



PROFESSIONAL
OUTDOOR LIGHTING



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

Report No: L081407404

Date: 9/3/2014



NVLAP LAB CODE 200927-0

Report No: L081407404

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

Model Number: 1059-XX-MF-D-30

Electrical and Photometric tests

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. Catalog number is 1059-XX-MF-D-30 . Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 8/26/14

Date of Tests: 8/28/14 - 8/28/14

Seasoning of Sample: 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.

Test Summary

Manufacturer:	U.S.T.E. dba Vista Professional Outdoor Lighting
Model Number:	1059-XX-MF-D-30
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-092-C1050-D
Total Lumens:	3407.20
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.41
Input Power (W):	48.20
Input Power Factor:	0.99
Current ATHD @ 120V(%):	12%
Current ATHD @ 277V(%):	N/A
Efficacy:	71
Color Rendering Index (CRI):	82
Correlated Color Temperature (K):	3106
Chromaticity Coordinate x:	0.4317
Chromaticity Coordinate y:	0.4060
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:35
Total Operating Time (Hours):	1:15
Off State Power(W):	0.00

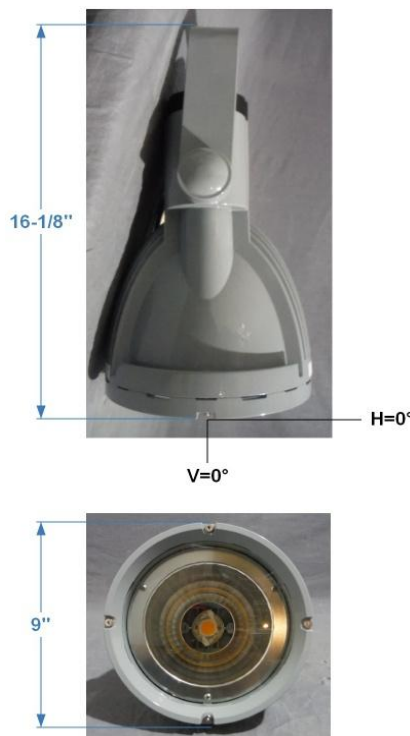
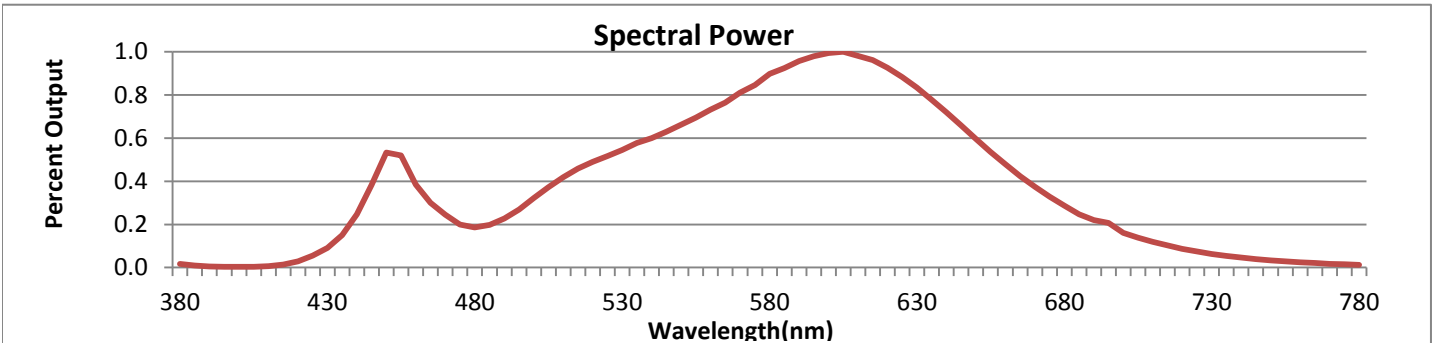


