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Indoor Distribution Test Report

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

Prepared For
LF Illumination LLC

Justin Weaver
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Chatsworth, CA 91311

Catalog Number
MF31BNT16L9030MTDLDUWW

Order Number
10804087
Test Number
1096470

Test Date

2015-06-08

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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Luminaire Description: Aluminum housing, faceted specular plastic reflector, no enclosure
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: ERP ESS030W-0500-42

Luminaire



Luminaire Characteristics

Luminous Diameter: 2.00 in.

Summary of Results

Total Luminaire Output:	906.6 Lumens
Luminaire Efficacy:	58.6 lm/w
Maximum Candela:	2800 Candela

Electrical Data

Test Temperature:	25.2 °C
Voltage:	120.0 VAC
Current:	0.1310 A
Power:	15.48 W
Power Factor:	0.985
Frequency:	60 Hz
Current THD:	13.5 %

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	0.1310 A	15.48 W	0.985	60 Hz	13.5 %

Summary of Results

Spacing Criteria

0-180: 0.45
90-270: 0.45

Total Lumen Output:

906.6 Lumens

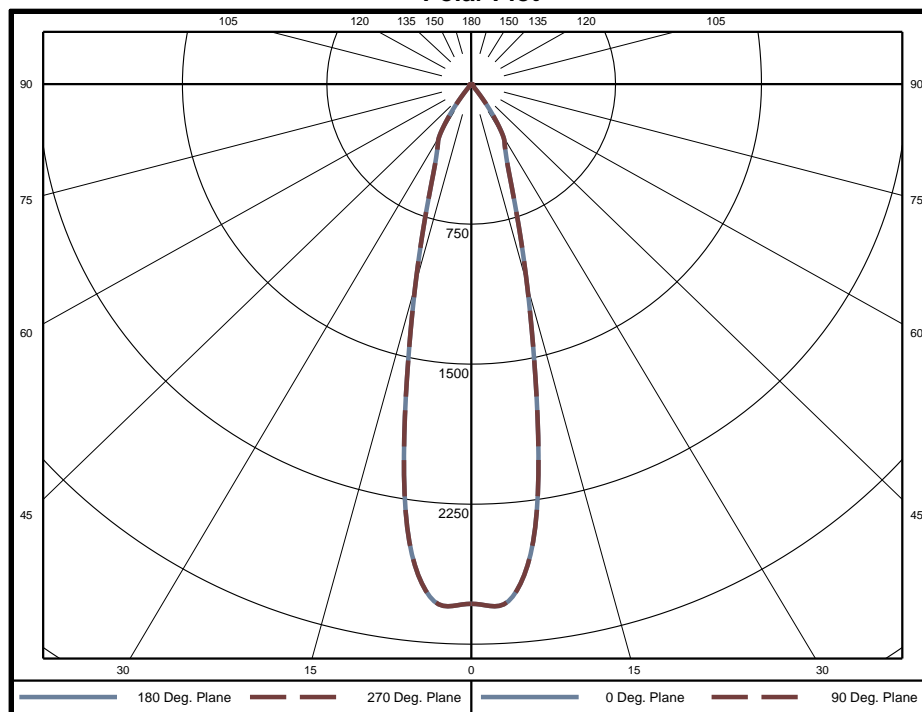
Luminaire Efficacy:

58.6 lm/w

Maximum Candela:

2800 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	66.5	7.3%	60-65	5.0	0.6%	120-125	0	0.0%
5-10	171.8	18.9%	65-70	5.0	0.6%	125-130	0	0.0%
10-15	179.4	19.8%	70-75	4.4	0.5%	130-135	0	0.0%
15-20	140.6	15.5%	75-80	3.7	0.4%	135-140	0	0.0%
20-25	109.1	12.0%	80-85	2.0	0.2%	140-145	0	0.0%
25-30	96.8	10.7%	85-90	0.6	0.1%	145-150	0	0.0%
30-35	77.1	8.5%	90-95	0	0.0%	150-155	0	0.0%
35-40	26.5	2.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	4.7	0.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	4.4	0.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	4.5	0.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	4.6	0.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	868	95.7%
0-60	886	97.7%
0-90	907	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical 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	2784	2784	2784	2784	2784	2784	2784	2784	2784	2784	2784	2784	2784	2784	2784	2784
	5	2724	2724	2724	2724	2724	2724	2724	2724	2724	2724	2724	2724	2724	2724	2724	2724
	10	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021
	15	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134	1134
	20	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649
	25	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433	433
	30	343	343	343	343	343	343	343	343	343	343	343	343	343	343	343	343
	35	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169	169
	40	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	45	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	50	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	55	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	60	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	65	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	70	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	75	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
80	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
85	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
95	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	
105	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	
115	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	
125	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	
135	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	
145	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	
155	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	
165	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	
175	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	

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

Vertical Angle (Degrees)	0	45	90	
	0	1374000	1374000	1374000
	45	7993	7993	7993
	55	8626	8626	8626
	65	12080	12080	12080
	75	14610	14610	14610
	85	12070	12070	12070



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	1079	1079	1079	1079	1054	1054	1054	1054	1007	1007	1007	964	964	964	925	925	925	907
1	1034	1011	991	973	1012	992	974	957	956	941	928	922	911	900	891	882	874	858
2	992	953	920	893	972	937	908	883	908	884	864	882	863	846	857	842	828	814
3	952	901	862	831	935	889	853	824	866	836	812	845	820	799	825	804	787	774
4	915	856	813	781	899	846	807	776	828	794	767	810	782	759	794	770	750	738
5	880	816	771	738	866	808	766	735	793	757	729	778	747	723	765	738	717	705
6	847	780	735	702	835	773	731	700	760	723	695	748	716	691	737	709	686	675
7	817	747	702	670	806	741	699	668	731	693	665	721	687	662	711	681	658	648
8	788	717	672	642	779	712	670	640	703	665	638	695	660	635	687	656	633	622
9	762	690	646	616	753	686	644	615	678	640	613	671	636	611	664	632	609	599
10	737	665	621	593	729	661	620	592	654	617	590	648	613	589	642	610	587	578

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	174	1.79
6.00	77.3	2.69
8.00	43.5	3.58
10.0	27.8	4.48
12.0	19.3	5.38
14.0	14.2	6.27
16.0	10.9	7.17

Cone of Light Plot

