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Test #: L03148701

Date: 4/8/2014



NVLAP LAB CODE 200927-0

Test Report: L03148701

Model Number: 1057-XX-NS-C-30

Report Prepared For: U.S.T.E. dba Vista Professional Outdoor Lighting
 1625 Surveyor Ave. Simi Valley CA 93063

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
ANSI C82.77:2002: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Fixture catalog number is 1057-AL-B-SP-40-MV. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 3/26/14

Date of Tests: 4/2/14 - 4/3/14

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	01/04/15
Xitron Power Analysis System	2503AH	MT-EL01	01/09/15
BK Precision DC Power Supply	1747	PSDC-04	01/08/15
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/04/15
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:	U.S.T.E. dba Vista Professional Outdoor Lighting
Model Number:	1057-XX-NS-C-30
LAMPCAT:	N/A
Driver Model Number:	THOMAS RESEARCH PRODUCTS LED40W-045-C0900-D
Total Lumens:	2825.26
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.36
Input Power (W):	42.68
Input Power Factor:	1.00
Total Harmonic Distortion @ 120V(%):	2%
Total Harmonic Distortion @ 277V(%):	N/A
Efficacy:	66
Color Rendering Index (CRI):	82
Correlated Color Temperature (K):	3141
Chromaticity Coordinate x:	0.4275
Chromaticity Coordinate y:	0.4012
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	1:35
Total Operating Time (Hours):	2:20
Off State Power(W):	0.00

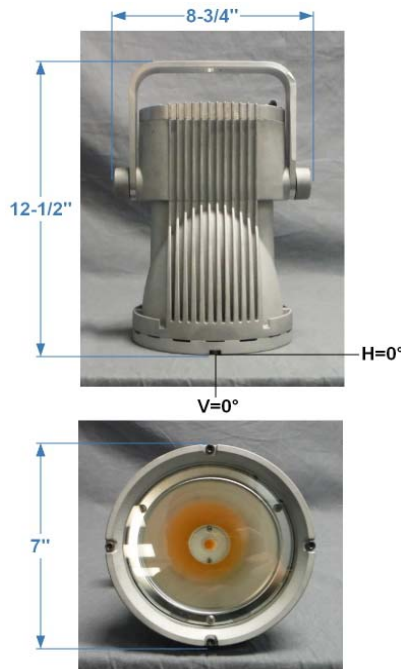
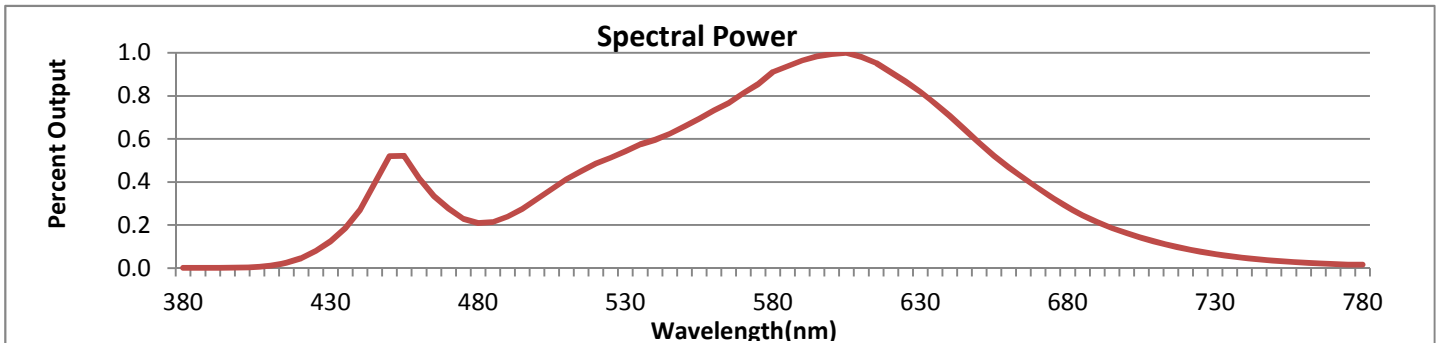


