



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: ITL60487
PREPARED FOR: YJBLED.COM
CATALOG NUMBER: 100120WL

DATE: 06/11/08

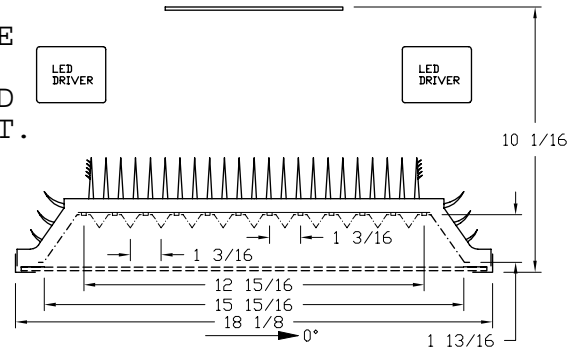
LUMINAIRE: EXTRUDED FINNED METAL HOUSING WITH CAST FINNED METAL END PIECES, SIX CIRCUIT BOARDS EACH WITH 20 LEDS, FORMED METAL TOP AND SIDE REFLECTORS WITH PREMIUM SPECULAR FINISH, CLEAR FLAT GLASS LENS IN FABRICATED METAL LENS FRAME. INTERIOR OF LENS HAS BLACK PAINTED OUTER PERIMETER.

LAMP: ONE HUNDRED TWENTY 1-WATT MULTI-CHIP LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

TOTAL INPUT WATTS = 134.5 AT 120.0 VOLTS

LED DRIVER: TWO MEAN WELL S-150-24

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



CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	4426	4426	4426	4426	4426
5	4316	4343	4379	4417	4439
15	3992	4030	4043	4025	4092
25	2435	2618	3293	3658	3755
35	2014	2128	2163	3119	3186
45	1447	1557	1673	1985	2465
55	41	83	961	1249	1812
65	50	36	15	675	1017
75	39	40	23	31	316
85	5	4	5	6	8
90	0	0	0	0	0

FLUX

415
1129
1466
1562
1359
726
313
80
7

ZONAL LUMEN SUMMARY

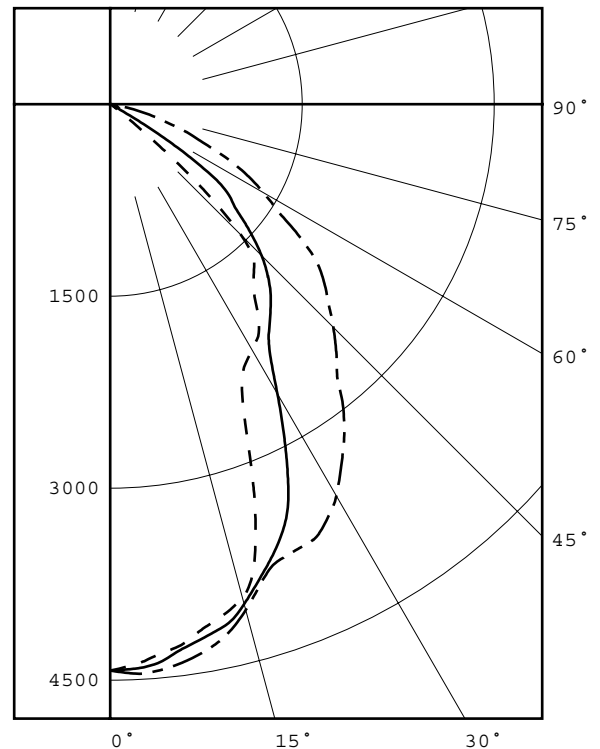
ZONE	LUMENS	%FIXT
0- 30	3009	42.6
0- 40	4571	64.8
0- 60	6656	94.3
0- 90	7056	100.0
90-180	0	0.0
0-180	7056	100.0

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG
SPACING CRITERIA : 0.8 1.2
LUMINOUS LENGTH : 15.938 15.625

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	12737.	14727.	21698.
55	445.	10429.	19664.
65	736.	221.	14979.
75	938.	553.	7600.
85	357.	357.	571.



