

Signify Classified - Internal  
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: STREETWORKS

Report Number: P1063507

Luminaire Tested: **GLAN-SA8C-760-U-T2BC**

Issue Date: 08/07/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P1063507  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/07/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GLAN-SA8C-760-U-T2BC  
Description: GALLEON II AREA AND ROADWAY LUMINAIRE 1050mA 8xLight Square PACKAGE  
70CRI 5700K FIXTURE w/ TYPE II ANGLED BACKLIGHT CONTROL  
Light Source: (112) 5700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 44198.8 lumens  
Efficiency: N/A  
Efficacy: 118.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B0 - U0 - G5

Input Watts (W): 372.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



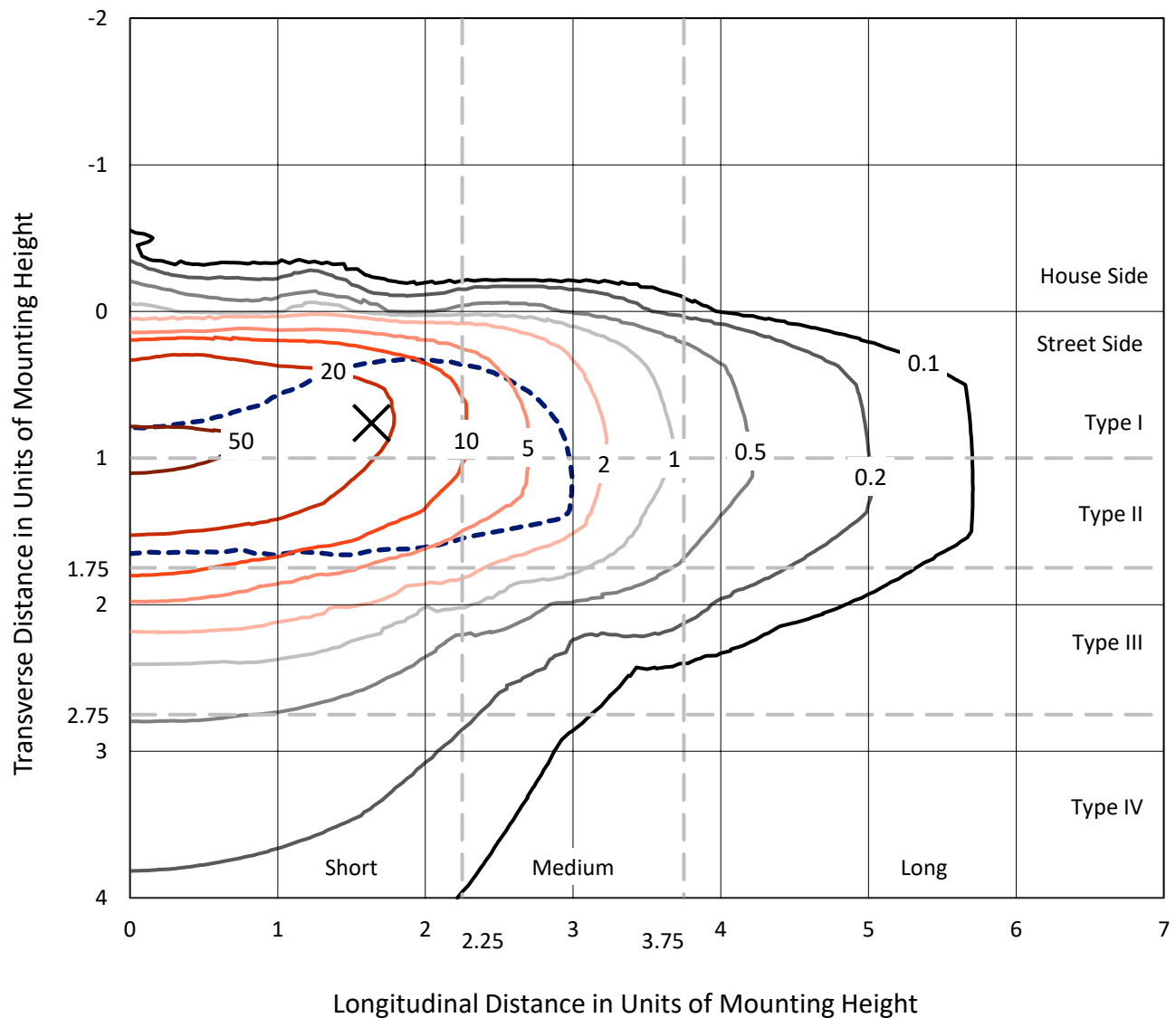
REPORT NUMBER: P1063507

CATALOG NUMBER: GLAN-SA8C-760-U-T2BC

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

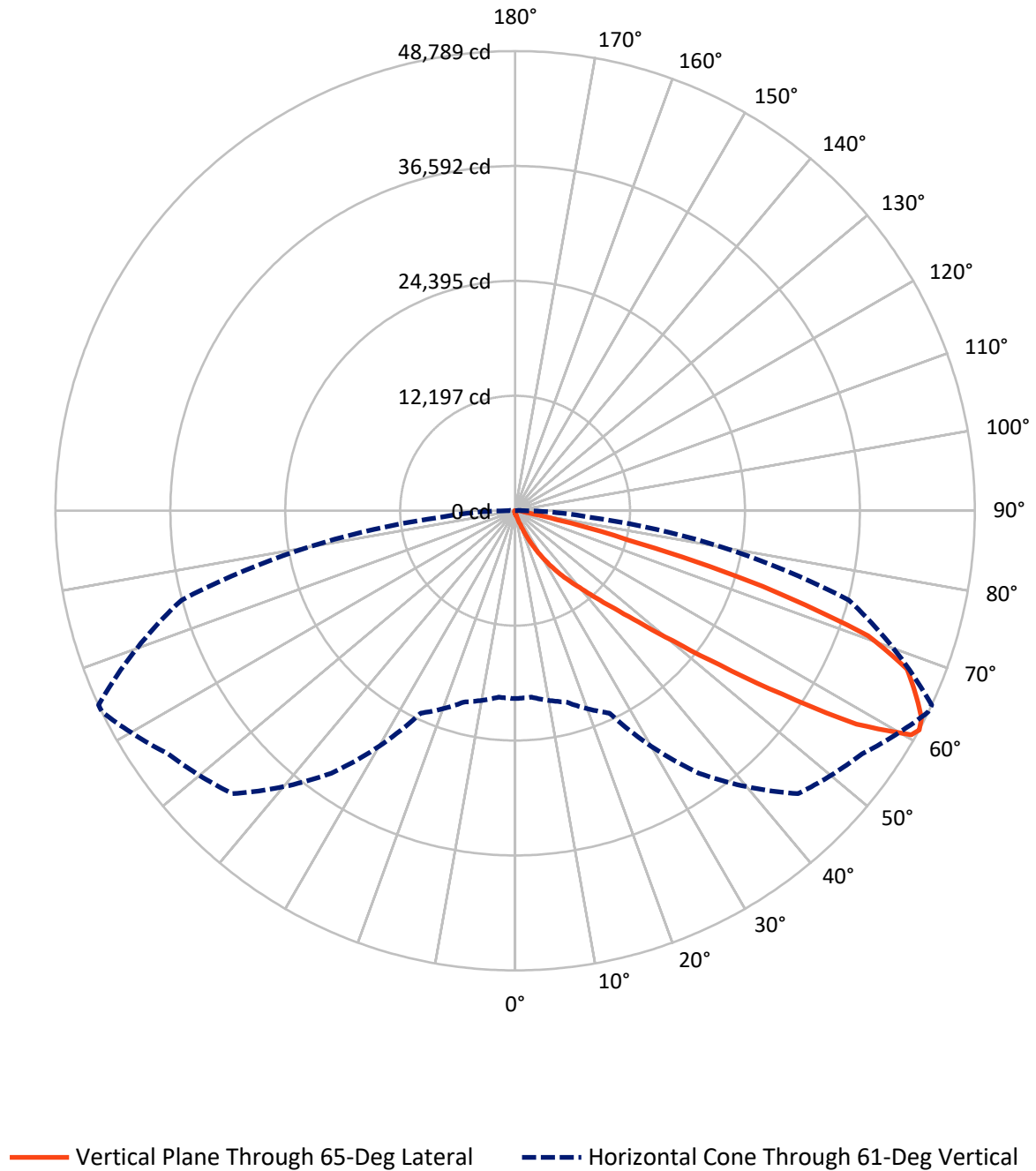


Based on 15 foot mounting height. Maximum calculated value = 58.5 fc  
 Type II - Short - N/A

