



**PROFESSIONAL
OUTDOOR LIGHTING**



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Report No: L081407401

Date: 9/3/2014



NVLAP LAB CODE 200927-0

Report No: L081407401

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

Model Number: 1059-XX-VNS-C-30

Test: 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-VNS-C-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: 8/27/14 - 8/27/14

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-VNS-C-30	
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-054-C1750-D	
Total Lumens:	2792.88	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	0.62	
Input Power (W):	74.08	
Input Power Factor:	1.00	
Current ATHD @ 120V(%):	6%	
Current ATHD @ 277V(%):	13% (0.29A, 73.74W, 0.93PF)	
Efficacy:	38	
Color Rendering Index (CRI):	82	
Correlated Color Temperature (K):	3130	
Chromaticity Coordinate x:	0.4298	
Chromaticity Coordinate y:	0.4049	
Ambient Temperature (°F):	77.0	
Stabilization Time (Hours):	0:45	
Total Operating Time (Hours):	1:25	
Off State Power(W):	0.00	

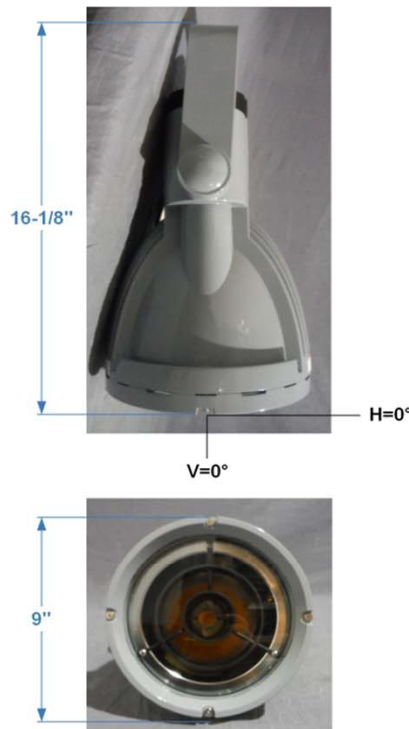
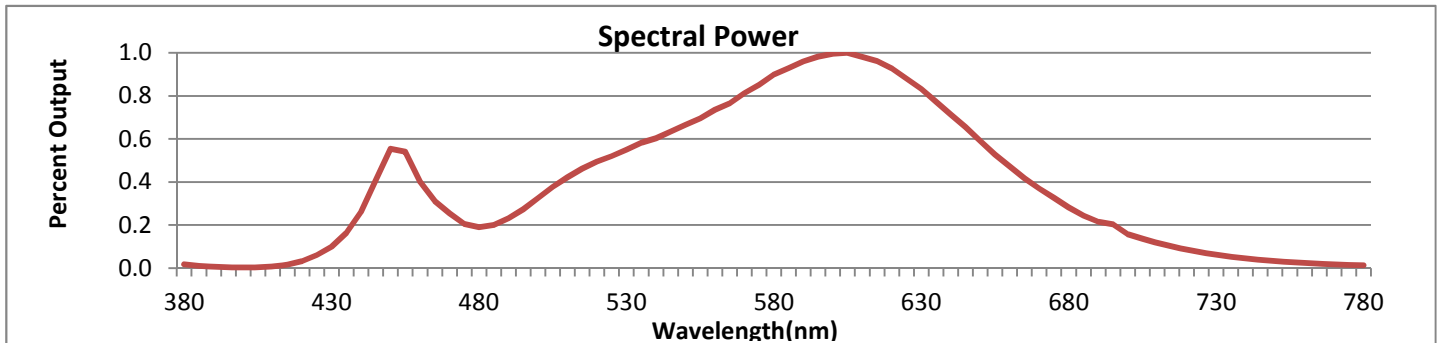


