

# SAE301

LED RECESSED TROFFER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	



## FEATURES

- Versatile, recessed, direct enclosed troffer
- Vi Technology for specifiable output/wattage
- Diffuser is a high efficiency one piece extruded acrylic lens
- Dropped center channel for excellent source diffuser
- Available in 2' x 2', 2' x 4' and 1' x 4' sizes
- SpectraSync™ Color Tuning Technology available
- NX Lighting Controls wired and wireless controls capability available
- PoE Lighting and Control options available



## CONTROL TECHNOLOGY



## SPECIFICATIONS

### CONSTRUCTION

- Housing: die-formed steel
- Wiring access plate on top of housing for flexible conduit attachment
- Reflectors: High-reflectance prepaint matte white steel

### OPTICAL PERFORMANCE

- 3 SDCM color consistency, 80 CRI
- High-efficiency one-piece extruded acrylic lens
- Dropped center channel for excellent source diffusion

### INSTALLATION

- Intended for installation in exposed, inverted T-bar grid ceiling and drywall
- Drywall option ships with frame kit to be installed in ceiling prior to fixture install
- Holes in housing provided for wire-on-chain mounting support to building structure

### ELECTRICAL

- Flex Whip: 3/8" flex conduit. 6' length. 90° connector on fixture end. 18 gauge wiring.
- LED boards and drivers can be accessed and removed from below fixture, while installed
- LED boards can be replaced individually

### CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Lighting Controls provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX Lighting Controls system deployments
- NX Lighting Controls are available in U.S., Canada and Mexico. For other locations consult factory

### CERTIFICATIONS

- CSA listed for damp locations
- IBEW
- AF of L
- IC rated
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction. Materials under Trade Agreements effective 8/14/2020. Contact factory for configurations including NX Lighting Controls or sensors.

### WARRANTY

- LED boards - 5 years
- LED drivers (standard) - 5 years
- LED drivers (Lutron) - 3 years

KEY DATA	
Lumen Range	1,700 - 6,100
Wattage Range	12.7 - 42.9
Efficacy Range (LPW)	127 - 148
Rated Life (Hours)	L70: >60,000 L90: up to 91,000

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## ORDERING GUIDE

Example: SAE301-G-D-22-SGL-C1-35K-D17-D01-UNV

CATALOG # \_\_\_\_\_

SAE	301						
Program	Series	Ceiling Type		Distribution	Size	Diffuser	Finish/Color <sup>6</sup>
SAE SAE Program	301 301 LED Recessed Troffer	<b>G</b> 1/8" Grid Ceiling		<b>D</b> Direct	<b>14</b> 1' x 4' Fixture <b>22</b> 2' x 2' Fixture <b>24</b> 2' x 4' Fixture	<b>SGL</b> Soft Glow Lens	<b>C1</b> Matte White
		<b>NG</b> 3/8" Narrow Face Grid Ceiling					
		<b>SS</b> 3/8" Screw Slot Grid Ceiling					
		<b>DW</b> Drywall Ceiling					

Color temperature		Output <sup>4</sup>	Driver	Voltage
<b>30K</b>	3000K	<b>D17 (min)</b> 1700	<b>D01</b> 1% Dimming, 0-10V	<b>UNV</b> Universal Voltage (120V through 277V)
<b>35K</b>	3500K	to	<b>D00</b> 1% Dim-to-Off, 0-10V	
<b>40K</b>	4000K	<b>D61 (max)</b> 6100	<b>D05</b> 5% Dimming, 0-10V <sup>3</sup>	<b>347</b> 347 Volt <sup>1,5</sup>
<b>2750T</b>	2700K - 5000K SpectraSync™ Tunable White <sup>2</sup>		<b>DS1</b> 1% Dimming w/ Soft Start, 0-10V	
<b>2765T</b>	2700K - 6500K SpectraSync™ Tunable White <sup>2</sup>		<b>DS0</b> 1% Dim-to-Off w/ Soft Start, 0-10V	
			<b>DALI</b> DALI <sup>1</sup>	
			<b>DALIP</b> Powered DALI (2.0) <sup>1</sup>	
			<b>NDM</b> Non-Dimming	

## OPTIONAL

Emergency	Chicago Environmental Air Modification	Flex Whip	Control Options
<b>EF</b> 10W Emergency Battery Pack <sup>7</sup>	<b>CCEA</b> Chicago Environmental Air Modification	<b>FW</b> Flex Whip <b>FWC</b> Flex Whip Field-installed <b>FWPR</b> Flex Whip, Plenum Rated (for CCEA only) <b>FWPRC</b> Flex Whip, Plenum Rated (for CCEA only) Field-installed	<b>NX Networked – Wired</b> <b>NXE</b> NX Wired Dual RJ45 SmartPORTS, without Sensor <sup>1,8,9,10</sup> <b>NXESM</b> NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming <sup>1,8,9,10</sup> <b>NX Networked – Wireless</b> <b>NXWSM</b> NX Networked Wireless Enabled Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming <sup>1,8,9,10</sup> <b>NXW</b> NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor <sup>1,8,9,10</sup> <b>Lutron Vive</b> <b>LV</b> 0-10V Wireless RF Fixture Module <sup>10,11</sup> <b>Sensors</b> <b>SD1</b> Daylight Sensor Required <sup>1</sup> <b>SO1</b> Occupancy Sensor Required <sup>1</sup>

