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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  
9200 Deering Avenue  
Chatsworth, CA 91311

Catalog Number  
**MF31DNT45L8030MTDLDUWW**

Order Number  
10804087  
Test Number  
1096485

Test Date

2015-06-09

Prepared By

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Approved By

Eric Gaudreau, Engineering Project Handler

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:** GE Lightech GELD60DMV1400PU

### Luminaire



### Luminaire Characteristics

Luminous Diameter: 4.00 in.

### Summary of Results

Total Luminaire Output:	3415 Lumens
Luminaire Efficacy:	75.6 lm/w
Maximum Candela:	19288 Candela

### Electrical Data

Test Temperature:	25.1 °C
Voltage:	120.0 VAC
Current:	0.3785 A
Power:	45.16 W
Power Factor:	0.994
Frequency:	60 Hz
Current THD:	7.76 %

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
25.1 °C	120.0 VAC	0.3785 A	45.16 W	0.994	60 Hz	7.76 %

### Summary of Results

#### Spacing Criteria

0-180: 0.35  
90-270: 0.35

#### Total Lumen Output:

3415 Lumens

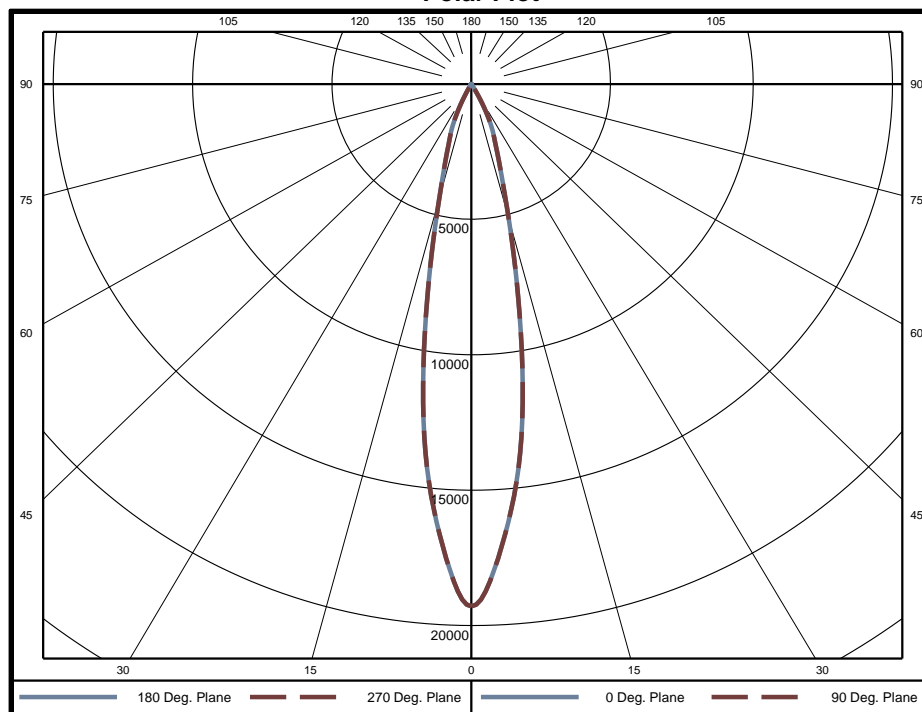
#### Luminaire Efficacy:

75.6 lm/w

#### Maximum Candela:

19288 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	412.0	12.1%	60-65	5.6	0.2%	120-125	0	0.0%
5-10	911.3	26.7%	65-70	5.5	0.2%	125-130	0	0.0%
10-15	820.0	24.0%	70-75	5.7	0.2%	130-135	0	0.0%
15-20	556.6	16.3%	75-80	5.4	0.2%	135-140	0	0.0%
20-25	406.5	11.9%	80-85	3.7	0.1%	140-145	0	0.0%
25-30	207.0	6.1%	85-90	1.2	0.0%	145-150	0	0.0%
30-35	44.3	1.3%	90-95	0	0.0%	150-155	0	0.0%
35-40	9.7	0.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	4.9	0.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	4.8	0.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	5.2	0.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	5.6	0.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	3367	98.6%
0-60	3388	99.2%
0-90	3415	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	19290	19290	19290	19290	19290	19290	19290	19290	19290	19290	19290	19290	19290	19290	19290	19290
5	15750	15750	15750	15750	15750	15750	15750	15750	15750	15750	15750	15750	15750	15750	15750	15750
10	9953	9953	9953	9953	9953	9953	9953	9953	9953	9953	9953	9953	9953	9953	9953	9953
15	4721	4721	4721	4721	4721	4721	4721	4721	4721	4721	4721	4721	4721	4721	4721	4721
20	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490
25	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421	1421
30	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319
35	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
40	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
45	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
50	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
55	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
60	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
65	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
70	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
75	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
80	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
85	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
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

Vertical Angle (Degrees)

**Average Luminance (cd/m<sup>2</sup>)**

Horizontal Angle (Degrees)

	0	45	90
0	2379000	2379000	2379000
45	2144	2144	2144
55	2608	2608	2608
65	3143	3143	3143
75	5141	5141	5141
85	6345	6345	6345

Vertical Angle (Degrees)



### 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	4066	4066	4066	4066	3971	3971	3971	3971	3795	3795	3795	3633	3633	3633	3485	3485	3485	3415
1	3927	3854	3789	3730	3846	3782	3724	3671	3646	3601	3559	3521	3486	3454	3406	3380	3355	3298
2	3800	3677	3575	3489	3730	3620	3529	3451	3514	3440	3377	3416	3358	3306	3326	3280	3239	3189
3	3682	3524	3403	3305	3621	3480	3369	3279	3396	3304	3229	3318	3243	3180	3246	3185	3133	3089
4	3572	3391	3259	3157	3519	3356	3234	3139	3288	3185	3104	3226	3140	3070	3168	3096	3036	2996
5	3470	3273	3135	3033	3424	3244	3116	3020	3189	3080	2995	3139	3045	2971	3091	3011	2947	2909
6	3374	3166	3026	2926	3333	3142	3012	2917	3098	2984	2899	3056	2957	2881	3017	2931	2864	2828
7	3284	3069	2930	2832	3248	3049	2918	2825	3012	2896	2812	2977	2875	2799	2945	2855	2786	2752
8	3199	2980	2842	2748	3167	2964	2833	2743	2932	2816	2733	2903	2799	2723	2875	2782	2713	2680
9	3118	2898	2762	2671	3090	2884	2755	2667	2857	2741	2659	2832	2727	2652	2809	2714	2644	2613
10	3043	2821	2689	2600	3017	2809	2683	2597	2787	2671	2592	2765	2660	2586	2745	2649	2580	2550

### Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	1210	1.40
6.00	536	2.09
8.00	301	2.79
10.0	193	3.49
12.0	134	4.19
14.0	98.4	4.89
16.0	75.3	5.58

### Cone of Light Plot

