



PROFESSIONAL
OUTDOOR LIGHTING



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Report No: L081407402
Date: 9/3/2014



NVLAP LAB CODE 200927-0

Report No: L081407402

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

Model Number: 1059-XX-VNS-B-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-B-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-B-30	
Driver Model Number:	THOMAS RESEARCH PRODUCTS PLED96W-069-C1400-D	
Total Lumens:	2459.90	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	0.50	
Input Power (W):	59.69	
Input Power Factor:	0.99	
Current ATHD @ 120V(%):	9%	
Current ATHD @ 277V(%):	24% (0.24A, 59.61W, 0.91PF)	
Efficacy:	41	
Color Rendering Index (CRI):	82	
Correlated Color Temperature (K):	3091	
Chromaticity Coordinate x:	0.4328	
Chromaticity Coordinate y:	0.4064	
Ambient Temperature (°F):	77.0	
Stabilization Time (Hours):	1:00	
Total Operating Time (Hours):	1:45	
Off State Power(W):	0.00	

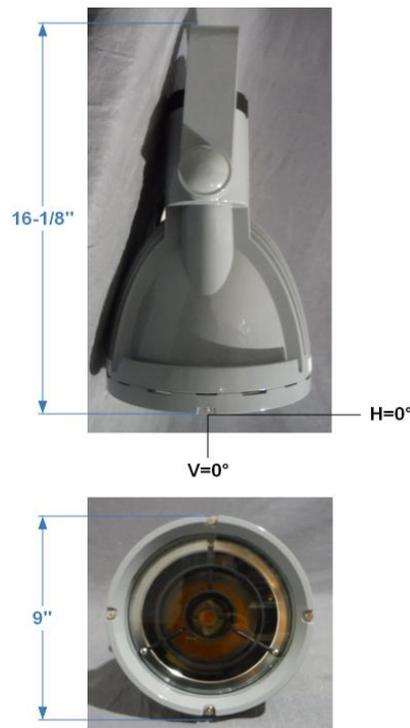
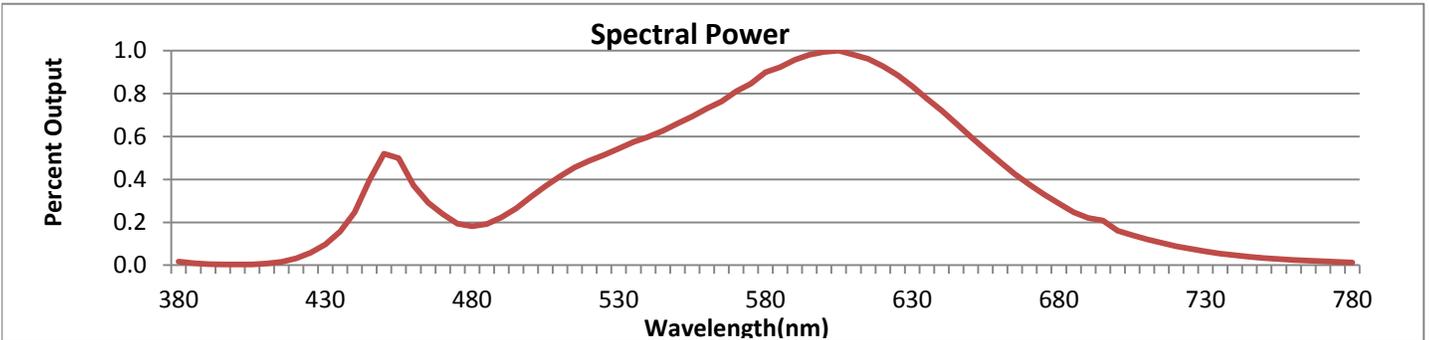


