



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

Test #: L09133804

Date: 10/9/2013



NVLAP LAB CODE 200927-0

**Test Report:** L09133804

**Model Number:** ELED Strip TW CW

**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 CW .  
 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**

<b>Manufacturer:</b>	ELATION LIGHTING
<b>Model Number:</b>	ELED Strip TW CW
<b>LAMPCAT:</b>	N/A
<b>Driver Model Number:</b>	N/A
<b>Total Lumens:</b>	881.86
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.37
<b>Input Power (W):</b>	39.42
<b>Input Power Factor:</b>	0.90
<b>Total Harmonic Distortion @ 120V(%):</b>	28%
<b>Total Harmonic Distortion @ 277V(%):</b>	N/A
<b>Efficacy:</b>	22
<b>Color Rendering Index (CRI):</b>	75
<b>Correlated Color Temperature (K):</b>	6308
<b>Chromaticity Coordinate x:</b>	0.3164
<b>Chromaticity Coordinate y:</b>	0.3285
<b>Ambient Temperature (°F):</b>	77.0
<b>Stabilization Time (Hours):</b>	0:35
<b>Total Operating Time (Hours):</b>	1:40
<b>Off State Power(W):</b>	0.00

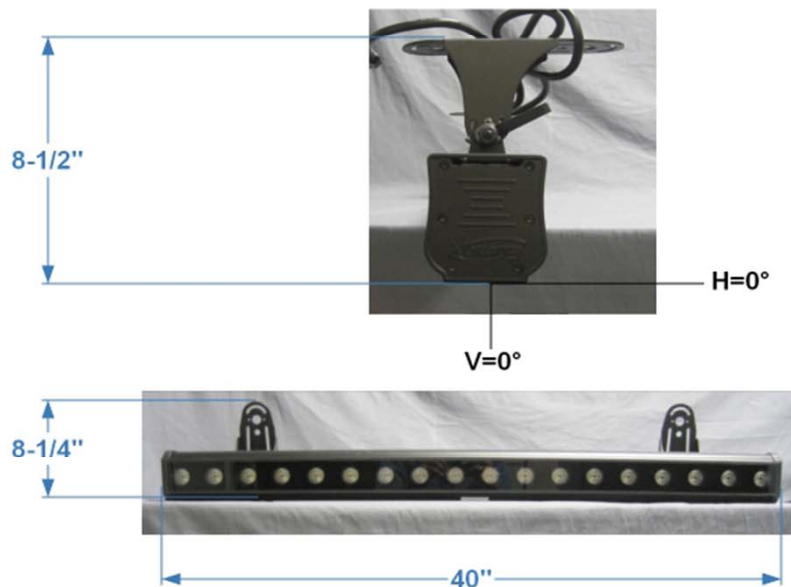
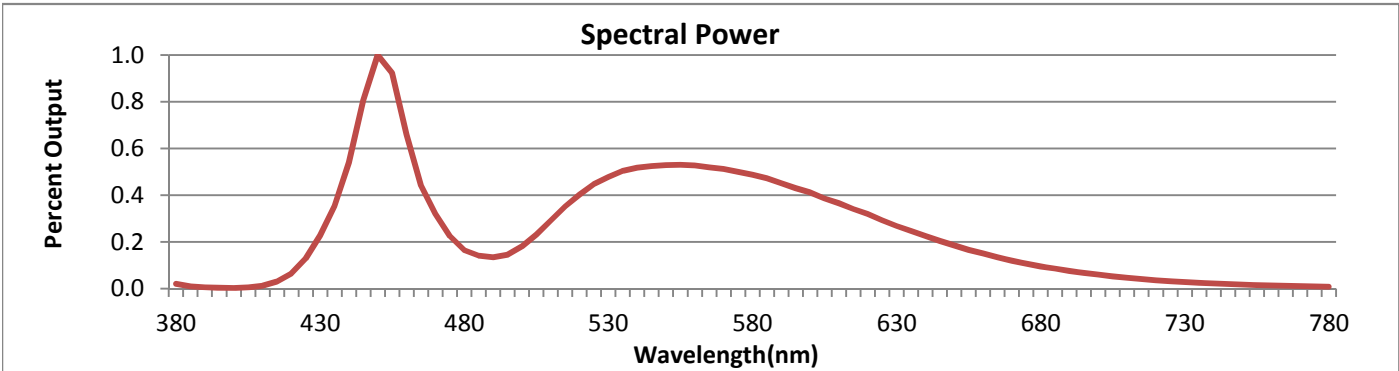


