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Indoor Distribution Test Report

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

Prepared For
Scientific Lighting Products, Div of Koller Enterprises

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1400 S Old Highway 141
Fenton, MO 63026-5733
United States

Catalog Number
CT2-1L4 1R (Frosted CIRA Lens)

Order Number
11161897
Test Number
1216837

Test Date

2016-03-03

Prepared By

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Approved By

Timothy Wagner, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White plastic housing, frosted lens enclosure
Lamp: 88 white LEDs
Mounting: Pendant
Ballast/Driver: One Philips Xitanium XI054C150V054DNT1

Luminaire



Luminaire Characteristics

Luminous Length: 51.00 in.
Luminous Width: 3.500 in.
Luminous Height: 1.50 in.

Summary of Results

Total Luminaire Output: 6133 Lumens
Luminaire Efficacy: 115.7 lm/w
Maximum Candela: 2091 Candela

Electrical Data

Test Temperature: 24.6 °C
Voltage: 120.0 VAC
Current: 0.4461 A
Power: 52.99 W
Power Factor: 0.990
Frequency: 60 Hz
Current THD: 12.9 %

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	0.4461 A	52.99 W	0.990	60 Hz	12.9 %

Summary of Results

Spacing Criteria

0-180: 1.29

90-270: 1.29

Total Lumen Output:

6133 Lumens

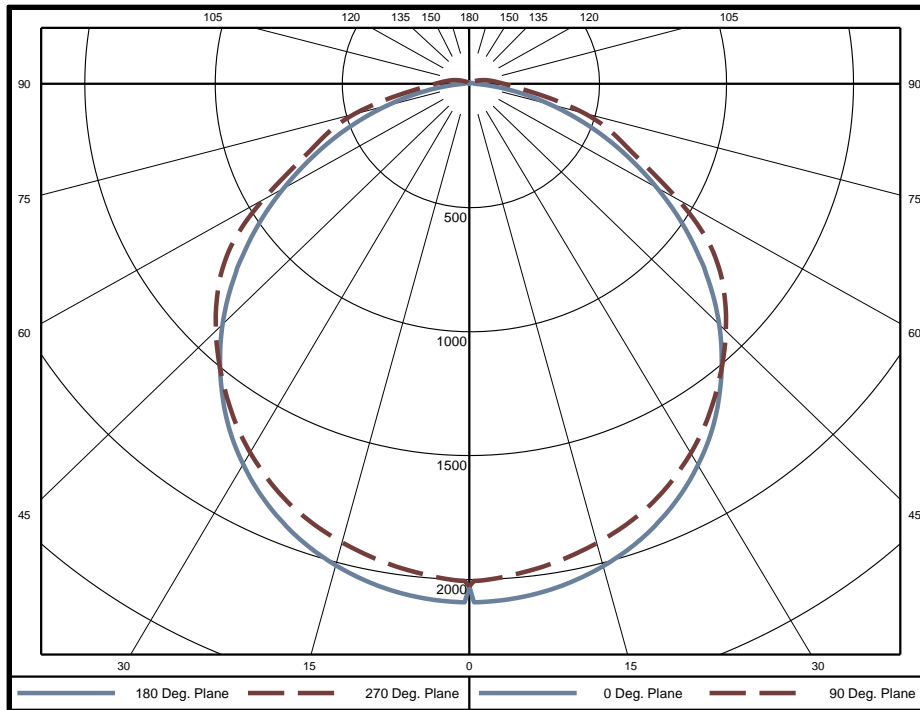
Luminaire Efficacy:

115.7 lm/w

Maximum Candela:

2091 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	48.3	0.8%	60-65	394.5	6.4%	120-125	4.5	0.1%
5-10	143.0	2.3%	65-70	320.5	5.2%	125-130	2.9	0.0%
10-15	232.8	3.8%	70-75	251.5	4.1%	130-135	1.8	0.0%
15-20	315.4	5.1%	75-80	182.9	3.0%	135-140	1.2	0.0%
20-25	388.2	6.3%	80-85	119.4	1.9%	140-145	0.9	0.0%
25-30	448.5	7.3%	85-90	76.3	1.2%	145-150	0.9	0.0%
30-35	494.0	8.1%	90-95	52.2	0.9%	150-155	0.8	0.0%
35-40	522.7	8.5%	95-100	37.1	0.6%	155-160	0.6	0.0%
40-45	534.6	8.7%	100-105	25.7	0.4%	160-165	0.5	0.0%
45-50	529.2	8.6%	105-110	16.9	0.3%	165-170	0.4	0.0%
50-55	506.1	8.3%	110-115	10.6	0.2%	170-175	0.2	0.0%
55-60	461.4	7.5%	115-120	6.7	0.1%	175-180	0.1	0.0%

