



8165 E Kaiser Blvd. Anaheim, CA 92808
 p. 714.282.2270
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Test #: L03130308

Date: 3/12/2013



NVLAP LAB CODE 200927-0

Test Report: L03130308

Model Number: CLSPXX36

Report Prepared For: Infinilux
 5349 Zambrano St, Commerce, CA 90040

Test: Electrical and Photometric tests as required by the IESNA test standards.

Standards Used: Appropriate part or all test guidelines were used for test performed:
IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products

Description of Sample: Client submitted the sample. Fixture catalog number is CLSPXX36. Received in working and undamaged condition. No modifications were necessary.

Sample Arrival Date: 2/13/12

Date of Tests: 3/8/13 - 3/11/13

Seasoning of Sample SSL: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S1	01/04/14
Xitron Power Analysis System	2503AH	MT-EL01	01/09/14
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/04/14
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

LM-79 Test Summary

Manufacturer:	Infinilux
Model Number:	CLSPXX36
LAMPCAT:	N/A
Driver Model Number:	THOMAS RESEARCH PRODUCTS LED40W-114-C0350-M
Total Lumens:	4114.94
Input Voltage (VAC):	120.00
Input Current (Amp):	0.34
Input Power (W):	40.85
Input Power Factor:	0.9891
Total Harmonic Distortion @ 120V(%):	10.0%
Total Harmonic Distortion @ 277V(%):	10.0%(0.16A, 41.55W, 0.9591PF)
Efficacy:	100.74
Color Rendering Index (CRI):	73.30
Correlated Color Temperature (K):	4698
Chromaticity Coordinate x:	0.3559
Chromaticity Coordinate y:	0.3710
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	1:10

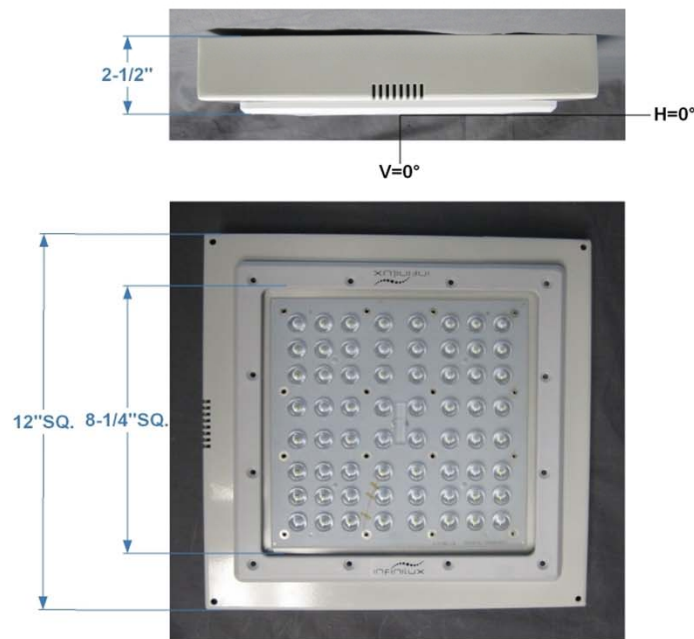
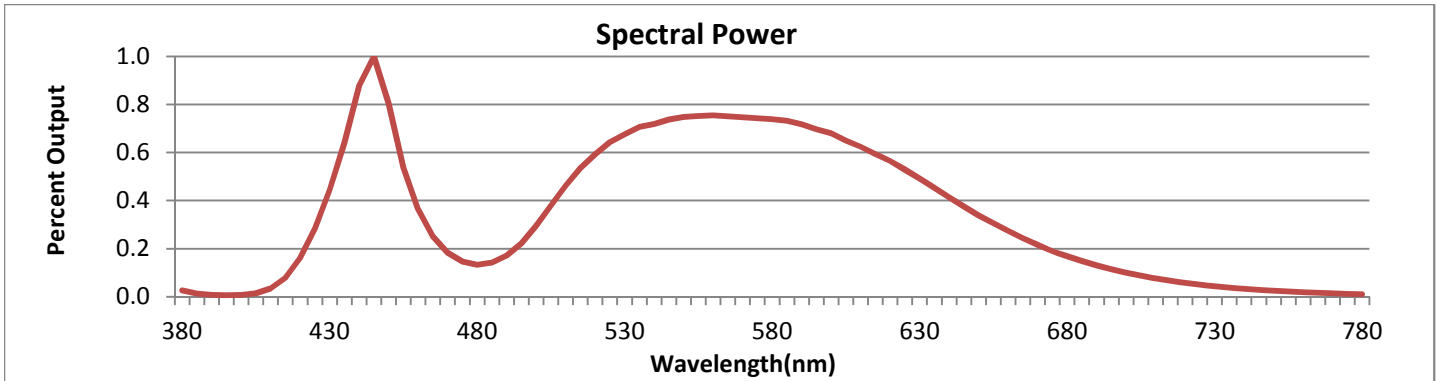


FIG.1 LUMINAIRE

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.