FIG1. LUMINAIRE

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



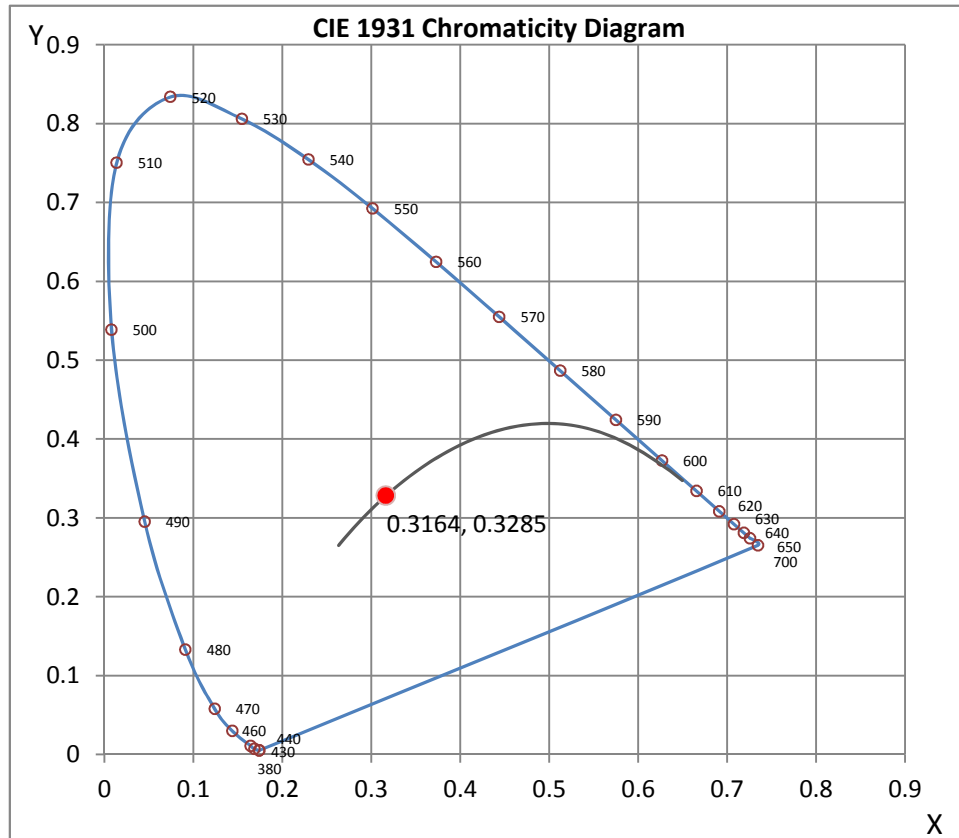
Wavelength	W/m <sup>2</sup> nm	440	0.0546	510	0.0295	580	0.0494	650	0.0187	720	0.0037
380	0.0022	450	0.1011	520	0.0408	590	0.0455	660	0.0153	730	0.0029
390	0.0006	460	0.0667	530	0.0483	600	0.0416	670	0.0121	740	0.0023
400	0.0004	470	0.0324	540	0.0523	610	0.0369	680	0.0096	750	0.0018
410	0.0013	480	0.0166	550	0.0535	620	0.0322	690	0.0076	760	0.0014
420	0.0066	490	0.0135	560	0.0533	630	0.0272	700	0.0061	770	0.0011
430	0.0231	500	0.0183	570	0.0517	640	0.0227	710	0.0048	780	0.0009

**CRI & CCT**

x	0.3164
y	0.3285
u'	0.2006
v'	0.4686
CRI	74.70
CCT	6308
Duv	0.00109

**R Values**

R1	73.34
R2	78.73
R3	78.98
R4	75.24
R5	72.92
R6	68.71
R7	84.08
R8	65.49
R9	-11.08
R10	45.86
R11	70.70
R12	42.26
R13	74.54
R14	87.51



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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 : 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*

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# Photometric Test Report

**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L09133804.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] L09133804  
 [TESTLAB] LIGHT LABORATORY, INC.  
 [ISSUEDATE] 10/9/2013  
 [MANUFAC] ELATION LIGHTING  
 [LUMCAT] ELED Strip TW CW  
 [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, 39.42W  
 [ TEST PROCEDURE] IESNA:LM-79-08

