

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P628911

Luminaire Tested: GWS-SA1A-750-U-SLL-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P628911  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-38)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1A-750-U-SLL-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (16) 5000K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1559.8 lumens  
Efficiency: N/A  
Efficacy: 79.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G0

Input Watts (W): 19.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 0  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



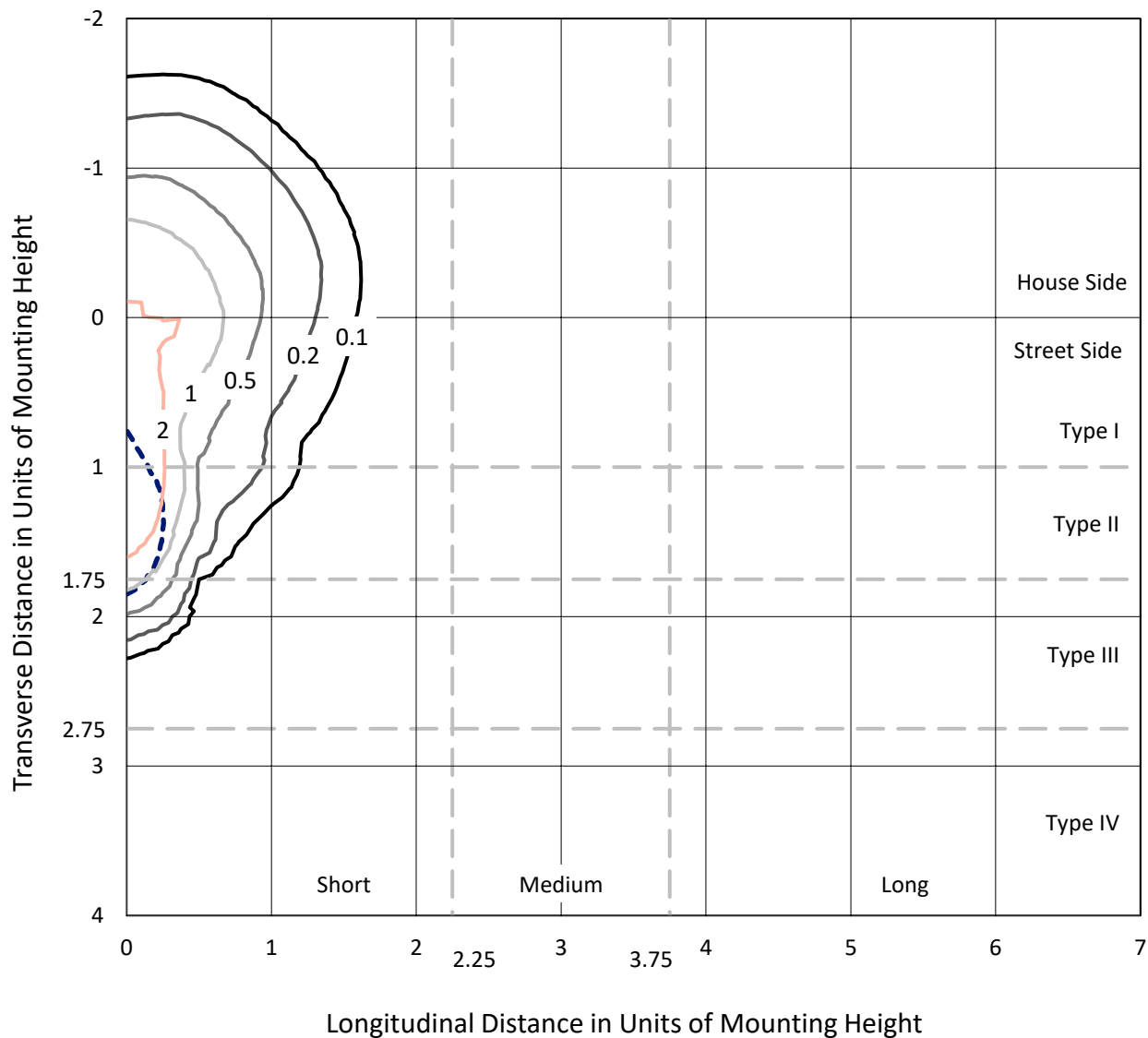
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

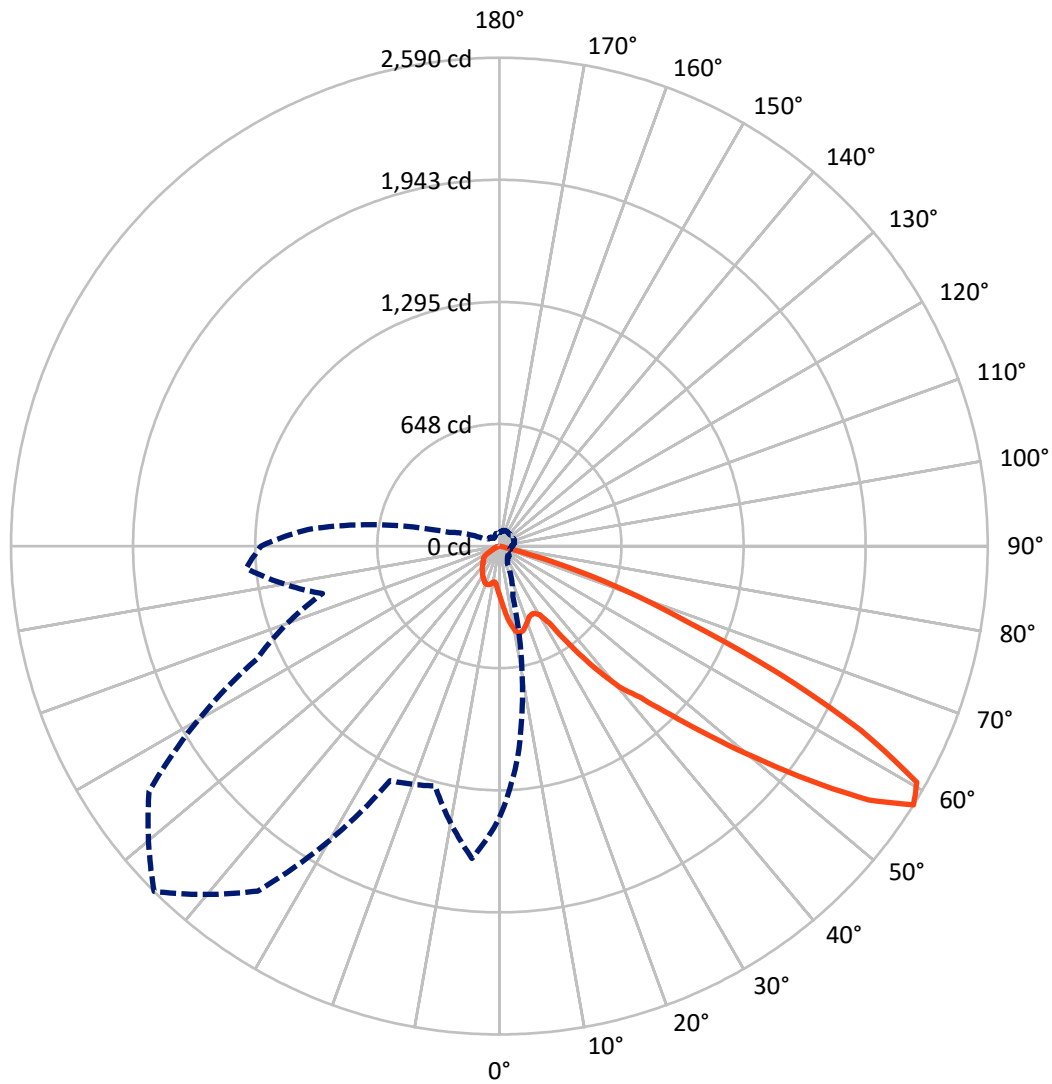


Based on 10 foot mounting height. Maximum calculated value = 4.2 fc  
 Type III - Short - N/A