FIG. 1 LUMINAIRE

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



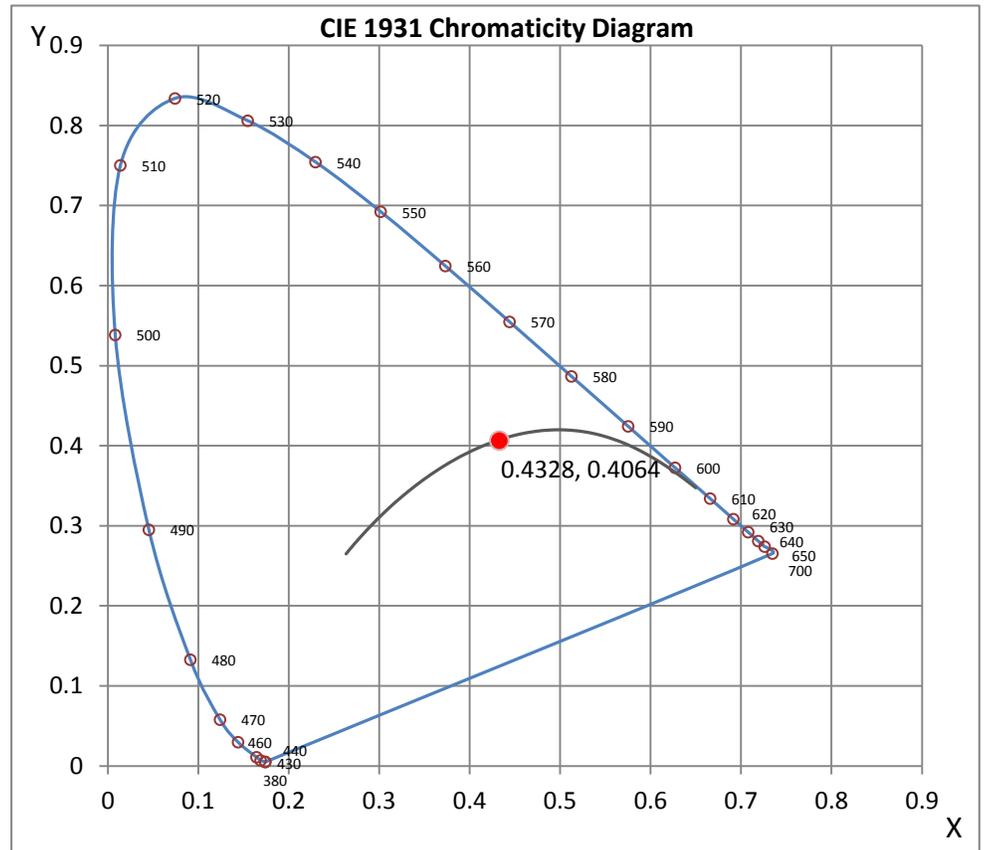
Wavelength	W/m ² nm	440	0.0435	510	0.0730	580	0.1586	650	0.1056	720	0.0155
380	0.0030	450	0.0916	520	0.0860	590	0.1689	660	0.0848	730	0.0113
390	0.0009	460	0.0656	530	0.0958	600	0.1755	670	0.0664	740	0.0082
400	0.0005	470	0.0420	540	0.1057	610	0.1730	680	0.0510	750	0.0059
410	0.0013	480	0.0320	550	0.1166	620	0.1638	690	0.0388	760	0.0043
420	0.0056	490	0.0392	560	0.1289	630	0.1471	700	0.0284	770	0.0032
430	0.0171	500	0.0562	570	0.1429	640	0.1272	710	0.0213	780	0.0023

CRI & CCT

x	0.4328
y	0.4064
u'	0.2469
v'	0.5217
CRI	82.10
CCT	3091
Duv	0.00152

R Values

R1	80.10
R2	89.09
R3	96.51
R4	80.40
R5	79.58
R6	85.72
R7	84.58
R8	60.70
R9	8.07
R10	74.53
R11	78.80
R12	65.71
R13	82.63
R14	97.94



*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 : L081407402.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L081407402
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUE DATE] 9/3/2014
[MANUFAC] U.S.T.E. DBA VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1059-XX-VNS-B-30
[LUMINAIRE] 9"DIA X 16-1/8"H. LED LUMINAIRE
[MORE] CLEAR LENS WITH INTERNAL SOURCE SHIELD
[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, 59.69W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

