

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

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

INDEPENDENT TESTING LABORATORIES, INC.  
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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REPORT NUMBER: ITL86712

PAGE: 1 OF 8

ISSUE DATE: 02/10/16

PREPARED FOR: FINELITE, INC.

CATALOG NUMBER: HP-WS-4W-2D-4'-V-8-35

LUMINAIRE: FABRICATED WHITE PAINTED METAL HOUSING, FLAT SEMI-DIFFUSE METAL REAR UPPER REFLECTOR, EXTRUDED WHITE PAINTED METAL LOWER REFLECTOR/HOUSING EXTENSION, FABRICATED WHITE PAINTED METAL CIRCUIT BOARD MOUNT/FORWARD REFLECTOR, 2 WHITE CIRCUIT BOARDS EACH WITH 80 LEDS, FROSTED HOLOGRAPHIC PLASTIC LENS. LENS FROSTED BOTH SIDES. VERTICAL PHOTOMETRIC CENTER LOCATED AT BACK BOTTOM EDGE OF HOUSING (CEILING HEIGHT).

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

INPUT ELECTRICAL: 277.0 VOLTS, 37.9 WATTS, 0.145 AMPS

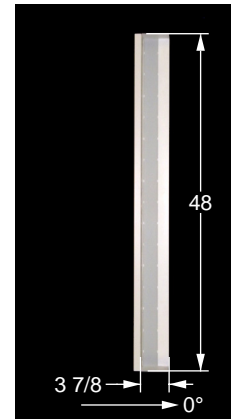
MOUNTING: RECESSED

LED DRIVER: OSRAM OT50W/PRG1400C/UNV/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



#### CANDELA DISTRIBUTION

#### FLUX

	0.0	45.0	90.0	135.0	180.0	
0	1235	1235	1235	1235	1235	
5	1280	1264	1229	1198	1168	116
15	1333	1281	1172	1002	903	321
25	1323	1241	1060	746	586	460
35	1258	1150	909	489	297	519
45	1144	1020	735	248	60	502
55	967	859	555	49	2	436
65	741	654	375	3	0	344
75	514	437	204	2	0	233
85	295	232	52	1	0	121
90	188	132	0	0	0	
95	117	68	0	0	0	37
105	19	13	0	0	0	6
115	9	2	0	0	0	2
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	897	29.0
0- 40	1416	45.7
0- 60	2354	76.0
0- 90	3052	98.5
90-120	45	1.5
90-130	45	1.5
90-150	45	1.5
90-180	45	1.5
0-180	3097	100.0

EFFICACY (277V) = 81.7 lm/W

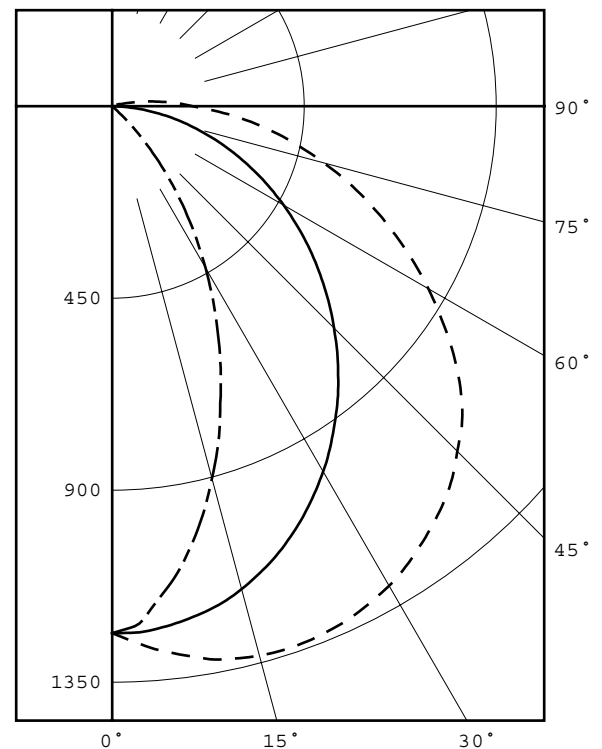
EFFICACY (120V) = 83.7 lm/W \*\*

\*\* THE EFFICACY AT 120 VOLTS IS BASED ON THE LUMENS FROM THIS REPORT AND THE WATTAGE MEASURED AT 120 VOLTS FROM ITL REPORT NUMBER ITL86713-THD.