REPORT NUMBER: P1063507

CATALOG NUMBER: GLAN-SA8C-760-U-T2BC

## Luminous Intensity Polar Plot



REPORT NUMBER: P1063507

CATALOG NUMBER: GLAN-SA8C-760-U-T2BC

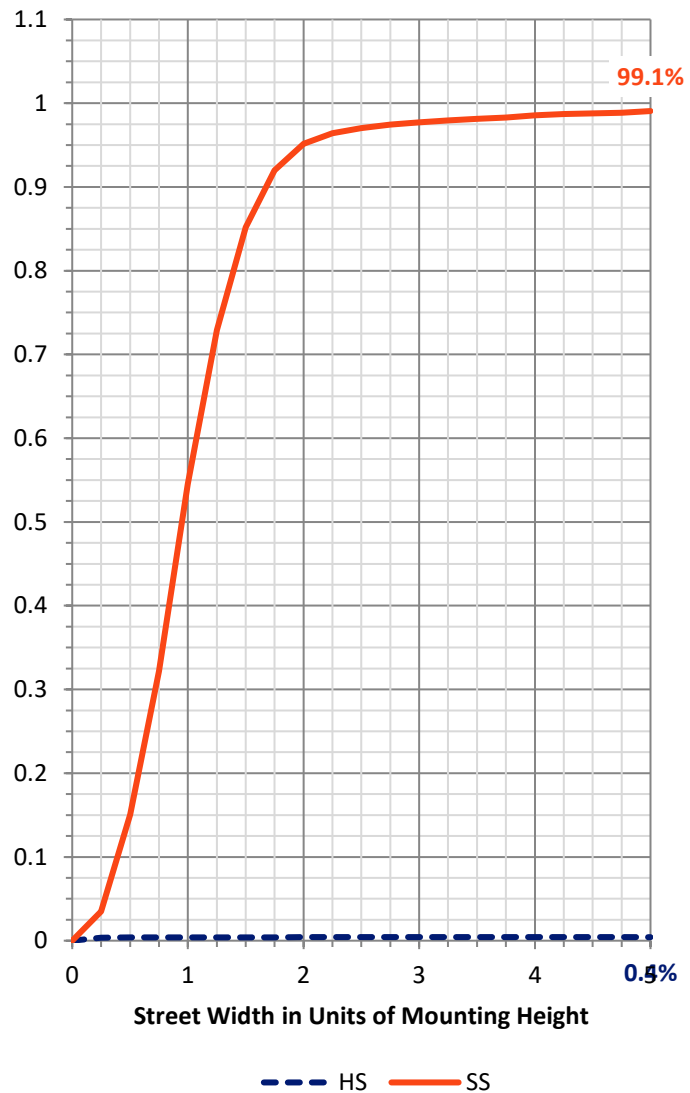
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 188.7    | 0.0    | 188.7   |
|                    | % Fixture | 0.4      | 0.0    | 0.4     |
| <b>Street Side</b> | Lumens    | 44010.1  | 0.0    | 44010.1 |
|                    | % Fixture | 99.6     | 0.0    | 99.6    |
| <b>Total</b>       | Lumens    | 44198.8  | 0.0    | 44198.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 34.4    | 0.1       |
| 10°-20°   | 363.5   | 0.8       |
| 20°-30°   | 1304.4  | 3.0       |
| 30°-40°   | 3472.7  | 7.9       |
| 40°-50°   | 9122.9  | 20.6      |
| 50°-60°   | 14133.0 | 32.0      |
| 60°-70°   | 11850.3 | 26.8      |
| 70°-80°   | 3487.3  | 7.9       |
| 80°-90°   | 430.2   | 1.0       |
| 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°    | 44198.8 | 100.0     |
| 0°-180°   | 44198.8 | 100.0     |



REPORT NUMBER: P1063507

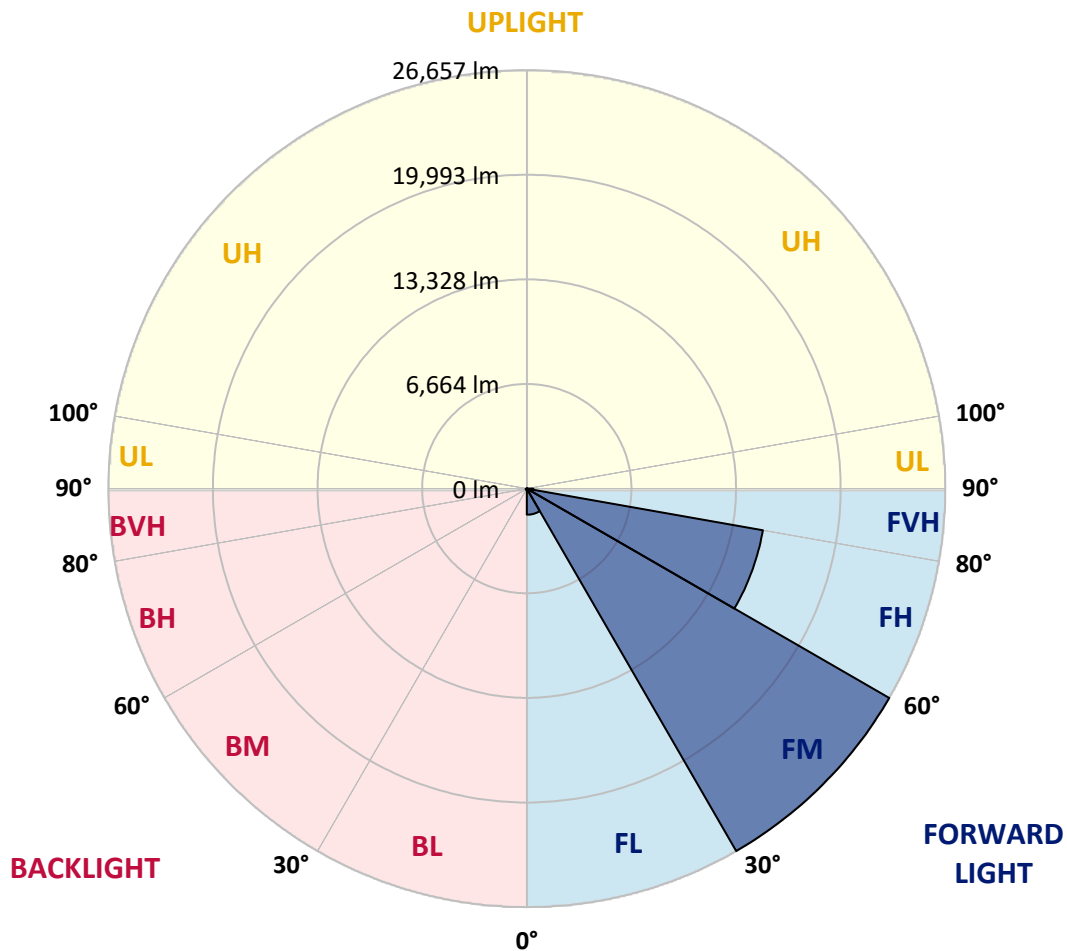
CATALOG NUMBER: GLAN-SA8C-760-U-T2BC

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|---------|-----------|-------------------------|------|--------|
|      |             |         |           | B                       | U    | G      |
| FL   | (0°-30°)    | 1659.9  | 3.8       |                         |      |        |
| FM   | (30°-60°)   | 26656.8 | 60.3      |                         |      |        |
| FH   | (60°-80°)   | 15271.1 | 34.6      |                         |      | G5     |
| FVH  | (80°-90°)   | 422.2   | 1.0       |                         |      | G3/500 |
| BL   | (0°-30°)    | 42.3    | 0.1       | B0/110                  |      |        |
| BM   | (30°-60°)   | 71.8    | 0.2       | B0/220                  |      |        |
| BH   | (60°-80°)   | 66.6    | 0.2       | B0/110                  |      | G0/110 |
| BVH  | (80°-90°)   | 8.0     | 0.0       |                         |      | G0/10  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |        |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |        |

