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7036 Snowdrift Road
Allentown, PA 18106
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Indoor Distribution Test Report

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

Prepared For
Encore Lighting Mfg LLC dba Nano Meter

Diane Paquet
57-10 49th Place
Maspeth, NY 11378
United States

Catalog Number
L24-4FT-400LM-2700K

Order Number
10980032
Test Number
1166408

Test Date

2015-10-13

Prepared By

Derek Smarr, Technician

Approved By

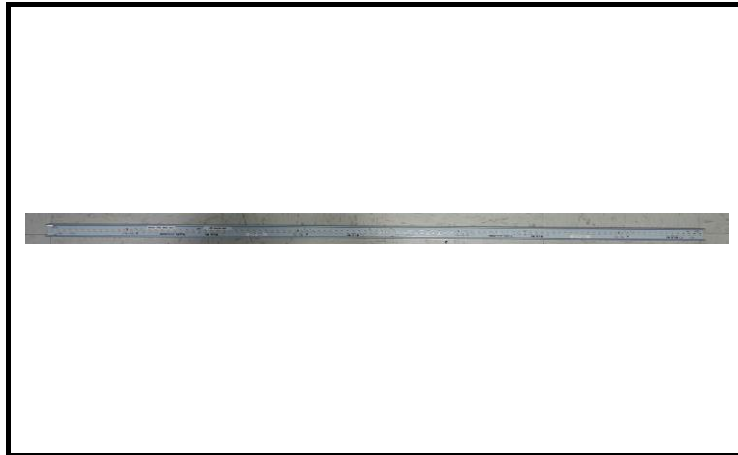
Jeffrey Lockner, Project Engineer

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Aluminum housing / heatsink, no enclosure
Lamp: 112 white LEDs, two boards with 56 LEDs each
Mounting: Surface
Ballast/Driver: One Mean Well HLG-60H-48A

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 0.8750 in.
Luminous Height: 0.38 in.

Summary of Results

Total Luminaire Output: 1519 Lumens
Luminaire Efficacy: 84.9 lm/w
Maximum Candela: 609 Candela

Electrical Data

Test Temperature: 24.6 °C
Voltage: 120.0 VAC
Current: 0.1527 A
Power: 17.90 W
Power Factor: 0.976
Frequency: 60 Hz
Current THD: 14.2 %

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
24.6 °C	120.0 VAC	0.1527 A	17.90 W	0.976	60 Hz	14.2 %

Summary of Results

Spacing Criteria

0-180: 1.27
90-270: 1.27

Total Lumen Output:

1519 Lumens

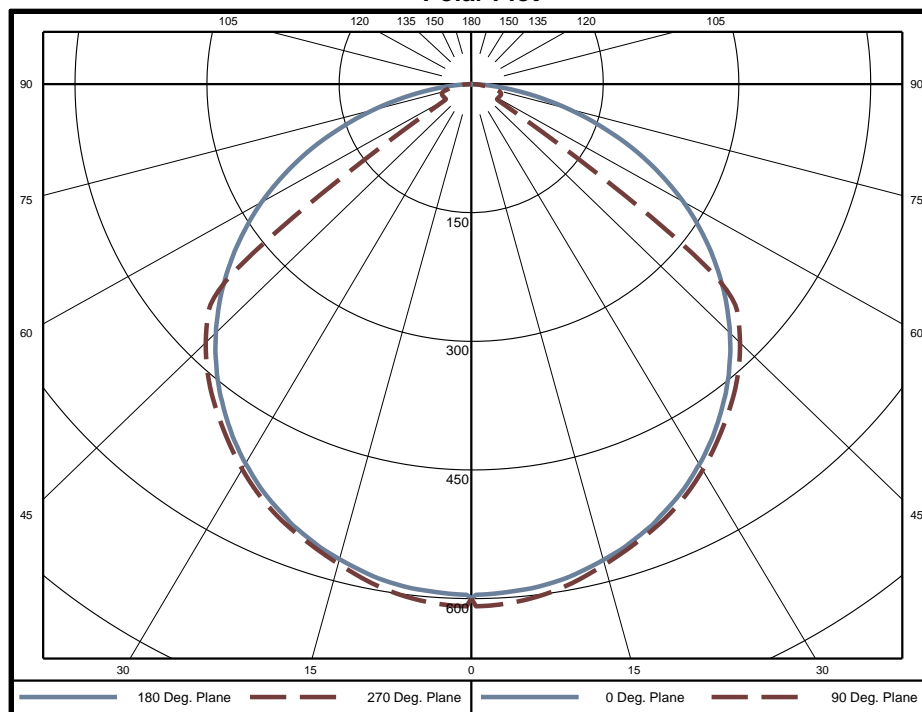
Luminaire Efficacy:

84.9 lm/w

Maximum Candela:

