

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: McGRAW-EDISON

Report Number: P386336

Luminaire Tested: **GWC-SA2A-727-U-SLR-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P386336  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GWC-SA2A-727-U-SLR-HSS  
Description: GALLEON WALL LUMINAIRE  
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6029 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B1 - U0 - G2

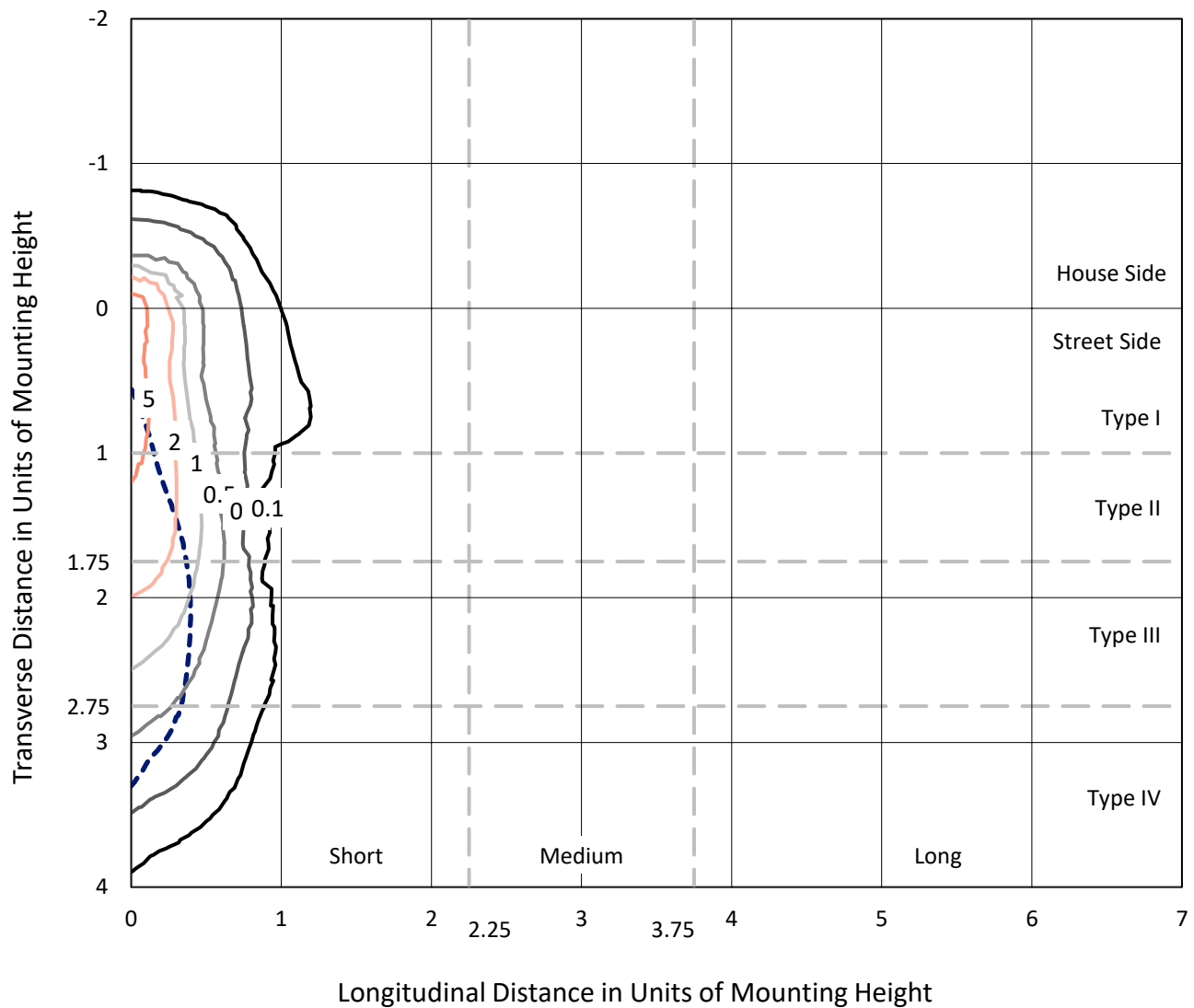
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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## Iso-Footcandle Lines of Horizontal Illumination

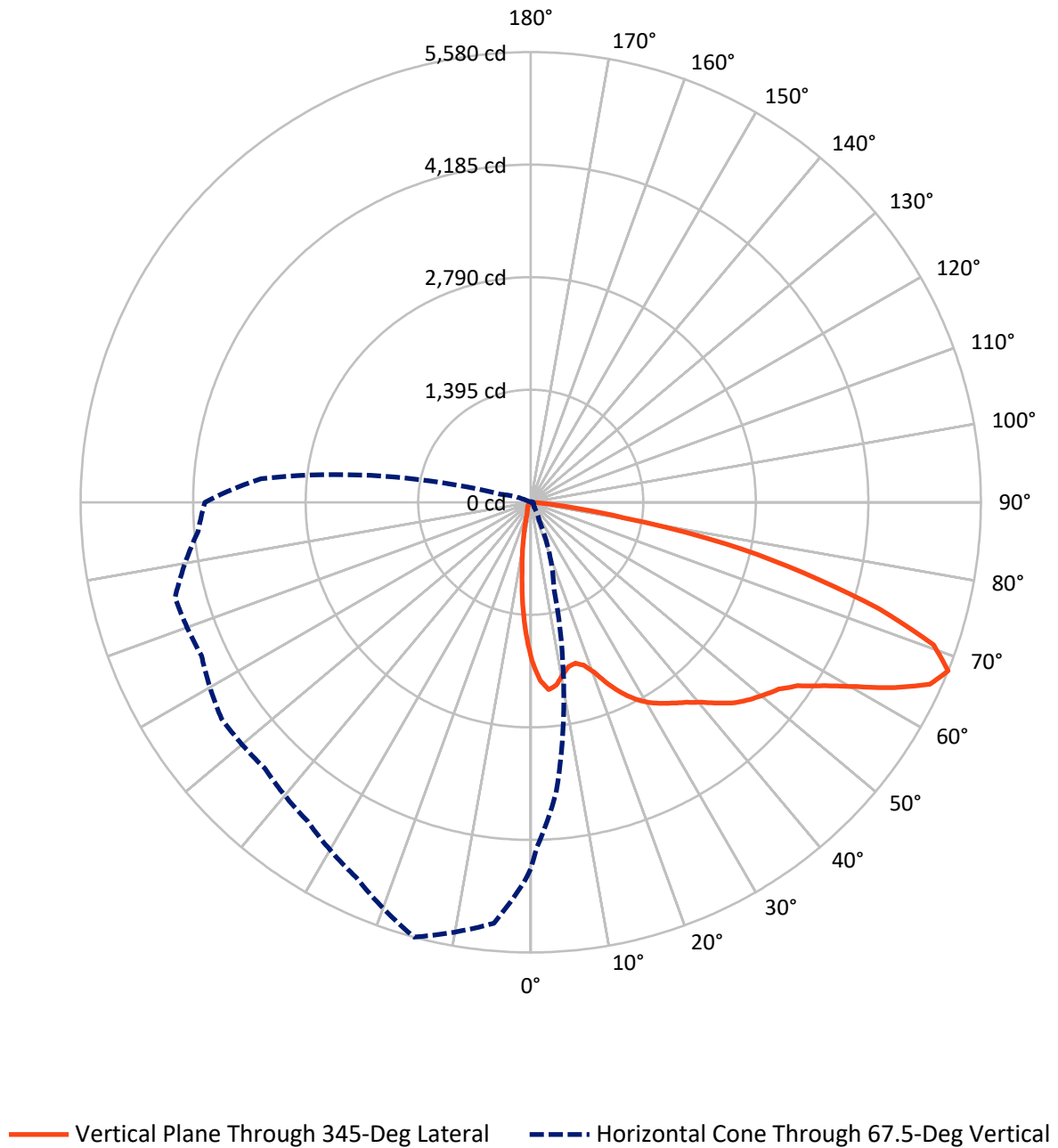
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 8.7 fc  
 Type IV - Medium - N/A

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## Luminous Intensity Polar Plot



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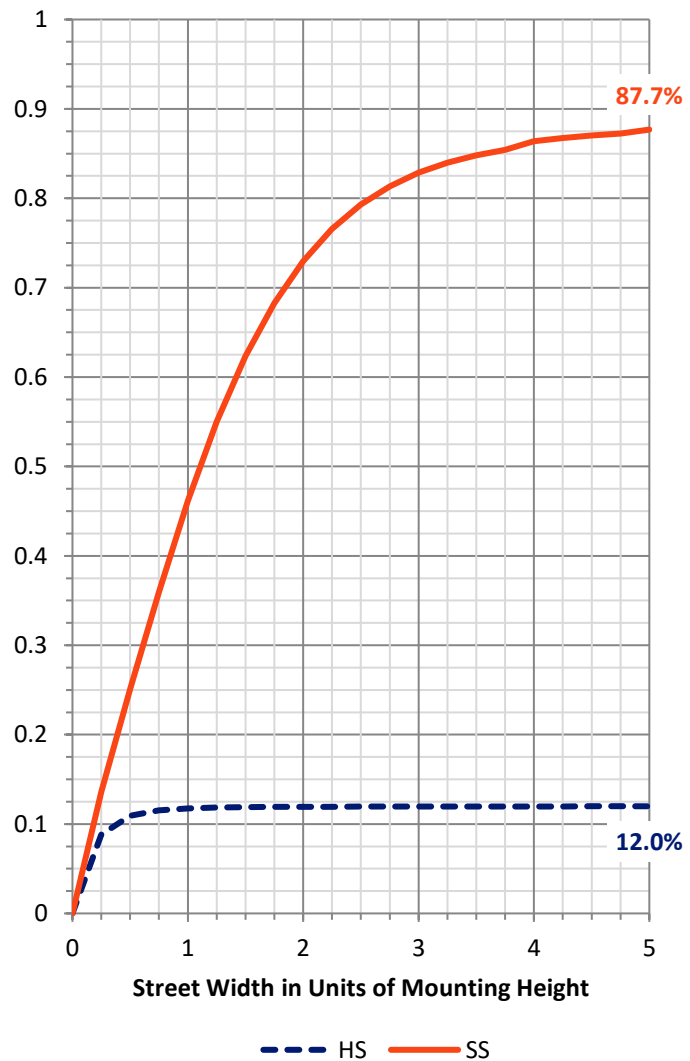
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 729.7    | 0.0    | 729.7  |
|                    | % Fixture | 12.1     | 0.0    | 12.1   |
| <b>Street Side</b> | Lumens    | 5299.3   | 0.0    | 5299.3 |
|                    | % Fixture | 87.9     | 0.0    | 87.9   |
| <b>Total</b>       | Lumens    | 6029.0   | 0.0    | 6029.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 150.7  | 2.5       |
| 10°-20°   | 300.0  | 5.0       |
| 20°-30°   | 426.0  | 7.1       |
| 30°-40°   | 629.3  | 10.4      |
| 40°-50°   | 907.6  | 15.1      |
