



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300



Photometric Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-10-2014, CIE 13.3-1995
CIE 15-2004, ANSI C78.377-2017, IES TM-30-2018

Prepared For
Cast Lighting
David Beausoleil
1120A Goffle Rd
Hawthorne, NJ 07506
United States

Catalog Number
CPL312
Order Number
13587672
Test Number
13587672.02

Test Date

2020-12-08

Prepared By

Javier Caban, Technician

Approved By

Kevin Rodriguez, Project Handler

The results contained in this report pertain only to the tested sample.
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Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 3-meter integrating sphere using the 4π geometry method.

Absorption correction was employed for Sphere measurement

Tested in 30 planes left side, 30 planes right side, left and right averaged
Vertical test increments are 2.5 degrees
Test distance exceeds five times the greatest luminous opening of luminaire
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Luminaire Description: Cast aluminum housing, white reflective inner coating, no enclosure
Lamp: Four white LEDs with optics below each
Mounting: Pathway
Ballast/Driver: One Cast Perimeter XCPD3 driver

Luminaire



Luminaire Characteristics

Luminous Length: 8.50 in.
Luminous Width: 5.000 in.

Summary of Results

Integrating Sphere

Luminous Flux: 1662 Lumens
Efficacy: 94.63 lm/w
CCT: 4323 K
CRI (Ra): 73.1

Distribution

Roadway Classification: Type IV, Medium
Cutoff Classification: Noncutoff
BUG Rating: B1 U1 G1

Electrical Data at 17 VDC

Test Temperature: 24.8 °C
Voltage: 17.02 VDC
Current: 1.032 A
Power: 17.56 W
Power Factor: 1.000



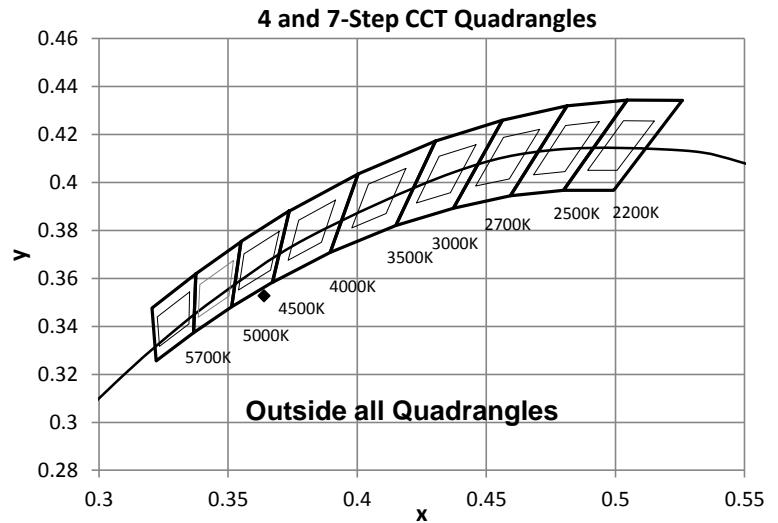
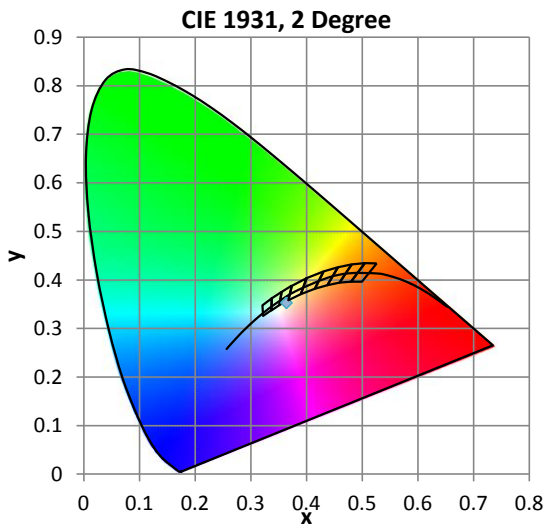
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

| Temperature | Voltage | Current | Power | Power Factor | Frequency | Current THD |
|-------------|-----------|---------|---------|--------------|-----------|-------------|
| 24.8 °C | 17.02 VDC | 1.032 A | 17.56 W | N/A | N/A | N/A |

