



PROFESSIONAL
OUTDOOR LIGHTING



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Report No: L081407409

Date: 9/3/2014



NVLAP LAB CODE 200927-0

Report No: L081407409

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

Model Number: 1059-XX-NS-F-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-NS-F-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: 9/2/14 - 9/2/14

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-NS-F-30
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-069-C1400-D
Total Lumens:	4280.52
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.50
Input Power (W):	59.49
Input Power Factor:	0.99
Current ATHD @ 120V(%):	9%
Current ATHD @ 277V(%):	N/A
Efficacy:	72
Color Rendering Index (CRI):	82
Correlated Color Temperature (K):	3152
Chromaticity Coordinate x:	0.4276
Chromaticity Coordinate y:	0.4025
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	1:10
Off State Power(W):	0.00

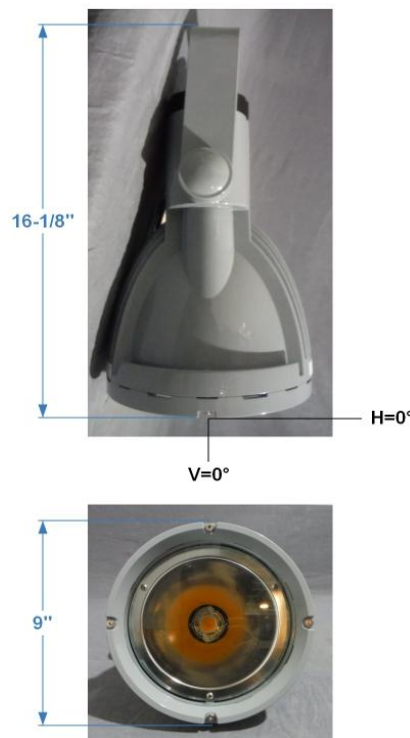
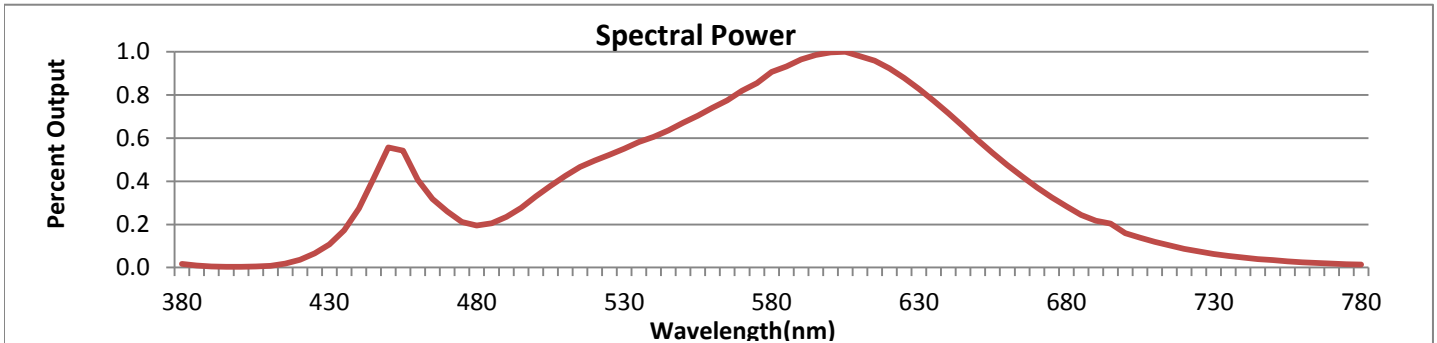


