Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P438111

Luminaire Tested: **ISW-SA1A-830-U-SLR-HSS**

Issue Date: 12/10/2020

Report Generated By 670245982

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P438111 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-23) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 12/10/2020 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | ISW-SA1A-830-U-SLR-HSS |
| Description: | IMPACT ELITE LED WEDGE LUMINAIRE |
| | (1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 1643 lumens |
| Efficiency: | N/A |
| Efficacy: | 81.7 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B0 - U0 - G1 |

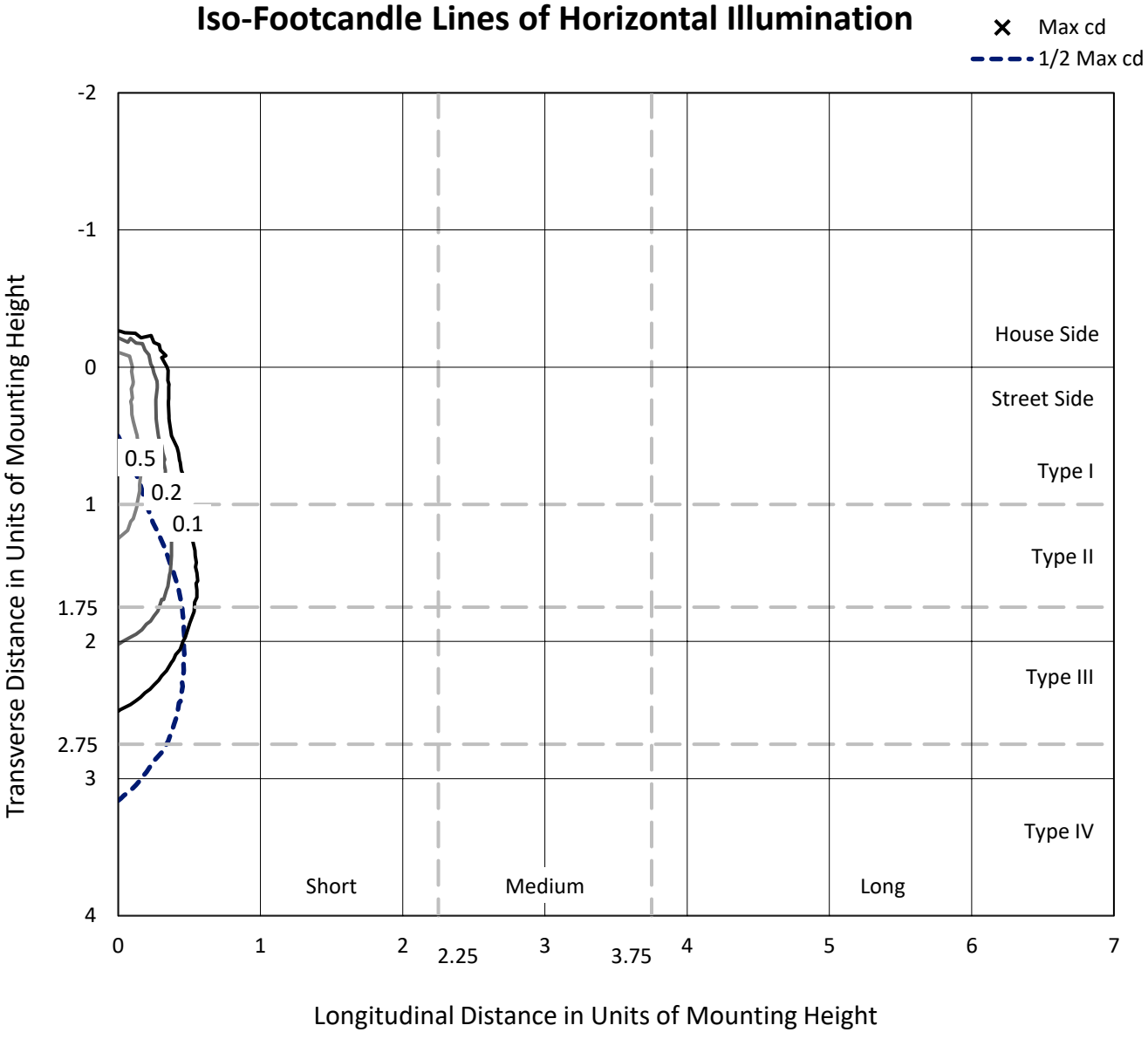
| | |
|---|---|
| Input Watts (W): | 20.1 |
| Input Voltage (V): | NR |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | NR |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P438111
CATALOG NUMBER: ISW-SA1A-830-U-SLR-HSS

## Iso-Footcandle Lines of Horizontal Illumination



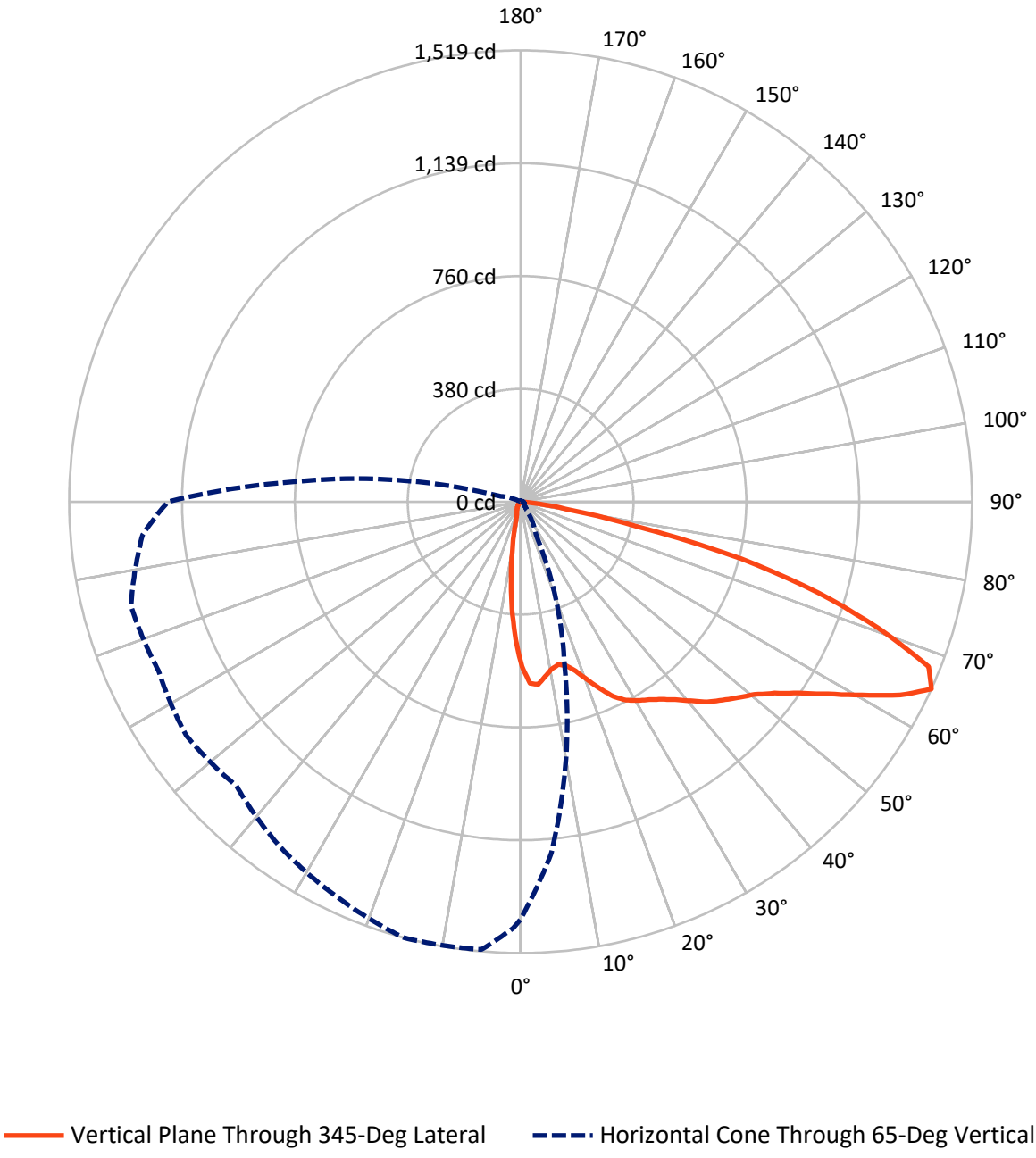

Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
Type IV - Short - N/A

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P438111
CATALOG NUMBER: ISW-SA1A-830-U-SLR-HSS

## Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

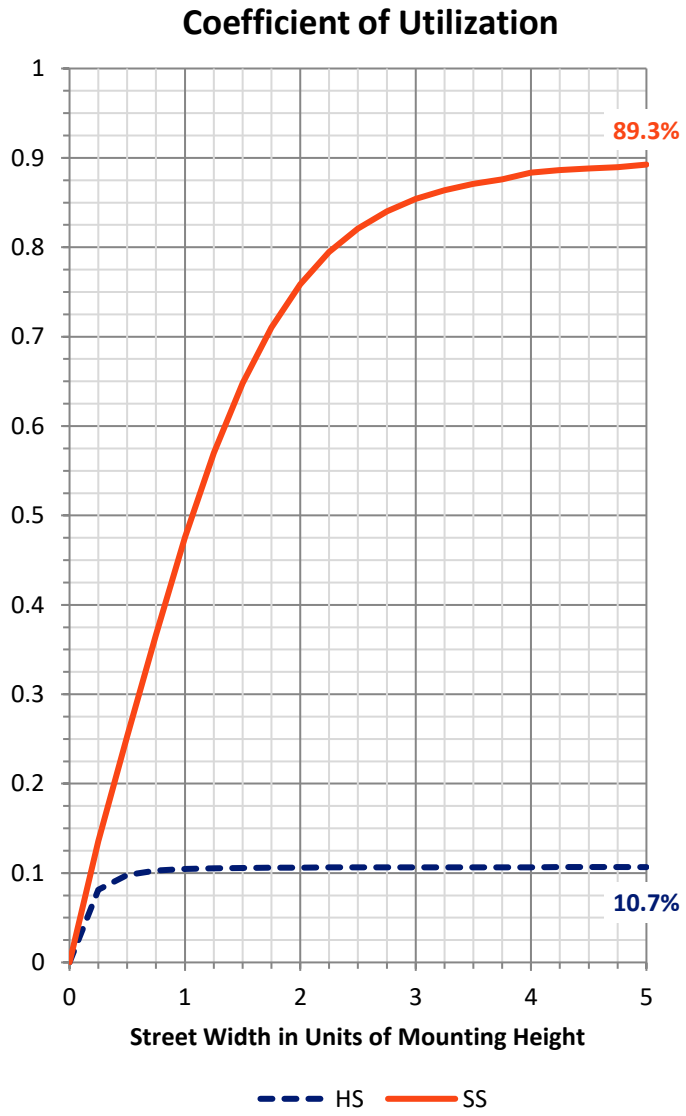
REPORT NUMBER: P438111
CATALOG NUMBER: ISW-SA1A-830-U-SLR-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 177.1 | 0.0 | 177.1 |
| | % Fixture | 10.8 | 0.0 | 10.8 |
| **Street Side** | Lumens | 1465.9 | 0.0 | 1465.9 |
| | % Fixture | 89.2 | 0.0 | 89.2 |
| **Total** | Lumens | 1643.0 | 0.0 | 1643.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 41.2 | 2.5 |
| 10°-20° | 80.1 | 4.9 |
| 20°-30° | 116.8 | 7.1 |
| 30°-40° | 173.7 | 10.6 |
| 40°-50° | 254.6 | 15.5 |
| 50°-60° | 366.4 | 22.3 |
| 60°-70° | 411.0 | 25.0 |
| 70°-80° | 180.3 | 11.0 |
| 80°-90° | 19.0 | 1.2 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 1643.0 | 100.0 |
| 0°-180° | 1643.0 | 100.0 |



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

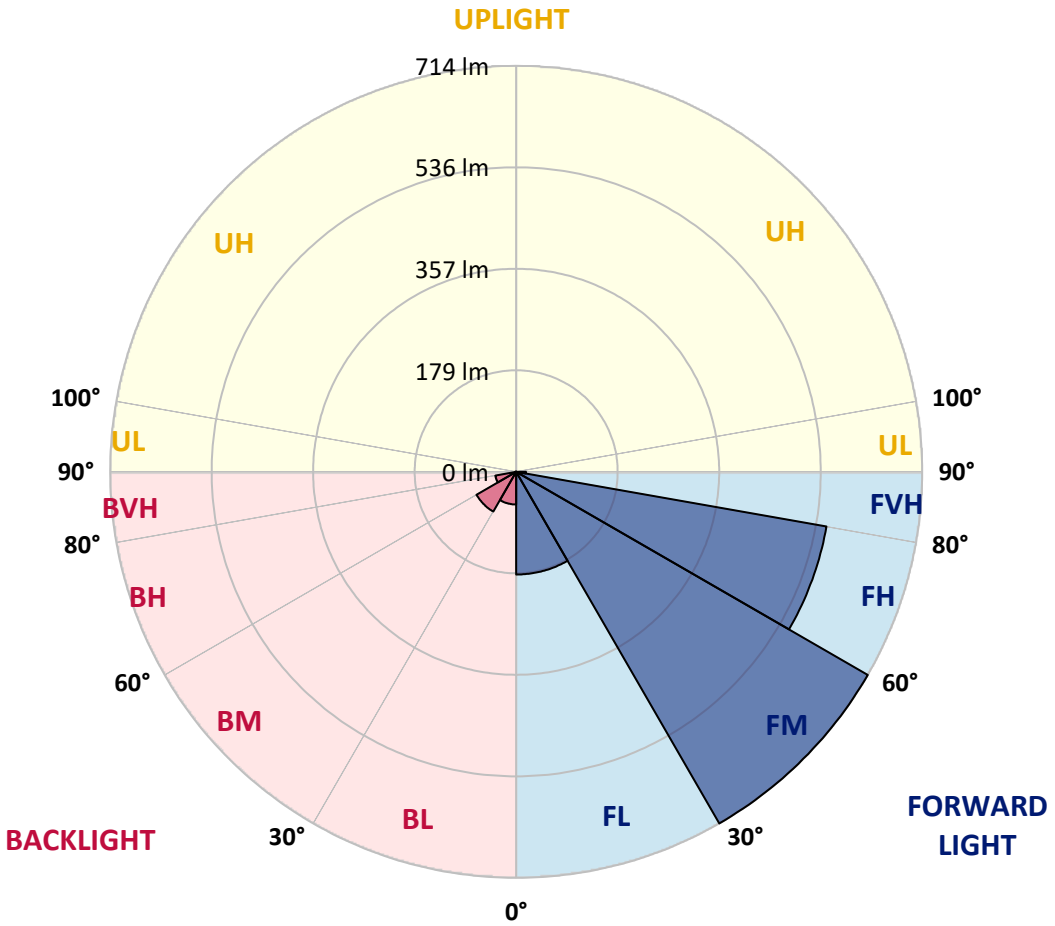
Scaled Data Report

REPORT NUMBER: P438111
CATALOG NUMBER: ISW-SA1A-830-U-SLR-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 180.7 | 11.0 | | | |
| FM | (30°-60°) | 714.0 | 43.5 | | | |
| FH | (60°-80°) | 554.1 | 33.7 | | | G0/660 |
| FVH | (80°-90°) | 17.1 | 1.0 | | | G1/100 |
| BL | (0°-30°) | 57.5 | 3.5 | B0/110 | | |
| BM | (30°-60°) | 80.6 | 4.9 | B0/220 | | |
| BH | (60°-80°) | 37.2 | 2.3 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.8 | 0.1 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B0-U0-G1**
Type IV Short



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P438111
CATALOG NUMBER: ISW-SA1A-830-U-SLR-HSS

