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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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United States

**Catalog Number**  
**CT2-2L4 1R (Frosted CIRA Lens)**

Order Number  
11161897  
Test Number  
1216839

Test Date

2016-03-02

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 XI075C200V054BPT1

#### Luminaire



#### Luminaire Characteristics

Luminous Length: 51.00 in.  
Luminous Width: 6.000 in.  
Luminous Height: 2.00 in.

#### Summary of Results

Total Luminaire Output: 8103 Lumens  
Luminaire Efficacy: 113.5 lm/w  
Maximum Candela: 2799 Candela

#### Electrical Data

Test Temperature: 25.2 °C  
Voltage: 120.0 VAC  
Current: 0.5962 A  
Power: 71.39 W  
Power Factor: 0.998  
Frequency: 60 Hz  
Current THD: 5.08 %

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
25.2 °C	120.0 VAC	0.5962 A	71.39 W	0.998	60 Hz	5.08 %

### Summary of Results

#### Spacing Criteria

0-180: 1.28

90-270: 1.28

#### Total Lumen Output:

8103 Lumens

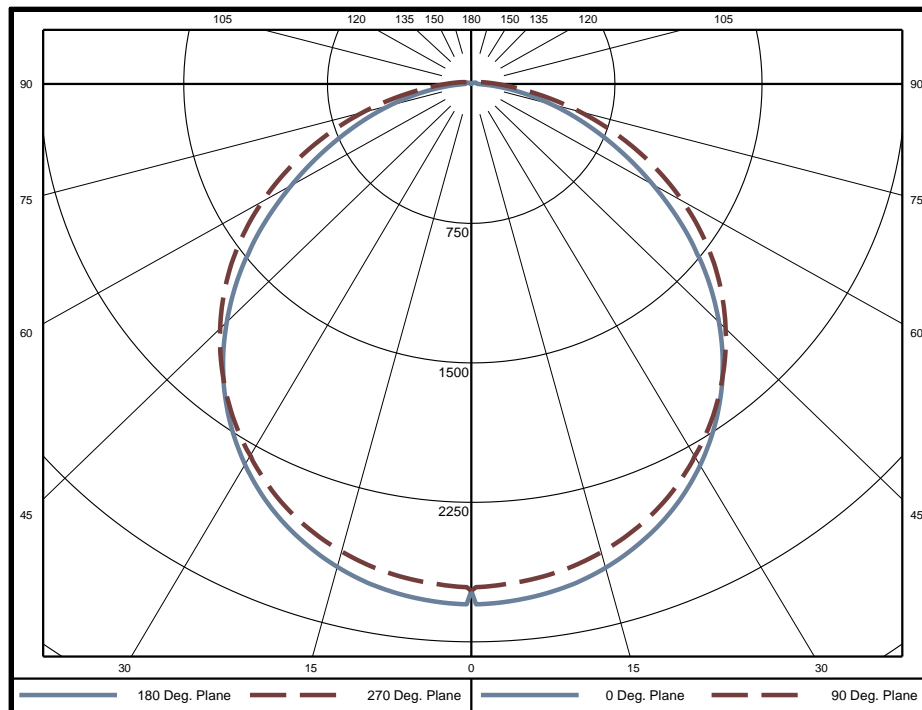
#### Luminaire Efficacy:

113.5 lm/w

#### Maximum Candela:

2799 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	65.0	0.8%	60-65	527.4	6.5%	120-125	3.3	0.0%
5-10	193.0	2.4%	65-70	437.0	5.4%	125-130	2.1	0.0%
10-15	314.7	3.9%	70-75	339.9	4.2%	130-135	1.4	0.0%
15-20	426.2	5.3%	75-80	242.7	3.0%	135-140	1.2	0.0%
20-25	523.9	6.5%	80-85	155.1	1.9%	140-145	1.0	0.0%
25-30	603.9	7.5%	85-90	89.3	1.1%	145-150	1.0	0.0%
30-35	663.3	8.2%	90-95	50.5	0.6%	150-155	0.9	0.0%
35-40	700.2	8.6%	95-100	30.2	0.4%	155-160	0.7	0.0%
40-45	712.9	8.8%	100-105	19.1	0.2%	160-165	0.6	0.0%
45-50	700.7	8.6%	105-110	12.3	0.2%	165-170	0.4	0.0%
50-55	664.4	8.2%	110-115	8.2	0.1%	170-175	0.3	0.0%
55-60	605.1	7.5%	115-120	5.4	0.1%	175-180	0.1	0.0%

Zone	Lumens	% of Luminaire
0-40	3490	43.1%
0-60	6173	76.2%
0-90	7965	98.3%
90-180	139	1.7%



