



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

Test #: L11125507

Date: 12/5/2012



NVLAP LAB CODE 200927-0

Test Report: L11125507

Model Number: MLVT22D4535

Report Prepared For: MaxLite
12 York Ave. West Caldwell, NJ. 07006

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 MLVT22D4535. Received in working and undamaged condition. No modifications were necessary.

Sample Arrival Date: 11/19/12

Date of Tests: 12/3/12 - 12/4/12

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:	MLVT22D4535
LAMPCAT:	N/A
Driver Model Number:	GP CHINA GP-C110S042DS
Total Lumens:	3101.14
Input Voltage (VAC):	120.00
Input Current (Amp):	0.34
Input Power (W):	40.28
Input Power Factor:	0.9912
Total Harmonic Distortion @ 120V(%):	6.4%
Total Harmonic Distortion @ 277V(%):	7.6%(0.15A, 40.18W, 0.9668PF)
Efficacy:	76.99
Color Rendering Index (CRI):	87.00
Correlated Color Temperature (CCT):	4030
Chromaticity Coordinate x:	0.3750
Chromaticity Coordinate y:	0.3610
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:40
Total Operating Time (Hours):	1:20

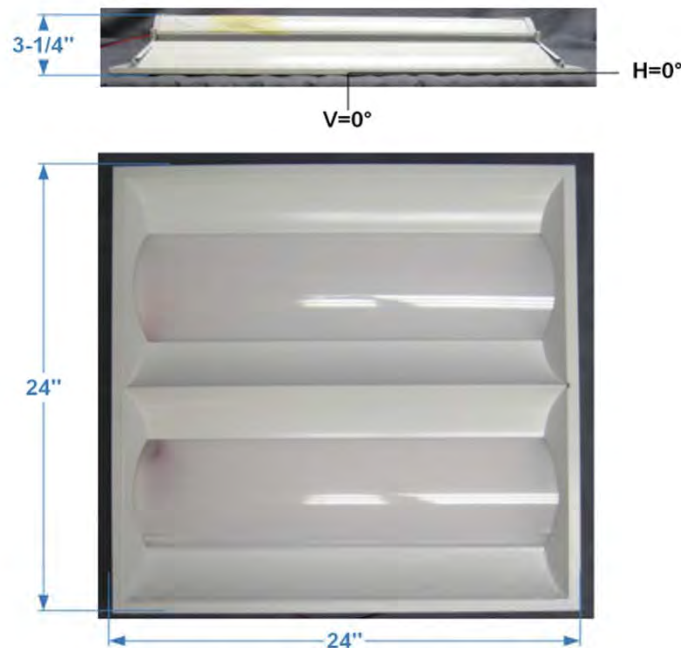
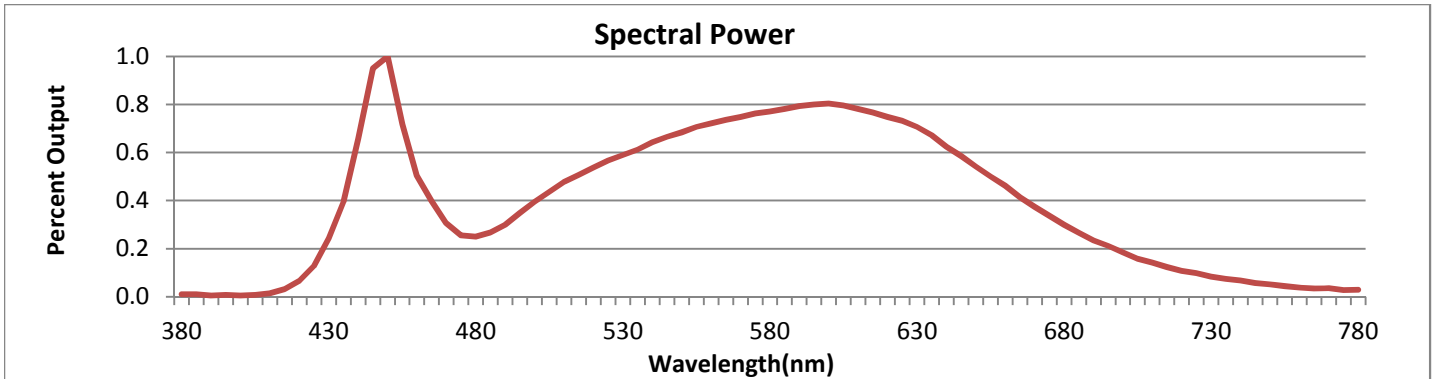