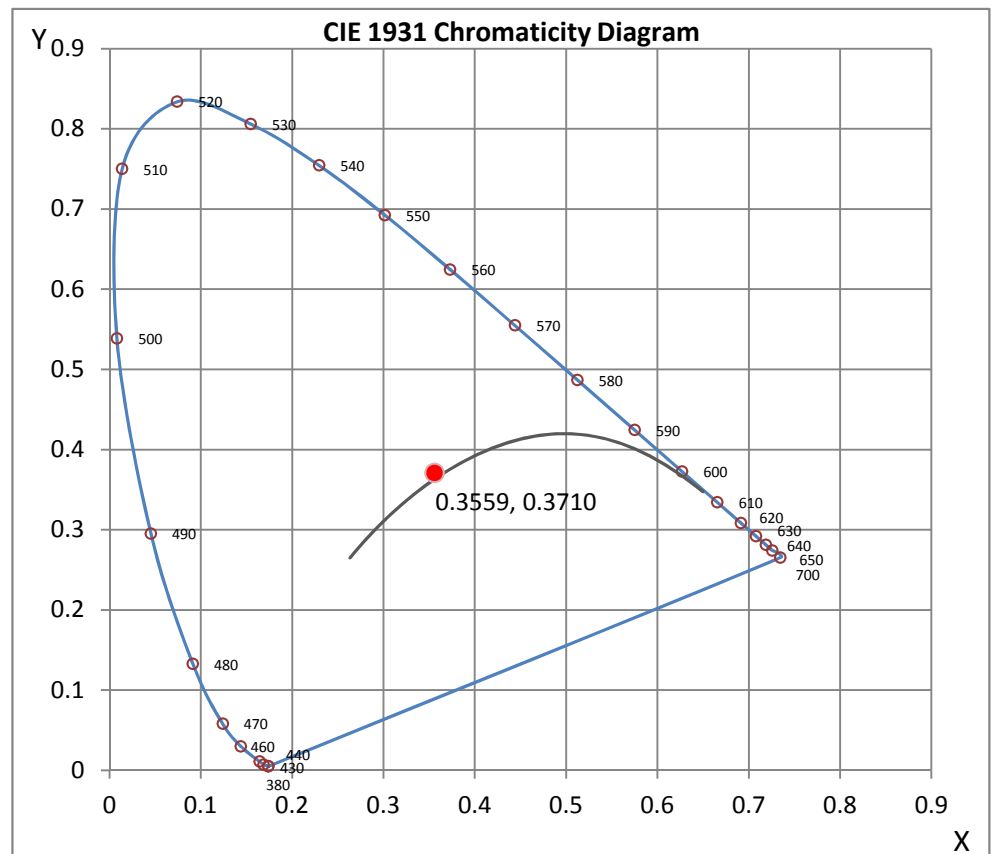
Wavelength	W/m ² nm	440	0.3365	510	0.1768	580	0.2826	650	0.1293	720	0.0218
380	0.0100	450	0.3076	520	0.2268	590	0.2745	660	0.1048	730	0.0166
390	0.0028	460	0.1393	530	0.2586	600	0.2601	670	0.0827	740	0.0125
400	0.0027	470	0.0702	540	0.2753	610	0.2387	680	0.0644	750	0.0094
410	0.0130	480	0.0507	550	0.2861	620	0.2165	690	0.0496	760	0.0071
420	0.0615	490	0.0655	560	0.2890	630	0.1883	700	0.0380	770	0.0053
430	0.1706	500	0.1129	570	0.2856	640	0.1576	710	0.0289	780	0.0038

CRI & CCT

x	0.3559
y	0.3710
u'	0.2112
v'	0.4954
CRI	73.30
CCT	4698
Duv	0.00536

R Values

R1	71.48
R2	76.49
R3	80.48
R4	75.03
R5	71.30
R6	67.93
R7	81.99
R8	61.83
R9	-13.76
R10	44.38
R11	72.54
R12	45.51
R13	72.22
R14	88.51



*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.