Notes:

- Additional lead time may be applicable. Contact factory.
- Must be ordered with D05 Driver option.
- Must be ordered with 2750T or 2765T option
- Specifiable in 100 lumen/ft increments. Reference the Performance Data Table for full performance offering and exceptions.
- Excludes Emergency Battery Pack 'EF' Option. Excludes DALI and DALIP Dimming Drivers.
- Visit [currentlighting.com/litecontrol](http://currentlighting.com/litecontrol) for details.
- Enter quantity. Provides a minimum of 90 minutes of emergency lighting. Inverter-Compatible. Provided by others.

**NX In-Fixture Control Options:**

- Only available with 0-10V Driver options
- Refer to NX Integrated Controls Reference Table on page 3 for Functionality of Options.

**Third-Party Control Options:**

- Excludes Ceiling type 'DW' option.
- Registered trademark of Daintree Networks, used by permission.

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## CONTROLS

### NX Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
<b>NX Networked – Wired</b>								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC dongle <sup>1</sup>
NXESM	NXSMP2-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wireless</b>								
NXWSM	NXSMP2-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXW	N/A	Yes	Yes	No	No	Yes	Yes	Yes

1 NXBTC needs to be plugged into an available NX SmartPort™ on the fixture network

### SpectraSync™ Color Tuning Technology:

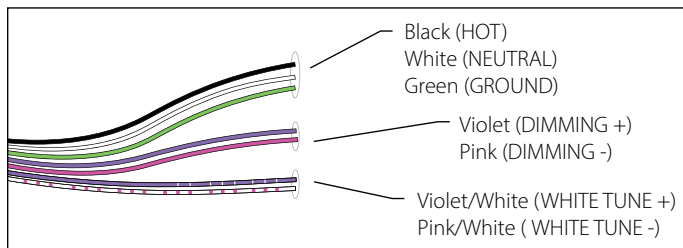
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K-5000K 2700K-6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space
Scheduled White	2700K-5000K 2700K-6500K	Mimics the rhythm of natural light or follows an alternative user-defined schedule throughout the day, enhancing an occupant's mood and well-being

### SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

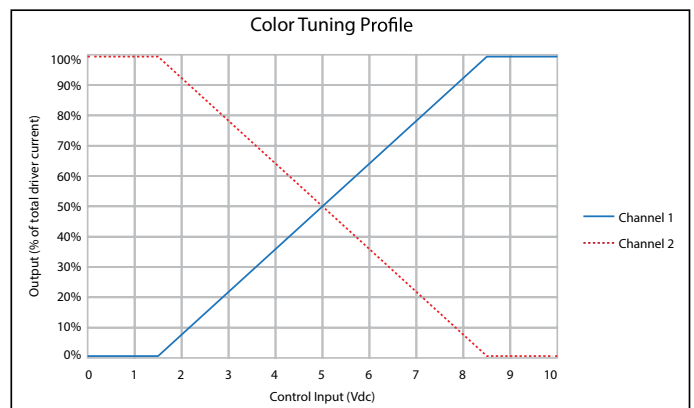


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and pink/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

### Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Current: NX Lighting Controls Room Controllers (NXRCFX2) and In-fixture Controllers (NXFM2)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



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## PERFORMANCE DATA TABLE

The table below shows the delivered lumens for the various lumen outputs. Use this chart in connection with the output multiplier capability to deliver any output required.

