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Photometric Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002, UL 1598-2008

Prepared For
Simkar Corporation

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United States

Catalog Number
LCH4FA9035U1

Order Number
11334431
Test Number
1263060

Test Date

2016-06-23 - 2016-06-29

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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Table of Contents

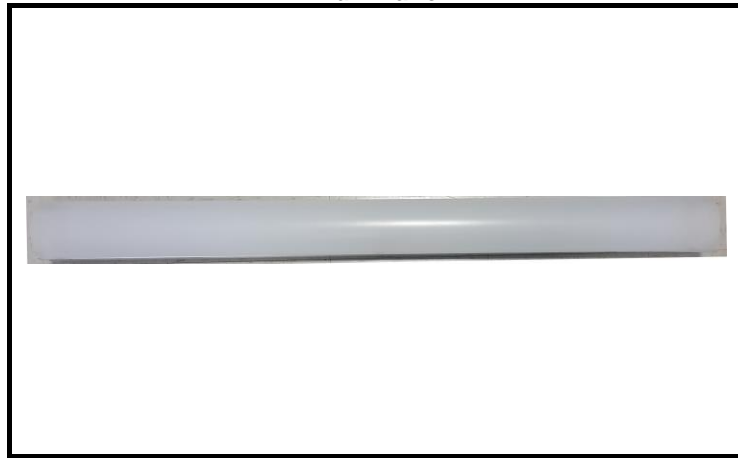
Summary of Results	Page 3
Distribution Results	
Conditions / Summary of Results / Polar Plot / Zonal Lumens	Page 4
Candela Tabulation / Average Luminance	Page 5
Coefficients of Utilization / Cone of Light	Page 6
ISOFootcandle Plot	Page 7
In-Situ Results	Page 8

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Luminaire Description: White steel housing, open end caps with plastic frosted linear prismatic lens enclosure
Lamp: 192 white LEDs (4 boards of 48 LEDs)
Mounting: Recessed
Ballast/Driver: Two Eaglerise EWP050C1400LED4

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 4.250 in.
Luminous Height: 1.50 in.

Summary of Results

Distribution

Total Luminaire Output: 8615 Lumens
Luminaire Efficacy: 118.3 lm/w
Maximum Candela: 2581 Candela

Electrical Data at 119 VAC

Test Temperature: 25.1 °C
Voltage: 119.9 VAC
Current: 0.6094 A
Power: 72.81 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 7.43 %

In-Situ

LED Temperature: 56.1 °C
Driver Temperature: 59.5 °C
Measured LED Current: 0.1129 A

Temperature is offset to an ambient temperature of 25°C as described in UL1598-2008.



Distribution - Goniophotometer

Distribution Test Conditions

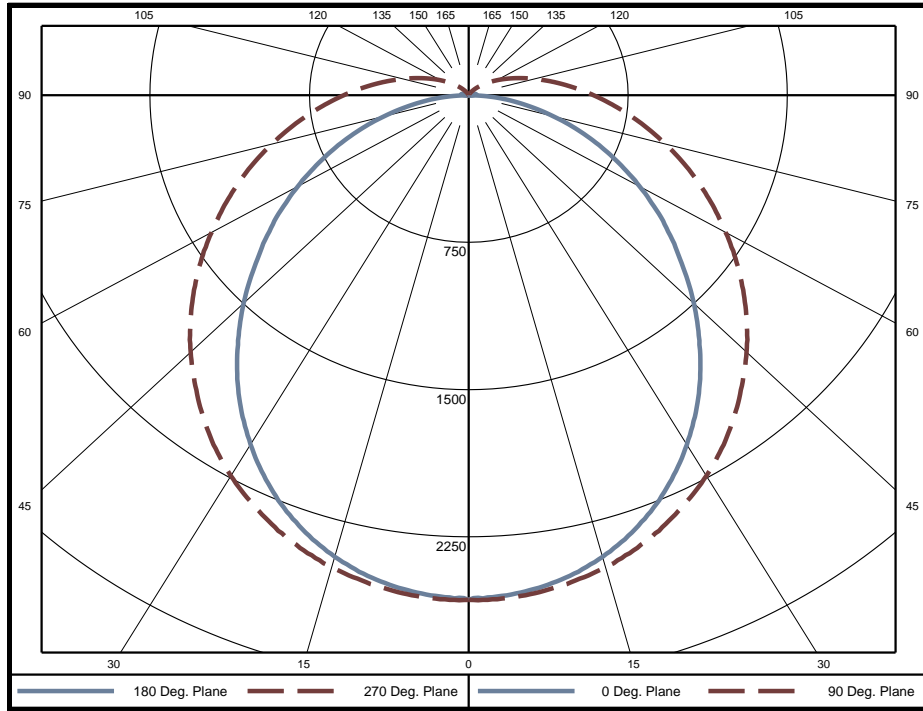
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	119.9 VAC	0.6094 A	72.81 W	0.996	60 Hz	7.43 %