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Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Test Report Released by:

Jeff Ahn
Engineering Manager

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 10*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03130308.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L03130308
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 3/12/2013
[MANUFAC] INFINILUX
[LUMCAT] CLSPXX36
[LUMINAIRE] 12"SQ. X 2-1/2"H. LED PERFORMANCE CANOPY
[MORE] LEDS WITH BUBBLE OPTICS
[BALLASTCAT] THOMAS RESEARCH PRODUCTS LED40W-114-C0350-M
[BALLAST] INPUT: 100-277VAC, 0.5A, 50/60Hz. OUTPUT: 350mADC, 38-114VDC, 39.9Wmax
[LAMPPOSITION] 0,0
[LAMPCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[_INPUT] 120VAC, 40.85W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4115
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	40.85
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.82
Spacing Criterion (90-270)	1.80
Spacing Criterion (Diagonal)	1.84
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.69 ft
Luminous Width (90-270)	0.69 ft
Luminous Height	0.00 ft

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03130308.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	34770	39402	33764
55	29850	36308	30874
65	9888	26135	9193
75	4800	6022	4625
85	5442	5442	5442

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03130308.IES

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0.0	938	938	938	938	938	938	938	938	938	938
1.0	939	937	938	939	938	937	938	938	938	938
3.0	950	948	948	950	949	948	949	949	949	949
5.0	976	974	974	976	975	974	974	974	974	974
7.0	1017	1014	1014	1016	1014	1013	1013	1013	1014	1014
9.0	1067	1073	1068	1066	1061	1059	1054	1053	1051	1046
11.0	1121	1119	1118	1122	1121	1121	1122	1123	1125	1124
13.0	1174	1171	1172	1176	1176	1177	1180	1182	1184	1184
15.0	1227	1224	1225	1230	1231	1234	1237	1240	1243	1243
17.0	1283	1280	1280	1286	1287	1290	1296	1299	1302	1301
19.5	1355	1353	1353	1360	1364	1366	1372	1376	1378	1376
22.5	1445	1443	1446	1455	1460	1466	1475	1481	1486	1484
25.5	1497	1497	1502	1514	1525	1536	1553	1568	1579	1580
29.0	1482	1483	1489	1502	1516	1533	1555	1575	1593	1600
33.0	1388	1388	1394	1408	1424	1446	1472	1499	1523	1535
37.5	1247	1249	1258	1276	1297	1323	1357	1389	1415	1424
42.5	1150	1151	1158	1174	1193	1218	1246	1272	1292	1297
47.5	1027	1030	1040	1059	1081	1107	1132	1152	1168	1170
55.0	758	758	767	785	805	829	858	888	911	922
65.0	185	188	206	290	333	368	406	447	479	489
75.0	55	55	56	62	69	73	75	74	68	69
85.0	21	21	22	23	23	23	22	21	21	21
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles **Horizontal Angles**

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0.0	938	938	938	938	938	938	938	938	938
1.0	938	938	938	938	938	938	939	939	937
3.0	948	948	949	949	949	948	949	950	948
5.0	974	974	975	976	976	975	977	977	975
7.0	1013	1013	1014	1015	1015	1015	1016	1016	1014
9.0	1046	1043	1041	1039	1035	1033	1036	1034	1062
11.0	1123	1122	1122	1121	1119	1117	1118	1117	1115
13.0	1183	1181	1179	1177	1174	1170	1170	1169	1166
15.0	1241	1238	1234	1230	1226	1221	1220	1218	1215
17.0	1298	1292	1287	1282	1276	1271	1270	1267	1264
19.5	1371	1364	1357	1351	1345	1340	1339	1337	1333
22.5	1477	1466	1456	1447	1440	1435	1434	1433	1430
25.5	1574	1560	1546	1532	1524	1518	1515	1514	1511
29.0	1598	1588	1578	1568	1560	1554	1551	1549	1545
33.0	1536	1525	1511	1496	1482	1470	1461	1455	1449
37.5	1419	1399	1372	1342	1311	1288	1271	1259	1252
42.5	1283	1254	1222	1188	1161	1140	1125	1114	1109
47.5	1154	1126	1096	1068	1046	1029	1017	1010	1005
55.0	913	887	860	837	819	802	791	785	784
65.0	473	436	393	356	325	280	198	176	172
75.0	68	72	72	71	67	60	55	53	53
85.0	21	21	22	23	23	22	21	21	21
90.0	0	0	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03130308.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	424.24	N.A.	10.30
0-30	1061.45	N.A.	25.80
0-40	1800.63	N.A.	43.80
0-60	3302.86	N.A.	80.30
0-80	4062.08	N.A.	98.70
0-90	4114.94	N.A.	100.00
10-90	4037.79	N.A.	98.10
20-40	1376.39	N.A.	33.40
20-50	2264.56	N.A.	55.00
40-70	2055.78	N.A.	50.00
60-80	759.22	N.A.	18.50
70-80	205.68	N.A.	5.00
80-90	52.85	N.A.	1.30
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4114.94	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	77.14
10-20	347.10
20-30	637.22
30-40	739.17
40-50	888.17
50-60	614.07
60-70	553.54
70-80	205.68
80-90	52.85
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

