



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: ITL89033-GONIOPHOTOMETRY

PAGE: 1 OF 7

ISSUE DATE: 03/08/17

PREPARED FOR: FINELITE, INC.

ADDRESS: 30500 WHIPPLE ROAD

UNION CITY, CA 94587

CATALOG NUMBER: HP-4-ID-4ft-V-V-835-WSO

LUMINAIRE: EXTRUDED WHITE PAINTED METAL HOUSING WITH WHITE PAINTED FLAT METAL END CAPS AND 2 DISTINCT OPTICAL COMPARTMENTS, TOP OPTICAL COMPARTMENT CONSISTS OF: 4 CIRCUIT BOARDS EACH WITH 40 LEDS, EXTRUDED 8-PIECE LINEAR PRISMATIC TRANSLUCENT PLASTIC LENS. BOTTOM COMPARTMENT CONSISTS OF FORMED WHITE PAINTED METAL REFLECTOR/CIRCUIT BOARD MOUNT, 4 CIRCUIT BOARDS EACH WITH 40 LEDS, EXTRUDED FROSTED PLASTIC DIFFUSER. DIFFUSER FROSTED BOTH SIDES, LENS PRISMS OUT AND PARALLEL WITH THE 0-DEGREE PLANE.

LAMPS: THREE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDs), 160 VERTICAL BASE-UP POSITION, 160 VERTICAL BASE-DOWN POSITION.

INPUT ELECTRICAL: 277.0 VOLTS, 74.7 WATTS, 0.280 AMPS

MOUNTING: PENDANT

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

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

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	<u>M KLOPF</u> TECHNICIAN
Approved	<u>R BEATTIE</u> LIGHTING ENGINEER

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CATALOG NUMBER: HP4ID-X'-V-V-835-F-WSO-X-X-X-X (NG TIR)

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	1378	1378	1378	1378	1378
5	1370	1370	1369	1370	1370
15	1314	1304	1309	1310	1305
25	1197	1184	1190	1187	1184
35	1038	1027	1030	1025	1020
45	851	841	843	837	833
55	652	643	642	636	635
65	446	437	438	435	433
75	245	240	242	241	240
85	70	68	67	67	69
90	0	0	0	0	0
95	45	80	82	64	64
105	211	271	614	589	472
115	385	434	783	1212	1323
125	503	565	885	1386	1514
135	588	656	915	1294	1462
145	668	723	912	1137	1234
155	737	771	882	992	1037
165	790	802	845	884	899
175	816	817	821	825	828
180	819	819	819	819	819

FLUX

130
369
548
643
648
573
433
256
77
97
485
804
852
752
585
409
240
79

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	1046	13.1
0- 40	1689	21.2
0- 60	2910	36.5
0- 90	3676	46.1
90-120	1385	17.4
90-130	2237	28.0
90-150	3574	44.8
90-180	4302	53.9
0-180	7978	100.0

EFFICACY (277V) = 106.8 lm/W

EFFICACY (120V) = 108.8 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 ITL89033-THD.

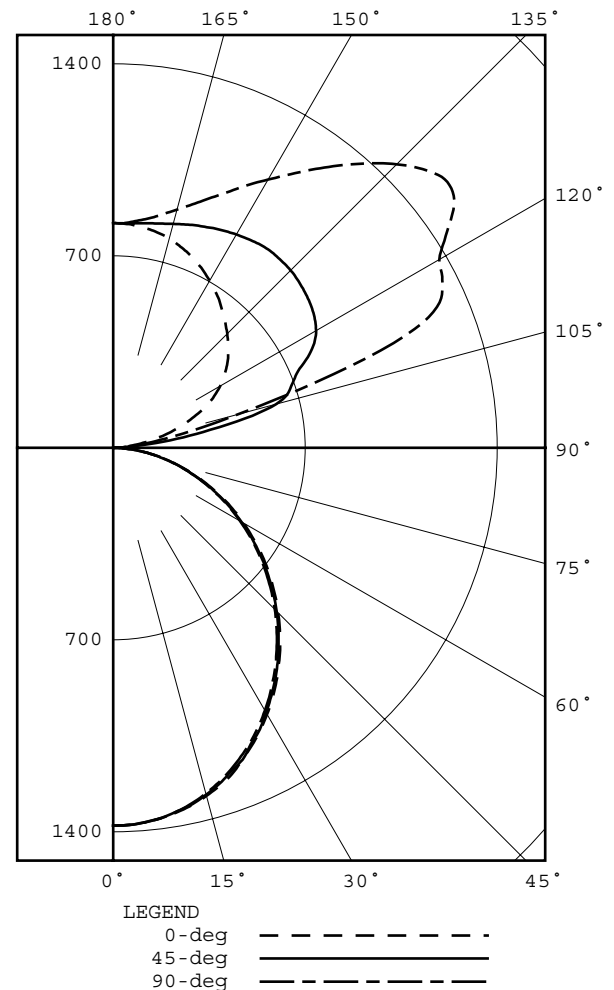
CIE TYPE - GENERAL DIFFUSE

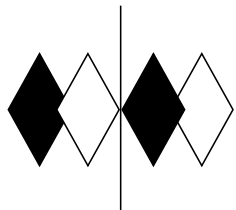
PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 1.21 1.20

BEAM ANGLE (50%) : 97.5 X 144.2 DEGREES

FIELD ANGLE (10%) : 159.7 X 162.4 DEGREES





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THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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CATALOG NUMBER: HP4ID-X'-V-V-835-F-WSO-X-X-X-X (NG TIR)

PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 48.000 3.875

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	10029.	9935.	9817.
55	9473.	9327.	9226.
65	8794.	8637.	8538.
75	7888.	7792.	7727.
85	6693.	6406.	6597.



