



LED Direct Troffer Luminaires with Selectable Wattage

Product Specifications

TCP's LED Direct Troffer Luminaires feature back-lit technology with a robust construction that still offers a slim, low-profile with beautiful full panel diffusion and superior uniformity.

These energy efficient troffers offer a cost-effective solution to maximize energy savings and take advantage of utility rebates while using the best LED technology.

Applications: T-bar Grid Ceilings

Reasons to choose the LED Direct Troffer Luminaires from TCP

- Provides energy savings over fluorescent alternatives, providing instant energy savings and potential rebate eligibility
- Long 50,000 hour rated life significantly reduces maintenance labor & material costs
- Excellent color consistency & CRI Enhances color of focal point while maintaining uniformity throughout lighting installation
- Mercury free construction is great for all environments
- Fits standard 1" and 9/16" T-bar grid ceilings
- Utilizes back-lit technology for full diffusion with excellent uniformity
- Slim, low-profile design and lightweight for easy handling

Ideal Applications

- Office
- Retail Stores
- Schools
- Hospitality
- Restaurants
- Healthcare

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5 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.



LED Direct Troffer Luminaires with Selectable Wattage

Specifications

Input Line Voltage	120-277 VAC
Input Line Frequency (Hz)	50/60HZ
Wattage (W)	
2x2	23W/29W/38W Selectable
2x4	29W/39W/46W Selectable
Lumens (L)	
2x2	2600L/3200L/4200L
2x4	3300L/4400L/5100L
Lumens per Watt (LPW)	>110 LPW
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 Standard 4.4
Controls	0-10V dimming (standard)



Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
TCP LED Direct Troffer - 2x2	—	3200	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 Direct Troffer - 2x4	—	5100	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%.

NOTE: Charts show system lumens (delivered lumens), NOT straight lamp lumen output. This is calculated as follows:

System lumens = mean lumens x # lamps x ballast factor x luminaire efficiency factor

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2x2 LED Direct Troffer Luminaires with Selectable Wattage

Applications

TCP LED Direct Troffer luminaires are cost-effective, high-efficiency alternatives to traditional T5, T8 and T12 linear fluorescent troffers. Featuring a slim, low-profile design, our LED Direct Troffers use back lit technology to deliver full panel diffusion and superior uniformity that meets or exceeds the output from edge-lit panels. Applications include offices, schools, retail locations, healthcare, hospitality and other T-grid and commercial ceilings.

Construction

- Remote-mount LED driver with integrated junction box
- Rectangular white frame
- Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

Electrical

- UL/cUL damp location rated
- 0-10V dimming driver (standard)
- Selectable wattage driver with quick connect to panel
- System rated for long 50,000 hour life

Optics

- Back-lit technology provides even, uniform lighting
- 120° beam angle
- Frosted diffuser for reduced glare and aesthetic appeal
- Meets or exceeds the look and performance of edge-lit panels



Listings

UL/cUL Listed
IC Rated
RoHS Compliant
DLC 4.4 Standard

Lumen Maintenance

L70 > 54000 hours

Warranty

Five year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: DTF2UZDB141K

Item Number	Lumens/ Selectable Wattages		
DTF2UZDB130K	2600L	3200L	4200L
	23W	29W	38W
DTF2UZDB135K	2600L	3200L	4200L
	23W	29W	38W
DTF2UZDB141K	2600L	3200L	4200L
	23W	29W	38W
DTF2UZDB150K	2600L	3200L	4200L
	23W	29W	38W

These items ship in contractor friendly bulk quantities(LED panel and drivers ship separately.)

Options:

Item Number	Description
Emergency Battery Backup	Add "EB" to the end of the part number (boxed individually).