FIG. 1 LUMINAIRE



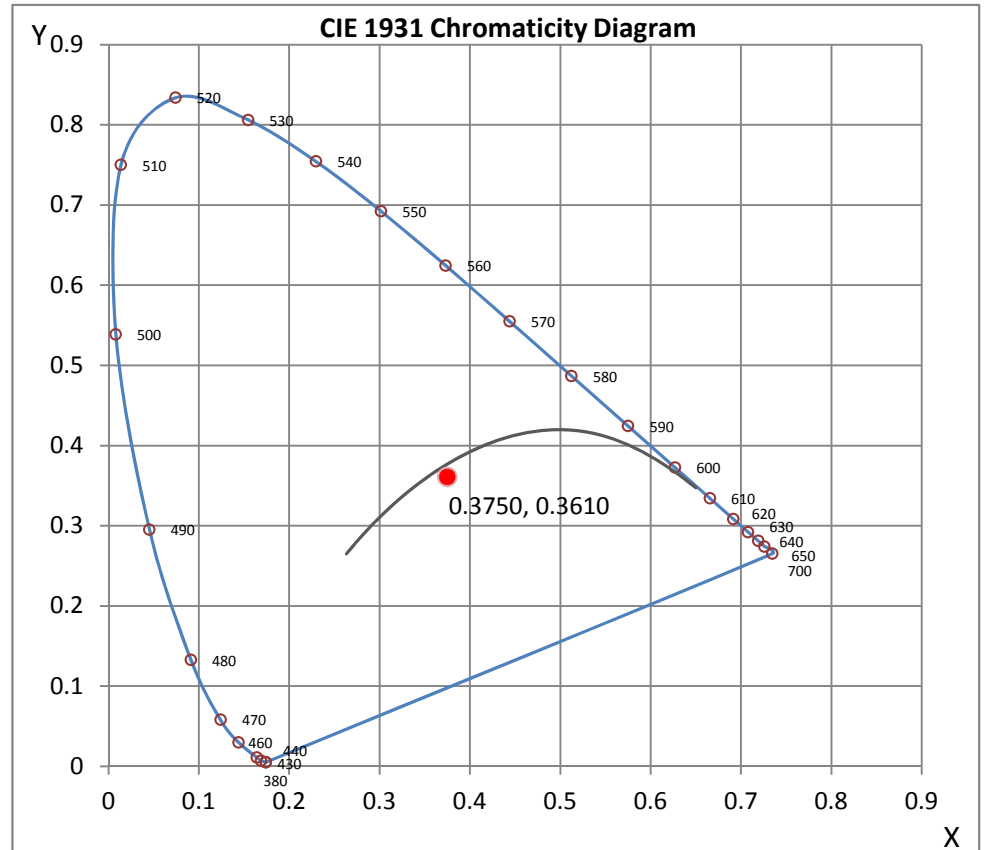
Wavelength	W/m ² nm	440	0.1750	510	0.1270	580	0.2050	650	0.1440	720	0.0285
380	0.0027	450	0.2660	520	0.1430	590	0.2110	660	0.1230	730	0.0223
390	0.0014	460	0.1340	530	0.1570	600	0.2140	670	0.0995	740	0.0178
400	0.0014	470	0.0815	540	0.1710	610	0.2080	680	0.0796	750	0.0136
410	0.0038	480	0.0665	550	0.1820	620	0.1990	690	0.0624	760	0.0102
420	0.0175	490	0.0797	560	0.1920	630	0.1880	700	0.0491	770	0.0095
430	0.0648	500	0.1050	570	0.1990	640	0.1660	710	0.0379	780	0.0076

CRI & CCT

x	0.3750
y	0.3610
u'	0.2279
v'	0.4936
CRI	87.00
CCT	4030
Duv	-0.00595

R Values

R1	87.40
R2	90.90
R3	91.50
R4	86.90
R5	87.10
R6	85.90
R7	88.90
R8	77.40
R9	42.00
R10	76.90
R11	85.80
R12	69.70
R13	88.00
R14	94.90





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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*



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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L11125507.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L11125507
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 12/4/2012
[MANUFAC] MAXLITE
[LUMCAT] MLVT22D4535
[LUMINAIRE] 24"SQR. X 3"H. VOLUMETRIC
[MORE] TWO MODULES OF 3500K LEDS WITH DIFFUSED ACRYLLIC LENS
[BALLASTCAT] GP CHINA GP-C110S042DS
[BALLAST] INPUT: 100-277VAC, 50/60HZ, 0.6A MAX OUTPUT: 20-40VDC, 1.05A
[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, 40.28W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3101
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	40.28
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.73 ft
Luminous Width (90-270)	1.73 ft
Luminous Height	0.00 ft

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L11125507.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3491	3720	3882
55	3120	3427	3608
65	2772	3171	3078
75	2152	2374	2013
85	1196	948	866

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L11125507.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	1220	1220	1220	1220	1220
5	1211	1209	1207	1216	1222
10	1187	1187	1187	1196	1203
15	1148	1149	1153	1164	1172
20	1096	1099	1106	1120	1128
25	1031	1037	1049	1065	1074
30	956	965	981	1000	1009
35	872	883	905	926	935
40	782	795	822	845	853
45	687	702	732	756	764
50	592	608	640	664	670
55	498	514	547	570	576
60	410	426	457	481	478
65	326	342	373	373	362
70	238	255	274	256	245
75	155	173	171	154	145
80	82	94	84	71	65
85	29	31	23	21	21
90	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L11125507.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	441.05	N.A.	14.20
0-30	924.88	N.A.	29.80
0-40	1490.36	N.A.	48.10
0-60	2538.71	N.A.	81.90
0-80	3065.59	N.A.	98.90
0-90	3101.14	N.A.	100.00
10-90	2986.09	N.A.	96.30
20-40	1049.31	N.A.	33.80
20-50	1611.82	N.A.	52.00
40-70	1400.89	N.A.	45.20
60-80	526.88	N.A.	17.00
70-80	174.34	N.A.	5.60
80-90	35.55	N.A.	1.10
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	3101.14	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