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

**CHARACTERISTICS**

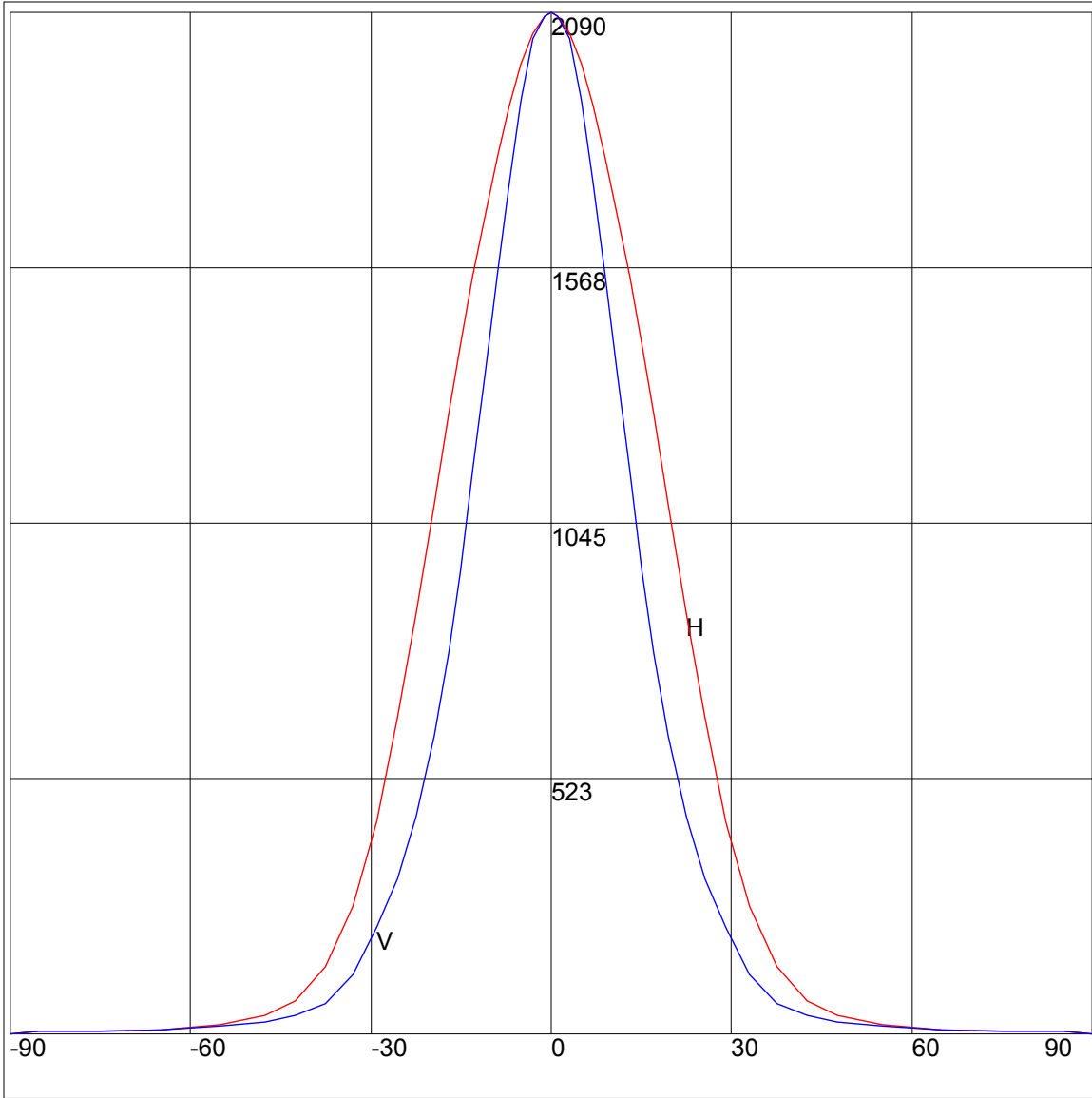
NEMA Type	4 H x 4 V
Maximum Candela	2090
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	40.1
Vertical Beam Angle (50%)	28.1
Horizontal Field Angle (10%)	69.9
Vertical Field Angle (10%)	58.8
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	395
Beam Efficiency	N.A.
Field Lumens	741
Field Efficiency	N.A.
Spill Lumens	141
Luminaire Lumens	882
Total Efficiency	N.A.
Total Luminaire Watts	39.42
Ballast Factor	1.00

