

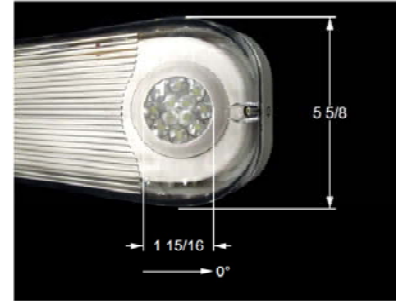
IES INDOOR REPORT
PHOTOMETRIC FILENAME : ITL77370_FHEM12WW.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]ITL77370
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.
[ISSUE DATE]06/04/13
[MANUFAC]FULHAM
[LUMCAT]FHEM12WW
[LUMINAIRE]MOLDED WHITE PLASTIC EXTERIOR HOUSING, MOLDED WHITE
[MORE]PLASTIC INTERIOR HOUSING, TWO MOLDED WHITE PLASTIC SWIVEL HEAD
[MORE]ASSEMBLIES, EACH HEAD ASSEMBLY CONSISTS OF: ONE CIRCUIT BOARD
[MORE]WITH 12 LEDS, PLASTIC REFLECTOR WITH SPECULAR FINISH AND ONE
[MORE]APERTURE PER LED, FROSTED PLASTIC LENS, LENS FROSTED SIDE IN.
[MORE]CLEAR PLASTIC EXTERIOR LENS WITH LINEAR PRISMATIC FORWARD
[MORE]CENTER SECTION, LENS PRISMS IN AND PARALLEL WITH LENGTH OF
[MORE]HOUSING. EXACT INTERIOR PROPERTIES UNKNOWN AS HEAD ASSEMBLY NOT
[MORE]DISASSEMBLED FOR INSPECTION. ONLY ONE HEAD ASSEMBLY ENERGIZED
[MORE]FOR THIS TEST.
[LAMP]TWELVE WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP
[MORE]POSITION.
[OTHER]TOTAL INPUT WATTS = 1.15 AT 3.6 VOLTS DC
[_ MOUNTING]WALL
[_ NOTE]DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT CUSTOMER
[MORE]REQUESTED INPUT VOLTAGE (3.6VDC) TO THE LAMP. THE SWIVEL HEAD
[MORE]ASSEMBLY WAS SET IN A CLIENT REQUESTED POSITION WHICH IS
[MORE]APPROXIMATELY AIMED AT THE HORIZON AND CANTED 28-DEGREES FROM
[MORE]STRAIGHT AHEAD WHEN LUMINAIRE IS IN THE VERTICAL AND LEVEL
[MORE]POSITION. FOR THIS TEST THE LUMINAIRE WAS POSITIONED TO PLACE
[MORE]THE LEDS IN THE VERTICAL BASE-UP POSITION (AIMED TOWARDS
[MORE]NADIR).
[OTHER]TEST PROCEDURE: IESNA LM-79-08
[OTHER]TEST DISTANCE = 20.0 FEET
[_ ABSOLUTE LUMENS]58.0

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	58
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	50
Total Luminaire Watts	1.15
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.32
Spacing Criterion (90-270)	0.32
Spacing Criterion (Diagonal)	0.32
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.16 ft (Diameter)
Luminous Width (90-270)	0.16 ft (Diameter)
Luminous Height	0.01 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4198	4198	4198
55	3367	3367	4208
65	2196	3293	2196
75	1650	1650	1650
85	0	0	0

