



8165 E Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

Test #: L06122602

Date: 6/15/2012



NVLAP LAB CODE 200927-0

Test Report: L06122602

Model Number: MLRT24D5550

Report Prepared For: MAXLITE
11810 Jersey Blvd. Rancho Cucamonga, CA 91730

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 one sample of 2X4 5000K LED ceiler troffer. Fixture catalog number is MLFP24DLCT50. Received in working and undamaged condition. No modifications were necessary.

Sample Arrival Date: 6/1/12

Date of Tests: 6/11/12 - 6/15/12

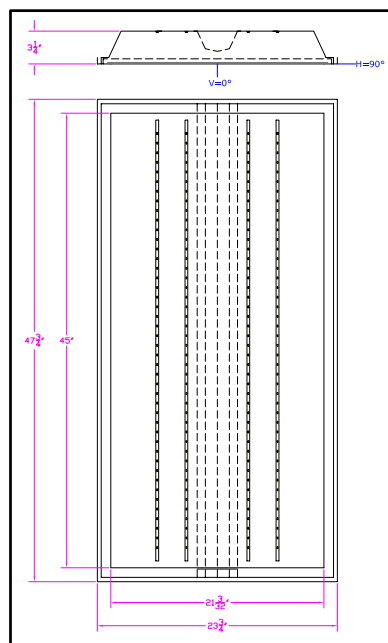
Seasoning of Sample SSL: No seasoning was performed in accordance with IESNA LM-79.

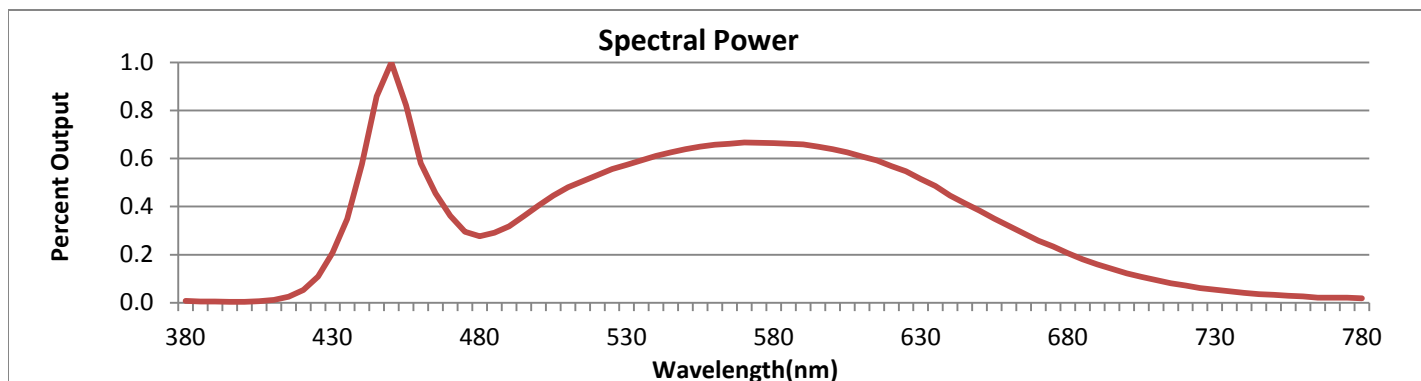
Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S1	01/04/13
Xitron Power Analysis System	2503AH	MT-EL01	01/09/13
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/04/13
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

LM-79 Test Summary

Manufacturer:	MAXLITE
Model Number:	MLRT24D5550
Total Lumens:	4903.66
Input Voltage (VAC):	120.00
Input Current (Amp):	0.46
Input Power (W):	54.67
Input Power Factor:	0.99
Efficacy:	89.70
Color Rendering Index (CRI):	84.93
Correlated Color Temperature (CCT):	4846
Chromaticity Coordinate x:	0.3496
Chromaticity Coordinate y:	0.3557
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	1:30
Total Operating Time (Hours):	2:00