**BUG Rating: B0-U0-G5**

Type II Short



REPORT NUMBER: P1063507

CATALOG NUMBER: GLAN-SA8C-760-U-T2BC

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 64°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 270.6   | 270.6   | 270.6   | 270.6   | 270.6   | 270.6   | 270.6   | 270.6   | 270.6   | 270.6   | 270.6   |
| 2.5°  | 328.4   | 331.4   | 325.3   | 313.2   | 304.0   | 304.0   | 301.0   | 291.9   | 291.9   | 282.8   | 276.7   |
| 5°    | 459.1   | 453.0   | 440.9   | 416.5   | 395.3   | 374.0   | 352.7   | 331.4   | 328.4   | 301.0   | 282.8   |
| 7.5°  | 751.0   | 757.1   | 717.5   | 641.5   | 577.7   | 495.6   | 419.6   | 374.0   | 367.9   | 322.3   | 285.8   |
| 10°   | 1647.9  | 1602.3  | 1511.1  | 1216.2  | 1000.3  | 754.0   | 559.4   | 434.8   | 428.7   | 346.6   | 291.9   |
| 12.5° | 3003.9  | 2967.4  | 2800.2  | 2496.2  | 1939.8  | 1349.9  | 817.9   | 538.2   | 519.9   | 367.9   | 294.9   |
| 15°   | 4329.5  | 4271.8  | 4180.5  | 3873.5  | 3222.8  | 2420.2  | 1337.8  | 735.8   | 687.1   | 398.3   | 291.9   |
| 17.5° | 5174.8  | 5183.9  | 5101.8  | 4971.1  | 4551.5  | 3581.6  | 2310.7  | 1097.6  | 1003.3  | 453.0   | 285.8   |
| 20°   | 5913.6  | 5892.3  | 5937.9  | 5868.0  | 5573.1  | 4867.7  | 3362.7  | 1739.1  | 1578.0  | 541.2   | 288.8   |
| 22.5° | 6764.9  | 6816.6  | 6850.0  | 6834.8  | 6509.5  | 5907.5  | 4557.6  | 2602.6  | 2398.9  | 702.3   | 298.0   |
| 25°   | 7905.0  | 7899.0  | 7902.0  | 7862.5  | 7546.3  | 6877.4  | 5755.5  | 3675.8  | 3469.1  | 963.8   | 319.2   |
| 27.5° | 9099.9  | 9136.4  | 9151.6  | 9008.7  | 8595.2  | 7938.5  | 6865.2  | 4849.4  | 4606.2  | 1383.4  | 346.6   |
| 30°   | 10732.6 | 10702.2 | 10632.3 | 10340.4 | 9838.7  | 9023.9  | 7959.8  | 6080.8  | 5825.4  | 1970.2  | 389.2   |
| 32.5° | 12933.9 | 12900.4 | 12547.7 | 11903.2 | 11152.2 | 10154.9 | 9060.4  | 7315.2  | 7005.1  | 2702.9  | 446.9   |
| 35°   | 16561.1 | 16612.7 | 15746.2 | 14077.0 | 12730.1 | 11514.0 | 10279.6 | 8543.5  | 8269.9  | 3605.9  | 526.0   |
| 37.5° | 22115.9 | 21833.1 | 20656.5 | 17707.3 | 14806.7 | 13210.5 | 11444.1 | 9784.0  | 9546.9  | 4718.7  | 629.4   |
| 40°   | 27512.6 | 27232.9 | 26892.3 | 24098.2 | 18415.7 | 15080.4 | 13073.7 | 11240.4 | 10933.3 | 5974.4  | 781.4   |
| 42.5° | 33186.0 | 33030.9 | 33015.7 | 30908.7 | 25001.2 | 18020.4 | 15034.8 | 12946.0 | 12684.5 | 7351.7  | 1030.7  |
| 45°   | 37205.4 | 37050.3 | 37375.6 | 37743.5 | 33970.4 | 24320.1 | 18449.1 | 15162.5 | 14782.4 | 9023.9  | 1429.0  |
| 47.5° | 37746.6 | 37752.6 | 38622.2 | 39774.5 | 40634.9 | 34064.6 | 22997.6 | 18099.5 | 17637.4 | 11416.7 | 2097.9  |
| 50°   | 35946.6 | 36016.6 | 37399.9 | 39461.3 | 41778.1 | 42240.3 | 31018.1 | 22362.1 | 21678.0 | 14253.4 | 3046.5  |
| 52.5° | 32520.1 | 32599.2 | 34526.8 | 37916.8 | 40726.1 | 44204.4 | 40461.6 | 27938.2 | 27150.8 | 17792.4 | 4384.3  |
| 55°   | 29434.1 | 29482.7 | 31693.1 | 35977.0 | 39458.3 | 43137.2 | 46068.1 | 35384.2 | 34350.4 | 22146.3 | 5703.8  |
| 57.5° | 26378.5 | 26266.0 | 27704.1 | 32608.3 | 39242.4 | 41826.8 | 46895.1 | 43869.9 | 42729.8 | 26904.5 | 6731.4  |
| 60°   | 22292.2 | 22103.7 | 23259.1 | 26378.5 | 36402.7 | 42687.2 | 45347.5 | 48564.3 | 48305.9 | 33529.5 | 7525.0  |
| 61°   | 19942.0 | 19862.9 | 21024.4 | 23699.9 | 34012.9 | 42468.3 | 44976.6 | 48761.9 | 48789.3 | 36664.2 | 7880.7  |
| 62.5° | 14241.2 | 14466.2 | 16241.8 | 19720.0 | 28488.5 | 41048.4 | 45025.3 | 48150.8 | 48421.4 | 40829.5 | 8802.0  |
| 65°   | 6330.1  | 6691.9  | 8072.3  | 10902.9 | 16567.1 | 34146.7 | 44593.5 | 46810.0 | 46676.2 | 41972.7 | 11976.1 |
| 67.5° | 3754.9  | 3809.6  | 4496.7  | 6178.1  | 8774.6  | 18367.0 | 39351.9 | 45037.4 | 44858.0 | 36539.5 | 14901.0 |
| 70°   | 2958.3  | 2985.7  | 3204.6  | 3876.5  | 5092.7  | 7035.5  | 22459.4 | 38965.8 | 39747.1 | 29628.7 | 14587.8 |
| 72.5° | 2806.3  | 2800.2  | 2830.6  | 2949.2  | 3207.6  | 3490.4  | 8695.5  | 25901.2 | 27491.3 | 21337.5 | 12231.5 |
| 75°   | 2769.8  | 2757.6  | 2727.2  | 2681.6  | 2322.9  | 2055.3  | 2693.8  | 11456.2 | 12377.5 | 14578.7 | 9209.4  |
| 77.5° | 2687.7  | 2690.8  | 2696.8  | 2572.2  | 1991.5  | 1453.3  | 1304.3  | 3675.8  | 4521.1  | 9251.9  | 6546.0  |
| 80°   | 1818.2  | 1845.5  | 1891.1  | 1842.5  | 1790.8  | 1052.0  | 921.2   | 1307.4  | 1325.6  | 5193.0  | 4323.4  |
| 82.5° | 921.2   | 921.2   | 900.0   | 802.7   | 693.2   | 684.1   | 732.7   | 948.6   | 960.8   | 2626.9  | 2034.0  |
| 85°   | 556.4   | 586.8   | 599.0   | 544.2   | 498.6   | 459.1   | 559.4   | 754.0   | 781.4   | 1018.5  | 474.3   |
| 87.5° | 124.7   | 127.7   | 139.9   | 185.5   | 270.6   | 367.9   | 519.9   | 690.2   | 702.3   | 653.7   | 57.8    |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

