

TCP's LED E-Series troffers gives you the appearance of fluorescent technology with a tube-like glow.

Limitless options for the following applications:

- Offices
- Restaurants
- Retail Stores
- Lobbies
- Schools
- Hospitals
- Any Grid Ceiling

Great features and benefits:

- Long life: 50,000 hours
- LM80 certified LEDs
- Smooth, uniform dimming (120V)
- High efficiency alternative to T12 and T8 linear fluorescent troffers
- Excellent color consistency and superior lumen maintenance



2 x 2 LED E-Series Flat Troffer

2 x 4 LED E-Series Flat Troffer



LED
we know light.™



TCP E-Series LED Flat Panel Troffers

LED 50,000 Hours average rated life, 120-277 Volts

| Features | Benefits |
|--|---|
| Up to 39% less energy than fluorescent alternatives | Instant energy savings. |
| Long life | Minimizes replacement and maintenance costs. |
| Very low heat generation | Less energy wasted as heat. |
| Excellent color consistency and CRI | Enhances colors of focal point while maintaining uniformity throughout lighting installation. |
| Mercury free | Great for all environments |
| Fits standard 1" and 9/16" T-bar grids | Easy installation and retrofit application |
| TCP LED drivers are specifically designed for high efficient LED combination | Optimal performance and efficiency |

Specifications

| | |
|------------------------|---------------|
| Input Line Voltage: | 120 - 277 VAC |
| Input Line Frequency | 50/60HZ |
| Lamp Life (Rated) | 50,000 hrs |
| Minimum Starting Temp | -30°C |
| Maximum Operating Temp | 40°C |
| CRI | 82 |
| Power Factor | >90% |
| THD | <20% |

Warranty

Five years against defects in manufacturing.



5 YEAR WARRANTY

For the most up-to-date specs and warranty information, please visit www.tcp.com

TCP®

325 Campus Dr. | Aurora, Ohio 44202 | P: 800-324-1496 | tcp.com

©TCP MAY 2014/52643



TCP E-Series 2x2 LED Flat Panel Troffer



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.

LED Energy Savings

| System | Ballast Factor | Lumens | Input Watts | Energy Savings |
|------------------------|----------------|--------|-------------|----------------|
| TCP 2000 Lumen 2X2 LED | | 2000 | 25 | — |
| 2 Lamp 14W T5 | 1.0 | 2113 | 34 | 26% |
| 2 Lamp 17W T8 | 1.0 | 1905 | 33 | 24% |
| TCP 4000 Lumen 2X2 LED | | 4000 | 45 | — |
| 2 Lamp 34W T12 U-Bend | 0.88 | 4420 | 74 | 39% |
| 2 Lamp 32W T8 U-Bend | 0.88 | 4275 | 58 | 22% |
| 2 Lamp 24W T5 HO | 1.0 | 3145 | 54 | 17% |

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 50,000 hours life. Full range dimming is optional.

Optics

The one piece flat acrylic diffuser comes in two styles, opaque or A12 clear prismatic. The opaque lens provides an even glow while the clear prismatic lens mimics the look of traditional prismatic troffers.

Catalog Ordering Matrix

| Brand | Family | Size | Voltage and Controls | Lumen Package (Power) ^{1,2} | Color |
|---------------------|---|-------------|--|--|--|
| TCPE - TCP E-Series | TRF - Flat Opaque TRP - Flat Prismatic | 2 - 2' x 2' | UNI - 120V-277V 120DIM - 120V, Line Dim | 20 - 2000 Lumens (25W) 40 - 4000 Lumens (45W) | 30K - 3000K 35K - 3500K 41K - 4100K 50K - 5000K |

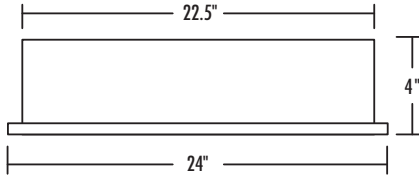
¹ Approximate lumen output.