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG 180-DEG

SPACING CRITERIA : 1.53 1.19 0.73

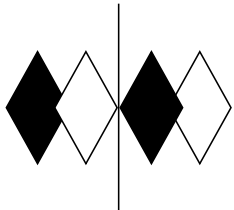


#### LEGEND:

0-deg -----  
90-deg -----  
180-deg -----

Checked B. HYRE

Approved R. BEATTIE  
Lighting Engineer



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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	112.5	135.0	157.5
0.0	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235
2.5	1258	1256	1255	1254	1252	1249	1246	1242	1239	1237	1235	1231	1227	1220
5.0	1280	1280	1279	1276	1272	1264	1256	1248	1239	1232	1229	1219	1198	1172
7.5	1298	1297	1296	1290	1283	1274	1264	1250	1236	1224	1219	1197	1149	1123
10.0	1316	1313	1311	1304	1294	1280	1265	1248	1228	1211	1207	1166	1108	1067
12.5	1326	1323	1322	1314	1301	1282	1263	1240	1217	1197	1192	1125	1058	1003
15.0	1333	1330	1329	1319	1303	1281	1259	1228	1202	1178	1172	1085	1002	932
17.5	1336	1334	1331	1320	1302	1277	1250	1214	1185	1156	1148	1046	943	858
20.0	1335	1333	1329	1317	1297	1269	1238	1197	1164	1133	1122	1003	878	783
22.5	1330	1329	1324	1309	1288	1256	1221	1177	1139	1105	1092	955	813	707
25.0	1323	1320	1315	1298	1274	1241	1202	1155	1112	1075	1060	907	746	632
27.5	1311	1309	1303	1284	1259	1223	1180	1130	1084	1042	1025	856	683	559
30.0	1298	1294	1287	1267	1240	1201	1155	1103	1053	1008	989	803	617	487
32.5	1280	1277	1269	1248	1218	1177	1129	1073	1020	971	950	750	553	416
35.0	1258	1258	1247	1225	1193	1150	1100	1041	985	935	909	698	489	348
37.5	1235	1235	1223	1199	1166	1121	1068	1008	948	896	868	644	426	283
40.0	1210	1208	1195	1171	1136	1090	1033	971	910	854	824	589	364	220
42.5	1180	1180	1166	1140	1105	1057	999	935	871	812	781	536	305	161
45.0	1144	1144	1131	1106	1070	1020	961	896	830	768	735	482	248	105
47.5	1111	1108	1095	1070	1033	983	923	857	790	725	691	430	193	55
50.0	1069	1066	1054	1029	993	943	882	815	747	680	645	378	141	14
52.5	1020	1020	1008	986	951	902	841	774	705	636	600	328	93	6
55.0	967	967	957	937	906	859	799	731	661	592	555	278	49	4
57.5	911	913	903	884	858	814	755	688	617	549	509	230	13	3
60.0	856	857	847	828	803	765	711	644	573	503	464	184	6	2
62.5	799	800	790	771	746	711	663	598	529	458	419	139	5	1
65.0	741	743	733	717	689	654	614	554	484	414	375	97	3	1
67.5	685	687	677	660	633	599	562	508	441	371	331	58	3	1
70.0	629	630	619	603	576	543	507	461	395	327	288	23	2	1
72.5	572	573	565	547	522	488	453	409	352	285	245	7	2	1
75.0	514	513	508	491	467	437	400	357	305	243	204	5	2	1
77.5	458	458	452	435	413	384	347	307	262	201	165	4	1	1
80.0	404	403	397	382	360	332	297	259	214	160	127	3	1	1
82.5	350	349	343	328	308	282	249	213	170	119	89	2	1	1
85.0	295	294	290	275	256	232	203	168	127	77	52	1	1	0
87.5	240	243	236	225	204	181	155	124	89	37	18	1	1	0
90.0	188	189	184	173	153	132	107	79	51	18	0	0	0	0
92.5	155	155	150	140	120	100	76	50	25	6	0	0	0	0
95.0	117	117	112	103	86	68	47	24	11	2	0	0	0	0
97.5	84	85	79	71	56	40	22	14	7	1	0	0	0	0
100.0	54	54	49	42	29	20	15	10	3	1	0	0	0	0
102.5	28	27	23	21	19	16	12	7	2	0	0	0	0	0
105.0	19	18	18	17	15	13	9	3	1	0	0	0	0	0
107.5	15	15	15	14	13	10	7	2	1	0	0	0	0	0
110.0	13	13	12	12	11	8	2	2	1	0	0	0	0	0
112.5	11	11	11	10	9	5	2	1	0	0	0	0	0	0
115.0	9	9	9	8	7	2	1	1	0	0	0	0	0	0
117.5	7	7	7	7	1	1	1	0	0	0	0	0	0	0
120.0	6	5	3	1	1	1	1	0	0	0	0	0	0	0
122.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
127.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
132.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
157.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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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	112.5	135.0	157.5
160.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	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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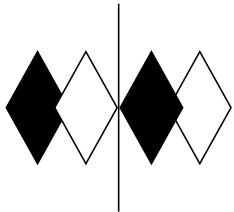
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CANDELA DISTRIBUTION  
LATERAL ANGLE

