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Indoor Distribution Test Report

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

Prepared For
Simkar Corporation

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United States

Catalog Number
LCH4FA5050U1

Order Number
11334431
Test Number
1263062

Test Date

2016-07-11

Prepared By

Javier Caban, Technician

Approved By

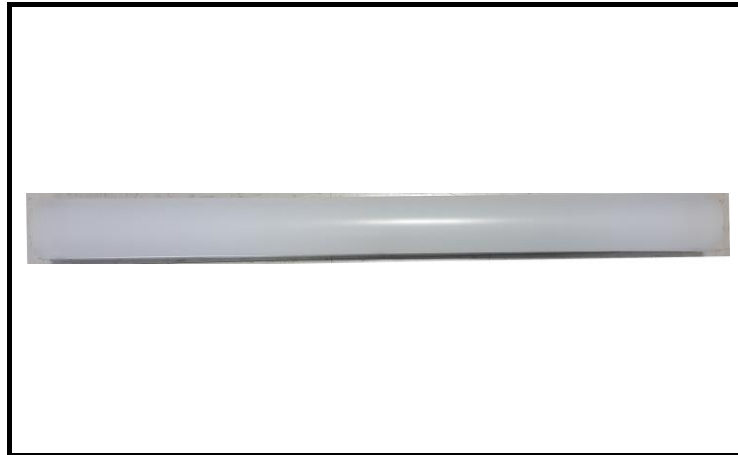
Carissa Samonte-cam, Project Handler

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Luminaire Description: White steel housing, plastic frosted linear prismatic lens
Lamp: 96 white LEDs (2 boards of 48 LEDs)
Mounting: Recessed
Ballast/Driver: One Eaglerise EWP0050C1400MED4

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 4.250 in.
Luminous Height: 1.75 in.

Summary of Results

Total Luminaire Output: 4795 Lumens
Luminaire Efficacy: 130.3 lm/w
Maximum Candela: 1485 Candela

Test Conditions

Test Temperature: 25.3 °C
Voltage: 120.0 VAC
Current: 0.3082 A
Power: 36.81 W
Power Factor: 0.995
Frequency: 60 Hz
Current THD: 7.66 %

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



Distribution - Goniophotometer

Distribution Test Conditions

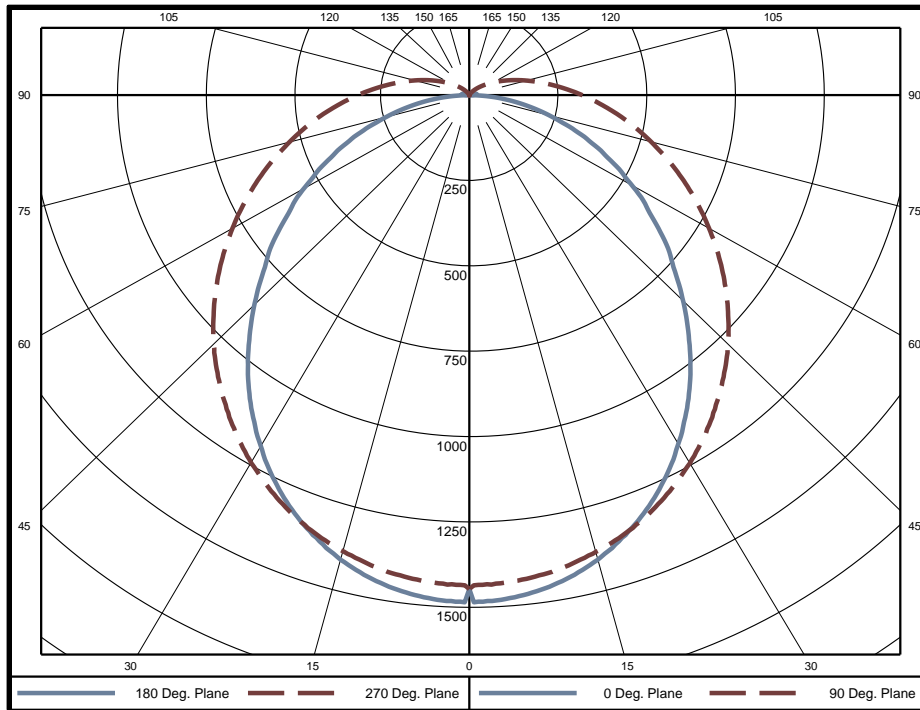
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.3 °C	120.0 VAC	0.3082 A	36.81 W	0.995	60 Hz	7.66 %