REPORT NUMBER: P1063507

CATALOG NUMBER: GLAN-SA8C-760-U-T2BC

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 270.6  | 270.6 | 270.6 | 270.6 | 270.6 | 270.6 | 270.6 | 270.6 | 270.6 | 270.6 | 270.6 |
| 2.5°  | 273.6  | 267.6 | 264.5 | 255.4 | 246.3 | 237.2 | 231.1 | 228.0 | 231.1 | 234.1 | 234.1 |
| 5°    | 270.6  | 261.5 | 246.3 | 231.1 | 218.9 | 206.7 | 194.6 | 191.5 | 191.5 | 194.6 | 194.6 |
| 7.5°  | 270.6  | 255.4 | 234.1 | 215.9 | 197.6 | 179.4 | 170.3 | 164.2 | 167.2 | 167.2 | 167.2 |
| 10°   | 270.6  | 252.4 | 225.0 | 197.6 | 176.3 | 155.1 | 139.9 | 133.8 | 133.8 | 133.8 | 133.8 |
| 12.5° | 267.6  | 249.3 | 215.9 | 182.4 | 152.0 | 127.7 | 109.5 | 100.3 | 103.4 | 103.4 | 103.4 |
| 15°   | 261.5  | 240.2 | 203.7 | 155.1 | 121.6 | 97.3  | 79.1  | 69.9  | 73.0  | 79.1  | 82.1  |
| 17.5° | 252.4  | 231.1 | 182.4 | 130.7 | 97.3  | 73.0  | 54.7  | 48.6  | 51.7  | 60.8  | 60.8  |
| 20°   | 249.3  | 221.9 | 161.1 | 106.4 | 73.0  | 51.7  | 36.5  | 30.4  | 33.4  | 45.6  | 48.6  |
| 22.5° | 249.3  | 215.9 | 145.9 | 88.2  | 54.7  | 33.4  | 21.3  | 12.2  | 12.2  | 21.3  | 21.3  |
| 25°   | 252.4  | 212.8 | 133.8 | 73.0  | 39.5  | 24.3  | 12.2  | 6.1   | 12.2  | 33.4  | 39.5  |
| 27.5° | 258.4  | 209.8 | 127.7 | 60.8  | 30.4  | 21.3  | 9.1   | 21.3  | 36.5  | 36.5  | 36.5  |
| 30°   | 264.5  | 203.7 | 118.6 | 51.7  | 27.4  | 15.2  | 15.2  | 30.4  | 30.4  | 36.5  | 39.5  |
| 32.5° | 273.6  | 200.7 | 112.5 | 45.6  | 21.3  | 12.2  | 21.3  | 18.2  | 18.2  | 21.3  | 24.3  |
| 35°   | 291.9  | 203.7 | 106.4 | 45.6  | 21.3  | 15.2  | 18.2  | 9.1   | 6.1   | 6.1   | 6.1   |
| 37.5° | 316.2  | 206.7 | 97.3  | 39.5  | 18.2  | 18.2  | 9.1   | 0.0   | 0.0   | 0.0   | 0.0   |
| 40°   | 355.7  | 215.9 | 91.2  | 36.5  | 15.2  | 15.2  | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 42.5° | 422.6  | 234.1 | 88.2  | 33.4  | 15.2  | 12.2  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 45°   | 556.4  | 276.7 | 82.1  | 30.4  | 15.2  | 6.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 47.5° | 799.6  | 377.0 | 79.1  | 24.3  | 9.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 50°   | 1167.5 | 510.8 | 76.0  | 21.3  | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 52.5° | 1489.8 | 538.2 | 51.7  | 18.2  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 55°   | 1526.3 | 370.9 | 39.5  | 12.2  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 57.5° | 1216.2 | 240.2 | 33.4  | 9.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 60°   | 921.2  | 182.4 | 30.4  | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 61°   | 884.8  | 164.2 | 30.4  | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 62.5° | 976.0  | 142.9 | 27.4  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 65°   | 1587.1 | 118.6 | 24.3  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 67.5° | 2757.6 | 103.4 | 21.3  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 70°   | 3484.3 | 97.3  | 18.2  | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 72.5° | 3037.4 | 88.2  | 18.2  | 6.1   | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 75°   | 1827.3 | 76.0  | 18.2  | 12.2  | 6.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 77.5° | 957.7  | 57.8  | 18.2  | 15.2  | 9.1   | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 80°   | 465.2  | 51.7  | 21.3  | 15.2  | 12.2  | 6.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 182.4  | 42.6  | 24.3  | 21.3  | 15.2  | 9.1   | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 82.1   | 36.5  | 27.4  | 24.3  | 21.3  | 12.2  | 3.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 42.6   | 33.4  | 30.4  | 27.4  | 21.3  | 15.2  | 6.1   | 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



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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-7

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-760-U-5WQ

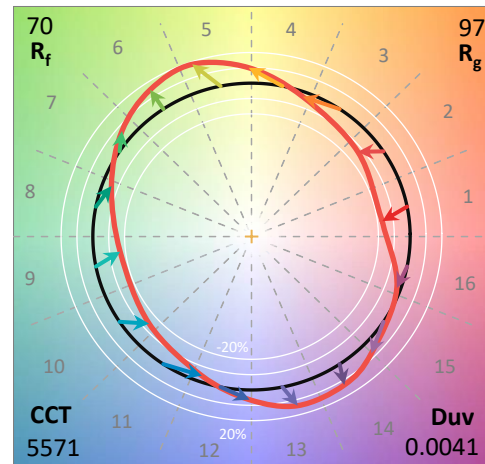
Data in this report applies to families of products including GSS-SB1A-760-U-5WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-7  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 10/15/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GSS-SB1A-70-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI  
 5700K CCT 26 LEDS

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 5571     | CRI (Ra): | 69.9 |      |       |
| CIE u':                   | 0.2033   | R1:       | 68.8 | R9:  | -35.4 |
| CIE v':                   | 0.4806   | R2:       | 72.5 | R10: | 36.7  |
| Duv:                      | 0.0041   | R3:       | 76.8 | R11: | 73.9  |
| CIE x:                    | 0.3308   | R4:       | 72.0 | R12: | 47.8  |
| CIE y:                    | 0.3476   | R5:       | 70.9 | R13: | 68.0  |
| CIE z:                    | 0.3216   | R6:       | 65.6 | R14: | 87.0  |
| Peak Wavelength (nm):     | 442      | R7:       | 75.5 | R15: | 59.8  |
| Dominant Wavelength (nm): | 544      | R8:       | 56.8 |      |       |
| Purity:                   | 3.635698 |           |      |      |       |
| Rf:                       | 70.4     |           |      |      |       |
| Rg:                       | 97.1     |           |      |      |       |



### Test Conditions

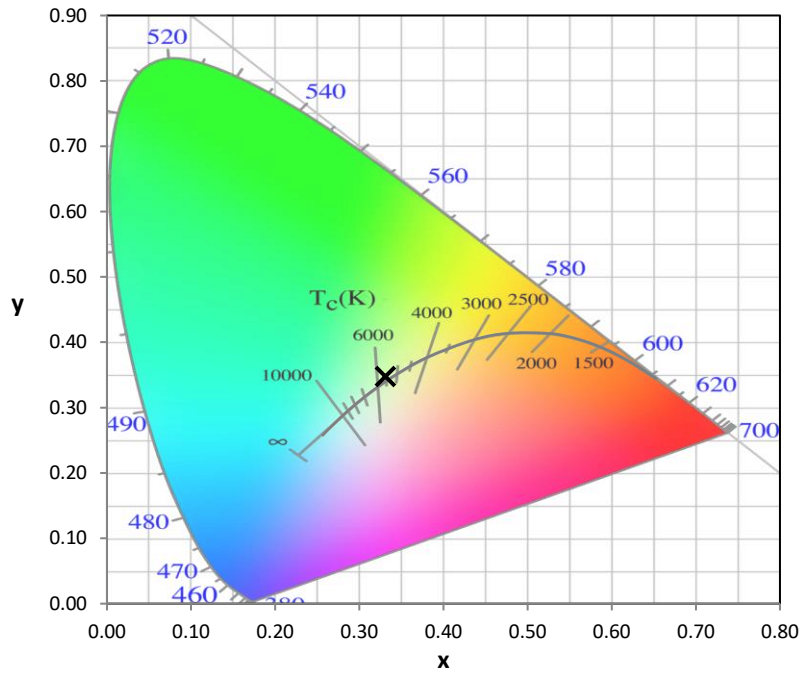
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-7

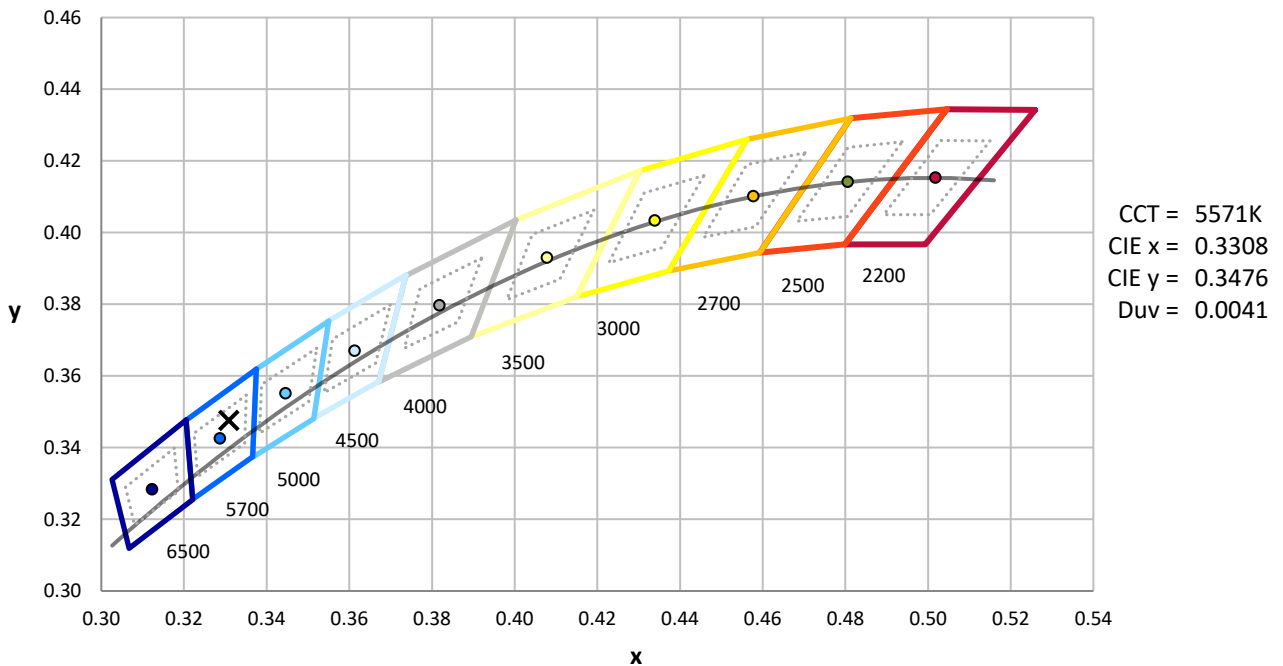
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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: SP1-2407-184-7