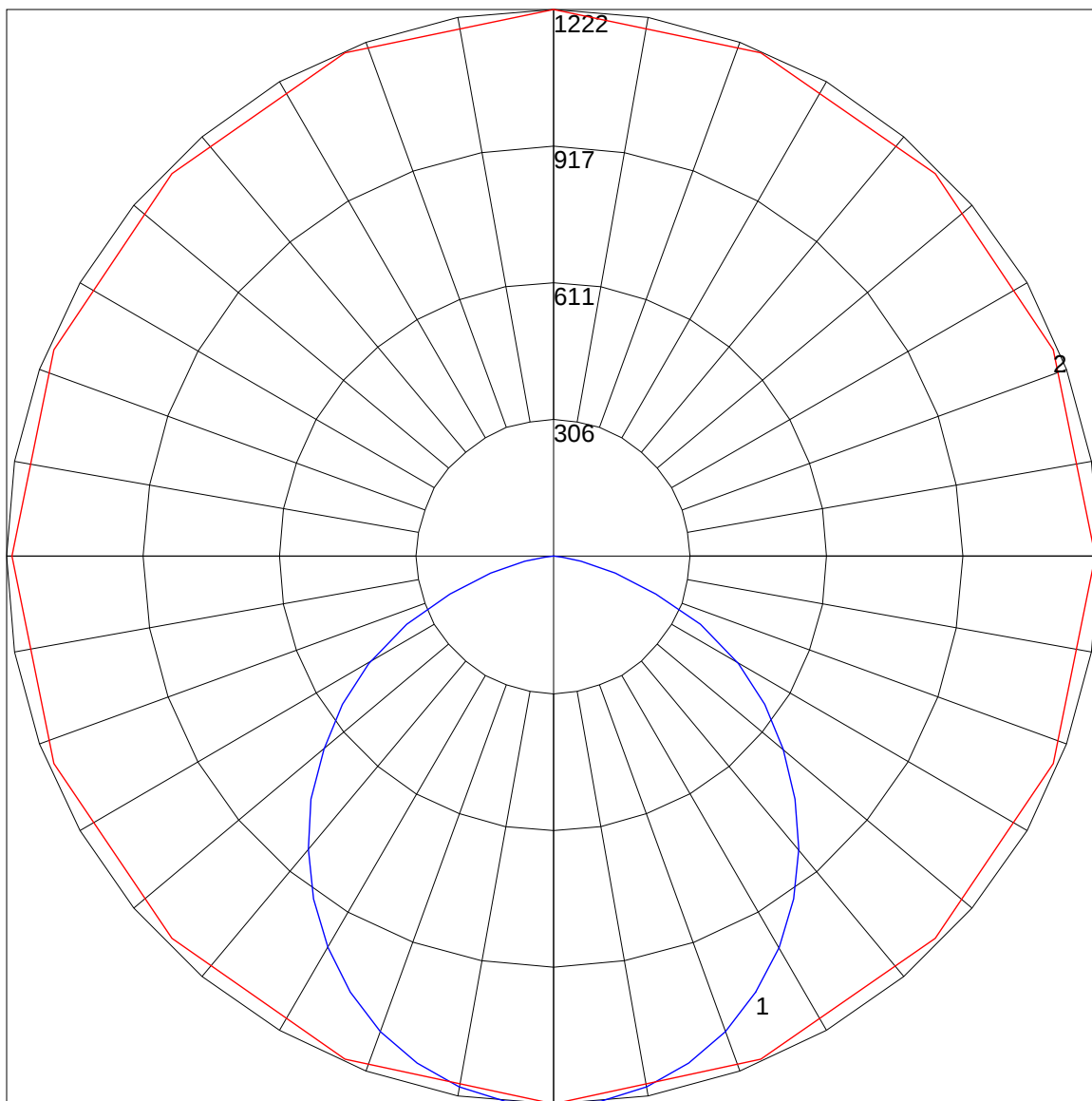
Zone	Lumens
0-10	115.05
10-20	326.00
20-30	483.84
30-40	565.48
40-50	562.51
50-60	485.84
60-70	352.54
70-80	174.34
80-90	35.55
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	81	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	66	77	70	65	74	68	64	71	67	63	61
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	59	54	52
5	77	65	56	49	75	63	55	49	61	54	49	59	53	48	58	52	47	45
6	71	58	50	43	69	57	49	43	56	48	43	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	51	43	38	49	43	38	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	31	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

POLAR GRAPH



Maximum Candela = 1222 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)