



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



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

REPORT NUMBER: ITL91931-GONIOPHOTOMETRY

PAGE: 1 OF 6

ISSUE DATE: 06/24/19

PREPARED FOR: FINELITE, INC.

ADDRESS: 30500 WHIPPLE ROAD
UNION CITY, CA 94587

CATALOG NUMBER: HP-4 D-RG-4'-V-835-F-RG-LHE-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 96-CELL ELLIPSOIDAL 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

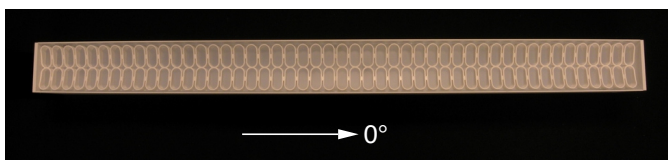
LED DRIVER: OSRAM OTi 50/120-277/1A4 DIM L, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER PROGRAMMED FOR 700mA OUTPUT.

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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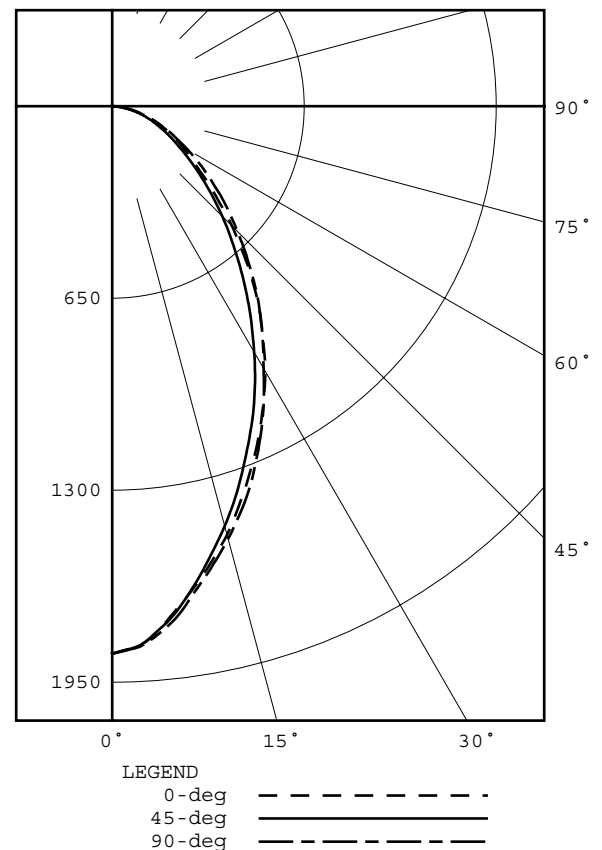
CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	1853	1853	1853	1853	1853	
5	1783	1781	1782	1788	1794	166
15	1502	1470	1471	1493	1516	416
25	1189	1137	1132	1157	1198	530
35	876	822	800	825	877	519
45	573	523	527	556	600	424
55	343	307	323	351	384	304
65	216	185	190	204	223	199
75	110	95	96	100	107	106
85	24	24	20	18	17	25
90	0	0	0	0	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	1112	41.3
0- 40	1631	60.7
0- 60	2359	87.7
0- 90	2690	100.0
90-180	0	0.0
0-180	2690	100.0

EFFICACY (277) = 71.9 lm/W
EFFICACY (120) = 73.5 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
BEAM ANGLE (50%) : 66.7 X 66.6 DEGREES
FIELD ANGLE (10%) : 135.3 X 135.6 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	6646.	6112.	6959.
55	4904.	4618.	5490.
65	4192.	3687.	4327.
75	3486.	3042.	3390.
85	2258.	1882.	1600.





