

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.

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 & high 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









LED DT Series Luminaires

Specifications

Input Line Voltage	120-2 <i>77</i> VAC
	50/60HZ
Wattage (W)	
6"x4'	23W
	23W/29W/38W
	23W/29W/38W
2'x4'	29W/39W/46W
Lumens (L)	
	2100L
	2600L/3200L/4200L
2′×2′	2600L/3200L/4200L
2′x4′	3300L/4400L/5100L
Lumens per Watt (LPW)	>110 LPW
Rated Life	50,000 hours
Minimum Starting Temperature	20°C
	ure40°C
CRI	>80
Power Factor	>90%
	<20%
Ratings	. UL/cUL damp location rated, IC rated,
	IP20, DLC Standard 5.0
Controls	0-10V dimming (standard)



Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
TCP LED Direct Troffer - 1x4, 2x2	_	3200	29	_
2 Lamp 34W T12 U-Bend 2 Lamp 32W T8 U-Bend 2 Lamp 24W T5HO	0.88 0.88 1.0	4420 4275 3145	74 58 54	61% 50% 46%
TCP LED Direct Troffer - 2x4	_	5100	46	_
3 Lamp 32W T8 HBF 3 Lamp 32W T8 NBF 2 Lamp 32W T8 HBF 2 Lamp 28W T5 2 Lamp 32W T8 NBF	1.18 0.88 1.18 1.0 0.88	6960 6681 4658 4675 4468	93 89 65 63 59	51% 48% 29% 27% 22%

^{*}Actual wattage may differ by \pm -5%, when operating between 120-277V \pm -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











0.5x4 LED DT Series Luminaires

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

- 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)
- LED driver with integrated junction box
- 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





Warranty

RoHS Compliant

Five year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: DTF405UZD2341K

DT	F	405	U	ZD			
FAMILY	LENS TYPE	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2}	COLOR TEMPERATURE	OPTIONS
DT = Direct Back-Lit Troffer	F = Frosted	405 = 0.5' × 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 2100 Lumens	27K = 2700K*** 30K = 3000K 35K = 3500K	
Holler			H = 120V-347V	ZD = 0-10V Dimming		41K = 4100K 50K = 5000K 65K = 6500K***	

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

Accessories:

Item Number	Description
YHANGER6PK	Y FIT CABLE HANGER 6 PACK
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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







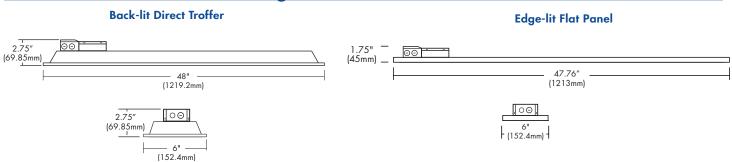
² Actual wattage may differ by +/- 5%; when operating between 120-277V +/- 10%.

^{***2700}K and 6500K are special order. Please contact your TCP representative for lead times. ***



0.5x4 LED DT Series Luminaires

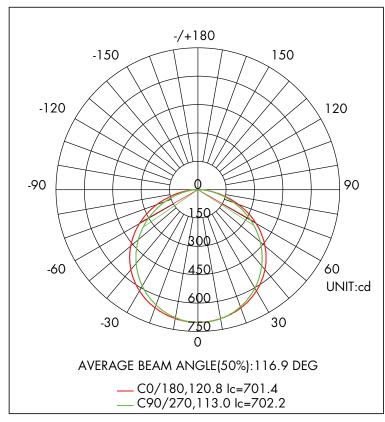
Dimensions and Mounting Data



Photometric Report

Based on photometric data for TCP Item # DTF405UZD2341K

Polar Graph



 $\label{eq:maximum Candela = 1407.6 Located At Horizontal Angle = 0, Vertical Angle = 0 \\ \#\ 1 \cdot Vertical Plane Through Horizontal Angles (0 \cdot 180) [Through Max. Cd.) \\ \#\ 2 \cdot Horizontal Cone Through Vertical Angle (0) [Through Max. Cd.) \\ \end{aligned}$

Specifications and dimensions subject to change without notice.





