

LED Fixed Wattage Volumetric Troffers

Product Specifications



TCP's LED Volumetric Troffers offer a high-efficiency alternative to T5, T8, and T12 linear fluorescent systems. They provide long-life with consistent color and superior lumen maintenance. Designed to mount in a variety of grid ceilings, the rugged, cold-rolled steel housing is post-painted with a matte white finish. The acrylic diffuser provides a low-glare, wide light distribution, and the sloped reflector softens the contrast between the luminaire and ceiling.

The LED Volumetric Troffers offer a cost-effective solution to maximize savings and take advantage of potential utility rebates where applicable, without sacrificing performance.

Reasons to choose the LED Fixed Wattage Volumetric Troffers from TCP

- Uses up to 61% less energy than fluorescent alternatives
- Long 50,000 hour rated life
- Excellent color consistency and CRI
- Fits standard 1" and 9/16" T-bar grid ceilings
- Acrylic diffuser with sloped housing design
- Slim, low-profile design
- Mercury-free

Ideal Applications in T-Bar Ceilings

- Offices
- Retail Stores
- Schools
- Hospitality
- Restaurants
- Healthcare

Specifications

Input Line Voltage	120-277 VAC
Input Line Frequency (Hz)	50/60Hz
Wattage (W)	
2x2	23W/29W/38W
2x4	23W/29W/38W/46W
Lumens (L)	
2x2	3100L/4000L/5200L
2x4	3100L/4000L/5200L/6000L
Lumens per Watt (LPW).....	>130LPW
Rated Life	50,000 hours
Minimum Starting Temperature	-20°C
Maximum Operating Temperature.....	40°C
CRI	>80
Power Factor	>90%
THD.....	<20%
Ratings	UL/cUL damp location rated, IC rated, IP20, DLC 5.0 Premium
Controls.....	0-10V dimming (standard)



Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
TCP LED Volumetric Troffer - 2x2	—	3800	29	—
2 Lamp 34W T12 U-Bend	0.88	4420	74	61%
2 Lamp 32W T8 U-Bend	0.88	4275	58	50%
2 Lamp 24W T5HO	1.0	3145	54	46%
TCP LED Volumetric Troffer - 2x4	—	6000	46	—
3 Lamp 32W T8 HBF	1.18	6960	93	51%
3 Lamp 32W T8 NBF	0.88	6681	89	48%
2 Lamp 32W T8 HBF	1.18	4658	65	29%
2 Lamp 28W T5	1.0	4675	63	27%
2 Lamp 32W T8 NBF	0.88	4468	59	22%

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

Applications

The TCP LED Volumetric Troffers are high-efficiency alternatives to T5, 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 other T-grid ceilings.

Construction

The LED Volumetric Troffer is constructed of rugged cold-rolled steel, post-painted with a matte white finish, and an acrylic diffuser. The housing is designed to mount in a variety of grid ceiling types.

Electrical

All electrical components are cULus listed. TCP high-efficiency drivers provide consistent power to ensure even lighting from the long-life LEDs. Each driver is wattage selectable and paired with a high-quality LED light engine to deliver long life and high-quality light. Full range 0-10V dimming is optional.

Optics

The acrylic diffuser conceals the LEDs while providing a highly-diffused, low-glare light. The smooth white reflector integrates into the diffuser creating soft illumination and distributing the light evenly in a wide pattern. The sloped design also softens the contrast between the luminaire and ceiling.

Item Number	
Notes	Type



Listings

UL/cUL Listed
IC Rated
RoHS Compliant
DLC v5.0 Premium

Lumen Maintenance

L90 > 36,000 hours

Warranty

Seven year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: TRV2UZD2330K

FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS
TRV = Volumetric Troffer	2 = 2' x 2'	U = 120V-277V	ZD = 0-10V Dimming	23 = 3100 Lumens 29 = 4000 Lumens 38 = 4200 Lumens (Wattage Selectable to 38W/29W/23W)	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	EB - Emergency Backup

¹ Approximate lumen output. Actual performance may vary based on CCT, options selected and end user application.