Summary of Results

Spacing Criteria
 0-180: 1.19
 90-270: 1.19

Total Lumen Output: 8615 Lumens
Luminaire Efficacy: 118.3 lm/w
Maximum Candela: 2581 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	61.3	0.7%	60-65	525.6	6.1%	120-125	29.9	0.3%
5-10	181.8	2.1%	65-70	467.5	5.4%	125-130	19.9	0.2%
10-15	295.9	3.4%	70-75	402.9	4.7%	130-135	12.5	0.1%
15-20	399.4	4.6%	75-80	336.0	3.9%	135-140	7.4	0.1%
20-25	488.4	5.7%	80-85	271.7	3.2%	140-145	3.9	0.0%
25-30	560.1	6.5%	85-90	213.5	2.5%	145-150	1.8	0.0%
30-35	612.0	7.1%	90-95	169.0	2.0%	150-155	0.7	0.0%
35-40	642.7	7.5%	95-100	135.1	1.6%	155-160	0.2	0.0%
40-45	652.2	7.6%	100-105	105.0	1.2%	160-165	0.0	0.0%
45-50	643.0	7.5%	105-110	79.9	0.9%	165-170	0.0	0.0%
50-55	616.9	7.2%	110-115	59.3	0.7%	170-175	0	0.0%
55-60	576.7	6.7%	115-120	42.9	0.5%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	3242	37.6%
0-60	5730	66.5%
0-90	7948	92.3%
90-180	668	7.7%