FIG. 1 LUMINAIRE

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



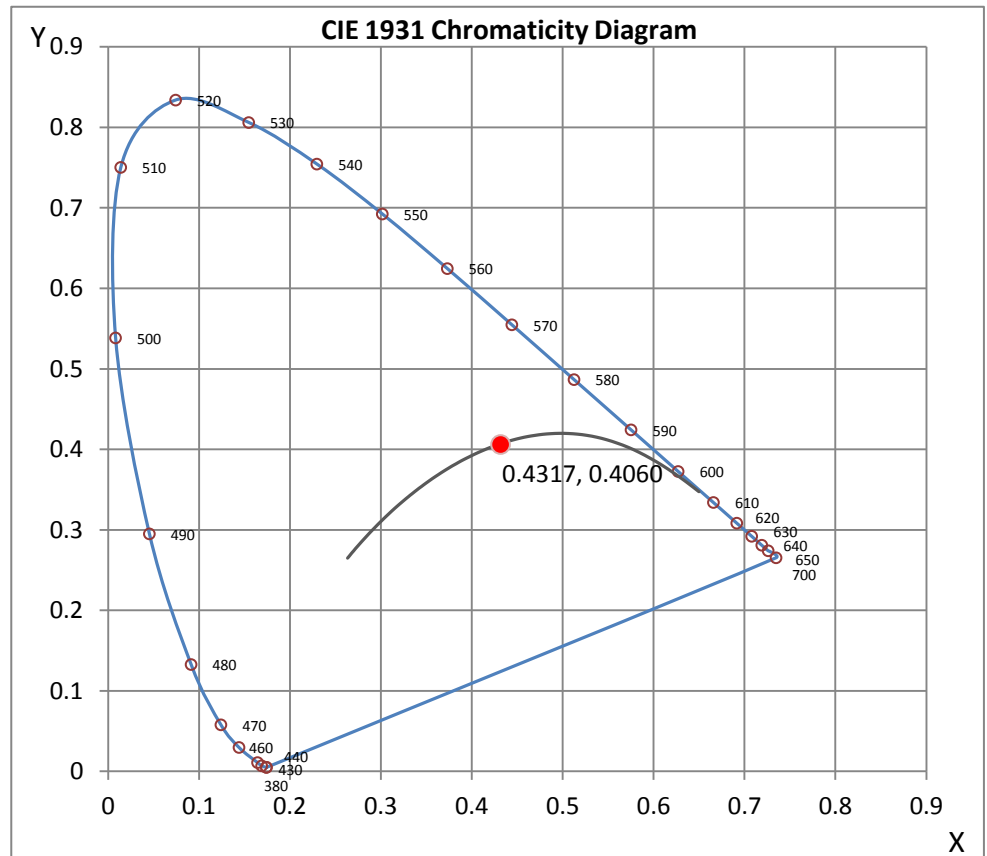
Wavelength	W/m ² nm	440	0.0678	510	0.1153	580	0.2476	650	0.1644	720	0.0240
380	0.0047	450	0.1467	520	0.1348	590	0.2639	660	0.1321	730	0.0174
390	0.0014	460	0.1058	530	0.1503	600	0.2738	670	0.1031	740	0.0126
400	0.0008	470	0.0678	540	0.1655	610	0.2702	680	0.0790	750	0.0091
410	0.0019	480	0.0512	550	0.1824	620	0.2551	690	0.0606	760	0.0067
420	0.0080	490	0.0626	560	0.2016	630	0.2297	700	0.0441	770	0.0048
430	0.0252	500	0.0889	570	0.2232	640	0.1982	710	0.0330	780	0.0036

CRI & CCT

x	0.4317
y	0.4060
u'	0.2464
v'	0.5214
CRI	82.20
CCT	3106
Duv	0.00153

R Values

R1	80.30
R2	89.30
R3	96.62
R4	80.50
R5	79.79
R6	86.00
R7	84.60
R8	60.88
R9	8.49
R10	75.00
R11	78.95
R12	65.74
R13	82.87
R14	98.03



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



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

Report No: L081407404

Date: 9/3/2014



NVLAP LAB CODE 200927-0

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 : Wilson Khounlavong

Test Report Released by:

Test Report Reviewed by:

Jeff Ahn
 Engineering Manager

Steve Kang
 Quality Assurance

**Attached are photometric data reports. Total number of pages: 8*

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



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

Photometric Test Report

IES FLOOD REPORT

PHOTOMETRIC FILENAME : L081407404.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081407404
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 9/3/2014
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1059-XX-MF-D-30
[LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE
[MORE] CLEAR LENS
[BALLASTCAT] THOMAS RESEARCH PRODUCTS PLED96W-092-C1050-D
[BALLAST] INPUT: 90-305VAC, 1.3A, 50/60HZ. OUTPUT: 31-92VDC, 1.05A
[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, 48.2W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

