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Indoor Distribution Test Report

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

Prepared For
RLE Industries

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Catalog Number
RD-2-2S

Order Number
10959934
Test Number
1158720

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Test Date

2015-09-15

Prepared By

Kevin Rodriguez, Technician

Approved By

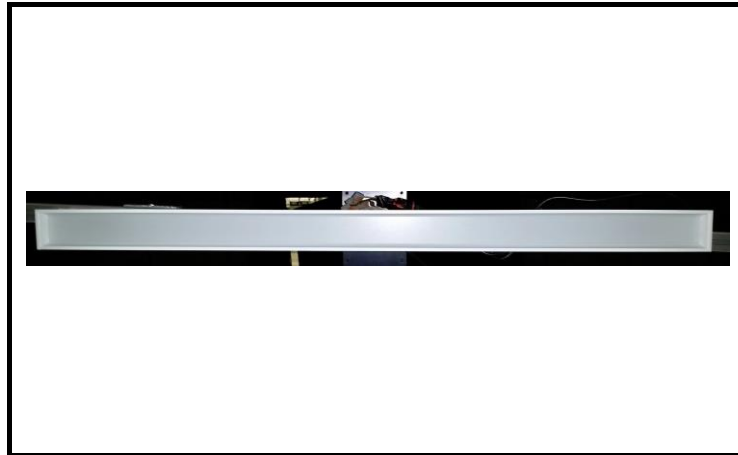
Jeffrey Lockner, Project Engineer

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Luminaire Description: White aluminum housing / white reflector, frosted plastic lens enclosure
Lamp: 88 white LEDs, two boards with 44 LEDs each
Mounting: Pendant
Ballast/Driver: One Philips Advance XI054C150V054DNT1

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 2.500 in.

Summary of Results

Total Luminaire Output:	2976 Lumens
Luminaire Efficacy:	66.1 lm/w
Maximum Candela:	1472 Candela

Electrical Data

Test Temperature:	24.6 °C
Voltage:	120.0 VAC
Current:	0.3795 A
Power:	45.02 W
Power Factor:	0.989
Frequency:	60 Hz
Current THD:	13.4 %

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	0.3795 A	45.02 W	0.989	60 Hz	13.4 %

Summary of Results

Spacing Criteria

0-180: 1.19
90-270: 1.19

Total Lumen Output:

2976 Lumens

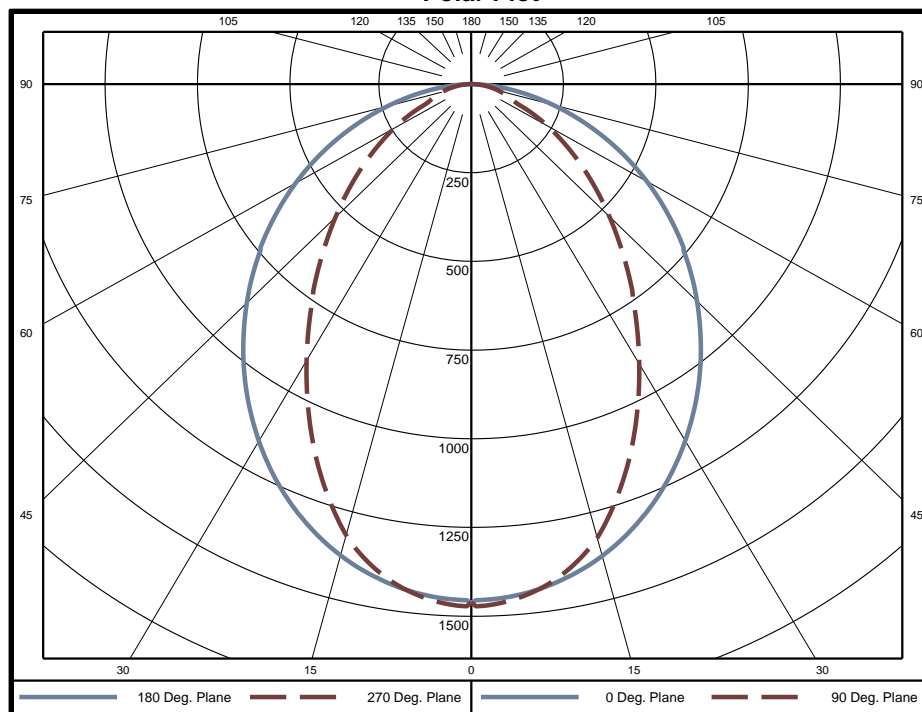
Luminaire Efficacy:

66.1 lm/w

Maximum Candela:

1472 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	34.8	1.2%	60-65	151.4	5.1%	120-125	0	0.0%
5-10	102.3	3.4%	65-70	111.2	3.7%	125-130	0	0.0%
10-15	163.7	5.5%	70-75	77.1	2.6%	130-135	0	0.0%
15-20	215.1	7.2%	75-80	49.4	1.7%	135-140	0	0.0%
20-25	253.0	8.5%	80-85	26.2	0.9%	140-145	0	0.0%
25-30	276.7	9.3%	85-90	7.9	0.3%	145-150	0	0.0%
30-35	286.8	9.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	284.8	9.6%	95-100	0	0.0%	155-160	0	0.0%
40-45	272.4	9.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	251.2	8.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	223.0	7.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	189.1	6.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1617	54.3%
0-60	2553	85.8%
0-90	2976	100.0%
90-180	0	0.0%



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	1462	1462	1462	1462	1462	1462	1462	1462	1462	1462	1462	1462	1462	1462	1462	1462
5	1446	1451	1449	1446	1454	1446	1449	1451	1446	1451	1449	1446	1454	1446	1449	1451
10	1419	1420	1410	1400	1406	1400	1410	1420	1419	1420	1410	1400	1406	1400	1410	1420
15	1377	1372	1348	1326	1324	1326	1348	1372	1377	1372	1348	1326	1324	1326	1348	1372
20	1319	1306	1267	1211	1199	1211	1267	1306	1319	1306	1267	1211	1199	1211	1267	1306
25	1248	1224	1154	1080	1059	1080	1154	1224	1248	1224	1154	1080	1059	1080	1154	1224
30	1165	1132	1031	940	914	940	1031	1132	1165	1132	1031	940	914	940	1031	1132
35	1072	1028	903	804	775	804	903	1028	1072	1028	903	804	775	804	903	1028
40	974	912	776	679	651	679	776	912	974	912	776	679	651	679	776	912
45	871	794	658	559	534	559	658	794	871	794	658	559	534	559	658	794
50	766	682	539	450	428	450	539	682	766	682	539	450	428	450	539	682
55	664	566	427	350	332	350	427	566	664	566	427	350	332	350	427	566
60	556	454	324	261	245	261	324	454	556	454	324	261	245	261	324	454
65	447	345	230	177	159	177	230	345	447	345	230	177	159	177	230	345
70	339	241	147	113	111	113	147	241	339	241	147	113	111	113	147	241
75	236	145	86	83	83	83	86	145	236	145	86	83	83	83	86	145
80	141	63	56	54	54	54	56	63	141	63	56	54	54	54	56	63
85	60	27	27	26	26	26	27	27	60	27	27	26	26	26	27	27
90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	18880	18880	18880
45	15920	12010	9751
55	14940	9618	7475
65	13660	7039	4845
75	11750	4270	4118
85	8835	3993	3851



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	3543	3543	3543	3543	3461	3461	3461	3461	3307	3307	3307	3166	3166	3166	3037	3037	3037	2976
1	3276	3150	3037	2935	3197	3083	2981	2888	2958	2874	2797	2843	2775	2712	2737	2683	2632	2572
2	3011	2791	2608	2455	2936	2736	2568	2426	2632	2492	2371	2537	2420	2317	2449	2353	2267	2206
3	2770	2485	2265	2089	2700	2439	2235	2071	2353	2178	2035	2273	2125	2000	2199	2074	1967	1906
4	2556	2228	1988	1805	2491	2190	1966	1793	2117	1923	1769	2050	1882	1746	1987	1843	1723	1663
5	2365	2011	1763	1581	2306	1979	1746	1572	1918	1713	1556	1861	1681	1540	1807	1650	1524	1465
6	2196	1826	1578	1400	2142	1799	1565	1394	1747	1538	1382	1698	1513	1371	1653	1488	1360	1302
7	2046	1668	1424	1252	1996	1645	1413	1248	1600	1392	1239	1559	1371	1231	1520	1351	1223	1167
8	1912	1532	1294	1130	1867	1512	1285	1126	1474	1267	1120	1438	1251	1114	1404	1234	1107	1054
9	1792	1414	1183	1027	1752	1397	1176	1024	1364	1161	1019	1333	1147	1014	1304	1134	1009	958
10	1685	1312	1088	939	1649	1297	1082	937	1268	1070	933	1241	1058	929	1215	1047	926	876

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	91.4	4.32
6.00	40.6	6.49
8.00	22.8	8.65
10.0	14.6	10.8
12.0	10.2	13.0
14.0	7.46	15.1
16.0	5.71	17.3

Cone of Light Plot