Summary of Results

Spacing Criteria
 0-180: 1.22
 90-270: 1.22

Total Lumen Output: 4795 Lumens
Luminaire Efficacy: 130.3 lm/w
Maximum Candela: 1485 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	34.5	0.7%	60-65	296.9	6.2%	120-125	13.8	0.3%
5-10	102.2	2.1%	65-70	263.3	5.5%	125-130	9.1	0.2%
10-15	166.2	3.5%	70-75	226.2	4.7%	130-135	5.6	0.1%
15-20	224.1	4.7%	75-80	188.0	3.9%	135-140	3.2	0.1%
20-25	274.0	5.7%	80-85	150.2	3.1%	140-145	1.7	0.0%
25-30	314.0	6.5%	85-90	115.2	2.4%	145-150	0.8	0.0%
30-35	342.8	7.1%	90-95	89.0	1.9%	150-155	0.3	0.0%
35-40	360.3	7.5%	95-100	69.9	1.5%	155-160	0.1	0.0%
40-45	366.3	7.6%	100-105	53.3	1.1%	160-165	0.1	0.0%
45-50	361.5	7.5%	105-110	39.7	0.8%	165-170	0.0	0.0%
50-55	347.5	7.2%	110-115	28.8	0.6%	170-175	0.0	0.0%
55-60	325.8	6.8%	115-120	20.3	0.4%	175-180	0.0	0.0%

Zone	Lumens	% of Luminaire
0-40	1818	37.9%
0-60	3219	67.1%
0-90	4459	93.0%
90-180	336	7.0%



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	1446	1446	1446	1446	1446	1446	1446	1446	1446	1446	1446	1446	1446	1446	1446	1446
5	1476	1446	1430	1430	1428	1430	1430	1446	1476	1446	1430	1430	1428	1430	1430	1446
10	1450	1422	1409	1411	1411	1411	1409	1422	1450	1422	1409	1411	1411	1411	1409	1422
15	1409	1383	1374	1382	1384	1382	1374	1383	1409	1383	1374	1382	1384	1382	1374	1383
20	1349	1327	1328	1342	1349	1342	1328	1327	1349	1327	1328	1342	1349	1342	1328	1327
25	1275	1258	1268	1292	1301	1292	1268	1258	1275	1258	1268	1292	1301	1292	1268	1258
30	1184	1175	1199	1232	1244	1232	1199	1175	1184	1175	1199	1232	1244	1232	1199	1175
35	1085	1081	1121	1163	1179	1163	1121	1081	1085	1081	1121	1163	1179	1163	1121	1081
40	974	980	1034	1088	1108	1088	1034	980	974	980	1034	1088	1108	1088	1034	980
45	860	874	943	1009	1033	1009	943	874	860	874	943	1009	1033	1009	943	874
50	749	766	848	925	951	925	848	766	749	766	848	925	951	925	848	766
55	640	664	753	839	867	839	753	664	640	664	753	839	867	839	753	664
60	537	562	658	751	781	751	658	562	537	562	658	751	781	751	658	562
65	433	467	564	665	697	665	564	467	433	467	564	665	697	665	564	467
70	338	373	477	579	613	579	477	373	338	373	477	579	613	579	477	373
75	240	283	395	499	532	499	395	283	240	283	395	499	532	499	395	283
80	155	201	321	423	456	423	321	201	155	201	321	423	456	423	321	201
85	74	130	256	353	384	353	256	130	74	130	256	353	384	353	256	130
90	0	82	198	289	319	289	198	82	0	82	198	289	319	289	198	82
95	19	54	152	233	260	233	152	54	19	54	152	233	260	233	152	54
100	21	37	114	186	209	186	114	37	21	37	114	186	209	186	114	37
105	17	27	85	145	165	145	85	27	17	27	85	145	165	145	85	27
110	14	19	62	111	129	111	62	19	14	19	62	111	129	111	62	19
115	10	14	44	83	98	83	44	14	10	14	44	83	98	83	44	14
120	8	10	31	60	72	60	31	10	8	10	31	60	72	60	31	10
125	6	7	21	43	52	43	21	7	6	7	21	43	52	43	21	7
130	4	5	14	29	36	29	14	5	4	5	14	29	36	29	14	5
135	3	3	8	19	24	19	8	3	3	3	8	19	24	19	8	3
140	1	2	4	12	15	12	4	2	1	2	4	12	15	12	4	2
145	1	1	2	6	9	6	2	1	1	1	2	6	9	6	2	1
150	0	1	1	3	4	3	1	1	0	1	1	3	4	3	1	1
155	0	1	1	1	2	1	1	1	0	1	1	1	2	1	1	1
160	0	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1
165	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1
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)

