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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
LCH4FA5040U1

Order Number
11334431
Test Number
1263061

Test Date

2016-06-24

Prepared By

Dane Hernandez-Adams, Technician

Approved By

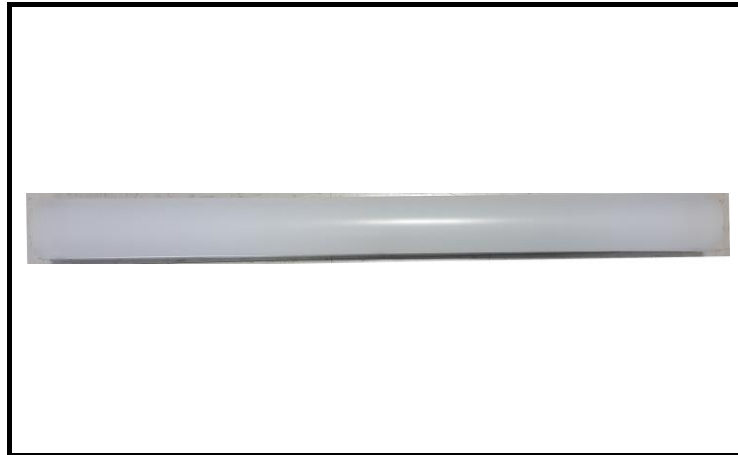
Carissa Samonte-cam, Project Handler

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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 EWP050C1400LED4

Luminaire



Luminaire Characteristics

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

Summary of Results

Total Luminaire Output: 4536 Lumens
Luminaire Efficacy: 126.3 lm/w
Maximum Candela: 1373 Candela

Test Conditions

Test Temperature: 25.4 °C
Voltage: 120.0 VAC
Current: 0.3006 A
Power: 35.92 W
Power Factor: 0.995
Frequency: 60 Hz
Current THD: 7.68 %

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



Distribution - Goniophotometer

Distribution Test Conditions

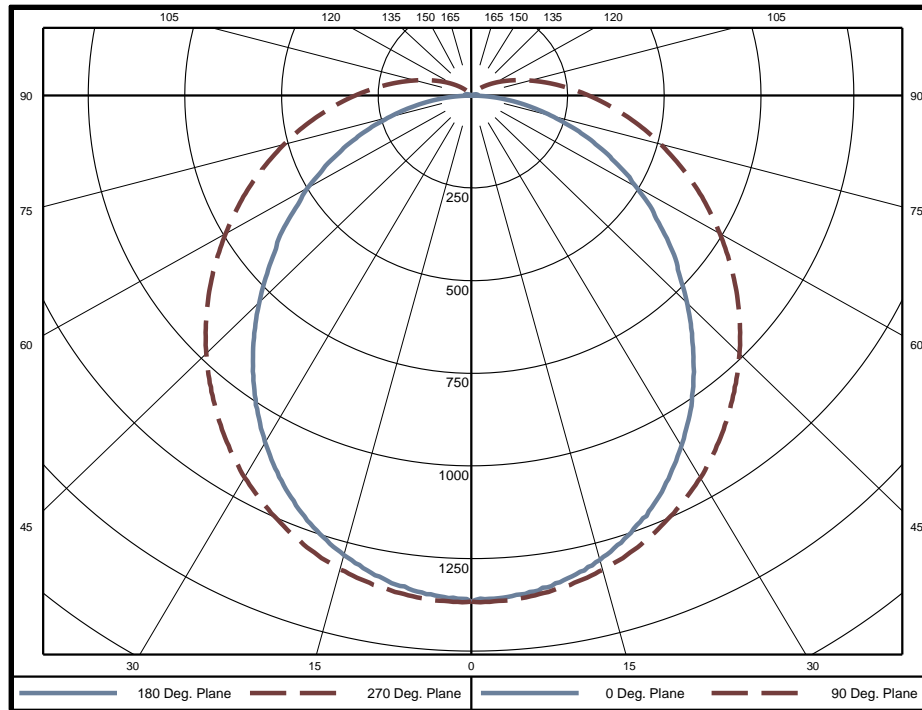
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.4 °C	120.0 VAC	0.3006 A	35.92 W	0.995	60 Hz	7.68 %