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## Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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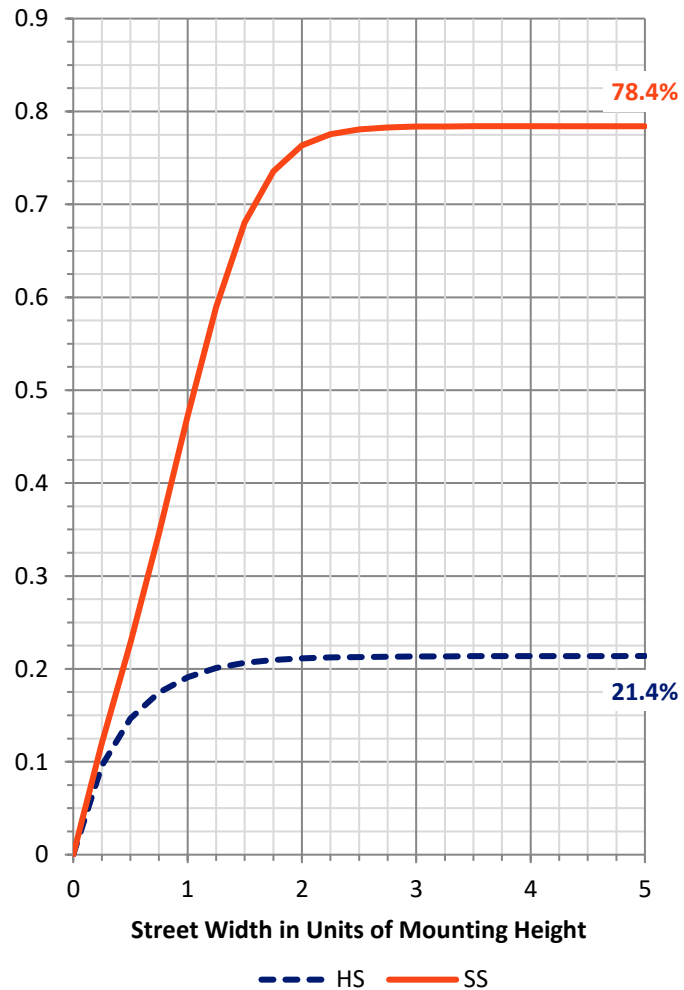
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 336.0    | 0.0    | 336.0  |
|                    | % Fixture | 21.5     | 0.0    | 21.5   |
| <b>Street Side</b> | Lumens    | 1223.8   | 0.0    | 1223.8 |
|                    | % Fixture | 78.5     | 0.0    | 78.5   |
| <b>Total</b>       | Lumens    | 1559.8   | 0.0    | 1559.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 26.2   | 1.7       |
| 10°-20°   | 86.2   | 5.5       |
| 20°-30°   | 139.9  | 9.0       |
| 30°-40°   | 214.7  | 13.8      |
| 40°-50°   | 342.9  | 22.0      |
| 50°-60°   | 480.1  | 30.8      |
| 60°-70°   | 246.2  | 15.8      |
| 70°-80°   | 23.7   | 1.5       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 1559.8 | 100.0     |
| 0°-180°   | 1559.8 | 100.0     |

**Coefficient of Utilization**



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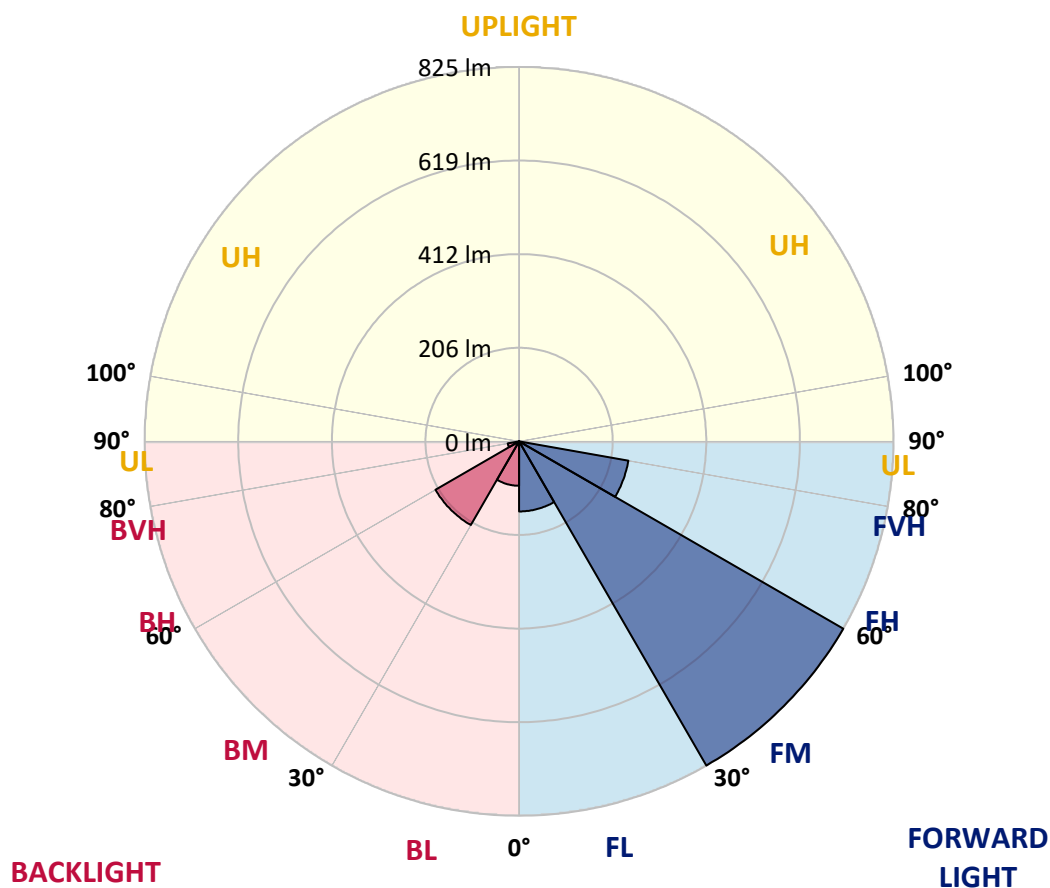
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|--------|-----------|-------------------------|------|--------|
|      |             |        |           | B                       | U    | G      |
| FL   | (0°-30°)    | 154.4  | 9.9       |                         |      |        |
| FM   | (30°-60°)   | 824.9  | 52.9      |                         |      |        |
| FH   | (60°-80°)   | 244.5  | 15.7      |                         |      | G0/660 |
| FVH  | (80°-90°)   | 0.0    | 0.0       |                         |      | G0/10  |
| BL   | (0°-30°)    | 97.8   | 6.3       | B0/110                  |      |        |
| BM   | (30°-60°)   | 212.8  | 13.6      | B0/220                  |      |        |
| BH   | (60°-80°)   | 25.4   | 1.6       | B0/110                  |      | G0/110 |
| BVH  | (80°-90°)   | 0.0    | 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-G0**