| 50°-60°   | 1274.0 | 21.1      |
| 60°-70°   | 1485.1 | 24.6      |
| 70°-80°   | 759.2  | 12.6      |
| 80°-90°   | 97.0   | 1.6       |
| 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°    | 6029.0 | 100.0     |
| 0°-180°   | 6029.0 | 100.0     |

**Coefficient of Utilization**



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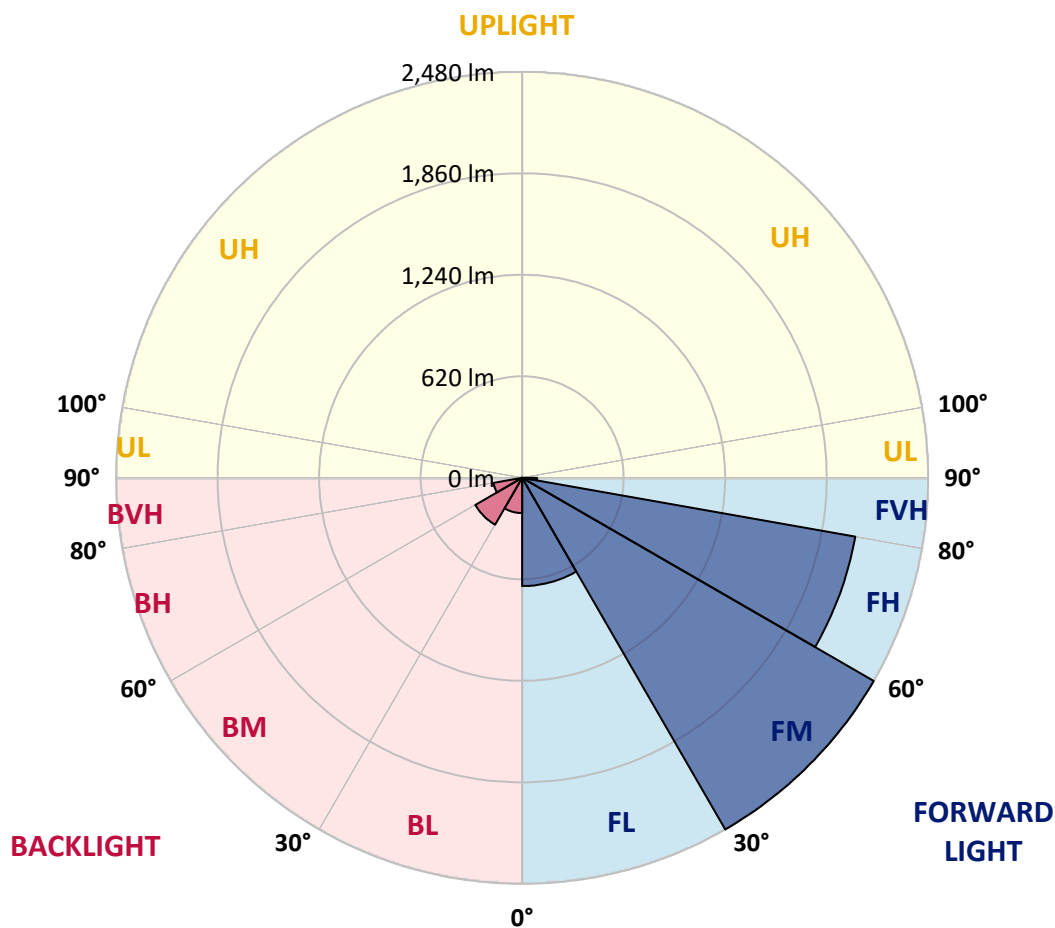
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 661.3  | 11.0      |                         |      |         |
| FM   | (30°-60°)   | 2480.4 | 41.1      |                         |      |         |
| FH   | (60°-80°)   | 2066.5 | 34.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 91.1   | 1.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 215.5  | 3.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 330.4  | 5.5       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 177.8  | 2.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 5.9    | 0.1       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type IV Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 |
| 2.5°  | 2150.4 | 2133.9 | 2115.6 | 2055.9 | 2000.5 | 1937.1 | 1885.4 | 1849.4 | 1804.3 | 1745.7 | 1730.9 |
| 5°    | 2135.0 | 2117.3 | 2059.9 | 1927.1 | 1810.8 | 1697.7 | 1588.6 | 1524.6 | 1445.2 | 1364.7 | 1344.7 |
| 7.5°  | 1979.9 | 1961.4 | 1878.5 | 1696.6 | 1540.1 | 1376.7 | 1235.0 | 1147.3 | 1057.7 | 984.0  | 944.8  |
| 10°   | 1818.6 | 1798.3 | 1705.2 | 1484.4 | 1291.6 | 1143.9 | 1039.9 | 956.3  | 871.4  | 792.6  | 729.8  |
