b>nLight Wireless Networking</b> RES7N nLight <sup>®</sup> AIR PIR integral occupancy sensor with automatic dimming photocell for Networking Capabilities <sup>7,10</sup> <b>nLight Wireless Zone</b> RES7Z nLight <sup>®</sup> AIR PIR integral occupancy sensor with automatic dimming photocell for zone control <sup>7,10</sup>	EL7L 700 lumen battery pack (non-CEC compliant) EL14L 1400 lumen battery pack (non-CEC compliant) EL14LSD 1400 lumen battery pack with self-diagnostic testing feature (non-CEC compliant) <sup>12</sup> E10WLCP EM Self-Diagnostic battery pack, 10W Constant Power, CEC compliant CP Chicago plenum

### Accessories: Order as separate catalog number.

2VT2 F916	Trim to adjust fixture mounting flush with 9/16" T-bar; for 2x2 fixture
DGA22 FS/VT	Drywall ceiling adapter with trim kit

### Notes

- 1 Approximate lumen output.
- 2 Not available with SLD, EL7L, or EL14L.
- 3 Not available with N80, N80EMG, N100, or N100EMG.
- 4 Gateway not included. Requires on-site commissioning. Visit [www.lightingcontrols.com/XPointWireless](http://www.lightingcontrols.com/XPointWireless) for more information.
- 5 nLight EMG option requires a connection to existing nLight network. Power is provided from a separate N80 or N100 enabled fixture.
- 6 Must order with RES7N or RES7Z sensor. Only available with EZ1 or EZB driver.
- 7 Must specify ADPT diffuser. See sensor section on page 3.
- 8 Requires N80, N80EMG, N100, or N100EMG.
- 9 Only available with EXA1 or EXAB driver options.
- 10 Only available with EZ1 or EZB driver option. 0-10V dimming wires not accessible via access plate.
- 11 Only available with EZ1 driver option. 0-10V dimming wires not accessible via access plate.
- 12 For more information, please see the [PSSD2 specification sheet](#).

### nLight<sup>®</sup> Wired Control Accessories:

Order as separate catalog number. Visit [www.acuitybrands.com/products/controls/nlight](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

### nLight<sup>®</sup> AIR Control Accessories:

Order as separate catalog number. Visit [www.acuitybrands.com/products/controls/nlightair](http://www.acuitybrands.com/products/controls/nlightair).

Wall switches	Model number
On/Off single pole	rPODB [color]
On/Off two pole	rPODB 2P [color]
On/Off & raise/lower single pole	rPODB DX [color]
On/Off & raise/lower two pole	rPODB 2P DX [color]
On/Off & raise/lower single pole	rPODB DX WH <sup>1</sup>

### Notes

- 1 Can only be ordered with the RES7Z zone control sensor version.

# 2VTL Volumetric Recessed Lighting 2'x2'

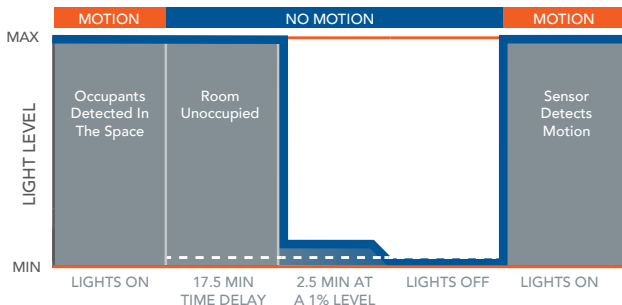
Option	Sensor Options					
	Automatic Dimming Photocell	Occupancy Sensing		nLight Wired Networking	nLight AIR Networking	nLight AIR Zone
		PIR	PDT			
MSD7ADCX	X	X				
MSDPDT7ADCX	X		X			
NES7		X		X		
NES7ADCX	X	X		X		
NESPDT7			X	X		
NESPDT7ADCX	X		X	X		
RES7N	X	X			X	
RES7Z	X	X				X

## 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

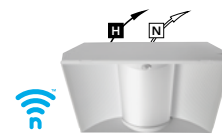
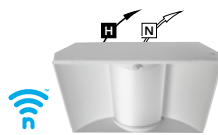
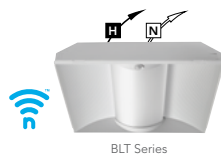
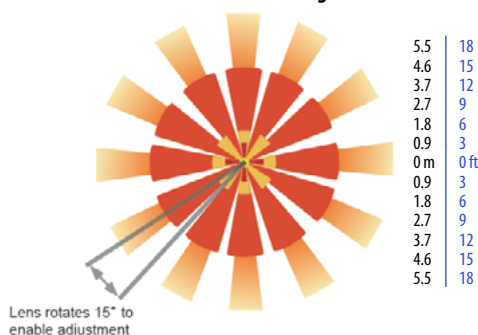


\*The presetting on the automatic dimming photocell is 5fc.