Type III Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°   | 25°   | 35°   | 45°   | 55°   | 65°   | 75°   | 85°   |
|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 265.0  | 265.0  | 265.0  | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 |
| 2.5°  | 294.4  | 293.8  | 291.7  | 284.6 | 280.3 | 273.4 | 268.4 | 261.9 | 254.8 | 250.4 | 246.1 |
| 5°    | 325.7  | 324.0  | 318.4  | 302.2 | 289.6 | 276.1 | 265.2 | 253.4 | 240.6 | 232.3 | 224.6 |
| 7.5°  | 355.7  | 353.2  | 345.7  | 318.2 | 299.2 | 279.8 | 264.4 | 247.1 | 229.2 | 216.7 | 207.1 |
| 10°   | 385.1  | 379.5  | 367.6  | 333.8 | 308.2 | 284.8 | 266.7 | 246.9 | 225.8 | 210.0 | 199.3 |
| 12.5° | 409.3  | 405.2  | 388.9  | 348.7 | 315.7 | 285.9 | 263.6 | 245.2 | 231.0 | 220.4 | 210.6 |
| 15°   | 430.2  | 425.6  | 410.2  | 362.0 | 322.2 | 281.7 | 250.4 | 234.4 | 236.7 | 240.8 | 232.5 |
| 17.5° | 449.4  | 444.6  | 427.9  | 373.0 | 324.7 | 271.5 | 232.1 | 224.4 | 237.1 | 252.7 | 249.6 |
| 20°   | 469.2  | 463.8  | 443.3  | 382.0 | 323.8 | 255.4 | 213.5 | 215.8 | 233.8 | 251.7 | 253.4 |
| 22.5° | 492.3  | 486.7  | 462.9  | 393.5 | 323.2 | 236.3 | 197.5 | 208.3 | 227.5 | 242.7 | 245.6 |
| 25°   | 523.0  | 516.3  | 490.2  | 410.4 | 324.9 | 218.7 | 186.0 | 201.0 | 216.9 | 230.6 | 232.3 |
| 27.5° | 563.4  | 554.9  | 521.7  | 431.2 | 328.4 | 205.0 | 181.0 | 191.0 | 203.3 | 215.6 | 217.1 |
| 30°   | 616.2  | 605.3  | 557.8  | 449.4 | 326.8 | 195.4 | 177.7 | 181.0 | 188.3 | 198.3 | 198.5 |
| 32.5° | 677.9  | 663.1  | 598.3  | 465.0 | 312.4 | 188.3 | 173.1 | 170.8 | 172.4 | 180.2 | 181.6 |
| 35°   | 750.5  | 731.3  | 642.9  | 479.8 | 286.1 | 174.5 | 164.7 | 157.0 | 156.4 | 160.1 | 163.7 |
| 37.5° | 833.7  | 810.7  | 699.2  | 498.8 | 255.0 | 160.1 | 152.4 | 144.7 | 141.4 | 143.3 | 148.7 |
| 40°   | 910.4  | 885.0  | 758.0  | 521.7 | 223.3 | 147.2 | 138.0 | 130.1 | 126.2 | 126.8 | 133.5 |
| 42.5° | 1000.5 | 974.2  | 829.9  | 551.8 | 197.1 | 138.5 | 123.0 | 114.9 | 109.7 | 112.6 | 120.3 |
| 45°   | 1137.3 | 1107.5 | 934.8  | 577.8 | 176.2 | 136.4 | 109.9 | 98.4  | 95.9  | 100.9 | 110.1 |
| 47.5° | 1324.1 | 1287.6 | 1078.9 | 593.7 | 158.5 | 138.3 | 100.7 | 85.1  | 85.7  | 91.3  | 100.5 |
| 50°   | 1509.5 | 1470.1 | 1245.5 | 572.8 | 143.9 | 134.5 | 96.1  | 74.7  | 78.6  | 83.6  | 92.0  |
| 52.5° | 1636.9 | 1585.6 | 1326.6 | 512.6 | 130.5 | 120.3 | 95.7  | 64.9  | 72.4  | 74.0  | 81.1  |
| 55°   | 1641.9 | 1578.7 | 1285.1 | 404.1 | 112.4 | 101.6 | 91.3  | 56.7  | 65.5  | 66.1  | 72.1  |
| 57.5° | 1439.2 | 1382.1 | 1123.1 | 277.5 | 99.9  | 74.4  | 72.8  | 49.6  | 53.8  | 59.0  | 62.8  |
| 60°   | 1095.0 | 1046.4 | 839.9  | 127.2 | 75.9  | 47.3  | 49.8  | 42.7  | 40.2  | 48.0  | 51.7  |
| 62.5° | 670.6  | 639.5  | 503.8  | 56.3  | 48.4  | 25.2  | 30.2  | 34.0  | 30.2  | 33.2  | 36.3  |
| 65°   | 266.3  | 252.5  | 191.2  | 24.0  | 19.8  | 12.7  | 13.8  | 19.8  | 21.3  | 23.4  | 26.3  |
| 67.5° | 46.3   | 43.8   | 32.1   | 10.6  | 8.1   | 7.7   | 6.7   | 9.2   | 12.9  | 14.4  | 16.7  |
| 70°   | 6.0    | 5.8    | 5.2    | 4.4   | 4.2   | 3.8   | 2.9   | 5.8   | 8.8   | 9.2   | 10.6  |
| 72.5° | 1.5    | 1.3    | 1.3    | 1.0   | 1.3   | 0.4   | 0.4   | 3.1   | 6.3   | 6.5   | 7.5   |
| 75°   | 0.0    | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 1.0   | 4.0   | 4.4   | 5.2   |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.2   |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 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   |

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**CANDELA DISTRIBUTION (continued):**

|       | 90°   | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 |
| 2.5°  | 242.5 | 238.3 | 236.9 | 234.8 | 232.1 | 232.9 | 229.2 | 227.9 | 229.8 | 232.3 | 231.7 |
| 5°    | 220.4 | 215.8 | 212.7 | 207.9 | 207.1 | 205.2 | 203.9 | 202.3 | 204.4 | 207.3 | 207.9 |
| 7.5°  | 202.9 | 198.9 | 195.8 | 194.3 | 193.3 | 192.5 | 190.0 | 188.7 | 188.7 | 190.0 | 191.0 |
| 10°   | 195.4 | 192.5 | 191.8 | 192.3 | 193.9 | 193.7 | 191.4 | 189.8 | 187.7 | 186.6 | 187.9 |
| 12.5° | 205.8 | 201.0 | 200.2 | 200.4 | 202.5 | 202.3 | 199.8 | 197.7 | 197.3 | 197.7 | 201.6 |
| 15°   | 223.5 | 216.2 | 210.8 | 209.8 | 210.8 | 210.4 | 208.5 | 207.3 | 207.9 | 213.9 | 220.6 |
| 17.5° | 239.4 | 228.1 | 218.3 | 214.6 | 214.4 | 213.7 | 211.9 | 211.4 | 214.6 | 225.8 | 235.6 |
| 20°   | 244.0 | 232.9 | 218.9 | 214.2 | 213.1 | 212.5 | 210.4 | 211.0 | 215.0 | 228.5 | 236.9 |
| 22.5° | 237.9 | 227.3 | 212.7 | 207.9 | 207.1 | 206.9 | 204.8 | 205.6 | 208.9 | 220.8 | 227.7 |
| 25°   | 226.5 | 217.5 | 202.3 | 198.1 | 198.1 | 197.7 | 195.8 | 196.2 | 198.3 | 208.7 | 215.4 |
| 27.5° | 212.5 | 203.9 | 191.2 | 187.0 | 187.7 | 188.3 | 186.0 | 185.4 | 187.0 | 196.8 | 200.8 |
| 30°   | 196.4 | 190.4 | 180.4 | 176.6 | 176.4 | 178.9 | 175.8 | 175.0 | 177.2 | 185.0 | 185.8 |
| 32.5° | 180.8 | 177.9 | 170.8 | 167.9 | 168.1 | 168.5 | 166.8 | 166.8 | 168.9 | 173.1 | 172.9 |
| 35°   | 165.6 | 163.7 | 162.4 | 160.4 | 160.1 | 159.3 | 159.3 | 159.7 | 162.0 | 163.5 | 160.8 |
| 37.5° | 151.0 | 152.8 | 154.3 | 152.2 | 150.6 | 150.6 | 150.6 | 152.4 | 154.5 | 153.9 | 149.3 |
| 40°   | 138.0 | 142.0 | 146.6 | 144.3 | 140.3 | 140.1 | 141.0 | 144.1 | 147.2 | 143.5 | 139.3 |
| 42.5° | 127.0 | 132.0 | 138.5 | 137.2 | 132.8 | 132.2 | 132.8 | 136.8 | 139.3 | 134.5 | 129.9 |
| 45°   | 116.1 | 122.4 | 130.1 | 130.1 | 125.3 | 124.7 | 124.9 | 130.1 | 131.6 | 125.9 | 120.1 |
| 47.5° | 107.0 | 113.9 | 122.0 | 122.0 | 118.0 | 116.8 | 117.8 | 123.2 | 124.3 | 116.4 | 110.9 |
| 50°   | 98.2  | 105.7 | 114.7 | 114.1 | 111.4 | 110.3 | 112.2 | 118.0 | 116.8 | 108.0 | 102.4 |
| 52.5° | 87.2  | 95.1  | 107.4 | 108.0 | 106.6 | 106.8 | 109.1 | 112.8 | 109.3 | 98.6  | 93.8  |
| 55°   | 77.2  | 85.3  | 97.6  | 100.9 | 100.9 | 100.7 | 101.8 | 104.7 | 101.8 | 89.0  | 83.2  |
| 57.5° | 66.3  | 73.2  | 83.4  | 84.2  | 84.9  | 82.6  | 84.0  | 88.0  | 86.5  | 75.7  | 72.4  |
| 60°   | 54.4  | 60.3  | 66.1  | 66.7  | 64.0  | 59.2  | 61.9  | 66.5  | 67.6  | 59.4  | 55.7  |
| 62.5° | 38.6  | 44.2  | 51.1  | 51.1  | 48.4  | 43.6  | 47.1  | 51.1  | 49.6  | 41.3  | 39.0  |
| 65°   | 28.8  | 34.0  | 39.2  | 41.5  | 39.2  | 35.9  | 38.6  | 41.5  | 39.2  | 32.3  | 29.0  |
| 67.5° | 18.6  | 22.1  | 25.2  | 27.1  | 27.5  | 27.1  | 28.4  | 27.5  | 24.8  | 20.2  | 18.4  |
| 70°   | 11.3  | 13.1  | 14.8  | 16.5  | 17.7  | 18.4  | 19.0  | 17.1  | 14.4  | 11.9  | 11.3  |
| 72.5° | 8.1   | 9.8   | 11.3  | 12.5  | 14.0  | 14.4  | 14.4  | 13.1  | 10.6  | 8.3   | 7.7   |
| 75°   | 5.6   | 7.1   | 8.3   | 9.2   | 10.4  | 10.8  | 10.8  | 9.8   | 7.9   | 6.0   | 5.4   |
| 77.5° | 0.2   | 1.5   | 1.5   | 1.3   | 1.7   | 2.1   | 2.1   | 2.5   | 2.3   | 1.7   | 1.5   |
| 80°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 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   |