| 12.5° | 1707.4 | 1680.9 | 1579.8 | 1329.6 | 1161.6 | 1061.4 | 964.3  | 864.0  | 749.2  | 664.6  | 595.5  |
| 15°   | 1660.9 | 1630.6 | 1523.8 | 1269.9 | 1115.6 | 998.0  | 871.4  | 748.3  | 613.8  | 517.0  | 453.6  |
| 17.5° | 1696.9 | 1657.5 | 1542.9 | 1265.9 | 1057.9 | 897.7  | 737.8  | 593.2  | 447.3  | 349.3  | 304.2  |
| 20°   | 1819.1 | 1767.4 | 1622.0 | 1264.7 | 988.0  | 778.6  | 575.8  | 412.4  | 294.8  | 237.1  | 213.4  |
| 22.5° | 2011.6 | 1943.4 | 1735.7 | 1273.9 | 915.7  | 653.5  | 415.9  | 280.2  | 221.4  | 191.4  | 177.4  |
| 25°   | 2244.1 | 2165.0 | 1899.4 | 1306.1 | 852.3  | 531.8  | 302.2  | 221.4  | 186.8  | 164.8  | 153.1  |
| 27.5° | 2465.2 | 2400.9 | 2106.2 | 1352.7 | 803.2  | 433.6  | 245.3  | 187.7  | 159.7  | 145.1  | 135.7  |
| 30°   | 2686.0 | 2605.2 | 2318.4 | 1408.1 | 744.0  | 367.0  | 215.6  | 171.1  | 143.1  | 127.7  | 121.7  |
| 32.5° | 2846.5 | 2779.4 | 2484.6 | 1448.1 | 680.9  | 323.6  | 192.8  | 156.5  | 133.7  | 118.0  | 109.1  |
| 35°   | 3035.3 | 2959.3 | 2627.1 | 1457.0 | 640.4  | 296.2  | 173.4  | 140.8  | 116.0  | 102.0  | 92.5   |
| 37.5° | 3239.2 | 3144.7 | 2791.7 | 1437.5 | 608.7  | 282.8  | 158.8  | 133.7  | 108.3  | 94.0   | 84.0   |
| 40°   | 3464.9 | 3358.1 | 2949.6 | 1409.5 | 577.5  | 278.2  | 147.7  | 128.2  | 102.3  | 87.7   | 77.4   |
| 42.5° | 3702.5 | 3576.6 | 3086.4 | 1380.1 | 557.8  | 262.5  | 146.5  | 122.8  | 97.7   | 82.0   | 71.7   |
| 45°   | 3902.2 | 3774.5 | 3227.0 | 1370.4 | 543.8  | 245.3  | 151.4  | 119.1  | 94.5   | 77.4   | 67.4   |