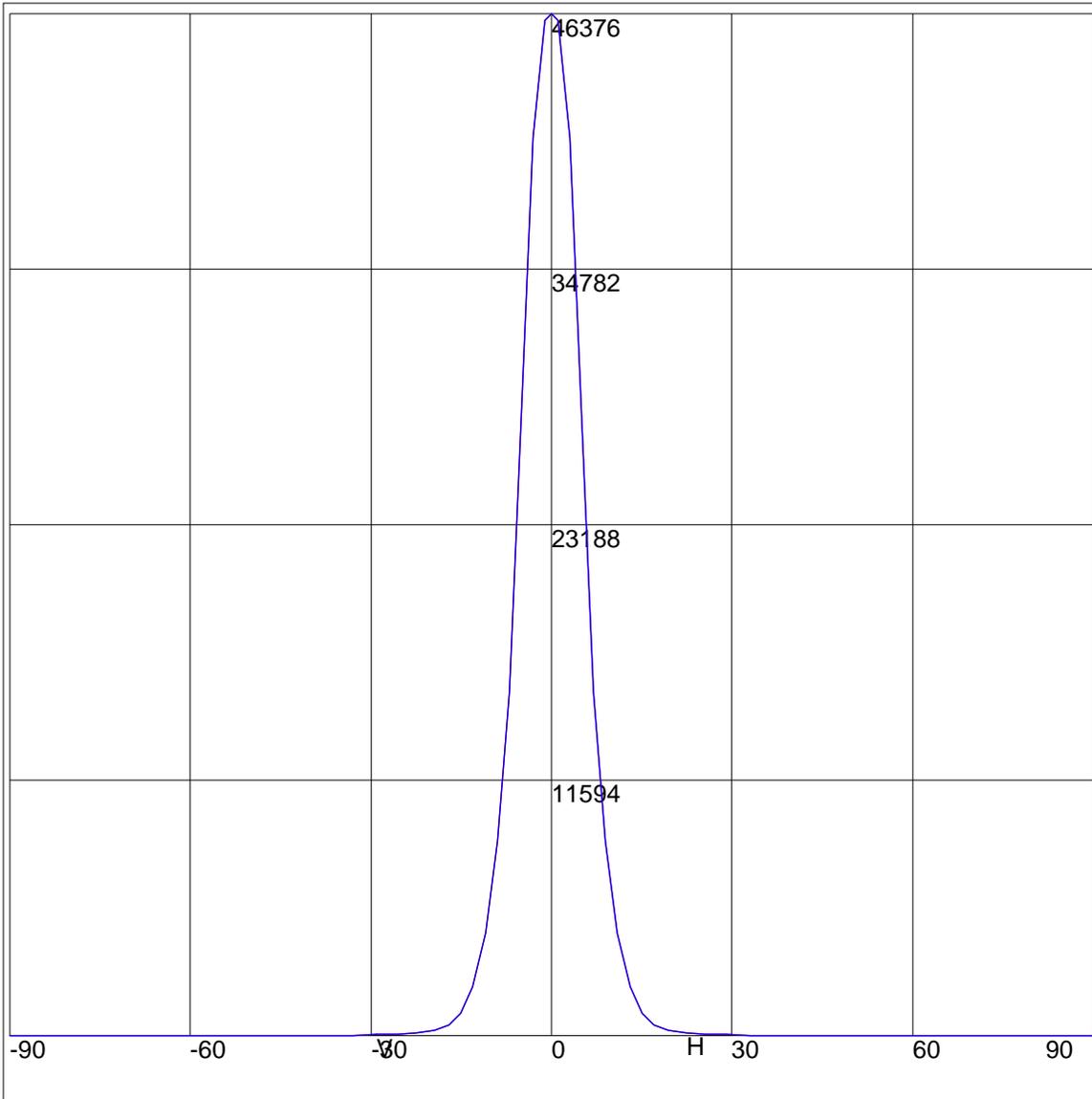
NEMA Type	2 H x 2 V
Maximum Candela	46376
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	11.6
Vertical Beam Angle (50%)	11.6
Horizontal Field Angle (10%)	22.1
Vertical Field Angle (10%)	22.1
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1037
Beam Efficiency	N.A.
Field Lumens	2018
Field Efficiency	N.A.
Spill Lumens	442
Luminaire Lumens	2460
Total Efficiency	N.A.
Total Luminaire Watts	59.69
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L081407402.IES