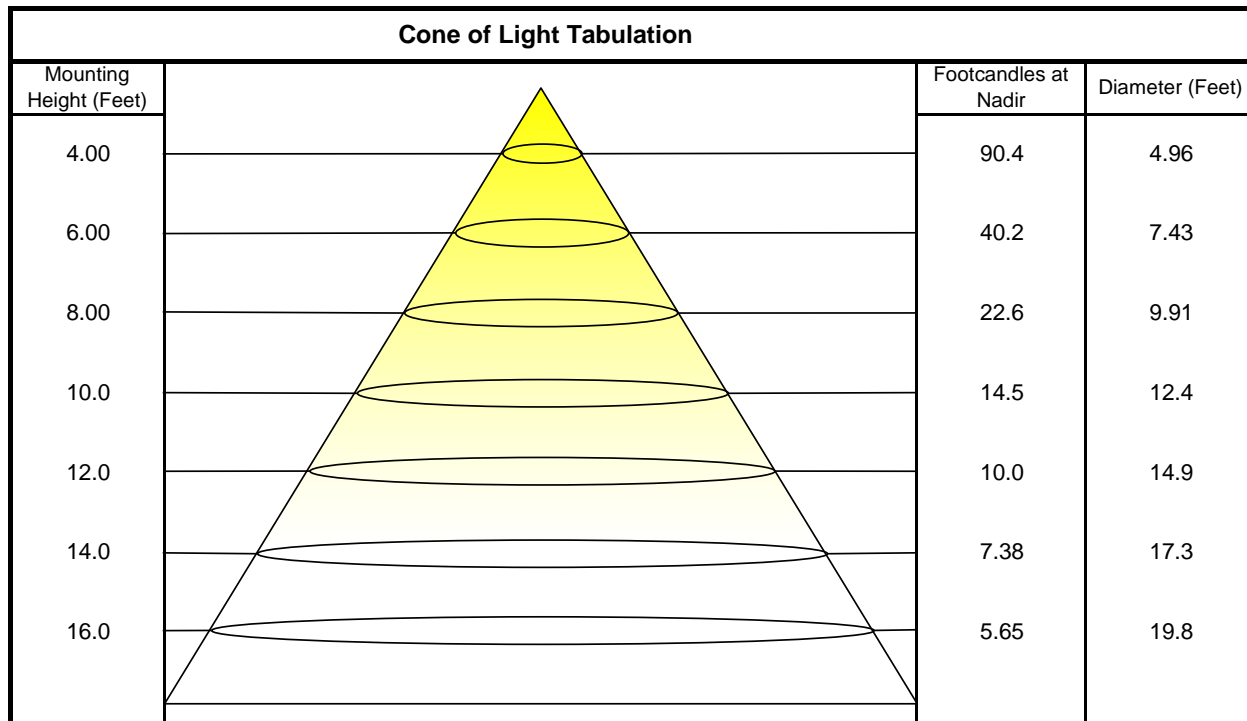
	0	45	90
0	10990	10990	10990
45	8917	7696	7859
55	8061	6867	7233
65	7220	6039	6651
75	6213	5313	6156
85	4547	4821	5862