| 47.5° | 4061.3 | 3940.4 | 3370.9 | 1392.1 | 535.8  | 229.6  | 138.0  | 124.0  | 92.8   | 73.4   | 63.7   |
| 50°   | 4251.2 | 4114.4 | 3573.7 | 1457.0 | 524.1  | 213.9  | 124.8  | 142.0  | 92.8   | 70.8   | 60.6   |
| 52.5° | 4489.4 | 4354.0 | 3799.9 | 1557.5 | 500.7  | 192.2  | 112.2  | 142.2  | 93.7   | 67.4   | 56.6   |
| 55°   | 4789.0 | 4690.8 | 4123.0 | 1667.7 | 463.3  | 160.2  | 97.1   | 122.2  | 90.3   | 61.1   | 52.8   |
| 57.5° | 5076.4 | 4996.1 | 4417.4 | 1743.1 | 413.3  | 125.1  | 84.5   | 98.5   | 82.5   | 53.7   | 47.1   |
| 59°   | 5154.9 | 5067.2 | 4525.4 | 1746.6 | 375.9  | 109.1  | 78.3   | 81.4   | 80.8   | 50.3   | 43.7   |
| 60°   | 5154.9 | 5061.8 | 4556.5 | 1728.3 | 348.7  | 100.3  | 74.3   | 72.5   | 84.3   | 48.0   | 41.7   |
| 62.5° | 5061.5 | 4930.7 | 4455.4 | 1604.6 | 284.5  | 85.4   | 64.8   | 60.0   | 75.7   | 43.1   | 36.8   |
| 65°   | 4867.3 | 4676.8 | 4111.0 | 1381.0 | 253.6  | 78.3   | 56.0   | 49.1   | 52.6   | 38.0   | 32.3   |
| 67.5° | 4543.4 | 4285.2 | 3614.3 | 1115.6 | 241.4  | 76.3   | 48.3   | 41.7   | 39.7   | 32.6   | 28.3   |
| 70°   | 3973.0 | 3686.5 | 3011.3 | 877.1  | 230.8  | 75.4   | 40.6   | 35.1   | 32.0   | 27.4   | 24.0   |
| 72.5° | 2891.6 | 2592.9 | 2137.9 | 685.8  | 224.5  | 77.1   | 32.6   | 29.4   | 26.3   | 21.4   | 18.6   |
| 75°   | 1654.0 | 1458.4 | 1201.6 | 453.0  | 191.4  | 73.7   | 25.1   | 24.6   | 18.9   | 15.4   | 12.9   |
| 77.5° | 854.6  | 828.6  | 720.1  | 173.9  | 91.7   | 32.3   | 16.6   | 14.3   | 11.1   | 9.4    | 7.7    |