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

³ 23W and 29W are permanently fixed; 38W is adjustable to 38W, 29W, or 23W.

Accessories:

Item Number	Description
DNFLK2	RECESS MOUNT FLANGE KIT FOR 2X2 TROFFERS AND PANELS (WHITE)
DTSK2	SURFACE MOUNT KIT FOR 2X2 TROFFER (WHITE) NOTE: Not compatible with Battery Backup Units
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE
YHANGER6PK	Y FIT CABLE HANGER 6 PACK (HANGS 3 UNITS)

NOTE: EB option is not compatible with DTSK2

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

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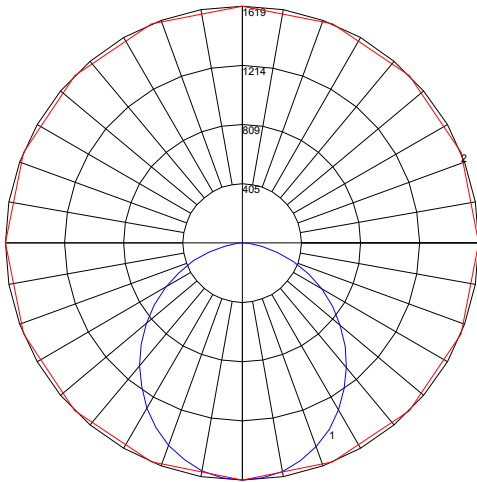
7 YEAR WARRANTY

Not all versions of this product are qualified on the DLC QPL. To view our DLC qualified products, please consult the DLC Qualified Products List at www.designlights.org/qpl.

Photometric Report

Based on photometric data for
TCP Item # TRV2UZA3830K

Polar Graph



Maximum Candela = 1671.01 Located At Horizontal Angle = 10, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 190) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3788	4043	4385
55	3530	3930	4460
65	3190	3840	4691
75	2600	3900	5273
85	1462	3433	3393

Coefficients of Utilization – Zonal Cavity Method

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	94	105	101	97	93	96	93	90	92	90	87	89	87	85	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	72	77	74	70	68
3	89	78	70	63	86	76	69	62	73	67	61	71	65	60	68	63	59	57
4	81	69	60	53	79	68	59	53	65	58	52	63	56	51	61	55	50	48
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48	44	42
6	69	55	46	40	67	54	46	39	53	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	590.75	N.A.	12.30
0-30	1252.75	N.A.	26.10
0-40	2050.35	N.A.	42.80
0-60	3647.2	N.A.	76.00
0-80	4670.78	N.A.	97.40
0-90	4793.14	N.A.	99.90
10-90	4640.08	N.A.	96.70
20-40	1459.6	N.A.	30.40
20-50	2290.86	N.A.	47.80
40-70	2214.67	N.A.	46.20
60-80	1023.58	N.A.	21.30
70-80	405.76	N.A.	8.50
80-90	122.36	N.A.	2.60
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.73	N.A.	0.00
90-180	2.82	N.A.	0.10
110-180	2.82	N.A.	0.10
0-180	4795.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Spacing Criterion

(0-180): 1.24, (90-270): 1.32

Specifications and dimensions subject to change without notice.

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7 YEAR WARRANTY

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Applications

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Optics

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Notes	Type



Listings

UL/cUL Listed
IC Rated
RoHS Compliant
DLC v5.0 Premium

Lumen Maintenance

L90 > 36,000 hours

Warranty

Seven year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: TRV4UZD2330K

FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3,4}	COLOR TEMPERATURE	OPTIONS
TRV = Volumetric Troffer	4 = 2' x 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 3100 Lumens 29 = 4000 Lumens 38 = 4200 Lumens (Wattage Selectable to 38W/29W/23W) 46 = 6000 Lumens	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	EB - Emergency Backup

¹ Approximate lumen output. Actual performance may vary based on CCT, options selected and end user application.

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

³ 23W and 29W are permanently fixed; 38W is adjustable to 38W, 29W, or 23W.

⁴ 46W is permanently fixed.

