

Luxterior

by TCP

LED Premium Flat Panel Luminaires with Fixed Wattage

Product Specifications



TCP's LED Flat Panel Luminaire features a slim, low-profile design with full panel diffusion and superior uniformity.

It offers a cost effective solution to maximize savings and take advantage of utility rebates without sacrificing performance.

Applications: T-bar Grid Ceilings

Reasons to choose the LED Direct Troffer Luminaires from TCP

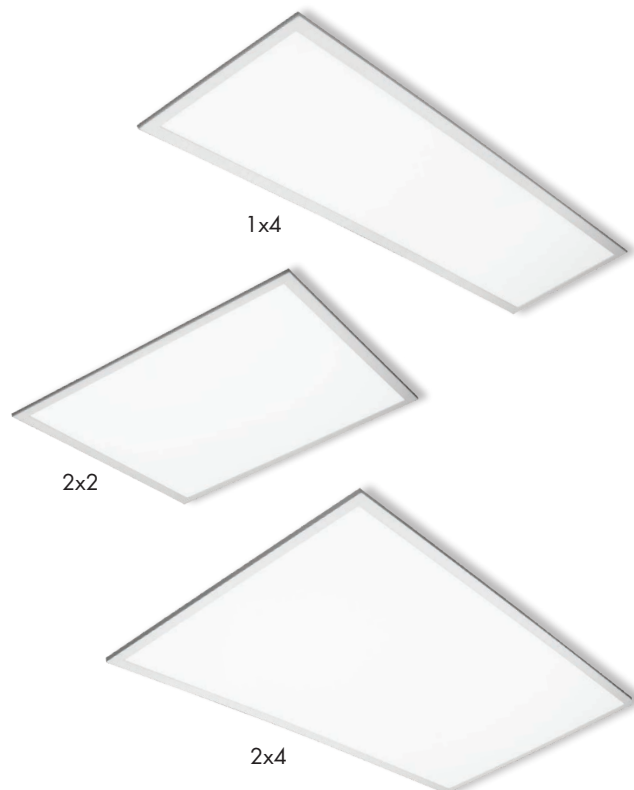
- Up to 51% less energy than fluorescent alternatives
- Long 50,000 hour rated life
- Excellent color consistency & CRI
- Mercury free
- Fits standard 1" and 9/16" T-bar grid ceilings
- Utilizes edge-lit technology
- Slim, low-profile design

Ideal Applications

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

Specifications

Input Line Voltage	120-277 VAC
Input Line Frequency (Hz)	50/60HZ
Wattage (W)	
1x4	23W/29W/38W
2x2	23W/29W/38W
2x4	23W/29W/38W/46W
Lumens (L)	
1x4	3000L/3650L/4600L
2x2	3000L/3800L/4800L
2x4	3250L/4000L/5200L/6000L
Lumens per Watt (LPW).....	>130 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 Premium 4.4
Controls.....	0-10V dimming (standard)



Replacement Strategy

SYSTEM	BALLAST FACTOR	LUMENS	INPUT WATTS*	LED ENERGY SAVINGS
TCP LED Flat Panel - 1x4	—	4600	38	—
2 Lamp 28W T5	1.0	3968	64	41%
1 Lamp 54W T5HO	1.0	3395	61	38%
2 Lamp 32W T8 NBF	0.88	3827	54	30%
TCP LED Flat Panel - 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	52%
TCP LED Flat Panel - 2x4	—	5200	38	—
3 Lamp 32W T8 HBF	1.18	6960	93	59%
3 Lamp 32W T8 NBF	0.88	6681	89	57%
2 Lamp 32W T8 HBF	1.18	4658	65	42%
2 Lamp 28W T5	1.0	4675	63	40%
2 Lamp 32W T8 NBF	0.88	4468	59	36%

*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:

$$\text{System lumens} = \text{mean lumens} \times \# \text{ lamps} \times \text{ballast factor} \times \text{luminaire efficiency factor}$$

Applications

TCP LED Flat Panel luminaires are cost-effective, high-efficiency alternatives to traditional T5, T8 and T12 linear fluorescent troffers. Featuring a slim, low-profile design, our LED flat panels use edge-lit technology to deliver full panel diffusion and superior uniformity. 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
- Optional emergency back-up
- PMMA Light Guide

Optics

- Innovative edge-lit technology paired with acrylic light guide and thin frosted white diffuser
- 120° beam angle
- Delivers full panel diffusion and excellent uniformity



