



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:** ITL90350-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-D-RG-4ft-V-835-F

**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, 37.6 WATTS, 0.141 AMPS

**MOUNTING:** SURFACE

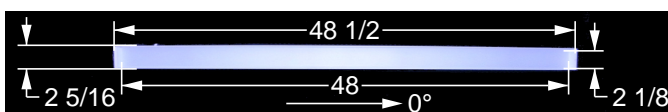
**LED DRIVER:** OSRAM OTi 50/120-277/1A4 DIM L, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER PROGRAMMED FOR 700mA OUTPUT.

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

TEST PROCEDURE: IESNA LM-79-08

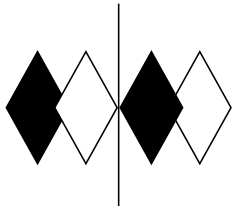
TEST DISTANCE = 35.0 FEET

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

**NVLAP**  
TESTING  
NVLAP LAB CODE: 200925-0

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

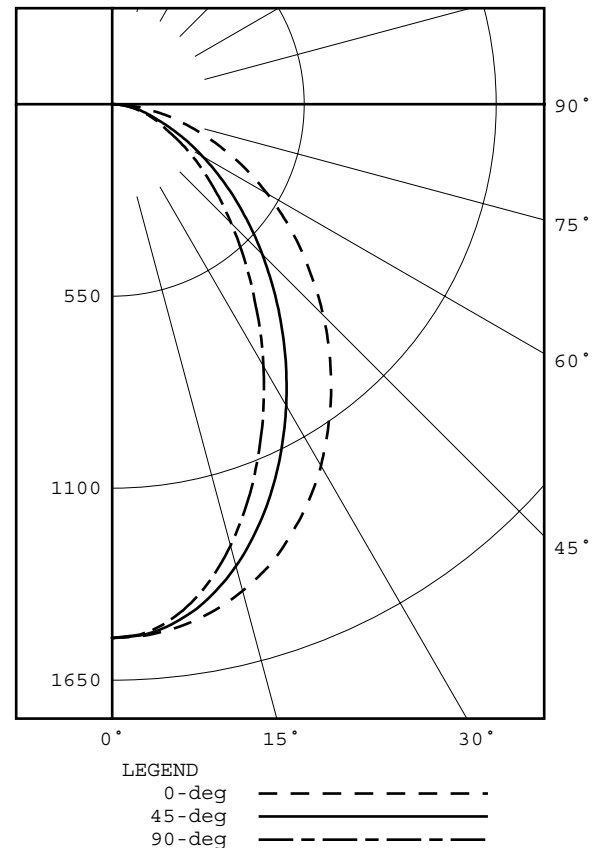
CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	1529	1529	1529	1529	1529	
5	1520	1518	1513	1507	1504	143
15	1443	1412	1370	1327	1309	385
25	1293	1224	1131	1049	1017	523
35	1086	993	862	757	722	550
45	855	749	608	511	482	490
55	624	516	392	322	305	380
65	407	311	219	178	171	249
75	212	141	103	95	94	131
85	57	32	28	26	26	36
90	0	0	0	0	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	1051	36.4
0- 40	1600	55.4
0- 60	2470	85.6
0- 90	2887	100.0
90-180	0	0.0
0-180	2887	100.0

EFFICACY (277) = 76.8 lm/W  
EFFICACY (120) = 78.7 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 ITL90350-THD.

CIE TYPE - DIRECT  
PLANE : 0-DEG 90-DEG  
SPACING CRITERIA : 1.17 0.93  
BEAM ANGLE (50%) : 97.6 X 67.1 DEGREES  
FIELD ANGLE (10%) : 157.3 X 134.8 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	18374.	13066.	10358.
55	16532.	10385.	8081.
65	14635.	7875.	6149.
75	12447.	6047.	5519.
85	9938.	4882.	4533.