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**CANDELA DISTRIBUTION (continued):**

|       | 185°  | 195°  | 205°  | 215°  | 225°  | 235°  | 245°  | 255°  | 265°   | 270°   | 275°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 0°    | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0 | 265.0  | 265.0  | 265.0  |
| 2.5°  | 232.9 | 240.4 | 242.5 | 250.2 | 257.1 | 264.0 | 272.3 | 277.3 | 284.8  | 290.1  | 293.0  |
| 5°    | 210.0 | 216.2 | 223.7 | 235.2 | 247.1 | 260.2 | 276.1 | 289.8 | 307.2  | 319.9  | 324.0  |
| 7.5°  | 193.3 | 201.4 | 210.2 | 224.6 | 240.8 | 258.4 | 280.7 | 303.2 | 329.7  | 347.0  | 358.0  |
| 10°   | 190.2 | 198.5 | 210.2 | 224.4 | 241.5 | 261.5 | 288.8 | 318.0 | 351.2  | 372.2  | 384.7  |
| 12.5° | 205.2 | 214.2 | 219.2 | 225.6 | 238.6 | 260.9 | 295.9 | 333.0 | 372.0  | 394.9  | 408.3  |
| 15°   | 227.3 | 235.2 | 227.1 | 218.9 | 227.3 | 254.2 | 299.9 | 345.5 | 390.4  | 416.8  | 430.6  |
| 17.5° | 242.5 | 243.1 | 225.4 | 208.1 | 210.4 | 242.1 | 301.3 | 358.0 | 410.0  | 437.7  | 452.1  |
| 20°   | 241.1 | 236.0 | 218.1 | 198.9 | 191.8 | 226.5 | 299.6 | 369.1 | 429.8  | 458.8  | 472.9  |
| 22.5° | 229.8 | 224.0 | 208.7 | 190.0 | 176.2 | 207.9 | 296.7 | 379.1 | 447.9  | 480.9  | 494.2  |
| 25°   | 216.2 | 210.0 | 197.5 | 181.0 | 166.2 | 190.0 | 294.4 | 392.9 | 470.8  | 509.6  | 520.1  |
| 27.5° | 200.4 | 195.0 | 184.3 | 172.4 | 162.0 | 176.4 | 293.8 | 411.0 | 498.6  | 544.7  | 552.0  |
| 30°   | 185.0 | 180.0 | 171.6 | 164.7 | 160.4 | 168.5 | 291.7 | 430.4 | 531.7  | 584.9  | 592.8  |
| 32.5° | 170.2 | 165.2 | 159.9 | 158.9 | 159.1 | 165.6 | 284.6 | 449.6 | 571.1  | 643.3  | 649.1  |
| 35°   | 157.4 | 151.6 | 149.5 | 152.0 | 156.6 | 160.6 | 264.6 | 465.4 | 613.5  | 706.9  | 711.7  |
| 37.5° | 145.3 | 139.5 | 139.3 | 145.3 | 150.3 | 152.8 | 241.1 | 481.1 | 670.6  | 771.5  | 777.6  |
| 40°   | 134.3 | 128.5 | 130.5 | 137.8 | 141.8 | 143.0 | 212.5 | 504.8 | 731.1  | 839.7  | 836.4  |
| 42.5° | 124.9 | 118.9 | 120.1 | 129.5 | 133.0 | 136.4 | 186.2 | 524.6 | 789.3  | 904.4  | 903.3  |
| 45°   | 115.7 | 111.1 | 110.3 | 120.5 | 123.7 | 137.0 | 167.0 | 539.9 | 864.1  | 986.7  | 988.4  |
| 47.5° | 106.8 | 103.2 | 103.4 | 107.8 | 115.5 | 140.1 | 150.8 | 549.9 | 972.8  | 1117.3 | 1088.3 |
| 50°   | 98.6  | 95.9  | 98.2  | 93.2  | 110.3 | 136.2 | 136.8 | 547.8 | 1094.1 | 1242.4 | 1184.2 |
| 52.5° | 89.7  | 89.0  | 90.1  | 78.0  | 102.0 | 120.1 | 123.7 | 520.1 | 1151.0 | 1327.9 | 1294.7 |
| 55°   | 80.5  | 80.3  | 71.9  | 62.3  | 85.3  | 95.9  | 105.9 | 433.9 | 1149.2 | 1373.3 | 1413.6 |
| 57.5° | 69.6  | 68.0  | 54.6  | 50.9  | 66.3  | 66.7  | 96.5  | 284.2 | 1018.4 | 1264.5 | 1347.9 |
| 60°   | 52.8  | 51.5  | 40.0  | 41.3  | 46.3  | 42.7  | 76.9  | 141.6 | 761.1  | 985.1  | 1079.1 |
| 62.5° | 36.5  | 34.8  | 29.8  | 31.9  | 29.8  | 24.4  | 47.1  | 70.1  | 461.0  | 622.0  | 707.3  |
| 65°   | 26.7  | 24.8  | 20.4  | 17.5  | 14.0  | 14.0  | 17.9  | 26.9  | 178.5  | 264.4  | 318.8  |
| 67.5° | 16.5  | 15.6  | 12.1  | 8.8   | 8.5   | 9.2   | 9.4   | 13.3  | 28.8   | 45.9   | 56.1   |
| 70°   | 10.6  | 9.8   | 8.1   | 5.6   | 5.2   | 5.4   | 5.6   | 6.3   | 7.3    | 7.9    | 9.6    |
| 72.5° | 7.3   | 6.9   | 5.8   | 3.1   | 2.5   | 2.7   | 2.9   | 2.9   | 3.5    | 3.3    | 4.0    |
| 75°   | 5.2   | 4.8   | 4.2   | 1.5   | 0.8   | 1.0   | 1.3   | 1.0   | 1.3    | 0.8    | 1.0    |
| 77.5° | 1.5   | 1.5   | 1.0   | 0.2   | 0.0   | 0.2   | 0.4   | 0.4   | 0.2    | 0.0    | 0.0    |
| 80°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.2   | 0.2   | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0    | 0.0    |
| 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    |