FIG. 1 LUMINAIRE

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



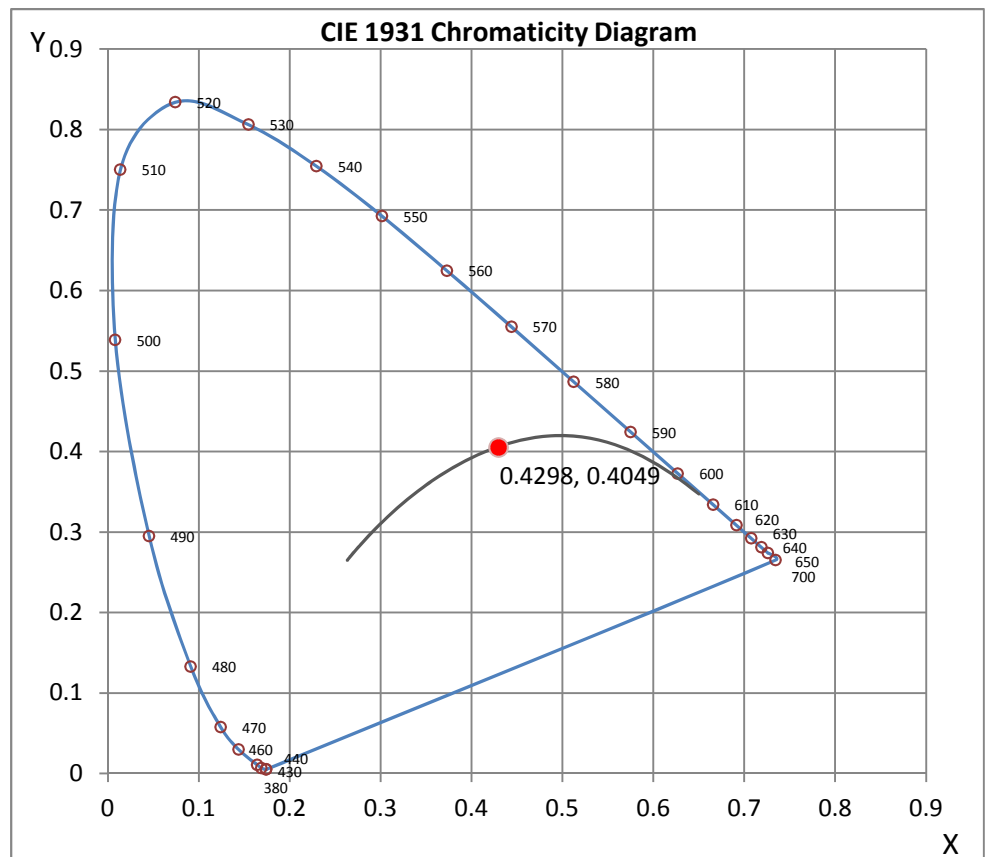
Wavelength	W/m ² nm	440	0.0777	510	0.1252	580	0.2667	650	0.1748	720	0.0253
380	0.0051	450	0.1644	520	0.1467	590	0.2846	660	0.1404	730	0.0184
390	0.0015	460	0.1187	530	0.1629	600	0.2955	670	0.1096	740	0.0133
400	0.0009	470	0.0753	540	0.1788	610	0.2910	680	0.0838	750	0.0096
410	0.0023	480	0.0565	550	0.1972	620	0.2749	690	0.0641	760	0.0069
420	0.0096	490	0.0685	560	0.2181	630	0.2467	700	0.0468	770	0.0050
430	0.0295	500	0.0966	570	0.2411	640	0.2114	710	0.0347	780	0.0037

CRI & CCT

x	0.4298
y	0.4049
u'	0.0779
v'	0.0609
CRI	81.80
CCT	3130
Duv	0.04555

R Values

R1	80.48
R2	89.47
R3	96.50
R4	80.57
R5	80.04
R6	86.18
R7	84.43
R8	60.92
R9	8.54
R10	75.32
R11	79.07
R12	66.30
R13	83.07
R14	98.01



*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.

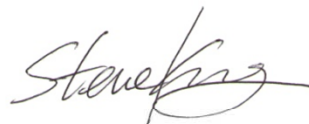
Report Prepared by : Wilson Khounlavong

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 : L081407401.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081407401
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 9/3/2014
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1059-XX-VNS-C-30
[LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE
[MORE] CLEAR LENS WITH INTERNAL SOURCE SHIELD
[BALLASTCAT] THOMAS RESEARCH PRODUCTS PLED96W-054-C1750-D
[BALLAST] INPUT: 100-277VAC, 1.3A, 50/60HZ. OUTPUT: 18-54VDC, 1.75A
[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, 74.13W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

