



UL LLC
1075 W Lambert Rd Suite B
Brea, CA 92821

Indoor Distribution Test Report

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

Prepared For
SONNEMAN - A WAY OF LIGHT

NICOLAS CARMICHAEL
106 PIERCES RD
NEWBURGH, NY 12550-9369
United States

Catalog Number

7250.98-WL

Order Number

11281216

Test Number

1253432

Test Date

2016-07-05

Prepared By

Khang Nguyen, Technician

Approved By

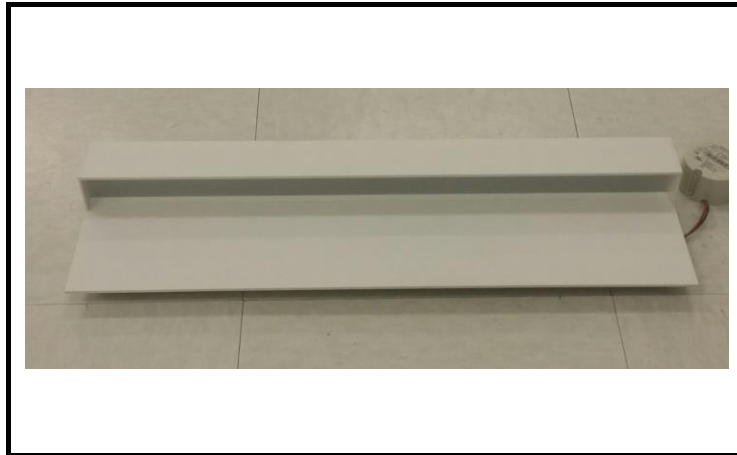
Eric Gaudreau, Senior Engineering Associate

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White formed aluminum housing and frosted plastic lens
Lamp: 47 White LEDs
Mounting: Surface/Wall
Ballast/Driver: ERP EBR020U-0500-42

Luminaire



Luminaire Characteristics

Luminous Length: 1.50 in.
Luminous Width: 20.00 in.
Luminous Height: 4.00 in.

Summary of Results

Total Luminaire Output: 1014 Lumens
Luminaire Efficacy: 47.5 lm/w
Maximum Candela: 553 Candela

Test Conditions

Test Temperature: 24.5 °C
Voltage: 120.0 VAC
Current: 0.1794 A
Power: 21.33 W
Power Factor: 0.991
Frequency: 60 Hz
Current THD: 11.6 %

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



Distribution - Goniophotometer

Distribution Test Conditions

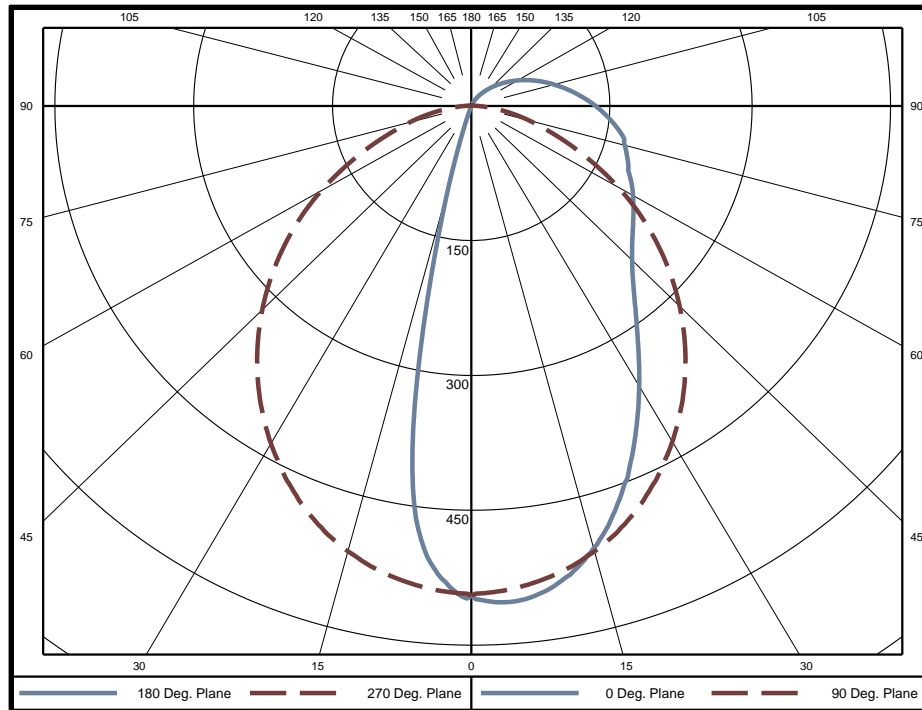
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.1794 A	21.33 W	0.991	60 Hz	11.6 %

