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

# Photometric Test Report

**IES FLOOD REPORT**
**PHOTOMETRIC FILENAME : L021606606.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] L021606606
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 3/3/2016
[MANUFAC] VISTA PROFESSIONAL OUTDOOR LIGHTING
[LUMCAT] 1185-WF-C-CX
[LUMINAIRE] 8"DIA. X 8"H. LED Ingrade, WF Distribution
[BALLASTCAT] ERP ESS030W-0620-42
[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, 25.69W
[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 | 3879 |
| Maximum Candela Angle | 0H 0V |
| Horizontal Beam Angle (50%) | 38.2 |
| Vertical Beam Angle (50%) | 38.2 |
| Horizontal Field Angle (10%) | 56.0 |
| Vertical Field Angle (10%) | 56.0 |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Beam Lumens | 1094 |
| Beam Efficiency | N.A. |
| Field Lumens | 1501 |
| Field Efficiency | N.A. |
| Spill Lumens | 124 |
| Luminaire Lumens | 1625 |
| Total Efficiency | N.A. |
| Total Luminaire Watts | 25.69 |
| Ballast Factor | 1.00 |

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**AXIAL CANDELA**

| DEG. | HOR. | DEG. | VERT. |
|---|---|---|---|
| 90 | 0 | 90 | 0 |
| 85 | 10 | 85 | 10 |
| 75 | 11 | 75 | 11 |
| 65 | 13 | 65 | 13 |
| 55 | 16 | 55 | 16 |
| 47.5 | 22 | 47.5 | 22 |
| 42.5 | 26 | 42.5 | 26 |
| 37.5 | 33 | 37.5 | 33 |
| 33 | 44 | 33 | 44 |
| 29 | 208 | 29 | 208 |
| 25.5 | 845 | 25.5 | 845 |
| 22.5 | 1245 | 22.5 | 1245 |
| 19.5 | 1838 | 19.5 | 1838 |
| 17 | 2502 | 17 | 2502 |
| 15 | 2986 | 15 | 2986 |
| 13 | 3329 | 13 | 3329 |
| 11 | 3557 | 11 | 3557 |
| 9 | 3667 | 9 | 3667 |
| 7 | 3669 | 7 | 3669 |
| 5 | 3667 | 5 | 3667 |
| 3 | 3731 | 3 | 3731 |
| 1 | 3840 | 1 | 3840 |
| 0 | 3879 | 0 | 3879 |
| -1 | 3840 | -1 | 3840 |
| -3 | 3731 | -3 | 3731 |
| -5 | 3667 | -5 | 3667 |
| -7 | 3669 | -7 | 3669 |
| -9 | 3667 | -9 | 3667 |
| -11 | 3557 | -11 | 3557 |
| -13 | 3329 | -13 | 3329 |
| -15 | 2986 | -15 | 2986 |
| -17 | 2502 | -17 | 2502 |
| -19.5 | 1838 | -19.5 | 1838 |
| -22.5 | 1245 | -22.5 | 1245 |
| -25.5 | 845 | -25.5 | 845 |
| -29 | 208 | -29 | 208 |
| -33 | 44 | -33 | 44 |
| -37.5 | 33 | -37.5 | 33 |
| -42.5 | 26 | -42.5 | 26 |
| -47.5 | 22 | -47.5 | 22 |
| -55 | 16 | -55 | 16 |
| -65 | 13 | -65 | 13 |
| -75 | 11 | -75 | 11 |
| -85 | 10 | -85 | 10 |
| -90 | 0 | -90 | 0 |

**ZONAL LUMEN SUMMARY**

| Zone | % |
|---|---|
| 0-20 | 67.7 |
| 0-30 | 93.1 |
| 0-40 | 95.6 |
| 0-60 | 97.5 |
| 0-80 | 99.1 |
| 0-90 | 100 |
| 10-90 | 82.4 |
| 20-40 | 27.9 |
| 20-50 | 29.1 |
| 40-70 | 2.8 |
| 60-80 | 1.6 |
| 70-80 | 0.8 |
| 80-90 | 0.9 |
| 90-110 | 0 |
| 90-120 | 0 |
| 90-130 | 0 |
| 90-150 | 0 |
| 90-180 | 0 |
| 110-180 | 0 |
| 0-180 | 100 |

