



8165 E Kaiser Blvd. Anaheim, CA 92808  
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Report No: L111407302

Date: 1/15/2015



NVLAP LAB CODE 200927-0

**Report No:** L111407302

**Report Prepared For:** Cast Lighting  
 1120-A Goffle Rd., Hawthorne, NJ., 07506

**Model Number:** CBLED141-Low

**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 CBLED141-Low. Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 11/18/14

**Date of Tests:** 1/10/15 - 1/15/15

**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.

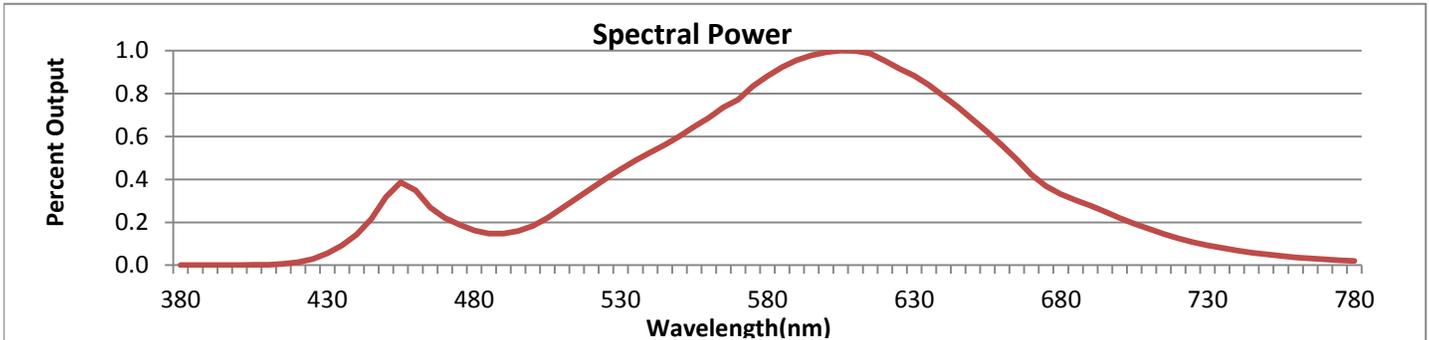
**Test Summary**

<b>Manufacturer:</b>	Cast Lighting
<b>Model Number:</b>	CBLED141-Low
<b>Driver Model Number:</b>	N/A
<b>Total Lumens:</b>	269.12
<b>Input Voltage (VAC/60Hz):</b>	12.00
<b>Input Current (Amp):</b>	0.52
<b>Input Power (W):</b>	5.86
<b>Input Power Factor:</b>	0.93
<b>Current ATHD @ 12V(%):</b>	38%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	46
<b>Color Rendering Index (CRI):</b>	80
<b>Correlated Color Temperature (K):</b>	2720
<b>Chromaticity Coordinate x:</b>	0.4585
<b>Chromaticity Coordinate y:</b>	0.4107
<b>Ambient Temperature (°F):</b>	77.0
<b>Stabilization Time (Hours):</b>	0:35
<b>Total Operating Time (Hours):</b>	1:45
<b>Off State Power(W):</b>	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.