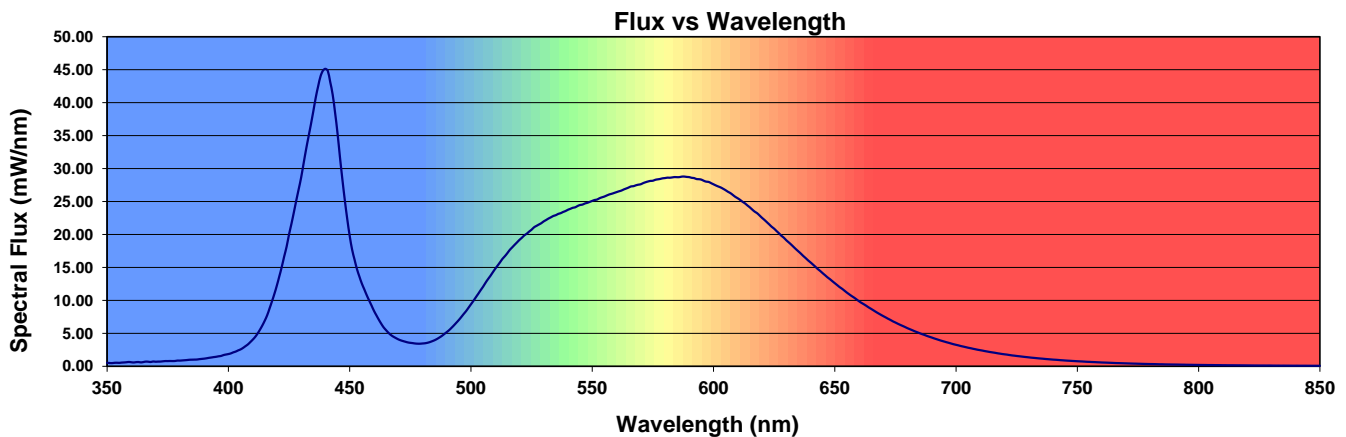
Summary of Results

| | | | |
|-----------------------------|-------------|---------------------------|---------|
| Total Output: | 1662 Lumens | Chromaticity (x): | 0.3639 |
| Efficacy: | 94.6 lm/w | Chromaticity (y): | 0.3528 |
| CCT: | 4323 K | Chromaticity (u'): | 0.2238 |
| CRI (Ra): | 73.1 | Chromaticity (v'): | 0.4880 |
| CRI (R9): | -11.6 | TM-30 Rf: | 69 |
| Peak Wavelength: | 440 nm | TM-30 Rg: | 100 |
| Dominant Wavelength: | 584 nm | TM-30 Rcs,h1: | -14% |
| S/P Ratio: | 1.58 | Duv: | -0.0065 |



Color Rendering Index Detail

| Ra (CRI) | R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|----------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|
| 73.1 | 73.7 | 77.1 | 79.1 | 74.7 | 73.7 | 69.3 | 77.6 | 59.9 | -11.6 | 45.5 | 75.0 | 50.9 | 72.9 | 87.7 | 67.6 |