**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	2727	2727	2727	2727	2727	2727	2727	2727	2727	2727	2727	2727	2727	2727	2727
	5	2786	2728	2694	2694	2691	2694	2694	2728	2786	2728	2694	2694	2691	2694	2728
	10	2752	2693	2660	2661	2660	2661	2660	2693	2752	2693	2660	2661	2660	2661	2693
	15	2693	2635	2605	2608	2607	2608	2605	2635	2693	2635	2605	2608	2607	2608	2635
	20	2610	2554	2529	2531	2533	2531	2529	2554	2610	2554	2529	2531	2533	2531	2554
	25	2504	2451	2433	2436	2437	2436	2433	2451	2504	2451	2433	2436	2437	2436	2451
	30	2371	2324	2313	2316	2313	2316	2313	2324	2371	2324	2313	2316	2313	2316	2324
	35	2211	2172	2171	2181	2183	2181	2171	2172	2211	2172	2171	2181	2183	2181	2171
	40	2026	1999	2010	2028	2031	2028	2010	1999	2026	1999	2010	2028	2031	2028	2010
	45	1816	1803	1831	1859	1864	1859	1831	1803	1816	1803	1831	1859	1864	1859	1831
	50	1588	1588	1640	1675	1682	1675	1640	1588	1588	1588	1640	1675	1682	1675	1640
	55	1341	1363	1435	1475	1483	1475	1435	1363	1341	1363	1435	1475	1483	1475	1435
	60	1091	1131	1221	1261	1266	1261	1221	1131	1091	1131	1221	1261	1266	1261	1221
	65	853	908	1002	1037	1042	1037	1002	908	853	908	1002	1037	1042	1037	1002
	70	635	699	787	811	811	811	787	699	635	699	787	811	811	811	787
	75	439	512	580	591	588	591	580	512	439	512	580	591	588	591	580
	80	261	344	395	392	384	392	395	344	261	344	395	392	384	392	395
	85	117	209	246	236	229	236	246	209	117	209	246	236	229	236	246
	90	35	111	144	139	135	139	144	111	35	111	144	139	135	139	144
	95	29	53	85	86	83	86	85	53	29	53	85	86	83	86	85
	100	28	25	52	56	55	56	52	25	28	25	52	56	55	56	52
	105	25	13	31	38	39	38	31	13	25	13	31	38	39	38	31
	110	22	7	19	26	27	26	19	7	22	7	19	26	27	26	19
	115	17	6	11	18	20	18	11	6	17	6	11	18	20	18	11
	120	12	5	6	12	14	12	6	5	12	5	6	12	14	12	6
	125	9	4	3	7	9	7	3	4	9	4	3	7	9	7	3
	130	6	4	3	4	5	4	3	4	6	4	3	4	5	4	3
	135	5	3	3	3	3	3	3	3	5	3	3	3	3	3	3
	140	4	3	3	3	3	3	3	3	4	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	4	4	4	3	3	3	4	4	4	4	4	3	3	3	4
	165	4	4	4	4	3	4	4	4	4	4	4	4	3	4	4
	170	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	175	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	180	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

**Average Luminance (cd/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	13810	13810
	45	12520	10010
	55	11220	8870
	65	9431	7279
	75	7487	5129
	85	4675	2770



### 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	9613	9613	9613	9613	9374	9374	9374	9374	8926	8926	8926	8517	8517	8517	8141	8141	8141	7964
1	8737	8332	7969	7642	8500	8134	7803	7504	7761	7490	7240	7420	7198	6993	7105	6927	6761	6579
2	7932	7245	6676	6197	7703	7078	6556	6112	6766	6327	5947	6478	6112	5790	6212	5910	5640	5454
3	7224	6352	5677	5139	7009	6212	5587	5083	5949	5414	4974	5705	5251	4869	5479	5096	4767	4581
4	6609	5621	4898	4345	6410	5503	4829	4307	5281	4695	4231	5074	4568	4158	4882	4447	4087	3904
5	6075	5018	4280	3735	5893	4919	4226	3708	4730	4120	3653	4554	4020	3600	4389	3923	3549	3370
6	5607	4515	3782	3256	5442	4430	3738	3235	4269	3654	3195	4118	3572	3155	3977	3494	3116	2944
7	5197	4091	3374	2872	5047	4018	3338	2856	3880	3269	2825	3750	3202	2794	3628	3138	2764	2599
8	4837	3731	3036	2558	4701	3668	3007	2546	3549	2949	2521	3437	2894	2497	3331	2840	2473	2316
9	4518	3423	2752	2299	4394	3368	2728	2289	3265	2680	2270	3167	2633	2250	3075	2588	2231	2080
10	4235	3157	2512	2083	4123	3109	2491	2074	3019	2450	2058	2934	2411	2042	2853	2373	2026	1883

### Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	170	5.06
6.00	75.7	7.59
8.00	42.6	10.1
10.0	27.3	12.7
12.0	18.9	15.2
14.0	13.9	17.7
16.0	10.7	20.3

### Cone of Light Plot

