



PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: [itl@itlboulder.com](mailto:itl@itlboulder.com) • WEBSITE: [www.itlboulder.com](http://www.itlboulder.com)



INDEPENDENT TESTING LABORATORIES, INC.  
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

**REPORT NUMBER:** ITL91932-GONIOPHOTOMETRY

**PAGE:** 1 OF 6

**ISSUE DATE:** 07/08/19

**PREPARED FOR:** FINELITE, INC.

**ADDRESS:** 30500 WHIPPLE ROAD  
UNION CITY, CA 94587

**CATALOG NUMBER:** HP-4 D-RG-4'-V-835-F-RG-LHC-277V

**LUMINAIRE:** EXTRUDED WHITE PAINTED METAL HOUSING WITH WHITE PAINTED FLAT METAL END CAPS, 2-PIECE FORMED WHITE PAINTED METAL REFLECTOR/CIRCUIT BOARD MOUNT, 2 WHITE CIRCUIT BOARDS EACH WITH 80 LEDS, MOLDED WHITE PLASTIC 48-CELL HONEYCOMB BAFFLE, EXTRUDED PLASTIC LENS ON TOP OF BAFFLE.

**LAMPS:** ONE HUNDRED SIXTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION.

**INPUT ELECTRICAL:** 277.0 VOLTS, 37.4 WATTS, 0.140 AMPS

**MOUNTING:** SUSPENDED

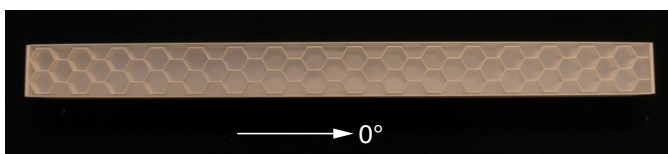
**LED DRIVER:** OSRAM OTi 50/120-277/1A4 DIM L, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER PROGRAMMED FOR 700mA OUTPUT.

**NOTE:** DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (277VAC, 60Hz) TO THE DRIVER.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET

THIS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.



Approved R BERGIN

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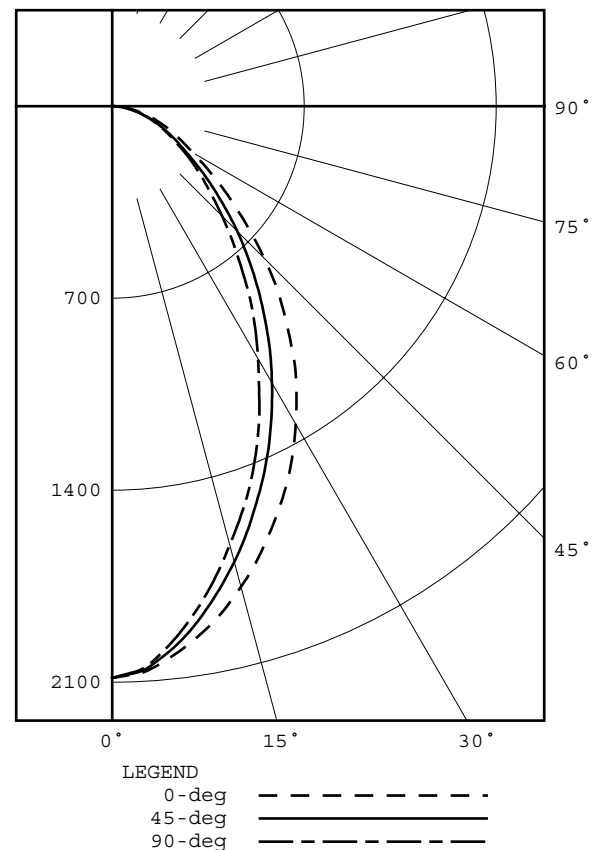
CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	2084	2084	2084	2084	2084	
5	2039	2033	2021	2011	2006	189
15	1814	1764	1720	1683	1656	484
25	1511	1419	1354	1300	1267	627
35	1162	1065	979	912	885	621
45	784	714	645	585	566	507
55	456	413	380	359	356	352
65	261	230	222	216	213	226
75	137	118	114	111	110	124
85	34	30	29	28	28	34
90	0	0	0	0	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	1299	41.1
0- 40	1921	60.7
0- 60	2779	87.9
0- 90	3163	100.0
90-180	0	0.0
0-180	3163	100.0

EFFICACY (277) = 84.6 lm/W  
 EFFICACY (120) = 86.4 lm/W \*\*  
 \*\* THE EFFICACY AT 120 VOLTS IS BASED ON  
 THE LUMENS FROM THIS REPORT AND THE  
 WATTAGE MEASURED AT 120 VOLTS FROM ITL  
 REPORT NUMBER ITL91931-SPHERE.

CIE TYPE - DIRECT  
 PLANE : 0-DEG 90-DEG  
 SPACING CRITERIA : 1.00 0.86  
 BEAM ANGLE (50%) : 76.1 X 61.2 DEGREES  
 FIELD ANGLE (10%) : 138.1 X 130.9 DEGREES  
 LUMINOUS LENGTH : 48.000 3.938

LUMINANCE DATA IN CANDELA/SQ M				
ANGLE	AVERAGE	AVERAGE	AVERAGE	
IN DEG	0-DEG	45-DEG	90-DEG	
45	9093.	7481.	6565.	
55	6520.	5433.	5090.	
65	5065.	4308.	4133.	
75	4341.	3612.	3486.	
85	3199.	2729.	2635.	





