



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: ITL92314-GONIOPHOTOMETRY

PAGE: 1 OF 7

ISSUE DATE: 10/01/19

PREPARED FOR: FINELITE, INC.

ADDRESS: 30500 WHIPPLE ROAD

UNION CITY, CA 94587

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

LUMINAIRE: EXTRUDED WHITE PAINTED METAL HOUSING WITH CAST WHITE PAINTED METAL END CAPS AND 2 DISTINCT OPTICAL COMPARTMENTS, TOP OPTICAL COMPARTMENT CONSISTS OF: 2-PIECE FABRICATED DIFFUSE METAL CIRCUIT BOARD MOUNTING STRIP, 2 CIRCUIT BOARDS EACH WITH 80 LEDS, EXTRUDED 4-PIECE FROSTED LINEAR PRISMATIC LENS. BOTTOM OPTICAL COMPARTMENT CONSISTS OF: 2-PIECE FLAT METAL CIRCUIT BOARD MOUNTING PLATE, 4 CIRCUIT BOARDS EACH WITH 120 LEDS, TRANSLUCENT WHITE FROSTED PLASTIC DIFFUSER. LENS AND DIFFUSER FROSTED BOTH SIDES WITH LENS PRISMS OUT AND PARALLEL WITH LENGTH OF HOUSING.

LAMPS: SIX HUNDRED FORTY WHITE LIGHT EMITTING DIODES (LEDs), 160 VERTICAL BASE-DOWN POSITION, 480 VERTICAL BASE-UP POSITION.

INPUT ELECTRICAL: 277.0 VOLTS, 72.9 WATTS, 0.274 AMPS

MOUNTING: SUSPENDED

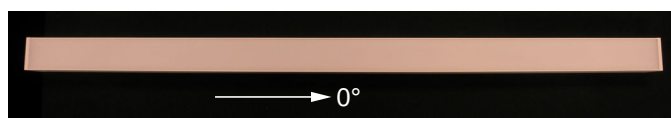
LED DRIVERS: TWO OSRAM OTi 50/120-277/1A4 DIM L, DRIVERS HAVE MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES EACH DRIVER PROGRAMMED FOR 700mA OUTPUT.

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

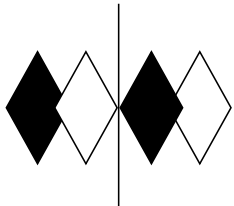
TEST PROCEDURE: IESNA LM-79-08

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.



Approved C STOUT



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NVLAP LAB CODE: 200925-0

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CATALOG NUMBER: HP-X ID-4' -V-V-835-WSO-F-277V-X-X-X

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	1387	1387	1387	1387	1387
5	1382	1382	1382	1382	1382
15	1336	1329	1336	1337	1330
25	1241	1231	1242	1243	1237
35	1104	1093	1104	1104	1100
45	929	925	933	929	926
55	729	729	731	728	726
65	509	511	512	511	511
75	290	291	294	295	296
85	85	88	91	93	93
90	2	6	9	13	15
95	38	87	213	102	80
105	147	224	828	907	636
115	264	341	787	1684	1840
125	362	441	794	1456	1717
135	437	504	786	1218	1413
145	506	555	741	994	1109
155	566	593	693	807	856
165	609	619	656	693	707
175	631	632	636	640	642
180	634	634	634	634	634

FLUX

131
376
571
689
716
651
506
310
101
144
626
943
836
666
488
326
187
61

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	1078	12.9
0- 40	1767	21.2
0- 60	3134	37.6
0- 90	4052	48.7
90-120	1713	20.6
90-130	2549	30.6
90-150	3703	44.5
90-180	4276	51.3
0-180	8328	100.0