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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	1853	1853	1853	1853	1853
2.5	1832	1831	1833	1836	1836
5.0	1783	1781	1782	1788	1794
7.5	1711	1708	1717	1726	1735
10.0	1643	1632	1636	1652	1657
12.5	1573	1555	1553	1572	1587
15.0	1502	1470	1471	1493	1516
17.5	1422	1387	1388	1414	1443
20.0	1344	1305	1299	1331	1367
22.5	1267	1221	1214	1245	1282
25.0	1189	1137	1132	1157	1198
27.5	1112	1058	1047	1066	1112
30.0	1037	981	961	981	1025
32.5	953	901	879	901	950
35.0	876	822	800	825	877
37.5	799	744	725	751	806
40.0	720	666	653	682	732
42.5	643	593	588	616	665
45.0	573	523	527	556	600
47.5	503	460	469	498	541
50.0	444	402	416	444	487
52.5	390	352	368	397	431
55.0	343	307	323	351	384
57.5	308	269	284	310	338
60.0	275	238	249	271	296
62.5	246	211	219	235	255
65.0	216	185	190	204	223
67.5	187	161	164	176	189
70.0	161	138	141	148	160
72.5	135	116	118	122	131
75.0	110	95	96	100	107
77.5	87	75	76	78	79
80.0	65	57	57	54	54
82.5	44	39	37	34	34
85.0	24	24	20	18	17
87.5	9	9	6	6	6
90.0	0	0	0	0	0



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	43
5- 10	122
10- 15	185
15- 20	231
20- 25	259
25- 30	271
30- 35	267
35- 40	252
40- 45	227
45- 50	197
50- 55	166
55- 60	137
60- 65	112
65- 70	87
70- 75	64
75- 80	42
80- 85	21
85- 90	5

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	166
0- 20	582
0- 30	1112
0- 40	1631
0- 50	2056
0- 60	2359
0- 70	2558
0- 80	2664
0- 90	2690



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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	98	95	96	94	92	93	91	90	88
2	102	95	90	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	66	60	55	64	59	55	53
6	76	64	57	51	74	64	56	51	62	55	50	60	54	50	59	54	49	48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43
8	67	55	47	42	66	54	47	42	53	46	42	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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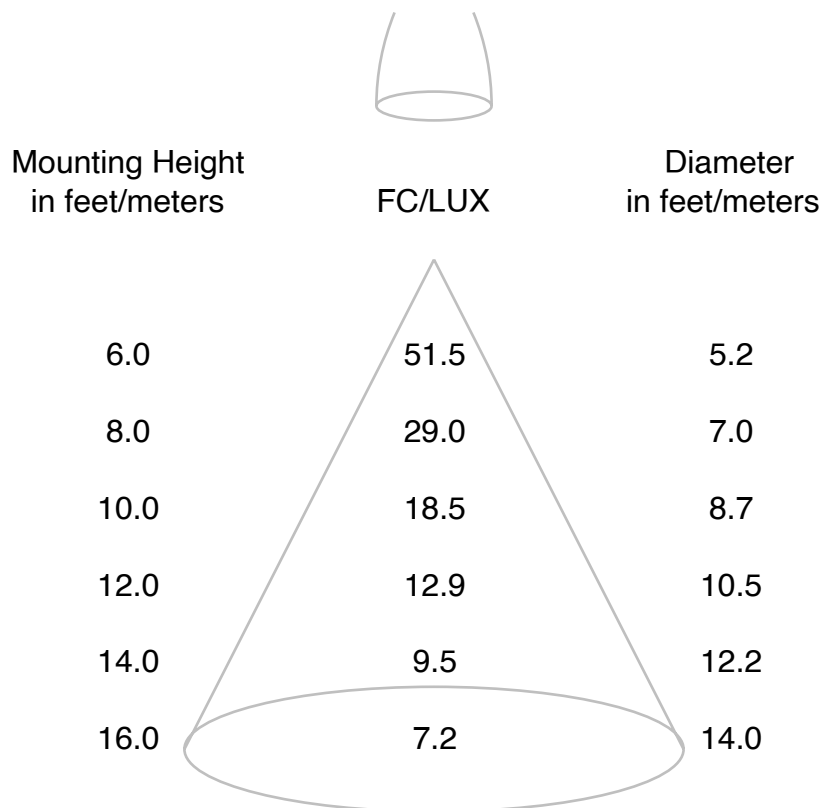
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CONE OF LIGHT DIAGRAM

(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.