



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300



Indoor Distribution Test Report

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

Prepared For
Scientific Lighting Products, Div of Koller Enterprises

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

Catalog Number
CT2-2L4 2R (Clear CIRA Lens)

Order Number
11161897
Test Number
1216842

Test Date

2016-03-02

Prepared By

Derek Smarr, Technician

Approved By

Timothy Wagner, Project Handler

The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.
This report must not be used by the client to claim product certification, approval, or endorsement by
NVLAP, NIST, or any agency of the Federal Government.



Luminaire Description: White plastic housing, clear lens enclosure
Lamp: 176 white LEDs
Mounting: Pendant
Ballast/Driver: One Philips Xitanium XI075C200V054XPT1

Luminaire



Luminaire Characteristics

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

Summary of Results

Total Luminaire Output: 8849 Lumens
Luminaire Efficacy: 125.5 lm/w
Maximum Candela: 3116 Candela

Electrical Data

Test Temperature: 24.8 °C
Voltage: 120.0 VAC
Current: 0.5908 A
Power: 70.50 W
Power Factor: 0.995
Frequency: 60 Hz
Current THD: 9.86 %

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
24.8 °C	120.0 VAC	0.5908 A	70.50 W	0.995	60 Hz	9.86 %

Summary of Results

Spacing Criteria

0-180: 1.30

90-270: 1.30

Total Lumen Output:

8849 Lumens

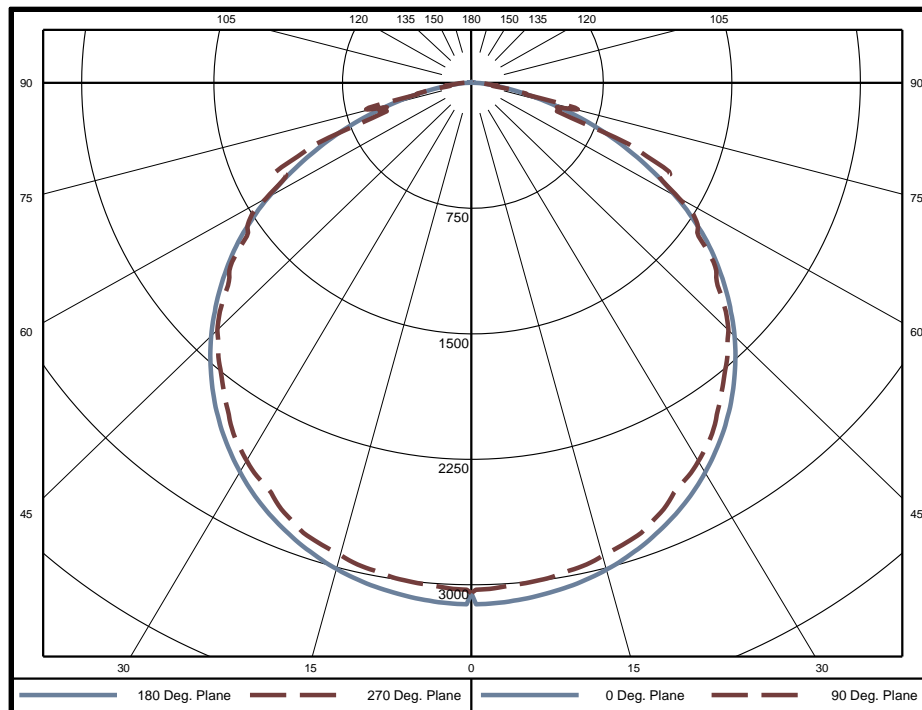
Luminaire Efficacy:

125.5 lm/w

Maximum Candela:

3116 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	72.7	0.8%	60-65	603.4	6.8%	120-125	2.7	0.0%
5-10	215.8	2.4%	65-70	496.9	5.6%	125-130	1.6	0.0%
10-15	352.4	4.0%	70-75	328.5	3.7%	130-135	1.2	0.0%
15-20	478.9	5.4%	75-80	208.6	2.4%	135-140	1.2	0.0%
20-25	590.5	6.7%	80-85	91.0	1.0%	140-145	1.1	0.0%
25-30	682.2	7.7%	85-90	34.7	0.4%	145-150	1.0	0.0%
30-35	752.7	8.5%	90-95	15.4	0.2%	150-155	0.9	0.0%
35-40	797.1	9.0%	95-100	10.4	0.1%	155-160	0.8	0.0%
40-45	817.1	9.2%	100-105	7.0	0.1%	160-165	0.6	0.0%
45-50	805.3	9.1%	105-110	4.9	0.1%	165-170	0.5	0.0%
50-55	764.2	8.6%	110-115	3.4	0.0%	170-175	0.3	0.0%
55-60	700.3	7.9%	115-120	3.0	0.0%	175-180	0.1	0.0%

Zone	Lumens	% of Luminaire
0-40	3942	44.6%
0-60	7029	79.4%
0-90	8792	99.4%
90-180	56	0.6%