EFFICACY = 114.2 lm/W

EFFICACY = 117.1 lm/W **

** THE EFFICACY AT 120 VOLTS IS BASED ON THE LUMENS FROM THIS REPORT AND THE WATTAGE MEASURED AT 120 VOLT INPUT.

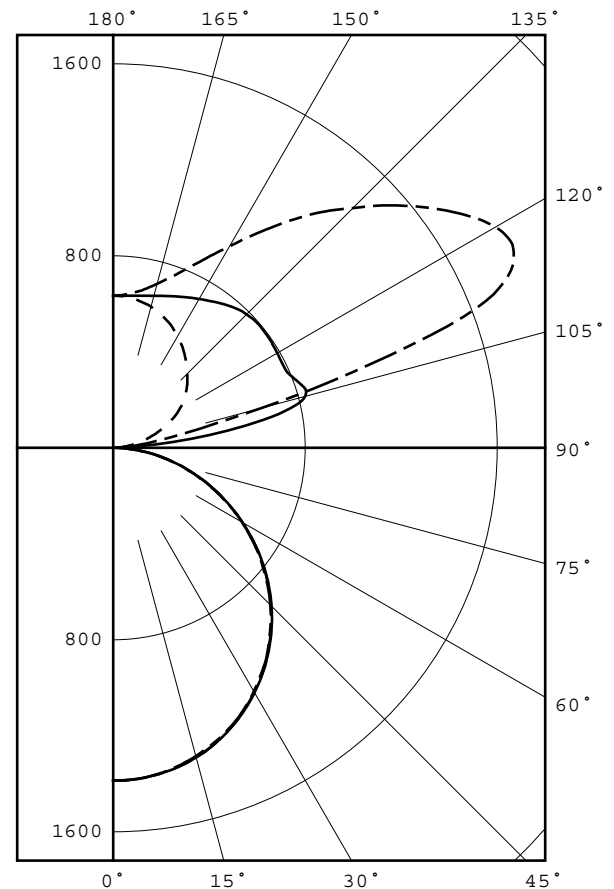
CIE TYPE - GENERAL DIFFUSE

PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 1.26 1.26

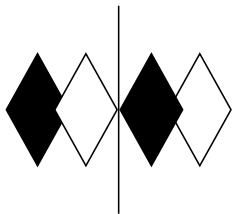
BEAM ANGLE (50%) : 89.6 X 44.7 DEGREES

FIELD ANGLE (10%) : 159.9 X 162.4 DEGREES



LEGEND

0-deg - - - - -
45-deg - - - - -
90-deg - - - - -



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CATALOG NUMBER: HP-X ID-4'-V-V-835-WSO-F-277V-X-X-X

PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 48.000 2.375

LUMINANCE DATA IN CANDELA/SQ M				
ANGLE	AVERAGE	AVERAGE	AVERAGE	
IN DEG	0-DEG	45-DEG	90-DEG	
45	17863.	17940.	17805.	
55	17281.	17328.	17210.	
65	16376.	16472.	16440.	
75	15235.	15445.	15550.	
85	13260.	14196.	14508.	



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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	1387	1387	1387	1387	1387
5.0	1382	1382	1382	1382	1382
10.0	1364	1361	1365	1365	1362
15.0	1336	1329	1336	1337	1330
20.0	1293	1284	1294	1295	1289
25.0	1241	1231	1242	1243	1237
30.0	1176	1168	1178	1178	1172
35.0	1104	1093	1104	1104	1100
40.0	1020	1014	1023	1021	1015
45.0	929	925	933	929	926
50.0	832	828	836	830	827
55.0	729	729	731	728	726
60.0	621	620	624	621	620
65.0	509	511	512	511	511
70.0	399	399	403	402	403
75.0	290	291	294	295	296
80.0	186	186	190	192	192
85.0	85	88	91	93	93
90.0	2	6	9	13	15
95.0	38	87	213	102	80
100.0	91	166	598	329	229
105.0	147	224	828	907	636
110.0	205	281	815	1589	1483
115.0	264	341	787	1684	1840
120.0	318	398	789	1583	1839
125.0	362	441	794	1456	1717
130.0	402	477	795	1333	1570
135.0	437	504	786	1218	1413
140.0	472	531	767	1107	1266
145.0	506	555	741	994	1109
150.0	537	575	716	889	969
155.0	566	593	693	807	856
160.0	589	607	673	741	769
165.0	609	619	656	693	707
170.0	622	627	643	659	665
175.0	631	632	636	640	642
180.0	634	634	634	634	634



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	33
5- 10	98
10- 15	160
15- 20	216
20- 25	265
25- 30	305
30- 35	335
35- 40	354
40- 45	360
45- 50	356
50- 55	339
55- 60	312
60- 65	275
65- 70	231
70- 75	181
75- 80	129
80- 85	76
85- 90	26
90- 95	30
95-100	114
100-105	237
105-110	388
110-115	473
115-120	470
120-125	438
125-130	398
130-135	355
135-140	311
140-145	266
145-150	222
150-155	181
155-160	144
160-165	110
165-170	77
170-175	46
175-180	15