Summary of Results

Spacing Criteria
 0-180: 1.20
 90-270: 1.18

Total Lumen Output: 4536 Lumens
Luminaire Efficacy: 126.3 lm/w
Maximum Candela: 1373 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	32.6	0.7%	60-65	281.7	6.2%	120-125	12.2	0.3%
5-10	96.7	2.1%	65-70	250.5	5.5%	125-130	7.7	0.2%
10-15	157.3	3.5%	70-75	215.4	4.7%	130-135	4.4	0.1%
15-20	212.3	4.7%	75-80	178.9	3.9%	135-140	2.3	0.1%
20-25	259.6	5.7%	80-85	142.6	3.1%	140-145	1.0	0.0%
25-30	297.6	6.6%	85-90	109.2	2.4%	145-150	0.3	0.0%
30-35	325.3	7.2%	90-95	84.1	1.9%	150-155	0.0	0.0%
35-40	341.5	7.5%	95-100	65.4	1.4%	155-160	0	0.0%
40-45	347.0	7.6%	100-105	49.5	1.1%	160-165	0	0.0%
45-50	342.4	7.5%	105-110	36.5	0.8%	165-170	0	0.0%
50-55	329.3	7.3%	110-115	26.2	0.6%	170-175	0	0.0%
55-60	308.4	6.8%	115-120	18.2	0.4%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1723	38.0%
0-60	3050	67.2%
0-90	4228	93.2%
90-180	308	6.8%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	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	1366	1366	1366	1366	1366	1366	1366	1366	1366	1366	1366	1366	1366	1366	1366	1366
5	1353	1365	1356	1362	1364	1361	1358	1365	1351	1365	1358	1361	1364	1362	1356	1365
10	1334	1341	1338	1345	1349	1346	1340	1343	1324	1343	1340	1346	1349	1345	1338	1341
15	1299	1304	1306	1318	1325	1320	1309	1306	1285	1306	1309	1320	1325	1318	1306	1304
20	1244	1253	1262	1280	1290	1283	1264	1256	1230	1256	1264	1283	1290	1280	1262	1253
25	1181	1188	1206	1233	1244	1235	1209	1193	1161	1193	1209	1235	1244	1233	1206	1188
30	1097	1111	1138	1175	1191	1178	1145	1117	1079	1117	1145	1178	1191	1175	1138	1111
35	1007	1021	1062	1108	1128	1113	1070	1030	987	1030	1070	1113	1128	1108	1062	1021
40	904	924	978	1035	1058	1039	988	934	888	934	988	1039	1058	1035	978	924
45	801	823	892	959	985	963	899	833	782	833	899	963	985	959	892	823
50	702	721	802	878	908	883	809	732	678	732	809	883	908	878	802	721
55	599	628	710	795	828	800	718	629	583	629	718	800	828	795	710	628
60	502	526	619	712	745	716	628	538	490	538	628	716	745	712	619	526
65	406	437	532	632	665	635	541	449	396	449	541	635	665	632	532	437
70	315	349	452	552	586	556	461	358	308	358	461	556	586	552	452	349
75	224	262	377	476	510	481	381	272	218	272	381	481	510	476	377	262
80	141	183	304	404	437	408	310	194	139	194	310	408	437	404	304	183
85	67	117	239	336	368	340	245	125	65	125	245	340	368	336	239	117
90	0	73	185	275	305	279	190	77	0	77	190	279	305	275	185	73
95	14	47	140	221	249	224	145	49	13	49	145	224	249	221	140	47
100	16	31	104	175	200	177	108	33	16	33	108	177	200	175	104	31
105	13	22	76	135	157	138	79	23	14	23	79	138	157	135	76	22
110	9	15	55	103	121	104	57	16	10	16	57	104	121	103	55	15
115	6	10	39	76	92	78	40	11	7	11	40	78	92	76	39	10
120	4	7	27	55	67	56	28	7	5	7	28	56	67	55	27	7
125	2	4	17	38	48	39	18	4	3	4	18	39	48	38	17	4
130	0	2	11	26	33	26	10	2	2	2	10	26	33	26	11	2
135	0	1	6	16	21	17	4	0	0	0	4	17	21	16	6	1
140	0	0	3	9	12	9	1	0	0	0	1	9	12	9	3	0
145	0	0	1	4	6	3	0	0	0	0	0	3	6	4	1	0
150	0	0	0	1	2	0	0	0	0	0	0	0	2	1	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)