REPORT NUMBER: P628911

CATALOG NUMBER: GWS-SA1A-750-U-SLL-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 265.0  | 265.0  | 265.0  | 265.0  | 265.0  | 265.0  | 265.0  | 265.0  | 265.0  | 265.0  |
| 2.5°  | 300.5  | 305.3  | 307.2  | 304.4  | 306.7  | 303.0  | 301.5  | 295.9  | 295.5  | 294.4  |
| 5°    | 340.9  | 351.8  | 358.2  | 362.2  | 357.6  | 352.6  | 345.1  | 332.2  | 328.2  | 325.7  |
| 7.5°  | 380.8  | 397.7  | 408.7  | 413.9  | 412.7  | 402.4  | 388.9  | 367.2  | 359.5  | 355.7  |
| 10°   | 415.4  | 436.0  | 449.4  | 455.8  | 453.1  | 444.2  | 424.8  | 397.7  | 387.4  | 385.1  |
| 12.5° | 439.6  | 458.5  | 467.7  | 473.3  | 473.6  | 470.0  | 451.7  | 424.3  | 412.3  | 409.3  |
| 15°   | 454.8  | 462.9  | 463.1  | 466.5  | 472.3  | 480.2  | 471.7  | 447.5  | 434.6  | 430.2  |
| 17.5° | 464.4  | 455.4  | 446.2  | 447.1  | 456.7  | 477.7  | 486.5  | 467.9  | 454.2  | 449.4  |
| 20°   | 471.3  | 442.9  | 425.8  | 426.0  | 435.8  | 467.7  | 496.7  | 487.7  | 473.6  | 469.2  |
| 22.5° | 475.6  | 431.9  | 407.5  | 406.8  | 417.3  | 455.8  | 506.1  | 511.3  | 497.3  | 492.3  |
| 25°   | 484.6  | 426.6  | 396.4  | 399.9  | 409.1  | 452.1  | 518.8  | 542.6  | 529.6  | 523.0  |
| 27.5° | 500.7  | 431.9  | 395.4  | 403.5  | 413.9  | 463.1  | 540.9  | 584.3  | 570.9  | 563.4  |
| 30°   | 528.4  | 451.5  | 411.4  | 422.7  | 435.2  | 492.1  | 578.0  | 642.5  | 623.3  | 616.2  |
| 32.5° | 573.0  | 492.1  | 461.0  | 485.2  | 497.3  | 539.7  | 633.7  | 707.7  | 692.1  | 677.9  |
| 35°   | 634.5  | 584.9  | 581.4  | 637.7  | 634.7  | 629.7  | 702.1  | 787.8  | 764.2  | 750.5  |
| 37.5° | 719.2  | 734.2  | 760.5  | 816.4  | 814.5  | 776.3  | 792.0  | 863.5  | 851.4  | 833.7  |
| 40°   | 824.9  | 856.8  | 901.4  | 981.5  | 956.5  | 908.5  | 902.3  | 941.1  | 931.3  | 910.4  |
| 42.5° | 887.3  | 942.3  | 1027.4 | 1099.3 | 1079.3 | 995.5  | 988.4  | 1044.7 | 1023.2 | 1000.5 |
| 45°   | 916.3  | 1012.0 | 1178.8 | 1276.2 | 1215.5 | 1053.3 | 1050.5 | 1179.8 | 1167.7 | 1137.3 |
| 47.5° | 929.6  | 1082.2 | 1356.0 | 1503.5 | 1390.0 | 1103.9 | 1094.1 | 1375.8 | 1360.0 | 1324.1 |
| 50°   | 944.4  | 1179.2 | 1569.6 | 1766.8 | 1600.8 | 1161.3 | 1168.4 | 1558.5 | 1551.8 | 1509.5 |
| 52.5° | 976.9  | 1281.8 | 1832.5 | 2067.9 | 1856.5 | 1251.1 | 1295.8 | 1730.7 | 1685.7 | 1636.9 |
| 55°   | 1025.7 | 1393.6 | 2106.1 | 2375.5 | 2117.3 | 1371.9 | 1433.6 | 1822.3 | 1695.9 | 1641.9 |
| 57.5° | 971.7  | 1421.5 | 2268.1 | 2590.3 | 2233.1 | 1372.3 | 1317.0 | 1663.6 | 1491.6 | 1439.2 |
| 60°   | 771.1  | 1322.5 | 2205.8 | 2543.8 | 2134.4 | 1218.6 | 1008.4 | 1298.9 | 1130.0 | 1095.0 |
| 62.5° | 521.3  | 1109.1 | 1941.8 | 2151.3 | 1826.9 | 958.6  | 655.4  | 844.7  | 699.6  | 670.6  |
| 65°   | 285.7  | 827.4  | 1568.9 | 1627.5 | 1429.8 | 669.6  | 337.2  | 366.6  | 279.2  | 266.3  |
| 67.5° | 78.8   | 575.9  | 1154.4 | 1079.7 | 1003.2 | 436.0  | 87.2   | 65.5   | 46.7   | 46.3   |
| 70°   | 19.8   | 381.0  | 691.7  | 712.9  | 615.1  | 279.2  | 16.7   | 7.9    | 6.3    | 6.0    |
| 72.5° | 8.3    | 163.9  | 328.2  | 377.2  | 314.9  | 129.3  | 6.0    | 2.3    | 1.9    | 1.5    |
| 75°   | 1.0    | 13.1   | 27.9   | 42.3   | 29.0   | 14.0   | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 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    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-4-R4

Test Date: 10/02/2019

Luminaire Tested: SA1C-750-U-5WQ

Data in this report applies to families of products SA1C-760-U-5WQ .

### Test Information

Test Method: LM-79-2008  
 Report Number: SP1-1908-441-4-R4  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 10/28/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: MCGRAW-EDISON  
 Catalog Number: **SA1C-750-U-5WQ**  
 Description: MCGRAW EDISON ROADWAY AND AREA LUMINAIRE

\*\*\*THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.\*\*\*TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

### Spectral Parameters

|                           |        |           |      |      |       |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K):                  | 4884   | CRI (Ra): | 73.5 |      |       |
| CIE u':                   | 0.2101 | R1:       | 70.5 | R9:  | -28.4 |
| CIE v':                   | 0.4904 | R2:       | 77.7 | R10: | 48.6  |
| Duv:                      | 0.0037 | R3:       | 84.6 | R11: | 73.2  |
| CIE x:                    | 0.3493 | R4:       | 74.7 | R12: | 50.7  |
| CIE y:                    | 0.3624 | R5:       | 71.9 | R13: | 71.2  |
| CIE z:                    | 0.2884 | R6:       | 70.7 | R14: | 91.4  |
| Peak Wavelength (nm):     | 444    | R7:       | 81.2 |      |       |
| Dominant Wavelength (nm): | 571    | R8:       | 56.9 |      |       |
| Purity:                   | 13.7   |           |      |      |       |
| Rf:                       | 74.9   |           |      |      |       |
| Rg:                       | 96.3   |           |      |      |       |



REPORT NUMBER: SP1-1908-441-4-R4

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 6/28/2019        | 12/28/2019           |
| Power Meter                    | IN0071                | 12/5/2018        | 12/5/2019            |
| AC Power Source                | IN0063                | 12/5/2018        | 12/5/2019            |
| DC Power Source                | IN0208                | 12/5/2018        | 12/5/2019            |
| Sphere Thermometer             | IN0085                | 12/5/2018        | 12/5/2019            |
| Room Thermometer               | IN0046                | 12/5/2018        | 12/5/2019            |