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 1° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 |
| 2.5° | 586.8 | 586.8 | 578.1 | 557.6 | 538.7 | 515.8 | 503.2 | 491.4 | 478.8 | 470.1 | 456.7 |
| 5° | 559.2 | 553.7 | 541.1 | 503.2 | 463.0 | 436.2 | 415.7 | 379.4 | 362.0 | 349.4 | 343.9 |
| 7.5° | 513.5 | 510.3 | 489.8 | 445.6 | 397.5 | 354.1 | 326.5 | 296.6 | 272.9 | 263.4 | 246.9 |
| 10° | 481.9 | 478.8 | 452.7 | 392.8 | 336.8 | 305.2 | 283.1 | 261.9 | 239.0 | 216.1 | 198.8 |
| 12.5° | 466.1 | 459.8 | 434.6 | 366.8 | 318.6 | 287.9 | 262.6 | 236.6 | 208.2 | 183.0 | 162.5 |
| 15° | 470.1 | 459.8 | 431.4 | 362.0 | 305.2 | 267.4 | 235.0 | 197.2 | 168.8 | 138.8 | 119.9 |
| 17.5° | 497.7 | 486.6 | 451.9 | 366.0 | 287.9 | 239.8 | 197.2 | 154.6 | 116.7 | 89.1 | 79.7 |
| 20° | 548.9 | 537.1 | 489.8 | 374.6 | 276.8 | 212.2 | 152.2 | 106.5 | 77.3 | 64.7 | 59.2 |
| 22.5° | 614.4 | 598.6 | 542.6 | 388.8 | 264.2 | 184.6 | 115.2 | 75.7 | 59.2 | 51.3 | 47.3 |
| 25° | 683.0 | 667.3 | 604.9 | 410.1 | 256.3 | 160.9 | 89.1 | 59.2 | 48.1 | 43.4 | 41.0 |
| 27.5° | 745.3 | 725.6 | 660.9 | 441.7 | 246.9 | 139.6 | 74.1 | 51.3 | 43.4 | 37.9 | 36.3 |
| 30° | 802.1 | 779.3 | 716.9 | 468.5 | 233.5 | 120.7 | 63.9 | 47.3 | 40.2 | 35.5 | 33.1 |
| 32.5° | 850.2 | 832.1 | 762.7 | 487.4 | 222.4 | 110.4 | 56.8 | 41.8 | 34.7 | 30.8 | 29.2 |
| 35° | 907.8 | 890.5 | 806.9 | 503.2 | 215.3 | 105.7 | 52.1 | 39.4 | 32.3 | 28.4 | 25.2 |
| 37.5° | 985.9 | 960.7 | 855.8 | 517.4 | 207.4 | 101.7 | 48.1 | 37.1 | 30.8 | 26.0 | 23.7 |
| 40° | 1056.1 | 1028.5 | 912.5 | 527.7 | 203.5 | 98.6 | 47.3 | 35.5 | 29.2 | 24.5 | 22.1 |
| 42.5° | 1118.4 | 1093.2 | 958.3 | 531.6 | 200.3 | 93.1 | 46.5 | 34.7 | 29.2 | 23.7 | 20.5 |
| 45° | 1157.8 | 1135.0 | 1012.7 | 541.8 | 200.3 | 89.1 | 43.4 | 34.7 | 28.4 | 22.9 | 19.7 |
| 47.5° | 1194.1 | 1172.0 | 1060.0 | 552.9 | 197.2 | 86.0 | 39.4 | 37.9 | 28.4 | 22.1 | 18.1 |
| 50° | 1247.0 | 1229.6 | 1120.0 | 586.0 | 191.7 | 81.2 | 35.5 | 37.1 | 29.2 | 21.3 | 18.1 |
| 52.5° | 1314.0 | 1306.1 | 1208.3 | 631.0 | 183.8 | 72.6 | 31.5 | 34.7 | 29.2 | 20.5 | 17.4 |
| 55° | 1388.1 | 1385.0 | 1300.6 | 672.0 | 174.3 | 62.3 | 29.2 | 31.5 | 28.4 | 18.9 | 15.8 |
| 57.5° | 1433.1 | 1433.1 | 1360.5 | 694.9 | 166.4 | 49.7 | 26.0 | 26.0 | 27.6 | 17.4 | 14.2 |
| 60° | 1449.7 | 1432.3 | 1353.4 | 692.5 | 153.0 | 41.0 | 23.7 | 21.3 | 29.2 | 15.0 | 12.6 |
| 62.5° | 1448.1 | 1410.2 | 1287.2 | 654.6 | 134.9 | 37.9 | 20.5 | 18.1 | 21.3 | 13.4 | 11.0 |
| 65° | *1405.5* | *1359.7* | *1186.2* | *570.2* | *121.5* | *37.9* | *17.4* | *15.0* | *14.2* | *11.8* | *8.7* |
| 67.5° | 1288.0 | 1260.4 | 1038.7 | 483.5 | 112.0 | 37.9 | 15.0 | 12.6 | 11.0 | 9.5 | 7.9 |
| 70° | 1094.0 | 1057.7 | 836.8 | 373.1 | 104.9 | 37.9 | 12.6 | 11.0 | 10.3 | 7.9 | 6.3 |
| 72.5° | 713.0 | 692.5 | 511.9 | 256.3 | 86.0 | 37.1 | 11.0 | 10.3 | 9.5 | 7.1 | 5.5 |
| 75° | 388.0 | 358.9 | 281.6 | 91.5 | 61.5 | 26.8 | 9.5 | 8.7 | 7.1 | 6.3 | 4.7 |
| 77.5° | 168.0 | 161.7 | 143.5 | 24.5 | 18.1 | 7.9 | 5.5 | 5.5 | 4.7 | 4.7 | 3.2 |
| 80° | 22.1 | 16.6 | 18.9 | 7.1 | 6.3 | 3.9 | 3.2 | 2.4 | 2.4 | 2.4 | 1.6 |
| 82.5° | 0.8 | 0.8 | 0.0 | 0.8 | 2.4 | 1.6 | 0.0 | 0.0 | 0.8 | 0.8 | 0.8 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P438111
CATALOG NUMBER: ISW-SA1A-830-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 |
| 2.5° | 463.0 | 453.5 | 446.4 | 446.4 | 455.9 | 450.4 | 456.7 | 452.7 | 463.8 | 469.3 | 467.7 |
| 5° | 332.1 | 336.0 | 332.1 | 338.4 | 348.6 | 354.1 | 357.3 | 365.2 | 364.4 | 367.5 | 373.1 |
| 7.5° | 240.6 | 240.6 | 242.1 | 240.6 | 250.0 | 260.3 | 265.8 | 263.4 | 261.9 | 258.7 | 264.2 |
| 10° | 193.2 | 184.6 | 174.3 | 174.3 | 175.9 | 181.4 | 182.2 | 178.3 | 172.7 | 162.5 | 165.6 |
| 12.5° | 151.4 | 145.1 | 138.8 | 125.4 | 124.6 | 121.5 | 120.7 | 109.6 | 101.0 | 97.8 | 97.8 |
| 15° | 111.2 | 107.3 | 100.2 | 93.9 | 87.5 | 84.4 | 78.9 | 65.5 | 56.8 | 56.0 | 56.8 |
| 17.5° | 74.1 | 71.8 | 69.4 | 69.4 | 67.0 | 61.5 | 56.0 | 47.3 | 43.4 | 41.8 | 42.6 |
| 20° | 55.2 | 54.4 | 52.1 | 52.8 | 52.8 | 48.1 | 42.6 | 38.6 | 37.1 | 37.1 | 37.9 |
| 22.5° | 45.7 | 45.0 | 42.6 | 42.6 | 42.6 | 40.2 | 36.3 | 33.9 | 33.1 | 33.1 | 33.1 |
| 25° | 39.4 | 38.6 | 37.1 | 36.3 | 36.3 | 34.7 | 31.5 | 30.0 | 29.2 | 29.2 | 29.2 |
| 27.5° | 35.5 | 34.7 | 33.1 | 31.5 | 31.5 | 30.0 | 28.4 | 26.0 | 26.0 | 26.0 | 26.0 |
| 30° | 31.5 | 30.8 | 30.0 | 28.4 | 27.6 | 26.0 | 24.5 | 23.7 | 22.9 | 22.9 | 22.9 |
| 32.5° | 28.4 | 27.6 | 26.8 | 26.0 | 24.5 | 22.9 | 21.3 | 20.5 | 19.7 | 19.7 | 19.7 |
| 35° | 24.5 | 22.9 | 22.1 | 22.9 | 22.1 | 19.7 | 18.9 | 17.4 | 16.6 | 16.6 | 16.6 |
| 37.5° | 22.1 | 20.5 | 18.9 | 18.1 | 18.1 | 18.1 | 16.6 | 15.0 | 14.2 | 13.4 | 14.2 |
| 40° | 20.5 | 18.9 | 17.4 | 15.8 | 15.0 | 15.8 | 14.2 | 12.6 | 11.8 | 11.0 | 11.8 |
| 42.5° | 18.9 | 17.4 | 15.0 | 13.4 | 11.8 | 13.4 | 11.8 | 10.3 | 9.5 | 8.7 | 9.5 |
| 45° | 18.1 | 16.6 | 14.2 | 11.8 | 10.3 | 10.3 | 10.3 | 8.7 | 7.1 | 7.1 | 7.1 |
| 47.5° | 17.4 | 15.8 | 12.6 | 10.3 | 8.7 | 7.9 | 7.9 | 6.3 | 5.5 | 4.7 | 4.7 |
| 50° | 16.6 | 15.0 | 11.8 | 8.7 | 7.1 | 6.3 | 6.3 | 4.7 | 3.9 | 3.9 | 3.9 |
| 52.5° | 15.8 | 14.2 | 11.0 | 7.9 | 6.3 | 4.7 | 3.9 | 3.2 | 3.2 | 2.4 | 2.4 |
| 55° | 14.2 | 12.6 | 9.5 | 7.1 | 5.5 | 3.9 | 3.2 | 2.4 | 2.4 | 1.6 | 2.4 |
| 57.5° | 13.4 | 11.8 | 8.7 | 6.3 | 4.7 | 3.2 | 2.4 | 1.6 | 1.6 | 1.6 | 1.6 |
| 60° | 11.8 | 10.3 | 7.1 | 4.7 | 3.2 | 2.4 | 1.6 | 1.6 | 1.6 | 0.8 | 0.8 |
| 62.5° | 9.5 | 8.7 | 6.3 | 3.9 | 2.4 | 1.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 65° | *8.7* | *7.9* | *5.5* | *3.2* | *1.6* | *0.8* | *0.8* | *0.8* | *0.8* | *0.8* | *0.8* |
| 67.5° | 7.1 | 6.3 | 3.9 | 2.4 | 0.8 | 0.8 | 0.0 | 0.8 | 0.8 | 0.0 | 0.0 |
| 70° | 5.5 | 5.5 | 3.2 | 1.6 | 0.8 | 0.0 | 0.0 | 0.8 | 0.8 | 0.0 | 0.0 |
| 72.5° | 4.7 | 4.7 | 3.2 | 0.8 | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 | 0.8 | 0.0 |
| 75° | 3.9 | 3.9 | 3.2 | 1.6 | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 | 0.8 | 0.8 |
| 77.5° | 3.2 | 2.4 | 1.6 | 0.8 | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 | 0.8 | 0.8 |
| 80° | 1.6 | 1.6 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 | 0.8 | 0.8 |
| 82.5° | 0.8 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 1.6 | 1.6 | 0.8 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 1.6 | 1.6 | 1.6 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 1.6 | 1.6 | 1.6 | 1.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P438111
CATALOG NUMBER: ISW-SA1A-830-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

| | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 |
| 2.5° | 471.7 | 484.3 | 498.5 | 507.1 | 526.1 | 542.6 | 562.4 | 579.7 | 600.2 | 611.3 | 615.2 |
| 5° | 378.6 | 385.7 | 403.8 | 427.5 | 448.8 | 478.8 | 513.5 | 552.1 | 593.9 | 613.6 | 627.8 |
| 7.5° | 261.1 | 267.4 | 293.4 | 315.5 | 351.0 | 389.6 | 436.9 | 489.8 | 544.2 | 571.8 | 597.1 |
| 10° | 170.4 | 179.0 | 201.1 | 231.9 | 276.8 | 324.2 | 372.3 | 427.5 | 490.6 | 522.9 | 556.8 |
| 12.5° | 98.6 | 108.8 | 135.7 | 175.9 | 220.1 | 270.5 | 320.2 | 381.0 | 451.1 | 486.6 | 521.3 |
| 15° | 56.8 | 60.7 | 76.5 | 112.0 | 161.7 | 223.2 | 281.6 | 347.0 | 429.1 | 468.5 | 509.5 |
| 17.5° | 42.6 | 45.0 | 49.7 | 64.7 | 103.3 | 171.2 | 253.2 | 336.8 | 431.4 | 484.3 | 520.6 |
| 20° | 37.9 | 39.4 | 41.8 | 47.3 | 65.5 | 121.5 | 218.5 | 329.7 | 454.3 | 522.1 | 566.3 |
| 22.5° | 33.9 | 35.5 | 37.9 | 41.8 | 49.7 | 82.0 | 182.2 | 328.9 | 492.2 | 578.1 | 627.8 |
| 25° | 30.0 | 31.5 | 33.9 | 37.9 | 44.2 | 59.2 | 141.2 | 326.5 | 539.5 | 639.6 | 702.0 |
| 27.5° | 26.0 | 27.6 | 30.0 | 33.9 | 39.4 | 48.9 | 107.3 | 319.4 | 596.3 | 705.9 | 772.2 |
| 30° | 22.9 | 24.5 | 26.8 | 30.0 | 35.5 | 42.6 | 82.0 | 307.6 | 645.2 | 765.1 | 819.5 |
| 32.5° | 19.7 | 21.3 | 23.7 | 26.8 | 31.5 | 37.1 | 66.3 | 282.4 | 683.0 | 811.6 | 858.1 |
| 35° | 16.6 | 18.1 | 20.5 | 23.7 | 27.6 | 31.5 | 54.4 | 241.3 | 721.7 | 859.7 | 904.7 |
| 37.5° | 14.2 | 15.8 | 17.4 | 20.5 | 24.5 | 28.4 | 45.0 | 215.3 | 750.1 | 919.6 | 963.8 |
| 40° | 11.8 | 13.4 | 15.8 | 18.1 | 21.3 | 26.8 | 36.3 | 180.6 | 778.5 | 977.2 | 1018.2 |
| 42.5° | 9.5 | 11.0 | 13.4 | 16.6 | 19.7 | 23.7 | 29.2 | 149.1 | 806.9 | 1029.3 | 1067.9 |
| 45° | 7.1 | 8.7 | 11.0 | 15.0 | 19.7 | 20.5 | 23.7 | 127.0 | 814.0 | 1078.2 | 1111.3 |
| 47.5° | 5.5 | 6.3 | 8.7 | 12.6 | 18.9 | 18.1 | 19.7 | 110.4 | 827.4 | 1116.8 | 1153.9 |
| 50° | 3.9 | 4.7 | 7.1 | 11.8 | 16.6 | 15.0 | 17.4 | 104.1 | 846.3 | 1146.8 | 1166.5 |
| 52.5° | 3.2 | 3.9 | 5.5 | 10.3 | 13.4 | 13.4 | 15.8 | 110.4 | 870.7 | 1182.3 | 1198.9 |
| 55° | 2.4 | 3.2 | 4.7 | 7.1 | 10.3 | 11.8 | 15.0 | 119.1 | 918.1 | 1244.6 | 1241.4 |
| 57.5° | 1.6 | 2.4 | 3.9 | 5.5 | 7.9 | 10.3 | 14.2 | 132.5 | 966.2 | 1314.8 | 1317.9 |
| 60° | 1.6 | 2.4 | 3.2 | 4.7 | 7.1 | 8.7 | 12.6 | 134.1 | 958.3 | 1325.0 | 1371.6 |
| 62.5° | 0.8 | 1.6 | 3.2 | 3.9 | 5.5 | 7.1 | 11.0 | 112.8 | 882.6 | 1275.4 | 1343.2 |
| 65° | *0.8* | *1.6* | *2.4* | *3.9* | *4.7* | *6.3* | *8.7* | *71.8* | *768.2* | *1187.0* | *1276.9* |
| 67.5° | 0.8 | 1.6 | 2.4 | 3.2 | 3.9 | 5.5 | 7.1 | 37.1 | 651.5 | 1095.5 | 1182.3 |
| 70° | 0.8 | 1.6 | 2.4 | 3.2 | 3.9 | 4.7 | 6.3 | 18.1 | 493.7 | 923.6 | 1035.6 |
| 72.5° | 0.8 | 1.6 | 2.4 | 3.2 | 3.2 | 3.9 | 5.5 | 12.6 | 317.1 | 694.1 | 802.1 |
| 75° | 0.8 | 1.6 | 1.6 | 2.4 | 3.2 | 3.9 | 4.7 | 8.7 | 205.1 | 466.9 | 608.1 |
| 77.5° | 0.8 | 1.6 | 1.6 | 2.4 | 3.2 | 3.9 | 5.5 | 7.9 | 149.9 | 320.2 | 420.4 |
| 80° | 0.8 | 1.6 | 1.6 | 2.4 | 3.2 | 3.2 | 3.9 | 5.5 | 80.4 | 212.2 | 267.4 |
| 82.5° | 1.6 | 1.6 | 2.4 | 2.4 | 2.4 | 3.2 | 3.9 | 3.9 | 41.8 | 135.7 | 180.6 |
| 85° | 1.6 | 1.6 | 2.4 | 2.4 | 3.2 | 3.2 | 3.2 | 3.9 | 18.1 | 56.8 | 89.9 |
| 87.5° | 1.6 | 2.4 | 2.4 | 2.4 | 3.2 | 3.2 | 3.2 | 3.2 | 2.4 | 3.2 | 3.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P438111
CATALOG NUMBER: ISW-SA1A-830-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