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	5628	5628	5628	5628	5458	5458	5458	5458	5141	5141	5141	4851	4851	4851	4584	4584	4584	4459
1	5049	4784	4546	4332	4880	4640	4425	4229	4371	4195	4033	4124	3981	3849	3897	3783	3676	3548
2	4563	4130	3772	3471	4401	4009	3681	3403	3781	3507	3271	3571	3345	3146	3377	3191	3026	2899
3	4146	3607	3190	2858	3994	3504	3120	2810	3311	2985	2716	3131	2857	2626	2965	2736	2539	2415
4	3788	3185	2744	2407	3649	3098	2688	2371	2933	2580	2301	2780	2478	2233	2637	2380	2168	2048
5	3480	2840	2393	2063	3352	2765	2348	2036	2624	2261	1982	2492	2177	1929	2370	2097	1878	1764
6	3211	2553	2112	1795	3095	2489	2074	1773	2367	2002	1730	2254	1933	1688	2147	1867	1647	1539
7	2975	2312	1882	1581	2870	2257	1851	1563	2151	1791	1528	2052	1733	1494	1960	1677	1460	1358
8	2769	2108	1692	1407	2673	2060	1666	1392	1968	1615	1363	1882	1566	1335	1800	1518	1307	1209
9	2586	1933	1533	1263	2499	1891	1511	1251	1810	1467	1227	1735	1425	1203	1663	1384	1179	1087
10	2424	1782	1398	1143	2345	1745	1379	1133	1674	1341	1112	1607	1305	1091	1544	1269	1071	984

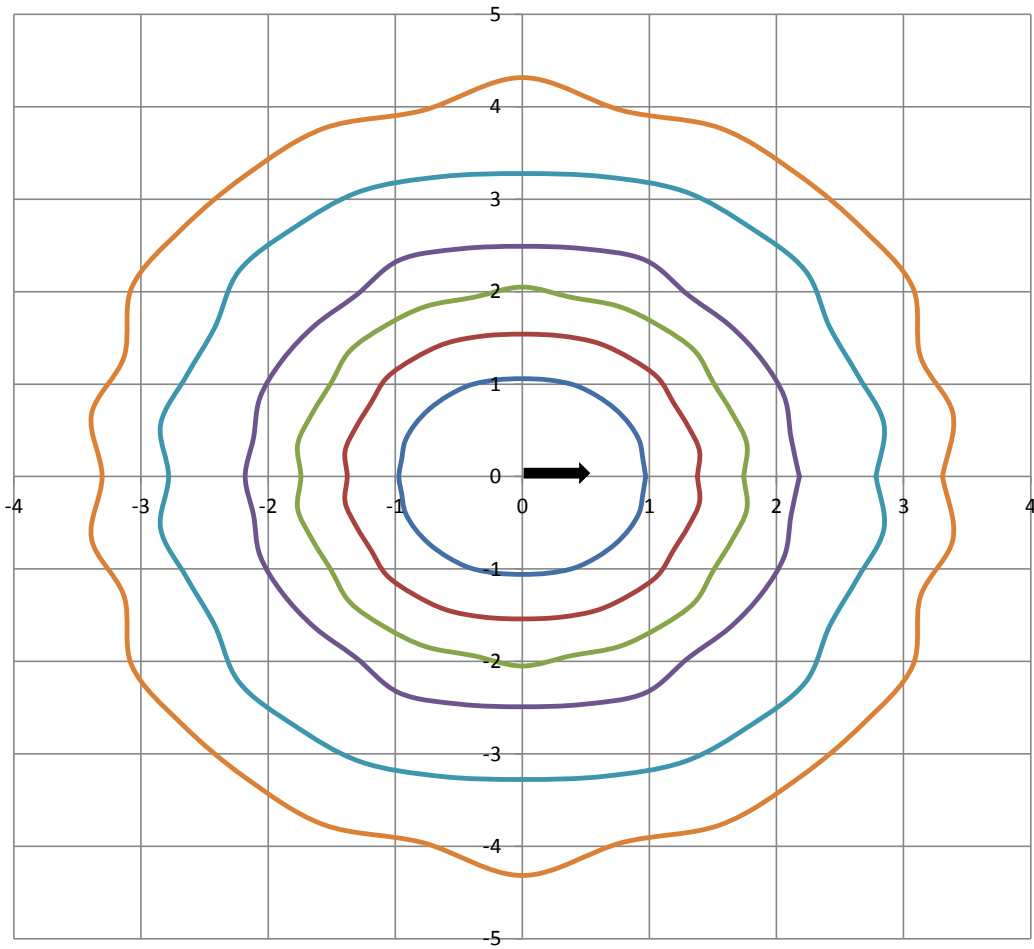
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1446 Candela
Central Cone Intensity:	1444 Candela
Beam Flux:	3045.2 Lumens
Beam Angle (0-180):	102.8 Degrees
Beam Angle (90-270):	126.8 Degrees
Field Angle (0-180):	161.2 Degrees
Field Angle (90-270):	215.5 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

