



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)



**REPORT NUMBER:** ITL90351-GONIOPHOTOMETRY

**PAGE:** 1 OF 6

**ISSUE DATE:** 04/03/18

**PREPARED FOR:** FINELITE, INC.

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

**CATALOG NUMBER:** HP-2-R-RG-4ft-V-835

**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, EXTRUDED TRANSLUCENT WHITE FROSTED PLASTIC REGRESSED DIFFUSER. DIFFUSER FROSTED BOTH SIDES.

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

**INPUT ELECTRICAL:** 277.0 VOLTS, 37.5 WATTS, 0.140 AMPS

**MOUNTING:** RECESSED

**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

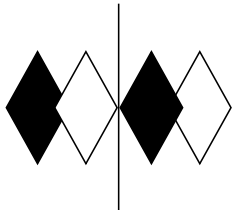
TEST DISTANCE = 35.0 FEET

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.



Checked M KLOPF

Approved N WHITE



**itl boulder**  
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

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NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.

4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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CATALOG NUMBER: HP-2 R-RG-4'-V-835-277V-X-X-X-X

#### CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	
0	1554	1554	1554	1554	1554	
5	1543	1542	1536	1530	1529	145
15	1467	1436	1389	1343	1324	390
25	1314	1245	1143	1055	1023	530
35	1105	1007	866	759	722	554
45	867	755	609	512	481	492
55	629	518	389	321	303	380
65	407	310	218	178	172	249
75	211	139	103	95	94	131
85	54	32	27	26	26	36
90	0	0	0	0	0	

#### FLUX

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	1065	36.6
0- 40	1619	55.7
0- 60	2491	85.7
0- 90	2907	100.0
90-180	0	0.0
0-180	2907	100.0

EFFICACY (277) = 77.5 lm/W

EFFICACY (120) = 78.6 lm/W \*\*

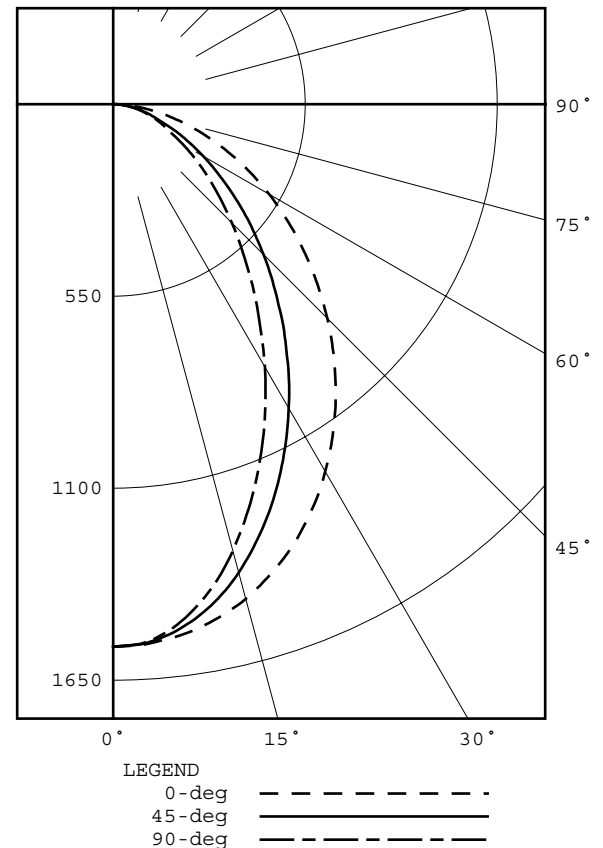
\*\* THE EFFICACY AT 120 VOLTS IS BASED ON THE LUMENS FROM THIS REPORT AND THE WATTAGE MEASURED AT 120 VOLTS FROM ITL REPORT NUMBER ITL90351-THD.

#### CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG  
SPACING CRITERIA : 1.17 0.92  
BEAM ANGLE (50%) : 97.5 X 66.1 DEGREES  
FIELD ANGLE (10%) : 156.5 X 134.4 DEGREES  
LUMINOUS LENGTH : 48.000 2.125

#### LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	18632.	13088.	10337.
55	16664.	10306.	8028.
65	14635.	7839.	6185.
75	12388.	6047.	5519.
85	9415.	4708.	4533.