Summary of Results

Spacing Criteria
 0-180: 1.03
 90-270: 0.40

Total Lumen Output: 1014 Lumens
Luminaire Efficacy: 47.5 lm/w
Maximum Candela: 553 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	12.87	1.3%	60-65	50.08	4.9%	120-125	5.43	0.5%
5-10	36.95	3.6%	65-70	44.14	4.4%	125-130	3.92	0.4%
10-15	54.21	5.3%	70-75	38.52	3.8%	130-135	2.68	0.3%
15-20	62.98	6.2%	75-80	33.61	3.3%	135-140	1.68	0.2%
20-25	68.01	6.7%	80-85	28.85	2.8%	140-145	0.94	0.1%
25-30	71.26	7.0%	85-90	24.21	2.4%	145-150	0.43	0.0%
30-35	72.36	7.1%	90-95	20.26	2.0%	150-155	0.13	0.0%
35-40	71.37	7.0%	95-100	17.04	1.7%	155-160	0.01	0.0%
40-45	68.73	6.8%	100-105	14.18	1.4%	160-165	0	0.0%
45-50	64.93	6.4%	105-110	11.60	1.1%	165-170	0	0.0%
50-55	60.35	6.0%	110-115	9.27	0.9%	170-175	0	0.0%
55-60	55.49	5.5%	115-120	7.23	0.7%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	450	44.4%
0-60	700	69.0%
0-90	919	90.6%
90-180	95	9.3%



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	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7	543.7
5	552.2	549.4	545.7	541.9	537.9	531.0	519.4	512.0	509.2	512.0	519.4	531.0	537.9	541.9	545.7	549.4
10	538.0	539.0	538.4	535.7	527.8	506.8	465.6	406.5	363.8	406.5	465.6	506.8	527.8	535.7	538.4	539.0
15	508.0	514.8	520.3	522.5	512.4	469.3	336.0	175.5	106.4	175.5	336.0	469.3	512.4	522.5	520.3	514.8
20	464.7	477.2	493.3	501.8	490.9	407.2	168.7	34.5	0.9	34.5	168.7	407.2	490.9	501.8	493.3	477.2
25	413.1	429.9	456.2	474.6	463.5	318.7	60.8	3.9	0.0	3.9	60.8	318.7	463.5	474.6	456.2	429.9
30	359.5	378.2	414.3	442.0	432.0	235.3	21.5	3.5	0.0	3.5	21.5	235.3	432.0	442.0	414.3	378.2
35	310.2	328.5	369.3	406.2	397.0	165.1	12.8	3.0	0.0	3.0	12.8	165.1	397.0	406.2	369.3	328.5
40	270.8	284.9	323.8	367.5	358.5	111.2	11.2	2.4	0.0	2.4	11.2	111.2	358.5	367.5	323.8	284.9
45	243.4	250.2	280.9	327.2	317.8	73.5	9.4	1.8	0.0	1.8	9.4	73.5	317.8	327.2	280.9	250.2
50	225.1	224.7	242.5	285.8	275.0	45.2	7.7	1.3	0.0	1.3	7.7	45.2	275.0	285.8	242.5	224.7
55	211.5	205.7	210.0	244.7	230.6	28.0	6.1	0.9	0.0	0.9	6.1	28.0	230.6	244.7	210.0	205.7
60	199.6	190.8	183.8	205.0	184.3	22.6	4.6	0.6	0.0	0.6	4.6	22.6	184.3	205.0	183.8	190.8
65	187.2	177.1	162.0	166.7	138.6	17.5	3.2	0.3	0.0	0.3	3.2	17.5	138.6	166.7	162.0	177.1
70	178.0	163.5	143.2	131.2	98.1	12.5	2.0	0.2	0.0	0.2	2.0	12.5	98.1	131.2	143.2	163.5
75	169.6	154.7	127.6	100.5	66.2	8.0	1.1	0.1	0.0	0.1	1.1	8.0	66.2	100.5	127.6	154.7
80	160.7	145.9	115.9	76.6	39.7	4.1	0.5	0.0	0.0	0.0	0.5	4.1	39.7	76.6	115.9	145.9
85	146.8	131.4	102.6	60.7	18.2	1.2	0.0	0.0	0.0	0.0	0.0	1.2	18.2	60.7	102.6	131.4
90	132.5	117.1	87.6	44.8	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	44.8	87.6	117.1
95	118.0	102.7	73.9	33.3	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	33.3	73.9	102.7
100	104.0	89.7	62.0	25.1	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	25.1	62.0	89.7
105	90.9	77.5	51.4	18.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	18.8	51.4	77.5
110	78.5	65.8	41.9	13.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	13.8	41.9	65.8
115	66.8	55.0	33.6	9.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	9.9	33.6	55.0
120	55.6	45.0	26.3	6.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.7	26.3	45.0
125	45.1	35.8	19.9	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	19.9	35.8
130	35.3	27.5	14.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	14.3	27.5
135	26.5	20.1	9.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	9.5	20.1
140	18.7	13.6	5.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	5.6	13.6
145	12.0	8.1	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	8.1
150	6.2	3.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.7
155	1.8	0.4	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	0.4
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)