| | 285° | 295° | 305° | 315° | 325° | 335° | 345° | 355° | 359° | 360° |
|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | 554.5 | *554.5* | 554.5 | 554.5 | 554.5 |
| 2.5° | 627.0 | 637.3 | 642.0 | 638.1 | 634.9 | 625.5 | *612.0* | 598.6 | 587.6 | 586.8 |
| 5° | 660.2 | 682.2 | 699.6 | 690.9 | 679.1 | 651.5 | *617.6* | 579.7 | 565.5 | 559.2 |
| 7.5° | 653.1 | 701.2 | 730.4 | 722.5 | 698.8 | 646.7 | *593.9* | 544.2 | 521.3 | 513.5 |
| 10° | 620.7 | 685.4 | 724.0 | 721.7 | 699.6 | 638.1 | *572.6* | 512.7 | 488.2 | 481.9 |
| 12.5° | 590.7 | 654.6 | 691.7 | 693.3 | 685.4 | 628.6 | *562.4* | 498.5 | 469.3 | 466.1 |
| 15° | 575.0 | 629.4 | 651.5 | 656.2 | 659.4 | 627.8 | *571.8* | 507.9 | 477.2 | 470.1 |
| 17.5° | 578.1 | 604.2 | 609.7 | 605.7 | 627.0 | 628.6 | *598.6* | 541.1 | 506.4 | 497.7 |
| 20° | 597.1 | 587.6 | 569.5 | 573.4 | 597.1 | 631.8 | *638.9* | 599.4 | 560.0 | 548.9 |
| 22.5° | 633.3 | 586.8 | 550.5 | 547.4 | 578.1 | 637.3 | *682.2* | 661.7 | 620.7 | 614.4 |
| 25° | 687.0 | 598.6 | 542.6 | 536.3 | 563.1 | 642.8 | *726.4* | 727.2 | 694.9 | 683.0 |
| 27.5° | 739.0 | 617.6 | 541.8 | 535.5 | 563.1 | 649.9 | *756.4* | 791.9 | 758.0 | 745.3 |
| 30° | 769.0 | 639.6 | 554.5 | 542.6 | 573.4 | 656.2 | *776.1* | 843.1 | 813.2 | 802.1 |
| 32.5° | 796.6 | 663.3 | 567.9 | 553.7 | 593.1 | 673.6 | *794.2* | 889.7 | 863.6 | 850.2 |
| 35° | 819.5 | 690.9 | 593.1 | 571.0 | 622.3 | 698.8 | *816.3* | 940.9 | 924.4 | 907.8 |
| 37.5° | 841.6 | 718.5 | 628.6 | 616.0 | 671.2 | 735.1 | *845.5* | 994.6 | 1002.5 | 985.9 |
| 40° | 873.1 | 750.1 | 689.3 | 679.1 | 743.0 | 790.3 | *881.0* | 1048.2 | 1074.2 | 1056.1 |
| 42.5° | 903.1 | 790.3 | 750.9 | 760.3 | 829.7 | 854.2 | *921.2* | 1097.1 | 1126.3 | 1118.4 |
| 45° | 930.7 | 840.0 | 840.0 | 862.9 | 923.6 | 924.4 | *952.0* | 1131.0 | 1161.8 | 1157.8 |
| 47.5° | 967.0 | 901.5 | 932.3 | 995.4 | 1027.7 | 985.1 | *985.1* | 1163.4 | 1205.2 | 1194.1 |
| 50° | 1002.5 | 983.5 | 1054.5 | 1112.1 | 1140.5 | 1058.5 | *1019.0* | 1206.7 | 1256.4 | 1247.0 |
| 52.5° | 1041.1 | 1063.2 | 1168.9 | 1225.7 | 1242.2 | 1142.1 | *1070.3* | 1250.1 | 1314.0 | 1314.0 |
| 55° | 1103.4 | 1131.0 | 1289.6 | 1336.9 | 1360.5 | 1211.5 | *1135.8* | 1311.6 | 1384.2 | 1388.1 |
| 57.5° | 1167.3 | 1196.5 | 1357.4 | 1417.3 | 1448.1 | 1314.0 | *1220.1* | 1393.7 | 1433.9 | 1433.1 |
| 60° | 1234.3 | 1265.1 | 1410.2 | 1469.4 | 1514.3 | 1418.9 | *1320.3* | 1468.6 | 1457.5 | 1449.7 |
| 62.5° | 1317.2 | 1317.2 | 1429.9 | 1457.5 | 1512.0 | 1485.2 | *1433.1* | 1511.2 | 1466.2 | 1448.1 |
| 65° | *1357.4* | *1344.8* | *1373.2* | *1352.7* | *1415.0* | *1466.2* | *1519.1* | *1512.8* | *1435.5* | *1405.5* |
| 67.5° | 1336.1 | 1259.6 | 1210.7 | 1179.9 | 1193.3 | 1281.7 | *1481.2* | 1437.8 | 1310.8 | 1288.0 |
| 70° | 1190.2 | 1007.2 | 961.4 | 912.5 | 886.5 | 978.0 | *1280.1* | 1269.8 | 1115.2 | 1094.0 |
| 72.5° | 970.1 | 727.2 | 616.8 | 666.5 | 641.2 | 744.5 | *1049.0* | 896.0 | 731.9 | 713.0 |
| 75° | 805.3 | 541.1 | 402.2 | 403.0 | 407.0 | 489.0 | *766.6* | 532.4 | 402.2 | 388.0 |
| 77.5° | 582.9 | 381.0 | 325.0 | 291.0 | 294.2 | 312.3 | *399.1* | 227.2 | 185.3 | 168.0 |
| 80° | 355.7 | 235.8 | 262.6 | 233.5 | 225.6 | 173.5 | *171.9* | 33.1 | 22.1 | 22.1 |
| 82.5° | 194.0 | 149.9 | 139.6 | 50.5 | 78.1 | 94.6 | *78.1* | 1.6 | 0.8 | 0.8 |
| 85° | 98.6 | 59.9 | 28.4 | 8.7 | 10.3 | 8.7 | *1.6* | 0.0 | 0.0 | 0.0 |
| 87.5° | 3.2 | 2.4 | 2.4 | 1.6 | 1.6 | 0.8 | *0.8* | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

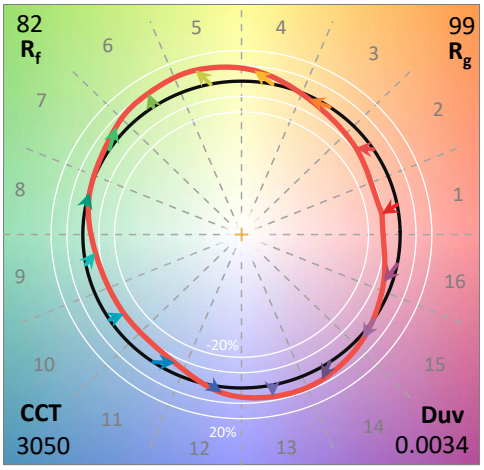
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2408-195-9 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 08/07/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | MCGRAW EDISON |
| Catalog Number: | **GALN-SB1A-830-U-5WQ** |
| Description: | GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS |

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 3050 | CRI (Ra): | 81.0 | | |
| CIE u': | 0.2476 | R1: | 79.6 | R9: | 7.1 |
| CIE v': | 0.5251 | R2: | 85.6 | R10: | 67.0 |
| Duv: | 0.0034 | R3: | 92.0 | R11: | 82.7 |
| CIE x: | 0.4383 | R4: | 82.6 | R12: | 63.2 |
| CIE y: | 0.4131 | R5: | 78.9 | R13: | 80.3 |
| CIE z: | 0.1487 | R6: | 81.7 | R14: | 95.0 |
| Peak Wavelength (nm): | 603 | R7: | 85.2 | R15: | 71.7 |
| Dominant Wavelength (nm): | 581 | R8: | 62.0 | | |
| Purity: | 55.55201 | | | | |
| Rf: | 81.5 | | | | |
| Rg: | 99.2 | | | | |