Distribution - Goniophotometer

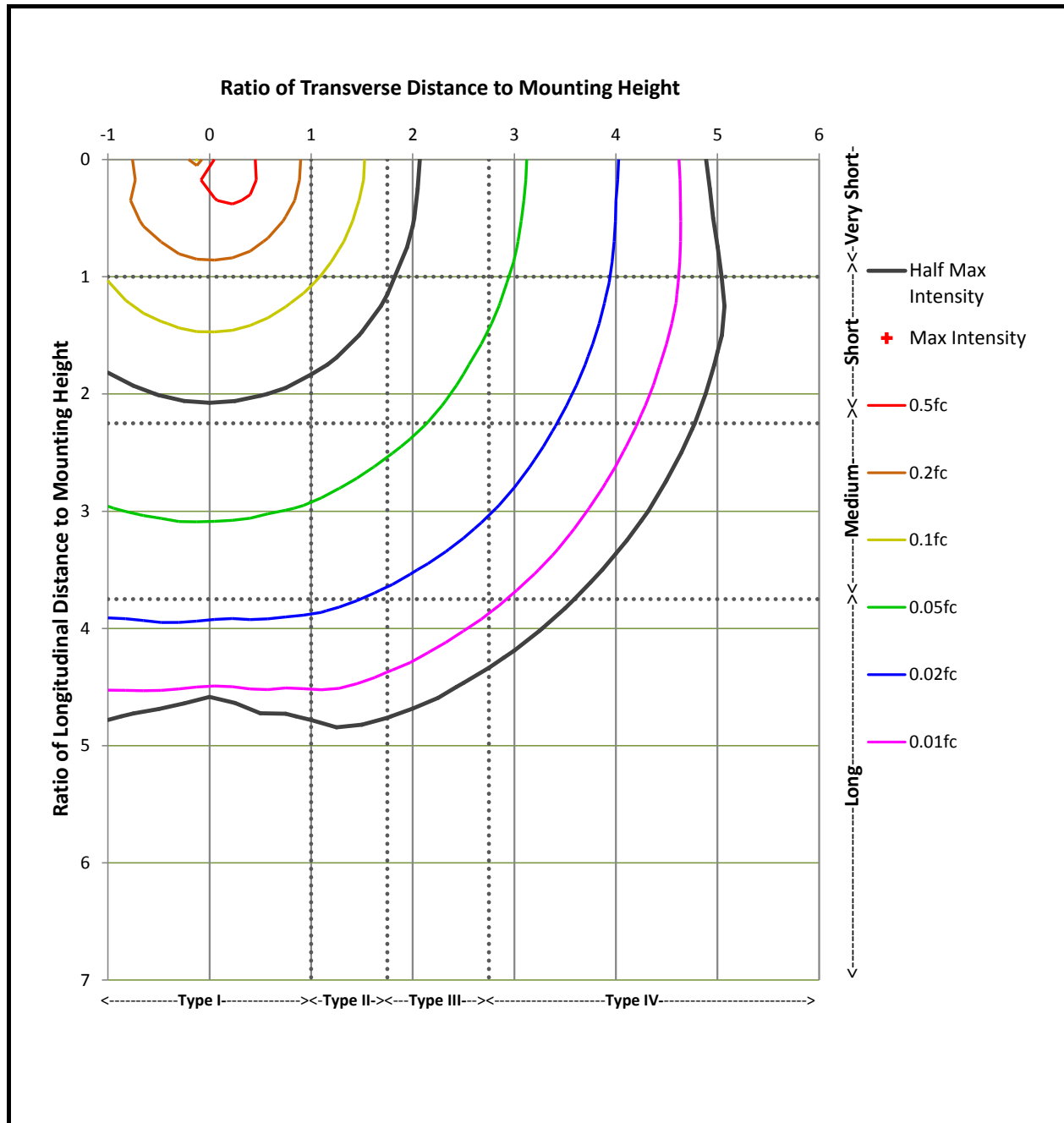
Distribution Test Conditions

| Temperature | Voltage | Current | Power | Power Factor | Frequency | Current THD |
|-------------|-----------|---------|---------|--------------|-----------|-------------|
| 24.7 °C | 17.00 VDC | 1.053 A | 17.90 W | N/A | N/A | N/A |