**CIE 1931 Chromaticity Diagram**



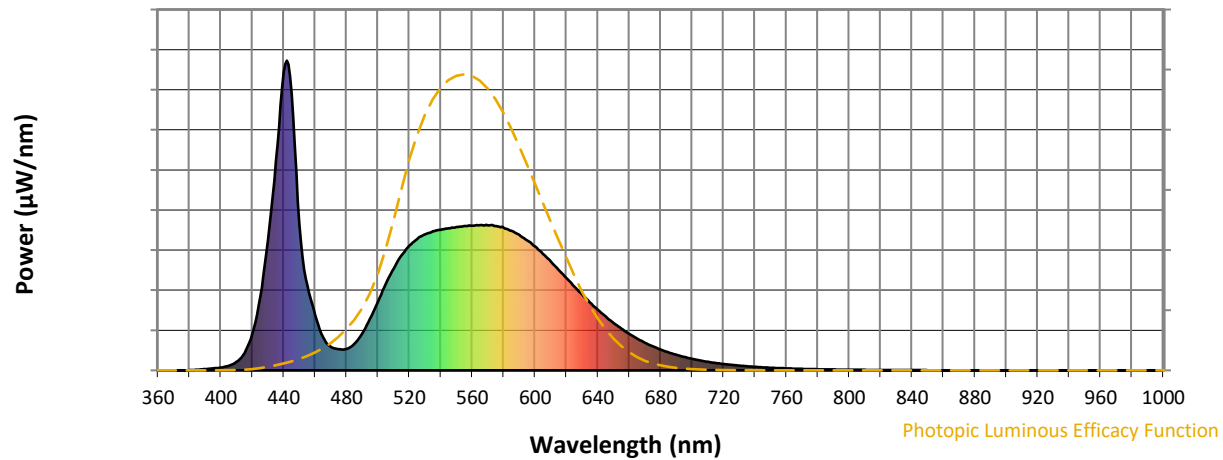
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 5700K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-7

### Photopic Flux vs. Wavelength

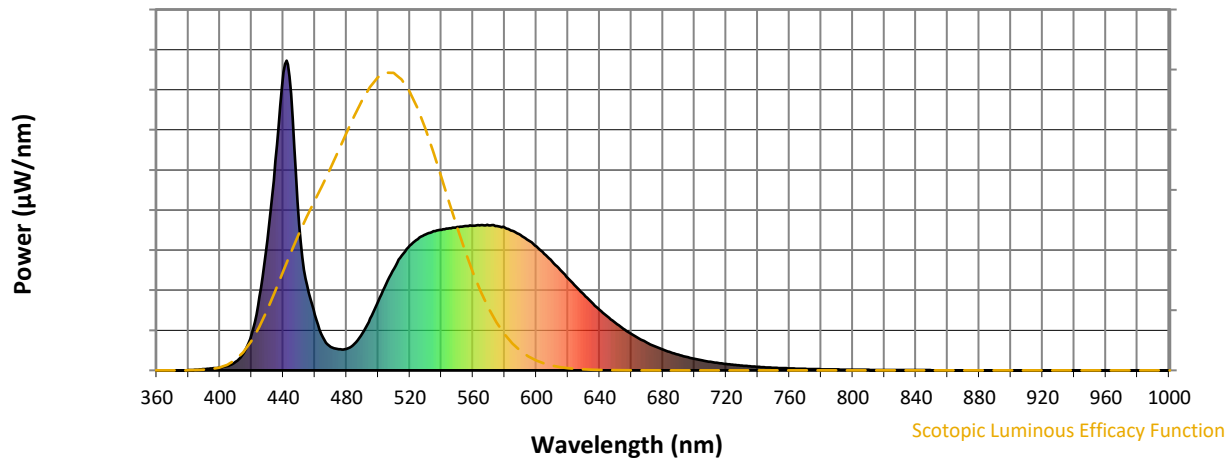


### Photopic Lumens: NR

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 120                         | NR               | 620       | 298                         | NR               | 750       | 9                           | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 167                         | NR               | 625       | 270                         | NR               | 755       | 7                           | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 222                         | NR               | 630       | 245                         | NR               | 760       | 6                           | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 279                         | NR               | 635       | 219                         | NR               | 765       | 6                           | NR               | 895       | 0                           | NR               |
| 380       | 1                           | NR               | 510       | 329                         | NR               | 640       | 196                         | NR               | 770       | 5                           | NR               | 900       | 0                           | NR               |
| 385       | 2                           | NR               | 515       | 371                         | NR               | 645       | 173                         | NR               | 775       | 4                           | NR               | 905       | 0                           | NR               |
| 390       | 4                           | NR               | 520       | 403                         | NR               | 650       | 153                         | NR               | 780       | 4                           | NR               | 910       | 0                           | NR               |
| 395       | 6                           | NR               | 525       | 424                         | NR               | 655       | 135                         | NR               | 785       | 3                           | NR               | 915       | 0                           | NR               |
| 400       | 9                           | NR               | 530       | 439                         | NR               | 660       | 117                         | NR               | 790       | 3                           | NR               | 920       | 0                           | NR               |
| 405       | 14                          | NR               | 535       | 449                         | NR               | 665       | 103                         | NR               | 795       | 2                           | NR               | 925       | 0                           | NR               |
| 410       | 28                          | NR               | 540       | 454                         | NR               | 670       | 89                          | NR               | 800       | 2                           | NR               | 930       | 0                           | NR               |
| 415       | 55                          | NR               | 545       | 459                         | NR               | 675       | 77                          | NR               | 805       | 2                           | NR               | 935       | 0                           | NR               |
| 420       | 118                         | NR               | 550       | 463                         | NR               | 680       | 67                          | NR               | 810       | 2                           | NR               | 940       | 0                           | NR               |
| 425       | 237                         | NR               | 555       | 466                         | NR               | 685       | 58                          | NR               | 815       | 1                           | NR               | 945       | 0                           | NR               |
| 430       | 420                         | NR               | 560       | 467                         | NR               | 690       | 50                          | NR               | 820       | 1                           | NR               | 950       | 0                           | NR               |
| 435       | 677                         | NR               | 565       | 469                         | NR               | 695       | 43                          | NR               | 825       | 1                           | NR               | 955       | 0                           | NR               |
| 440       | 962                         | NR               | 570       | 469                         | NR               | 700       | 37                          | NR               | 830       | 1                           | NR               | 960       | 0                           | NR               |
| 445       | 894                         | NR               | 575       | 466                         | NR               | 705       | 32                          | NR               | 835       | 1                           | NR               | 965       | 0                           | NR               |
| 450       | 472                         | NR               | 580       | 461                         | NR               | 710       | 28                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 275                         | NR               | 585       | 450                         | NR               | 715       | 24                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 180                         | NR               | 590       | 437                         | NR               | 720       | 21                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 107                         | NR               | 595       | 420                         | NR               | 725       | 18                          | NR               | 855       | 0                           | NR               | 985       | 0                           | NR               |
| 470       | 76                          | NR               | 600       | 400                         | NR               | 730       | 15                          | NR               | 860       | 0                           | NR               | 990       | 0                           | NR               |
| 475       | 68                          | NR               | 605       | 376                         | NR               | 735       | 13                          | NR               | 865       | 0                           | NR               | 995       | 0                           | NR               |
| 480       | 69                          | NR               | 610       | 352                         | NR               | 740       | 11                          | NR               | 870       | 0                           | NR               | 1000      | 0                           | NR               |
| 485       | 86                          | NR               | 615       | 325                         | NR               | 745       | 10                          | NR               | 875       | 0                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2407-184-7