## Test Conditions

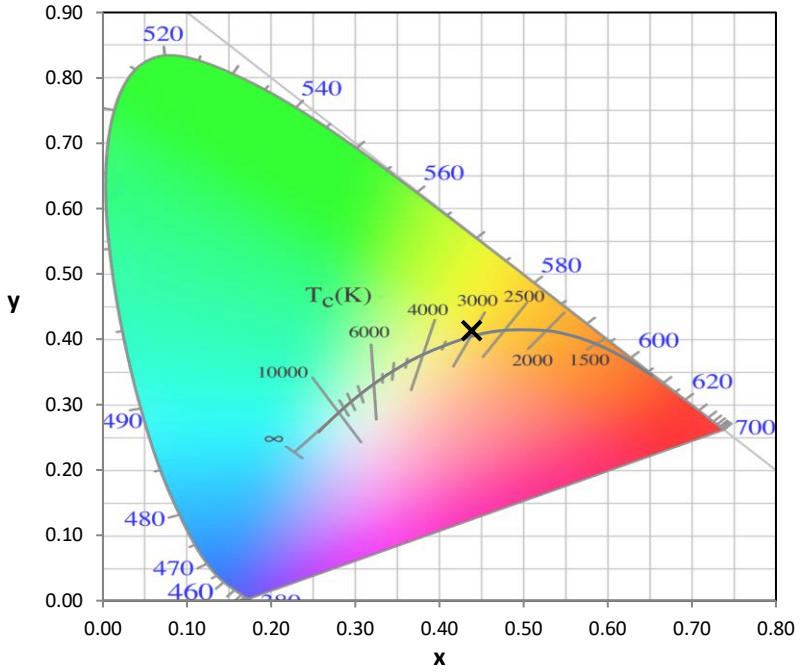
| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 24.2 |

REPORT NUMBER: SP1-2408-195-9

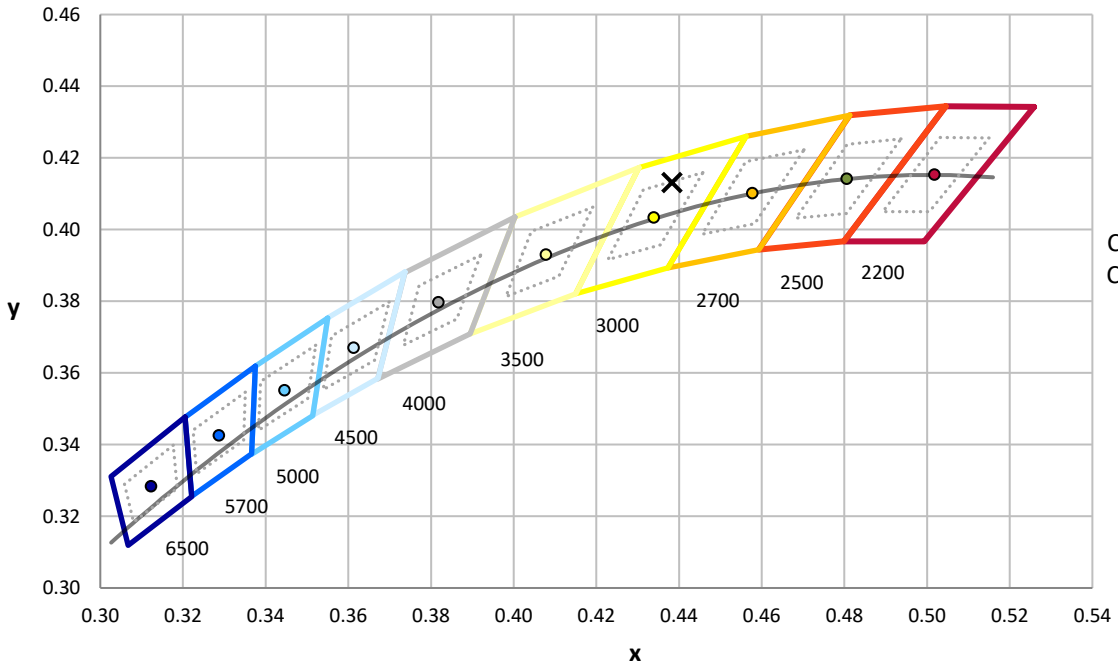
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

REPORT NUMBER: SP1-2408-195-9

## CIE 1931 Chromaticity Diagram




## CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles

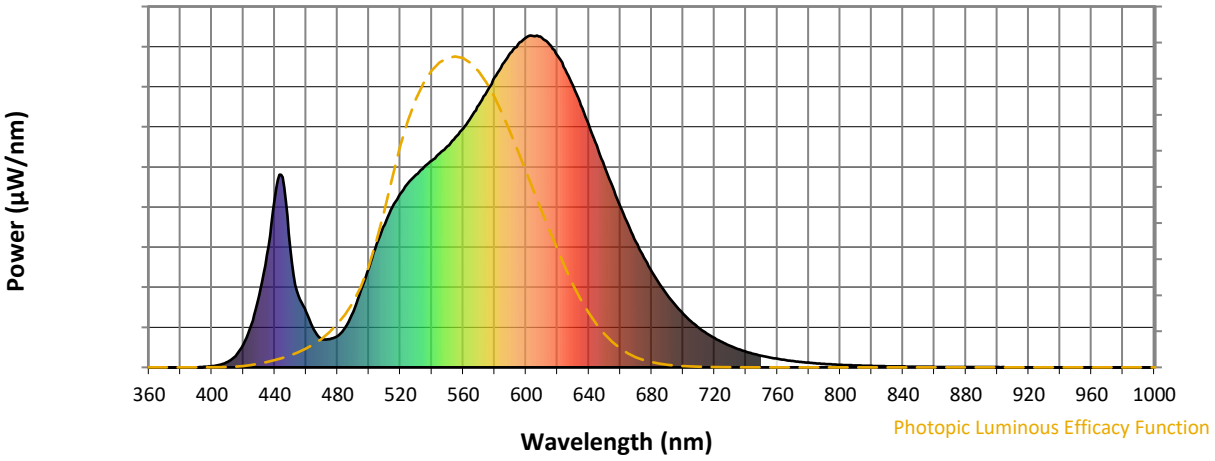



CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

## Photopic Flux vs. Wavelength

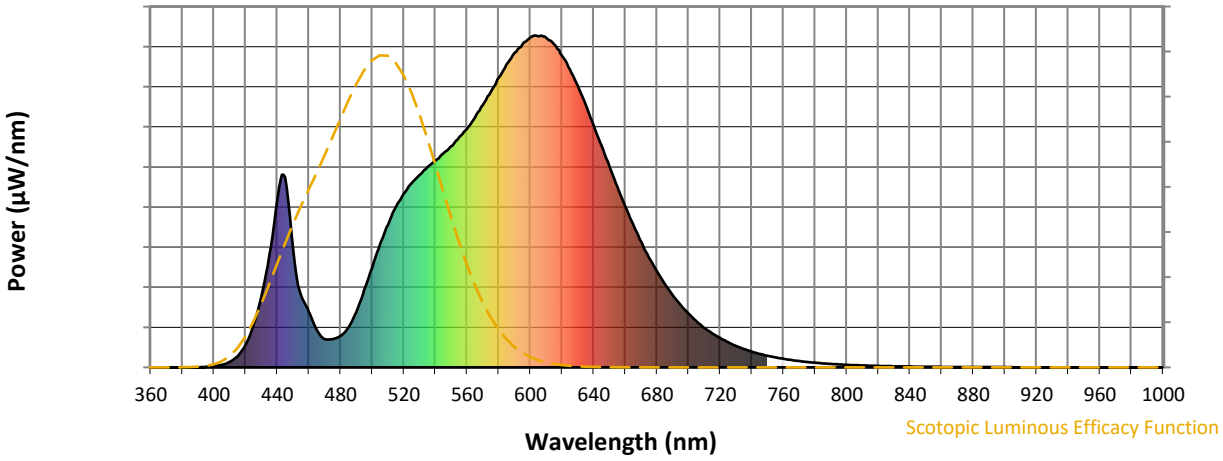



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2408-195-9

## Scotopic Flux vs. Wavelength

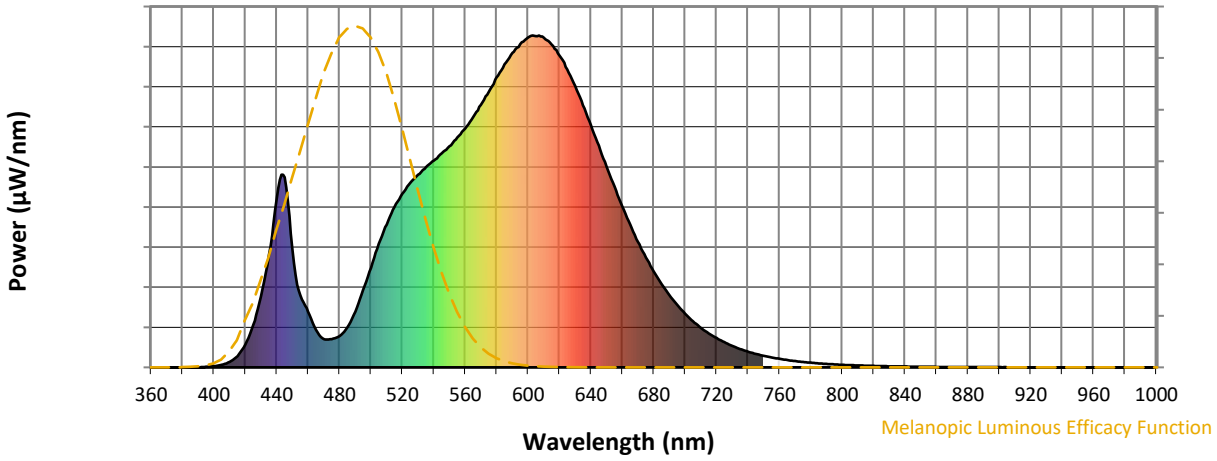



**Scotopic Lumens: NR** **S/P: 1.27**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2408-195-9

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.32**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