1x4 LED DT Series Luminaires

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

- 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

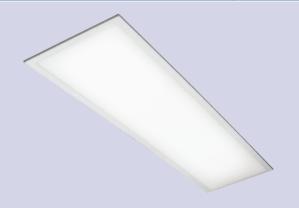
Electrical

- UL/cUL damp location rated
- 0-10V dimming driver (standard)
- LED driver with integrated junction box
- 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 5.0

Lumen Maintenance

L70 > 54,000 hours

Warranty

Five year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: DTF1UZD2341K

DT	F	1	U	ZD				
FAMILY	LENS TYPE	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS	CONTROL
Back-Lit	F = Frosted	1 = 1' x 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 2600 Lumens 29 = 3200 Lumens	27K = 2700K*** 30K = 3000K	BLANK = None EB = Battery	SM = SmartBox SBS = SmartBox
Troffer			H = 120V-347V	ZD = 0-10V Dimming	38 = 4200 Lumens (Wattage Selectable to 38W/29W/23W)	35K = 3500K 41K = 4100K 50K = 5000K 65K = 6500K***	Back-up CP = Chicago Plenum	with Sensor

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

Accessories:

Item Number	Description
YHANGER6PK	y fit cable hanger 6 pack (hangs 2 units)
DTSK1	SURFACE MOUNT KIT FOR DIRECT TROFFER 1X4
DTFLK1	RECESS MOUNT FLANGE KIT FOR 1X4 TROFFERS AND PANELS
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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







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

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

2700K and 6500K are special order. Please contact your TCP representative for lead times.



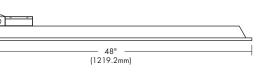
2.75"

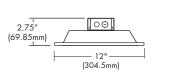
(69.85mm)

1x4 LED DT Series Luminaires

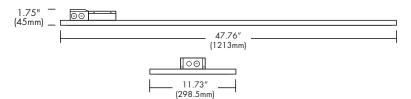
Dimensions and Mounting Data

Back-lit Direct Troffer





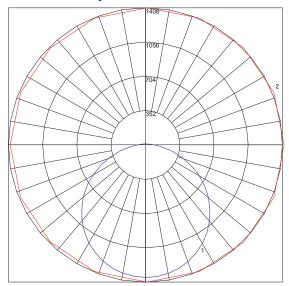
Edge-lit Flat Panel



Photometric Report

Based on photometric data for TCP Item # DTF1UZD3830K (38W)

Polar Graph



Maximum Candela = 1407.6 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

Specifications and dimensions subject to change without notice.

TCP[®]

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Coefficients of Utilization - Zonal Cavity Method

				, .				-										
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
]	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	, ,	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	73	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	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	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	493.60	N.A.	12.71
0-30	1095.31	N.A.	27.02
0-40	1722.30	N.A.	44.34
0-60	3056.50	N.A.	78.68
0-80	3808.40	N.A.	98.04
0-90	3881.50	N.A.	99.92
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	3884.70	N.A.	100.00

Total Luminaire Efficiency = N.A.%









2x2 LED DT Series Luminaires

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

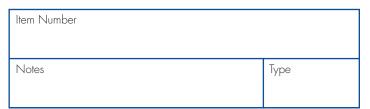
- Rectangular white frame
- · Lens: frosted white diffuser
- IP20 rated
- IC rated for direct contact with insulation
- Designed for easy drop into T-bar grid ceilings

Electrical

- UL/cUL damp location rated
- 0-10V dimming driver (standard)
- LED driver with integrated junction box
- 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 5.0 Standard

