

itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL60484
PREPARED FOR: YJBLED.COM
CATALOG NUMBER: 10048WL

DATE: 06/12/08

LUMINAIRE: EXTRUDED FINNED METAL HOUSING WITH CAST FINNED METAL END PIECES, FOUR CIRCUIT BOARDS EACH WITH 12 LEDS, FORMED METAL TOP AND SIDE REFLECTORS WITH PREMIUM SPECULAR FINISH, CLEAR FLAT GLASS LENS IN FABRICATED METAL LENS FRAME. INTERIOR OF LENS HAS BLACK PAINTED OUTER PERIMETER.

LAMP: FORTY-EIGHT 1-WATT MULTI-CHIP LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

TOTAL INPUT WATTS = 53.4 AT 120.0 VOLTS

LED DRIVER: MEAN WELL S-150-24

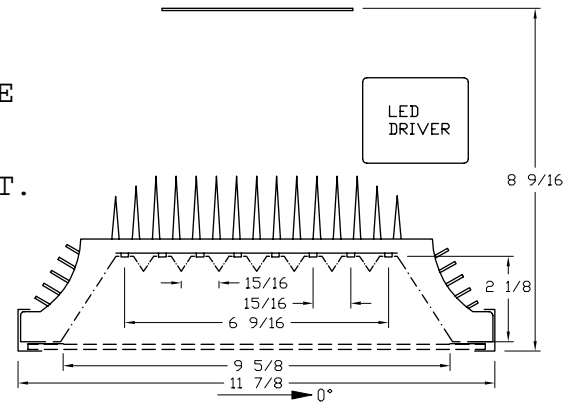
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC) TO THE LED DRIVER. LAMP AND DRIVER INFORMATION PROVIDED BY CLIENT.

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	1643	1643	1643	1643	1643
5	1592	1612	1638	1662	1668
15	1243	1312	1468	1621	1685
25	1010	1031	1135	1514	1683
35	825	854	988	1154	1443
45	637	632	744	865	1130
55	265	356	516	507	722
65	45	32	90	219	351
75	19	16	9	24	41
85	3	2	1	0	0
90	0	0	0	0	0

FLUX

155
414
577
641
596
404
137
24
2



ZONAL LUMEN SUMMARY

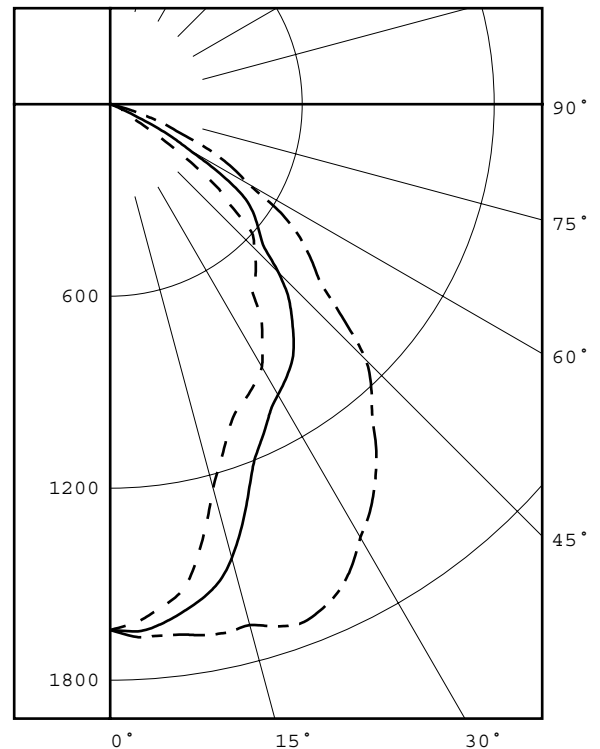
ZONE	LUMENS	%FIXT
0- 30	1146	38.8
0- 40	1787	60.6
0- 60	2787	94.5
0- 90	2950	100.0
90-180	0	0.0
0-180	2950	100.0

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG
SPACING CRITERIA : 0.8 1.4
LUMINOUS LENGTH : 9.625 11.125

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	13040.	15231.	23133.
55	6688.	13023.	18221.
65	1541.	3083.	12023.
75	1063.	503.	2293.
85	498.	166.	0.



LEGEND:

0-deg: - - - - -
45-deg: = = = = =
90-deg: - . - . - .

Checked B. HYRE

Approved R. BEATTIE



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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0.0	1643	1643	1643	1643	1643
2.5	1625	1634	1649	1660	1665
5.0	1592	1612	1638	1662	1668
7.5	1555	1581	1611	1653	1672
10.0	1482	1532	1579	1649	1685
12.5	1366	1431	1538	1640	1691
15.0	1243	1312	1468	1621	1685
17.5	1158	1201	1375	1608	1711
20.0	1084	1125	1273	1598	1728
22.5	1035	1062	1189	1567	1713
25.0	1010	1031	1135	1514	1683
27.5	981	997	1083	1435	1632
30.0	948	959	1049	1341	1564
32.5	885	912	1020	1233	1510
35.0	825	854	988	1154	1443
37.5	728	771	942	1076	1366
40.0	706	690	885	992	1274
42.5	673	669	827	916	1208
45.0	637	632	744	865	1130
47.5	605	593	646	795	982
50.0	491	561	605	661	852
52.5	409	445	566	550	789
55.0	265	356	516	507	722
57.5	125	211	418	453	632
60.0	60	86	287	395	500
62.5	49	35	202	265	431
65.0	45	32	90	219	351
67.5	41	30	25	176	238
70.0	33	26	18	115	177
72.5	25	19	13	56	100
75.0	19	16	9	24	41
77.5	14	12	5	5	10
80.0	9	9	4	2	1
82.5	6	5	4	0	0
85.0	3	2	1	0	0
87.5	0	0	0	0	0
90.0	0	0	0	0	0