| 80°   | 368.7  | 364.7  | 315.6  | 50.3   | 24.3   | 18.0   | 9.4    | 6.0    | 5.1    | 4.0    | 3.1    |
| 82.5° | 127.4  | 127.4  | 112.2  | 16.9   | 10.9   | 8.9    | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 25.7   | 28.8   | 20.3   | 0.0    | 3.7    | 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°    | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 |
| 2.5°  | 1712.9 | 1678.3 | 1676.0 | 1654.3 | 1627.2 | 1614.9 | 1607.8 | 1620.3 | 1635.8 | 1637.5 | 1660.6 |
| 5°    | 1329.6 | 1293.3 | 1308.4 | 1269.9 | 1277.6 | 1269.9 | 1257.3 | 1259.6 | 1266.4 | 1245.0 | 1271.6 |
| 7.5°  | 933.7  | 906.3  | 923.7  | 913.4  | 927.1  | 932.6  | 924.8  | 913.4  | 879.7  | 875.7  | 898.9  |
| 10°   | 703.8  | 672.6  | 654.1  | 634.7  | 638.9  | 647.8  | 644.9  | 636.7  | 615.2  | 616.4  | 638.7  |
| 12.5° | 565.5  | 530.7  | 493.8  | 446.1  | 434.4  | 441.0  | 434.4  | 429.6  | 409.0  | 410.7  | 430.4  |
| 15°   | 429.0  | 400.4  | 361.9  | 323.6  | 302.8  | 304.8  | 286.5  | 273.6  | 260.8  | 245.3  | 257.3  |
| 17.5° | 289.6  | 272.2  | 260.8  | 249.3  | 224.5  | 218.8  | 195.7  | 170.8  | 161.1  | 154.0  | 159.1  |
| 20°   | 205.1  | 195.7  | 191.1  | 190.5  | 176.2  | 169.1  | 146.5  | 131.1  | 126.2  | 124.8  | 128.0  |
| 22.5° | 171.4  | 164.5  | 157.9  | 154.2  | 147.1  | 138.8  | 121.7  | 114.0  | 110.5  | 108.8  | 111.1  |
| 25°   | 149.1  | 144.0  | 137.1  | 130.8  | 128.0  | 119.1  | 106.8  | 101.1  | 98.8   | 97.1   | 98.3   |