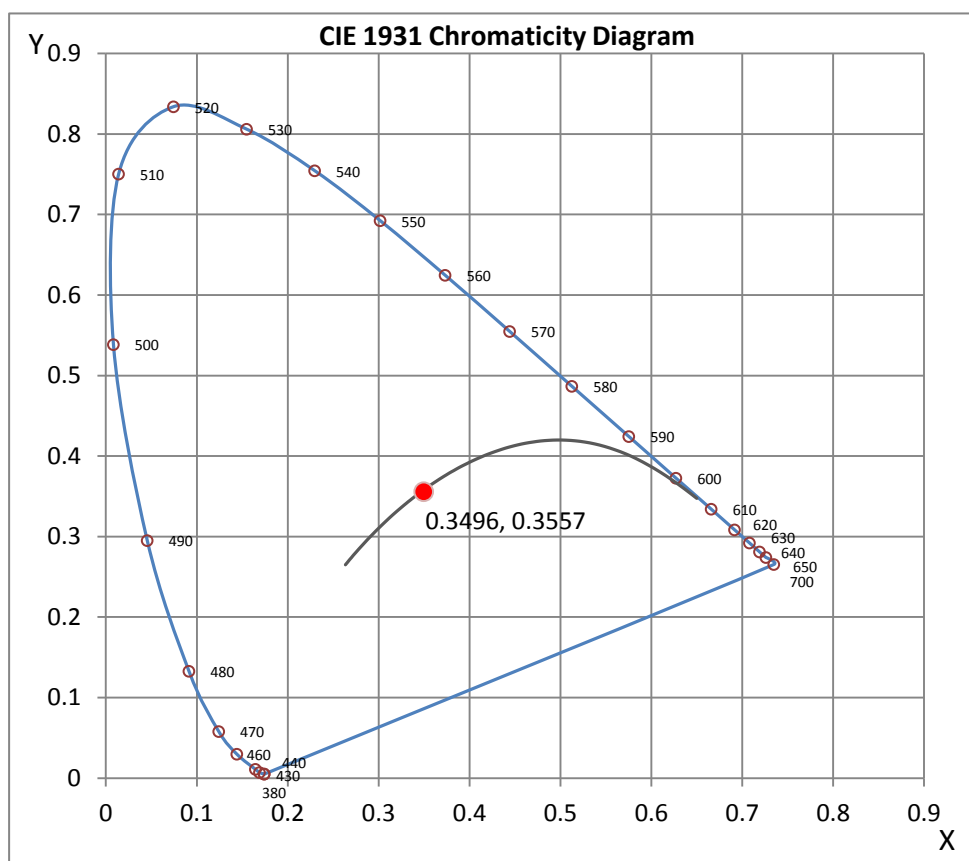
Wavelength	W/m ² nm	440	0.4089	510	0.3412	580	0.4718	650	0.2721	720	0.0504
380	0.0051	450	0.7095	520	0.3773	590	0.4677	660	0.2263	730	0.0383
390	0.0031	460	0.4119	530	0.4071	600	0.4535	670	0.1831	740	0.0291
400	0.0025	470	0.2569	540	0.4337	610	0.4322	680	0.1460	750	0.0237
410	0.0078	480	0.1965	550	0.4537	620	0.4030	690	0.1130	760	0.0186
420	0.0373	490	0.2254	560	0.4663	630	0.3655	700	0.0862	770	0.0151
430	0.1471	500	0.2873	570	0.4729	640	0.3164	710	0.0664	780	0.0129

CRI & CCT

x	0.3496
y	0.3557
u'	0.2129
v'	0.4873
CRI	84.93
CCT	4846
Duv	0.00029

R Values

R1	83.67
R2	88.83
R3	91.46
R4	84.61
R5	83.47
R6	83.22
R7	89.84
R8	74.39
R9	27.75
R10	72.36
R11	82.86
R12	61.12
R13	84.83
R14	95.23





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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:

Joseph Shin
Engineering Manager

Test Report Reviewed by:

Steve Kang
Quality Assurance

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

**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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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L06122602.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L06122602
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 6/15/2012
[MANUFAC] MAXLITE
[LUMCAT] MLRT24D5550
[LUMINAIRE] 47-3/4"L. X 23-3/4"W. X 3-1/4"H. 2X4 RECESSED CEILING TROFFER
[MORE] 4 LED STRIPS, EACH STRIP HAS 44 5000K LEDS,
[MORE] WHITE REFLECTOR, PRISMATIC ACRYLIC LENS
[BALLASTCAT] GP CHINA GP-C140S055DT
[BALLAST] INPUT: 100-240VAC, 50/60Hz OUTPUT: 9-37VDC, 1.40A
[LAMPPOSITION] 0,0
[LAMPCAT] 5000K LED
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 54.67W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4904
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	54.67
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.75 ft
Luminous Width (90-270)	1.76 ft
Luminous Height	0.00 ft

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L06122602.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2797	2694	2486
55	2253	1974	1758
65	1785	1361	1430
75	1498	1171	1479
85	1552	1346	1533