Nomenclature	Lumens/Fix	2x2		2x4		1x4	
		W/unit	Efficacy	W/unit	Efficacy	W/unit	Efficacy
D17 (min)	1700*	12.7	134	n/a	n/a	n/a	n/a
D18	1800*	13.3	135	n/a	n/a	n/a	n/a
D19	1900**	14.0	136	n/a	n/a	14.0	136
D20	2000	14.7	136	13.9	144	14.6	137
D21	2100	15.3	137	14.5	145	15.3	137
D22	2200	16.0	137	15.1	146	16.0	138
D23	2300	16.7	137	15.7	146	16.7	138
D24	2400	17.4	138	16.4	147	17.4	138
D25	2500	18.2	138	17.0	147	18.0	139
D26	2600	18.9	138	17.7	147	18.7	139
D27	2700	19.6	138	18.3	147	19.4	139
D28	2800	20.4	138	19.0	148	20.1	139
D29	2900	21.1	137	19.6	148	20.8	139
D30	3000	21.9	137	20.3	148	21.6	139
D31	3100	22.6	137	20.9	148	22.3	139
D32	3200	23.4	137	21.6	148	23.0	139
D33	3300	24.2	136	22.3	148	23.7	139
D34	3400	25.0	136	23.0	148	24.5	139
D35	3500	25.8	136	23.6	148	25.2	139
D36	3600	26.6	135	24.3	148	25.9	139
D37	3700	27.4	135	25.0	148	26.7	139
D38	3800	28.2	135	25.7	148	27.4	139
D39	3900	29.1	134	26.4	148	28.2	138
D40	4000	29.9	134	27.1	148	28.9	138
D41	4100	30.8	133	27.8	147	29.7	138
D42	4200	31.6	133	28.5	147	30.5	138
D43	4300	32.5	132	29.3	147	31.2	138
D44	4400	33.4	132	30.0	147	32.0	137
D45	4500	34.3	131	30.7	147	32.8	137
D46	4600	35.2	131	31.4	146	33.6	137
D47	4700	36.1	130	32.2	146	34.4	137
D48	4800	37.0	130	32.9	146	35.2	136
D49	4900	38.0	129	33.6	146	36.0	136
D50	5000***	n/a	n/a	34.4	145	36.8	136
D51	5100***	n/a	n/a	35.1	145	37.6	136
D52	5200***	n/a	n/a	35.9	145	38.4	135
D53	5300****	n/a	n/a	36.7	145	n/a	n/a
D54	5400****	n/a	n/a	37.4	144	n/a	n/a
D55	5500****	n/a	n/a	38.2	144	n/a	n/a
D56	5600****	n/a	n/a	39.0	144	n/a	n/a
D57	5700****	n/a	n/a	39.7	143	n/a	n/a
D58	5800****	n/a	n/a	40.5	143	n/a	n/a
D59	5900****	n/a	n/a	41.3	143	n/a	n/a
D60	6000****	n/a	n/a	42.1	142	n/a	n/a
D61 (max)	6100****	n/a	n/a	42.9	142	n/a	n/a

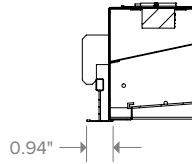
(wattage may vary up to 5% from published) \*2x2 only \*\*excludes 2x4 \*\*\*excludes 2x2 \*\*\*\*2x4 only

# SAE301

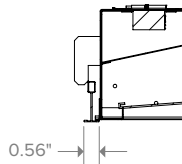
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## DIMENSIONS

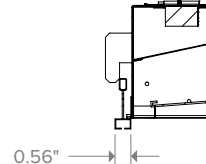
### Grid Mounting Options



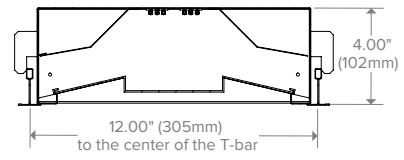
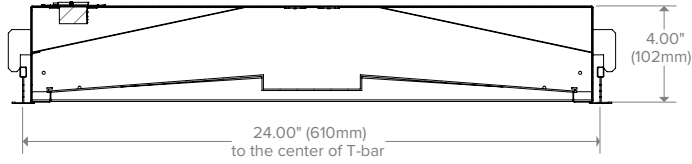
**G Grid**



**NG Narrow Face Grid**



**SS Screw Slot**



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## PHOTOMETRY

### SAE301-G-D-22-SGL-C1-35K-D38-D01-UNV

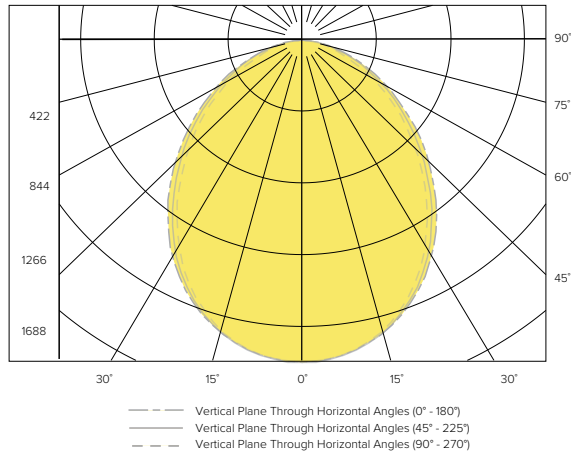
#### LUMINAIRE DATA

Test No.	20.00243
Description	2'x2' Recessed Architectural Troffer
Delivered Lumens	3775
Watts	29W
Efficacy	132.3
Mounting	Recessed

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1860	49.3
0-60	3101	82.1
0-90	3775	100.0
0-180	3775	100.0

