



**PROFESSIONAL
OUTDOOR LIGHTING**



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

Report No: L021606501

Date: 3/3/2016



NVLAP LAB CODE 200927-0

Report No: L021606501

Report Prepared For: Vista Professional Outdoor Lighting
1625 Surveyor Ave., Simi Valley CA 93063

Model Number: 1043-VNS-B

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 1043-VNS-B. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 2/25/16

Date of Tests: 3/1/16 - 3/3/16

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	11/18/16
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
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.

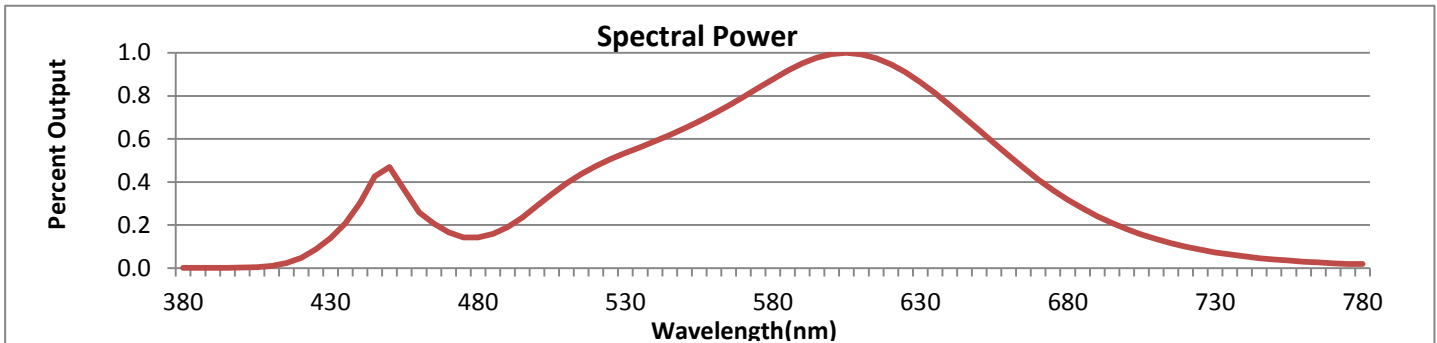
Test Summary

Manufacturer:	Vista Professional Outdoor Lighting
Model Number:	1043-VNS-B
Driver Model Number:	ERP ESS020W-1400-14
Total Lumens:	360.64
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.13
Input Power (W):	15.58
Input Power Factor:	0.99
Current ATHD @ 120V(%):	8%
Current ATHD @ 277V(%):	N/A
Efficacy:	23
Color Rendering Index (CRI):	82
Correlated Color Temperature (K):	2970
Chromaticity Coordinate x:	0.4416
Chromaticity Coordinate y:	0.4098
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	2:25
Total Operating Time (Hours):	3:40
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.