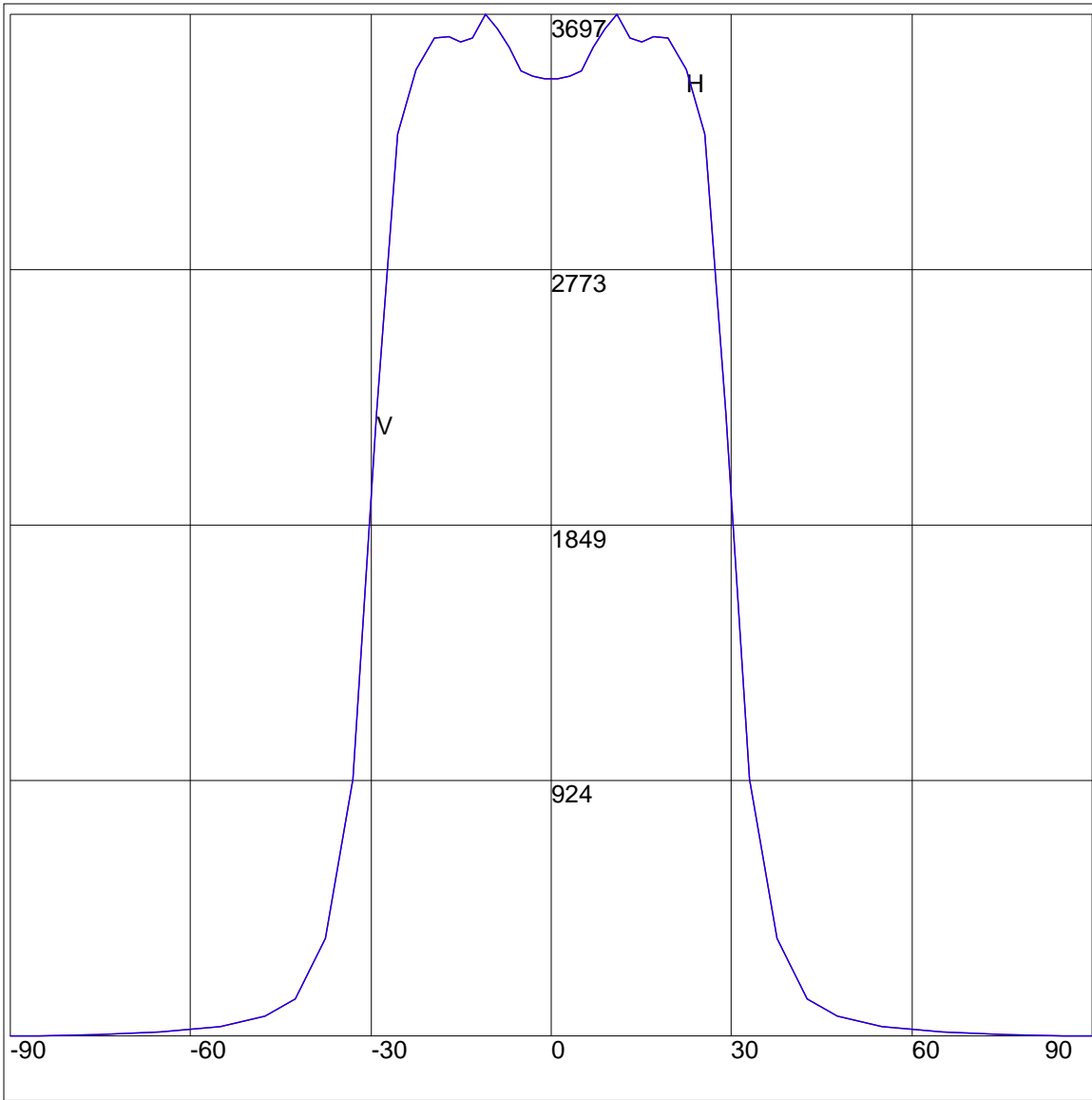
NEMA Type	5 H x 5 V
Maximum Candela	3697
Maximum Candela Angle	-11H -1V
Horizontal Beam Angle (50%)	60.5
Vertical Beam Angle (50%)	56.6
Horizontal Field Angle (10%)	74.8
Vertical Field Angle (10%)	73.4
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	2749
Beam Efficiency	N.A.
Field Lumens	3214
Field Efficiency	N.A.
Spill Lumens	193
Luminaire Lumens	3407
Total Efficiency	N.A.
Total Luminaire Watts	48.2
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407404.IES