REPORT NUMBER: SP1-1908-441-4-R4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-4-R4

**Photopic Flux vs. Wavelength**



#####

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 2945             | NR               | 490       | 37941            | NR               | 620       | 88803            | NR               | 750       | 3908             | NR               | 880       | 2997             | NR               |
| 365       | 2596             | NR               | 495       | 48525            | NR               | 625       | 80578            | NR               | 755       | 3988             | NR               | 885       | 2927             | NR               |
| 370       | 2732             | NR               | 500       | 60609            | NR               | 630       | 73127            | NR               | 760       | 3335             | NR               | 890       | 2649             | NR               |
| 375       | 2894             | NR               | 505       | 72036            | NR               | 635       | 66244            | NR               | 765       | 3438             | NR               | 895       | 2828             | NR               |
| 380       | 2822             | NR               | 510       | 82168            | NR               | 640       | 59440            | NR               | 770       | 3427             | NR               | 900       | 1407             | NR               |
| 385       | 2394             | NR               | 515       | 90898            | NR               | 645       | 52864            | NR               | 775       | 2759             | NR               | 905       | 2224             | NR               |
| 390       | 2370             | NR               | 520       | 97142            | NR               | 650       | 47085            | NR               | 780       | 2340             | NR               | 910       | 2905             | NR               |
| 395       | 2267             | NR               | 525       | 103255           | NR               | 655       | 41789            | NR               | 785       | 2412             | NR               | 915       | 3350             | NR               |
| 400       | 2262             | NR               | 530       | 106697           | NR               | 660       | 37064            | NR               | 790       | 1999             | NR               | 920       | 3114             | NR               |
| 405       | 3000             | NR               | 535       | 110081           | NR               | 665       | 32299            | NR               | 795       | 2054             | NR               | 925       | 2834             | NR               |
| 410       | 5324             | NR               | 540       | 112494           | NR               | 670       | 28142            | NR               | 800       | 2331             | NR               | 930       | 2271             | NR               |
| 415       | 10725            | NR               | 545       | 115513           | NR               | 675       | 24505            | NR               | 805       | 2648             | NR               | 935       | 2228             | NR               |
| 420       | 22128            | NR               | 550       | 117203           | NR               | 680       | 21162            | NR               | 810       | 2485             | NR               | 940       | 2833             | NR               |
| 425       | 44095            | NR               | 555       | 119753           | NR               | 685       | 18400            | NR               | 815       | 2409             | NR               | 945       | 2941             | NR               |
| 430       | 77002            | NR               | 560       | 122602           | NR               | 690       | 16065            | NR               | 820       | 2221             | NR               | 950       | 2323             | NR               |
| 435       | 119881           | NR               | 565       | 124314           | NR               | 695       | 13860            | NR               | 825       | 1562             | NR               | 955       | 1667             | NR               |
| 440       | 164454           | NR               | 570       | 126775           | NR               | 700       | 12177            | NR               | 830       | 2249             | NR               | 960       | 749              | NR               |
| 445       | 179997           | NR               | 575       | 127511           | NR               | 705       | 10757            | NR               | 835       | 2573             | NR               | 965       | 2669             | NR               |
| 450       | 142822           | NR               | 580       | 127577           | NR               | 710       | 9601             | NR               | 840       | 2764             | NR               | 970       | 3968             | NR               |
| 455       | 90008            | NR               | 585       | 126153           | NR               | 715       | 8944             | NR               | 845       | 3109             | NR               | 975       | 3886             | NR               |
| 460       | 60557            | NR               | 590       | 123678           | NR               | 720       | 7947             | NR               | 850       | 2963             | NR               | 980       | 2788             | NR               |
| 465       | 43305            | NR               | 595       | 119774           | NR               | 725       | 7062             | NR               | 855       | 2336             | NR               | 985       | 3496             | NR               |
| 470       | 31089            | NR               | 600       | 115733           | NR               | 730       | 6004             | NR               | 860       | 2118             | NR               | 990       | 2913             | NR               |
| 475       | 26278            | NR               | 605       | 109231           | NR               | 735       | 5594             | NR               | 865       | 3144             | NR               | 995       | 4659             | NR               |
| 480       | 27060            | NR               | 610       | 102408           | NR               | 740       | 5165             | NR               | 870       | 3069             | NR               | 1000      | 1308             | NR               |
| 485       | 30698            | NR               | 615       | 96015            | NR               | 745       | 4687             | NR               | 875       | 3311             | NR               |           |                  |                  |

REPORT NUMBER: SP1-1908-441-4-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 13493.5

S/P: 1.77

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 2945             | NR               | 490       | 37941            | NR               | 620       | 88803            | NR               | 750       | 3908             | NR               | 880       | 2997             | NR               |
| 365       | 2596             | NR               | 495       | 48525            | NR               | 625       | 80578            | NR               | 755       | 3988             | NR               | 885       | 2927             | NR               |
| 370       | 2732             | NR               | 500       | 60609            | NR               | 630       | 73127            | NR               | 760       | 3335             | NR               | 890       | 2649             | NR               |
| 375       | 2894             | NR               | 505       | 72036            | NR               | 635       | 66244            | NR               | 765       | 3438             | NR               | 895       | 2828             | NR               |
| 380       | 2822             | NR               | 510       | 82168            | NR               | 640       | 59440            | NR               | 770       | 3427             | NR               | 900       | 1407             | NR               |
| 385       | 2394             | NR               | 515       | 90898            | NR               | 645       | 52864            | NR               | 775       | 2759             | NR               | 905       | 2224             | NR               |
| 390       | 2370             | NR               | 520       | 97142            | NR               | 650       | 47085            | NR               | 780       | 2340             | NR               | 910       | 2905             | NR               |
| 395       | 2267             | NR               | 525       | 103255           | NR               | 655       | 41789            | NR               | 785       | 2412             | NR               | 915       | 3350             | NR               |
| 400       | 2262             | NR               | 530       | 106697           | NR               | 660       | 37064            | NR               | 790       | 1999             | NR               | 920       | 3114             | NR               |
| 405       | 3000             | NR               | 535       | 110081           | NR               | 665       | 32299            | NR               | 795       | 2054             | NR               | 925       | 2834             | NR               |
| 410       | 5324             | NR               | 540       | 112494           | NR               | 670       | 28142            | NR               | 800       | 2331             | NR               | 930       | 2271             | NR               |
| 415       | 10725            | NR               | 545       | 115513           | NR               | 675       | 24505            | NR               | 805       | 2648             | NR               | 935       | 2228             | NR               |
| 420       | 22128            | NR               | 550       | 117203           | NR               | 680       | 21162            | NR               | 810       | 2485             | NR               | 940       | 2833             | NR               |
| 425       | 44095            | NR               | 555       | 119753           | NR               | 685       | 18400            | NR               | 815       | 2409             | NR               | 945       | 2941             | NR               |
| 430       | 77002            | NR               | 560       | 122602           | NR               | 690       | 16065            | NR               | 820       | 2221             | NR               | 950       | 2323             | NR               |
| 435       | 119881           | NR               | 565       | 124314           | NR               | 695       | 13860            | NR               | 825       | 1562             | NR               | 955       | 1667             | NR               |
| 440       | 164454           | NR               | 570       | 126775           | NR               | 700       | 12177            | NR               | 830       | 2249             | NR               | 960       | 749              | NR               |
| 445       | 179997           | NR               | 575       | 127511           | NR               | 705       | 10757            | NR               | 835       | 2573             | NR               | 965       | 2669             | NR               |
| 450       | 142822           | NR               | 580       | 127577           | NR               | 710       | 9601             | NR               | 840       | 2764             | NR               | 970       | 3968             | NR               |
| 455       | 90008            | NR               | 585       | 126153           | NR               | 715       | 8944             | NR               | 845       | 3109             | NR               | 975       | 3886             | NR               |
| 460       | 60557            | NR               | 590       | 123678           | NR               | 720       | 7947             | NR               | 850       | 2963             | NR               | 980       | 2788             | NR               |
| 465       | 43305            | NR               | 595       | 119774           | NR               | 725       | 7062             | NR               | 855       | 2336             | NR               | 985       | 3496             | NR               |
| 470       | 31089            | NR               | 600       | 115733           | NR               | 730       | 6004             | NR               | 860       | 2118             | NR               | 990       | 2913             | NR               |
| 475       | 26278            | NR               | 605       | 109231           | NR               | 735       | 5594             | NR               | 865       | 3144             | NR               | 995       | 4659             | NR               |
| 480       | 27060            | NR               | 610       | 102408           | NR               | 740       | 5165             | NR               | 870       | 3069             | NR               | 1000      | 1308             | NR               |
| 485       | 30698            | NR               | 615       | 96015            | NR               | 745       | 4687             | NR               | 875       | 3311             | NR               |           |                  |                  |