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L06122602.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	2171	2171	2171	2171	2171
5	2145	2149	2160	2164	2185
10	2121	2123	2135	2137	2156
15	2076	2078	2088	2087	2103
20	2010	2013	2015	2013	2028
25	1917	1918	1916	1912	1919
30	1789	1786	1781	1768	1773
35	1632	1620	1600	1582	1578
40	1434	1420	1390	1360	1344
45	1214	1201	1169	1109	1079
50	998	977	931	848	822
55	793	757	695	633	619
60	627	576	516	488	483
65	463	407	353	371	371
70	335	290	246	291	296
75	238	212	186	227	235
80	163	145	138	160	165
85	83	77	72	82	82
90	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L06122602.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1673.45	N.A.	34.10
0-40	2670.4	N.A.	54.50
0-60	4196.34	N.A.	85.60
0-90	4903.66	N.A.	100.00
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
0-180	4903.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	205.34
10-20	588.22
20-30	879.89
30-40	996.95
40-50	890.29
50-60	635.65
60-70	394.15
70-80	229.19
80-90	83.99
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

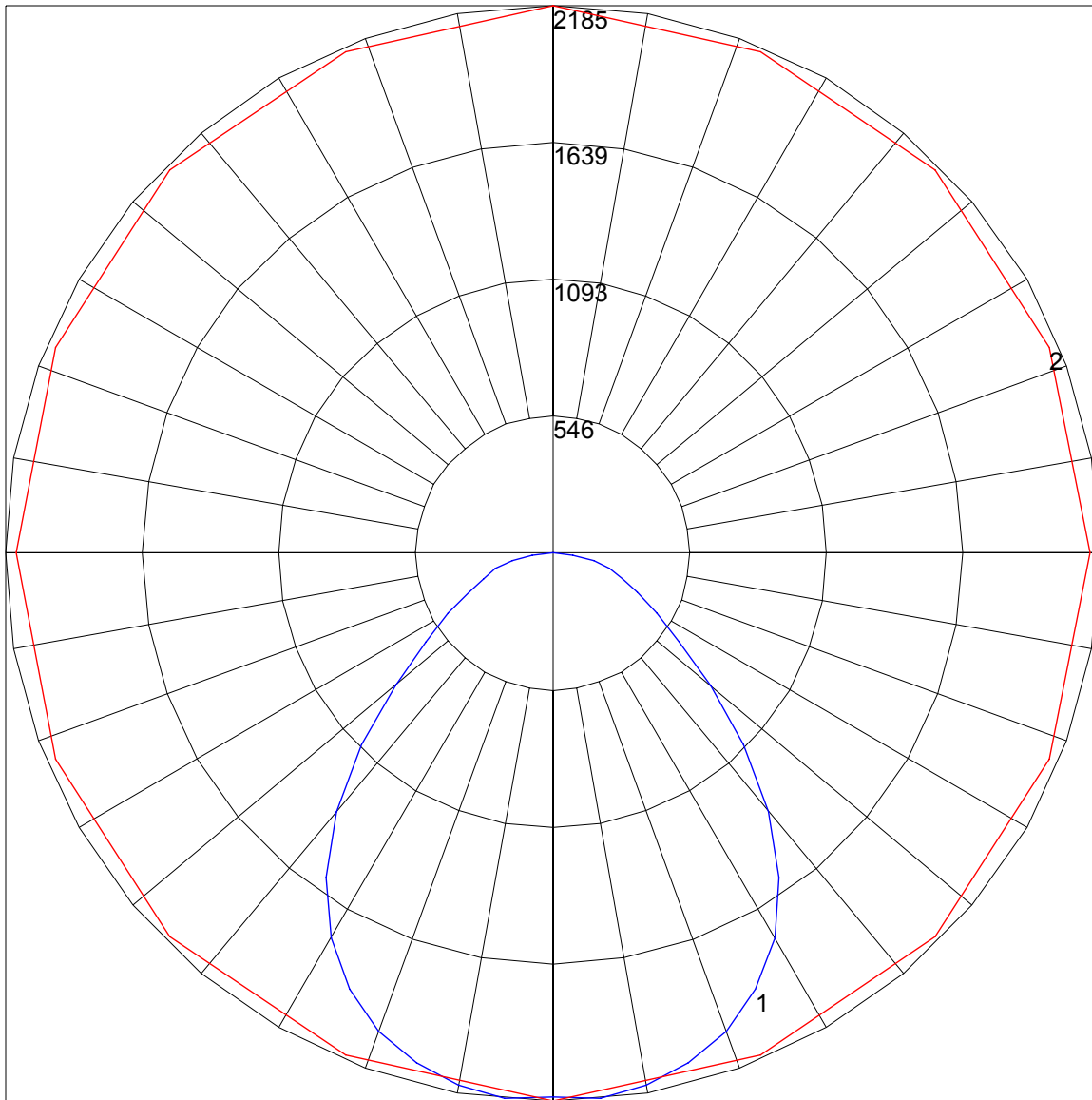
IES INDOOR REPORT
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	58	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	50	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	35	31	29

POLAR GRAPH



Maximum Candela = 2185 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.): BLUE
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.): RED