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	2571	2571	2571	2571	2571	2571	2571	2571	2571	2571	2571	2571	2571	2571	2571	2571
5	2548	2567	2553	2559	2566	2559	2553	2567	2548	2567	2553	2559	2566	2559	2553	2567
10	2506	2526	2518	2529	2535	2529	2518	2526	2506	2526	2518	2529	2535	2529	2518	2526
15	2435	2458	2460	2480	2489	2480	2460	2458	2435	2458	2460	2480	2489	2480	2460	2458
20	2335	2361	2375	2407	2424	2407	2375	2361	2335	2361	2375	2407	2424	2407	2375	2361
25	2206	2241	2271	2318	2337	2318	2271	2241	2206	2241	2271	2318	2337	2318	2271	2241
30	2055	2096	2146	2212	2239	2212	2146	2096	2055	2096	2146	2212	2239	2212	2146	2096
35	1883	1930	2003	2088	2121	2088	2003	1930	1883	1930	2003	2088	2121	2088	2003	1930
40	1694	1748	1845	1948	1989	1948	1845	1748	1694	1748	1845	1948	1989	1948	1845	1748
45	1499	1558	1677	1802	1851	1802	1677	1558	1499	1558	1677	1802	1851	1802	1677	1558
50	1298	1363	1506	1650	1705	1650	1506	1363	1298	1363	1506	1650	1705	1650	1506	1363
55	1117	1179	1332	1492	1552	1492	1332	1179	1117	1179	1332	1492	1552	1492	1332	1179
60	928	994	1160	1336	1397	1336	1160	994	928	994	1160	1336	1397	1336	1160	994
65	749	822	1002	1185	1249	1185	1002	822	749	822	1002	1185	1249	1185	1002	822
70	578	657	851	1037	1103	1037	851	657	578	657	851	1037	1103	1037	851	657
75	409	502	707	896	959	896	707	502	409	502	707	896	959	896	707	502
80	259	360	578	764	826	764	578	360	259	360	578	764	826	764	578	360
85	126	245	468	643	701	643	468	245	126	245	468	643	701	643	468	245
90	0	165	374	536	589	536	374	165	0	165	374	536	589	536	374	165
95	30	116	294	440	488	440	294	116	30	116	294	440	488	440	294	116
100	34	81	229	357	399	357	229	81	34	81	229	357	399	357	229	81
105	29	57	175	285	322	285	175	57	29	57	175	285	322	285	175	57
110	23	40	132	224	256	224	132	40	23	40	132	224	256	224	132	40
115	17	29	97	172	200	172	97	29	17	29	97	172	200	172	97	29
120	13	20	69	129	153	129	69	20	13	20	69	129	153	129	69	20
125	9	14	48	94	113	94	48	14	9	14	48	94	113	94	48	14
130	6	10	31	66	81	66	31	10	6	10	31	66	81	66	31	10
135	4	6	18	44	55	44	18	6	4	6	18	44	55	44	18	6
140	2	4	11	28	36	28	11	4	2	4	11	28	36	28	11	4
145	1	2	6	15	21	15	6	2	1	2	6	15	21	15	6	2
150	0	1	3	7	11	7	3	1	0	1	3	7	11	7	3	1
155	0	0	1	2	4	2	1	0	0	0	1	2	4	2	1	0
160	0	0	0	0	1	0	0	0	0	0	0	0	1	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)

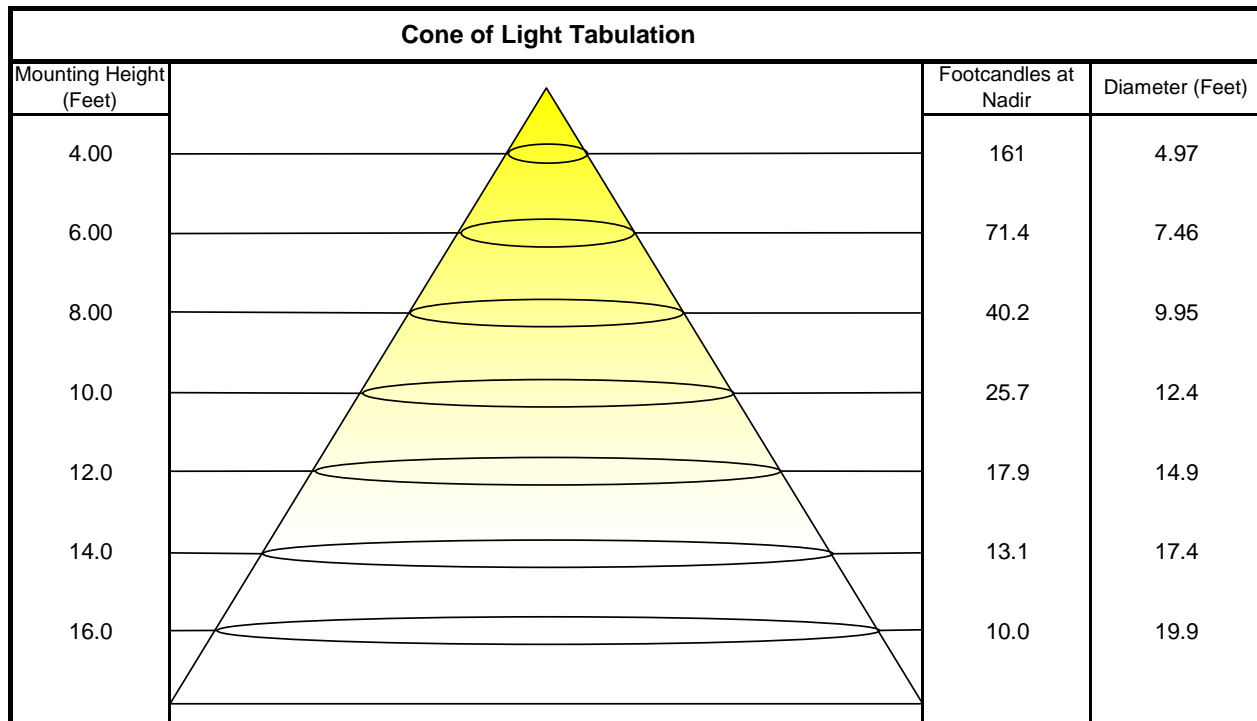
	0	45	90
0	19540	19540	19540
45	15620	14170	14700
55	14170	12710	13670
65	12620	11380	12780
75	10760	10300	12150
85	8113	9929	12140