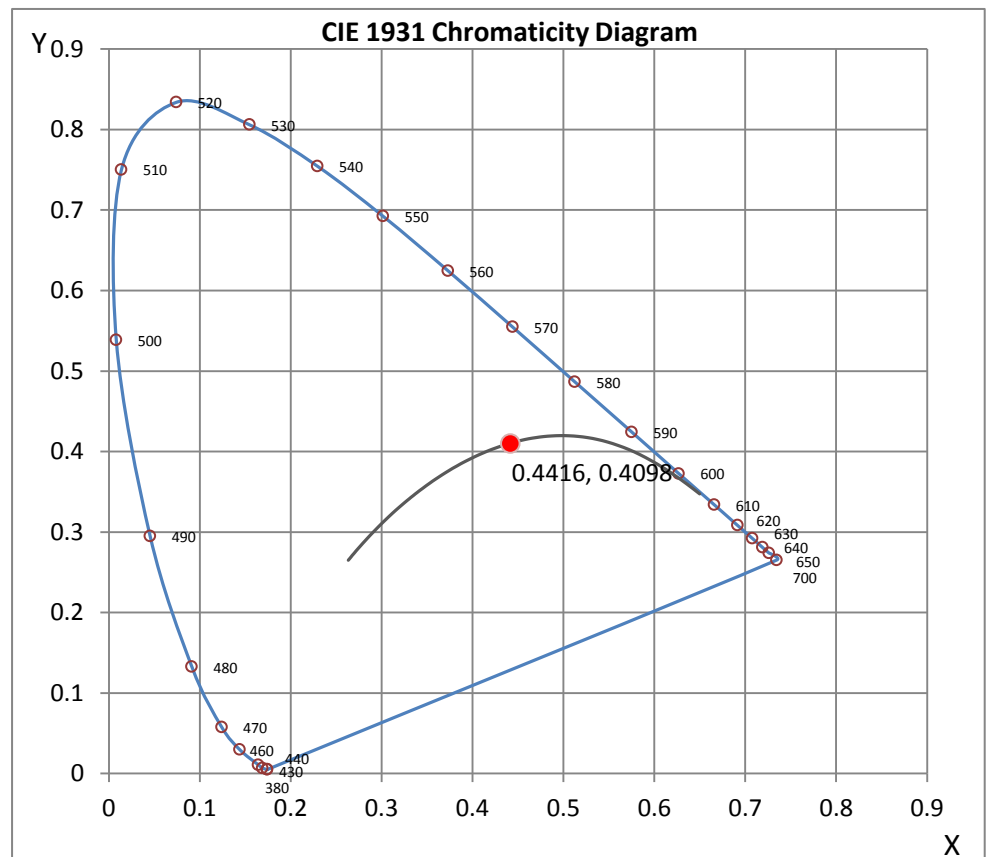
Wavelength	W/m ² nm	440	0.0013	510	0.0017	580	0.0039	650	0.0028	720	0.0004
380	0.0000	450	0.0021	520	0.0021	590	0.0042	660	0.0023	730	0.0003
390	0.0000	460	0.0011	530	0.0024	600	0.0044	670	0.0018	740	0.0002
400	0.0000	470	0.0007	540	0.0026	610	0.0044	680	0.0014	750	0.0002
410	0.0000	480	0.0006	550	0.0029	620	0.0042	690	0.0011	760	0.0001
420	0.0002	490	0.0008	560	0.0032	630	0.0038	700	0.0008	770	0.0001
430	0.0006	500	0.0013	570	0.0035	640	0.0034	710	0.0006	780	0.0001

CRI & CCT

x	0.4416
y	0.4098
u'	0.2511
v'	0.5243
CRI	81.90
CCT	2970
Duv	0.00163

R Values

R1	80.03
R2	87.94
R3	95.16
R4	81.19
R5	79.29
R6	84.18
R7	85.20
R8	61.86
R9	10.79
R10	71.99
R11	79.77
R12	66.03
R13	81.44
R14	96.85



*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 : Keyur Patel

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*



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

Photometric Test Report

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L021606501.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L021606501
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 3/3/2016
 [MANUFAC] VISTA PROFESSIONAL OUTDOOR LIGHTING
 [LUMCAT] 1043-VNS-B
 [LUMINAIRE] 2.75"DIA. X 9.75"H. LED ACCENT LUMINAIRE
 [MORE] VNS DISTRIBUTION
 [BALLASTCAT] ERP ESS020W-1400-14
 [LAMPPOSITION] 0,0
 [LAMPCAT] N/A
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120VAC, 15.58W
 [TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

NEMA Type	3 H x 3 V
Maximum Candela	2977
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	17.4
Vertical Beam Angle (50%)	17.4
Horizontal Field Angle (10%)	34.1
Vertical Field Angle (10%)	34.1
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	155
Beam Efficiency	N.A.
Field Lumens	301
Field Efficiency	N.A.
Spill Lumens	60
Luminaire Lumens	361
Total Efficiency	N.A.
Total Luminaire Watts	15.58
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L021606501.IES