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	131
0- 20	508
0- 30	1078
0- 40	1767
0- 50	2483
0- 60	3134
0- 70	3640
0- 80	3951
0- 90	4052
0-100	4196
0-110	4821
0-120	5765
0-130	6601
0-140	7267
0-150	7755
0-160	8080
0-170	8267
0-180	8328



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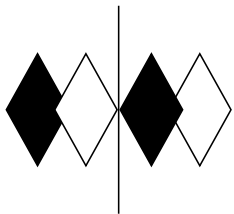
CATALOG NUMBER: HP-X ID-4'-V-V-835-WSO-F-277V-X-X-X

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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	93	89	85	89	85	82	79	72	69	67	59	58	56	48	47	46	40
2	88	81	74	69	81	74	69	64	63	59	55	52	49	46	42	40	38	33
3	80	71	63	57	74	65	59	53	55	50	46	46	42	39	37	34	32	28
4	73	62	54	48	67	58	51	45	49	43	39	41	37	33	33	30	28	24
5	67	55	47	41	62	51	44	39	44	38	34	36	32	29	30	26	24	21
6	62	50	41	36	57	46	39	33	39	33	29	33	28	25	27	23	21	18
7	57	45	37	31	52	42	34	29	35	30	26	30	25	22	24	21	18	16
8	53	41	33	27	49	38	31	26	32	27	23	27	23	20	22	19	17	14
9	49	37	29	24	45	34	28	23	30	24	20	25	21	18	21	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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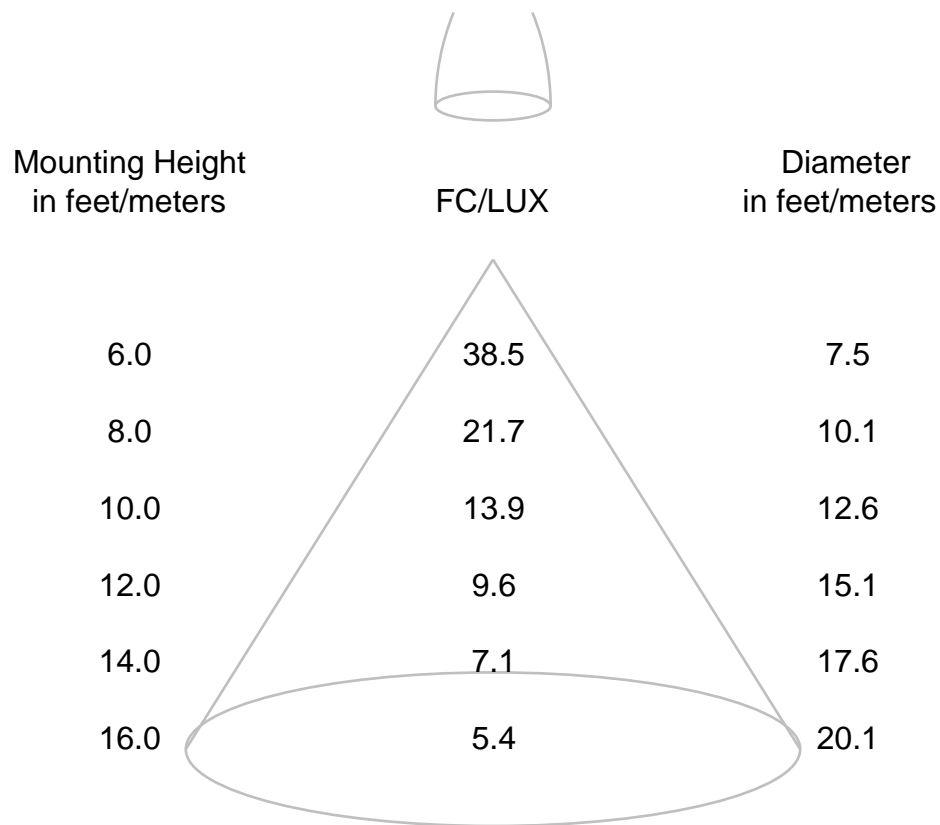
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CONE OF LIGHT DIAGRAM

(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.