Accessories:

Item Number	Description
DNFLK4	RECESS MOUNT FLANGE KIT FOR 2X4 TROFFERS AND PANELS (WHITE)
DTSK4	SURFACE MOUNT KIT FOR 2X4 TROFFER (WHITE) NOTE: Not compatible with Battery Backup Units
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE
YHANGER6PK	Y FIT CABLE HANGER 6 PACK (HANGS 3 UNITS)

NOTE: EB option is not compatible with DTSK4

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

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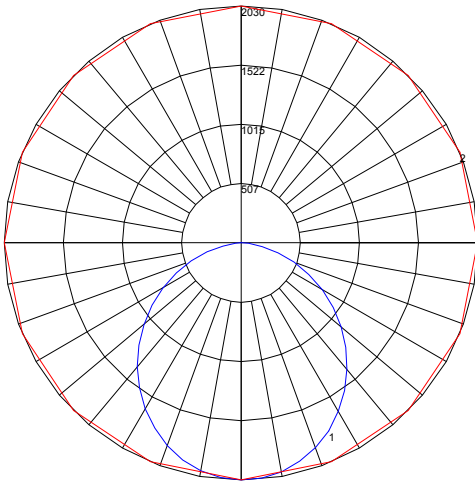


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Photometric Report

Based on photometric data for
TCP Item # TRV4UZD4630K

Polar Graph



Maximum Candela = 1671.01 Located At Horizontal Angle = 10, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 190) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

Average Luminance candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2411	2600	2825
55	2261	2257	2917
65	2048	2582	3137
75	1703	2774	3595
85	987	2767	2730

Coefficients of Utilization – Zonal Cavity Method

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	111	50	30	10	106	50	30	10	102	50	30	10	100
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	106	102	102	102	102	100	100	100	100
1	108	103	98	94	105	100	96	92	96	93	90	87	92	89	87	84	89	86	84	82	82	82	82	82
2	98	89	82	76	95	87	80	75	83	78	73	69	80	75	71	67	77	73	70	67	67	67	67	67
3	89	78	69	62	86	76	68	62	73	67	61	57	70	64	60	56	68	63	59	56	56	56	56	56
4	81	69	60	53	79	67	59	52	65	57	51	47	62	56	51	47	60	55	50	48	48	48	48	48
5	74	61	52	45	72	60	51	45	58	50	44	40	56	49	44	40	54	48	43	41	41	41	41	41
6	69	55	46	39	67	54	45	39	52	44	39	35	50	44	38	34	49	43	38	36	36	36	36	36
7	64	50	41	35	62	49	40	34	47	40	34	30	46	39	34	30	45	38	34	32	32	32	32	32
8	59	45	37	31	58	45	36	31	43	36	30	27	42	35	30	27	41	35	30	28	28	28	28	28
9	55	42	33	28	54	41	33	28	40	33	27	24	39	32	27	24	38	32	27	25	25	25	25	25
10	52	38	30	25	51	38	30	25	37	30	25	22	36	29	25	22	35	29	25	23	23	23	23	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	741.86	N.A.	12.10
0-30	1575.01	N.A.	25.80
0-40	2581.26	N.A.	42.20
0-60	4607.58	N.A.	75.40
0-80	5937.37	N.A.	97.10
0-90	6112.53	N.A.	100.00
10-90	5920.5	N.A.	96.80
20-40	1839.41	N.A.	30.10
20-50	2891.24	N.A.	47.30
40-70	2821.12	N.A.	46.10
60-80	1329.79	N.A.	21.70
70-80	534.99	N.A.	8.70
80-90	175.16	N.A.	2.90
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	1.65	N.A.	0.00
110-180	1.65	N.A.	0.00
0-180	6114.17	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Spacing Criterion

(0-180): 1.24, (90-270): 1.32

Specifications and dimensions subject to change without notice.