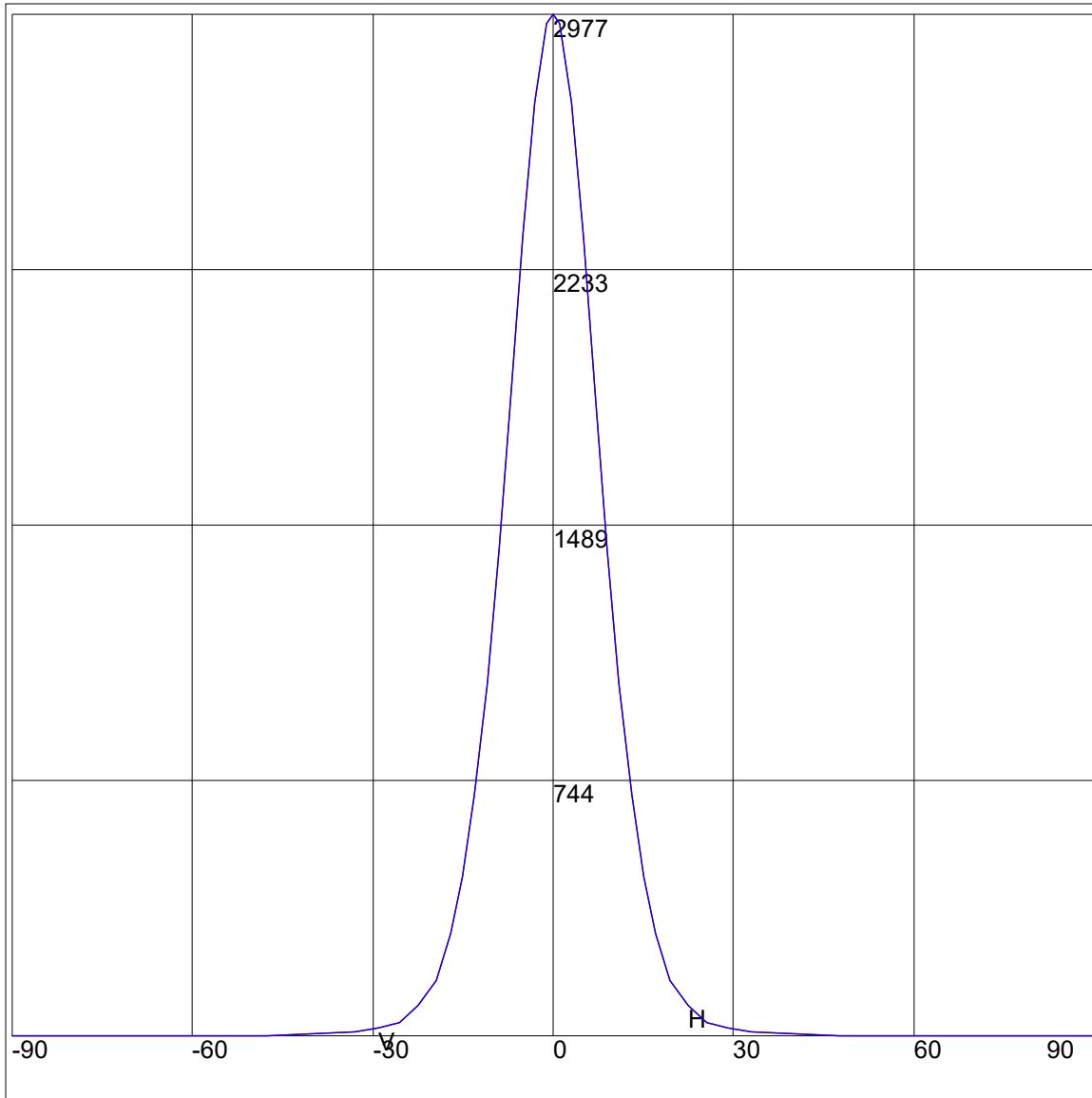
AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	0	75	0
65	0	65	0
55	1	55	1
47.5	3	47.5	3
42.5	5	42.5	5
37.5	9	37.5	9
33	15	33	15
29	26	29	26
25.5	41	25.5	41
22.5	90	22.5	90
19.5	161	19.5	161
17	301	17	301
15	467	15	467
13	703	13	703
11	1028	11	1028
9	1424	9	1424
7	1875	7	1875
5	2334	5	2334
3	2720	3	2720
1	2950	1	2950
0	2977	0	2977
-1	2950	-1	2950
-3	2720	-3	2720
-5	2334	-5	2334
-7	1875	-7	1875
-9	1424	-9	1424
-11	1028	-11	1028
-13	703	-13	703
-15	467	-15	467
-17	301	-17	301
-19.5	161	-19.5	161
-22.5	90	-22.5	90
-25.5	41	-25.5	41
-29	26	-29	26
-33	15	-33	15
-37.5	9	-37.5	9
-42.5	5	-42.5	5
-47.5	3	-47.5	3
-55	1	-55	1
-65	0	-65	0
-75	0	-75	0
-85	0	-85	0
-90	0	-90	0