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	10097	10097	10097	10097	9784	9784	9784	9784	9201	9201	9201	8668	8668	8668	8178	8178	8178	7947
1	9055	8578	8150	7765	8744	8314	7926	7574	7819	7502	7211	7364	7108	6870	6945	6740	6549	6315
2	8184	7406	6763	6221	7886	7183	6594	6094	6763	6273	5849	6376	5971	5615	6018	5687	5392	5160
3	7436	6469	5721	5124	7158	6280	5590	5034	5922	5339	4858	5592	5101	4688	5286	4875	4524	4299
4	6795	5713	4921	4315	6540	5552	4817	4248	5247	4616	4116	4964	4425	3988	4701	4243	3863	3647
5	6242	5094	4292	3700	6008	4956	4207	3648	4695	4044	3545	4452	3888	3445	4225	3738	3348	3141
6	5759	4579	3787	3219	5547	4461	3717	3177	4236	3583	3096	4025	3453	3015	3829	3328	2937	2741
7	5337	4147	3375	2835	5145	4044	3317	2801	3849	3204	2734	3666	3095	2668	3495	2990	2604	2418
8	4966	3780	3035	2522	4791	3691	2985	2494	3521	2889	2439	3361	2797	2384	3211	2707	2330	2154
9	4638	3467	2749	2265	4479	3388	2707	2241	3239	2625	2194	3099	2545	2148	2966	2468	2102	1936
10	4347	3196	2507	2049	4203	3127	2471	2029	2996	2400	1989	2871	2331	1949	2754	2264	1910	1753