FIG. 1 LUMINAIRE

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



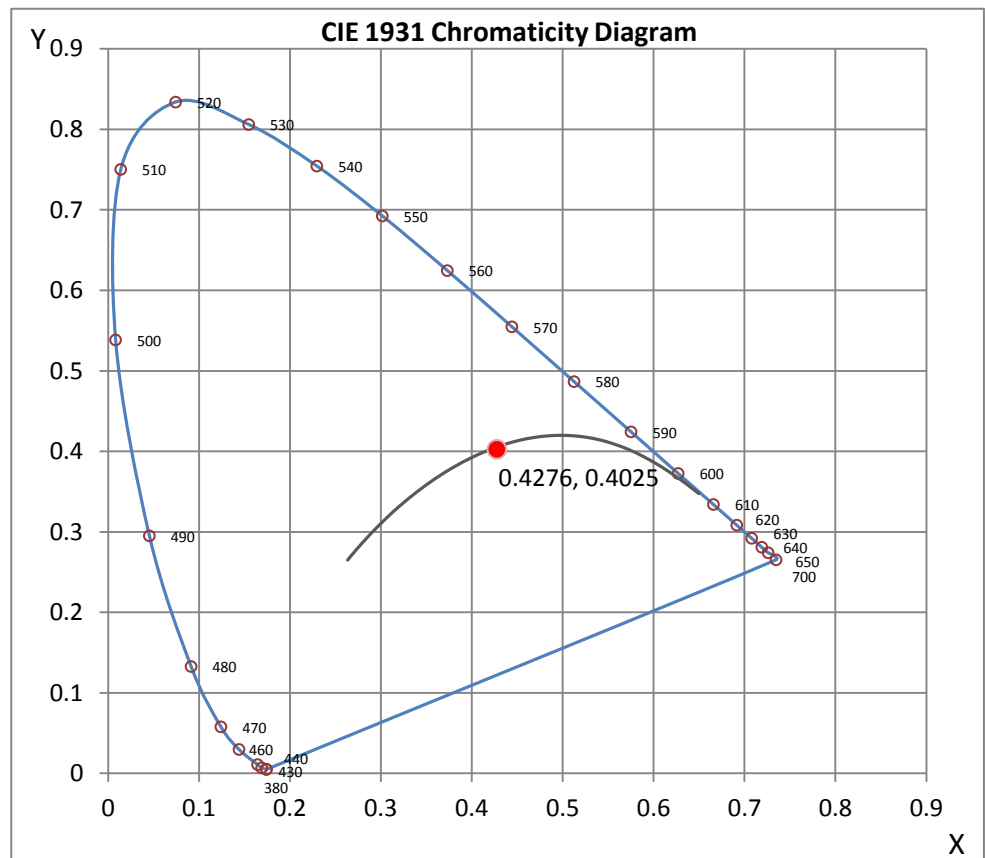
Wavelength	W/m ² nm	440	0.0931	510	0.1446	580	0.3083	650	0.2010	720	0.0295
380	0.0059	450	0.1893	520	0.1687	590	0.3278	660	0.1616	730	0.0215
390	0.0018	460	0.1385	530	0.1871	600	0.3390	670	0.1265	740	0.0157
400	0.0012	470	0.0883	540	0.2060	610	0.3330	680	0.0967	750	0.0115
410	0.0029	480	0.0664	550	0.2280	620	0.3140	690	0.0741	760	0.0083
420	0.0121	490	0.0799	560	0.2519	630	0.2817	700	0.0539	770	0.0061
430	0.0367	500	0.1122	570	0.2787	640	0.2432	710	0.0406	780	0.0045

CRI & CCT

x	0.4276
y	0.4025
u'	0.2452
v'	0.5194
CRI	82.20
CCT	3152
Duv	0.00075

R Values

R1	80.32
R2	89.42
R3	96.45
R4	80.36
R5	79.92
R6	86.05
R7	84.39
R8	60.91
R9	8.45
R10	75.21
R11	78.76
R12	66.48
R13	82.91
R14	98.00



*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 : L081407409.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081407409
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 9/3/2014
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1059-XX-NS-F-30
[LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE
[MORE] CLEAR LENS
[BALLASTCAT] THOMAS RESEARCH PRODUCTS PLED96W-069-C1400-D
[BALLAST] INPUT: 90-305VAC, 1.3A, 50/60HZ. OUTPUT: 23-69VDC, 1.4A
[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, 59.49W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