ZONAL LUMEN SUMMARY

Zone	%
0-20	89.2
0-30	96.7
0-40	98.9
0-60	99.9
0-80	100
0-90	100
10-90	48.7
20-40	9.6
20-50	10.4
40-70	1.1
60-80	0.1
70-80	0
80-90	0
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY

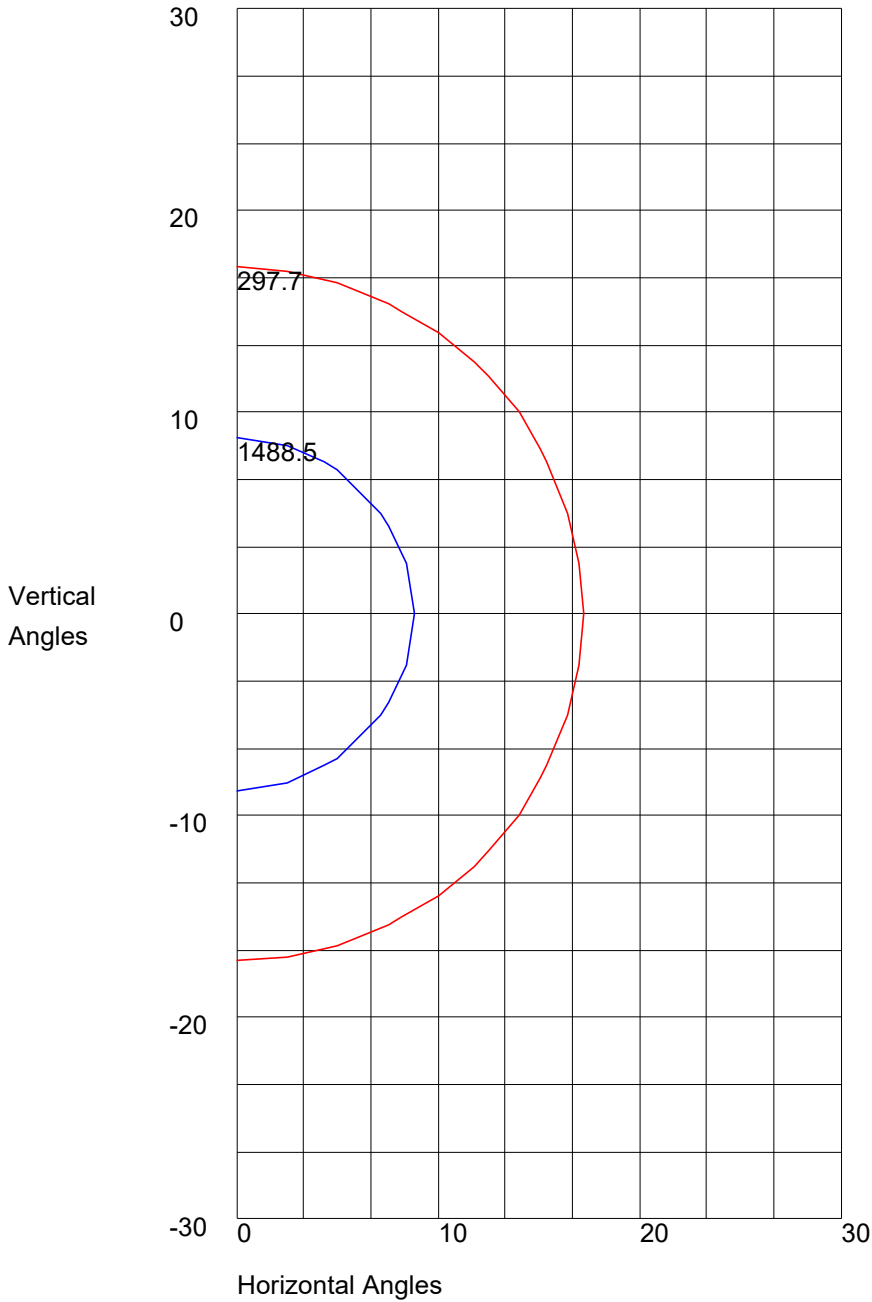


Maximum Candela = 2977 Located At Horizontal Angle = 0, Vertical Angle = 0

H - Horizontal Axial Candela

V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 2977 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 1488.5
10% Maximum Candela = 297.7