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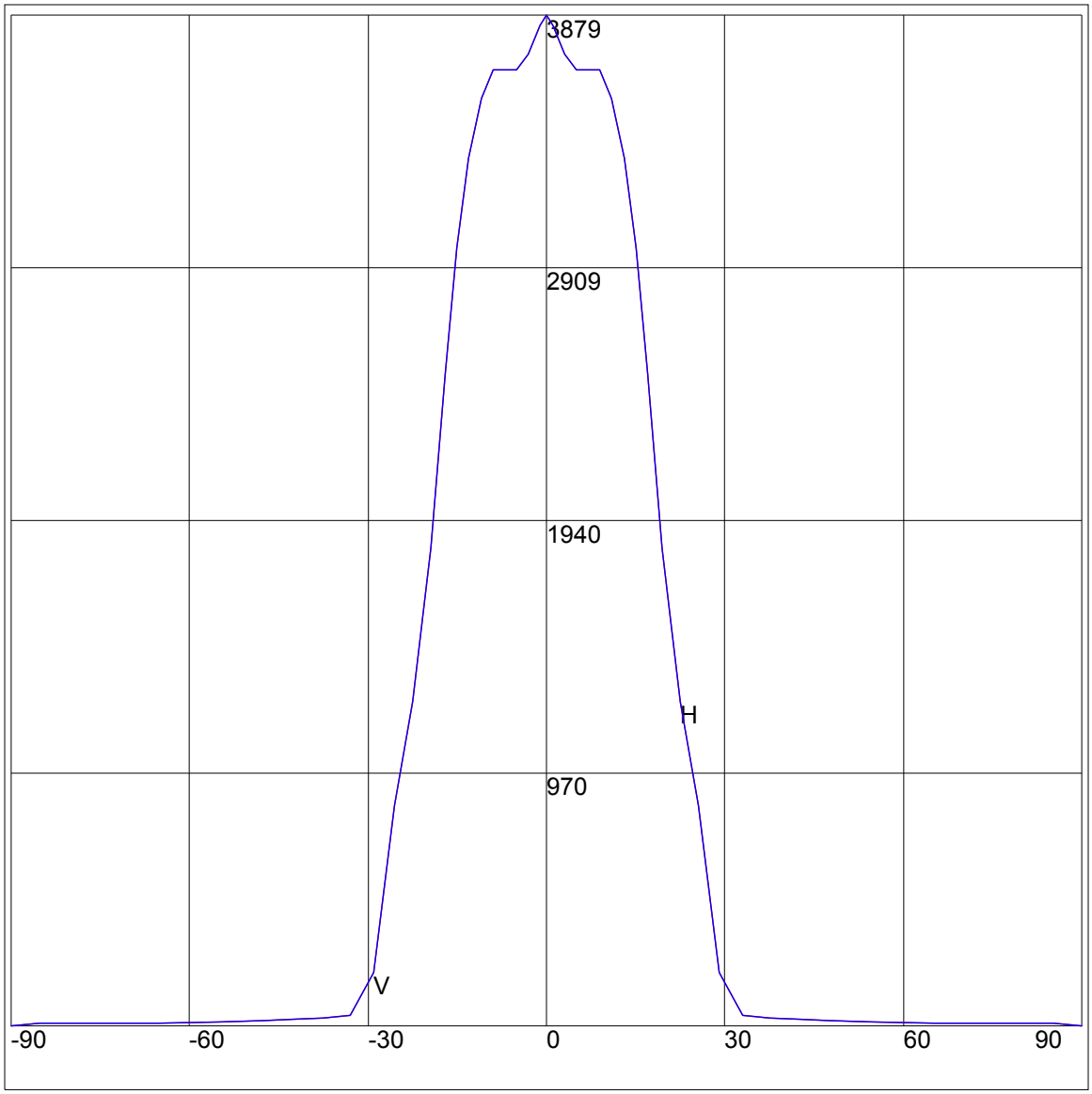
**AXIAL CANDELA DISPLAY**