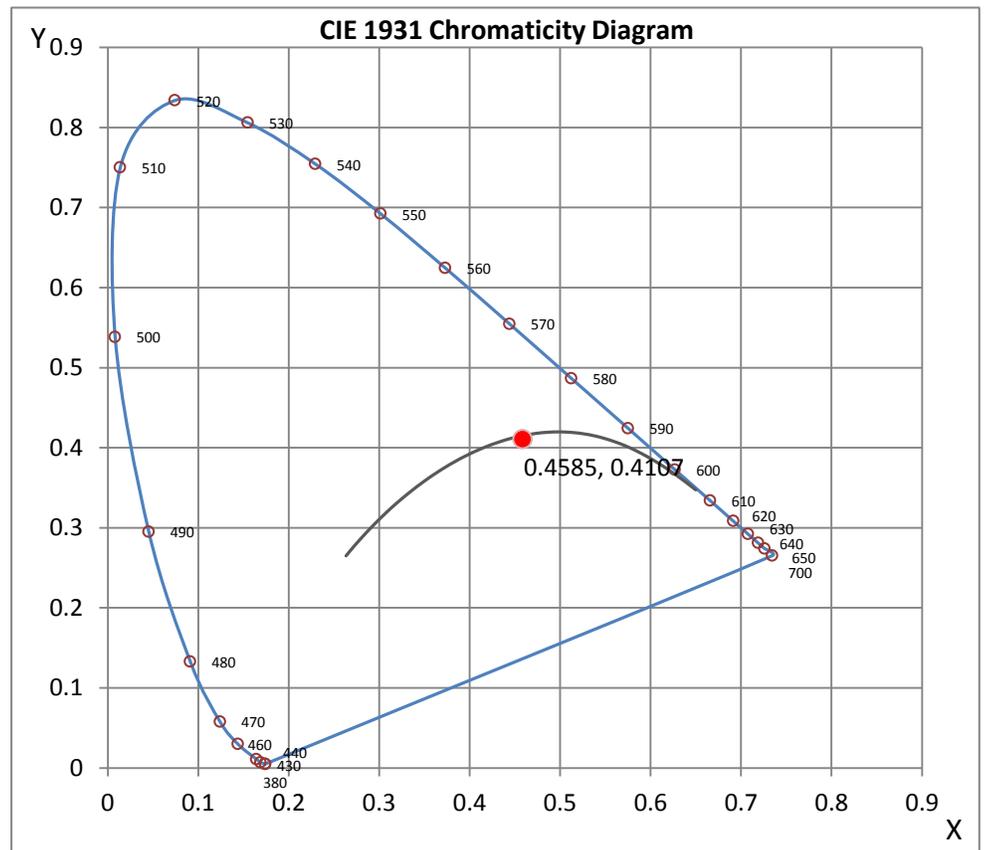
Wavelength	W/m <sup>2</sup> nm	440	0.1422	510	0.2655	580	0.8821	650	0.6791	720	0.1245
380	0.0008	450	0.3185	520	0.3588	590	0.9562	660	0.5583	730	0.0932
390	0.0007	460	0.3489	530	0.4471	600	0.9929	670	0.4227	740	0.0685
400	0.0009	470	0.2206	540	0.5263	610	0.9997	680	0.3309	750	0.0504
410	0.0027	480	0.1619	550	0.6022	620	0.9531	690	0.2774	760	0.0365
420	0.0139	490	0.1471	560	0.6873	630	0.8839	700	0.2207	770	0.0272
430	0.0547	500	0.1831	570	0.7721	640	0.7888	710	0.1692	780	0.0201

**CRI & CCT**

x	0.4585
y	0.4107
u'	0.2616
v'	0.5272
CRI	79.90
CCT	2720
Duv	0.00016

**R Values**

R1	77.84
R2	88.60
R3	96.18
R4	75.38
R5	75.95
R6	83.84
R7	82.95
R8	58.41
R9	8.59
R10	72.12
R11	70.62
R12	61.79
R13	79.97
R14	97.57



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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:

Test Report Reviewed by:

Jeff Ahn  
 Engineering Manager

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 : L111407302.IES**

## DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L111407302  
[TESTLAB] LIGHT LABORATORY, INC.  
[ISSUEDATE] 1/15/2015  
[MANUFAC] CAST LIGHTING  
[LUMCAT] CBLED141-HIGH  
[LUMINAIRE] 2-1/4"DIA. X 8-1/4"H. LED DIRECTIONAL LIGHT  
[MORE] CLEAR LENS  
[BALLASTCAT] N.A.  
[BALLAST] N.A.  
[LAMPPOSITION] 0,0  
[LAMPCAT] N/A  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[\_INPUT] 12VAC, 5.86W  
[\_TEST PROCEDURE] IESNA:LM-79-08

