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Indoor Distribution Test Report

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

Prepared For
LED Waves, LLC
Tiago Zeitoune
The Esquire Building at 41st ST
4100 1st Avenue 3rd Fl North
Brooklyn, NY 11232

Catalog Number
PR15-8-V1-W4000K-N
Order Number
10974084
Test Number
1163210

Test Date

2015-09-29

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: White steel / aluminum housing, frosted plastic lens enclosure
Lamp: 100 white LEDs
Mounting: Recessed
Ballast/Driver: LD024D-CA10024-15

Luminaire



Luminaire Characteristics

Luminous Diameter: 7.50 in.

Summary of Results

Total Luminaire Output:	1406 Lumens
Luminaire Efficacy:	82.7 lm/w
Maximum Candela:	417 Candela

Electrical Data

Test Temperature:	24.0 °C
Voltage:	120.0 VAC
Current:	0.1553 A
Power:	17.00 W
Power Factor:	0.912
Frequency:	60 Hz
Current THD:	0.103 %

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
24.0 °C	120.0 VAC	0.1553 A	17.00 W	0.912	60 Hz	0.103 %

Summary of Results

Spacing Criteria

0-180: 1.36
90-270: 1.36

Total Lumen Output:

1406 Lumens

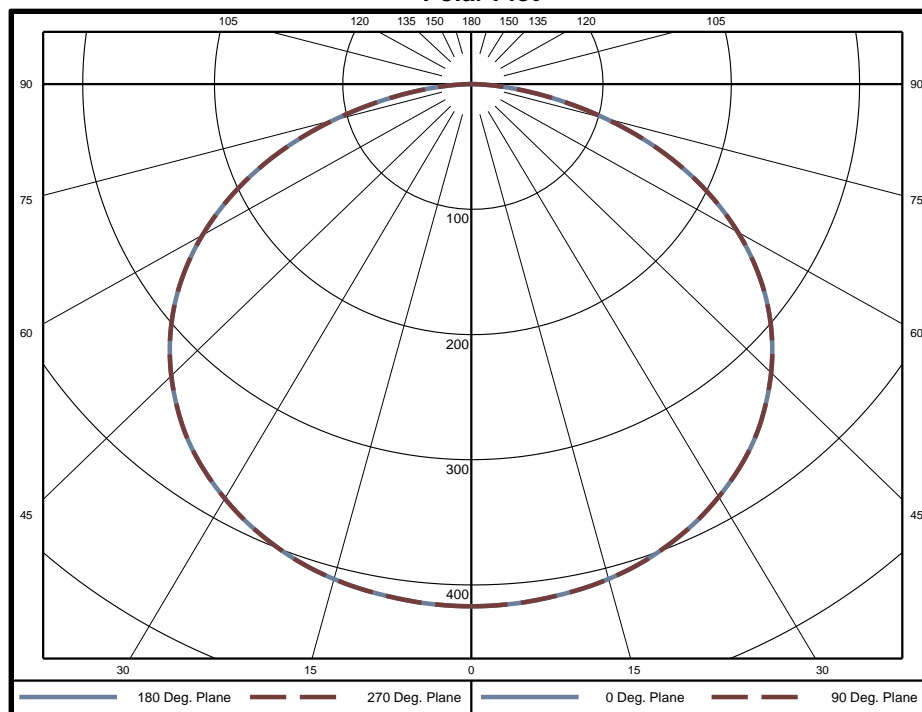
Luminaire Efficacy:

82.7 lm/w

Maximum Candela:

417 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	10.0	0.7%	60-65	106.9	7.6%	120-125	0	0.0%
5-10	29.7	2.1%	65-70	90.4	6.4%	125-130	0	0.0%
10-15	48.8	3.5%	70-75	69.4	4.9%	130-135	0	0.0%
15-20	66.9	4.8%	75-80	45.9	3.3%	135-140	0	0.0%
20-25	83.5	5.9%	80-85	23.5	1.7%	140-145	0	0.0%
25-30	98.1	7.0%	85-90	6.1	0.4%	145-150	0	0.0%
30-35	110.3	7.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	119.7	8.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	125.4	8.9%	100-105	0	0.0%	160-165	0	0.0%
45-50	127.5	9.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	125.4	8.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	118.6	8.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	567	40.3%
0-60	1064	75.7%
0-90	1406	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	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0	417.0
5	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0	416.0
10	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3	413.3
15	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2	409.2
20	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7	402.7
25	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4
30	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6	381.6
35	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3	367.3
40	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5	349.5
45	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9	327.9
50	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9	302.9
55	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5	273.5
60	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1	239.1
65	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
70	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4	156.4
75	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
80	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2	63.2
85	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
90	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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	14630	14630	14630
45	16270	16270	16270
55	16730	16730	16730
65	16610	16610	16610
75	14790	14790	14790
85	10050	10050	10050



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	1674	1674	1674	1674	1635	1635	1635	1635	1562	1562	1562	1496	1496	1496	1435	1435	1435	1406
1	1520	1449	1385	1328	1481	1417	1359	1306	1357	1309	1265	1301	1262	1226	1250	1219	1189	1159
2	1374	1252	1151	1065	1336	1225	1132	1052	1174	1096	1028	1128	1062	1004	1084	1030	981	950
3	1246	1090	970	874	1210	1068	956	866	1025	929	850	986	904	835	949	880	820	788
4	1136	960	830	732	1103	940	820	726	904	799	716	871	780	706	840	761	696	664
5	1041	853	721	624	1011	836	713	620	806	697	613	778	681	606	751	667	599	568
6	959	764	633	539	931	750	627	537	724	614	532	700	602	527	677	590	522	492
7	887	690	562	473	862	678	557	471	656	547	467	635	537	463	616	527	460	431
8	824	627	504	419	801	617	499	417	598	491	415	580	483	412	563	475	409	381
9	768	574	455	375	748	565	451	374	549	445	371	533	438	369	519	431	367	341
10	719	528	414	338	701	521	411	337	507	405	335	493	400	334	480	394	332	307

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	26.1	5.45
6.00	11.6	8.18
8.00	6.52	10.9
10.0	4.17	13.6
12.0	2.90	16.4
14.0	2.13	19.1
16.0	1.63	21.8

Cone of Light Plot