L70 > 54000 hours

Warranty

Five year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: DTF2UZD2341K

DT	F	2	U	ZD					
FAMILY	LENS TYPE	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS	FRAME OPTIONS	CONTROL
Back-	F = Frosted P = Prismatic		U = 120V-277V	ZD = 0-10V Dimming	23 = 2600 Lumens 29 = 3200 Lumens	27K = 2700K*** 30K = 3000K	BLANK = None EB = Battery	Frame	SBS = SmartBox
Lit Troffer	lens		H = 120V-347V	ZD = 0-10V Dimming	38 = 4200 Lumens (Wattage Selectable to 38W/29W/23W)	35K = 3500K 41K = 4100K 50K = 5000K 65K = 6500K***	Back-up CP = Chicago Plenum	BLK = Black Frame	with Sensor

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

Accessories:

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

Spacing Criterion (0-180): 1.28 Spacing Criterion (90-270):

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







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

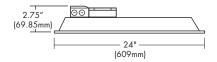
³ 23W and 29W are permanently fixed; 38W is adjustable to 29W or 23W.
2700K and 6500K are special order. Please contact your TCP representative for lead times.



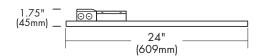
2x2 LED DT Series Luminaires

Dimensions and Mounting Data

Back-lit Direct Troffer



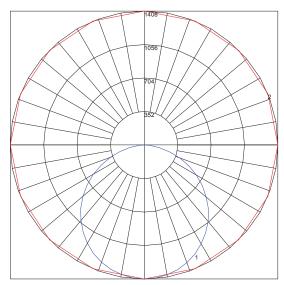
Edge-lit Flat Panel



Photometric Report

Based on photometric data for TCP Item # DTF2UZD3830K (38VV)

Polar Graph



Maximum Candela = 1407.6 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
8.5	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	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	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	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	73	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	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	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	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.









2x4 LED DT Series Luminaires

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

- 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)
- LED driver with integrated junction box
- 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





Catalog Ordering Matrix Example: DTF4UZD2941K

DT	F	4	U	ZD					
FAMILY	LENS TYPE	SIZE	VOLTAGE	DIMMING	WATTAGE1,2,3	COLOR TEMPERATURE	OPTIONS	FRAME OPTIONS	CONTROL
DT = Direct Back-	F = Frosted P = Prismatic		U = 120V-277V	ZD = 0-10V Dimming	29 = 3300 Lumens 39 = 4400 Lumens	27K = 2700K*** 30K = 3000K	BLANK = None EB = Battery		SM = SmartBox SBS = SmartBox
Lit Troffer	lens		H = 120V-347V	ZD = 0-10V Dimming	46 = 5100 Lumens (Wattage Selectable to 46W/39W/29W)		Back-up CP = Chicago Plenum	BLK = Black Frame	with Sensor

¹Approximate 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%.

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.tcpi.com







³ 29W and 39W are permanently fixed; 46W is adjustable to 39W or 29W.

^{***2700}K and 6500K are special order. Please contact your TCP representative for lead times.***



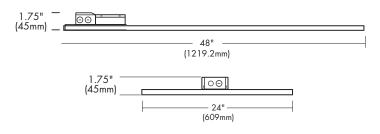
2x4 LED DT Series Luminaires

Dimensions and Mounting Data

Back-lit Direct Troffer

2.75" (69.85mm) 48" (1219.2mm) (69.85mm) 2.75" (69.85mm)

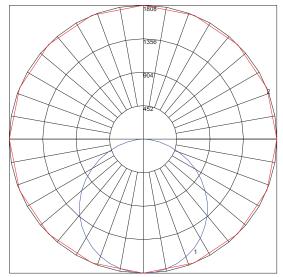
Edge-lit Flat Panel



Photometric Report

Based on photometric data for TCP Item # DTF4UZD4630K (46VV)

Polar Graph



Maximum Candela = 1808.2 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
8.5	1/100	1.470	1304

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









TECHNOLOGY CAST IN A BEAUTIFUL LIGHT

For over 20 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:	Catalog Number:
Date:	Туре:
Model:	Notes:
Project:	OTCP
Rep:	we know light.™