

**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: ITL86714

PAGE: 1 OF 8

ISSUE DATE: 02/11/16

PREPARED FOR: FINELITE, INC.

CATALOG NUMBER: HP-WS-4W-6D-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

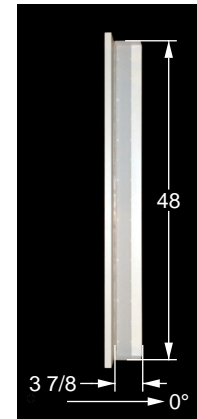
MOUNTING: RECESSED

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	1238	1238	1238	1238	1238	
5	1334	1298	1230	1061	974	110
15	1499	1403	1172	542	282	280
25	1542	1417	1060	93	7	385
35	1468	1347	909	11	0	456
45	1277	1192	733	3	0	472
55	1042	960	552	0	0	438
65	806	711	372	0	0	360
75	572	478	203	0	0	253
85	350	268	52	0	0	138
90	238	164	0	0	0	
95	162	98	0	0	0	51
105	55	40	0	0	0	19
115	44	32	0	0	0	13
125	38	27	0	0	0	9
135	31	5	0	0	0	4
145	4	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	

#### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0- 30	774	25.9
0- 40	1231	41.2
0- 60	2141	71.6
0- 90	2893	96.8
90-120	83	2.8
90-130	92	3.1
90-150	97	3.2
90-180	97	3.2
0-180	2989	100.0