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CANDELA DISTRIBUTION  
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	1529	1529	1529	1529	1529
2.5	1527	1526	1525	1524	1523
5.0	1520	1518	1513	1507	1504
7.5	1508	1503	1489	1477	1471
10.0	1491	1479	1458	1436	1427
12.5	1470	1448	1417	1385	1372
15.0	1443	1412	1370	1327	1309
17.5	1413	1372	1316	1263	1240
20.0	1378	1327	1258	1195	1168
22.5	1336	1277	1196	1122	1092
25.0	1293	1224	1131	1049	1017
27.5	1246	1168	1064	975	941
30.0	1196	1111	997	900	867
32.5	1141	1053	929	826	795
35.0	1086	993	862	757	722
37.5	1030	932	796	690	656
40.0	972	870	731	627	594
42.5	914	810	668	567	536
45.0	855	749	608	511	482
47.5	795	691	550	458	433
50.0	736	632	494	408	386
52.5	681	574	442	364	344
55.0	624	516	392	322	305
57.5	568	462	344	283	268
60.0	513	410	299	246	233
62.5	459	359	258	212	200
65.0	407	311	219	178	171
67.5	354	265	183	154	152
70.0	305	221	150	134	132
72.5	258	180	124	115	112
75.0	212	141	103	95	94
77.5	171	105	82	77	76
80.0	131	74	63	59	59
82.5	92	52	45	42	42
85.0	57	32	28	26	26
87.5	24	14	12	11	11
90.0	0	0	0	0	0



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

5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	36
5- 10	106
10- 15	168
15- 20	217
20- 25	252
25- 30	272
30- 35	278
35- 40	272
40- 45	256
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	143
0- 20	527
0- 30	1051
0- 40	1600
0- 50	2090
0- 60	2470
0- 70	2720
0- 80	2851
0- 90	2887



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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	86	82	89	84	80	85	81	78	82	79	76	74
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	64
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30

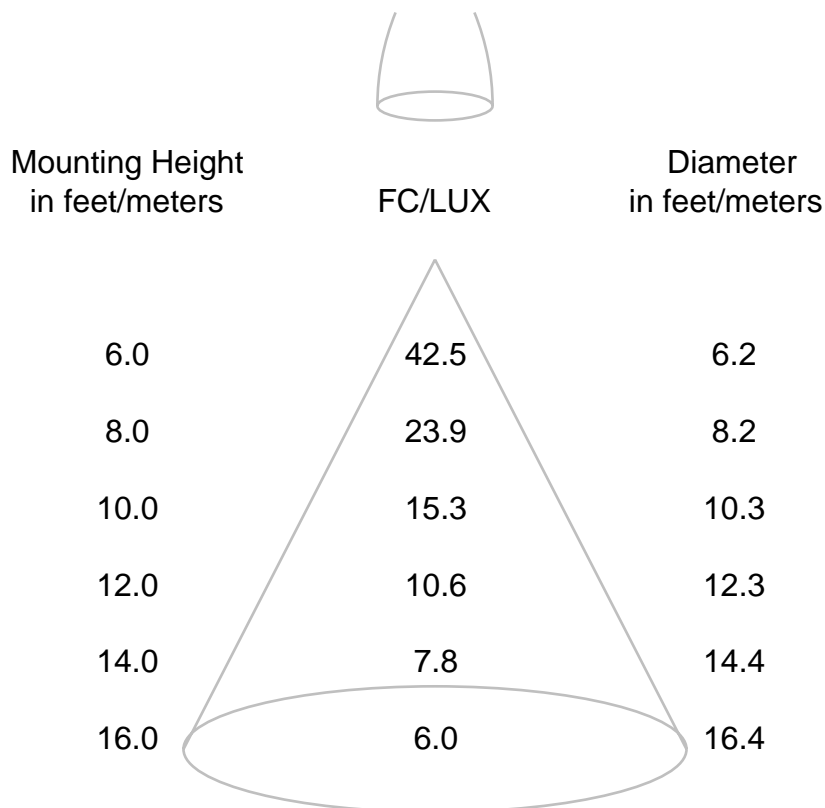
ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.

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## 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.