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## Indoor Distribution Test Report

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

**Prepared For**  
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Newburgh, NY 12550-9369

**Catalog Number**  
**2727**  
Order Number  
10776086  
Test Number  
1053173

Test Date

2015-05-06

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 aluminum housing, lower white steel trim, frosted plastic enclosure  
**Lamp:** 81 white LEDs  
**Mounting:** Surface - Ceiling  
**Ballast/Driver:** One ERP ESS030W-0700-42

**Luminaire**



**Luminaire Characteristics**

Luminous Length: 11.00 in.  
Luminous Width: 11.00 in.  
Luminous Height: 1.25 in.

**Summary of Results**

Total Luminaire Output: 1501 Lumens  
Luminaire Efficacy: 69 lm/w  
Maximum Candela: 540 Candela

**Electrical Data**

Test Temperature: 25.2 °C  
Voltage: 120.0 VAC  
Current: 0.1848 A  
Power: 21.76 W  
Power Factor: 0.981  
Frequency: 60 Hz  
Current THD: 15.1 %

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
25.2 °C	120.0 VAC	0.1848 A	21.76 W	0.981	60 Hz	15.1 %

### Summary of Results

#### Spacing Criteria

0-180: 1.18  
90-270: 1.18

#### Total Lumen Output:

1501 Lumens

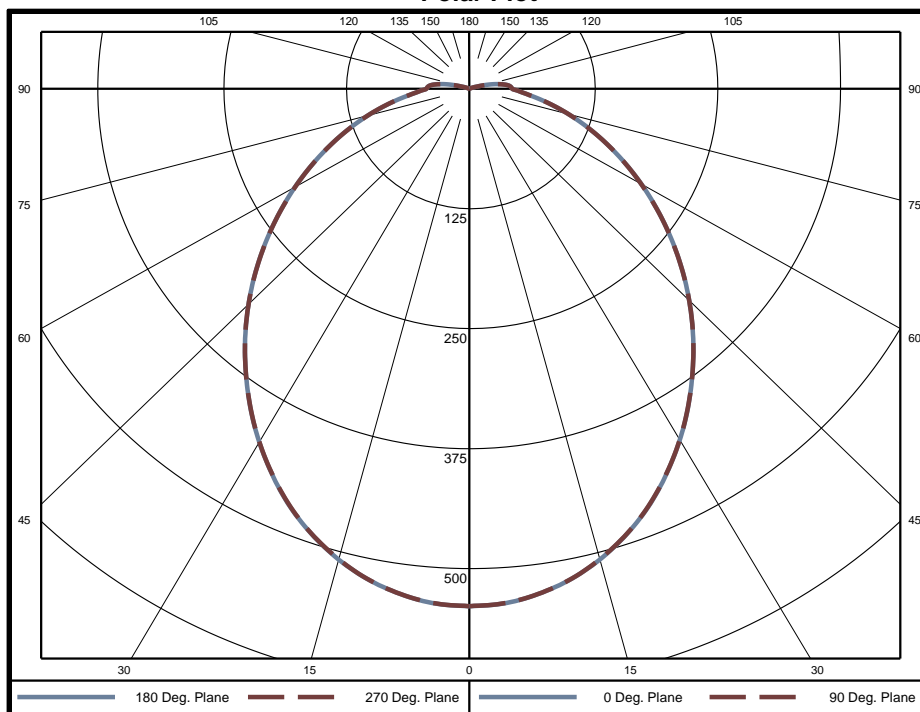
#### Luminaire Efficacy:

69.0 lm/w

#### Maximum Candela:

540 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	12.9	0.9%	60-65	89.6	6.0%	120-125	0	0.0%
5-10	38.0	2.5%	65-70	76.0	5.1%	125-130	0	0.0%
10-15	61.3	4.1%	70-75	62.1	4.1%	130-135	0	0.0%
15-20	81.9	5.5%	75-80	48.6	3.2%	135-140	0	0.0%
20-25	98.8	6.6%	80-85	36.7	2.4%	140-145	0	0.0%
25-30	111.4	7.4%	85-90	28.9	1.9%	145-150	0	0.0%
30-35	119.6	8.0%	90-95	24.7	1.6%	150-155	0	0.0%
35-40	123.5	8.2%	95-100	17.9	1.2%	155-160	0	0.0%
40-45	123.3	8.2%	100-105	8.8	0.6%	160-165	0	0.0%
45-50	119.3	7.9%	105-110	3.0	0.2%	165-170	0	0.0%
50-55	111.9	7.5%	110-115	0.9	0.1%	170-175	0	0.0%
55-60	101.8	6.8%	115-120	0.1	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	647	43.1%
0-60	992	73.5%
0-90	1446	96.3%
90-180	55	3.7%