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

## CHARACTERISTICS

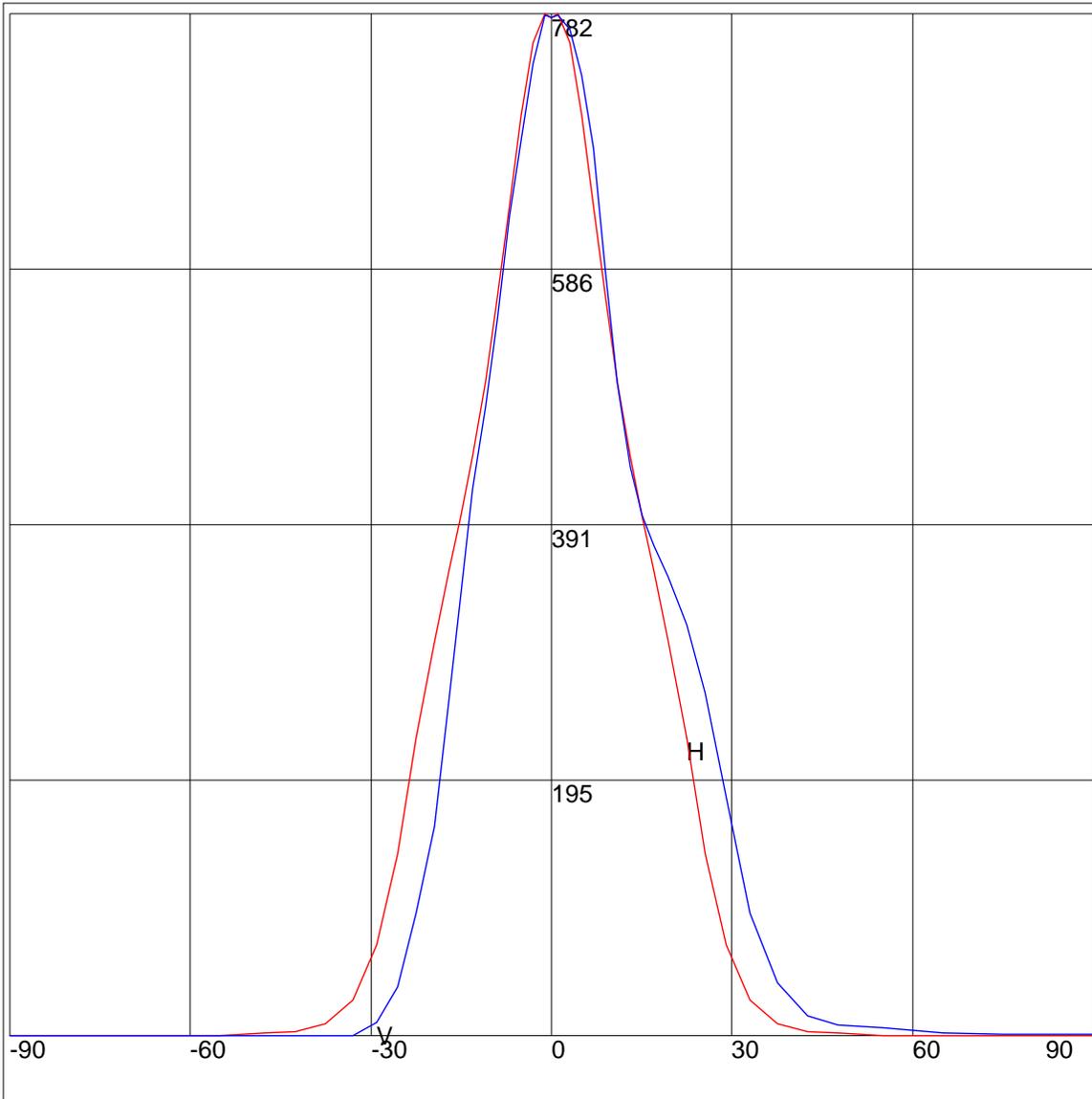
NEMA Type	4 H x 4 V
Maximum Candela	781.86
Maximum Candela Angle	-1H 0V
Horizontal Beam Angle (50%)	30.6
Vertical Beam Angle (50%)	29.2
Horizontal Field Angle (10%)	57.2
Vertical Field Angle (10%)	57.7
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	115
Beam Efficiency	N.A.
Field Lumens	243
Field Efficiency	N.A.
Spill Lumens	26
Luminaire Lumens	269
Total Efficiency	N.A.
Total Luminaire Watts	5.86
Ballast Factor	1.00