Maximum Candela = 3879  Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

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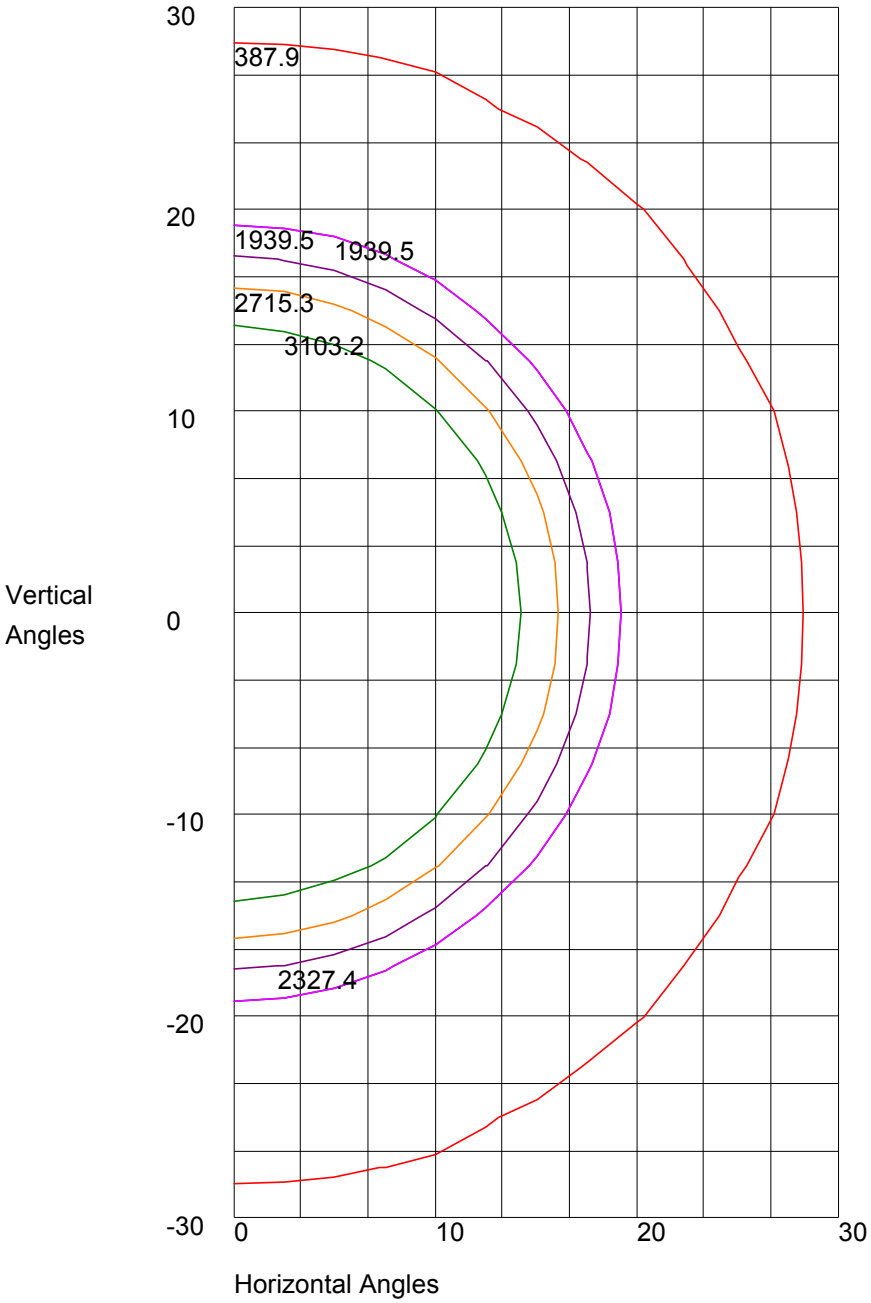
**ISOCANDELA CURVES**




Maximum Candela = 3879 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 1939.5
10% Maximum Candela = 387.9

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Report No: L021606606
Date: 3/3/2016

NVLAP LAB CODE 200927-0

**Report No:** **L021606606**

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

**Model Number:** **1185-WF-C-CX**

**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 1185-B-WF-30-C-MV-CX-ND . Received in working and undamaged condition. No modifications were necessary.