Summary of Results

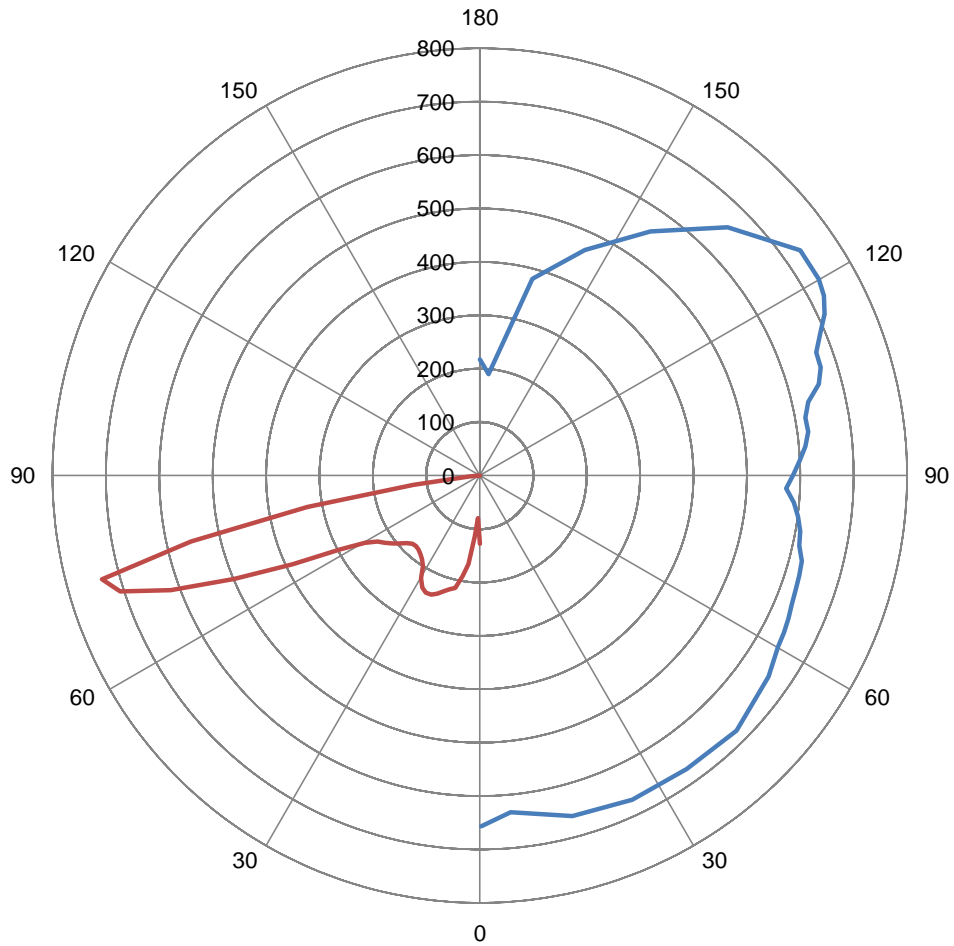
| | | | |
|------------------------------------|-----------------|----------------------------|-------------|
| IES Roadway Classification: | Type IV, Medium | Total Lumen Output: | 1665 Lumens |
| Cutoff Classification | Noncutoff | Luminaire Efficacy: | 93.0 lm/w |
| BUG Rating: | B1 U1 G1 | Maximum Candela: | 733 Candela |

ISO FootCandle Plot at 20 Feet





Maximum Plane and Cone Plots of Candela



Vertical Plane Through

125 ° Lateral

Lateral Cone Through

75 ° Vertical

Maximum Intensity (Candlepower):