| 27.5° | 132.5  | 128.0  | 120.0  | 116.0  | 113.7  | 106.0  | 95.4   | 90.8   | 88.8   | 88.3   | 88.0   |
| 30°   | 119.4  | 115.1  | 107.7  | 103.1  | 99.1   | 92.3   | 86.0   | 81.4   | 79.4   | 78.8   | 78.3   |
| 32.5° | 106.3  | 102.8  | 98.0   | 93.4   | 89.1   | 82.8   | 77.4   | 73.7   | 70.5   | 70.0   | 69.7   |
| 35°   | 89.7   | 86.3   | 83.7   | 83.4   | 79.4   | 73.4   | 69.4   | 64.6   | 62.0   | 61.1   | 61.4   |
| 37.5° | 79.7   | 75.1   | 69.4   | 71.4   | 70.3   | 66.0   | 60.6   | 55.7   | 53.1   | 52.6   | 52.6   |
| 40°   | 73.4   | 68.5   | 62.0   | 58.6   | 62.0   | 61.1   | 52.6   | 47.7   | 45.1   | 44.8   | 44.3   |
| 42.5° | 67.4   | 62.6   | 55.1   | 49.4   | 51.1   | 53.7   | 45.4   | 40.8   | 38.3   | 37.7   | 36.8   |
| 45°   | 63.1   | 58.0   | 49.7   | 43.1   | 39.7   | 45.1   | 38.8   | 33.1   | 31.7   | 30.6   | 30.0   |
| 47.5° | 59.1   | 54.3   | 44.8   | 37.4   | 31.7   | 32.6   | 31.1   | 27.1   | 25.4   | 24.3   | 24.0   |
| 50°   | 55.7   | 50.6   | 40.6   | 32.0   | 26.3   | 24.0   | 25.1   | 21.4   | 20.0   | 18.9   | 18.3   |
| 52.5° | 51.7   | 46.8   | 36.0   | 27.7   | 22.0   | 18.9   | 19.1   | 16.9   | 15.4   | 14.6   | 14.3   |
| 55°   | 48.6   | 43.7   | 32.3   | 24.3   | 19.4   | 15.4   | 13.7   | 13.1   | 12.3   | 11.7   | 11.4   |
| 57.5° | 44.3   | 39.7   | 28.6   | 20.6   | 16.6   | 12.6   | 10.6   | 10.6   | 10.3   | 9.7    | 9.4    |
| 59°   | 41.7   | 37.7   | 26.3   | 18.6   | 15.1   | 10.9   | 9.4    | 9.7    | 9.4    | 8.9    | 8.6    |