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

**Sample Arrival Date:** 2/22/16

**Date of Tests:** 2/29/16 - 2/29/16

**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.

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| Test Summary | |
|---|---|
| **Manufacturer:** | Vista Professional Outdoor Lighting |
| **Model Number:** | 1185-WF-C-CX |
| **Driver Model Number:** | ERP ESS030W-0620-42 |
| **Total Lumens:** | 1625.10 |
| **Input Voltage (VAC/60Hz):** | 120.00 |
| **Input Current (Amp):** | 0.22 |
| **Input Power (W):** | 25.69 |
| **Input Power Factor:** | 0.99 |
| **Current ATHD @ 120V(%):** | 12% |
| **Current ATHD @ 277V(%):** | N/A |
| **Efficacy:** | 63 |
| **Color Rendering Index (CRI):** | 84 |
| **Correlated Color Temperature (K):** | 3079 |
| **Chromaticity Coordinate x:** | 0.4313 |
| **Chromaticity Coordinate y:** | 0.4019 |
| **Ambient Temperature (°C):** | 25.0 |
| **Stabilization Time (Hours):** | 0:30 |
| **Total Operating Time (Hours):** | 1:00 |
| **Off State Power(W):** | 0.00 |

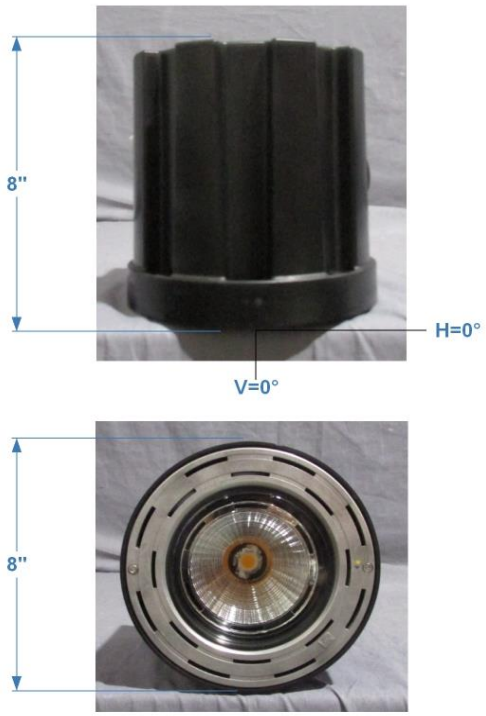


FIG. 1 LUMINAIRE

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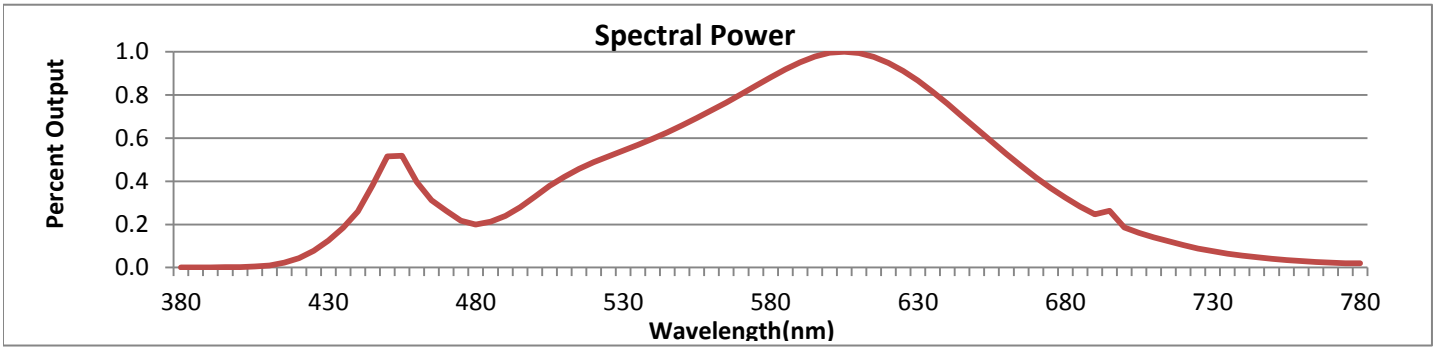