Listings

UL/cUL Listed
IC Rated
RoHS Compliant
DLC 4.4 Premium

Lumen Maintenance

L90 > 42000 hours
L70 > 54000 hours

Warranty

Seven year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: HFP2UZDA141K

HFP	2	U	ZD			
FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS
HFP = High Efficiency Flat Panel	2 = 2' x 2'	U = 120V-277V	ZD = 0-10V Dimming	23 = 3000 Lumens 29 = 3800 Lumens 38 = 4800 Lumens	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	EB = Emergency Battery 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

Accessories:

Item Number	Description
FPSK2	2X2 FLAT PANEL SUR MOUNT KIT (WHITE)
DTFLK2	RECESS MOUNT FLANGE KIT FOR 2X2 TROFFERS AND PANELS
YHANGER6PK	Y FIT CABLE HANGER 6 PACK
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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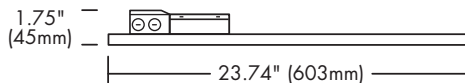
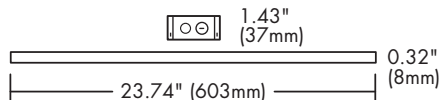
For the most up-to-date specs and warranty information, please visit www.tcp.com



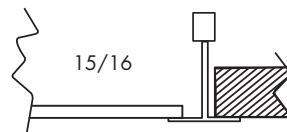
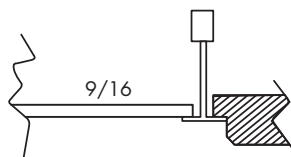
7 YEAR WARRANTY

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Dimensions and Mounting Data



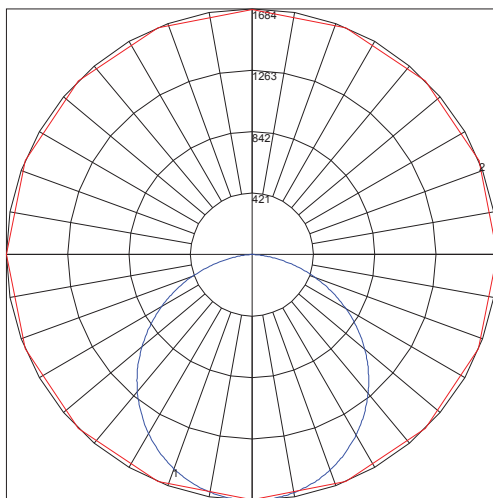
Length: 23.74" (603mm)
 Width: 23.74" (603mm)
 Depth: 0.32" (8mm)
 Weight: 6.61 lbs (3kg)



Photometric Report

Based on photometric data for
 TCP Item # HFP2UZDA130K

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.)

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	
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	98	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	75	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	47	58	51	46	56	50	46	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	51	43	36	63	51	42	36	49	42	36	48	41	36	46	40	36	34
8	60	47	38	33	59	46	38	32	44	37	32	44	37	32	42	36	32	30
9	56	43	35	29	55	42	35	29	40	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	26	37	31	26	37	31	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	614.45	N.A.	13.00
0-30	1302.92	N.A.	27.50
0-40	2130.68	N.A.	45.00
0-60	3754.61	N.A.	79.30
0-80	4653.74	N.A.	98.30
0-90	4727.51	N.A.	99.90
10-90	4568.37	N.A.	96.50
20-40	1516.23	N.A.	32.00
20-50	2371.74	N.A.	50.10
40-70	2203.45	N.A.	46.60
60-80	899.13	N.A.	19.00
70-80	319.61	N.A.	6.80
80-90	73.78	N.A.	1.60
90-110	0.34	N.A.	0.00
90-120	1.00	N.A.	0.00
90-130	1.98	N.A.	0.00
90-150	3.81	N.A.	0.10
90-180	4.71	N.A.	0.10
110-180	4.38	N.A.	0.10
0-180	4732.23	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4293	4228	4186
55	4133	4060	3986
65	3860	3772	3692
75	3324	3220	3108
85	2153	2035	1860

Specifications and dimensions subject to change without notice.