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CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	1554	1554	1554	1554	1554
2.5	1552	1551	1550	1549	1549
5.0	1543	1542	1536	1530	1529
7.5	1532	1526	1512	1498	1494
10.0	1515	1503	1479	1455	1447
12.5	1493	1472	1438	1402	1391
15.0	1467	1436	1389	1343	1324
17.5	1434	1396	1333	1277	1252
20.0	1398	1348	1273	1206	1177
22.5	1359	1300	1210	1131	1100
25.0	1314	1245	1143	1055	1023
27.5	1267	1189	1075	979	945
30.0	1215	1130	1006	904	869
32.5	1161	1069	937	830	792
35.0	1105	1007	866	759	722
37.5	1047	944	800	694	656
40.0	987	880	732	629	592
42.5	928	817	670	570	535
45.0	867	755	609	512	481
47.5	806	693	550	458	430
50.0	747	634	495	408	384
52.5	687	575	440	363	342
55.0	629	518	389	321	303
57.5	572	463	342	282	266
60.0	516	410	298	246	231
62.5	461	360	257	211	199
65.0	407	310	218	178	172
67.5	355	264	182	155	153
70.0	305	219	148	135	133
72.5	257	178	123	115	114
75.0	211	139	103	95	94
77.5	168	104	82	77	77
80.0	127	74	63	59	59
82.5	89	52	44	42	42
85.0	54	32	27	26	26
87.5	21	13	12	11	11
90.0	0	0	0	0	0



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	37
5- 10	108
10- 15	170
15- 20	220
20- 25	255
25- 30	275
30- 35	280
35- 40	274
40- 45	258
45- 50	234
50- 55	206
55- 60	174
60- 65	141
65- 70	108
70- 75	79
75- 80	52
80- 85	28
85- 90	8

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	145
0- 20	535
0- 30	1065
0- 40	1619
0- 50	2111
0- 60	2491
0- 70	2741
0- 80	2871
0- 90	2907



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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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50
6	74	62	54	48	72	61	53	48	59	52	47	58	52	47	56	51	46	45
7	69	57	49	43	68	56	48	43	54	48	42	53	47	42	52	46	42	40
8	65	52	44	39	63	52	44	39	50	43	38	49	43	38	48	42	38	36
9	61	48	41	35	59	48	40	35	47	40	35	46	39	35	45	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30

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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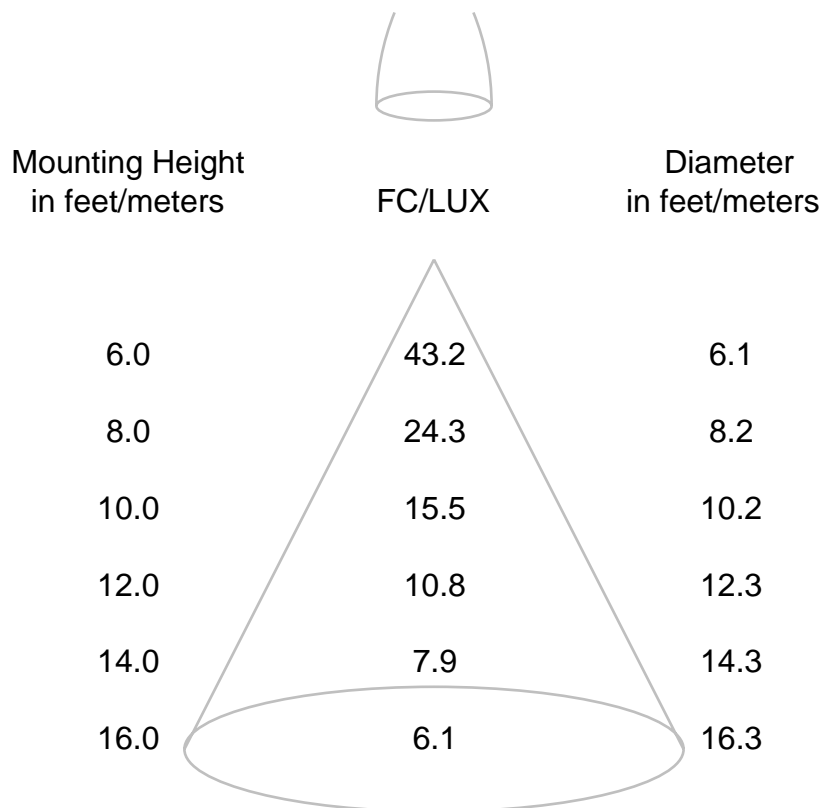
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## CONE OF LIGHT DIAGRAM

(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.