LED Designer Series

When appearance is most important, TCP's LED Designer Series turns any location into something truly exceptional.

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 Designer Series
Volumetric Troffer

2 x 4 LED Designer Series
Volumetric Troffer

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TCP Designer Series LED Volumetric 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.

c UL us 5 YEAR WARRANTY

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

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TCP Designer Series 2x2 LED Volumetric 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 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.

LED Energy Savings

System	Ballast Factor	Lumens	Input Watts	Energy Savings
TCP 2200 Lumen 2X2 LED		2200	22.5	–
2 Lamp 14W T5	1.0	2113	34	34%
2 Lamp 17W T8	1.0	1905	33	24%
TCP 3500 Lumen 2X2 LED		3500	35	–
2 Lamp 31W U-Bend	0.88	3790	59	41%
2 Lamp 24W T5 HO	1.0	3145	54	35%
TCP 4400 Lumen 2X2 LED		4400	45	–
2 Lamp 34W T12 U-Bend	0.88	4420	74	39%
2 Lamp 32W T8 U-Bend	0.88	4275	58	22%

Catalog Ordering Matrix — 24 combinations available

Brand	Family	Size	Voltage and Controls	Lumen Package (Power) [1] [2]	Color
TCP - TCP Designer	**TRV** - Volumetric	**2** – 2' x 2'	**UNI** - 120V-277V **120DIM** - 120V, Line Dim	**22** - 2200 Lumens (22.5W) **35** - 3500 Lumens (40W) **44** - 4400 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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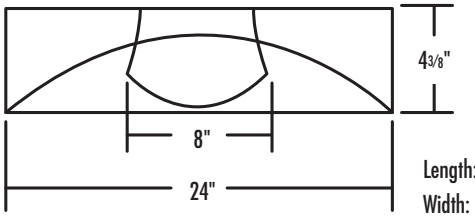
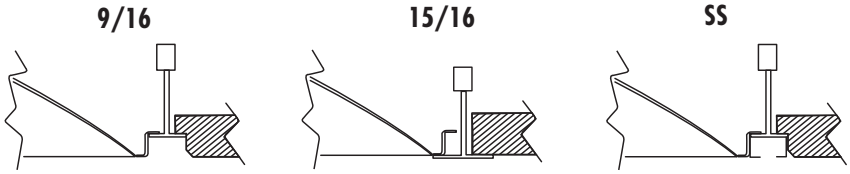
TCP Designer Series 2x2 LED Volumetric Troffer

Dimensions and Mounting Data



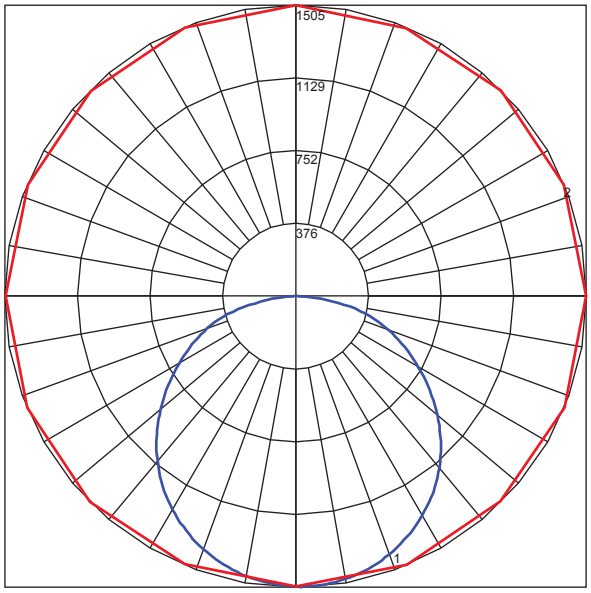
Length: 24″
Width: 24″
Depth: 4-3/8″



All dimensions are in inches unless otherwise specified.

Photometric Report

Luminous Intensity Distribution Diagram
TCP TRV 2 UNI 44 30K



Maximum Candela = 1504.77 Located At Horizontal Angle = 337.5, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (337.5 - 157.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)

Zonal Lumen Summary

Zone	Lumens	% Lamps	% Fixt.
0-20	546.99	N.A.	13.00
0-30	1156.31	N.A.	27.50
0-40	1882.91	N.A.	44.80
0-60	3286.64	N.A.	78.30
0-80	4112.81	N.A.	98.00
0-90	4193.06	N.A.	99.90
10-90	4051.09	N.A.	96.50
20-40	1335.92	N.A.	31.80
20-50	2078.18	N.A.	49.50
40-70	1915.01	N.A.	45.60
60-80	826.17	N.A.	19.70
70-80	314.89	N.A.	7.50
80-90	80.25	N.A.	1.90
90-110	0.77	N.A.	0.00
90-120	1.59	N.A.	0.00
90-130	2.73	N.A.	0.10
90-150	4.62	N.A.	0.10
90-180	5.38	N.A.	0.10
110-180	4.61	N.A.	0.10
0-180	4198.44	N.A.	100.00

Total Luminaire Efficiency = N.A.%

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	99	96	106	101	98	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	48	41	68	56	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36 3	0	26	24

Specifications and dimensions subject to change without notice.