² Actual wattage may differ by +/- 5% when operating between 120-277V +/- 10%.

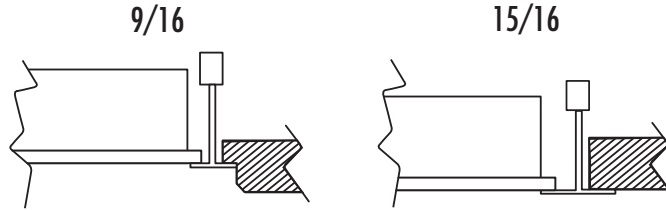


TCP E-Series 2x2 LED Flat Panel Troffer

Dimensions and Mounting Data

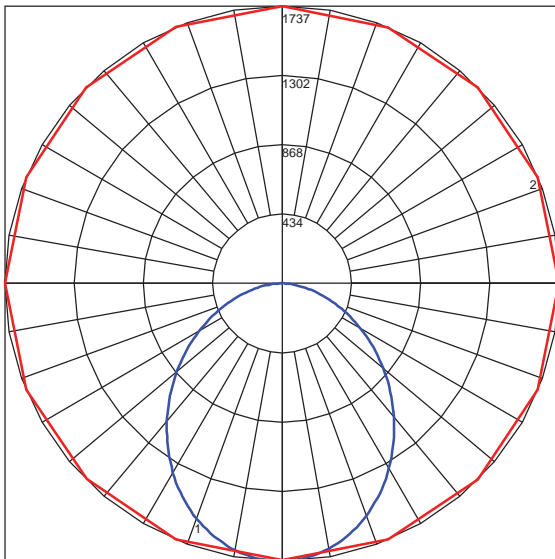


Length: 24" All dimensions are in inches
 Width: 24" unless otherwise specified.
 Depth: 4"



Photometric Report

Luminous Intensity Distribution Diagram TCPE TRF 2 UNI 40 30K



Maximum Candela = 1736.51 Located At Horizontal Angle = 180, Vertical Angle = 1
 # 1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
 # 2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)

Coefficients of Utilization

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 | 105 | 101 | 97 | 107 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 77 | 70 | 65 | 74 | 68 | 64 | 71 | 67 | 63 | 61 |
| 4 | 84 | 72 | 64 | 57 | 82 | 71 | 63 | 57 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 59 | 54 | 52 |
| 5 | 77 | 65 | 56 | 50 | 75 | 64 | 55 | 49 | 62 | 54 | 49 | 60 | 53 | 48 | 58 | 52 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 49 | 43 | 56 | 48 | 43 | 54 | 48 | 43 | 53 | 47 | 42 | 40 |
| 7 | 66 | 53 | 45 | 39 | 65 | 52 | 44 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 |
| 8 | 62 | 49 | 40 | 35 | 60 | 48 | 40 | 35 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 41 | 34 | 29 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |

Zonal Lumen Summary

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 622.73 | N.A. | 14.70 |
| 0-30 | 1294.01 | N.A. | 30.60 |
| 0-40 | 2062.28 | N.A. | 48.70 |
| 0-60 | 3447.47 | N.A. | 81.50 |
| 0-80 | 4157.31 | N.A. | 98.30 |
| 0-90 | 4224.08 | N.A. | 99.80 |
| 10-90 | 4060.69 | N.A. | 96.00 |
| 20-40 | 1439.55 | N.A. | 34.00 |
| 20-50 | 2189.02 | N.A. | 51.70 |
| 40-70 | 1843.19 | N.A. | 43.60 |
| 60-80 | 709.85 | N.A. | 16.80 |
| 70-80 | 251.84 | N.A. | 6.00 |
| 80-90 | 66.76 | N.A. | 1.60 |
| 90-110 | 0.50 | N.A. | 0.00 |
| 90-120 | 1.35 | N.A. | 0.00 |
| 90-130 | 2.67 | N.A. | 0.10 |
| 90-150 | 5.15 | N.A. | 0.10 |
| 90-180 | 6.41 | N.A. | 0.20 |
| 110-180 | 5.91 | N.A. | 0.10 |
| 0-180 | 4230.49 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

Specifications and dimensions subject to change without notice.