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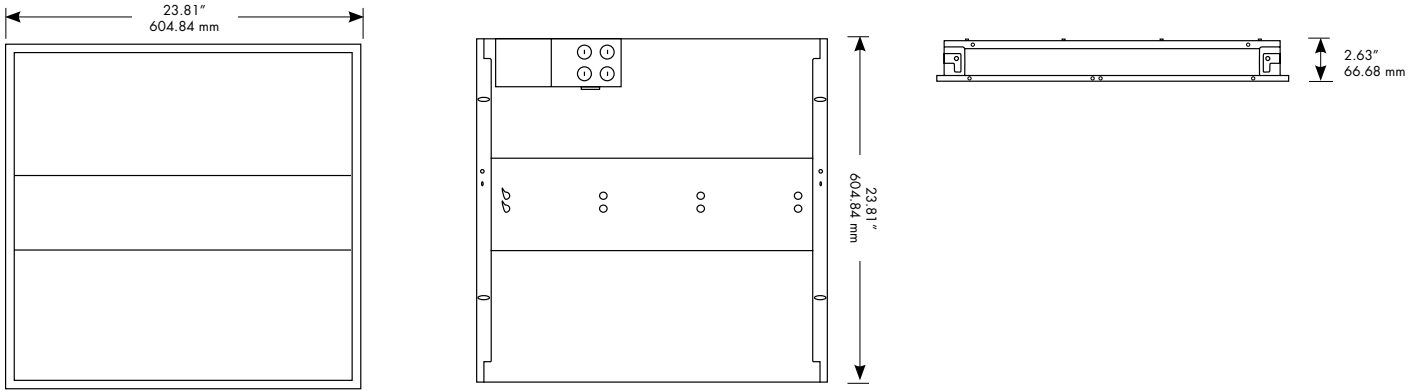
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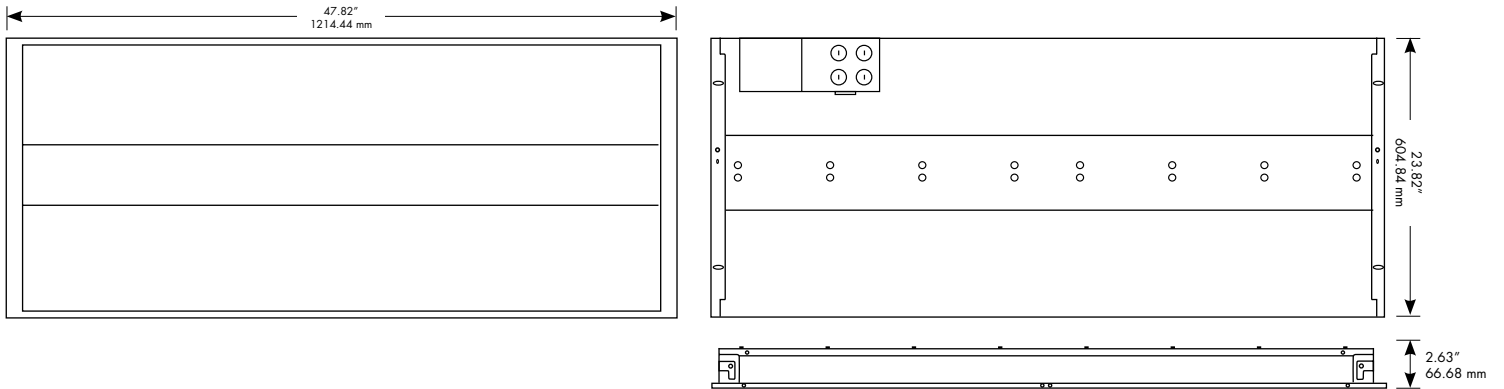
7 YEAR WARRANTY

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2x2 Dimensions and Mounting Data



2x4 Dimensions and Mounting Data



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7 YEAR
WARRANTY

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TECHNOLOGY CAST IN A BEAUTIFUL LIGHT

For over 30 years, TCP has been designing, developing and delivering energy-efficient lighting into the market. Thanks to our cutting-edge technology and manufacturing expertise, we have shipped billions of high quality lighting products. With TCP, you can count on a lighting product that is designed to meet the needs of the market - that transforms your surroundings and envelopes you in warmth - lighting that generates beauty with every flip of the switch.

Sales:

Date:

Model:

Project:

Rep:

Catalog Number:

Type:

Notes:



For more information on the quality and care TCP can deliver, call us at **800.324.1496** or visit tcp.com

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