

itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

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: ITL93801-GONIOPHOTOMETRY

PAGE: 1 OF 9

ISSUE DATE: 08/04/20

PREPARED FOR: FINELITE, INC.

ADDRESS: 30500 WHIPPLE ROAD

UNION CITY, CA 94587

CATALOG NUMBER: E3-P-WW-D-4ft-V-835-F

LUMINAIRE: EXTRUDED METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR FINISH AND FABRICATED WHITE PAINTED METAL END CAPS, FABRICATED WHITE PAINTED METAL REFLECTOR, ONE WHITE CIRCUIT BOARD WITH 80 LEDS, TRANSLUCENT FROSTED PLASTIC DIFFUSER. DIFFUSER FROSTED BOTH SIDES.

LAMPS: EIGHTY WHITE LIGHT EMITTING DIODES (LEDS), TILTED 20-DEGREES FROM VERTICAL BASE-UP POSITION.

INPUT ELECTRICAL: 277.0 VOLTS, 20.1 WATTS, 0.076 AMPS

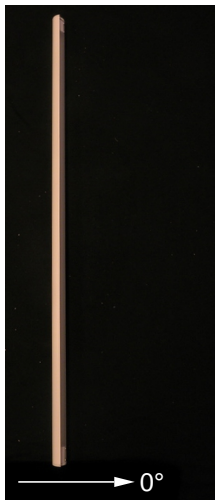
MOUNTING: SUSPENDED

LED DRIVER: OSRAM OTi 20/120-277/700 DIM-1 L G2, 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. A 12' POWER CORD EXTENDS FROM THE DRIVER TO THE LUMINAIRE.

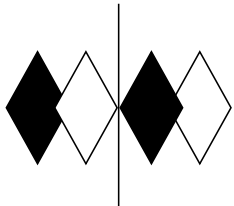
TEST PROCEDURE: IESNA LM-79-19

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
TESTING
NVLAP LAB CODE: 200925-0

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CATALOG NUMBER: E3-P-WW D-4'-V-835-F-277V-X-X-X-X-X-X