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CATALOG NUMBER: HP4ID-X'-V-V-835-F-WSO-X-X-X-X (NG TIR)

CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	1378	1378	1378	1378	1378
5.0	1370	1370	1369	1370	1370
10.0	1349	1346	1346	1348	1346
15.0	1314	1304	1309	1310	1305
20.0	1266	1250	1256	1255	1250
25.0	1197	1184	1190	1187	1184
30.0	1122	1110	1115	1111	1106
35.0	1038	1027	1030	1025	1020
40.0	947	936	937	933	928
45.0	851	841	843	837	833
50.0	752	743	743	737	734
55.0	652	643	642	636	635
60.0	549	540	540	535	534
65.0	446	437	438	435	433
70.0	343	337	337	336	334
75.0	245	240	242	241	240
80.0	153	151	152	151	151
85.0	70	68	67	67	69
90.0	0	0	0	0	0
95.0	45	80	82	64	64
100.0	119	186	333	246	193
105.0	211	271	614	589	472
110.0	299	356	697	1089	1038
115.0	385	434	783	1212	1323
120.0	450	503	854	1281	1373
125.0	503	565	885	1386	1514
130.0	547	614	903	1363	1547
135.0	588	656	915	1294	1462
140.0	627	691	918	1216	1349
145.0	668	723	912	1137	1234
150.0	703	749	898	1062	1129
155.0	737	771	882	992	1037
160.0	766	789	864	933	959
165.0	790	802	845	884	899
170.0	806	812	831	848	854
175.0	816	817	821	825	828
180.0	819	819	819	819	819



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	33
5- 10	97
10- 15	158
15- 20	211
20- 25	256
25- 30	291
30- 35	315
35- 40	328
40- 45	329
45- 50	319
50- 55	301
55- 60	273
60- 65	237
65- 70	196
70- 75	151
75- 80	105
80- 85	60
85- 90	17
90- 95	17
95-100	80
100-105	181
105-110	304
110-115	389
115-120	415
120-125	428
125-130	424
130-135	395
135-140	357
140-145	314
145-150	270
150-155	226
155-160	183
160-165	141
165-170	99
170-175	59
175-180	20

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	130
0- 20	499
0- 30	1046
0- 40	1689
0- 50	2337
0- 60	2910
0- 70	3344
0- 80	3599
0- 90	3676
0-100	3773
0-110	4258
0-120	5061
0-130	5913
0-140	6665
0-150	7250
0-160	7660
0-170	7899
0-180	7978



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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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	53	53	53	46
1	97	92	89	85	89	85	82	79	71	69	66	58	56	55	46	45	44	39
2	88	81	74	69	81	74	69	64	62	58	55	51	48	46	41	39	37	32
3	80	71	63	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27
4	73	63	55	49	67	58	51	45	49	43	39	40	36	33	32	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	29	29	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	21	18
7	57	45	37	31	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	29	24	20	25	21	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

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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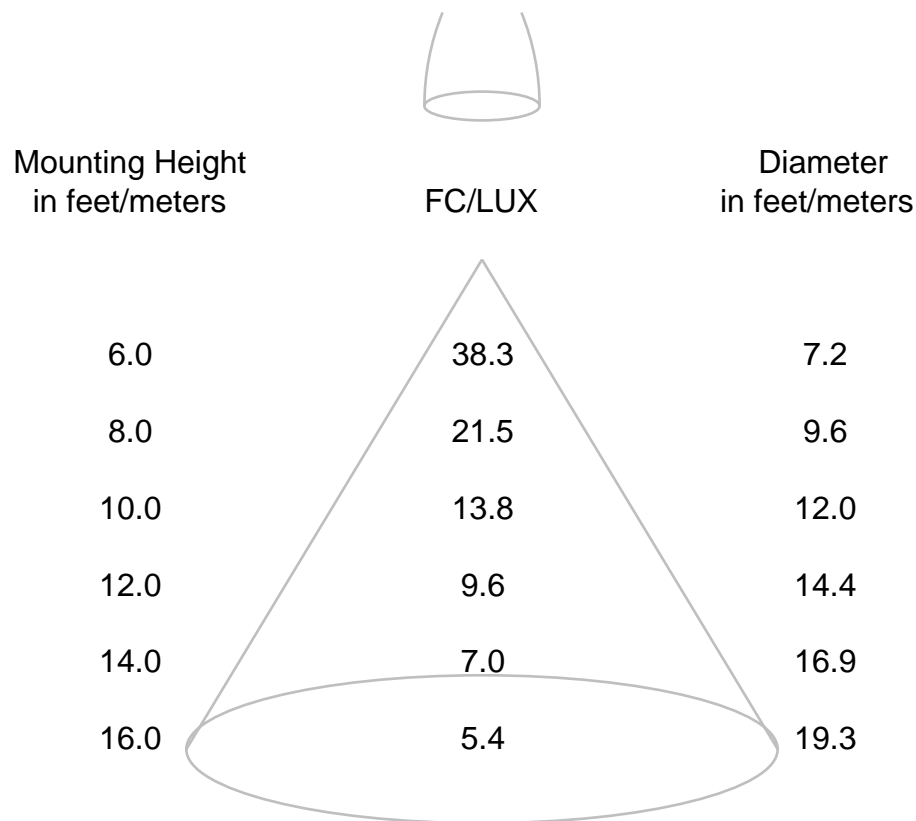
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CONE OF LIGHT DIAGRAM

(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.