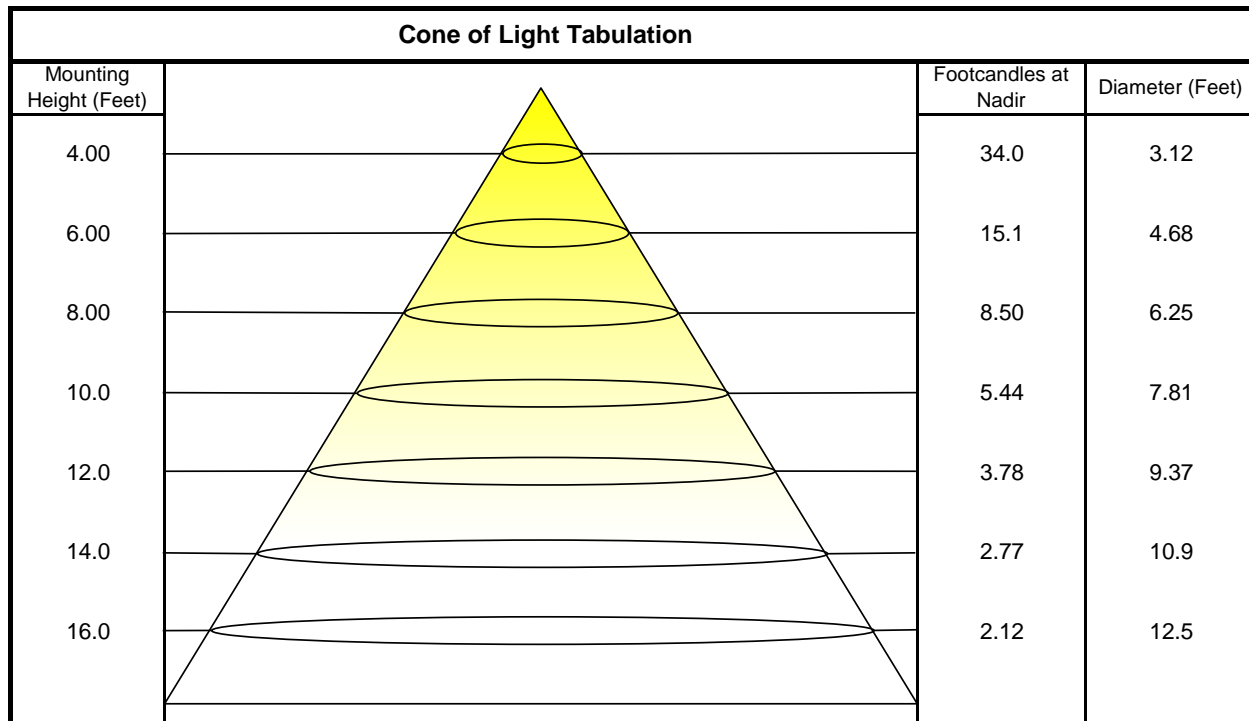
	0	45	90
0	28090	28090	28090
45	4851	6779	19350
55	3963	4856	16160
65	3407	3705	11860
75	3090	2975	7567
85	2764	2517	3290