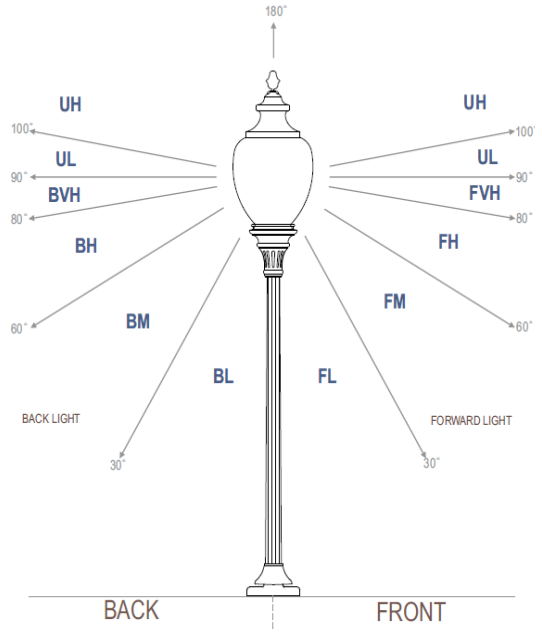
733 Candela

Zonal Lumen Summary

| Zone | Lumens | % of Luminaire | Zone | Lumens | % of Luminaire | Zone | Lumens | % of Luminaire |
|-------|--------|----------------|---------|--------|----------------|---------|--------|----------------|
| 0-5 | 3.4 | 0.2% | 60-65 | 139.9 | 8.4% | 120-125 | 0.0 | 0.0% |
| 5-10 | 12.4 | 0.7% | 65-70 | 234.7 | 14.1% | 125-130 | 0.0 | 0.0% |
| 10-15 | 24.9 | 1.5% | 70-75 | 315.8 | 19.0% | 130-135 | 0.0 | 0.0% |
| 15-20 | 37.4 | 2.2% | 75-80 | 242.4 | 14.6% | 135-140 | 0.0 | 0.0% |
| 20-25 | 50.7 | 3.0% | 80-85 | 74.2 | 4.5% | 140-145 | 0.0 | 0.0% |
| 25-30 | 61.2 | 3.7% | 85-90 | 9.9 | 0.6% | 145-150 | 0.0 | 0.0% |
| 30-35 | 61.1 | 3.7% | 90-95 | 1.4 | 0.1% | 150-155 | 0.0 | 0.0% |
| 35-40 | 63.3 | 3.8% | 95-100 | 0.6 | 0.0% | 155-160 | 0.0 | 0.0% |
| 40-45 | 66.8 | 4.0% | 100-105 | 0.3 | 0.0% | 160-165 | 0.0 | 0.0% |
| 45-50 | 74.0 | 4.4% | 105-110 | 0.2 | 0.0% | 165-170 | 0.0 | 0.0% |
| 50-55 | 86.9 | 5.2% | 110-115 | 0.1 | 0.0% | 170-175 | 0.0 | 0.0% |
| 55-60 | 103.4 | 6.2% | 115-120 | 0.0 | 0.0% | 175-180 | 0.0 | 0.0% |



IES "BUG" Rating
 (Back Light, Uplight, Glare)
 Per IES TM-15-11



Luminaire Classification System (LCS)

| LCS | Zone | Lumens | Luminaire % |
|-------------------|-----------------|---------------|---------------|
| FL | (0-30) | 107.9 | 6.5% |
| FM | (30-60) | 238.5 | 14.3% |
| FH | (60-80) | 506.8 | 30.4% |
| FVH | (80-90) | 37.5 | 2.3% |
| BL | (0-30) | 82.1 | 4.9% |
| BM | (30-60) | 216.9 | 13.0% |
| BH | (60-80) | 426.1 | 25.6% |
| BVH | (80-90) | 46.6 | 2.8% |
| UL | (90-100) | 2.0 | 0.1% |
| UH | (100-180) | 0.7 | 0.0% |
| Total | | 1664.9 | 100.0% |
| BUG Rating | B1 U1 G1 | | |