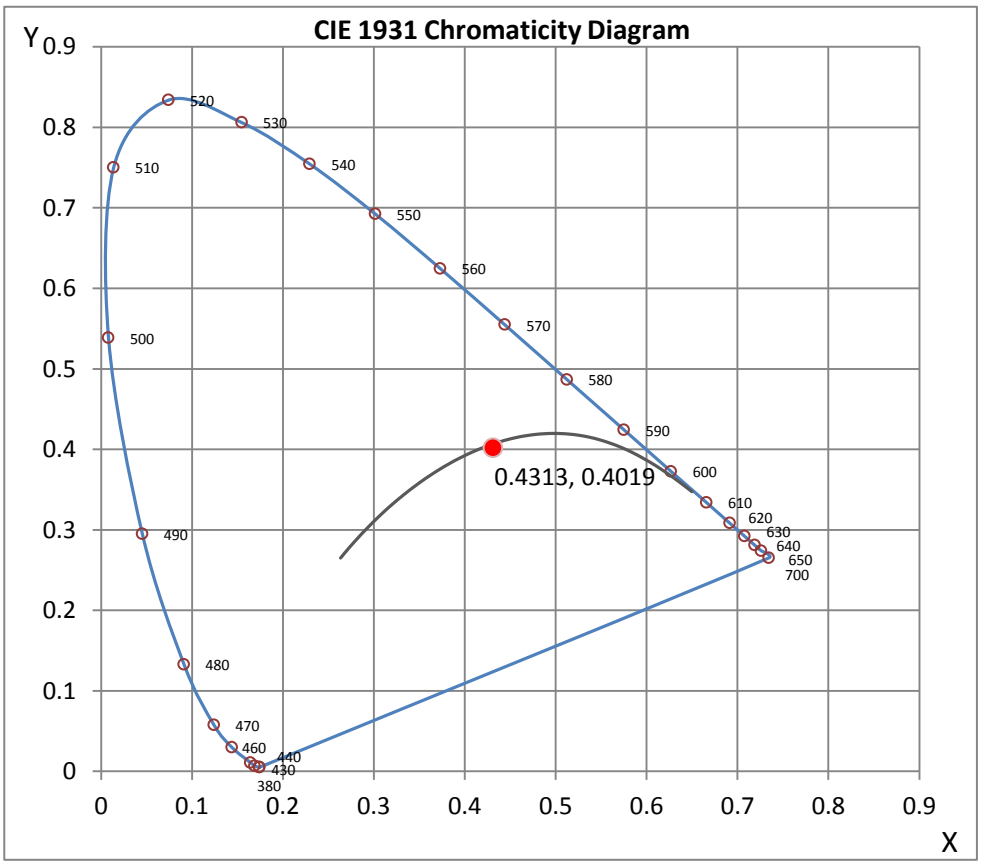

| Wavelength | W/m²nm | 440 | 0.0049 | 510 | 0.0079 | 580 | 0.0164 | 650 | 0.0120 | 720 | 0.0019 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 380 | 0.0000 | 450 | 0.0096 | 520 | 0.0091 | 590 | 0.0178 | 660 | 0.0098 | 730 | 0.0014 |
| 390 | 0.0000 | 460 | 0.0074 | 530 | 0.0101 | 600 | 0.0186 | 670 | 0.0078 | 740 | 0.0010 |
| 400 | 0.0000 | 470 | 0.0049 | 540 | 0.0111 | 610 | 0.0186 | 680 | 0.0060 | 750 | 0.0008 |
| 410 | 0.0002 | 480 | 0.0037 | 550 | 0.0123 | 620 | 0.0177 | 690 | 0.0046 | 760 | 0.0006 |
| 420 | 0.0008 | 490 | 0.0045 | 560 | 0.0136 | 630 | 0.0162 | 700 | 0.0035 | 770 | 0.0004 |
| 430 | 0.0023 | 500 | 0.0061 | 570 | 0.0150 | 640 | 0.0142 | 710 | 0.0026 | 780 | 0.0004 |

**CRI & CCT**

| | |
|---|---|
| **x** | 0.4313 |
| **y** | 0.4019 |
| **u'** | 0.2479 |
| **v'** | 0.5197 |
| **CRI** | 84.00 |
| **CCT** | 3079 |
| **Duv** | -0.00007 |

**R Values**

| | |
|---|---|
| **R1** | 82.51 |
| **R2** | 90.77 |
| **R3** | 96.80 |
| **R4** | 82.30 |
| **R5** | 82.14 |
| **R6** | 87.99 |
| **R7** | 85.33 |
| **R8** | 64.18 |
| **R9** | 17.60 |
| **R10** | 78.21 |
| **R11** | 81.05 |
| **R12** | 70.76 |
| **R13** | 84.34 |
| **R14** | 98.20 |

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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 : JEFF AHN

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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