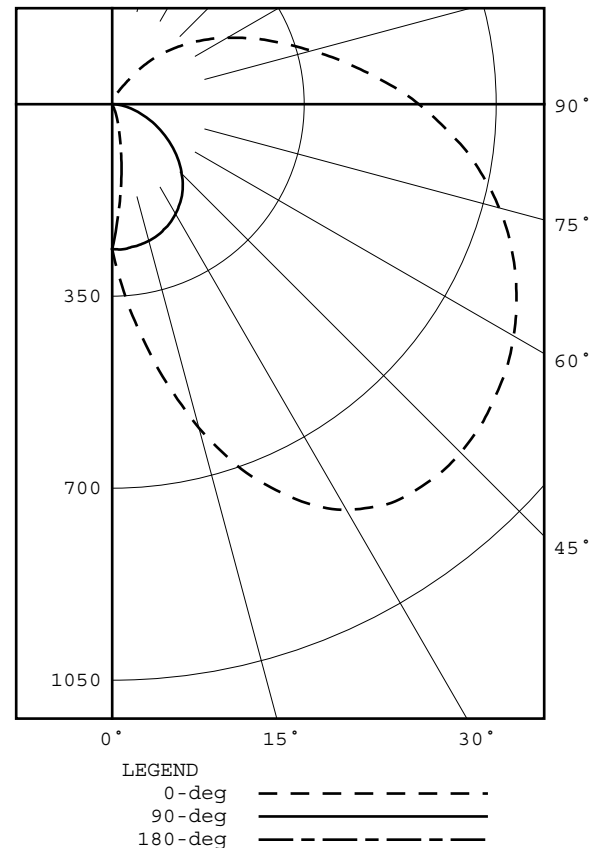
CANDELA DISTRIBUTION

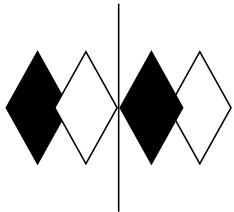
	0.0	45.0	90.0	135.0	180.0	FLUX
0	264	264	264	264	264	
5	376	340	265	196	169	26
15	611	497	258	86	47	84
25	795	627	243	29	4	150
35	887	699	217	2	1	213
45	898	703	179	0	0	256
55	870	655	133	0	0	272
65	813	579	85	0	0	266
75	730	491	42	0	0	239
85	619	398	12	0	0	200
90	559	354	0	0	0	
95	494	309	0	0	0	155
105	376	231	0	0	0	112
115	284	165	0	0	0	76
125	204	109	0	0	0	47
135	132	51	0	0	0	24
145	59	21	0	0	0	9
155	22	9	0	0	0	2
165	7	1	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	260	12.2
0- 40	473	22.2
0- 60	1001	47.0
0- 90	1705	80.1
90-120	342	16.1
90-130	389	18.3
90-150	421	19.8
90-180	424	19.9
0-180	2129	100.0

EFFICACY (277) = 105.9 lm/W
EFFICACY (120) = 109.2 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 ITL93801-SPHERE.

CIE TYPE - SEMI-DIRECT
PLANE : 0-DEG 90-DEG 180-DEG
SPACING CRITERIA : 3.15 1.29 0.25
BEAM ANGLE (50%) : 90.3 X N/A DEGREES
FIELD ANGLE (10%) : 151.3 X 127.7 DEGREES





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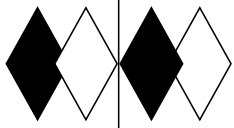
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CATALOG NUMBER: E3-P-WW D-4'-V-835-F-277V-X-X-X-X-X-X

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	20530.	5186.	0.
55	18729.	3721.	0.
65	17006.	2365.	0.
75	15332.	1201.	0.
85	13438.	364.	0.



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CATALOG NUMBER: E3-P-WW D-4' -V-835-F-277V-X-X-X-X-X-X

CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0	95.0	112.5	135.0
0.0	264	264	264	264	264	264	264	264	264	264	264	264	264	264
2.5	319	316	316	313	309	303	294	285	276	270	265	260	242	229
5.0	376	373	371	364	354	340	325	306	289	273	265	255	224	196
7.5	432	432	426	415	399	378	357	328	302	277	263	250	205	165
10.0	493	490	484	470	448	417	387	350	314	280	262	244	188	135
12.5	551	547	539	522	495	457	417	371	325	282	260	239	171	108
15.0	611	606	596	573	540	497	448	390	336	284	258	233	153	86
17.5	664	659	647	621	583	532	475	409	345	285	255	226	137	68
20.0	715	710	696	669	623	566	501	428	354	285	252	219	122	52
22.5	756	753	741	709	660	599	526	443	361	285	247	212	107	39
25.0	795	791	777	744	695	627	548	456	367	283	243	205	93	29
27.5	828	823	809	775	723	651	567	469	371	281	237	197	81	20
30.0	854	849	835	800	745	671	582	478	374	278	231	189	69	12
32.5	872	867	852	818	763	686	592	484	375	273	224	180	58	6
35.0	887	881	867	831	777	699	601	489	374	268	217	172	48	2
37.5	894	889	874	839	784	706	605	489	370	261	209	162	39	1
40.0	898	893	879	843	787	708	606	487	365	252	200	152	31	1
42.5	900	894	879	844	787	708	603	482	358	243	190	142	23	0
45.0	898	893	876	841	782	703	597	475	348	233	179	131	16	0
47.5	894	889	871	835	775	694	586	464	338	221	169	120	9	0
50.0	888	883	864	826	766	684	575	452	325	209	157	109	4	0
52.5	879	875	855	816	754	671	561	437	312	196	145	98	1	0
55.0	870	865	845	805	741	655	545	422	296	183	133	87	0	0
57.5	859	854	832	792	725	638	528	404	280	170	121	76	0	0
60.0	845	841	818	776	709	620	509	385	264	156	108	65	0	0
62.5	830	827	802	760	691	600	489	366	250	142	96	55	0	0
65.0	813	810	785	741	671	579	468	347	231	129	85	45	0	0
67.5	795	791	767	722	651	559	447	328	214	115	73	36	0	0
70.0	775	772	747	701	630	537	425	308	198	103	62	27	0	0
72.5	754	751	725	677	608	515	405	290	183	90	52	18	0	0
75.0	730	727	702	655	584	491	383	273	167	79	42	11	0	0
77.5	705	702	677	630	558	467	362	255	153	68	33	5	0	0
80.0	678	676	651	604	534	444	342	237	139	57	26	2	0	0
82.5	651	647	624	577	508	421	321	219	126	48	18	0	0	0
85.0	619	617	595	550	482	398	301	204	114	40	12	0	0	0
87.5	589	587	566	522	457	376	283	189	102	32	5	0	0	0
90.0	559	555	535	495	431	354	265	174	92	25	0	0	0	0
92.5	528	524	505	464	405	330	247	160	82	19	0	0	0	0
95.0	494	492	473	435	379	309	229	148	73	13	0	0	0	0
97.5	463	462	442	408	354	289	212	135	64	8	0	0	0	0
100.0	433	431	414	380	331	269	197	124	57	5	0	0	0	0
102.5	405	402	385	355	307	249	182	113	49	3	0	0	0	0
105.0	376	375	359	330	286	231	167	102	42	3	0	0	0	0
107.5	351	350	334	306	265	214	153	92	35	2	0	0	0	0
110.0	327	326	311	285	246	197	140	82	27	2	0	0	0	0
112.5	305	303	290	265	227	180	128	73	21	2	0	0	0	0
115.0	284	281	268	245	210	165	116	63	17	1	0	0	0	0
117.5	262	260	248	226	192	151	104	54	14	1	0	0	0	0
120.0	242	241	229	208	175	137	92	44	12	1	0	0	0	0
122.5	223	221	211	190	160	122	81	35	10	0	0	0	0	0
125.0	204	202	192	173	145	109	69	29	9	0	0	0	0	0
127.5	185	184	174	156	129	96	57	24	8	0	0	0	0	0
130.0	167	166	157	139	114	82	43	20	7	0	0	0	0	0
132.5	149	149	140	123	99	67	35	16	6	0	0	0	0	0
135.0	132	130	122	107	84	51	29	14	4	0	0	0	0	0
137.5	115	113	106	91	66	40	24	12	3	0	0	0	0	0
140.0	96	96	88	74	49	33	19	10	2	0	0	0	0	0
142.5	78	77	70	56	39	27	16	9	1	0	0	0	0	0
145.0	59	58	52	42	31	21	14	7	1	0	0	0	0	0
147.5	46	45	42	33	25	17	11	5	1	0	0	0	0	0

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.



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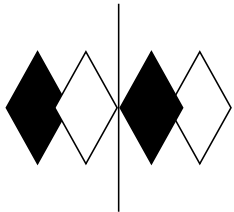
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CATALOG NUMBER: E3-P-WW D-4'-V-835-F-277V-X-X-X-X-X-X

CANDELA DISTRIBUTION LATERAL ANGLE														
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0	90.0	95.0	112.5	135.0
150.0	36	36	33	26	19	15	9	3	1	0	0	0	0	0
152.5	29	29	26	20	16	12	8	2	1	0	0	0	0	0
155.0	22	22	19	16	12	9	5	1	0	0	0	0	0	0
157.5	18	18	15	12	10	7	3	1	0	0	0	0	0	0
160.0	13	13	11	9	8	4	1	1	0	0	0	0	0	0
162.5	10	10	8	7	5	2	1	1	0	0	0	0	0	0
165.0	7	6	4	3	2	1	1	1	0	0	0	0	0	0
167.5	1	1	1	1	1	1	1	1	0	0	0	0	0	0
170.0	1	1	0	0	0	0	1	1	0	0	0	0	0	0
172.5	0	0	0	0	0	0	1	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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CATALOG NUMBER: E3-P-WW D-4'-V-835-F-277V-X-X-X-X-X-X