Applications

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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
- Optional emergency back-up
- PMMA Light Guide

Optics

- Innovative edge-lit technology paired with acrylic light guide and thin frosted white diffuser
- 120° beam angle
- Delivers full panel diffusion and excellent uniformity



Listings

UL/cUL Listed
IC Rated
RoHS Compliant
DLC 4.4 Premium

Lumen Maintenance

L90 > 42000 hours
L70 > 54000 hours

Warranty

Seven year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: HFP4UZDA141K

HFP	4	U	ZD			
FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS
HFP = High Efficiency Flat Panel	4 = 2' x 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 3250 Lumens 29 = 4000 Lumens 38 = 5200 Lumens 46 = 6000 Lumens	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	EB = Emergency Battery 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, 29W and 38W are permanently fixed; 46W is adjustable

Accessories:

Item Number	Description
FPSK4	2X2 FLAT PANEL SUR MOUNT KIT (WHITE)
DTFLK4	RECESS MOUNT FLANGE KIT FOR 2X4 TROFFERS AND PANELS
YHANGER6PK	Y FIT CABLE HANGER 6 PACK
DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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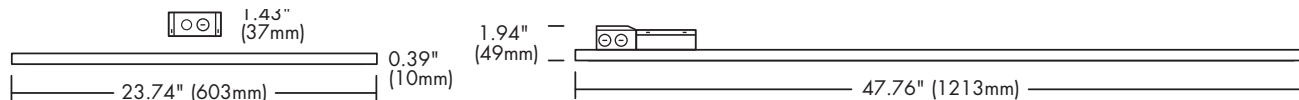
For the most up-to-date specs and warranty information, please visit www.tcp.com



7 YEAR WARRANTY

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Dimensions and Mounting Data



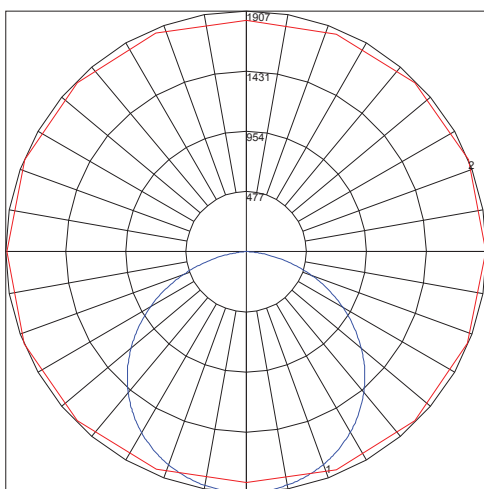
Length: 47.76" (1213mm)
 Width: 23.74" (603mm)
 Depth: 0.39" (10mm)
 Weight: 13.23 lbs (6kg)



Photometric Report

Based on photometric data for
 TCP Item # HFP4UZDA130K

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.)

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80				70				50				30				10				0						
	70	50	30	10	70	50	30	10	50	30	10	111	111	111	50	30	10	106	106	106		50	30	10	102	102	102
0	119	119	119	119	116	116	116	116	111	111	111	111	111	111	106	106	106	106	106	106	102	102	102	102	102	102	100
1	109	104	99	96	106	102	98	94	97	94	91	88	85	82	93	91	88	85	82	79	90	88	86	83	81	78	83
2	99	90	83	77	96	88	82	76	85	79	75	71	67	63	81	77	73	69	65	61	78	75	71	67	63	59	69
3	90	79	71	64	87	77	70	63	74	68	62	57	53	49	71	66	61	57	52	48	69	64	60	56	51	47	58
4	82	70	61	54	80	68	60	53	66	58	53	48	44	40	63	57	52	48	44	40	61	56	51	47	42	38	49
5	75	62	53	46	73	61	52	46	59	51	45	41	37	33	57	50	45	41	37	33	55	49	44	40	36	32	42
6	69	56	47	40	67	55	46	40	53	45	39	35	31	27	51	44	39	35	31	27	50	43	39	35	31	27	37
7	64	50	41	35	62	50	41	35	48	40	35	31	27	23	46	40	35	31	27	23	45	39	34	30	26	22	32
8	60	46	37	31	58	45	37	31	44	36	31	27	23	19	43	36	31	27	23	19	41	35	31	27	23	19	29
9	56	42	34	28	54	41	33	28	40	33	28	24	20	16	39	32	28	24	20	16	38	32	27	23	19	15	26
10	52	39	31	25	51	38	30	25	37	30	25	21	17	13	36	30	25	21	17	13	35	29	25	21	17	13	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	699.46	N.A.	11.90
0-30	1511.06	N.A.	25.70
0-40	2524.18	N.A.	42.90
0-60	4605.42	N.A.	78.20
0-80	5789.41	N.A.	98.30
0-90	5884.05	N.A.	99.90
10-90	5705.14	N.A.	96.90
20-40	1824.72	N.A.	31.00
20-50	2908.85	N.A.	49.40
40-70	2843.88	N.A.	48.30
60-80	1183.99	N.A.	20.10
70-80	421.35	N.A.	7.30
80-90	94.64	N.A.	1.60
90-110	1.11	N.A.	0.00
90-120	1.85	N.A.	0.00
90-130	2.31	N.A.	0.00
90-150	2.89	N.A.	0.00
90-180	3.18	N.A.	0.10
110-180	2.07	N.A.	0.00
0-180	5887.23	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Average Luminance

candelas/square meter (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2498	2636	2901
55	2432	2579	2888
65	2296	2432	2705
75	1989	2067	2256
85	1271	1212	1247

Specifications and dimensions subject to change without notice.