FIG.1 LUMINAIRE

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



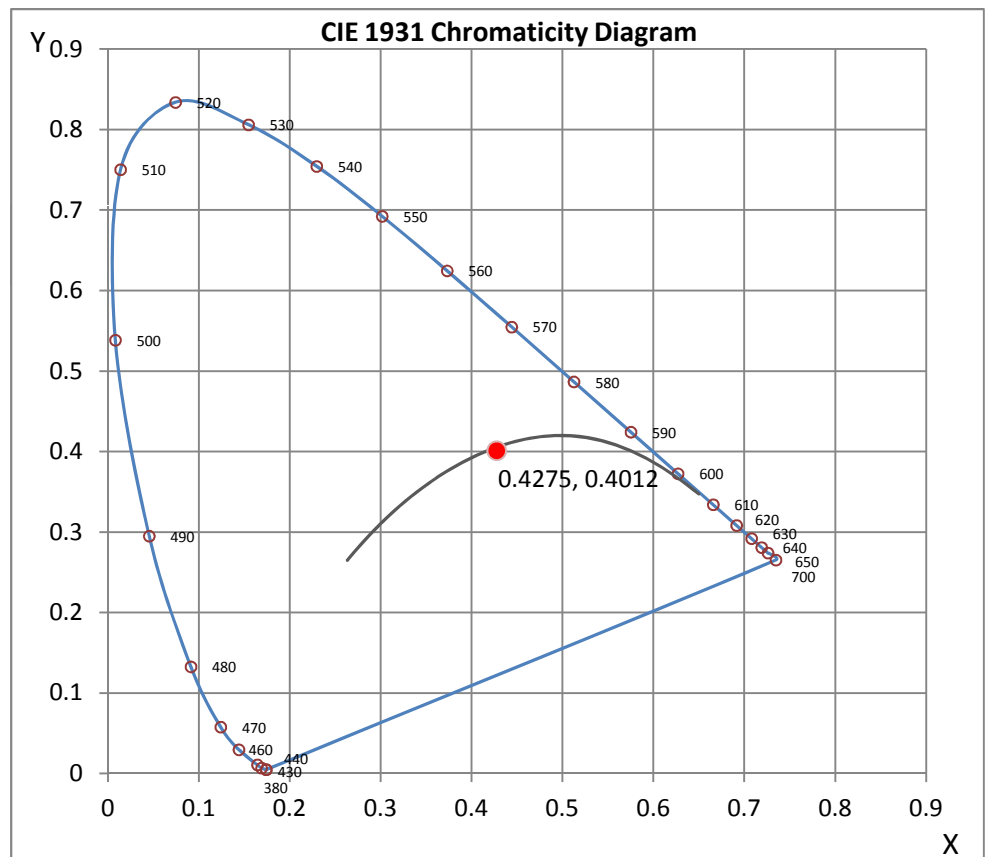
Wavelength	W/m ² nm	440	0.0115	510	0.0176	580	0.0389	650	0.0248	720	0.0038
380	0.0000	450	0.0222	520	0.0207	590	0.0412	660	0.0200	730	0.0028
390	0.0000	460	0.0178	530	0.0232	600	0.0424	670	0.0159	740	0.0020
400	0.0001	470	0.0118	540	0.0255	610	0.0419	680	0.0121	750	0.0015
410	0.0005	480	0.0089	550	0.0281	620	0.0389	690	0.0091	760	0.0011
420	0.0020	490	0.0102	560	0.0313	630	0.0349	700	0.0069	770	0.0008
430	0.0053	500	0.0137	570	0.0347	640	0.0302	710	0.0052	780	0.0007

CRI & CCT

x	0.4275
y	0.4012
u'	0.2457
v'	0.5188
CRI	81.90
CCT	3141
Duv	0.00024

R Values

R1	80.00
R2	89.65
R3	96.51
R4	79.65
R5	79.69
R6	86.41
R7	83.69
R8	59.83
R9	6.68
R10	75.74
R11	77.85
R12	67.86
R13	82.16
R14	98.20



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

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.

Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

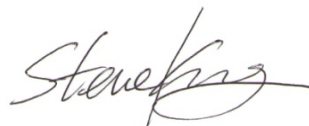
Report Prepared by : THI NGUYEN

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: 8



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Photometric Test Report

IES FLOOD REPORT

PHOTOMETRIC FILENAME : L03148701.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L03148701
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 04/08/2014
[MANUFAC] U.S.T.E.DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1057-XX-NS-C-30
[LUMINAIRE] 7"DIA. X 12-1/2"H. LED FIXTURE
[MORE] CLEAR LENS
[BALLASTCAT] THOMAS RESEARCH PRODUCTS LED40W-045-C0900-D
[BALLAST] INPUT: 100-277VAC, 0.40A, 50/60HZ OUTPUT: 15-45VDC, 900mA, 40W
[LAMPPOSITION] 0,0
[LAMP CAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[_INPUT] 120VAC, 42.68W
[_TEST PROCEDURE] IESNA:LM-79-08