CANDELA DISTRIBUTION
LATERAL ANGLE

	157.5	180.0
0.0	264	264
2.5	219	213
5.0	177	169
7.5	138	129
10.0	104	95
12.5	76	68
15.0	56	47
17.5	40	32
20.0	27	21
22.5	17	12
25.0	9	4
27.5	2	2
30.0	2	1
32.5	1	1
35.0	1	1
37.5	0	0
40.0	0	0
42.5	0	0
45.0	0	0
47.5	0	0
50.0	0	0
52.5	0	0
55.0	0	0
57.5	0	0
60.0	0	0
62.5	0	0
65.0	0	0
67.5	0	0
70.0	0	0
72.5	0	0
75.0	0	0
77.5	0	0
80.0	0	0
82.5	0	0
85.0	0	0
87.5	0	0
90.0	0	0
92.5	0	0
95.0	0	0
97.5	0	0
100.0	0	0
102.5	0	0
105.0	0	0
107.5	0	0
110.0	0	0
112.5	0	0
115.0	0	0
117.5	0	0
120.0	0	0
122.5	0	0
125.0	0	0
127.5	0	0
130.0	0	0
132.5	0	0
135.0	0	0
137.5	0	0
140.0	0	0
142.5	0	0
145.0	0	0
147.5	0	0



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CANDELA DISTRIBUTION
LATERAL ANGLE

	157.5	180.0
150.0	0	0
152.5	0	0
155.0	0	0
157.5	0	0
160.0	0	0
162.5	0	0
165.0	0	0
167.5	0	0
170.0	0	0
172.5	0	0
175.0	0	0
177.5	0	0
180.0	0	0



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	6
5- 10	20
10- 15	34
15- 20	50
20- 25	67
25- 30	84
30- 35	100
35- 40	113
40- 45	124
45- 50	131
50- 55	136
55- 60	137
60- 65	135
65- 70	131
70- 75	124
75- 80	115
80- 85	105
85- 90	95
90- 95	83
95-100	72
100-105	61
105-110	51
110-115	42
115-120	34
120-125	27
125-130	20
130-135	14
135-140	9
140-145	6
145-150	3
150-155	2
155-160	1
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	26
0- 20	109
0- 30	260
0- 40	473
0- 50	728
0- 60	1001
0- 70	1266
0- 80	1505
0- 90	1705
0-100	1860
0-110	1972
0-120	2048
0-130	2094
0-140	2118
0-150	2126
0-160	2129
0-170	2129
0-180	2129



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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	114	114	114	114	109	109	109	109	100	100	100	92	92	92	84	84	84	80
1	100	93	87	82	95	89	84	79	81	77	73	74	70	67	67	64	62	58
2	89	79	70	63	84	75	67	61	68	62	56	62	57	52	56	52	48	45
3	80	68	58	50	76	64	56	49	58	51	45	53	47	42	48	43	39	35
4	72	59	49	41	68	56	47	40	51	43	37	46	40	35	42	36	32	29
5	66	52	42	35	62	50	40	33	45	37	31	41	34	29	37	31	27	24
6	61	46	36	29	57	44	35	28	40	32	27	37	30	25	33	27	23	20
7	56	41	32	25	53	40	31	25	36	29	23	33	26	21	30	24	20	18
8	52	37	28	22	49	36	27	21	33	25	20	30	24	19	27	22	18	15
9	48	34	25	20	46	33	24	19	30	23	18	27	21	17	25	20	16	13
10	45	31	23	17	43	30	22	17	28	21	16	25	19	15	23	18	14	12

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.

NOTE: THE ZONAL CAVITY CALCULATION TECHNIQUE IS ACCURATE WHEN LUMINAIRES WITH SYMMETRIC CANDELA DISTRIBUTIONS ARE EMPLOYED AND WHEN THE LUMINAIRES ARE LOCATED SYMMETRICALLY THROUGHOUT THE ROOM. THIS UNIT HAS SPECIAL CHARACTERISTICS AND THEREFORE THESE COEFFICIENTS SHOULD BE USED WITH CAUTION.