### Scotopic Flux vs. Wavelength



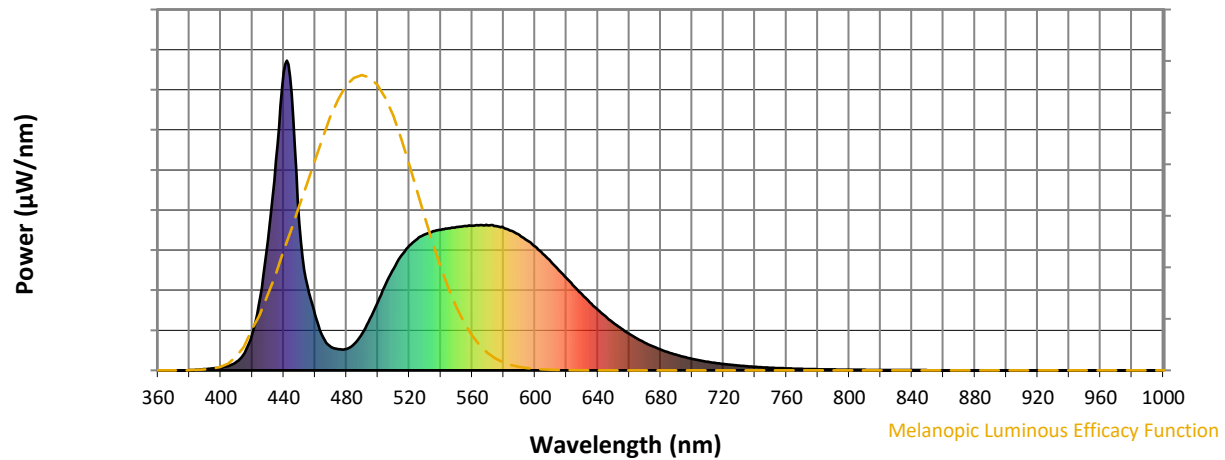
Scotopic Lumens: NR

S/P: 1.84

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 120                         | NR               | 620       | 298                         | NR               | 750       | 9                           | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 167                         | NR               | 625       | 270                         | NR               | 755       | 7                           | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 222                         | NR               | 630       | 245                         | NR               | 760       | 6                           | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 279                         | NR               | 635       | 219                         | NR               | 765       | 6                           | NR               | 895       | 0                           | NR               |
| 380       | 1                           | NR               | 510       | 329                         | NR               | 640       | 196                         | NR               | 770       | 5                           | NR               | 900       | 0                           | NR               |
| 385       | 2                           | NR               | 515       | 371                         | NR               | 645       | 173                         | NR               | 775       | 4                           | NR               | 905       | 0                           | NR               |
| 390       | 4                           | NR               | 520       | 403                         | NR               | 650       | 153                         | NR               | 780       | 4                           | NR               | 910       | 0                           | NR               |
| 395       | 6                           | NR               | 525       | 424                         | NR               | 655       | 135                         | NR               | 785       | 3                           | NR               | 915       | 0                           | NR               |
| 400       | 9                           | NR               | 530       | 439                         | NR               | 660       | 117                         | NR               | 790       | 3                           | NR               | 920       | 0                           | NR               |
| 405       | 14                          | NR               | 535       | 449                         | NR               | 665       | 103                         | NR               | 795       | 2                           | NR               | 925       | 0                           | NR               |
| 410       | 28                          | NR               | 540       | 454                         | NR               | 670       | 89                          | NR               | 800       | 2                           | NR               | 930       | 0                           | NR               |
| 415       | 55                          | NR               | 545       | 459                         | NR               | 675       | 77                          | NR               | 805       | 2                           | NR               | 935       | 0                           | NR               |
| 420       | 118                         | NR               | 550       | 463                         | NR               | 680       | 67                          | NR               | 810       | 2                           | NR               | 940       | 0                           | NR               |
| 425       | 237                         | NR               | 555       | 466                         | NR               | 685       | 58                          | NR               | 815       | 1                           | NR               | 945       | 0                           | NR               |
| 430       | 420                         | NR               | 560       | 467                         | NR               | 690       | 50                          | NR               | 820       | 1                           | NR               | 950       | 0                           | NR               |
| 435       | 677                         | NR               | 565       | 469                         | NR               | 695       | 43                          | NR               | 825       | 1                           | NR               | 955       | 0                           | NR               |
| 440       | 962                         | NR               | 570       | 469                         | NR               | 700       | 37                          | NR               | 830       | 1                           | NR               | 960       | 0                           | NR               |
| 445       | 894                         | NR               | 575       | 466                         | NR               | 705       | 32                          | NR               | 835       | 1                           | NR               | 965       | 0                           | NR               |
| 450       | 472                         | NR               | 580       | 461                         | NR               | 710       | 28                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 275                         | NR               | 585       | 450                         | NR               | 715       | 24                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 180                         | NR               | 590       | 437                         | NR               | 720       | 21                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 107                         | NR               | 595       | 420                         | NR               | 725       | 18                          | NR               | 855       | 0                           | NR               | 985       | 0                           | NR               |
| 470       | 76                          | NR               | 600       | 400                         | NR               | 730       | 15                          | NR               | 860       | 0                           | NR               | 990       | 0                           | NR               |
| 475       | 68                          | NR               | 605       | 376                         | NR               | 735       | 13                          | NR               | 865       | 0                           | NR               | 995       | 0                           | NR               |
| 480       | 69                          | NR               | 610       | 352                         | NR               | 740       | 11                          | NR               | 870       | 0                           | NR               | 1000      | 0                           | NR               |
| 485       | 86                          | NR               | 615       | 325                         | NR               | 745       | 10                          | NR               | 875       | 0                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2407-184-7

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.71

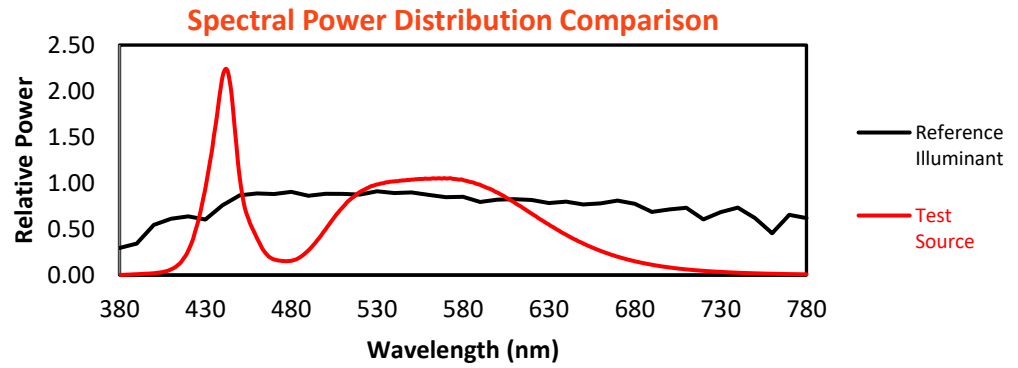
| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 120                                  | NR                             | 620               | 298                                  | NR                             | 750               | 9                                    | NR                             | 880               | 0                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 167                                  | NR                             | 625               | 270                                  | NR                             | 755               | 7                                    | NR                             | 885               | 0                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 222                                  | NR                             | 630               | 245                                  | NR                             | 760               | 6                                    | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 279                                  | NR                             | 635               | 219                                  | NR                             | 765               | 6                                    | NR                             | 895               | 0                                    | NR                             |
| 380               | 1                                    | NR                             | 510               | 329                                  | NR                             | 640               | 196                                  | NR                             | 770               | 5                                    | NR                             | 900               | 0                                    | NR                             |
| 385               | 2                                    | NR                             | 515               | 371                                  | NR                             | 645               | 173                                  | NR                             | 775               | 4                                    | NR                             | 905               | 0                                    | NR                             |
| 390               | 4                                    | NR                             | 520               | 403                                  | NR                             | 650               | 153                                  | NR                             | 780               | 4                                    | NR                             | 910               | 0                                    | NR                             |
| 395               | 6                                    | NR                             | 525               | 424                                  | NR                             | 655               | 135                                  | NR                             | 785               | 3                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 9                                    | NR                             | 530               | 439                                  | NR                             | 660               | 117                                  | NR                             | 790               | 3                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 14                                   | NR                             | 535               | 449                                  | NR                             | 665               | 103                                  | NR                             | 795               | 2                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 28                                   | NR                             | 540               | 454                                  | NR                             | 670               | 89                                   | NR                             | 800               | 2                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 55                                   | NR                             | 545               | 459                                  | NR                             | 675               | 77                                   | NR                             | 805               | 2                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 118                                  | NR                             | 550               | 463                                  | NR                             | 680               | 67                                   | NR                             | 810               | 2                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 237                                  | NR                             | 555               | 466                                  | NR                             | 685               | 58                                   | NR                             | 815               | 1                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 420                                  | NR                             | 560               | 467                                  | NR                             | 690               | 50                                   | NR                             | 820               | 1                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 677                                  | NR                             | 565               | 469                                  | NR                             | 695               | 43                                   | NR                             | 825               | 1                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 962                                  | NR                             | 570               | 469                                  | NR                             | 700               | 37                                   | NR                             | 830               | 1                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 894                                  | NR                             | 575               | 466                                  | NR                             | 705               | 32                                   | NR                             | 835               | 1                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 472                                  | NR                             | 580               | 461                                  | NR                             | 710               | 28                                   | NR                             | 840               | 1                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 275                                  | NR                             | 585               | 450                                  | NR                             | 715               | 24                                   | NR                             | 845               | 1                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 180                                  | NR                             | 590               | 437                                  | NR                             | 720               | 21                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 107                                  | NR                             | 595               | 420                                  | NR                             | 725               | 18                                   | NR                             | 855               | 0                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 76                                   | NR                             | 600               | 400                                  | NR                             | 730               | 15                                   | NR                             | 860               | 0                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 68                                   | NR                             | 605               | 376                                  | NR                             | 735               | 13                                   | NR                             | 865               | 0                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 69                                   | NR                             | 610               | 352                                  | NR                             | 740               | 11                                   | NR                             | 870               | 0                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 86                                   | NR                             | 615               | 325                                  | NR                             | 745               | 10                                   | NR                             | 875               | 0                                    | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-2407-184-7

