



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

Test #: L10131601

Date: 10/10/2013



NVLAP LAB CODE 200927-0

Test Report: L10131601

Model Number: ELED Strip TW BOTH A

Report Prepared For: ELATION LIGHTING
 6122 S. EASTERN AVE, COMMERCE, CA 90040

Test: Electrical and Photometric tests as required by the IESNA test standards.

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. Fixture catalog number is ELED Strip TW BOTH A. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 9/5/13

Date of Tests: 10/9/13 - 10/9/13

Seasoning of Sample SSL: 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	01/04/14
Xitron Power Analysis System	2503AH	MT-EL01	01/09/14
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/04/14
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.

LM-79 Test Summary

Manufacturer:	ELATION LIGHTING
Model Number:	ELED Strip TW BOTH A
LAMPCAT:	N/A
Driver Model Number:	N/A
Total Lumens:	1754.06
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.93
Input Power (W):	107.75
Input Power Factor:	0.97
Total Harmonic Distortion @ 120V(%)	16%
Total Harmonic Distortion @ 277V(%)	N/A
Efficacy:	16
Color Rendering Index (CRI):	75
Correlated Color Temperature (K):	3503
Chromaticity Coordinate x:	0.3967
Chromaticity Coordinate y:	0.3680
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:50
Off State Power(W):	0.00

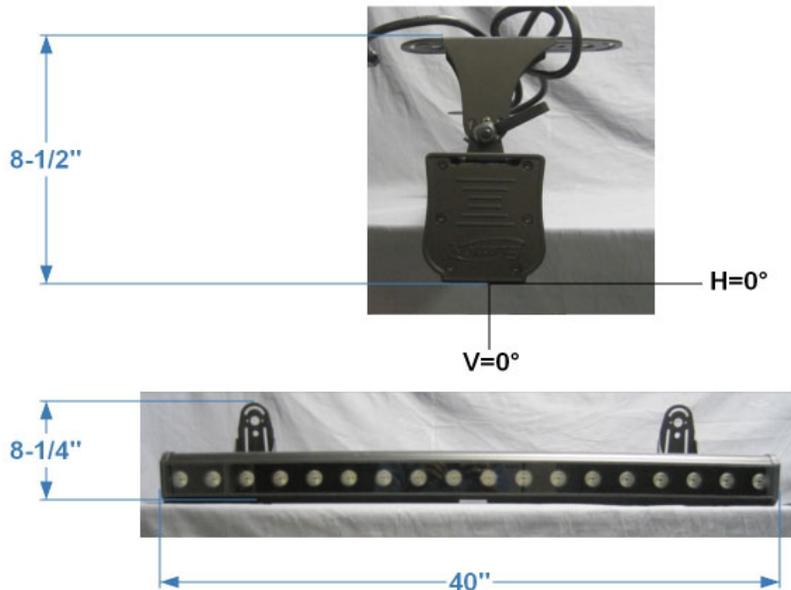
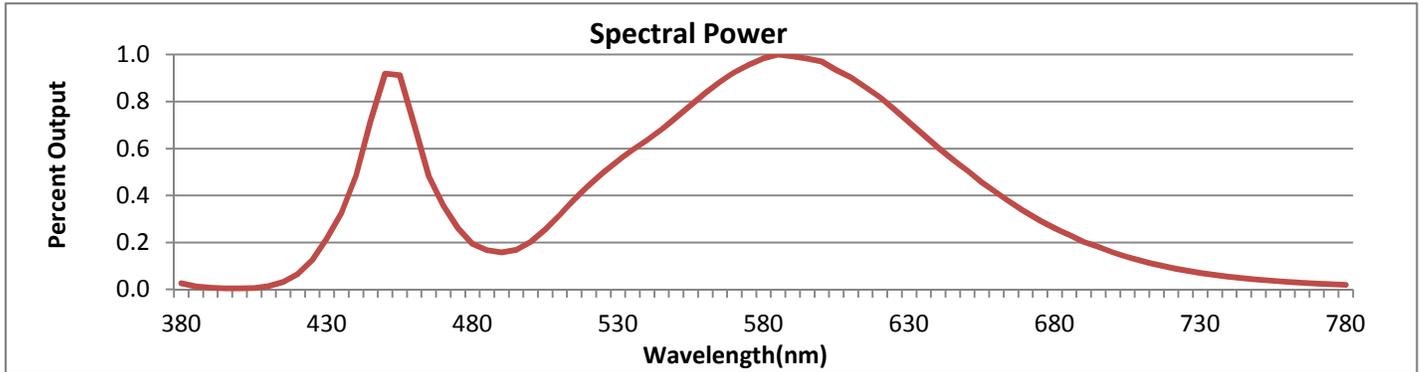