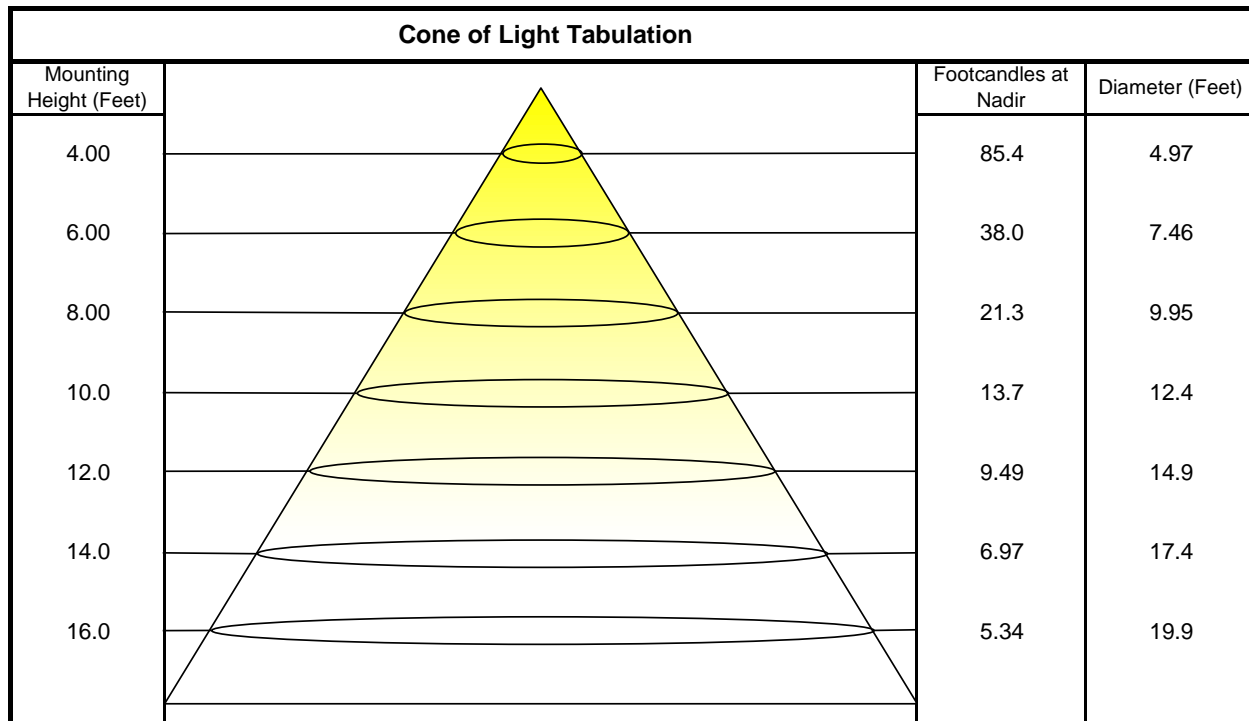
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	10380	10380	10380
45	8341	7536	7823
55	7595	6772	7294
65	6840	6046	6809
75	5891	5490	6459
85	4286	5064	6367



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	5327	5327	5327	5327	5167	5167	5167	5167	4869	4869	4869	4596	4596	4596	4346	4346	4346	4228
1	4778	4527	4302	4099	4619	4392	4188	4003	4140	3972	3819	3907	3772	3646	3693	3585	3484	3363
2	4318	3908	3569	3283	4165	3794	3483	3220	3580	3321	3097	3382	3168	2979	3200	3024	2867	2747
3	3923	3413	3018	2703	3780	3316	2952	2658	3134	2825	2571	2966	2706	2487	2810	2592	2405	2288
4	3585	3014	2596	2276	3453	2932	2543	2243	2776	2442	2178	2633	2347	2115	2499	2255	2053	1941
5	3293	2687	2264	1951	3173	2617	2221	1926	2484	2140	1876	2361	2062	1827	2245	1987	1779	1671
6	3038	2415	1997	1697	2929	2355	1963	1677	2241	1895	1638	2134	1831	1599	2034	1768	1560	1458
7	2815	2187	1780	1495	2717	2135	1751	1479	2036	1695	1446	1944	1641	1415	1857	1588	1383	1286
8	2620	1994	1601	1330	2530	1949	1576	1317	1863	1529	1290	1782	1483	1264	1706	1438	1238	1146
9	2447	1829	1450	1195	2365	1789	1429	1183	1714	1389	1161	1643	1349	1139	1576	1311	1117	1029
10	2293	1686	1323	1081	2219	1651	1305	1071	1585	1270	1052	1522	1236	1033	1463	1203	1015	932