	180.0
0.0	1235
2.5	1220
5.0	1168
7.5	1115
10.0	1051
12.5	981
15.0	903
17.5	828
20.0	741
22.5	664
25.0	586
27.5	511
30.0	437
32.5	366
35.0	297
37.5	232
40.0	170
42.5	112
45.0	60
47.5	16
50.0	5
52.5	3
55.0	2
57.5	1
60.0	0
62.5	0
65.0	0
67.5	0
70.0	0
72.5	0
75.0	0
77.5	0
80.0	0
82.5	0
85.0	0
87.5	0
90.0	0
92.5	0
95.0	0
97.5	0
100.0	0
102.5	0
105.0	0
107.5	0
110.0	0
112.5	0
115.0	0
117.5	0
120.0	0
122.5	0
125.0	0
127.5	0
130.0	0
132.5	0
135.0	0
137.5	0
140.0	0
142.5	0
145.0	0
147.5	0
150.0	0
152.5	0
155.0	0
157.5	0



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CANDELA DISTRIBUTION  
LATERAL ANGLE

	180.0
160.0	0
162.5	0
165.0	0
167.5	0
170.0	0
172.5	0
175.0	0
177.5	0
180.0	0



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5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	29
5- 10	87
10- 15	139
15- 20	183
20- 25	217
25- 30	242
30- 35	257
35- 40	262
40- 45	257
45- 50	245
50- 55	228
55- 60	208
60- 65	185
65- 70	159
70- 75	130
75- 80	103
80- 85	74
85- 90	46
90- 95	25
95-100	12
100-105	4
105-110	2
110-115	1
115-120	1
120-125	0
125-130	0
130-135	0
135-140	0
140-145	0
145-150	0
150-155	0
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	116
0- 20	438
0- 30	897
0- 40	1416
0- 50	1918
0- 60	2354
0- 70	2698
0- 80	2931
0- 90	3052
0-100	3088
0-110	3095
0-120	3097
0-130	3097
0-140	3097
0-150	3097
0-160	3097
0-170	3097
0-180	3097



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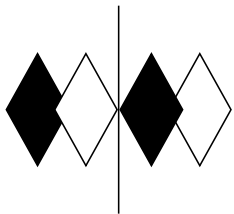
# COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	110	110	110	105	105	105	101	101	101	99
1	108	103	98	94	105	100	96	92	96	92	89	91	89	86	88	85	83	81
2	98	90	82	77	95	87	81	76	84	78	74	80	76	72	77	73	70	68
3	89	79	71	64	87	77	69	63	74	67	62	71	65	61	68	63	59	57
4	82	70	61	55	80	69	60	54	66	59	53	63	57	52	61	56	51	49
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	55	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	50	44	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	42	36	32	30
9	57	44	35	30	55	43	35	30	42	35	30	40	34	29	39	33	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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.



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UNION CITY, CA 94587

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