FIG. 1 LUMINAIRE

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



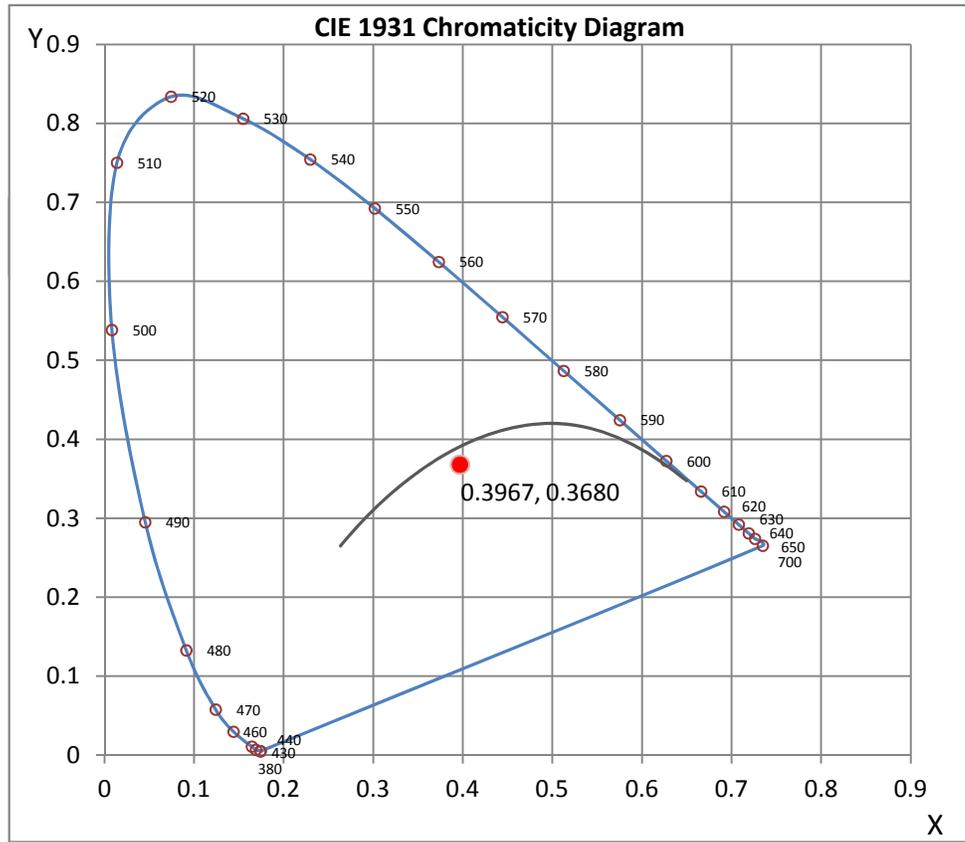
Wavelength	W/m ² nm	440	0.0603	510	0.0395	580	0.1223	650	0.0629	720	0.0114
380	0.0033	450	0.1142	520	0.0551	590	0.1234	660	0.0513	730	0.0087
390	0.0008	460	0.0869	530	0.0680	600	0.1206	670	0.0409	740	0.0067
400	0.0005	470	0.0443	540	0.0791	610	0.1123	680	0.0323	750	0.0052
410	0.0017	480	0.0241	550	0.0909	620	0.1018	690	0.0252	760	0.0039
420	0.0081	490	0.0196	560	0.1039	630	0.0884	700	0.0196	770	0.0031
430	0.0269	500	0.0251	570	0.1150	640	0.0751	710	0.0150	780	0.0024

CRI & CCT

x	0.3967
y	0.3680
u'	0.2396
v'	0.5001
CRI	74.80
CCT	3503
Duv	-0.00840

R Values

R1	72.69
R2	84.77
R3	91.21
R4	69.13
R5	71.17
R6	76.09
R7	79.67
R8	53.94
R9	-10.54
R10	61.89
R11	61.96
R12	52.53
R13	75.30
R14	94.79



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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 : Randy Chau

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 : L10131601.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L10131601
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 10/10/2013
[MANUFAC] ELATION LIGHTING
[LUMCAT] ELED Strip TW BOTH A
[LUMINAIRE] 8-1/4"L. X 40"W. X 8-1/2"H. LED LUMINAIRE
[MORE] CLEAR LENS
[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, 107.75W
[_TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