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	280	280	280	280	280	280	280	280	280
0.5	280	280	280	279	279	279	278	279	278
1.0	280	279	279	278	277	277	276	276	275
1.5	278	277	276	275	274	274	272	274	272
2.0	275	274	273	272	270	269	268	269	267
2.5	271	270	269	267	265	264	263	264	262
3.0	266	264	263	261	259	258	256	259	256
3.5	257	258	257	254	252	251	249	252	249
4.0	249	250	249	247	244	243	241	244	241
4.5	241	242	241	238	235	234	233	236	233
5.0	231	233	232	230	226	225	223	226	223
5.5	221	223	222	220	215	212	213	216	213
6.0	211	212	212	209	205	201	202	206	202
6.5	199	201	201	199	194	190	191	195	191
7.0	188	190	189	188	182	179	179	184	180
7.5	176	179	178	176	171	167	168	172	169
8.0	164	167	166	165	160	156	157	161	157
8.5	153	156	155	153	149	145	145	146	145
9.0	141	144	143	142	137	134	134	135	134
9.5	130	133	132	132	127	123	124	125	123
10.0	120	123	122	121	116	113	113	114	112
11.0	100	102	101	101	97	94	94	95	93
12.0	83	85	84	83	80	78	78	78	77
13.0	68	70	69	68	66	65	65	65	63
14.0	56	58	56	56	54	53	53	52	52
15.0	46	48	47	46	45	44	44	43	43
16.0	38	40	39	38	37	37	37	37	37
17.0	33	33	33	32	32	31	32	31	31
18.0	28	29	29	28	27	27	28	27	27
19.0	25	25	25	24	24	24	25	24	24
20.0	22	22	22	21	22	21	22	21	22
22.5	18	18	18	17	18	17	18	17	18
25.0	15	15	16	15	15	15	15	15	16
27.5	13	14	14	13	13	13	13	14	14
30.0	12	12	12	12	12	12	12	12	12
32.5	10	11	11	11	11	11	11	11	11
35.0	9	10	9	10	9	10	9	10	9
37.5	8	9	8	9	8	9	8	9	8
40.0	7	8	7	8	7	8	7	8	7
42.5	6	7	6	7	6	7	6	7	6
45.0	6	6	6	6	6	6	6	6	6
47.5	5	5	5	5	5	5	5	5	5
50.0	5	5	5	5	5	5	5	5	5
52.5	5	5	5	5	5	5	5	5	5
55.0	4	4	4	5	5	5	4	5	4
57.5	4	4	4	5	4	5	4	5	4
60.0	3	4	4	4	4	4	4	4	4
62.5	3	4	3	4	3	4	3	4	3
65.0	2	3	3	3	2	3	3	3	3
67.5	2	3	2	3	2	2	2	3	2
70.0	2	2	2	2	2	2	2	2	2
72.5	1	2	1	1	1	1	1	2	2
75.0	1	1	1	1	1	1	1	1	1
77.5	1	1	1	1	1	1	1	1	1

CANDELA TABULATION - (Cont.)

80.0	1	1	0	1	1	1	0	1	1
82.5	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0
87.5	0	0	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0	0	0
92.5	0	0	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0	0	0
97.5	0	0	0	0	0	0	0	0	0
100.0	0	0	0	0	0	0	0	0	0
102.5	0	0	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0	0	0
107.5	0	0	0	0	0	0	0	0	0
110.0	0	0	0	0	0	0	0	0	0
112.5	0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0
117.5	0	0	0	0	0	0	0	0	0
120.0	0	0	0	0	1	0	0	0	0
125.0	0	0	0	0	1	0	0	0	0
130.0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	31.77	N.A.	54.80
0-30	38.95	N.A.	67.20
0-40	44.97	N.A.	77.60
0-60	53.64	N.A.	92.60
0-80	57.76	N.A.	99.70
0-90	57.86	N.A.	99.80
10-90	39.89	N.A.	68.80
20-40	13.19	N.A.	22.80
20-50	17.76	N.A.	30.60
40-70	11.55	N.A.	19.90
60-80	4.12	N.A.	7.10
70-80	1.24	N.A.	2.10
80-90	0.10	N.A.	0.20
90-110	0.00	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.10	N.A.	0.20
90-150	0.10	N.A.	0.20
90-180	0.10	N.A.	0.20
110-180	0.10	N.A.	0.20
0-180	57.96	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	17.97
10-20	13.81
20-30	7.17
30-40	6.02
40-50	4.57
50-60	4.10
60-70	2.88
70-80	1.24
80-90	0.10
90-100	0.00
100-110	0.00
110-120	0.02
120-130	0.08
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