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7 YEAR WARRANTY

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Applications

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- 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
- Optional emergency back-up
- PMMA Light Guide

Optics

- Innovative edge-lit technology paired with acrylic light guide and thin frosted white diffuser
- 120° beam angle
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Listings

UL/cUL Listed
IC Rated
RoHS Compliant
DLC 4.4 Premium

Lumen Maintenance

L90 > 42000 hours
L70 > 54000 hours

Warranty

Seven year limited warranty against defects in manufacturing.

Catalog Ordering Matrix Example: HFP1UZD2941K

HFP	1	U	ZD			
FAMILY	SIZE	VOLTAGE	DIMMING	WATTAGE ^{1,2,3}	COLOR TEMPERATURE	OPTIONS
HFP = High Efficiency Flat Panel	1 = 1' x 4'	U = 120V-277V	ZD = 0-10V Dimming	23 = 3000 Lumens 29 = 3650 Lumens 38 = 4600 Lumens	30K = 3000K 35K = 3500K 41K = 4100K 50K = 5000K	EB = Emergency Battery Backup

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

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

Accessories:

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DRVEXTCABLE	3FT DRIVER EXTENSION CABLE

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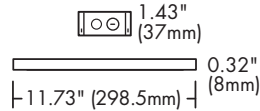
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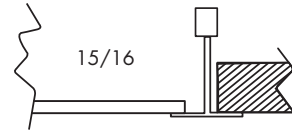
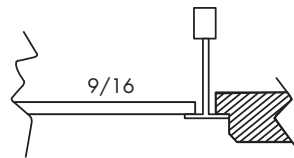
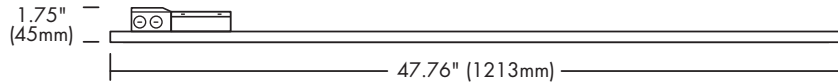
7 YEAR WARRANTY

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Dimensions and Mounting Data



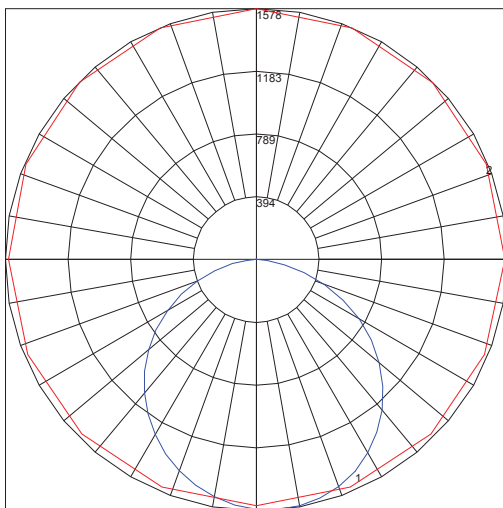
Length: 47.76" (1213mm)
 Width: 11.73" (298.5mm)
 Depth: 0.32" (8mm)
 Weight: 6.61 lbs (3kg)



Photometric Report

Based on photometric data for
 TCP Item # HFP1Uzd3830K

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.)

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	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70	70	70	70
3	90	80	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59	59	59	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50	50	50	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43	43	43	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38	38	38	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33	33	33	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30	30	30	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27	27	27	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24	24	24	24

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	574.05	N.A.	12.90
0-30	1219.25	N.A.	27.30
0-40	1997.45	N.A.	44.80
0-60	3532.47	N.A.	79.20
0-80	4384.06	N.A.	98.20
0-90	4460.44	N.A.	100.00
10-90	4311.93	N.A.	96.60
20-40	1423.41	N.A.	31.90
20-50	2230.55	N.A.	50.00
40-70	2083.77	N.A.	46.70
60-80	851.58	N.A.	19.10
70-80	302.83	N.A.	6.80
80-90	76.39	N.A.	1.70
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	0.34	N.A.	0.00
90-180	1.99	N.A.	0.00
110-180	1.99	N.A.	0.00
0-180	4462.43	N.A.	100.00

Total Luminaire Efficiency = 100.10%

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3972	4145	4286
55	3828	3986	4143
65	3548	3699	3831
75	2977	3103	3244
85	1771	2014	2150

Specifications and dimensions subject to change without notice.