**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	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3	539.3
5	535.9	536.3	536.4	536.2	535.7	536.2	536.4	536.3	535.9	536.3	536.4	536.2	535.7	536.2	536.4	536.3
10	525.2	525.5	525.8	525.5	525.0	525.5	525.8	525.5	525.2	525.5	525.8	525.5	525.0	525.5	525.8	525.5
15	508.1	508.4	508.6	508.3	507.7	508.3	508.6	508.4	508.1	508.4	508.6	508.3	507.7	508.3	508.6	508.4
20	485.1	485.4	485.5	485.2	484.9	485.2	485.5	485.4	485.1	485.4	485.5	485.2	484.9	485.2	485.5	485.4
25	456.7	456.9	457.1	456.8	456.4	456.8	457.1	456.9	456.7	456.9	457.1	456.8	456.4	456.8	457.1	456.9
30	424.1	424.1	424.3	424.2	424.0	424.2	424.3	424.1	424.1	424.1	424.3	424.2	424.0	424.2	424.3	424.1
35	388.7	388.7	388.7	388.6	388.7	388.6	388.7	388.7	388.7	388.7	388.7	388.6	388.7	388.6	388.7	388.7
40	351.9	352.0	352.1	352.1	352.0	352.1	352.1	352.0	351.9	352.0	352.1	352.1	352.0	352.1	352.1	352.0
45	314.3	314.3	314.5	314.2	314.3	314.2	314.5	314.3	314.3	314.3	314.5	314.2	314.3	314.2	314.5	314.3
50	276.2	276.4	276.6	276.2	276.1	276.2	276.6	276.4	276.2	276.4	276.6	276.2	276.1	276.2	276.6	276.4
55	238.3	238.7	239.1	238.7	238.3	238.7	239.1	238.7	238.3	238.7	239.1	238.7	238.3	238.7	239.1	238.7
60	201.9	202.0	202.7	202.0	201.6	202.0	202.7	202.0	201.9	202.0	202.7	202.0	201.6	202.0	202.7	202.0
65	167.0	166.9	166.6	166.9	166.8	166.9	166.6	166.9	167.0	166.9	166.6	166.9	166.8	166.9	166.6	166.9
70	134.7	134.1	133.3	134.2	134.6	134.2	133.3	134.1	134.7	134.1	133.3	134.2	134.6	134.2	133.3	134.1
75	104.9	104.2	103.3	104.6	105.0	104.6	103.3	104.2	104.9	104.2	103.3	104.6	105.0	104.6	103.3	104.2
80	78.4	77.9	78.1	78.2	78.6	78.2	78.1	77.9	78.4	77.9	78.1	78.2	78.6	78.2	78.1	77.9
85	56.9	58.8	60.0	58.9	57.0	58.9	60.0	58.8	56.9	58.8	60.0	58.9	57.0	58.9	60.0	58.8
90	43.2	48.9	50.9	48.9	43.4	48.9	50.9	48.9	43.2	48.9	50.9	48.9	43.4	48.9	50.9	48.9
95	40.0	40.9	40.7	40.6	39.7	40.6	40.7	40.9	40.0	40.9	40.7	40.6	39.7	40.6	40.7	40.9
100	28.4	25.0	20.5	24.6	27.8	24.6	20.5	25.0	28.4	25.0	20.5	24.6	27.8	24.6	20.5	25.0
105	13.4	9.6	6.0	9.2	12.8	9.2	6.0	9.6	13.4	9.6	6.0	9.2	12.8	9.2	6.0	9.6
110	4.9	3.5	1.0	3.3	4.6	3.3	1.0	3.5	4.9	3.5	1.0	3.3	4.6	3.3	1.0	3.5
115	1.6	0.7	0.0	0.6	1.4	0.6	0.0	0.7	1.6	0.7	0.0	0.6	1.4	0.6	0.0	0.7
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/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

	0	45	90
0	6908	6908	6908
45	5113	4909	5113
55	4579	4344	4578
65	4070	3756	4066
75	3644	3197	3650
85	3636	3106	3645



### 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	1773	1773	1773	1773	1726	1726	1726	1726	1637	1637	1637	1555	1555	1555	1481	1481	1481	1445
1	1605	1527	1458	1395	1558	1488	1424	1367	1413	1361	1313	1344	1302	1263	1281	1248	1216	1180
2	1458	1329	1222	1133	1413	1296	1198	1115	1233	1151	1080	1175	1107	1047	1122	1066	1016	980
3	1330	1168	1042	942	1287	1140	1024	930	1087	988	907	1038	954	884	992	922	862	826
4	1218	1036	902	800	1179	1012	888	792	967	860	775	926	833	758	887	808	742	707
5	1122	927	791	691	1086	907	780	684	869	757	672	833	736	659	800	715	647	614
6	1037	836	701	605	1005	819	692	600	786	674	590	756	656	580	727	639	571	539
7	963	759	628	535	933	744	620	531	716	605	524	690	590	516	665	576	509	478
8	897	694	566	479	870	681	560	475	657	547	469	634	535	463	612	523	457	428
9	839	638	515	432	814	627	509	429	605	499	424	585	488	419	566	478	414	386
10	787	589	471	392	765	579	466	390	561	457	386	543	448	381	526	440	377	350

### Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	33.7	4.70
6.00	15.0	7.06
8.00	8.43	9.41
10.0	5.39	11.8
12.0	3.74	14.1
14.0	2.75	16.5
16.0	2.11	18.8

### Cone of Light Plot