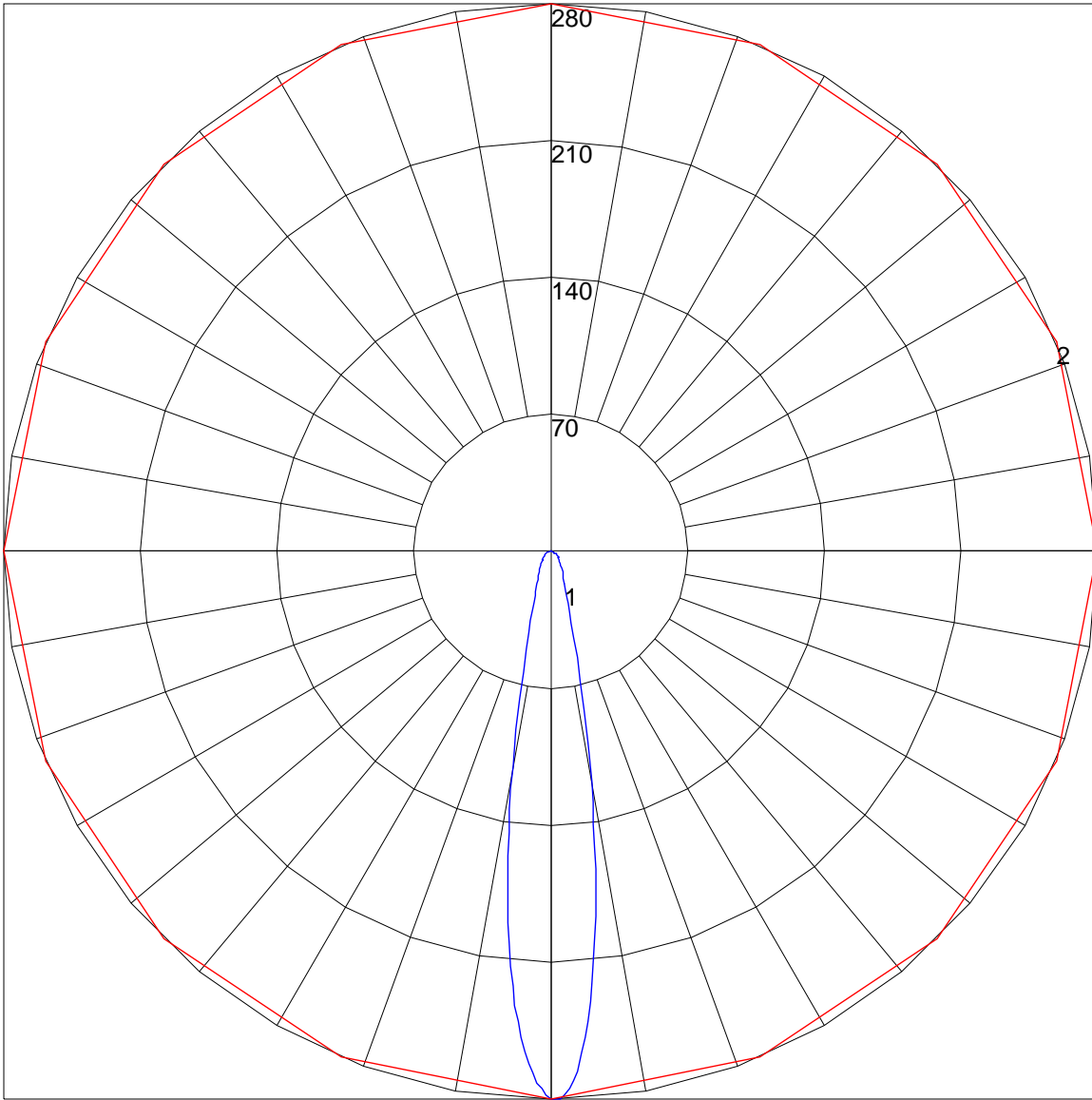
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	111	111	111	106	106	106	102	102	102	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92
2	107	102	97	94	105	100	96	93	97	93	91	94	91	89	91	89	87	85
3	101	95	90	85	99	93	89	85	91	87	83	88	85	82	86	83	81	79
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	78	76	74
5	92	84	78	74	91	83	78	74	81	76	73	80	75	72	78	74	72	70
6	88	80	74	70	87	79	73	69	77	73	69	76	72	68	75	71	68	67
7	85	76	70	66	84	75	70	66	74	69	66	73	69	65	72	68	65	64
8	82	73	67	63	81	72	67	63	71	66	63	70	66	63	69	65	62	61
9	79	70	64	61	78	69	64	61	69	64	60	68	63	60	67	63	60	59
10	76	67	62	59	75	67	62	59	66	62	58	65	61	58	65	61	58	57

POLAR GRAPH



Maximum Candela = 280 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)