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Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-2002

Prepared For
Sonneman
Nicolas Carmichael
151 Airport Dr
PO Box 394
Wappingers Falls, NY 12590
United States

Catalog Number
2700
Order Number
11526201
Test Number
11526201.09

Test Date
2016-11-14

Prepared By

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Approved By

Edward Bush, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Formed aluminum housing, frosted lens, pivoting head
Mounting: Surface – Wall
Ballast/Driver: ERP EBR010U-0250-42

Luminaire



Luminaire Characteristics

Luminous Length: 10.50 in.
Luminous Width: 3.000 in.

Summary of Results

Total Luminaire Output: 550.4 Lumens
Luminaire Efficacy: 54.8 lm/w
Maximum Candela: 192 Candela

Test Conditions

Test Temperature: 24.7 °C
Voltage: 120.0 VAC
Current: 0.08458 A
Power: 10.04 W
Power Factor: 0.989
Frequency: 60 Hz
Current THD: 11.4 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	0.08458 A	10.04 W	0.989	60 Hz	11.4 %

Summary of Results

Spacing Criteria

0-180: 20.51
90-270: 0.19

Total Lumen Output:

550.4 Lumens

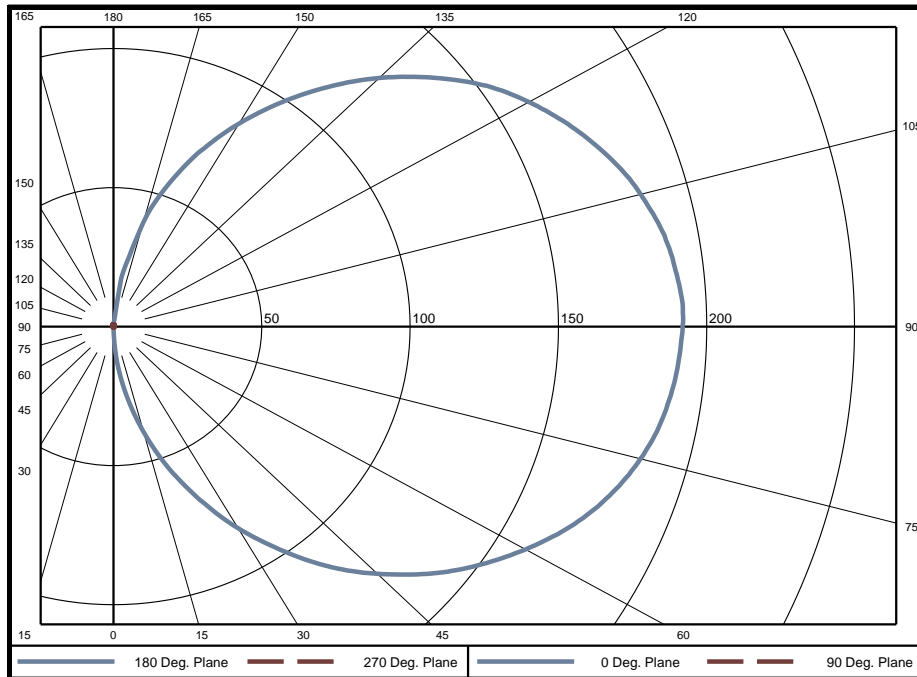
Luminaire Efficacy:

54.8 lm/w

Maximum Candela:

192 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.04	0.0%	60-65	24.17	4.4%	120-125	21.99	4.0%
5-10	0.39	0.1%	65-70	26.54	4.8%	125-130	19.24	3.5%
10-15	1.14	0.2%	70-75	28.41	5.2%	130-135	16.38	3.0%
15-20	2.29	0.4%	75-80	29.99	5.4%	135-140	13.55	2.5%
20-25	3.84	0.7%	80-85	31.07	5.6%	140-145	10.82	2.0%
25-30	5.75	1.0%	85-90	31.68	5.8%	145-150	8.30	1.5%
30-35	7.97	1.4%	90-95	31.78	5.8%	150-155	6.03	1.1%
35-40	10.47	1.9%	95-100	31.28	5.7%	155-160	4.03	0.7%
40-45	13.17	2.4%	100-105	30.21	5.5%	160-165	2.31	0.4%
45-50	15.99	2.9%	105-110	28.69	5.2%	165-170	0.97	0.2%
50-55	18.82	3.4%	110-115	26.74	4.9%	170-175	0.23	0.0%
55-60	21.56	3.9%	115-120	24.49	4.4%	175-180	0.02	0.0%

Zone	Lumens	% of Luminaire
0-40	32	5.8%
0-60	101	18.4%
0-90	273	49.7%
90-180	277	50.3%