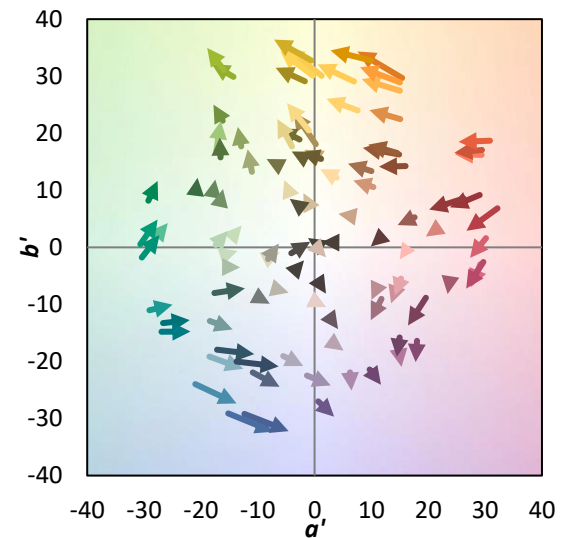
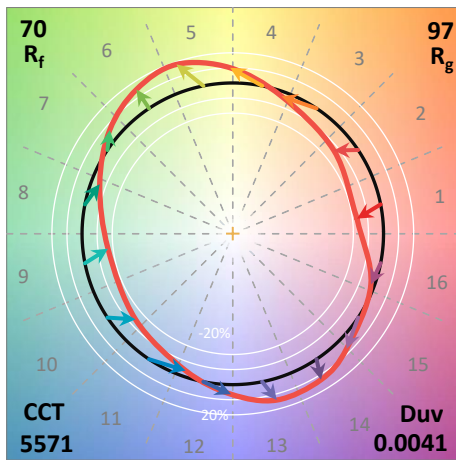
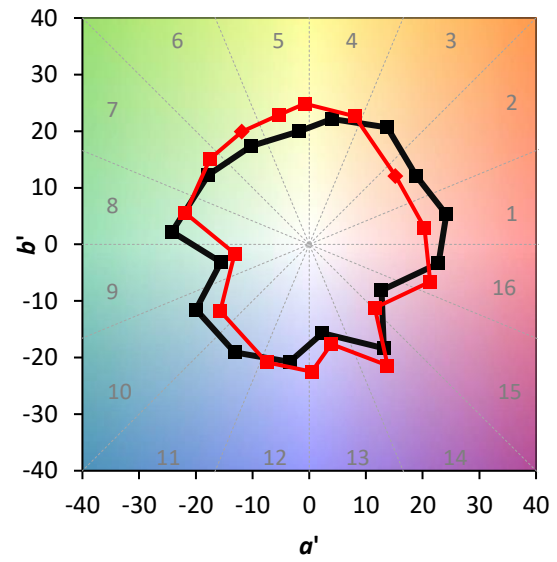
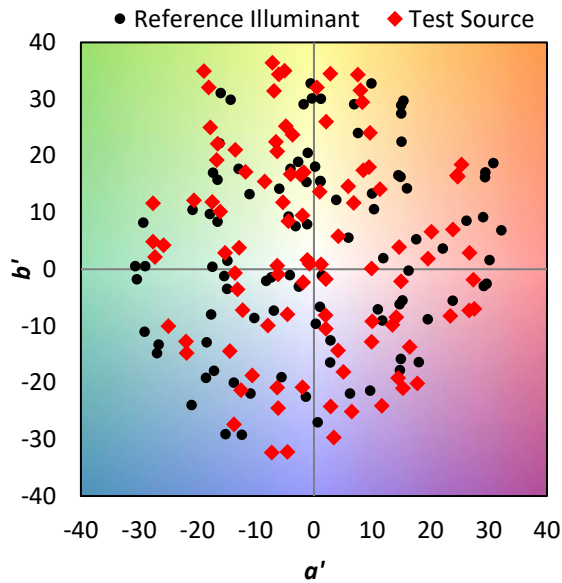
TM-30-18