| 60°   | 39.7   | 36.0   | 24.6   | 17.1   | 14.3   | 10.0   | 8.6    | 9.1    | 8.9    | 8.3    | 8.0    |
| 62.5° | 35.1   | 32.6   | 21.1   | 14.3   | 12.6   | 8.0    | 7.1    | 7.7    | 7.7    | 7.4    | 7.1    |
| 65°   | 30.8   | 28.0   | 18.0   | 12.0   | 11.7   | 6.9    | 5.7    | 6.9    | 7.1    | 6.6    | 6.0    |
| 67.5° | 26.8   | 24.0   | 15.7   | 9.7    | 10.9   | 5.4    | 4.3    | 5.7    | 7.7    | 6.0    | 5.4    |
| 70°   | 22.8   | 20.0   | 12.3   | 7.7    | 11.4   | 3.7    | 3.4    | 5.1    | 9.1    | 6.6    | 5.1    |
| 72.5° | 17.7   | 15.4   | 8.6    | 5.7    | 12.3   | 2.6    | 2.6    | 4.3    | 10.3   | 7.1    | 4.9    |
| 75°   | 12.3   | 10.0   | 5.1    | 3.4    | 10.0   | 1.7    | 1.7    | 4.0    | 9.7    | 6.6    | 4.6    |
| 77.5° | 7.1    | 5.4    | 1.7    | 0.3    | 5.1    | 0.0    | 0.3    | 2.9    | 6.9    | 4.0    | 2.0    |
| 80°   | 2.6    | 1.1    | 0.0    | 0.0    | 3.1    | 0.0    | 0.0    | 0.0    | 0.6    | 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°    | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 |
| 2.5°  | 1666.6 | 1705.2 | 1739.7 | 1792.0 | 1854.0 | 1925.4 | 1986.8 | 2052.8 | 2114.7 | 2140.4 | 2158.2 |
| 5°    | 1277.0 | 1324.7 | 1380.4 | 1457.2 | 1559.5 | 1685.5 | 1803.4 | 1936.8 | 2080.2 | 2151.9 | 2219.3 |
| 7.5°  | 902.9  | 951.4  | 1020.5 | 1102.2 | 1225.9 | 1375.8 | 1530.1 | 1714.3 | 1908.5 | 2021.9 | 2133.6 |
| 10°   | 649.2  | 708.9  | 773.5  | 885.1  | 1010.8 | 1153.1 | 1311.9 | 1517.5 | 1734.0 | 1859.7 | 1994.2 |