EFFICACY (277V) = 78.9 lm/W

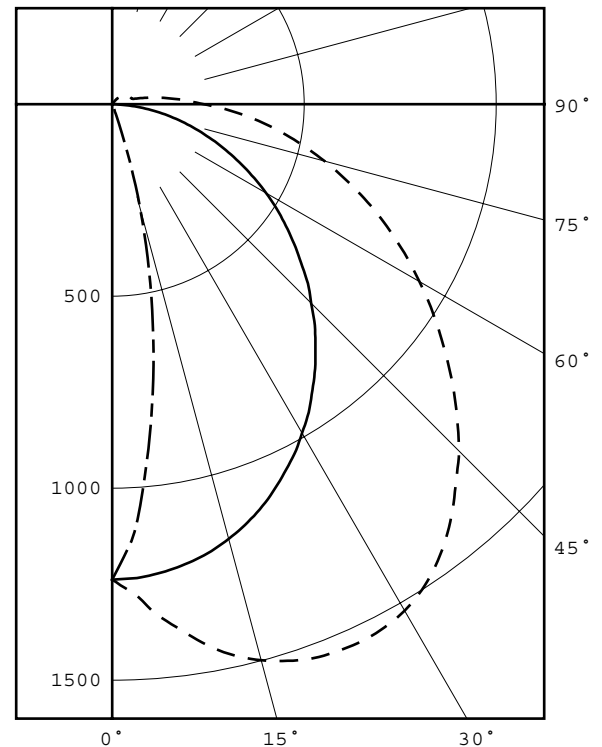
EFFICACY (120V) = 80.8 lm/W \*\*

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

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG 180-DEG

SPACING CRITERIA : 1.68 1.19 0.34

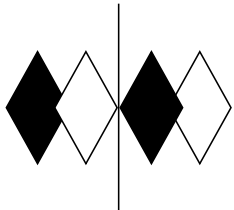


#### LEGEND:

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	1238	1238	1238	1238	1238	1238	1238	1238	1238	1238	1238	1238	1238	1238
2.5	1275	1277	1274	1270	1265	1258	1251	1247	1242	1237	1236	1213	1171	1144
5.0	1334	1333	1331	1323	1313	1298	1279	1262	1244	1233	1230	1155	1061	992
7.5	1382	1383	1381	1368	1353	1330	1307	1280	1248	1225	1220	1091	934	826
10.0	1431	1429	1426	1410	1388	1359	1328	1292	1250	1213	1208	1018	803	660
12.5	1470	1468	1463	1445	1418	1384	1344	1298	1247	1200	1192	938	672	498
15.0	1499	1497	1492	1474	1443	1403	1357	1300	1242	1184	1172	857	542	342
17.5	1520	1518	1511	1492	1460	1416	1364	1297	1230	1165	1149	774	417	198
20.0	1535	1532	1525	1505	1470	1423	1365	1293	1216	1143	1123	691	298	73
22.5	1541	1539	1531	1508	1473	1422	1361	1283	1199	1119	1093	608	187	21
25.0	1542	1539	1530	1506	1470	1417	1351	1270	1179	1091	1060	527	93	13
27.5	1536	1534	1524	1499	1462	1407	1338	1252	1157	1062	1027	448	31	8
30.0	1523	1520	1511	1486	1447	1392	1319	1231	1131	1032	989	371	20	6
32.5	1500	1499	1490	1465	1428	1371	1297	1207	1104	998	952	297	15	3
35.0	1468	1466	1459	1436	1402	1347	1270	1179	1072	961	909	227	11	3
37.5	1427	1425	1419	1399	1369	1317	1240	1149	1040	923	868	161	8	2
40.0	1379	1378	1371	1353	1329	1281	1206	1115	1005	883	823	101	6	2
42.5	1326	1326	1320	1302	1279	1240	1169	1079	969	842	781	50	4	1
45.0	1277	1271	1265	1248	1226	1192	1128	1040	929	800	733	32	3	1
47.5	1219	1215	1209	1191	1168	1138	1083	999	890	756	691	25	2	0
50.0	1161	1157	1151	1132	1111	1081	1031	956	846	712	642	20	1	0
52.5	1101	1098	1091	1072	1050	1022	975	909	803	669	597	15	1	0
55.0	1042	1038	1032	1012	989	960	916	860	759	625	552	11	0	0
57.5	984	979	973	952	928	899	855	807	713	581	509	9	0	0
60.0	924	920	913	891	866	836	794	750	668	537	463	6	0	0
62.5	866	861	854	833	802	772	731	687	620	493	417	4	0	0
65.0	806	802	792	774	742	711	669	627	569	448	372	3	0	0
67.5	748	744	734	714	684	650	608	566	516	402	328	1	0	0
70.0	689	685	675	656	628	591	549	505	460	359	285	1	0	0
72.5	630	627	617	597	570	534	491	446	402	314	243	0	0	0
75.0	572	568	559	540	513	478	435	388	345	270	203	0	0	0
77.5	515	513	501	483	457	423	381	333	288	226	163	0	0	0
80.0	460	457	445	429	404	371	331	282	234	181	125	0	0	0
82.5	405	402	390	376	351	320	281	233	185	135	88	0	0	0
85.0	350	347	335	323	299	268	232	189	140	87	52	0	0	0
87.5	294	292	284	269	246	217	183	143	99	42	16	0	0	0
90.0	238	236	229	215	192	164	133	97	59	19	0	0	0	0
92.5	198	197	190	176	156	132	101	67	33	7	0	0	0	0
95.0	162	161	154	140	122	98	71	41	19	3	0	0	0	0
97.5	128	126	120	108	91	70	45	29	15	1	0	0	0	0
100.0	98	95	89	79	64	47	37	26	13	0	0	0	0	0
102.5	70	68	64	56	50	43	33	23	11	0	0	0	0	0
105.0	55	55	53	51	46	40	31	21	9	0	0	0	0	0
107.5	52	51	50	47	43	37	29	20	6	0	0	0	0	0
110.0	49	49	47	45	41	35	27	19	3	0	0	0	0	0
112.5	47	46	45	43	39	33	26	18	1	0	0	0	0	0
115.0	44	44	43	41	37	32	25	13	0	0	0	0	0	0
117.5	42	42	41	39	36	31	24	9	0	0	0	0	0	0
120.0	41	41	40	38	35	30	23	5	0	0	0	0	0	0
122.5	39	39	38	36	33	28	16	3	0	0	0	0	0	0
125.0	38	38	37	35	32	27	11	0	0	0	0	0	0	0
127.5	36	36	35	34	30	20	7	0	0	0	0	0	0	0
130.0	35	35	34	32	27	14	3	0	0	0	0	0	0	0
132.5	34	34	33	29	19	9	0	0	0	0	0	0	0	0
135.0	31	31	28	21	13	5	0	0	0	0	0	0	0	0
137.5	22	22	19	14	8	1	0	0	0	0	0	0	0	0
140.0	15	15	13	9	3	0	0	0	0	0	0	0	0	0
142.5	9	9	7	4	0	0	0	0	0	0	0	0	0	0
145.0	4	4	2	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

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



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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



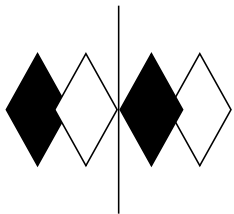
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CANDELA DISTRIBUTION  
LATERAL ANGLE

	180.0
0.0	1238
2.5	1139
5.0	974
7.5	795
10.0	616
12.5	444
15.0	282
17.5	135
20.0	26
22.5	12
25.0	7
27.5	4
30.0	2
32.5	0
35.0	0
37.5	0
40.0	0
42.5	0
45.0	0
47.5	0
50.0	0
52.5	0
55.0	0
57.5	0
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	81
10- 15	124
15- 20	156
20- 25	181
25- 30	204
30- 35	223
35- 40	234
40- 45	237
45- 50	235
50- 55	226
55- 60	212
60- 65	192
65- 70	168
70- 75	141
75- 80	112
80- 85	83
85- 90	55
90- 95	32
95-100	19
100-105	11
105-110	8
110-115	7
115-120	6
120-125	5
125-130	4
130-135	3
135-140	1
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	110
0- 20	390
0- 30	774
0- 40	1231
0- 50	1703
0- 60	2141
0- 70	2501
0- 80	2755
0- 90	2893
0-100	2944
0-110	2963
0-120	2976
0-130	2985
0-140	2989
0-150	2989
0-160	2989
0-170	2989
0-180	2989



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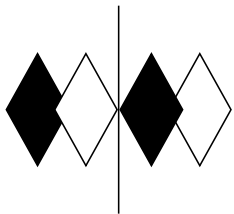
# COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97
1	107	101	97	92	104	99	94	90	94	90	87	89	86	84	85	83	81	78
2	97	88	80	74	94	86	79	73	81	76	71	78	73	69	74	70	67	64
3	88	77	68	61	85	75	67	61	72	65	59	68	63	58	65	60	56	54
4	80	68	59	52	78	66	58	51	64	56	50	61	54	49	58	53	48	46
5	74	61	52	45	72	60	51	44	57	49	44	55	48	43	52	47	42	40
6	68	55	46	39	66	54	45	39	52	44	38	50	43	38	48	42	37	35
7	63	50	41	35	62	49	40	34	47	39	34	45	38	33	44	38	33	31
8	59	45	37	31	57	45	36	31	43	36	30	42	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	27	38	32	27	37	31	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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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