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	3049	3049	3049	3049	3049	3049	3049	3049	3049	3049	3049	3049	3049	3049	3049
	5	3102	3053	3013	3007	3008	3007	3013	3053	3102	3053	3013	3007	3008	3007	3013
	10	3067	3016	2978	2977	2977	2977	2978	3016	3067	3016	2978	2977	2977	2977	2978
	15	3010	2956	2920	2924	2925	2924	2920	2956	3010	2956	2920	2924	2925	2924	2920
	20	2928	2875	2848	2858	2862	2858	2848	2875	2928	2875	2848	2858	2862	2858	2848
	25	2821	2767	2755	2746	2730	2746	2755	2767	2821	2767	2755	2746	2730	2746	2755
	30	2688	2644	2626	2611	2613	2611	2626	2644	2688	2644	2626	2611	2613	2611	2626
	35	2532	2489	2448	2469	2457	2469	2448	2489	2532	2489	2448	2469	2457	2469	2448
	40	2347	2324	2302	2276	2269	2276	2302	2324	2347	2324	2302	2276	2269	2276	2302
	45	2140	2126	2093	2090	2094	2090	2093	2126	2140	2126	2093	2090	2094	2090	2093
	50	1906	1885	1867	1870	1845	1870	1867	1885	1906	1885	1867	1870	1845	1870	1867
	55	1654	1655	1651	1647	1597	1647	1651	1655	1654	1655	1651	1647	1597	1647	1651
	60	1357	1399	1377	1410	1383	1410	1377	1399	1357	1399	1377	1410	1383	1410	1377
	65	1053	1080	1103	1114	1257	1114	1103	1080	1053	1080	1103	1114	1257	1114	1103
	70	749	819	808	814	612	814	808	819	749	819	808	814	612	814	808
	75	464	513	494	455	614	455	494	513	464	513	494	455	614	455	494
	80	234	318	391	249	249	249	391	318	234	318	391	249	249	249	391
	85	89	116	78	107	98	107	78	116	89	116	78	107	98	107	78
	90	13	38	52	52	45	52	52	38	13	38	52	52	45	52	52
	95	14	17	28	23	23	23	28	17	14	17	28	23	23	23	28
	100	16	9	18	18	17	18	18	9	16	9	18	18	17	18	18
	105	11	5	12	14	14	14	12	5	11	5	12	14	14	14	12
	110	7	3	8	11	12	11	8	3	7	3	8	11	12	11	8
	115	5	3	5	8	9	8	5	3	5	3	5	8	9	8	5
	120	4	13	4	6	7	6	4	13	4	13	4	6	7	6	4
	125	3	6	3	5	5	5	3	6	3	6	3	5	5	5	3
	130	3	4	3	3	4	3	3	4	3	4	3	3	4	3	3
	135	3	3	3	3	3	3	3	3	3	3	3	3	3	3	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	4	4	4	4	4	4	3	4	4	4	4	4	4	4
	155	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	160	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	165	4	4	4	4	4	4	4	4	4	4	4	4	4	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/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	15440	15440
	45	14750	11870
	55	13830	10600
	65	11640	8451
	75	7921	4871
	85	3567	1137



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	####	10521	10521	10521	10270	10270	10270	10270	9801	9801	9801	9372	9372	9372	8978	8978	8978	8792
1	9631	9217	8845	8511	9385	9011	8673	8367	8624	8347	8092	8270	8044	7835	7943	7762	7592	7404
2	8760	8038	7440	6937	8523	7866	7316	6849	7543	7080	6681	7245	6859	6520	6969	6651	6367	6173
3	7983	7054	6335	5763	7758	6910	6243	5707	6638	6067	5598	6386	5901	5493	6153	5743	5391	5196
4	7303	6243	5467	4875	7095	6122	5397	4837	5892	5262	4764	5679	5134	4692	5481	5011	4623	4429
5	6711	5572	4776	4189	6520	5469	4722	4163	5275	4616	4111	5093	4515	4061	4924	4418	4012	3822
6	6192	5011	4218	3649	6019	4924	4175	3630	4758	4091	3593	4603	4010	3556	4458	3932	3520	3336
7	5738	4538	3761	3217	5580	4464	3726	3203	4322	3658	3175	4189	3592	3147	4064	3528	3120	2943
8	5338	4137	3383	2864	5195	4073	3354	2853	3951	3298	2832	3836	3243	2811	3728	3191	2790	2620
9	4984	3794	3065	2573	4855	3739	3041	2564	3633	2995	2547	3533	2949	2531	3439	2906	2514	2351
10	4671	3498	2796	2329	4554	3450	2776	2322	3358	2737	2309	3271	2699	2296	3188	2662	2282	2127

Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	191	5.13
6.00	84.7	7.69
8.00	47.6	10.3
10.0	30.5	12.8
12.0	21.2	15.4
14.0	15.6	17.9
16.0	11.9	20.5

Cone of Light Plot