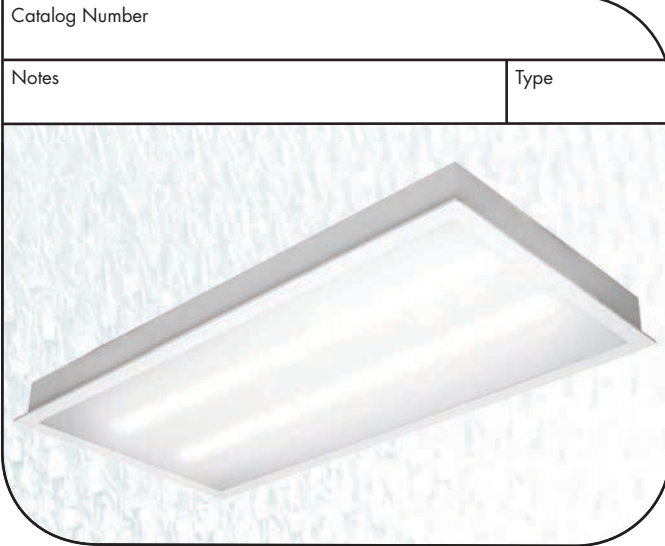
TCP®

325 Campus Dr. | Aurora, Ohio 44202 | P: 800-324-1496 | tcp.com

©TCP MAY 2014/52643



TCP E-Series 2x4 LED Flat Panel Troffer



Catalog Number

Notes

Type

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 50,000 hours life. Full range dimming is optional.

Optics

The one piece flat acrylic diffuser comes in two styles, opaque or A12 clear prismatic. The opaque lens provides an even glow while the clear prismatic lens mimics the look of traditional prismatic troffers.

LED Energy Savings

| System | Ballast Factor | Lumens | Input Watts | Energy Savings |
|------------------------|----------------|--------|-------------|----------------|
| TCP 4000 Lumen 2X4 LED | | 4000 | 45 | — |
| 2 Lamp 32W T8 HBF | 1.18 | 4658 | 65 | 31% |
| 2 Lamp 28W T5 | 1.0 | 4675 | 63 | 29% |
| 2 Lamp 32W T8 NBF | 0.88 | 4468 | 52 | 13% |
| TCP 6800 Lumen 2X4 LED | | 6800 | 80 | — |
| 3 Lamp 32W T8 HBF | 1.18 | 6960 | 93 | 14% |
| 3 Lamp 32W T8 NBF | 0.88 | 6681 | 78 | -3% |

Catalog Ordering Matrix

| Brand | Family | Size | Voltage and Controls | Lumen Package (Power) ^{1,2} | Color |
|---------------------|---|-------------|--|--|--|
| TCPE - TCP E-Series | TRF - Flat Opaque TRP - Flat Prismatic | 4 - 2' x 4' | UNI - 120V-277V 120DIM - 120V, Line Dim | 40 - 4000 Lumens (45W) 68 - 6800 Lumens (80W) | 30K - 3000K 35K - 3500K 41K - 4100K 50K - 5000K |

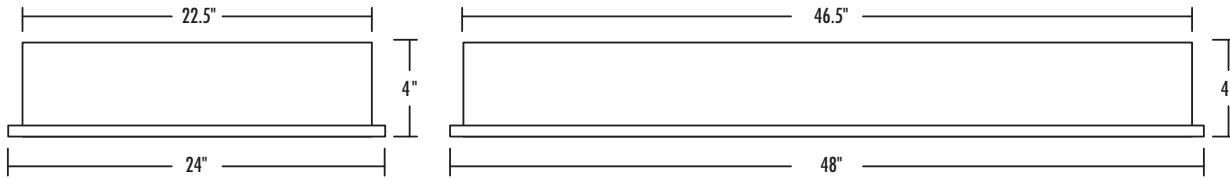
¹ Approximate lumen output.