AXIAL CANDELA

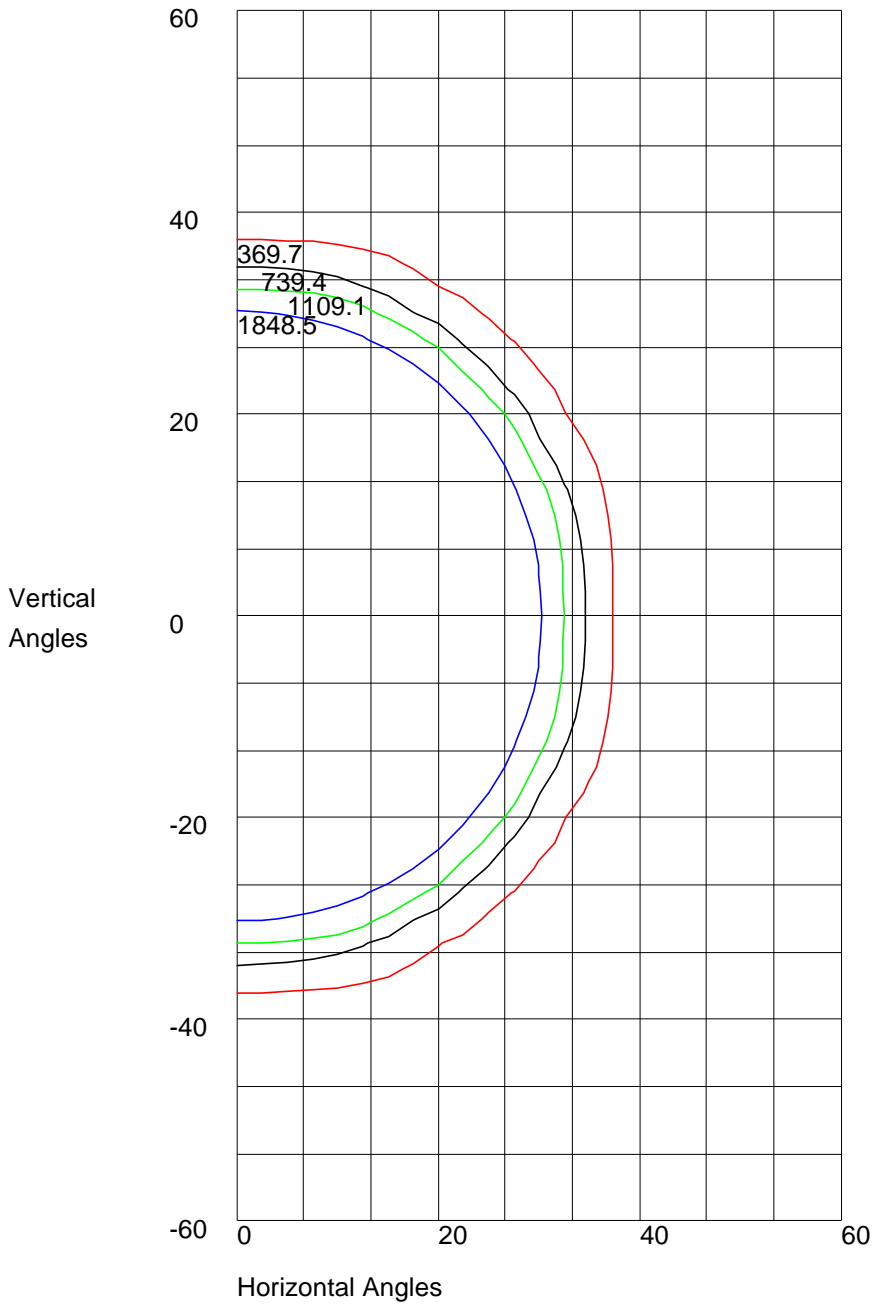
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	4	85	4
75	7	75	7
65	15	65	15
55	36	55	36
47.5	74	47.5	74
42.5	136	42.5	136
37.5	354	37.5	354
33	931	33	931
29	2260	29	2260
25.5	3263	25.5	3263
22.5	3498	22.5	3498
19.5	3611	19.5	3611
17	3614	17	3614
15	3597	15	3597
13	3613	13	3613
11	3697	11	3697
9	3647	9	3647
7	3579	7	3579
5	3491	5	3491
3	3475	3	3475
1	3466	1	3466
0	3466	0	3466
-1	3466	-1	3466
-3	3475	-3	3475
-5	3491	-5	3491
-7	3579	-7	3579
-9	3647	-9	3647
-11	3697	-11	3697
-13	3613	-13	3613
-15	3597	-15	3597
-17	3614	-17	3614
-19.5	3611	-19.5	3611
-22.5	3498	-22.5	3498
-25.5	3263	-25.5	3263
-29	2260	-29	2260
-33	931	-33	931
-37.5	354	-37.5	354
-42.5	136	-42.5	136
-47.5	74	-47.5	74
-55	36	-55	36
-65	15	-65	15
-75	7	-75	7
-85	4	-85	4
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 3697 Located At Horizontal Angle =-11, Vertical Angle =-1
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 3697 Located At Horizontal Angle =-11, Vertical Angle =-1
50% Maximum Candela = 1848.5
10% Maximum Candela = 369.7