### Summary

$R_f = 70.4$   
 $R_g = 97.1$   
 $CIE R_a = 69.9$   
 $R_g = -35.4$



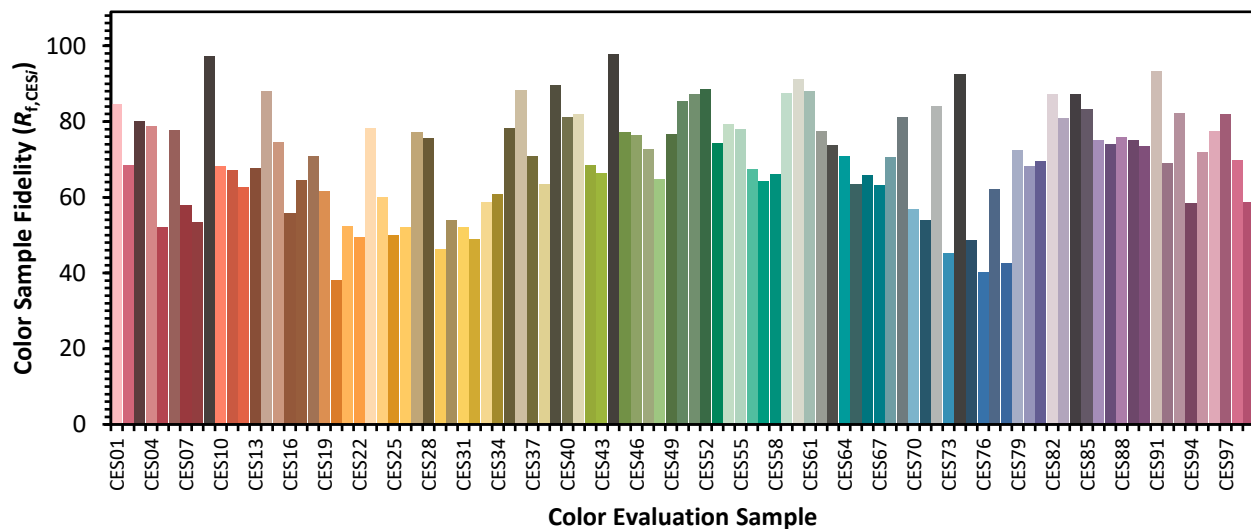
### Color Vector Graphics

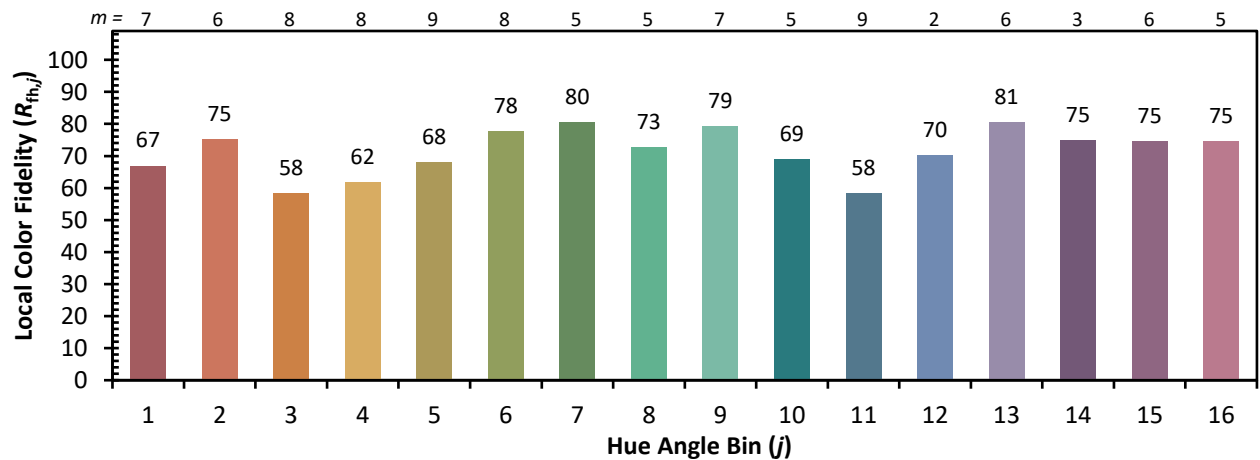
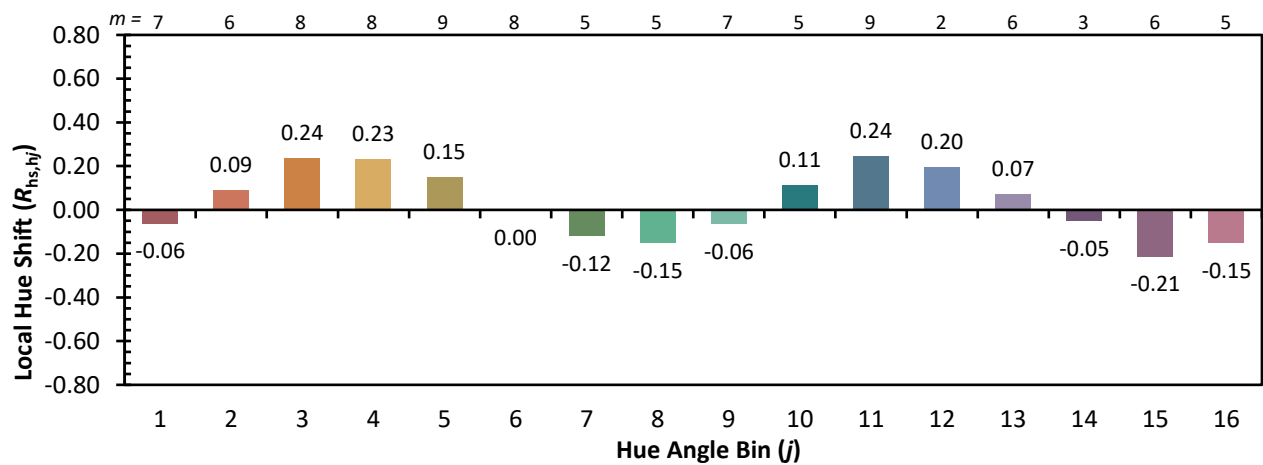
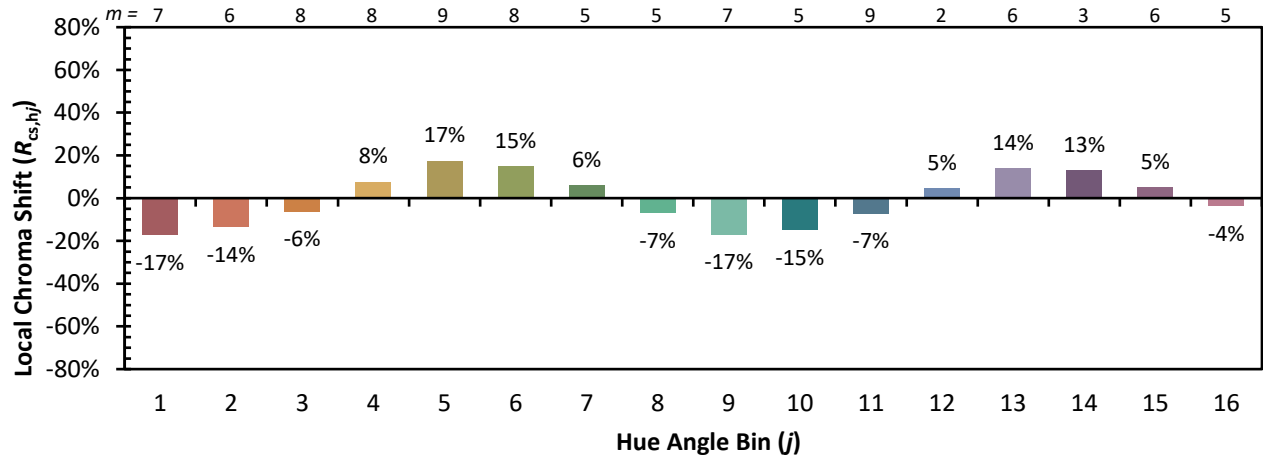




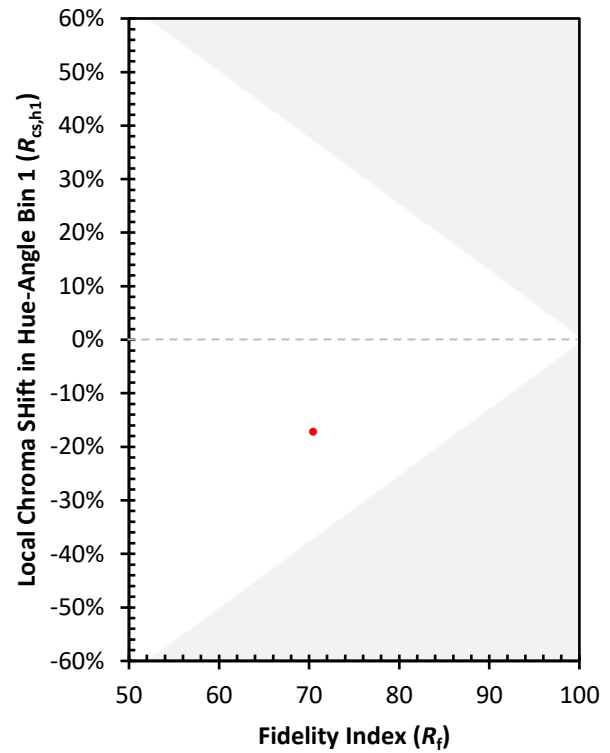
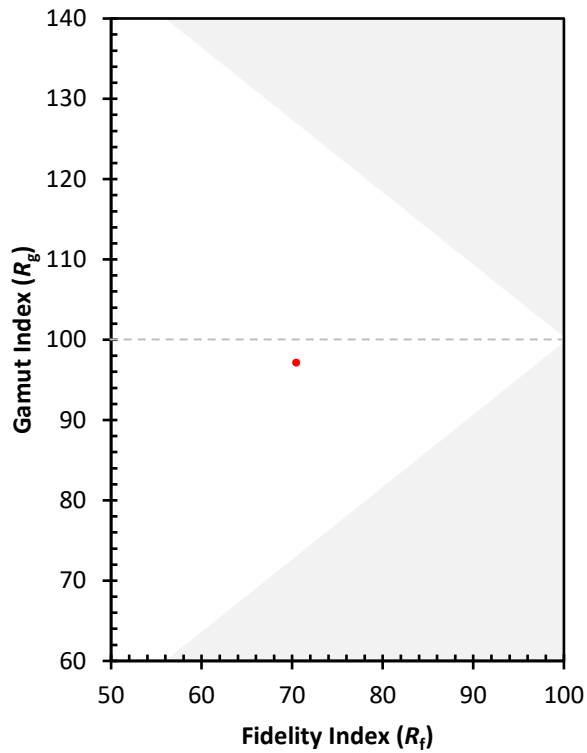
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 52 | CES51 = 87 | CES76 = 40 |
| CES02 = 59 | CES27 = 77 | CES52 = 88 | CES77 = 62 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 43 |
| CES04 = 68 | CES29 = 46 | CES54 = 79 | CES79 = 72 |
| CES05 = 45 | CES30 = 54 | CES55 = 78 | CES80 = 68 |
| CES06 = 49 | CES31 = 52 | CES56 = 67 | CES81 = 70 |
| CES07 = 38 | CES32 = 49 | CES57 = 64 | CES82 = 87 |
| CES08 = 37 | CES33 = 59 | CES58 = 66 | CES83 = 81 |
| CES09 = 29 | CES34 = 61 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 78 | CES60 = 91 | CES85 = 83 |
| CES11 = 55 | CES36 = 88 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 71 | CES62 = 77 | CES87 = 74 |
| CES13 = 41 | CES38 = 64 | CES63 = 74 | CES88 = 76 |
| CES14 = 74 | CES39 = 90 | CES64 = 71 | CES89 = 75 |
| CES15 = 70 | CES40 = 81 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 82 | CES66 = 66 | CES91 = 93 |
| CES17 = 48 | CES42 = 69 | CES67 = 63 | CES92 = 69 |
| CES18 = 55 | CES43 = 67 | CES68 = 71 | CES93 = 82 |
| CES19 = 70 | CES44 = 98 | CES69 = 81 | CES94 = 58 |
| CES20 = 63 | CES45 = 77 | CES70 = 57 | CES95 = 72 |
| CES21 = 85 | CES46 = 76 | CES71 = 54 | CES96 = 78 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 45 | CES98 = 70 |
| CES24 = 90 | CES49 = 77 | CES74 = 92 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)