Zone	Lumens	% of Luminaire
0-40	2593	42.3%
0-60	4624	75.4%
0-90	5969	97.3%
90-180	164	2.7%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical 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	2028	2028	2028	2028	2028	2028	2028	2028	2028	2028	2028	2028	2028	2028	2028
	5	2083	2032	1999	1994	1987	1994	1999	2032	2083	2032	1999	1994	1987	1994	2032
	10	2057	2002	1967	1962	1957	1962	1967	2002	2057	2002	1967	1962	1957	1962	2002
	15	2014	1955	1923	1922	1918	1922	1923	1955	2014	1955	1923	1922	1918	1922	1923
	20	1954	1893	1868	1871	1868	1871	1868	1893	1954	1893	1868	1871	1868	1871	1893
	25	1874	1817	1800	1805	1803	1805	1800	1817	1874	1817	1800	1805	1803	1805	1817
	30	1776	1725	1719	1722	1721	1722	1719	1725	1776	1725	1719	1722	1721	1722	1719
	35	1661	1614	1617	1626	1626	1626	1617	1614	1661	1614	1617	1626	1626	1626	1617
	40	1525	1490	1502	1517	1521	1517	1502	1490	1525	1490	1502	1517	1521	1517	1502
	45	1374	1350	1373	1402	1410	1402	1373	1350	1374	1350	1373	1402	1410	1402	1373
	50	1205	1194	1236	1280	1291	1280	1236	1194	1205	1194	1236	1280	1291	1280	1236
	55	1029	1027	1090	1139	1147	1139	1090	1027	1029	1027	1090	1139	1147	1139	1090
	60	845	850	933	955	940	955	933	850	845	850	933	955	940	955	933
	65	665	675	755	744	736	744	755	675	665	675	755	744	736	744	755
	70	493	508	572	588	601	588	572	508	493	508	572	588	601	588	572
	75	329	357	425	463	467	463	425	357	329	357	425	463	467	463	425
	80	185	236	311	312	303	312	311	236	185	236	311	312	303	312	311
	85	71	153	207	198	191	198	207	153	71	153	207	198	191	198	207
	90	21	98	139	137	135	137	139	98	21	98	139	137	135	137	139
	95	17	62	99	101	101	101	99	62	17	62	99	101	101	101	99
	100	14	37	69	76	78	76	69	37	14	37	69	76	78	76	69
	105	11	21	47	55	58	55	47	21	11	21	47	55	58	55	47
	110	9	10	30	39	41	39	30	10	9	10	30	39	41	39	30
	115	6	5	19	26	27	26	19	5	6	5	19	26	27	26	19
	120	5	4	12	18	19	18	12	4	5	4	12	18	19	18	12
	125	4	3	7	13	14	13	7	3	4	3	7	13	14	13	7
	130	3	3	3	9	10	9	3	3	3	3	3	9	10	9	3
	135	3	3	3	5	6	5	3	3	3	3	3	5	6	5	3
	140	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	145	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	150	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	155	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	160	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	165	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	170	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	175	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	180	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

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

Vertical Angle (Degrees)	0	45	90
	0	17610	17610
	45	16390	12740
	55	14940	11280
	65	12840	9150
	75	9957	6463
	85	5330	4394



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	7263	7263	7263	7263	7075	7075	7075	7075	6724	6724	6724	6403	6403	6403	6108	6108	6108	5969
1	6596	6288	6012	5763	6410	6132	5881	5653	5839	5633	5444	5570	5403	5247	5323	5188	5063	4921
2	5987	5466	5034	4671	5808	5335	4939	4602	5089	4756	4469	4862	4585	4343	4652	4425	4222	4077
3	5451	4790	4279	3871	5283	4680	4207	3825	4472	4068	3736	4280	3937	3649	4102	3813	3566	3423
4	4986	4238	3690	3271	4831	4145	3634	3239	3969	3526	3176	3805	3424	3115	3653	3326	3055	2914
5	4582	3782	3223	2810	4440	3703	3179	2787	3553	3093	2740	3414	3011	2695	3283	2933	2651	2514
6	4228	3401	2846	2447	4099	3334	2810	2430	3205	2741	2395	3086	2674	2360	2974	2610	2326	2195
7	3918	3080	2537	2157	3801	3022	2508	2143	2912	2451	2116	2809	2396	2089	2712	2343	2062	1936
8	3645	2808	2282	1920	3539	2758	2257	1909	2663	2210	1887	2573	2164	1865	2489	2120	1844	1724
9	3404	2575	2067	1725	3308	2532	2047	1716	2449	2007	1698	2371	1968	1680	2297	1931	1662	1548
10	3190	2374	1886	1561	3103	2336	1868	1553	2264	1835	1539	2195	1802	1524	2131	1770	1509	1400

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	127	5.07
6.00	56.3	7.60
8.00	31.7	10.1
10.0	20.3	12.7
12.0	14.1	15.2
14.0	10.3	17.7
16.0	7.92	20.3

Cone of Light Plot