Candela Tabulation
Horizontal Angle (Degrees)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
5	11.6	9.9	6.2	1.9	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.4	1.9	6.2	9.9
10	25.0	22.2	15.9	6.8	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.4	6.8	15.9	22.2
15	39.2	35.0	25.1	12.1	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	12.1	25.1	35.0
20	53.9	48.3	34.8	16.9	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	16.9	34.8	48.3
25	68.6	62.1	44.7	21.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	21.6	44.7	62.1
30	83.4	75.0	54.5	26.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	26.4	54.5	75.0
35	97.9	88.4	64.4	31.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	31.3	64.4	88.4
40	112.4	101.3	73.3	36.0	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	36.0	73.3	101.3
45	125.6	113.9	82.5	40.6	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	40.6	82.5	113.9
50	138.3	125.7	91.0	45.0	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	45.0	91.0	125.7
55	149.7	136.2	98.9	49.0	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	49.0	98.9	136.2
60	160.4	146.0	106.0	52.6	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.4	52.6	106.0	146.0
65	170.1	154.6	112.4	56.0	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.4	56.0	112.4	154.6
70	178.0	161.7	117.7	58.7	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	58.7	117.7	161.7
75	184.0	166.8	121.4	60.6	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	60.6	121.4	166.8
80	188.2	171.3	124.7	62.4	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	62.4	124.7	171.3
85	190.7	174.1	126.9	63.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	63.6	126.9	174.1
90	192.0	175.2	127.9	64.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	64.2	127.9	175.2
95	191.2	174.7	127.6	64.1	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	64.1	127.6	174.7
100	188.8	172.4	125.9	63.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	63.3	125.9	172.4
105	184.1	168.0	122.8	61.8	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.3	61.8	122.8	168.0
110	178.0	162.4	118.8	59.8	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.3	59.8	118.8	162.4
115	170.4	155.5	113.8	57.4	0.4	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.4	57.4	113.8	155.5
120	161.7	147.4	108.1	54.6	0.4	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.4	54.6	108.1	147.4
125	151.6	138.2	101.4	51.3	0.5	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.5	51.3	101.4	138.2
130	139.4	127.5	93.6	47.4	0.5	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.5	47.4	93.6	127.5
135	126.4	115.8	85.1	43.2	0.6	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.6	43.2	85.1	115.8
140	112.5	103.6	76.3	38.9	0.6	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.6	38.9	76.3	103.6
145	98.3	90.5	67.3	34.2	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	34.2	67.3	90.5
150	84.1	77.4	57.7	29.5	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	29.5	57.7	77.4
155	69.8	64.1	47.5	24.3	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8	24.3	47.5	64.1
160	54.7	49.9	36.8	17.8	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8	17.8	36.8	49.9
165	38.7	35.1	21.0	11.5	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	11.5	21.0	35.1
170	21.3	14.0	10.9	5.6	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	5.6	10.9	14.0
175	1.9	2.4	3.0	1.9	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	1.9	3.0	2.4
180	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

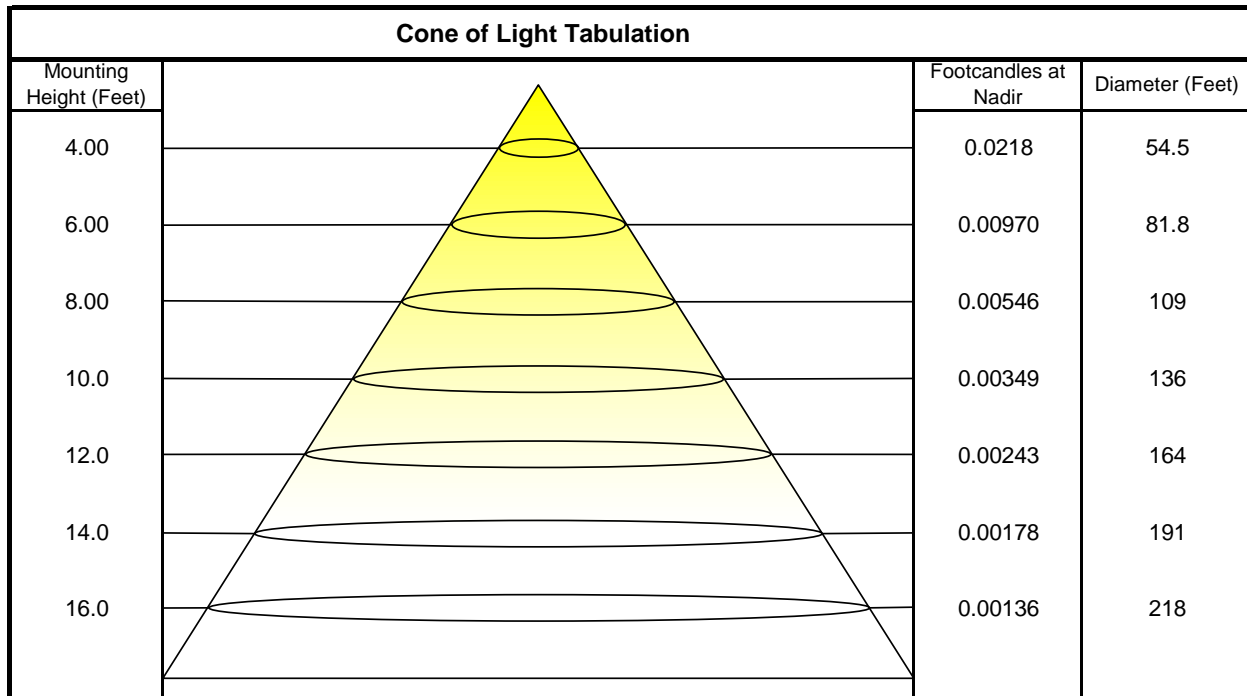
	0	45	90
0	17	17	17
45	8743	5744	21
55	12850	8484	31
65	19800	13090	46
75	34980	23090	60
85	107600	71640	147