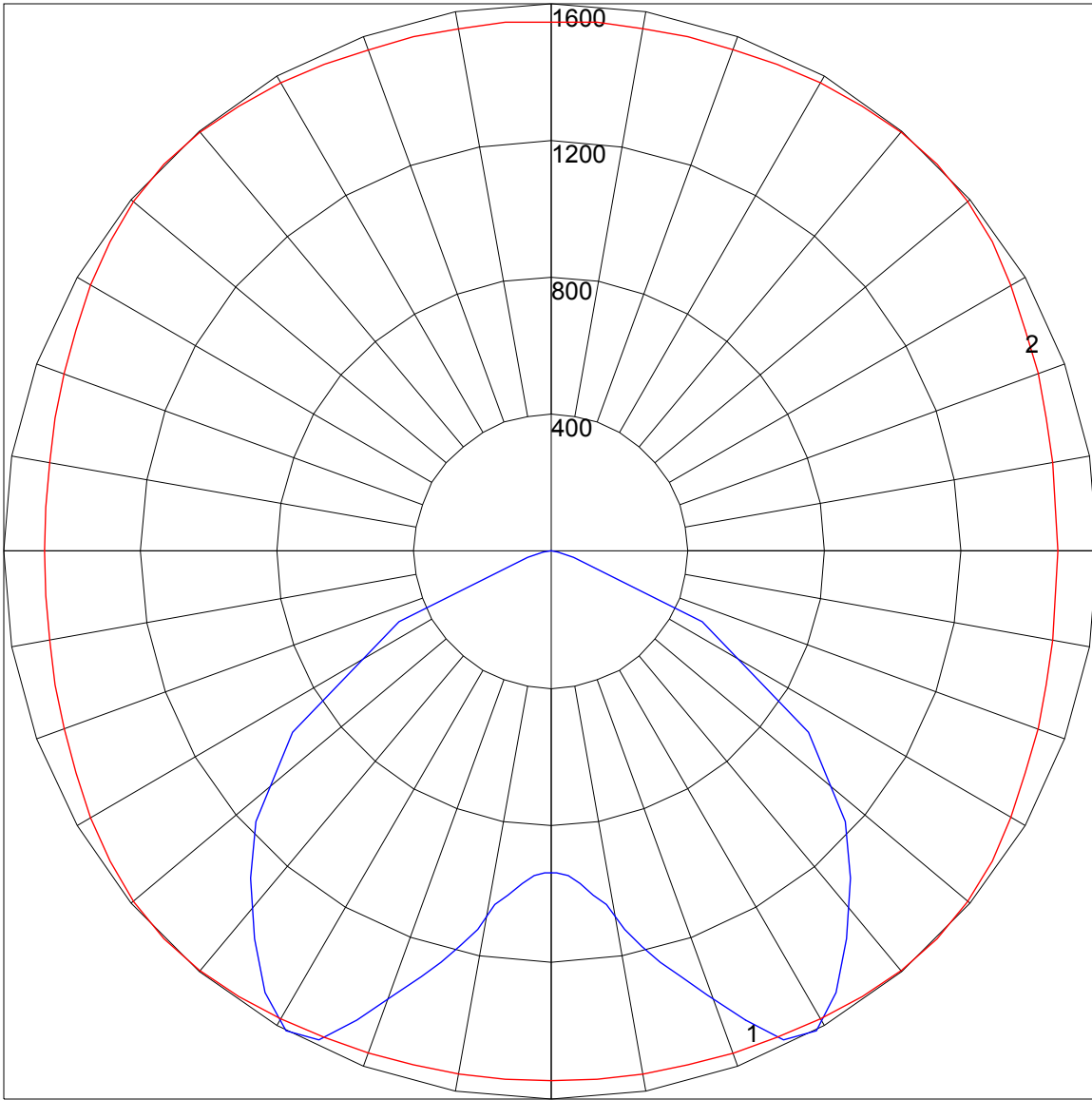
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03130308.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	90	80	72	65	88	78	71	65	75	69	63	73	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	41	36	48	41	35	47	40	35	46	39	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	41	33	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

POLAR GRAPH



Maximum Candela = 1600 Located At Horizontal Angle = 45, Vertical Angle = 29
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (29) (Through Max. Cd.)