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	4426	4426	4426	4426	4426
2.5	4383	4399	4414	4431	4453
5.0	4316	4343	4379	4417	4439
7.5	4261	4288	4294	4366	4396
10.0	4162	4204	4230	4287	4332
12.5	4087	4131	4170	4177	4238
15.0	3992	4030	4043	4025	4092
17.5	3745	3833	3886	3863	3921
20.0	3300	3483	3734	3761	3805
22.5	2789	3034	3559	3704	3775
25.0	2435	2618	3293	3658	3755
27.5	2287	2402	2949	3586	3662
30.0	2216	2281	2613	3478	3534
32.5	2151	2215	2327	3323	3358
35.0	2014	2128	2163	3119	3186
37.5	1843	1960	2056	2912	2992
40.0	1745	1802	1951	2635	2757
42.5	1666	1686	1824	2274	2613
45.0	1447	1557	1673	1985	2465
47.5	991	1330	1490	1722	2316
50.0	433	875	1294	1519	2187
52.5	111	350	1171	1369	2038
55.0	41	83	961	1249	1812
57.5	28	36	579	1147	1553
60.0	29	26	180	957	1385
62.5	41	27	35	818	1213
65.0	50	36	15	675	1017
67.5	41	38	13	558	785
70.0	51	33	21	324	632
72.5	59	46	24	106	442
75.0	39	40	23	31	316
77.5	20	20	30	26	185
80.0	15	12	15	19	80
82.5	11	9	9	13	22
85.0	5	4	5	6	8
87.5	2	1	1	2	3
90.0	0	0	0	0	0

ZONAL	LUMEN	SUMMARY
0-	5	106.
5-	10	309.
10-	15	494.
15-	20	635.
20-	25	712.
25-	30	754.
30-	35	782.
35-	40	780.
40-	45	734.
45-	50	626.
50-	55	431.
55-	60	295.
60-	65	183.
65-	70	129.
70-	75	56.
75-	80	24.
80-	85	6.
85-	90	1.



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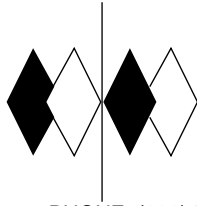
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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

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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CATALOG NUMBER: 100120WL

LUMINAIRE: EXTRUDED FINNED METAL HOUSING WITH CAST FINNED METAL END PIECES, SIX CIRCUIT BOARDS EACH WITH 20 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: ONE HUNDRED TWENTY 1-WATT MULTI-CHIP LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

LED DRIVER: TWO 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

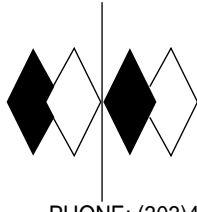
OBJECT OF TEST: Measure the Correlated Color Temperature (CCT), Color Rendering Index (CRI), Chromaticity Coordinates (x,y), and Spectral Power Distribution (SPD) of the lamp and input electrical parameters.

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:

SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Correlated Color Temp CCT (K)	5333
Chromaticity Ordinate x	0.3364
Chromaticity Ordinate y	0.3457
Color Rendering Index (CRI)	72
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	1.84
Input Power (Watts)	136.11

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



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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	0.05154	515	1.57706	650	1.05773
385	0.04917	520	1.87942	655	0.95825
390	0.05255	525	2.14791	660	0.86465
395	0.05794	530	2.36245	665	0.77667
400	0.06733	535	2.51062	670	0.69724
405	0.08638	540	2.62471	675	0.62178
410	0.12660	545	2.70193	680	0.55560
415	0.20740	550	2.74916	685	0.49471
420	0.35842	555	2.77189	690	0.44008
425	0.62954	560	2.77490	695	0.39060
430	1.06126	565	2.76107	700	0.34660
435	1.66105	570	2.72974	705	0.30738
440	2.43025	575	2.68514	710	0.27215
445	3.46260	580	2.62575	715	0.24080
450	4.29242	585	2.55236	720	0.21292
455	3.98953	590	2.46716	725	0.18848
460	2.87880	595	2.36984	730	0.16661
465	1.97485	600	2.26275	735	0.14691
470	1.38088	605	2.14786	740	0.12962
475	0.96030	610	2.02850	745	0.11434
480	0.70112	615	1.90243	750	0.10115
485	0.57113	620	1.77536	755	0.08931
490	0.53061	625	1.64735	760	0.07864
495	0.57906	630	1.52232	765	0.06923
500	0.72446	635	1.39928	770	0.06119
505	0.95583	640	1.28079	775	0.05384
510	1.25102	645	1.16478	780	0.04895