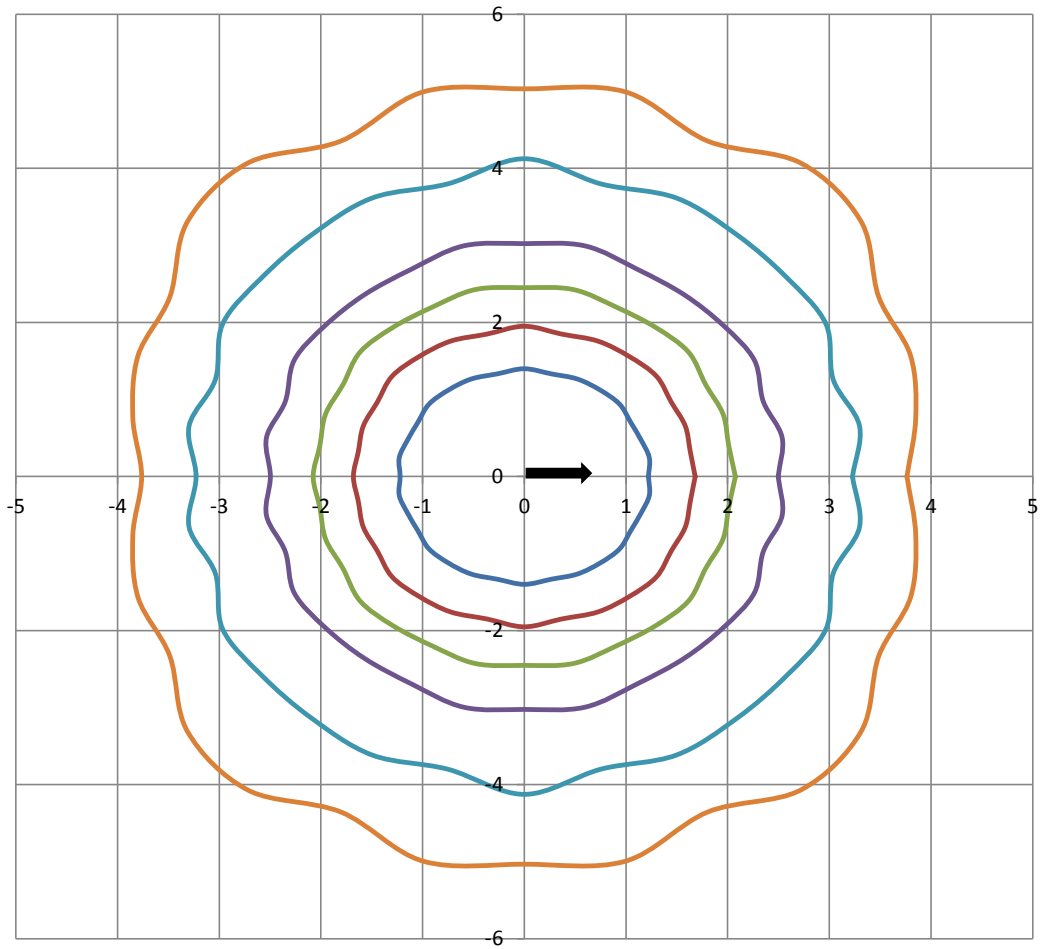
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	2571 Candela
Central Cone Intensity:	2567 Candela
Beam Flux:	5413.6 Lumens
Beam Angle (0-180):	100.7 Degrees
Beam Angle (90-270):	127.6 Degrees
Field Angle (0-180):	160.1 Degrees
Field Angle (90-270):	219.8 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height





In-Situ Test

In-Situ Test Conditions

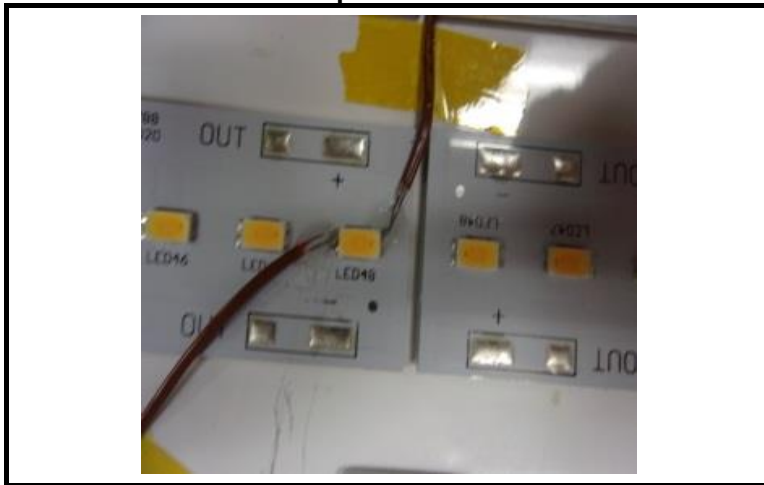
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
22.8 °C	119.5 VAC	N/A	N/A	N/A	60 Hz	N/A

Summary of Results

LED Temperature: 56.1 °C
Driver Temperature: 59.5 °C
Measured LED Current: 0.1129 A

Temperatures are offset to an ambient temperature of 25°C as described in UL1598-2008

LED Temperature Location



Driver Temperature Location