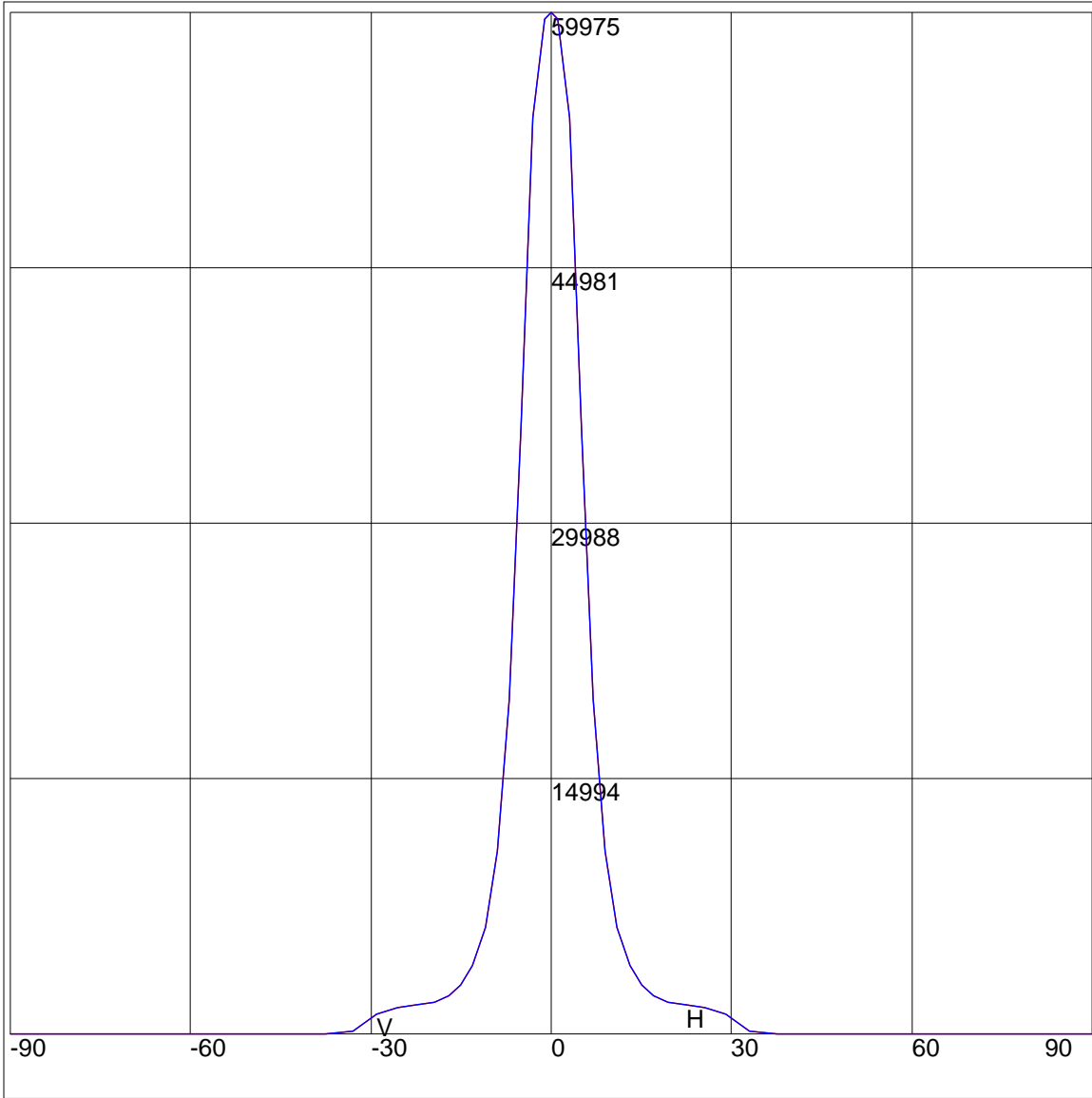
NEMA Type	2 H x 2 V
Maximum Candela	59975
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	11.4
Vertical Beam Angle (50%)	11.4
Horizontal Field Angle (10%)	22.5
Vertical Field Angle (10%)	22.5
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1345
Beam Efficiency	N.A.
Field Lumens	2610
Field Efficiency	N.A.
Spill Lumens	1671
Luminaire Lumens	4281
Total Efficiency	N.A.
Total Luminaire Watts	59.49
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407409.IES