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	589	589	589	589	543	543	543	543	458	458	458	379	379	379	307	307	307	273
1	505	468	434	404	461	428	398	371	353	330	309	284	266	250	221	207	195	164
2	447	391	344	304	406	356	314	279	291	259	231	231	206	184	176	157	140	112
3	401	333	281	239	362	303	256	219	247	210	180	194	166	142	146	124	106	81
4	362	288	234	193	327	262	214	177	213	175	144	167	137	113	124	102	83	61
5	329	252	199	159	297	230	181	145	186	148	119	146	116	92	109	85	67	47
6	301	223	171	133	272	203	156	122	165	127	99	130	100	77	96	73	55	37
7	277	199	149	114	250	181	136	104	148	111	84	116	87	65	86	64	46	30
8	255	179	131	98	231	163	119	89	133	98	72	105	76	56	78	56	39	25
9	237	162	116	85	215	148	106	77	121	87	63	95	68	48	72	50	34	21
10	221	147	103	74	200	135	95	68	110	77	55	87	61	42	66	45	29	18

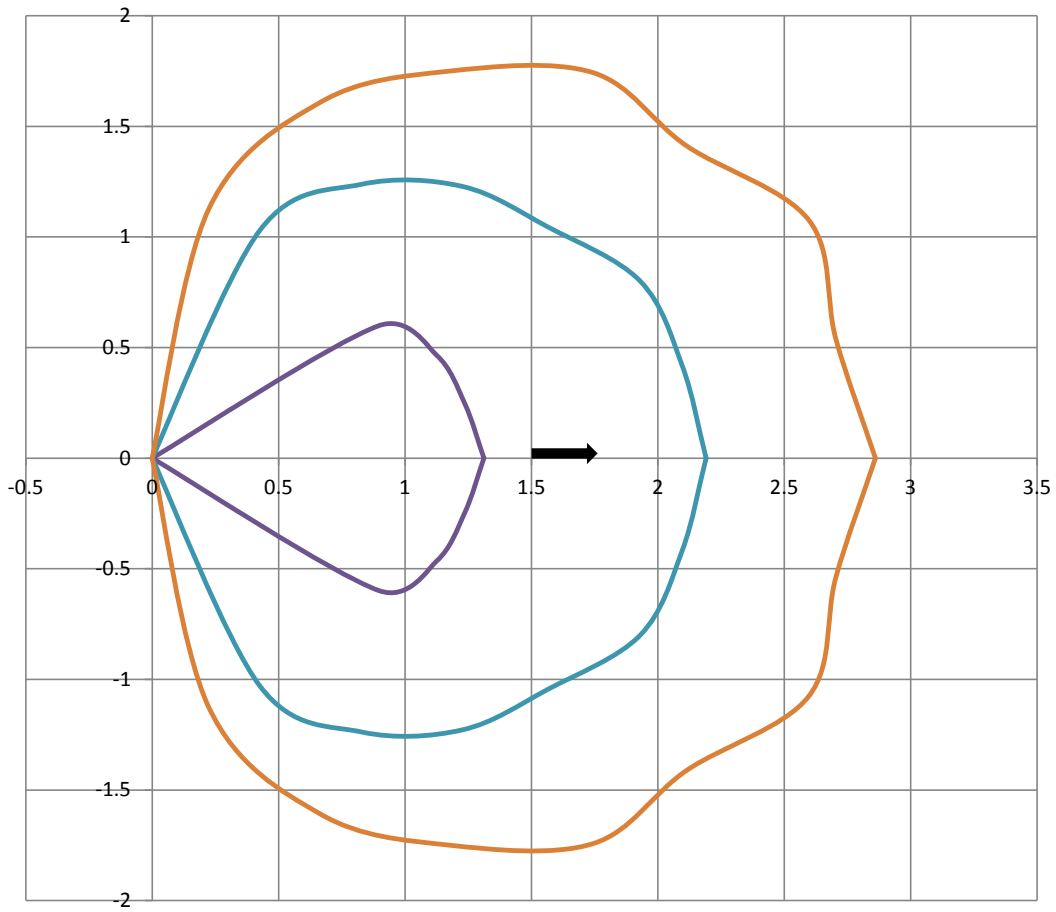
Beam and Field Information	
CIE Type:	Direct/Indirect
Center Beam Intensity:	0.3 Candela
Central Cone Intensity:	1 Candela
Beam Flux:	550.0 Lumens
Beam Angle (0-180):	#REF! Degrees
Beam Angle (90-270):	#REF! Degrees
Field Angle (0-180):	#REF! Degrees
Field Angle (90-270):	#REF! Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