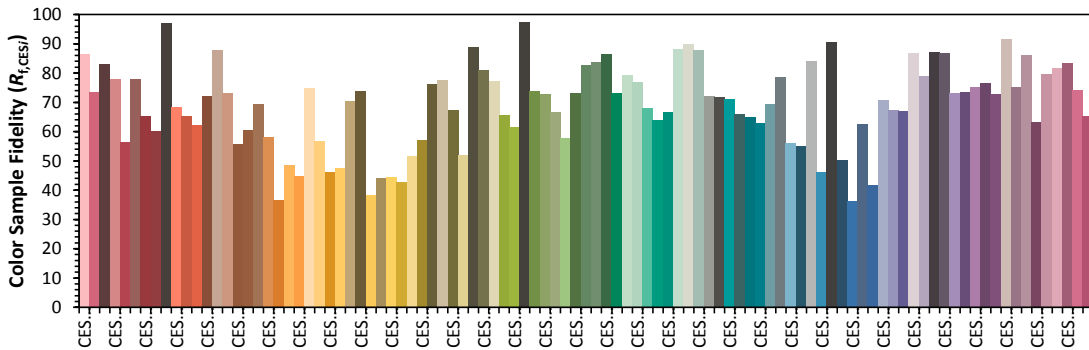
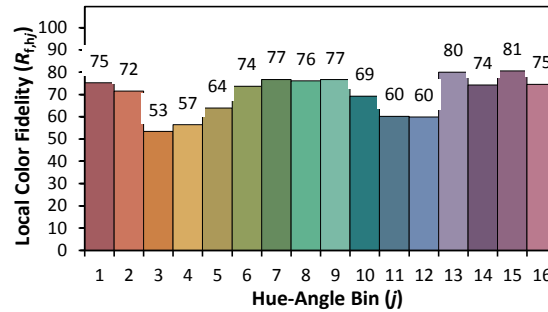
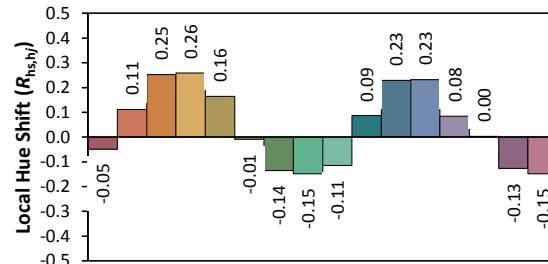
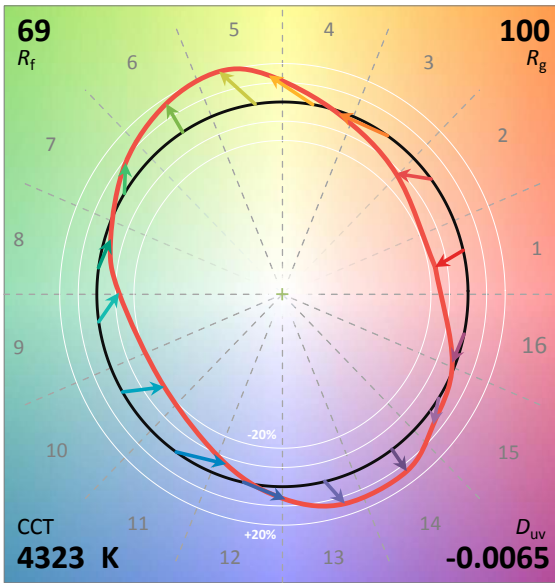
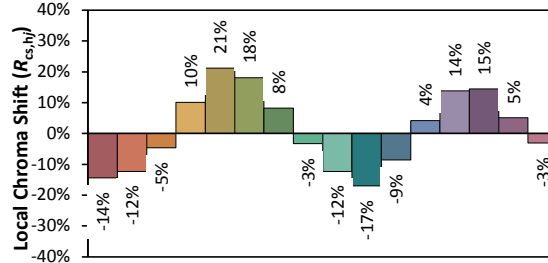
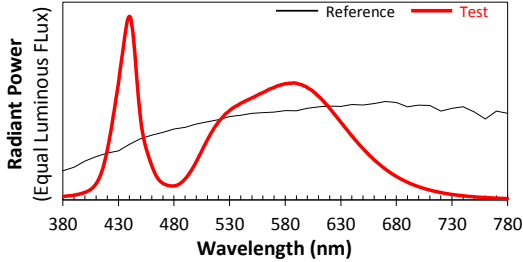
ANSI/IES TM-30-18 Color Rendition Report

Source: Test Number: 13587672.02

Manufacturer: Cast Lighting

Date: 2020-12-08

Model: CPL312



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3639
y 0.3528
u' 0.2238
v' 0.4880

CIE 13.3-1995
(CRI)
Ra 73
Rg -12

Colors are for visual orientation purposes only. Created with the IES TM-30-18 Calculator Version 2.00.