Note: Candela values converted from Type-C to Type-B

CHARACTERISTICS

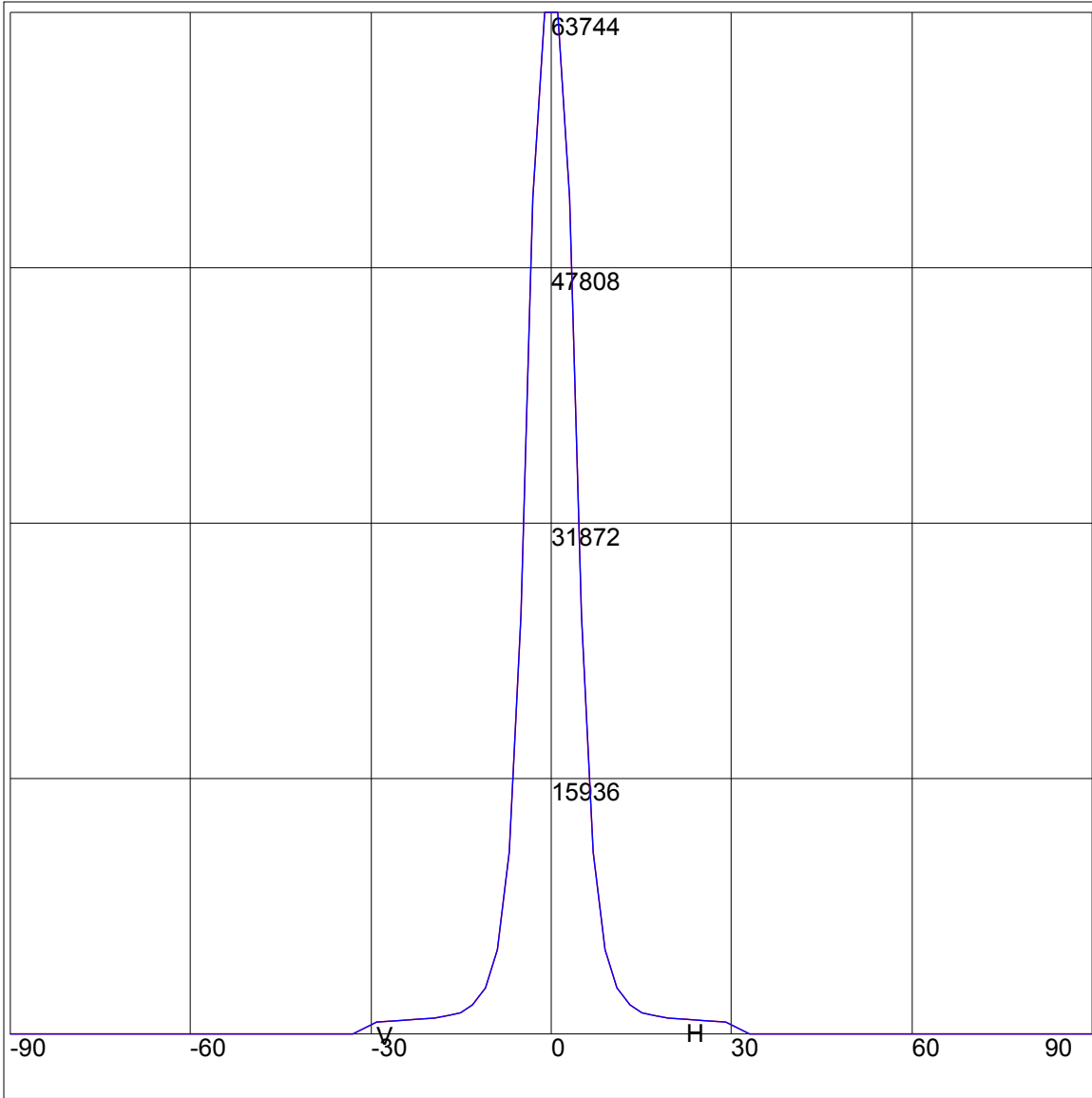
NEMA Type	1 H x 1 V
Maximum Candela	63744
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	9.1
Vertical Beam Angle (50%)	9.1
Horizontal Field Angle (10%)	17.3
Vertical Field Angle (10%)	17.3
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1104
Beam Efficiency	N.A.
Field Lumens	1729
Field Efficiency	N.A.
Spill Lumens	1096
Luminaire Lumens	2825
Total Efficiency	N.A.
Total Luminaire Watts	42.68
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L03148701.IES