AXIAL CANDELA

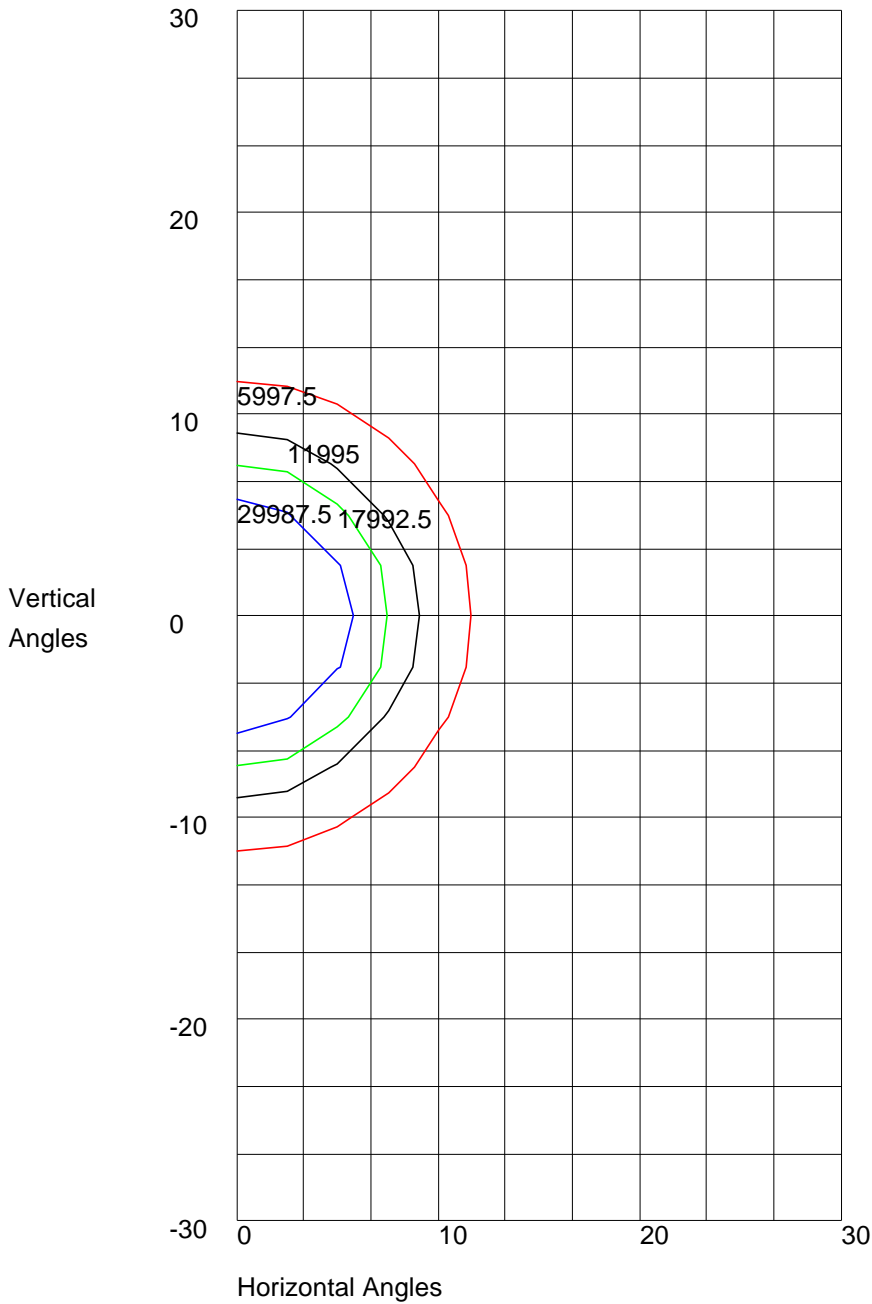
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	5	85	5
75	6	75	6
65	9	65	9
55	12	55	12
47.5	20	47.5	20
42.5	33	42.5	33
37.5	59	37.5	59
33	191	33	191
29	1233	29	1233
25.5	1613	25.5	1613
22.5	1703	22.5	1703
19.5	1926	19.5	1926
17	2302	17	2302
15	2912	15	2912
13	4047	13	4047
11	6280	11	6280
9	10789	9	10789
7	19661	7	19661
5	35586	5	35586
3	53776	3	53776
1	59575	1	59575
0	59975	0	59975
-1	59575	-1	59575
-3	53776	-3	53776
-5	35586	-5	35586
-7	19661	-7	19661
-9	10789	-9	10789
-11	6280	-11	6280
-13	4047	-13	4047
-15	2912	-15	2912
-17	2302	-17	2302
-19.5	1926	-19.5	1926
-22.5	1703	-22.5	1703
-25.5	1613	-25.5	1613
-29	1233	-29	1233
-33	191	-33	191
-37.5	59	-37.5	59
-42.5	33	-42.5	33
-47.5	20	-47.5	20
-55	12	-55	12
-65	9	-65	9
-75	6	-75	6
-85	5	-85	5
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 59975 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 59975 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 29987.5
10% Maximum Candela = 5997.5