

# 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: ITL60485  
PREPARED FOR: YJBLED.COM  
CATALOG NUMBER: 10064WL

DATE: 06/11/08

LUMINAIRE: EXTRUDED FINNED METAL HOUSING WITH CAST FINNED METAL END PIECES, FOUR CIRCUIT BOARDS EACH WITH 16 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: SIXTY-FOUR 1-WATT MULTI-CHIP LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION.

TOTAL INPUT WATTS = 70.0 AT 120.0 VOLTS

LED DRIVER: MEAN WELL S-150-24

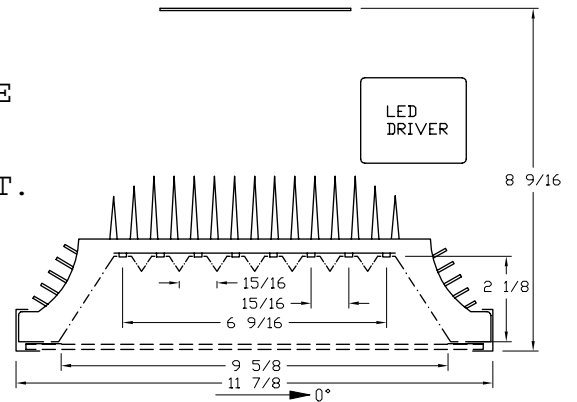
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC) TO THE LED DRIVER. LAMP AND DRIVER INFORMATION PROVIDED BY CLIENT.

### CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	2086	2086	2086	2086	2086
5	2032	2048	2072	2108	2109
15	1714	1802	1972	2106	2172
25	1336	1362	1535	1968	2078
35	1086	1113	1286	1584	1818
45	823	825	976	1144	1435
55	249	381	666	675	958
65	51	37	81	314	507
75	21	21	17	35	112
85	3	3	2	1	0
90	0	0	0	0	0

### FLUX

198
548
758
838
775
514
187
45
3



### ZONAL LUMEN SUMMARY

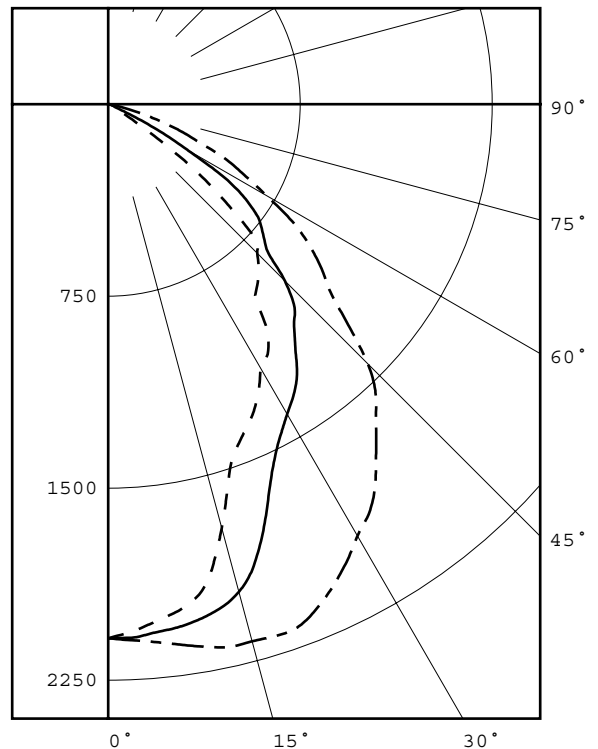
ZONE	LUMENS	%FIXT
0- 30	1504	38.9
0- 40	2341	60.6
0- 60	3631	93.9
0- 90	3865	100.0
90-180	0	0.0
0-180	3865	100.0

### CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG  
SPACING CRITERIA : 0.9 1.4  
LUMINOUS LENGTH : 9.625 13.625

### LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	13757.	16314.	23987.
55	5131.	13724.	19741.
65	1426.	2265.	14179.
75	959.	776.	5115.
85	407.	271.	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	2086	2086	2086	2086	2086
2.5	2063	2074	2086	2092	2096
5.0	2032	2048	2072	2108	2109
7.5	2003	2030	2062	2110	2129
10.0	1960	1996	2044	2115	2152
12.5	1865	1921	2018	2118	2172
15.0	1714	1802	1972	2106	2172
17.5	1556	1646	1891	2086	2178
20.0	1445	1503	1772	2065	2172
22.5	1388	1423	1642	2028	2131
25.0	1336	1362	1535	1968	2078
27.5	1270	1306	1458	1891	2016
30.0	1192	1228	1398	1792	1947
32.5	1159	1155	1348	1683	1896
35.0	1086	1113	1286	1584	1818
37.5	943	1020	1201	1448	1719
40.0	909	899	1130	1323	1627
42.5	871	861	1078	1228	1548
45.0	823	825	976	1144	1435
47.5	779	771	839	1032	1267
50.0	611	724	790	885	1127
52.5	446	543	744	753	1048
55.0	249	381	666	675	958
57.5	105	194	553	602	852
60.0	57	68	357	537	714
62.5	53	37	215	397	600
65.0	51	37	81	314	507
67.5	49	38	27	260	376
70.0	40	34	26	182	290
72.5	33	27	23	106	194
75.0	21	21	17	35	112
77.5	18	16	12	9	53
80.0	11	10	8	5	8
82.5	7	6	5	2	1
85.0	3	3	2	1	0
87.5	0	1	1	0	0
90.0	0	0	0	0	0

ZONAL	LUMEN	SUMMARY
0-	5	50.
5-	10	148.
10-	15	240.
15-	20	309.
20-	25	359.
25-	30	399.
30-	35	421.
35-	40	417.
40-	45	405.
45-	50	370.
50-	55	303.
55-	60	211.
60-	65	119.
65-	70	68.
70-	75	35.
75-	80	10.
80-	85	2.
85-	90	0.



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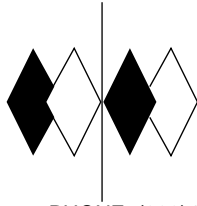
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	111	111	111	106	106	106	102	102	102	100
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	94	93	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	86	83	80	78
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	78	74	71	69
4	89	79	71	66	87	77	71	65	75	69	64	73	68	64	71	66	63	71	66	63	61
5	82	71	64	58	81	70	63	58	68	62	57	66	61	56	65	60	56	65	60	56	54
6	77	65	57	52	75	64	57	51	62	56	51	61	55	50	59	54	50	59	54	50	48
7	72	59	52	46	70	59	51	46	57	51	46	56	50	45	55	49	45	55	49	45	43
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	51	45	41	51	45	41	39
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	47	41	37	36
10	59	47	40	35	58	46	39	35	45	39	35	45	39	34	44	38	34	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: ITL60489  
DATE: 6/12/08  
PREPARED FOR: YJBLED.COM

Page 1 of 2

CATALOG NUMBER: 10064WL

LUMINAIRE: EXTRUDED FINNED METAL HOUSING WITH CAST FINNED METAL END PIECES, FOUR CIRCUIT BOARDS EACH WITH 16 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: SIXTY-FOUR 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

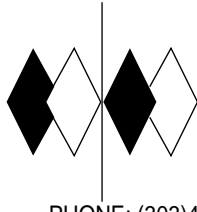
OBJECT OF TEST: Measure the Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), and Spectral Power Distribution (SPD) of the lamp and input electrical parameters.

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	0.3407
Chromaticity Ordinate y	0.3512
Color Rendering Index (CRI)	72
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	1.38
Input Power (Watts)	70.98

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	0.04991	515	1.57749	650	1.08333
385	0.04787	520	1.88865	655	0.98223
390	0.05080	525	2.16405	660	0.88722
395	0.05577	530	2.38438	665	0.79739
400	0.06487	535	2.53723	670	0.71661
405	0.08314	540	2.65420	675	0.63955
410	0.12118	545	2.73346	680	0.57178
415	0.19835	550	2.78313	685	0.50975
420	0.34344	555	2.80648	690	0.45357
425	0.60585	560	2.81079	695	0.40274
430	1.02860	565	2.79745	700	0.35753
435	1.61472	570	2.76816	705	0.31713
440	2.37587	575	2.72350	710	0.28074
445	3.39276	580	2.66487	715	0.24845
450	4.16821	585	2.59337	720	0.21921
455	3.81471	590	2.50569	725	0.19386
460	2.72580	595	2.41002	730	0.17098
465	1.86681	600	2.30104	735	0.15070
470	1.30191	605	2.18610	740	0.13289
475	0.90404	610	2.06506	745	0.11710
480	0.66239	615	1.93836	750	0.10347
485	0.54229	620	1.80985	755	0.09129
490	0.50742	625	1.68133	760	0.08058
495	0.55976	630	1.55443	765	0.07096
500	0.70847	635	1.42962	770	0.06259
505	0.94417	640	1.30963	775	0.05509
510	1.24416	645	1.19180	780	0.04991

