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Indoor Distribution Test Report

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

Prepared For
Sonneman
Nicolas Carmichael
106 Pierces Rd
Newburgh, NY 12550-9369

Catalog Number
2745
Order Number
11175190
Test Number
1216532

Test Date

2016-03-03

Prepared By

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Approved By

Kyle Spaziani, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Formed white enamel steel housing, frosted plastic lens enclosure
Lamp: 48 white LEDs
Mounting: Pendant
Ballast/Driver: One ERP EBR020U-0700-30

Luminaire



Luminaire Characteristics

Luminous Diameter: 7.00 in.

Summary of Results

Total Luminaire Output:	1007 Lumens
Luminaire Efficacy:	51.2 lm/w
Maximum Candela:	356 Candela

Electrical Data

Test Temperature:	26.0 °C
Voltage:	120.0 VAC
Current:	0.1660 A
Power:	19.66 W
Power Factor:	0.983
Frequency:	60 Hz
Current THD:	16.4 %

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
26.0 °C	120.0 VAC	0.1660 A	19.66 W	0.983	60 Hz	16.4 %

Summary of Results

Spacing Criteria

0-180: 1.25
90-270: 1.25

Total Lumen Output:

1007 Lumens

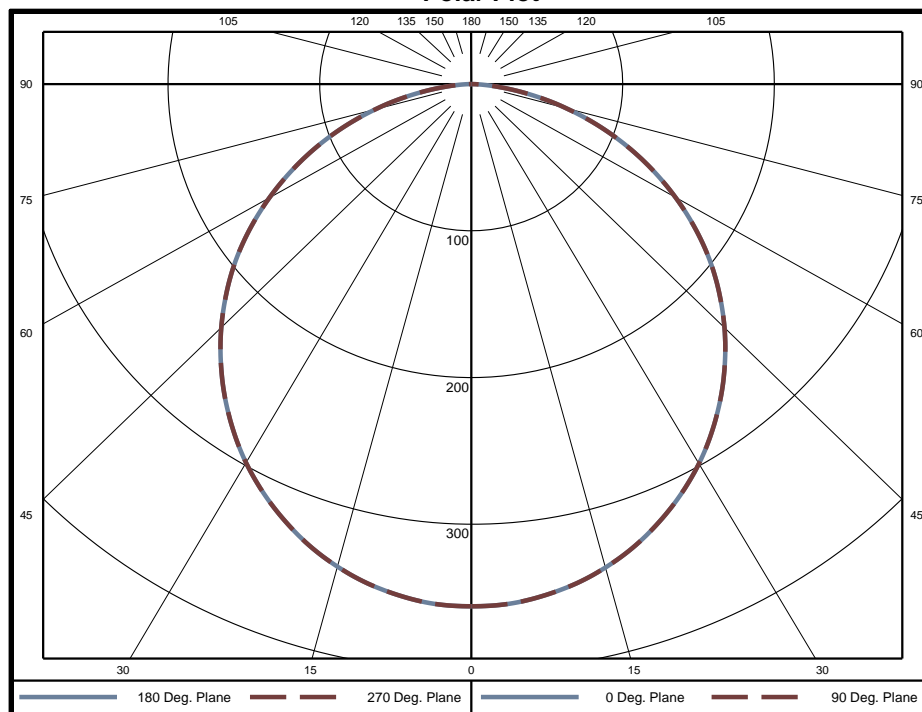
Luminaire Efficacy:

51.2 lm/w

Maximum Candela:

356 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	8.49	0.8%	60-65	68.29	6.8%	120-125	0	0.0%
5-10	25.17	2.5%	65-70	56.12	5.6%	125-130	0	0.0%
10-15	40.95	4.1%	70-75	42.17	4.2%	130-135	0	0.0%
15-20	55.28	5.5%	75-80	27.49	2.7%	135-140	0	0.0%
20-25	67.65	6.7%	80-85	13.41	1.3%	140-145	0	0.0%
25-30	77.74	7.7%	85-90	3.30	0.3%	145-150	0	0.0%
30-35	85.20	8.5%	90-95	0	0.0%	150-155	0	0.0%
35-40	89.74	8.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	91.38	9.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	90.06	8.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	85.81	8.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	78.38	7.8%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	450	44.7%
0-60	796	79.0%
0-90	1007	100.0%
90-180	0	0.0%



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	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9	355.9
5	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4	354.4
10	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2	349.2
15	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0
20	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6	329.6
25	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4
30	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9
35	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6	279.6
40	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3	258.3
45	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3
50	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6	210.6
55	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9
60	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3	155.3
65	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8	125.8
70	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9	95.9
75	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7
80	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3	37.3
85	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
90	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	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	0.0	0.0	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	0.0	0.0	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	0.0	0.0	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	0.0	0.0	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	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	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	0.0	0.0	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	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

	0	45	90
0	14330	14330	14330
45	13400	13400	13400
55	12910	12910	12910
65	11990	11990	11990
75	10220	10220	10220
85	6243	6243	6243



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	1198	1198	1198	1198	1171	1171	1171	1171	1118	1118	1118	1071	1071	1071	1027	1027	1027	1007
1	1095	1047	1004	965	1068	1024	985	949	981	949	919	942	916	891	906	884	865	844
2	995	912	843	785	969	893	830	776	857	804	758	824	779	740	793	757	724	702
3	907	800	718	652	882	784	708	646	754	688	634	726	670	623	700	653	612	590
4	830	708	620	552	806	695	612	548	670	597	540	646	583	533	624	570	525	503
5	763	633	542	474	741	621	536	472	600	524	467	580	513	461	561	503	456	435
6	704	569	479	414	685	560	474	412	541	465	408	524	456	404	508	448	401	380
7	653	516	427	365	635	508	424	364	492	416	361	477	409	358	464	402	356	335
8	607	471	385	326	592	464	382	324	450	376	322	438	370	320	426	364	318	299
9	568	432	349	293	553	426	346	292	414	341	290	403	337	289	393	332	287	269
10	532	398	319	265	519	393	316	265	383	312	263	374	308	262	365	304	261	243

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	22.2	5.00
6.00	9.89	7.49
8.00	5.56	9.99
10.0	3.56	12.5
12.0	2.47	15.0
14.0	1.82	17.5
16.0	1.39	20.0

Cone of Light Plot