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	1184	1184	1184	1184	1146	1146	1146	1146	1074	1074	1074	1008	1008	1008	947	947	947	919
1	1071	1019	972	930	1033	986	944	906	926	891	860	870	842	817	818	796	776	748
2	977	892	821	762	941	864	800	746	813	760	714	766	722	684	722	687	655	628
3	895	789	707	642	862	766	691	630	723	659	607	682	629	585	645	601	563	538
4	824	706	619	552	794	686	606	544	649	580	526	614	556	509	582	533	492	468
5	763	636	548	483	735	620	538	476	588	517	463	558	497	449	530	478	436	413
6	708	578	491	428	683	564	482	423	536	465	412	511	448	401	487	433	390	368
7	660	529	444	384	638	516	436	379	492	422	370	470	408	361	449	394	353	332
8	618	487	404	347	597	476	398	343	455	385	336	435	374	328	417	362	321	301
9	580	450	370	317	561	441	365	313	422	354	307	405	344	301	389	334	294	276
10	547	418	342	291	529	410	337	288	394	328	282	378	319	277	364	310	272	254

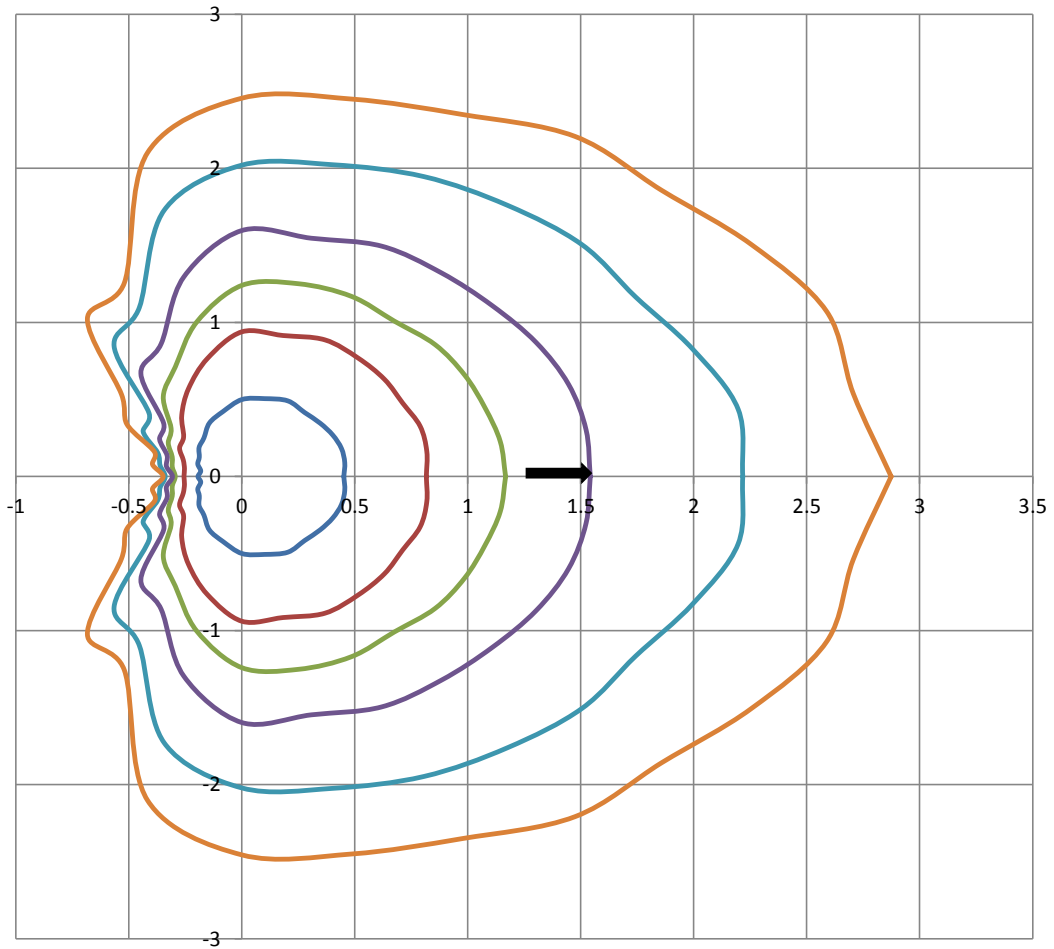
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	543.7 Candela
Central Cone Intensity:	540 Candela
Beam Flux:	509.0 Lumens
Beam Angle (0-180):	51.5 Degrees
Beam Angle (90-270):	100.7 Degrees
Field Angle (0-180):	137.2 Degrees
Field Angle (90-270):	154.4 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