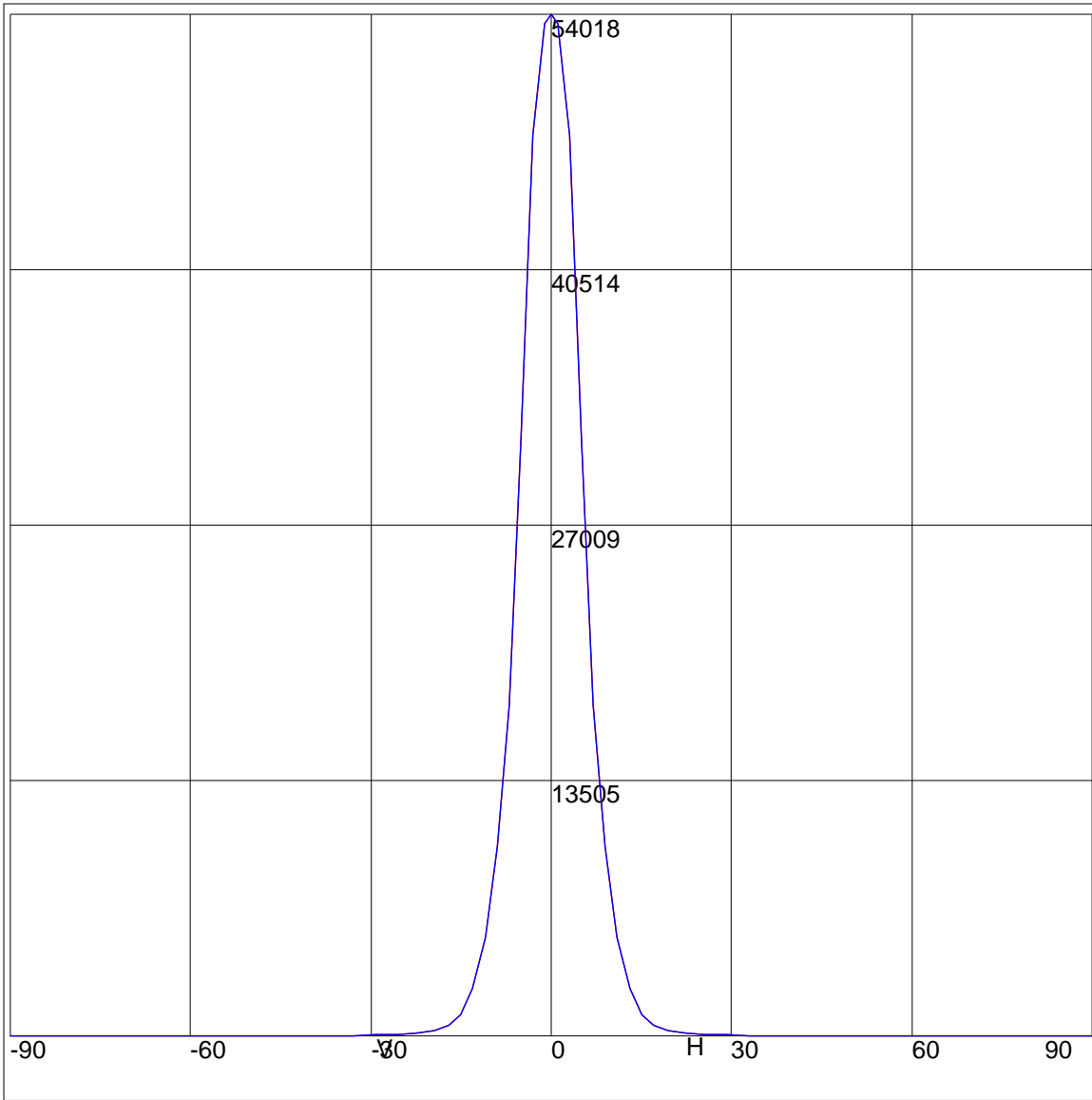
NEMA Type	2 H x 2 V
Maximum Candela	54018
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	11.3
Vertical Beam Angle (50%)	11.3
Horizontal Field Angle (10%)	21.9
Vertical Field Angle (10%)	21.9
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1065
Beam Efficiency	N.A.
Field Lumens	2296
Field Efficiency	N.A.
Spill Lumens	497
Luminaire Lumens	2793
Total Efficiency	N.A.
Total Luminaire Watts	74.13
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407401.IES