² Actual wattage may differ by +/- 5% when operating between 120-277V +/- 10%.



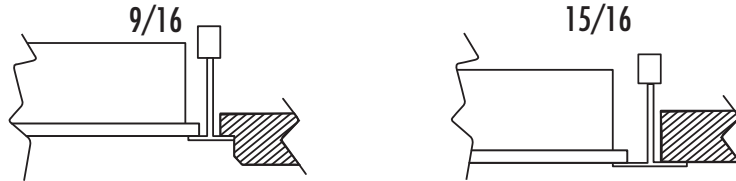
TCP E-Series 2x4 LED Flat Panel Troffer

Dimensions and Mounting Data



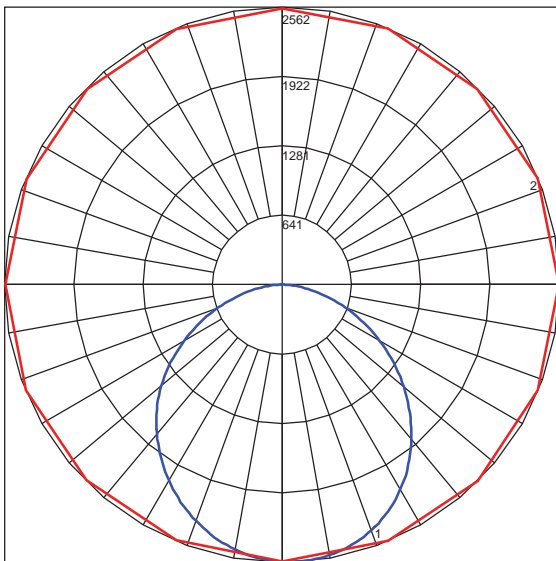
Length: 48"
Width: 24"
Depth: 4"

All dimensions are in inches unless otherwise specified.



Photometric Report

Luminous Intensity Distribution Diagram TCPE TRF 4 UNI 68 30K



Maximum Candela = 2562.35 Located At Horizontal Angle = 292.5, Vertical Angle = 2
1 - Vertical Plane Through Horizontal Angles (292.5 - 112.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (2) (Through Max. Cd.)

Coefficients of Utilization

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 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 71 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 |
| 5 | 77 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 44 |
| 6 | 71 | 58 | 49 | 42 | 69 | 57 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 34 |
| 8 | 61 | 48 | 39 | 33 | 60 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 40 | 33 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

Zonal Lumen Summary

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 930.40 | N.A. | 13.70 |
| 0-30 | 1962.2 | N.A. | 28.80 |
| 0-40 | 3181.76 | N.A. | 46.70 |
| 0-60 | 5479.61 | N.A. | 80.50 |
| 0-80 | 6692.33 | N.A. | 98.30 |
| 0-90 | 6803.55 | N.A. | 99.90 |
| 10-90 | 6561.88 | N.A. | 96.40 |
| 20-40 | 2251.35 | N.A. | 33.10 |
| 20-50 | 3479.69 | N.A. | 51.10 |
| 40-70 | 3081.14 | N.A. | 45.20 |
| 60-80 | 1212.72 | N.A. | 17.80 |
| 70-80 | 429.43 | N.A. | 6.30 |
| 80-90 | 111.23 | N.A. | 1.60 |
| 90-110 | 1.86 | N.A. | 0.00 |
| 90-120 | 3.24 | N.A. | 0.00 |
| 90-130 | 4.40 | N.A. | 0.10 |
| 90-150 | 6.09 | N.A. | 0.10 |
| 90-180 | 6.91 | N.A. | 0.10 |
| 110-180 | 5.04 | N.A. | 0.10 |
| 0-180 | 6810.46 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

Specifications and dimensions subject to change without notice.

TCP®

325 Campus Dr. | Aurora, Ohio 44202 | P: 800-324-1496 | tcp.com

©TCP MAY 2014/52643