609 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	14.3	0.9%	60-65	68.5	4.5%	120-125	0	0.0%
5-10	42.5	2.8%	65-70	47.3	3.1%	125-130	0	0.0%
10-15	69.3	4.6%	70-75	34.9	2.3%	130-135	0	0.0%
15-20	93.9	6.2%	75-80	16.4	1.1%	135-140	0	0.0%
20-25	115.7	7.6%	80-85	9.3	0.6%	140-145	0	0.0%
25-30	133.8	8.8%	85-90	2.8	0.2%	145-150	0	0.0%
30-35	147.6	9.7%	90-95	0.2	0.0%	150-155	0	0.0%
35-40	156.9	10.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	161.3	10.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	160.2	10.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	143.9	9.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	100.5	6.6%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	774	51.0%
0-60	1340	88.2%
0-90	1519	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	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9	599.9
5	592.9	597.1	596.3	597.6	605.5	597.6	596.3	597.1	592.9	597.1	596.3	597.6	605.5	597.6	596.3	597.1
10	586.7	590.1	589.2	590.9	595.5	590.9	589.2	590.1	586.7	590.1	589.2	590.9	595.5	590.9	589.2	590.1
15	574.2	578.5	577.8	578.8	579.7	578.8	577.8	578.5	574.2	578.5	577.8	578.8	579.7	578.8	577.8	578.5
20	558.3	562.0	561.6	562.7	562.8	562.7	561.6	562.0	558.3	562.0	561.6	562.7	562.8	562.7	561.6	562.0
25	537.4	540.0	540.8	542.8	543.8	542.8	540.8	540.0	537.4	540.0	540.8	542.8	543.8	542.8	540.8	540.0
30	512.1	513.8	515.8	518.4	519.3	518.4	515.8	513.8	512.1	513.8	515.8	518.4	519.3	518.4	515.8	513.8
35	482.3	483.2	487.0	490.0	490.9	490.0	487.0	483.2	482.3	483.2	487.0	490.0	490.9	490.0	487.0	483.2
40	448.6	449.4	454.0	457.0	461.2	457.0	454.0	449.4	448.6	449.4	454.0	457.0	461.2	457.0	454.0	449.4
45	410.6	411.4	417.3	420.5	426.2	420.5	417.3	411.4	410.6	411.4	417.3	420.5	426.2	420.5	417.3	411.4
50	368.8	370.3	376.6	380.1	374.3	380.1	376.6	370.3	368.8	370.3	376.6	380.1	374.3	380.1	376.6	370.3
55	323.3	324.9	331.8	211.8	96.7	211.8	331.8	324.9	323.3	324.9	331.8	211.8	96.7	211.8	331.8	324.9
60	275.3	277.6	263.5	32.3	33.8	32.3	263.5	277.6	275.3	277.6	263.5	32.3	33.8	32.3	263.5	277.6
65	223.1	227.3	39.4	30.7	34.7	30.7	39.4	227.3	223.1	227.3	39.4	30.7	34.7	30.7	39.4	227.3
70	168.2	175.0	23.7	31.1	35.4	31.1	23.7	175.0	168.2	175.0	23.7	31.1	35.4	31.1	23.7	175.0
75	114.2	45.9	22.4	29.3	32.5	29.3	22.4	45.9	114.2	45.9	22.4	29.3	32.5	29.3	22.4	45.9
80	64.1	12.3	18.2	21.5	23.1	21.5	18.2	12.3	64.1	12.3	18.2	21.5	23.1	21.5	18.2	12.3
85	23.2	8.6	8.7	9.6	10.0	9.6	8.7	8.6	23.2	8.6	8.7	9.6	10.0	9.6	8.7	8.6
90	0.8	1.0	0.6	0.4	0.2	0.4	0.6	1.0	0.8	1.0	0.6	0.4	0.2	0.4	0.6	1.0
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	22140	22140	22140
45	21260	16640	15570
55	20570	14820	3859
65	19160	2070	1577
75	15820	1483	1781
85	9003	810	721



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	1809	1809	1809	1809	1766	1766	1766	1766	1688	1688	1688	1616	1616	1616	1550	1550	1550	1519
1	1674	1611	1554	1503	1634	1577	1525	1479	1513	1471	1432	1455	1420	1389	1401	1373	1348	1317
2	1538	1426	1333	1255	1499	1397	1312	1240	1345	1273	1211	1296	1236	1184	1251	1202	1158	1127
3	1412	1265	1152	1062	1376	1242	1137	1052	1198	1108	1034	1157	1081	1017	1119	1055	999	968
4	1298	1129	1005	911	1265	1110	994	905	1072	972	892	1038	951	881	1006	931	869	838
5	1197	1014	885	791	1167	997	877	786	966	859	778	936	843	770	909	827	762	731
6	1108	915	786	694	1079	901	779	691	874	766	685	849	753	679	826	740	673	643
7	1028	831	704	615	1002	819	698	613	796	688	608	775	677	604	755	667	600	571
8	957	759	635	549	934	749	630	548	729	621	545	711	613	541	693	604	538	510
9	894	697	576	495	873	688	573	494	671	565	491	655	558	489	640	551	486	459
10	838	643	526	449	819	635	523	448	620	517	446	606	511	444	593	505	442	416

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	37.5	5.11
6.00	16.7	7.67
8.00	9.37	10.2
10.0	6.00	12.8
12.0	4.17	15.3
14.0	3.06	17.9
16.0	2.34	20.4

Cone of Light Plot