AXIAL CANDELA

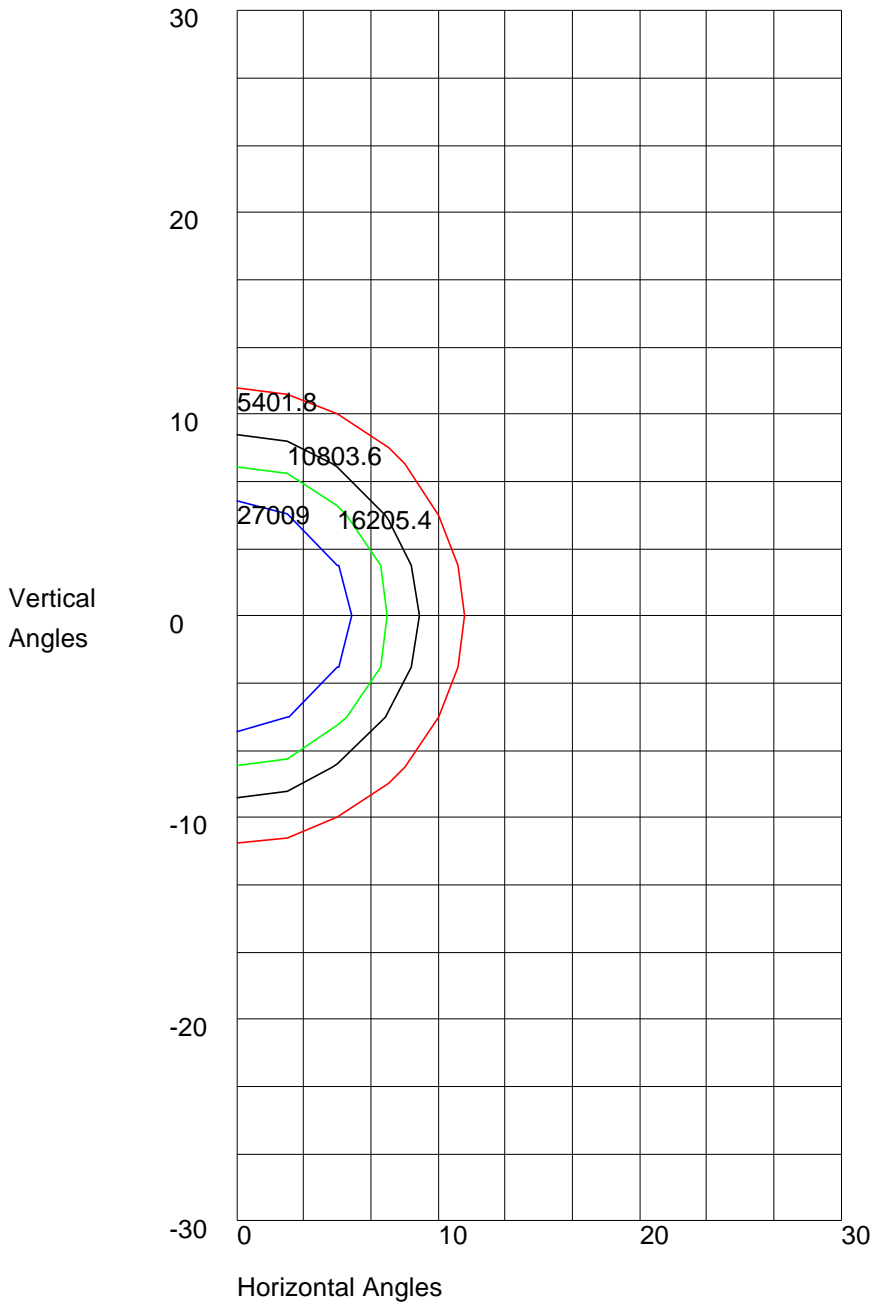
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	3	85	3
75	3	75	3
65	5	65	5
55	9	55	9
47.5	16	47.5	16
42.5	24	42.5	24
37.5	36	37.5	36
33	55	33	55
29	80	29	80
25.5	112	25.5	112
22.5	164	22.5	164
19.5	290	19.5	290
17	582	17	582
15	1151	15	1151
13	2523	13	2523
11	5277	11	5277
9	10028	9	10028
7	17470	7	17470
5	31523	5	31523
3	47606	3	47606
1	53555	1	53555
0	54018	0	54018
-1	53555	-1	53555
-3	47606	-3	47606
-5	31523	-5	31523
-7	17470	-7	17470
-9	10028	-9	10028
-11	5277	-11	5277
-13	2523	-13	2523
-15	1151	-15	1151
-17	582	-17	582
-19.5	290	-19.5	290
-22.5	164	-22.5	164
-25.5	112	-25.5	112
-29	80	-29	80
-33	55	-33	55
-37.5	36	-37.5	36
-42.5	24	-42.5	24
-47.5	16	-47.5	16
-55	9	-55	9
-65	5	-65	5
-75	3	-75	3
-85	3	-85	3
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 54018 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 54018 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 27009
10% Maximum Candela = 5401.8