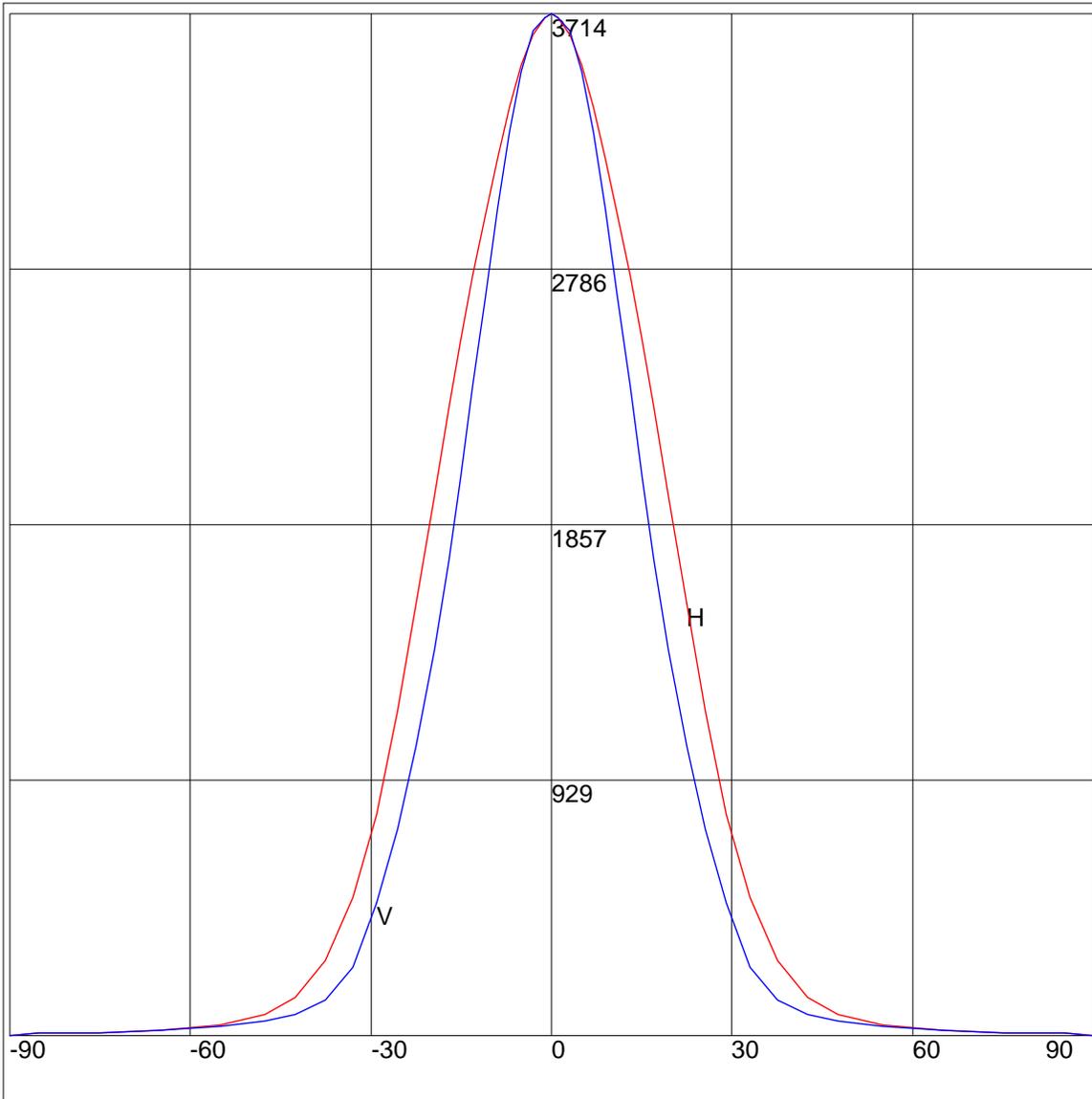
NEMA Type	5 H x 4 V
Maximum Candela	3714
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	40.6
Vertical Beam Angle (50%)	32.3
Horizontal Field Angle (10%)	71.2
Vertical Field Angle (10%)	61.9
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	842
Beam Efficiency	N.A.
Field Lumens	1483
Field Efficiency	N.A.
Spill Lumens	271
Luminaire Lumens	1754
Total Efficiency	N.A.
Total Luminaire Watts	107.75
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L10131601.IES