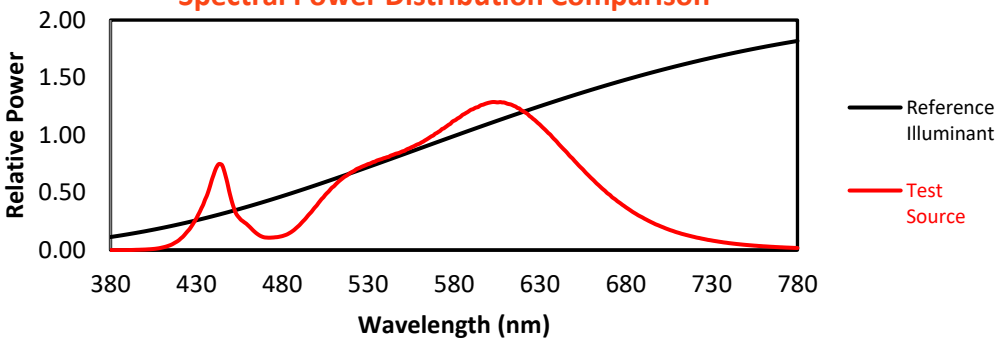
REPORT NUMBER: SP1-2408-195-9

# TM-30-18

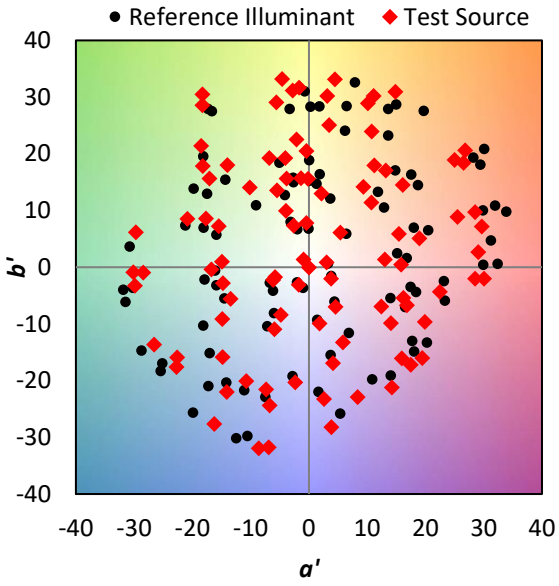
## Summary

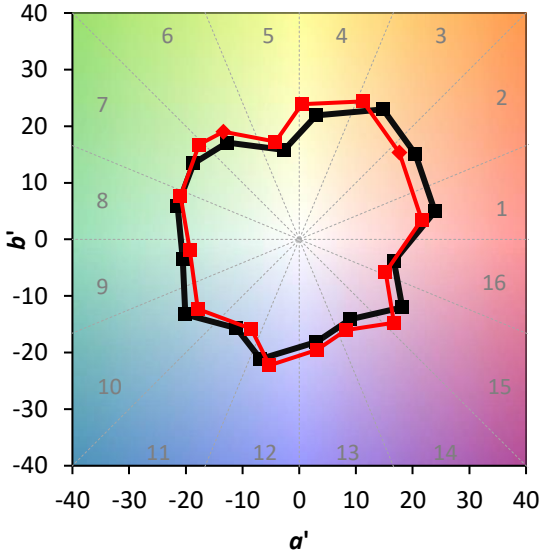
$R_f$ = 81.5
$R_g$ = 99.2
CIE $R_a$ = 81.0
$R_9$ = 7.1

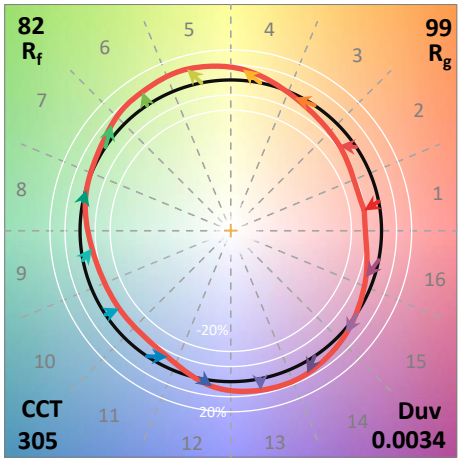
## Spectral Power Distribution Comparison