**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L09133804.IES**

**AXIAL CANDELA**

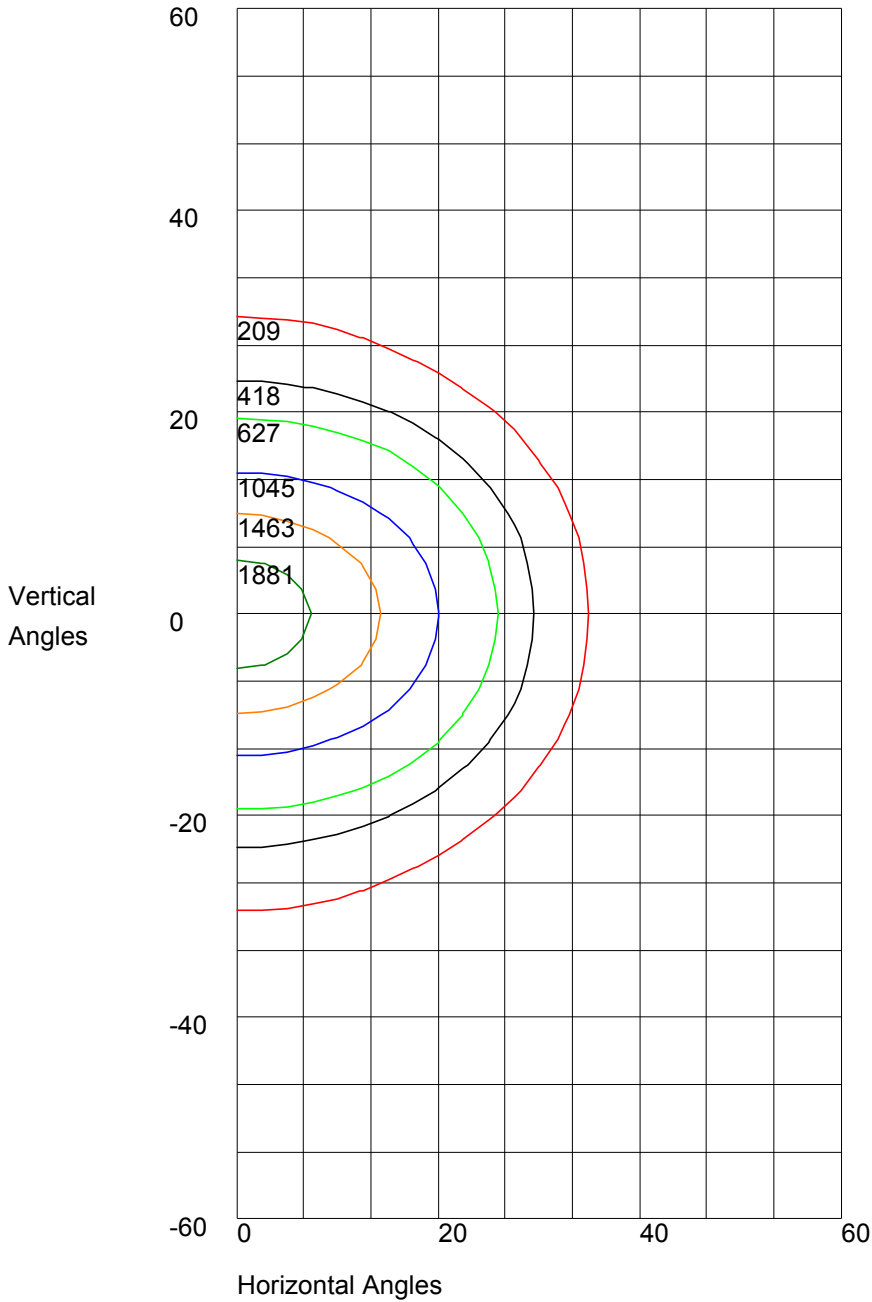
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	6	85	6
75	7	75	6
65	10	65	10
55	20	55	17
47.5	38	47.5	26
42.5	69	42.5	39
37.5	139	37.5	64
33	262	33	122
29	435	29	219
25.5	649	25.5	318
22.5	861	22.5	446
19.5	1085	19.5	612
17	1271	17	782
15	1413	15	950
13	1550	13	1150
11	1679	11	1359
9	1794	9	1554
7	1900	7	1741
5	1985	5	1911
3	2047	3	2036
1	2081	1	2082
0	2090	0	2090
-1	2081	-1	2082
-3	2047	-3	2036
-5	1985	-5	1911
-7	1900	-7	1741
-9	1794	-9	1554
-11	1679	-11	1359
-13	1550	-13	1150
-15	1413	-15	950
-17	1271	-17	782
-19.5	1085	-19.5	612
-22.5	861	-22.5	446
-25.5	649	-25.5	318
-29	435	-29	219
-33	262	-33	122
-37.5	139	-37.5	64
-42.5	69	-42.5	39
-47.5	38	-47.5	26
-55	20	-55	17
-65	10	-65	10
-75	7	-75	6
-85	6	-85	6
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 2090 Located At Horizontal Angle = 0, Vertical Angle = 0  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 2090 Located At Horizontal Angle = 0, Vertical Angle = 0  
50% Maximum Candela = 1045  
10% Maximum Candela = 209