#### POLAR GRAPH



### SAE301-G-D-24-SGL-C1-35K-D46-D01-UNV

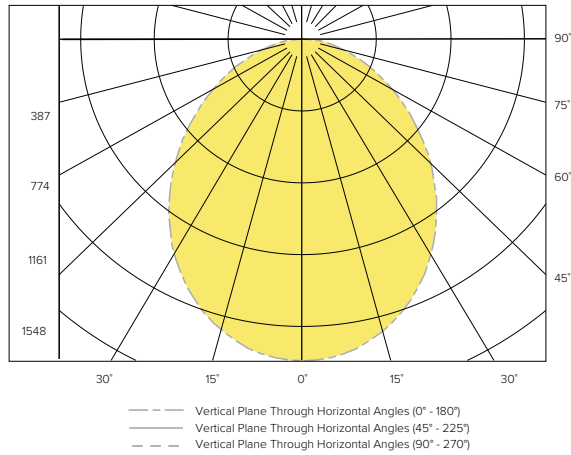
#### LUMINAIRE DATA

Test No.	20.00248
Description	2' x 4' Recessed Architectural Troffer
Delivered Lumens	4589
Watts	31W
Efficacy	146.1
Mounting	Recessed

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	2224	48.5
0-60	3746	81.6
0-90	4589	100.0
0-180	4589	100.0

#### POLAR GRAPH



### SAE301-G-D-14-SGL-C1-35K-D39-D01-UNV

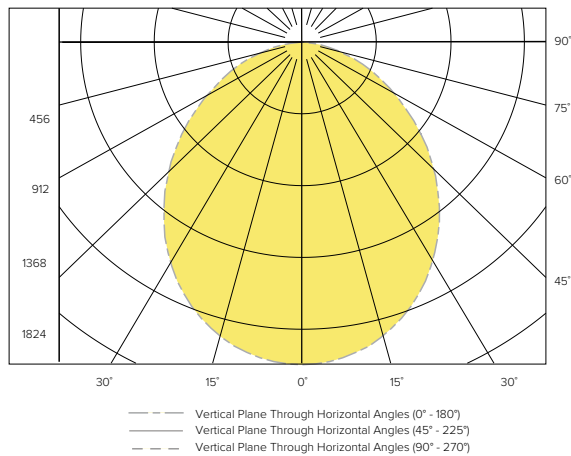
#### LUMINAIRE DATA

Test No.	20.00252
Description	1' x 4' Recessed Architectural Troffer
Delivered Lumens	3902
Watts	28W
Efficacy	137.2
Mounting	Recessed

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1998	51.2
0-60	3261	83.6
0-90	3902	100.0
0-180	3902	100.0

#### POLAR GRAPH



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## TM-30 DATA

	Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
3000K	83	82	92	96	81	83	90	83	60	10	81	81	76	84	98
3500K	83	90	90	95	83	83	86	86	67	21	77	81	70	84	98
4000K	83	90	95	84	83	86	87	87	67	15	76	83	68	84	97

\*Graphics shown for 80 CRI

## ADDITIONAL INFORMATION

### Output (VI Technology):

Variable Intensity (VI) technology allows precise specification of fixture output/wattage. Fixture will be programmed and labeled to specification. See Performance Data Table section for available increments.

### Sensor

SD1	Daylight sensor. Installs between light guide panels.
SO1	Occupancy sensor. Installs between light guide panels.
NX	NX sensors installs between light guide panels.
LV	Lutron Vive 0-10V Wireless RF Fixture Module for 1A 0-10V

See separate LC-Controls spec sheet for additional details.

### Driver:

D01	100%- 1% dimming range. Fixture will be wired for low voltage 0-10V dimming control.
D00	Dim-to-Off 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control.
D05	100%-5% dimming range. Fixture will be wired for low voltage 0-10V dimming control. Only applicable if either 2230TD, 2750T or 2765T is selected.
DS1	Soft-Start 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control.
DS0	Soft-Start Dim-to-Off 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control.
DALI	DALI compatible.
DALIP	Self-Powered DALI bus (e.g. SR, DEXAL)
NDM	Non-dimming. Fixture will be wired for fixed light output.

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## ADDITIONAL INFORMATION CONTINUED

**Fixture Weight:**

17.5 lbs (2x2)

**Rated Life (LED Board):**

Tested in accordance to LM79-2008

L70 calculated (per TM-21 extrapolated curve):

≤ 4200 lm= 340,000 hours

> 4200 lm= 96,000 hours

L70 reported (per TM-21/LM80 6x's limitation):

> 60,000 hours

L90 calculated (per TM-21 extrapolated curve):

≤ 4200 lm=91,000 hours

>4200 lm= 27,000 hours

**Rated Life:**

Standard: 100,000 hours