AXIAL CANDELA

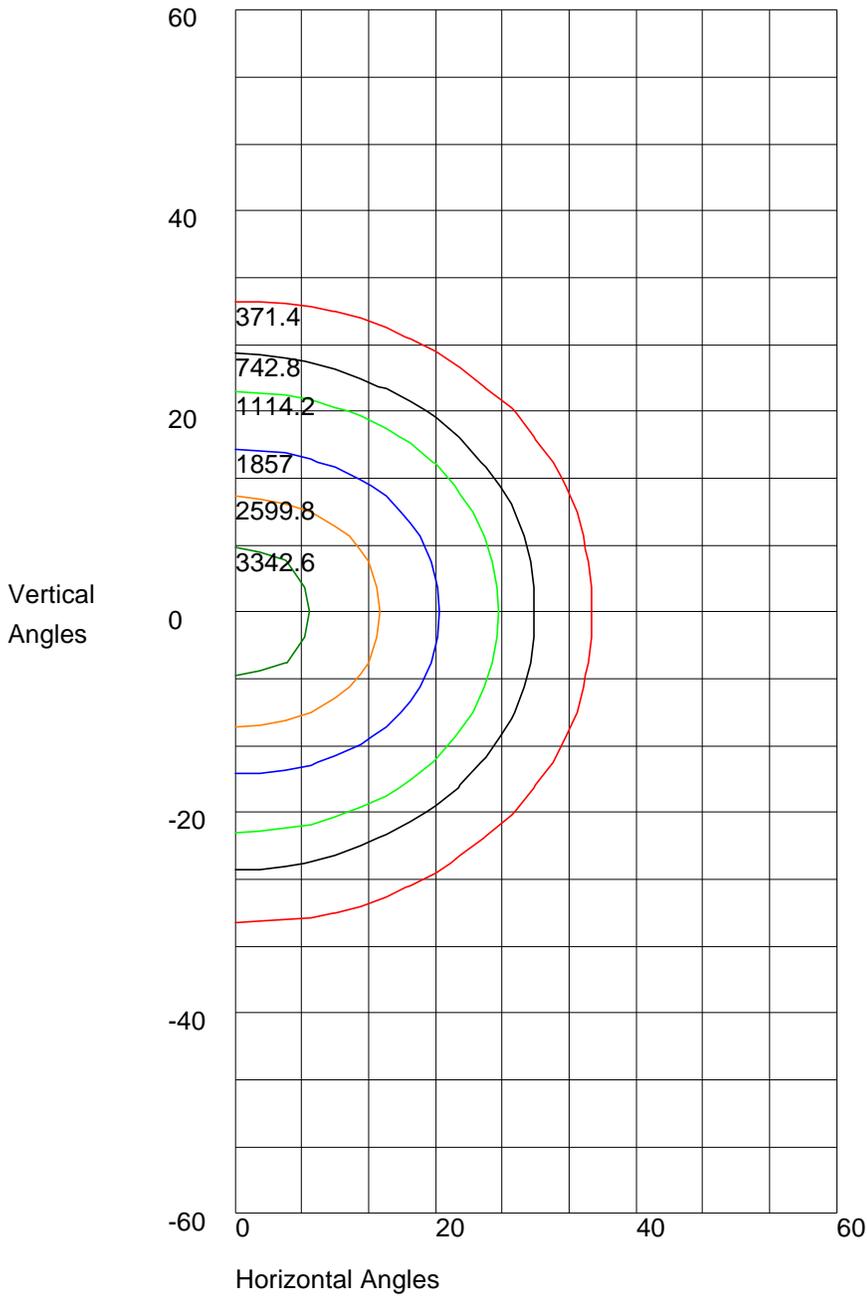
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	12	85	12
75	13	75	13
65	21	65	20
55	42	55	34
47.5	78	47.5	53
42.5	141	42.5	77
37.5	277	37.5	130
33	503	33	249
29	807	29	487
25.5	1186	25.5	753
22.5	1571	22.5	1054
19.5	1965	19.5	1404
17	2286	17	1731
15	2530	15	2030
13	2764	13	2360
11	2989	11	2692
9	3189	9	3006
7	3375	7	3284
5	3527	5	3502
3	3639	3	3654
1	3701	1	3702
0	3714	0	3714
-1	3701	-1	3702
-3	3639	-3	3654
-5	3527	-5	3502
-7	3375	-7	3284
-9	3189	-9	3006
-11	2989	-11	2692
-13	2764	-13	2360
-15	2530	-15	2030
-17	2286	-17	1731
-19.5	1965	-19.5	1404
-22.5	1571	-22.5	1054
-25.5	1186	-25.5	753
-29	807	-29	487
-33	503	-33	249
-37.5	277	-37.5	130
-42.5	141	-42.5	77
-47.5	78	-47.5	53
-55	42	-55	34
-65	21	-65	20
-75	13	-75	13
-85	12	-85	12
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 3714 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 3714 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 1857
10% Maximum Candela = 371.4