LED E-Series

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

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DLC QPL LISTED

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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	-30ºC
Maximum Operating Temp	40ºC
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.tcpi.com

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TCP E-Series 2x2 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.

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%.

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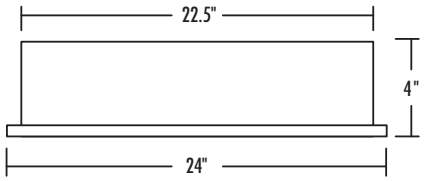
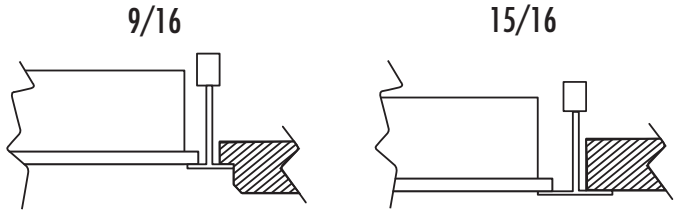
TCP E-Series 2x2 LED Flat Panel Troffer

Dimensions and Mounting Data



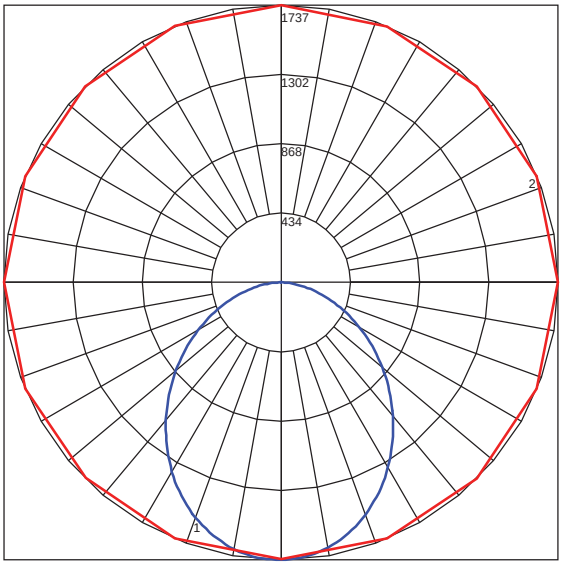


Length: 24"
Width: 24"
Depth: 4"

All dimensions are in inches unless otherwise specified.

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.

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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.

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%

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	**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%.

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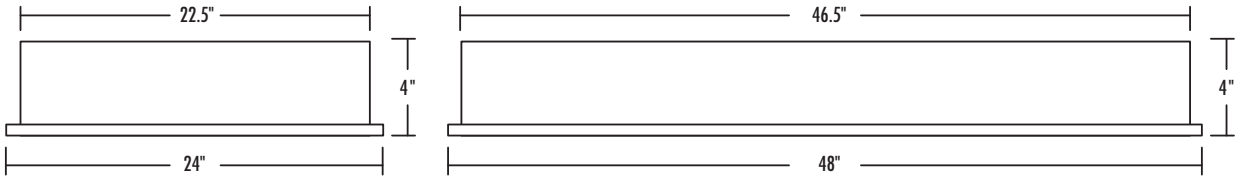
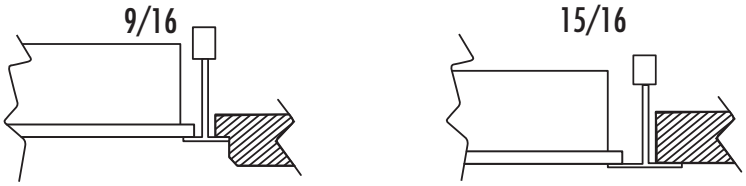
TCP E-Series 2x4 LED Flat Panel Troffer

Dimensions and Mounting Data



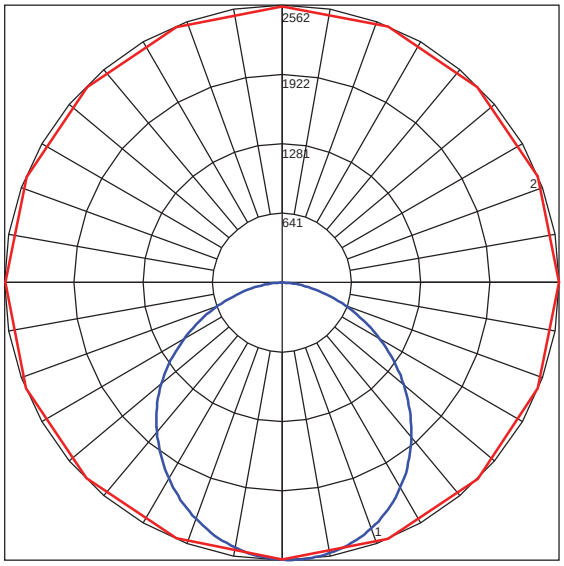
Length: 48"
Width: 24"
Depth: 4"

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.

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