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CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	2084	2084	2084	2084	2084
2.5	2072	2070	2067	2063	2062
5.0	2039	2033	2021	2011	2006
7.5	1993	1981	1960	1941	1930
10.0	1941	1916	1886	1860	1845
12.5	1882	1843	1804	1768	1753
15.0	1814	1764	1720	1683	1656
17.5	1744	1681	1631	1593	1563
20.0	1666	1598	1538	1503	1469
22.5	1589	1504	1447	1403	1369
25.0	1511	1419	1354	1300	1267
27.5	1426	1333	1259	1201	1160
30.0	1338	1245	1165	1101	1064
32.5	1251	1152	1073	1006	973
35.0	1162	1065	979	912	885
37.5	1063	977	890	826	793
40.0	971	888	804	743	711
42.5	880	799	722	659	636
45.0	784	714	645	585	566
47.5	691	635	570	518	504
50.0	606	556	500	458	449
52.5	529	481	438	406	400
55.0	456	413	380	359	356
57.5	395	353	330	318	313
60.0	340	301	289	281	274
62.5	297	263	254	247	242
65.0	261	230	222	216	213
67.5	229	200	192	188	186
70.0	196	171	165	161	159
72.5	166	144	139	135	135
75.0	137	118	114	111	110
77.5	108	94	91	89	88
80.0	82	72	68	67	66
82.5	58	50	48	47	46
85.0	34	30	29	28	28
87.5	14	12	11	11	10
90.0	0	0	0	0	0



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	49
5- 10	140
10- 15	214
15- 20	270
20- 25	305
25- 30	321
30- 35	319
35- 40	302
40- 45	272
45- 50	235
50- 55	195
55- 60	157
60- 65	126
65- 70	100
70- 75	74
75- 80	50
80- 85	27
85- 90	7

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	189
0- 20	672
0- 30	1299
0- 40	1921
0- 50	2427
0- 60	2779
0- 70	3005
0- 80	3129
0- 90	3163



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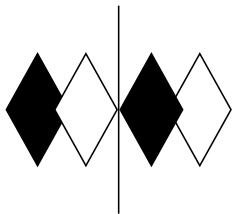
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# COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	95	89	85	100	93	88	84	90	86	82	87	83	80	84	81	78	76
3	95	86	79	73	92	84	78	72	81	76	71	79	74	70	76	72	69	67
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53
6	76	64	56	51	74	64	56	51	62	55	50	60	54	50	59	53	49	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	51	45	41	39
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36
10	59	47	40	35	58	47	40	35	46	40	35	45	39	35	44	39	35	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 TEST SAMPLE.



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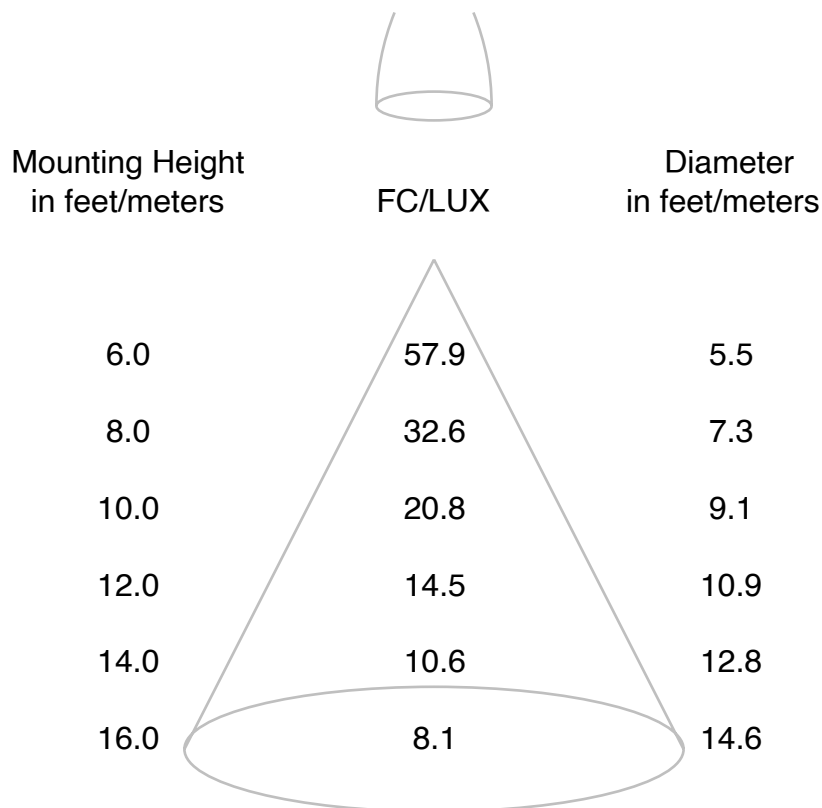
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## CONE OF LIGHT DIAGRAM

(diameter shown is where fc/lux value is half the fc/lux at nadir)



If distances are feet, results are footcandles.  
If distances are meters, results are lux.

Note: The candela values used to generate this diagram were obtained by averaging the photometric data into a single plane.