Accessories:

Item Number	Description
YHANGER6PK	Y FIT CABLE HANGER 6 PACK
DTSK2	SURFACE MOUNT KIT FOR DIRECT TROFFER 2X2
DTFLK2	RECESS MOUNT FLANGE KIT FOR 2X2 TROFFERS AND PANELS
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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

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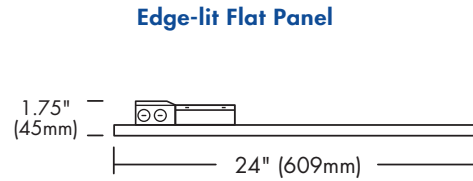
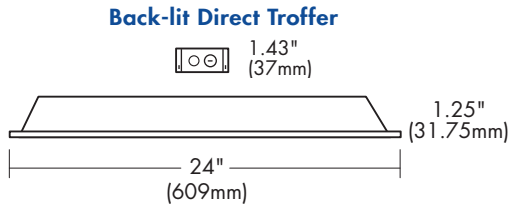
5 YEAR WARRANTY

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2x2 LED Direct Troffer Luminaires with Selectable Wattage

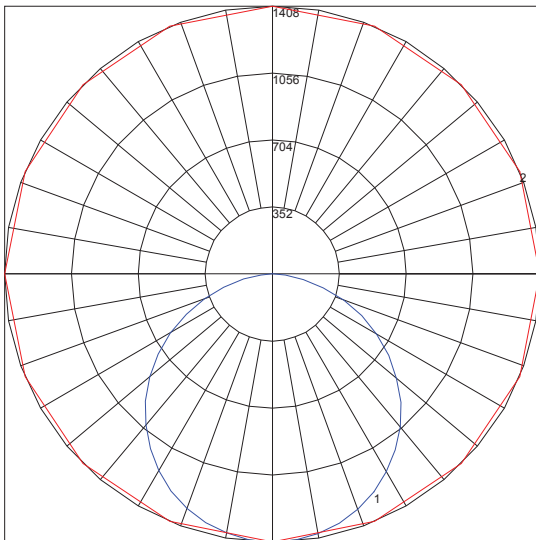
Dimensions and Mounting Data



Photometric Report

Based on photometric data for
TCP Item # DTF2UZDB141K (38W)

Polar Graph



Maximum Candela = 1293.063 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.)

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3631	3602	3585
55	3506	3474	3437
65	3292	3239	3179
75	2892	2795	2680
85	2165	1983	1746

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	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84	84	84	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58	58	58	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50	50	50	50
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	56	50	45	43	43	43	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38	38	38	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	33	33	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29	29	29	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26	26	26	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	24	24	24

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	515.20	N.A.	12.70
0-30	1095.31	N.A.	27.10
0-40	1796.69	N.A.	44.40
0-60	3184.62	N.A.	78.70
0-80	3967.55	N.A.	98.10
0-90	4044.17	N.A.	100.00
10-90	3910.96	N.A.	96.70
20-40	1281.49	N.A.	31.70
20-50	2010.58	N.A.	49.70
40-70	1887.56	N.A.	46.70
60-80	782.93	N.A.	19.40
70-80	283.30	N.A.	7.00
80-90	76.63	N.A.	1.90
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	0.01	N.A.	0.00
90-180	0.76	N.A.	0.00
110-180	0.76	N.A.	0.00
0-180	4044.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

Specifications and dimensions subject to change without notice.

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5 YEAR WARRANTY

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2x4 LED Direct Troffer Luminaires with Selectable Wattage

Applications

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Construction

- Remote-mount LED driver with integrated junction box
- Rectangular white frame
- Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

Electrical

- UL/cUL damp location rated
- 0-10V dimming driver (standard)
- Selectable wattage driver with quick connect to panel
- System rated for long 50,000 hour life

Optics

- Back-lit technology provides even uniform lighting
- 120° beam angle
- Frosted diffuser for reduced glare and aesthetic appeal
- Meets or exceeds the look and performance of edge-lit panels



Listings

UL/cUL Listed
IC Rated
RoHS Compliant
DLC 4.4 Standard

Lumen Maintenance

L70 > 54000 hours

Warranty

Five year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: DTF4UZDB141K

Item Number	Lumens/ Selectable Wattages		
DTF4UZDB130K	3300L	4400L	5100L
	29W	39W	46W
DTF4UZDB135K	3300L	4400L	5100L
	29W	39W	46W
DTF4UZDB141K	3300L	4400L	5100L
	29W	39W	46W
DTF4UZDB150K	3300L	4400L	5100L
	29W	39W	46W

These items ship in contractor friendly bulk quantities(LED panel and drivers ship separately.)

Options:

Item Number	Description
Emergency Battery Backup	Add "EB" to the end of the part number (boxed individually).