AXIAL CANDELA

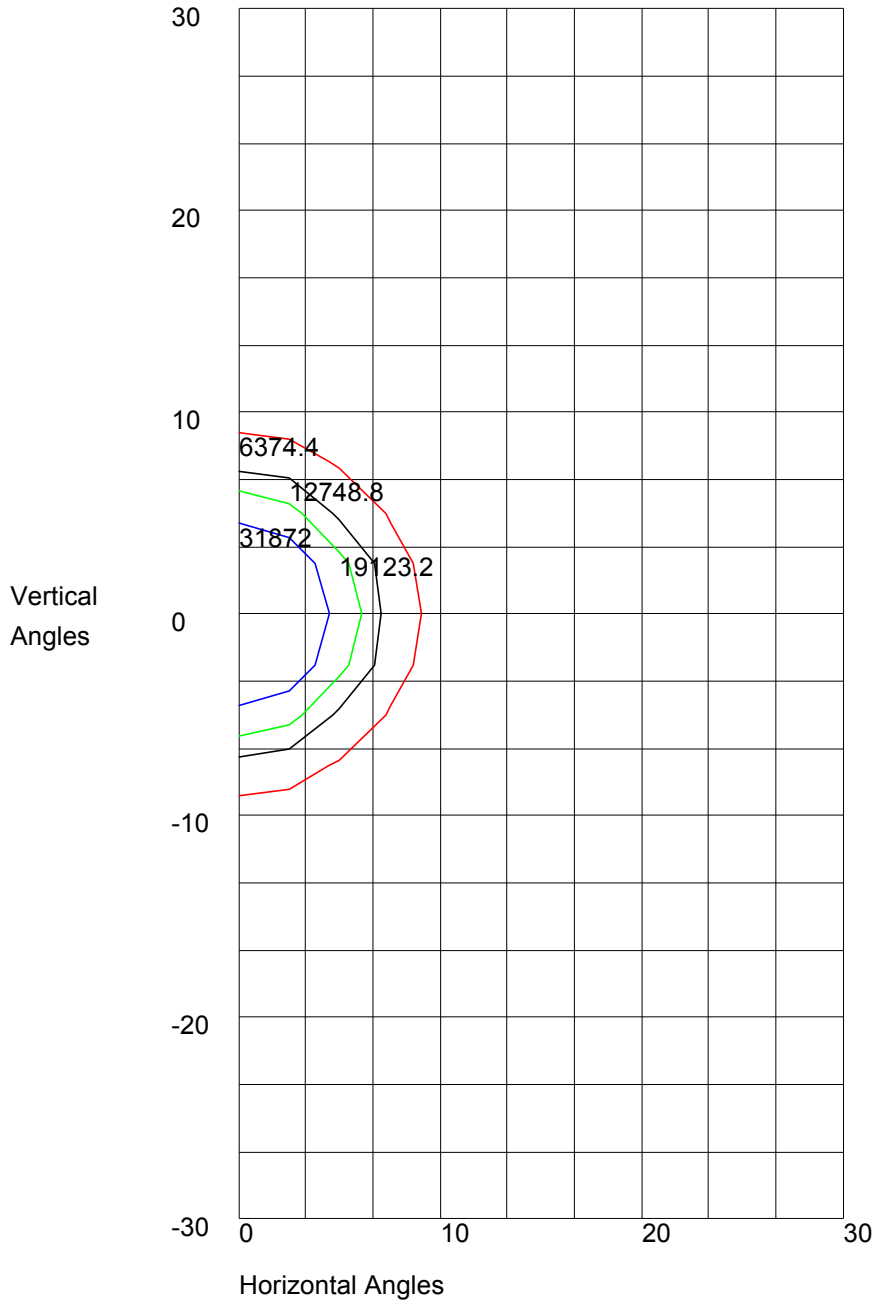
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	9	85	9
75	10	75	10
65	11	65	11
55	12	55	12
47.5	14	47.5	14
42.5	20	42.5	20
37.5	30	37.5	30
33	70	33	70
29	756	29	756
25.5	864	25.5	864
22.5	913	22.5	913
19.5	1017	19.5	1017
17	1180	17	1180
15	1392	15	1392
13	1850	13	1850
11	2875	11	2875
9	5265	9	5265
7	11389	7	11389
5	26153	5	26153
3	52155	3	52155
1	63728	1	63728
0	63744	0	63744
-1	63728	-1	63728
-3	52155	-3	52155
-5	26153	-5	26153
-7	11389	-7	11389
-9	5265	-9	5265
-11	2875	-11	2875
-13	1850	-13	1850
-15	1392	-15	1392
-17	1180	-17	1180
-19.5	1017	-19.5	1017
-22.5	913	-22.5	913
-25.5	864	-25.5	864
-29	756	-29	756
-33	70	-33	70
-37.5	30	-37.5	30
-42.5	20	-42.5	20
-47.5	14	-47.5	14
-55	12	-55	12
-65	11	-65	11
-75	10	-75	10
-85	9	-85	9
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 63744 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 63744 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 31872
10% Maximum Candela = 6374.4