**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L111407302.IES**

**AXIAL CANDELA**

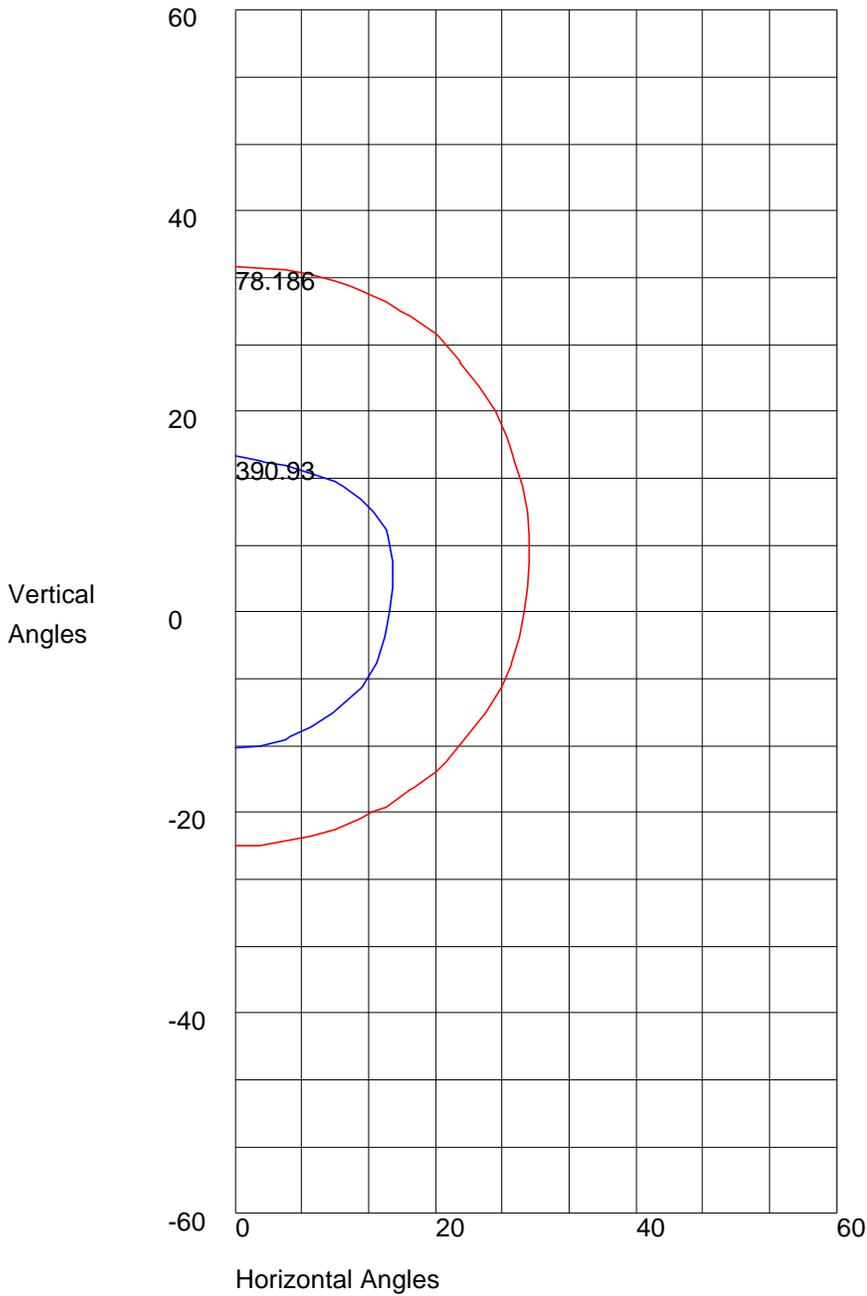
DEG.	HOR.	DEG.	VERT.
90	.08	90	1.01
85	.08	85	1.17
75	.25	75	1.51
65	.5	65	2.68
55	.84	55	6.37
47.5	2.52	47.5	8.72
42.5	3.69	42.5	15.6
37.5	9.73	37.5	40.76
33	27.76	33	93.93
29	70.36	29	182.66
25.5	139.38	25.5	262.49
22.5	228.11	22.5	314.32
19.5	301.83	19.5	351.05
17	356.42	17	375.04
15	397.6	15	397.85
13	443.89	13	435.92
11	501.17	11	500
9	566.16	9	585.37
7	634.43	7	678.79
5	704.71	5	734.81
3	760.06	3	770.04
1	781.86	1	781.11
0	778.46	0	778.46
-1	781.86	-1	781.11
-3	760.06	-3	743.2
-5	704.71	-5	684.83
-7	634.43	-7	626.63
-9	566.16	-9	549.64
-11	501.17	-11	482.05
-13	443.89	-13	418.65
-15	397.6	-15	337.13
-17	356.42	-17	257.46
-19.5	301.83	-19.5	161.02
-22.5	228.11	-22.5	94.1
-25.5	139.38	-25.5	38.07
-29	70.36	-29	10.74
-33	27.76	-33	.34
-37.5	9.73	-37.5	0
-42.5	3.69	-42.5	0
-47.5	2.52	-47.5	0
-55	.84	-55	0
-65	.5	-65	0
-75	.25	-75	0
-85	.08	-85	0
-90	.08	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 781.86 Located At Horizontal Angle = -1, Vertical Angle = 0  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 781.86 Located At Horizontal Angle = -1, Vertical Angle = 0  
50% Maximum Candela = 390.93  
10% Maximum Candela = 78.186