



## 2'x2' LED Volumetric Troffer

Catalog Number

Notes

Type



### 2' x 2' LED Volumetric Lay-In Troffer

#### Installation

Grid ceiling mounted. Edge design provides mounting into standard 1" and 9/16" tee bar or screw slot grids. Before installation, please consult your local ordinances and building codes for compliance.

#### Warranty

Five years against defects in manufacturing.

#### Listing

UL/cUL Listed - suitable for indoor applications. DesignLights Consortium qualified

### Application

The TCP LED lay-in troffers are high efficiency alternatives to T8 and T12 linear fluorescent troffers. Our intelligent high performance LED light engines and drivers deliver long life, consistent color, and superior lumen maintenance. Applications include offices, schools, retail locations, hospitals, and any other grid ceiling.

### Construction

The TCP LED troffer is constructed of rugged cold-rolled steel, post painted with a highly diffuse white finish. End plates are designed to mount in a variety of grid ceiling types. The diffuser is a one piece impact resistant acrylic which provides a wide distribution.

### Electrical

All electrical components are UL/cUL listed. TCP high efficiency drivers provide consistent power to ensure even lighting from the long life LEDs. Each driver is matched to a light engine to deliver LM80 rated performance for 50,000 hours. Full range dimming is optional.

### Optics

The one piece acrylic diffuser conceals the LEDs while providing even light distribution across the luminaire. The smooth white reflector curves into the diffuser, creating volumetric illumination by softening and distributing the light evenly in a wide pattern. The curved design also softens the contrast between the luminaire and ceiling.

**DESIGNLIGHTS**  
CONSORTIUM



### Catalog Ordering Matrix

| Brand | Family           | Size        | Voltage and Controls   | Lumen Package                     | Color  |
|-------|------------------|-------------|--|-----------------------------------|--|
| TCP   | TRV - Volumetric | 2 - 2' x 2' | <b>120DIM</b> - 120V, Line Dim (2013)<br><b>UNI</b> - 120V-277V<br><b>UNIO10</b> - 120V-277V, Control Dim<br><b>UNIREM</b> - 120V-277V, Remote Dim (2013)<br><b>347</b> - 347V | <b>32</b> - 3200 Lumens (2' x 2') | <b>30K</b> - 3000K<br><b>41K</b> - 4100K<br><b>50K</b> - 5000K |

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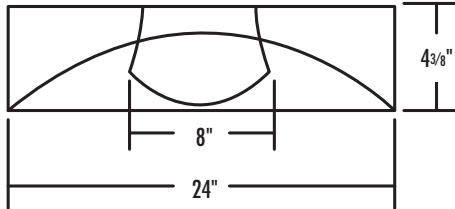
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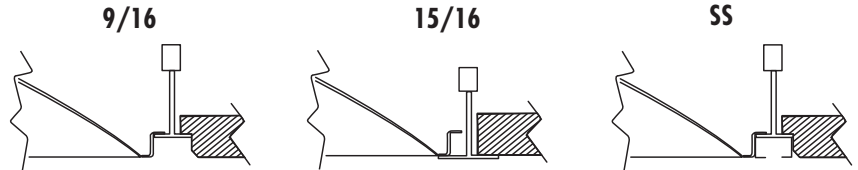
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### Dimensions and Mounting Data



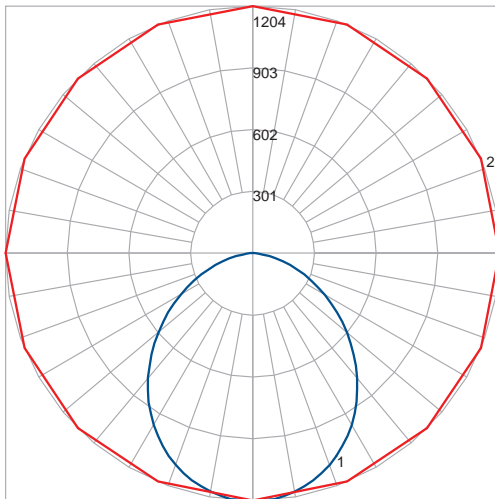
Length: 24"  
Width: 24"  
Depth: 4-3/8"

All dimensions are in inches unless otherwise specified.



### Photometric Report

#### Luminous Intensity Distribution Diagram



Maximum Candela = 1204 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

#### Candela Distribution

Effective Floor Cavity Reflectance 0.20

| RC | 80  |     |     |     | 70  |     |     |     | 50  |     |     | 30  |     |     | 10  |     |     | 0   |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RW | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 0   |
| 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1  | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 90  | 93  | 90  | 88  | 90  | 87  | 85  | 83  |
| 2  | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  | 69  |
| 3  | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 64  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |
| 4  | 82  | 70  | 61  | 54  | 80  | 69  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 62  | 56  | 52  | 49  |
| 5  | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 46  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 50  | 45  | 43  |
| 6  | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 53  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 39  | 37  |
| 7  | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 40  | 35  | 46  | 40  | 35  | 33  |
| 8  | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 31  | 29  |
| 9  | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 28  | 27  |
| 10 | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 24  |

### LED Energy Savings

| System              | Lamp Type | Ballast Factor | Input Watts | Watts Saved with LED |
|---------------------|-----------|----------------|-------------|----------------------|
| 2x2 LED 3200 Lumens | LED       | 1.00           | 38          | -                    |
| 4 LAMP T12          | 20W T12   | 0.88           | 92          | 47                   |
| 4 LAMP T8           | 17W T8    | 0.88           | 60          | 38                   |
| 2 LAMP T12 U-Bend   | 40W T12   | 0.88           | 74          | 29                   |
| 2 LAMP T12 U-Bend   | 34W T12   | 0.88           | 63          | 18                   |
| 2 LAMP T8 U-Bend    | 32W T8    | 0.88           | 54          | 9                    |

#### Zonal Lumen Summary

| Zone   | Lumens  | % Fixt. |
|--------|---------|---------|
| 0-30   | 927.03  | 27.3    |
| 0-40   | 1511.18 | 44.5    |
| 0-60   | 2649.26 | 77.9    |
| 0-90   | 3398.85 | 100     |
| 90-120 | 0       | 0       |
| 90-130 | 0       | 0       |
| 90-150 | 0       | 0       |
| 90-180 | 0       | 0       |
| 0-180  | 3398.85 | 100     |

Total Luminaire Efficiency = N.A.

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