REPORT NUMBER: SP1-1908-441-4-R4

**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: 5378.9**

**M/P: 0.71**

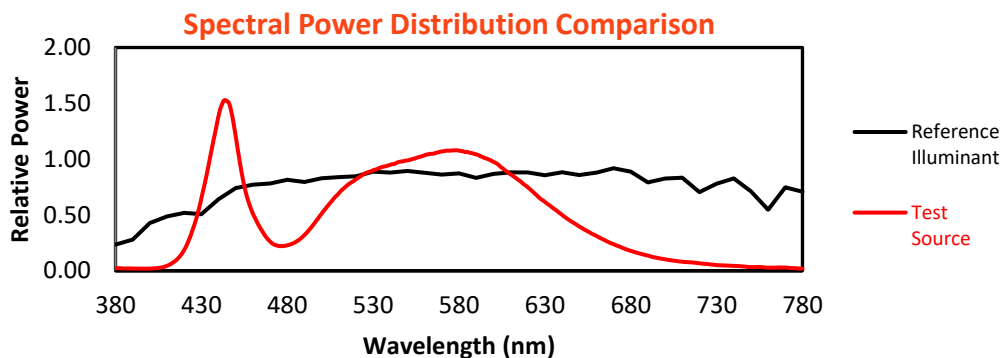
| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 2945             | NR               | 490       | 37941            | NR               | 620       | 88803            | NR               | 750       | 3908             | NR               | 880       | 2997             | NR               |
| 365       | 2596             | NR               | 495       | 48525            | NR               | 625       | 80578            | NR               | 755       | 3988             | NR               | 885       | 2927             | NR               |
| 370       | 2732             | NR               | 500       | 60609            | NR               | 630       | 73127            | NR               | 760       | 3335             | NR               | 890       | 2649             | NR               |
| 375       | 2894             | NR               | 505       | 72036            | NR               | 635       | 66244            | NR               | 765       | 3438             | NR               | 895       | 2828             | NR               |
| 380       | 2822             | NR               | 510       | 82168            | NR               | 640       | 59440            | NR               | 770       | 3427             | NR               | 900       | 1407             | NR               |
| 385       | 2394             | NR               | 515       | 90898            | NR               | 645       | 52864            | NR               | 775       | 2759             | NR               | 905       | 2224             | NR               |
| 390       | 2370             | NR               | 520       | 97142            | NR               | 650       | 47085            | NR               | 780       | 2340             | NR               | 910       | 2905             | NR               |
| 395       | 2267             | NR               | 525       | 103255           | NR               | 655       | 41789            | NR               | 785       | 2412             | NR               | 915       | 3350             | NR               |
| 400       | 2262             | NR               | 530       | 106697           | NR               | 660       | 37064            | NR               | 790       | 1999             | NR               | 920       | 3114             | NR               |
| 405       | 3000             | NR               | 535       | 110081           | NR               | 665       | 32299            | NR               | 795       | 2054             | NR               | 925       | 2834             | NR               |
| 410       | 5324             | NR               | 540       | 112494           | NR               | 670       | 28142            | NR               | 800       | 2331             | NR               | 930       | 2271             | NR               |
| 415       | 10725            | NR               | 545       | 115513           | NR               | 675       | 24505            | NR               | 805       | 2648             | NR               | 935       | 2228             | NR               |
| 420       | 22128            | NR               | 550       | 117203           | NR               | 680       | 21162            | NR               | 810       | 2485             | NR               | 940       | 2833             | NR               |
| 425       | 44095            | NR               | 555       | 119753           | NR               | 685       | 18400            | NR               | 815       | 2409             | NR               | 945       | 2941             | NR               |
| 430       | 77002            | NR               | 560       | 122602           | NR               | 690       | 16065            | NR               | 820       | 2221             | NR               | 950       | 2323             | NR               |
| 435       | 119881           | NR               | 565       | 124314           | NR               | 695       | 13860            | NR               | 825       | 1562             | NR               | 955       | 1667             | NR               |
| 440       | 164454           | NR               | 570       | 126775           | NR               | 700       | 12177            | NR               | 830       | 2249             | NR               | 960       | 749              | NR               |
| 445       | 179997           | NR               | 575       | 127511           | NR               | 705       | 10757            | NR               | 835       | 2573             | NR               | 965       | 2669             | NR               |
| 450       | 142822           | NR               | 580       | 127577           | NR               | 710       | 9601             | NR               | 840       | 2764             | NR               | 970       | 3968             | NR               |
| 455       | 90008            | NR               | 585       | 126153           | NR               | 715       | 8944             | NR               | 845       | 3109             | NR               | 975       | 3886             | NR               |
| 460       | 60557            | NR               | 590       | 123678           | NR               | 720       | 7947             | NR               | 850       | 2963             | NR               | 980       | 2788             | NR               |
| 465       | 43305            | NR               | 595       | 119774           | NR               | 725       | 7062             | NR               | 855       | 2336             | NR               | 985       | 3496             | NR               |
| 470       | 31089            | NR               | 600       | 115733           | NR               | 730       | 6004             | NR               | 860       | 2118             | NR               | 990       | 2913             | NR               |
| 475       | 26278            | NR               | 605       | 109231           | NR               | 735       | 5594             | NR               | 865       | 3144             | NR               | 995       | 4659             | NR               |
| 480       | 27060            | NR               | 610       | 102408           | NR               | 740       | 5165             | NR               | 870       | 3069             | NR               | 1000      | 1308             | NR               |
| 485       | 30698            | NR               | 615       | 96015            | NR               | 745       | 4687             | NR               | 875       | 3311             | NR               |           |                  |                  |

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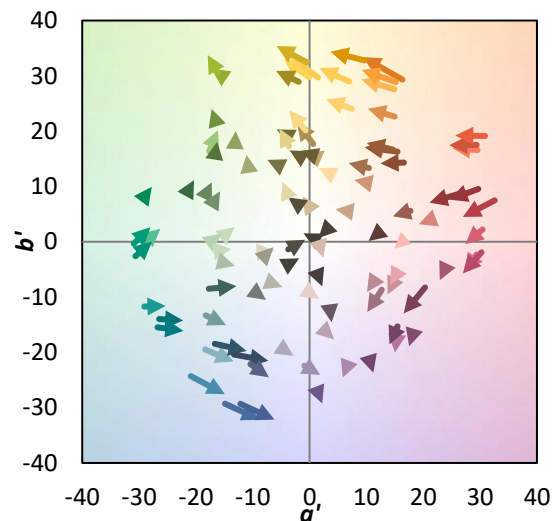
**TM-30-18**