## 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

## 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 CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the intended outcome



rPODB 2P DX

Mobile Device

## Basic nLight Zone



## nLight Wired Networking

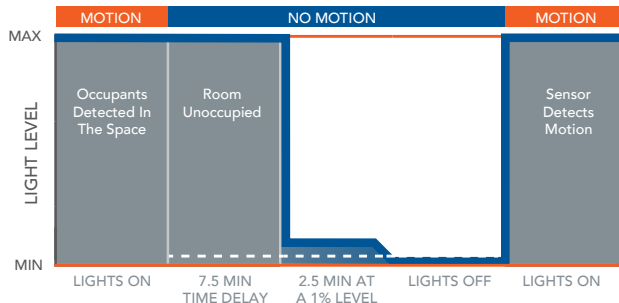
The nES 7 is ideal for small rooms without obstructions or areas with primarily walking motion. Ideal areas include hallways, corridors, storage rooms, and breakrooms. Additionally, the NES7ADCX includes an integrated photocell, which enables daylight harvesting controls.

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. The integrated rES 7 smart sensor is 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

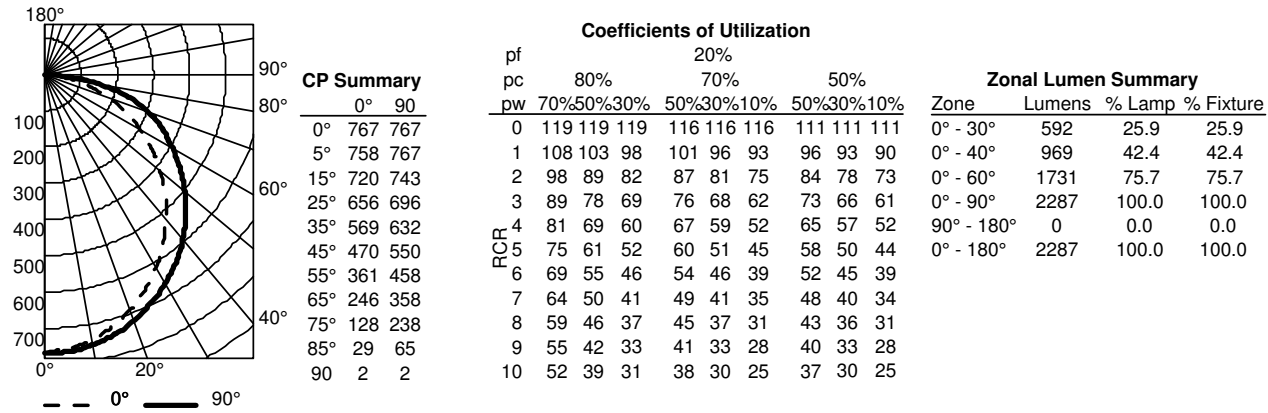


\*The presetting on the automatic dimming photocell is 5fc.

# 2VTL Volumetric Recessed Lighting 2'x2'

## PHOTOMETRICS

2VTL2 20L ADP LP835, 2286 delivered lumens, test no. LTL24790P101, tested in accordance to IESNA LM-79



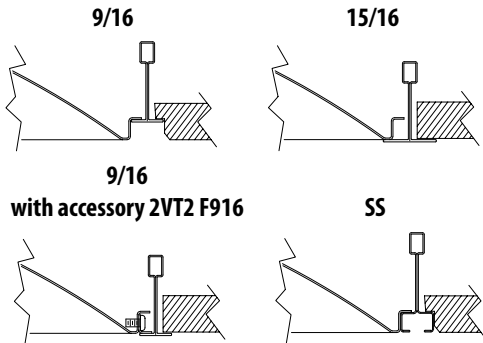
### Coefficients of Utilization

RCR	pf	20%									
		80%		70%		50%		50%			
	pc	pw	70%	50%	30%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111	111	111
1	108	103	98	101	96	93	96	93	90	90	90
2	98	89	82	87	81	75	84	78	73	73	73
3	89	78	69	76	68	62	73	66	61	61	61
4	81	69	60	67	59	52	65	57	52	52	52
5	75	61	52	60	51	45	58	50	44	44	44
6	69	55	46	54	46	39	52	45	39	39	39
7	64	50	41	49	41	35	48	40	34	34	34
8	59	46	37	45	37	31	43	36	31	31	31
9	55	42	33	41	33	28	40	33	28	28	28
10	52	39	31	38	30	25	37	30	25	25	25

### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	592	25.9	25.9
0° - 40°	969	42.4	42.4
0° - 60°	1731	75.7	75.7
0° - 90°	2287	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	2287	100.0	100.0

## Mounting Data



### Performance Data

Lumen Package	Lumens	Input Watts <sup>2</sup>	LPW
20L ADP LP830	2128	17.4	122
20L ADP LP835	2286	17.4	131
20L ADP LP840	2333	17.5	133
20L ADP LP850	2500	17.5	143
33L ADP LP830	3495	29.3	119
33L ADP LP835	3711	29.4	126
33L ADP LP840	3821	29.5	129
33L ADP LP850	4072	29.3	139
40L ADP LP830	4080	35.2	116
40L ADP LP835	4351	35.3	123
40L ADP LP840	4447	35.5	125
40L ADP LP850	4730	35.7	133

### How to Calculate Delivered Lumens in Emergency Mode

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

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

P = Output 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.

Note: Based on ADP diffuser