Accessories:

Item Number	Description
YHANGER6PK	Y FIT CABLE HANGER 6 PACK
DTSK4	SURFACE MOUNT KIT FOR DIRECT TROFFER 2X4
DTFLK4	RECESS MOUNT FLANGE KIT FOR 2X4 TROFFERS AND PANELS
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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

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5 YEAR WARRANTY

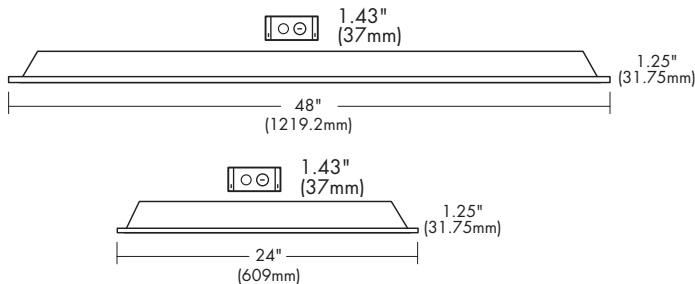
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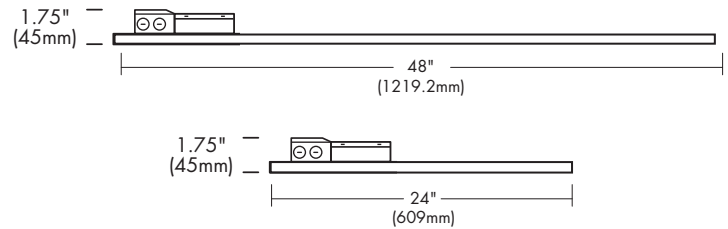
2x4 LED Direct Troffer Luminaires with Selectable Wattage

Dimensions and Mounting Data

Back-lit Direct Troffer



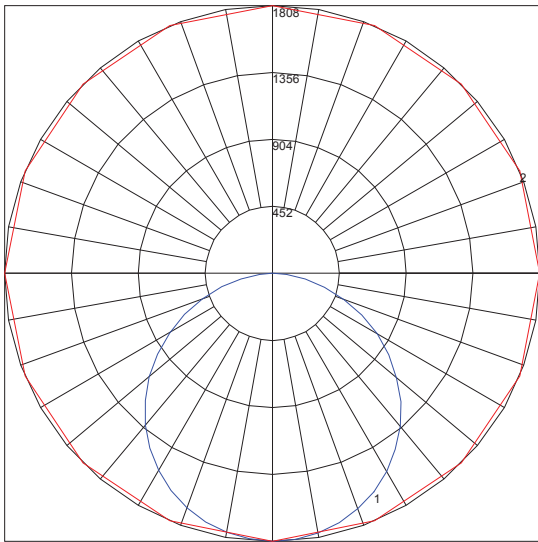
Edge-lit Flat Panel



Photometric Report

Based on photometric data for
TCP Item # DTF4UZDB141K (46W)

Polar Graph



Maximum Candela = 1293.063 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.)

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2333	2317	2318
55	2254	2237	2229
65	2125	2092	2083
75	1904	1866	1822
85	1499	1470	1394

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	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83	83	83	83
2	99	90	83	78	96	88	82	77	85	79	75	81	77	73	78	75	71	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50	50	50	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	43	43	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37	37	37	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	33	33	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29	29	29	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26	26	26	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	24	24	24

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	661.93	N.A.	12.70
0-30	1407.56	N.A.	26.90
0-40	2309.2	N.A.	44.20
0-60	4094.49	N.A.	78.40
0-80	5115.44	N.A.	97.90
0-90	5222.48	N.A.	100.00
10-90	5051.35	N.A.	96.70
20-40	1647.27	N.A.	31.50
20-50	2584.72	N.A.	49.50
40-70	2431.84	N.A.	46.60
60-80	1020.95	N.A.	19.50
70-80	374.40	N.A.	7.20
80-90	107.04	N.A.	2.00
90-110	0.62	N.A.	0.00
90-120	0.62	N.A.	0.00
90-130	0.62	N.A.	0.00
90-150	0.67	N.A.	0.00
90-180	1.55	N.A.	0.00
110-180	0.94	N.A.	0.00
0-180	5224.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

Specifications and dimensions subject to change without notice.

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