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TCP Designer Series 2x4 LED Volumetric 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 4400 Lumen 2X4 LED		4400	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 7000 Lumen 2X4 LED		7000	72	–
3 Lamp 32W T8 HBF	1.18	6960	93	23%
3 Lamp 32W T8 NBF	0.88	6681	78	8%
TCP 8600 Lumen 2X4 LED		8600	97	–
2 Lamp 54W T5	1.0	8000	117	17%
4 Lamp 32W T8 HBF	1.18	8965	112	13%
4 Lamp 32W T8 NBF	0.88	8606	102	5%

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 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.

Catalog Ordering Matrix — 24 combinations available

Brand	Family	Size	Voltage and Controls	Lumen Package (Power) [1] [2]	Color
TCP - TCP Designer	**TRV** - Volumetric	**4** – 2' x 4'	**UNI** - 120V-277V **120DIM** - 120V, Line Dim	**44** - 4400 Lumens (45W) **70** - 7000 Lumens (72W) **86** - 8600 Lumens (97W)	**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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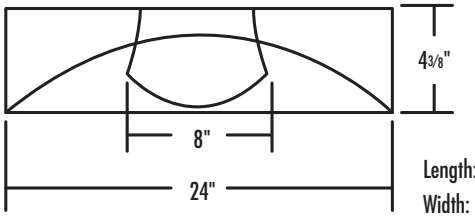
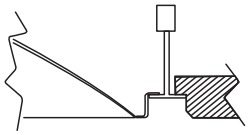
TCP Designer Series 2x4 LED Volumetric Troffer

Dimensions and Mounting Data



Length: 48"
Width: 24"
Depth: 4-3/8"

9/16



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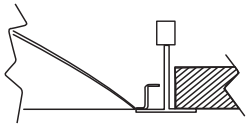

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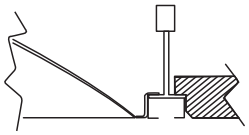
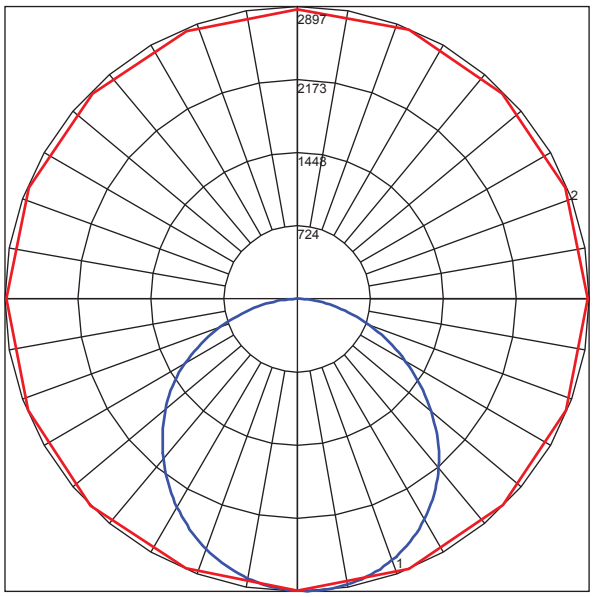


All dimensions are in inches unless otherwise specified.

Photometric Report

Luminous Intensity Distribution Diagram
TCP TRV 4 UNI 70 30K



Maximum Candela = 2896.74 Located At Horizontal Angle = 292.5, Vertical Angle = 4
1 - Vertical Plane Through Horizontal Angles (292.5 - 112.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (4) (Through Max. Cd.)

Zonal Lumen Summary

Zone	Lumens	% Lamps	% Fixt.
0-20	1060.49	N.A.	12.40
0-30	2260.64	N.A.	26.40
0-40	3718.1	N.A.	43.40
0-60	6620.86	N.A.	77.20
0-80	8379.19	N.A.	97.70
0-90	8565.41	N.A.	99.90
10-90	8291.78	N.A.	96.70
20-40	2657.61	N.A.	31.00
20-50	4179.62	N.A.	48.80
40-70	3980.69	N.A.	46.40
60-80	1758.33	N.A.	20.50
70-80	680.40	N.A.	7.90
80-90	186.23	N.A.	2.20
90-110	3.01	N.A.	0.00
90-120	4.79	N.A.	0.10
90-130	5.89	N.A.	0.10
90-150	7.19	N.A.	0.10
90-180	7.82	N.A.	0.10
110-180	4.81	N.A.	0.10
0-180	8573.23	N.A.	100.00

Total Luminaire Efficiency = N.A.%

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	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	65	61	69	64	60	57
4	82	69	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

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