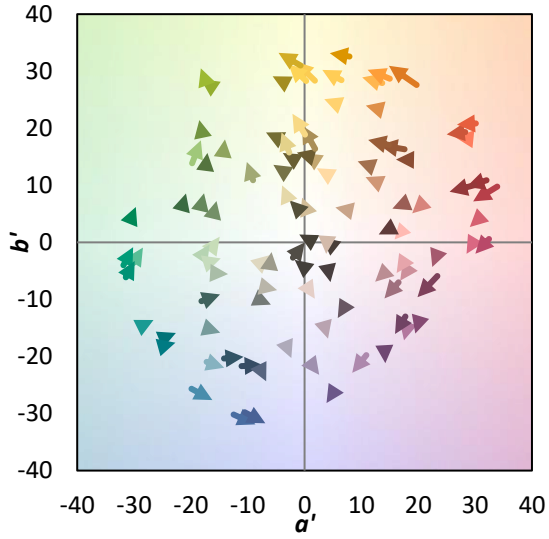



## Color Vector Graphics



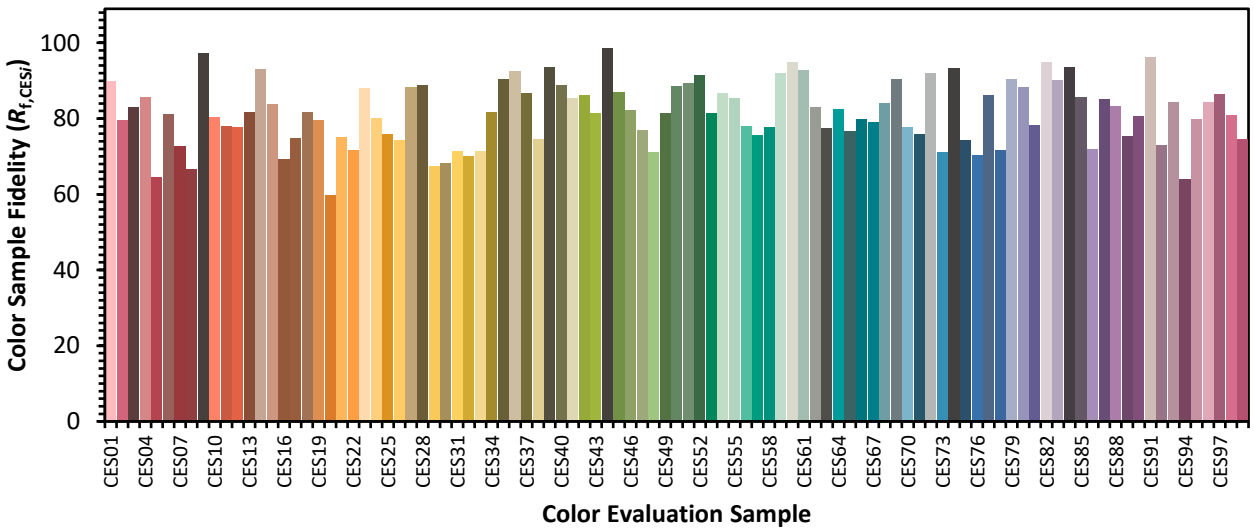



REPORT NUMBER: SP1-2408-195-9

# TM-30-18

**Individual Sample Fidelity Index ($R_{f,i}$)**

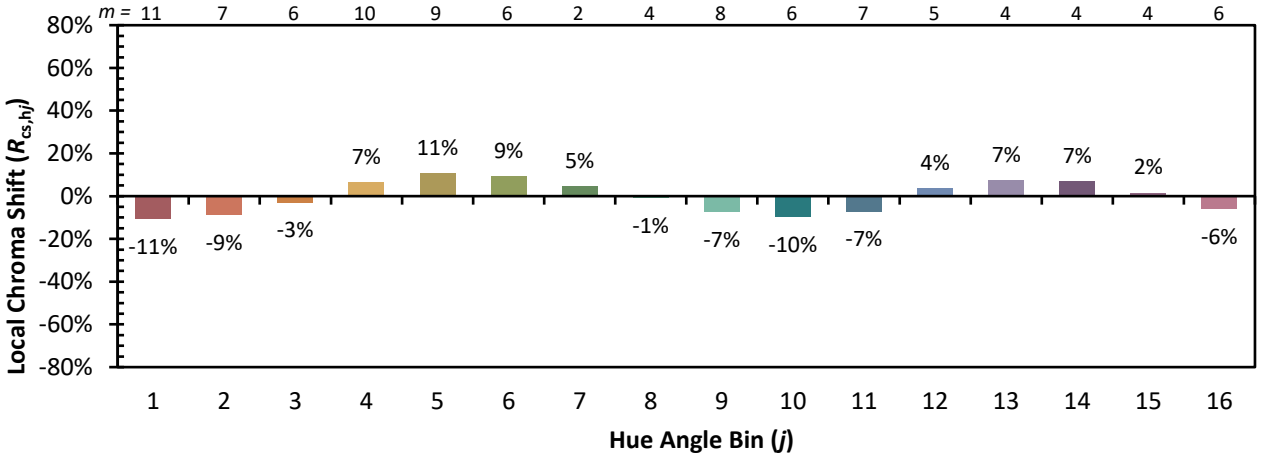
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 92 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 94 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 91 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 78 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 | |

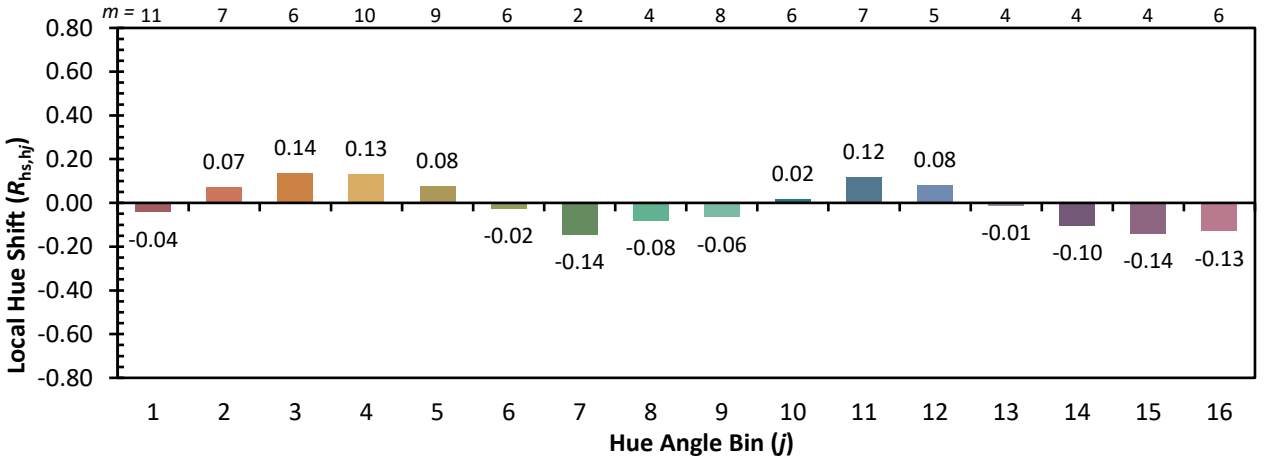


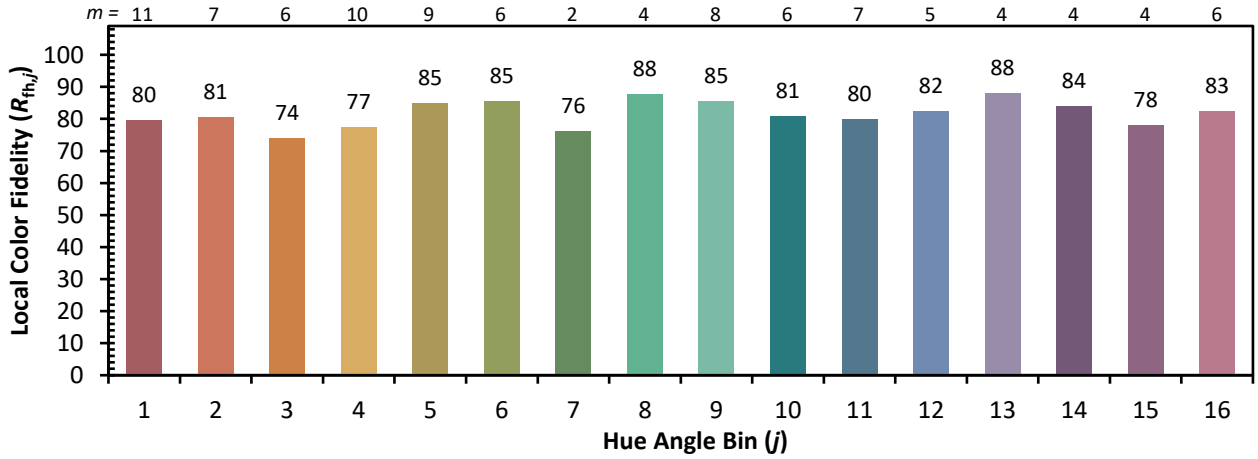
REPORT NUMBER: SP1-2408-195-9

**TM-30-18**

## Color Rendition by Hue-Angle Bin



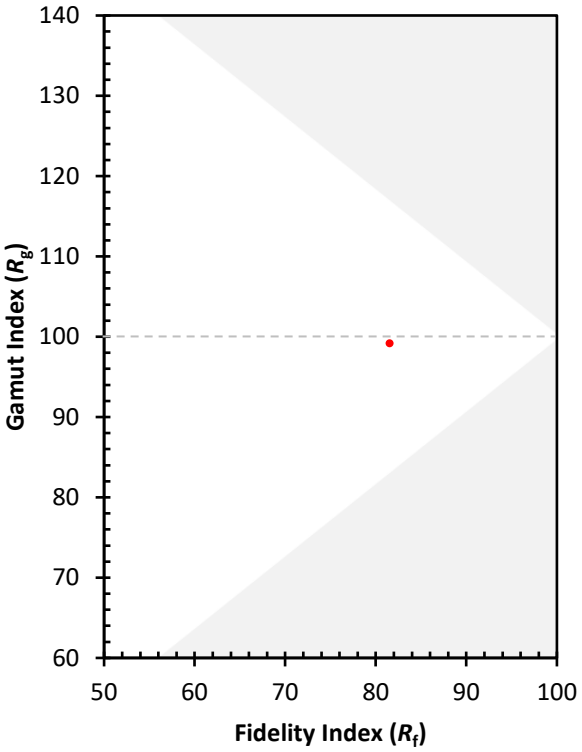



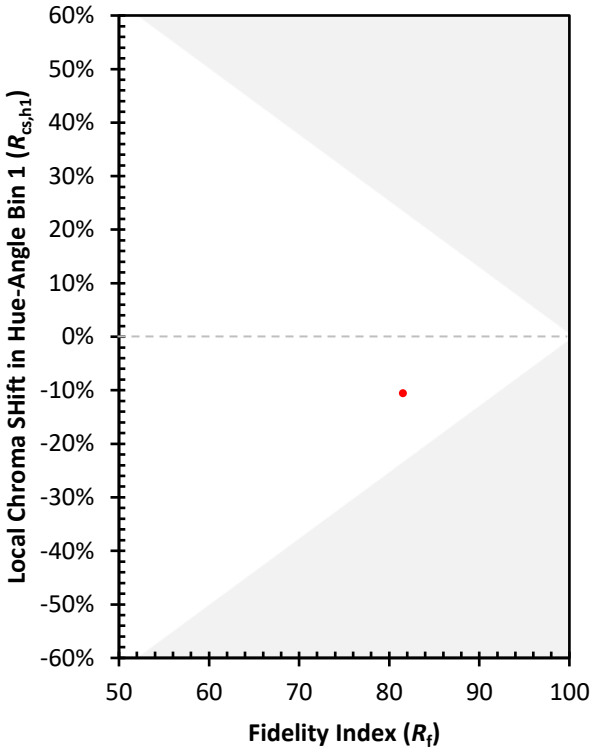



REPORT NUMBER: SP1-2408-195-9

# TM-30-18

## Measure Comparisons




(END OF REPORT)