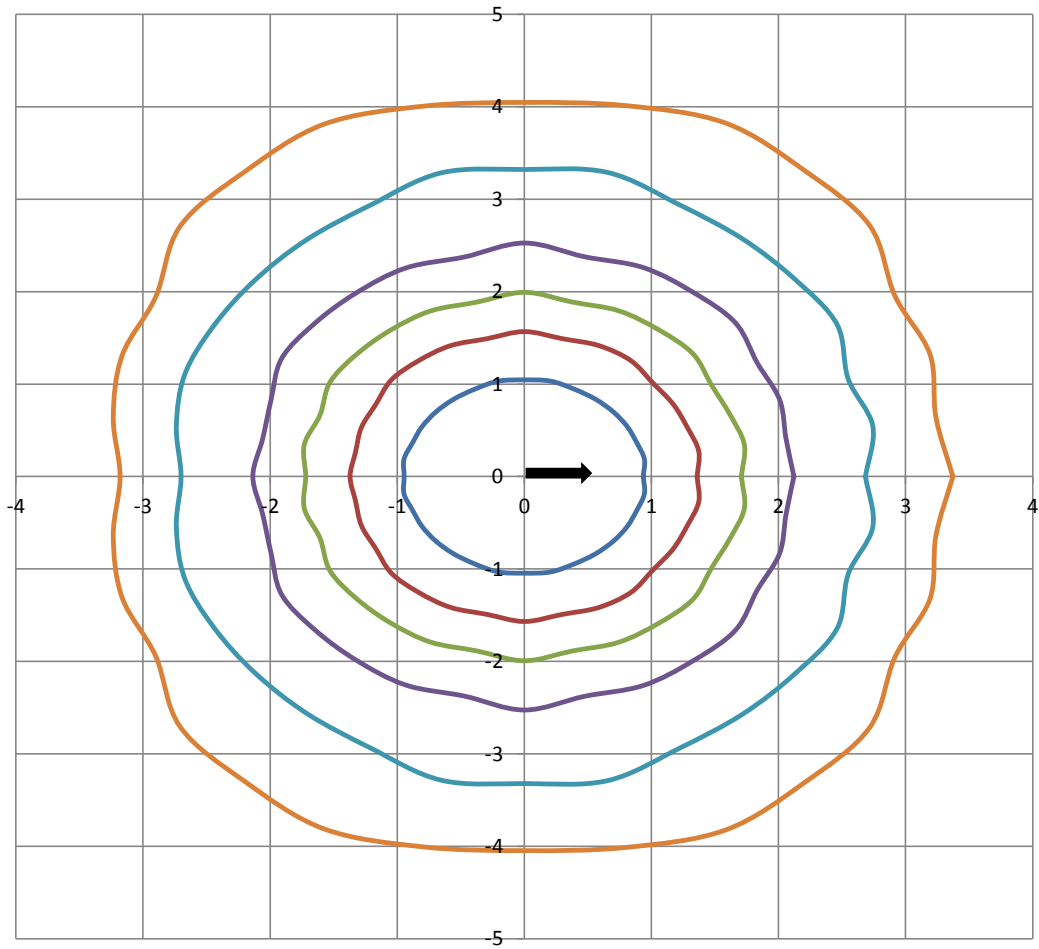
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1366 Candela
Central Cone Intensity:	1364 Candela
Beam Flux:	2892.0 Lumens
Beam Angle (0-180):	100.7 Degrees
Beam Angle (90-270):	127.7 Degrees
Field Angle (0-180):	160.4 Degrees
Field Angle (90-270):	215.5 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