### Summary

$R_f = 74.9$   
 $R_g = 96.3$   
 CIE  $R_a = 73.5$   
 $R_g = -28.4$



### Color Vector Graphics



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

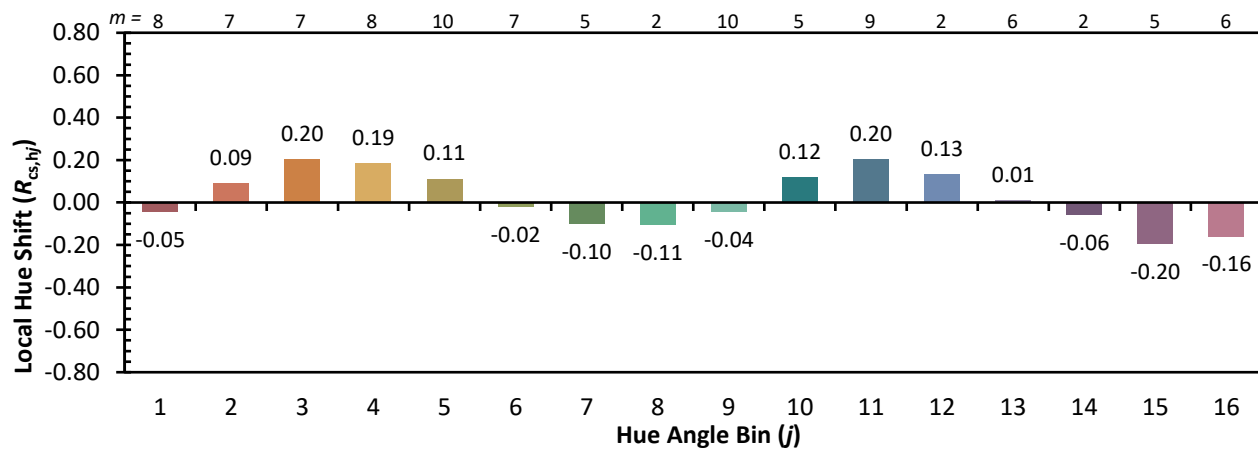
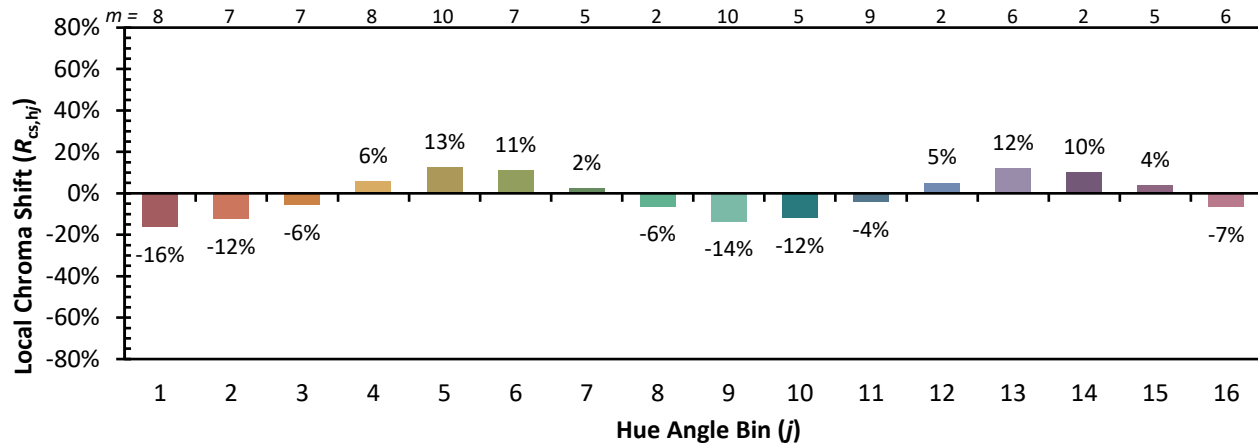
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| CES02 = 60 | CES27 = 84 | CES52 = 91 | CES77 = 71 |
| CES03 = 30 | CES28 = 81 | CES53 = 79 | CES78 = 54 |
| CES04 = 69 | CES29 = 58 | CES54 = 83 | CES79 = 80 |
| CES05 = 46 | CES30 = 67 | CES55 = 83 | CES80 = 77 |
| CES06 = 50 | CES31 = 63 | CES56 = 73 | CES81 = 77 |
| CES07 = 39 | CES32 = 59 | CES57 = 72 | CES82 = 90 |
| CES08 = 38 | CES33 = 69 | CES58 = 73 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 88 | CES84 = 88 |
| CES10 = 73 | CES35 = 83 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 95 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 78 | CES62 = 85 | CES87 = 78 |
| CES13 = 41 | CES38 = 76 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 93 | CES64 = 74 | CES89 = 75 |
| CES15 = 70 | CES40 = 86 | CES65 = 67 | CES90 = 77 |
| CES16 = 46 | CES41 = 87 | CES66 = 69 | CES91 = 89 |
| CES17 = 49 | CES42 = 78 | CES67 = 67 | CES92 = 66 |
| CES18 = 55 | CES43 = 75 | CES68 = 73 | CES93 = 80 |
| CES19 = 71 | CES44 = 99 | CES69 = 81 | CES94 = 57 |
| CES20 = 64 | CES45 = 83 | CES70 = 63 | CES95 = 71 |
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| CES22 = 77 | CES47 = 80 | CES72 = 86 | CES97 = 85 |
| CES23 = 91 | CES48 = 72 | CES73 = 53 | CES98 = 75 |
| CES24 = 90 | CES49 = 81 | CES74 = 96 | CES99 = 62 |
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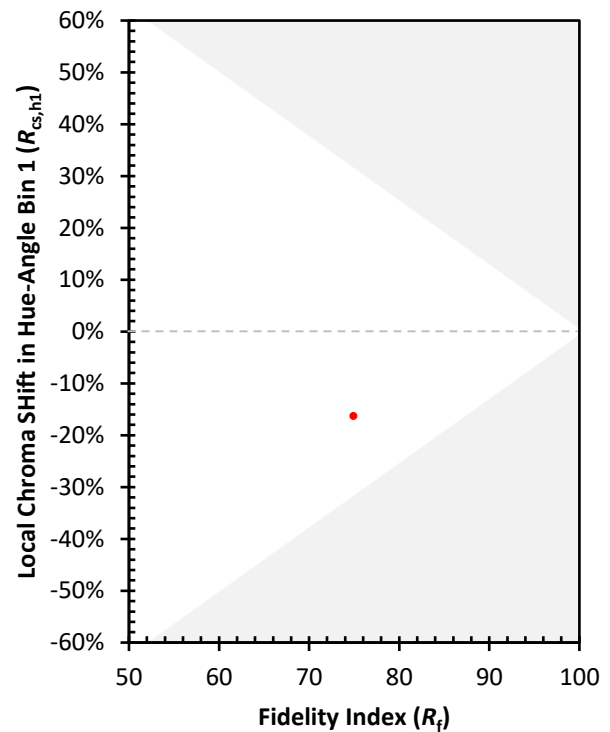
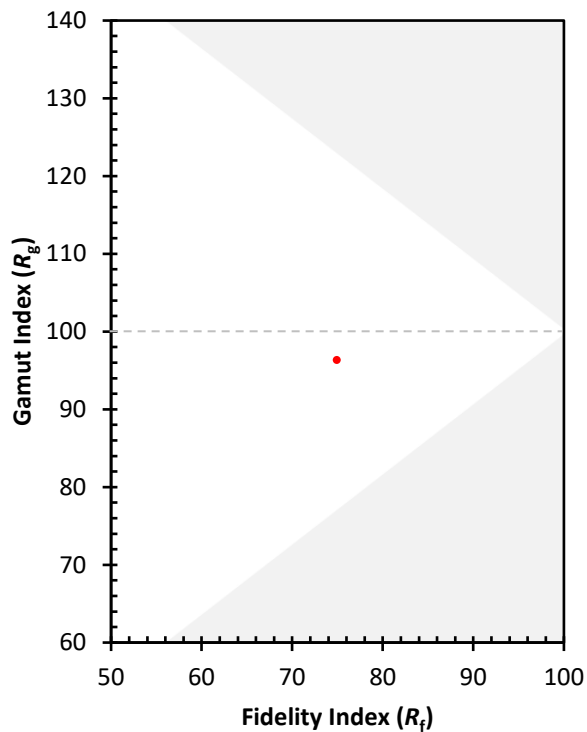
Color Rendition by Hue-Angle Bin



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**Measure Comparisons**



(END OF REPORT)