ZONAL	LUMEN	SUMMARY
0-	5	39.
5-	10	116.
10-	15	182.
15-	20	232.
20-	25	272.
25-	30	305.
30-	35	321.
35-	40	320.
40-	45	310.
45-	50	286.
50-	55	235.
55-	60	169.
60-	65	90.
65-	70	47.
70-	75	20.
75-	80	5.
80-	85	2.
85-	90	0.



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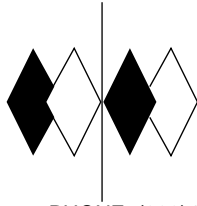
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69
4	89	79	71	66	87	78	71	65	75	69	64	73	68	64	71	67	63	61
5	83	71	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	54
6	77	65	57	52	75	64	57	51	62	56	51	61	55	51	59	54	50	48
7	72	60	52	46	70	59	51	46	57	51	46	56	50	46	55	49	45	43
8	67	55	47	42	65	54	47	42	53	46	42	52	46	41	51	45	41	39
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.



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REPORT NUMBER: ITL60488
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Page 1 of 2

CATALOG NUMBER: 10048WL

LUMINAIRE: EXTRUDED FINNED METAL HOUSING WITH CAST FINNED METAL END PIECES, THREE CIRCUIT BOARDS EACH WITH 12 LEDS, FORMED METAL TOP AND SIDE REFLECTORS WITH PREMIUM SPECULAR FINISH, CLEAR FLAT GLASS LENS IN FABRICATED METAL LENS FRAME. LENS HAS BLACK PAINTED OUTER PERIMETER.

LAMP: FORTY-EIGHT 1-WATT MULTI-CHIP LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION.

LED DRIVER: MEAN WELL S-150-24

INSTRUMENTATION: Elgar CW2501 Voltage Regulator
Yokogawa WT210 Digital Power Analyzer
Optronics OL770 Spectroradiometer
ITL 1.5 Meter Diameter Integrating Sphere

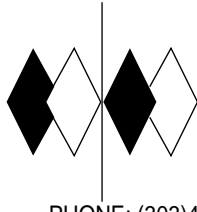
OBJECT OF TEST: Measure the Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), and Spectral Power Distribution (SPD) of the lamp and input electrical parameters.

PROCEDURE: The luminaire was provided by customer and the LEDs had an unknown number of burn hours. The luminaire was mounted inside the integrating sphere with the LEDs in a base up position (lens down). The luminaire was allowed to stabilize overnight at 120VAC input. After stabilization occurred, CCT, CRI, x/y coordinates, and SPD readings were recorded. In order to measure the mean performance, twenty data sets were recorded and averaged within the OL770. All data are traceable to the National Institute of Standards and Technology.

RESULTS:

SPECTORADIOMETRIC	
Observer	CIE 1931 2 degree
Correlated Color Temp CCT (K)	5172
Chromaticity Ordinate x	0.3406
Chromaticity Ordinate y	0.3501
Color Rendering Index (CRI)	71
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	1.29
Input Power (Watts)	54.36

Checked: <u> N Gully </u>
Approved: <u> R Bergin </u>



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Page 2 of 2

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RESULTS : Spectral Performance Test:

Wavelength	Percent of Integrated Radiant Flux for each 5nm wavelength window(%)	Wavelength	Percent of Integrated Radiant Flux for each 5nm wavelength window(%)	Wavelength	Percent of Integrated Radiant Flux for each 5nm wavelength window(%)
380	0.04973	515	1.57829	650	1.08330
385	0.04756	520	1.89185	655	0.98224
390	0.05082	525	2.16992	660	0.88672
395	0.05595	530	2.39097	665	0.79699
400	0.06558	535	2.54340	670	0.71569
405	0.08370	540	2.66109	675	0.63888
410	0.12040	545	2.73947	680	0.57111
415	0.19353	550	2.78858	685	0.50904
420	0.33366	555	2.81191	690	0.45297
425	0.59441	560	2.81673	695	0.40177
430	1.02310	565	2.80296	700	0.35683
435	1.63414	570	2.77288	705	0.31655
440	2.48854	575	2.72827	710	0.28027
445	3.67567	580	2.66927	715	0.24745
450	4.42134	585	2.59694	720	0.21872
455	3.78361	590	2.51046	725	0.19309
460	2.57655	595	2.41345	730	0.17031
465	1.74234	600	2.30549	735	0.15017
470	1.19124	605	2.18848	740	0.13224
475	0.81306	610	2.06794	745	0.11672
480	0.59715	615	1.94093	750	0.10305
485	0.49346	620	1.81170	755	0.09088
490	0.46930	625	1.68274	760	0.08025
495	0.53116	630	1.55539	765	0.07055
500	0.68890	635	1.43016	770	0.06236
505	0.93184	640	1.30976	775	0.05497
510	1.23909	645	1.19232	780	0.04968