AXIAL CANDELA

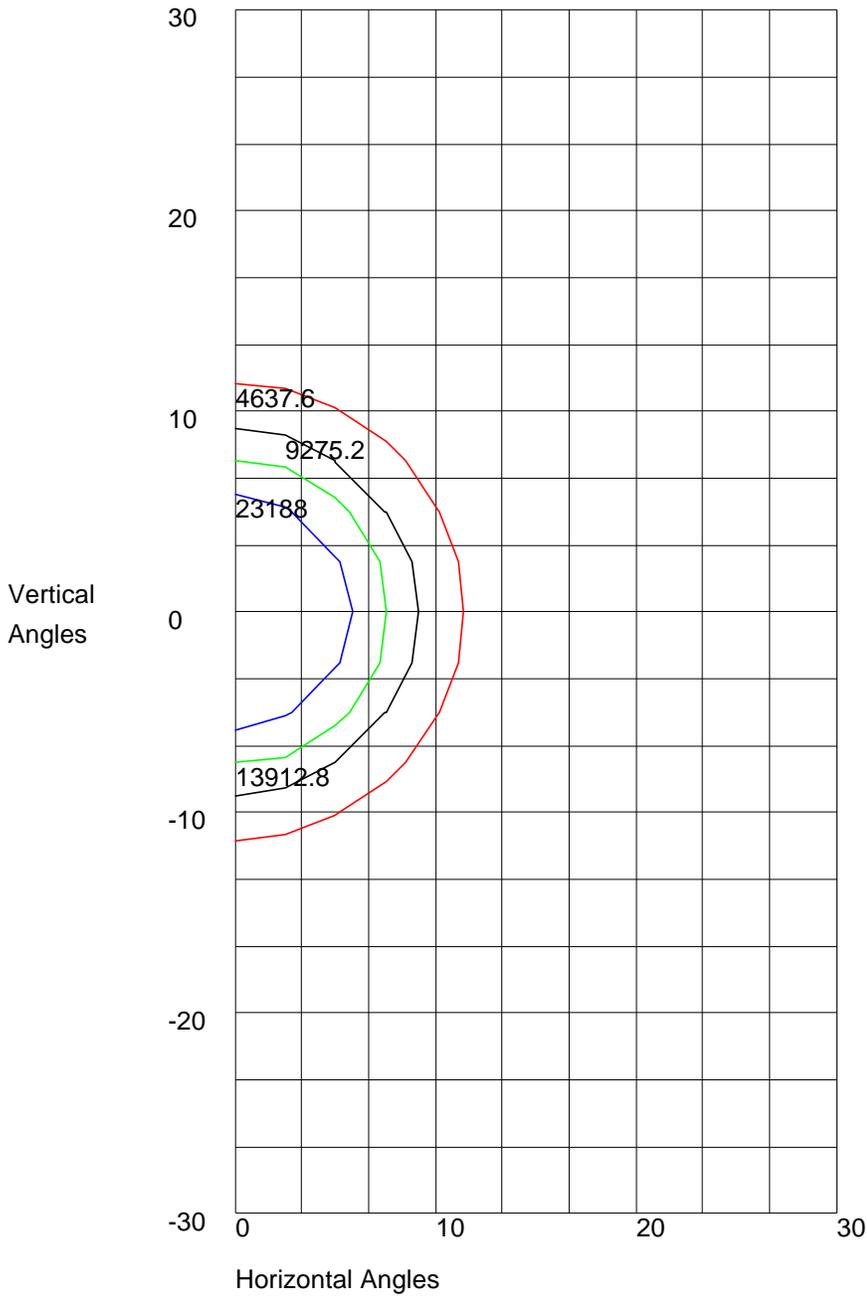
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	2	85	2
75	3	75	3
65	5	65	5
55	8	55	8
47.5	14	47.5	14
42.5	21	42.5	21
37.5	31	37.5	31
33	47	33	47
29	70	29	70
25.5	97	25.5	97
22.5	143	22.5	143
19.5	258	19.5	258
17	517	17	517
15	1039	15	1039
13	2265	13	2265
11	4712	11	4712
9	8886	9	8886
7	15596	7	15596
5	27997	5	27997
3	40751	3	40751
1	46103	1	46103
0	46376	0	46376
-1	46103	-1	46103
-3	40751	-3	40751
-5	27997	-5	27997
-7	15596	-7	15596
-9	8886	-9	8886
-11	4712	-11	4712
-13	2265	-13	2265
-15	1039	-15	1039
-17	517	-17	517
-19.5	258	-19.5	258
-22.5	143	-22.5	143
-25.5	97	-25.5	97
-29	70	-29	70
-33	47	-33	47
-37.5	31	-37.5	31
-42.5	21	-42.5	21
-47.5	14	-47.5	14
-55	8	-55	8
-65	5	-65	5
-75	3	-75	3
-85	2	-85	2
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 46376 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 46376 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 23188
10% Maximum Candela = 4637.6