| 12.5° | 441.9  | 509.8  | 607.5  | 732.6  | 880.3  | 1019.7 | 1157.6 | 1353.8 | 1605.2 | 1729.7 | 1874.0 |
| 15°   | 265.1  | 302.8  | 406.2  | 551.0  | 732.0  | 905.7  | 1056.8 | 1253.6 | 1521.5 | 1674.0 | 1824.0 |
| 17.5° | 163.4  | 180.8  | 237.1  | 355.9  | 546.1  | 765.8  | 972.8  | 1219.6 | 1533.5 | 1719.2 | 1879.7 |
| 20°   | 130.2  | 137.1  | 155.1  | 210.2  | 361.9  | 611.5  | 878.3  | 1212.8 | 1631.5 | 1860.0 | 2032.2 |
| 22.5° | 113.1  | 119.7  | 131.7  | 152.8  | 227.6  | 457.9  | 788.6  | 1219.0 | 1772.0 | 2071.0 | 2272.1 |
| 25°   | 99.7   | 105.4  | 116.8  | 134.2  | 166.8  | 322.5  | 692.6  | 1247.0 | 1955.1 | 2333.0 | 2546.6 |
| 27.5° | 89.1   | 94.0   | 104.5  | 120.5  | 143.1  | 225.1  | 583.8  | 1281.0 | 2172.2 | 2600.9 | 2811.7 |
| 30°   | 79.4   | 83.7   | 93.1   | 108.0  | 124.2  | 173.1  | 464.4  | 1304.1 | 2389.5 | 2811.7 | 3001.0 |
| 32.5° | 71.1   | 74.3   | 82.8   | 95.4   | 108.0  | 138.0  | 353.0  | 1300.4 | 2550.9 | 2987.0 | 3137.3 |
| 35°   | 62.6   | 65.7   | 73.1   | 84.0   | 94.0   | 114.0  | 277.6  | 1231.0 | 2691.4 | 3169.0 | 3293.2 |
| 37.5° | 53.1   | 57.1   | 64.3   | 74.0   | 80.8   | 100.3  | 224.5  | 1147.3 | 2833.9 | 3376.9 | 3467.2 |
| 40°   | 45.1   | 49.1   | 55.4   | 66.0   | 70.3   | 95.1   | 172.5  | 1045.4 | 2994.2 | 3609.4 | 3658.0 |
| 42.5° | 37.4   | 41.1   | 47.7   | 56.8   | 66.3   | 82.0   | 127.7  | 928.8  | 3148.1 | 3808.2 | 3831.9 |
| 45°   | 30.3   | 34.0   | 40.8   | 50.0   | 70.8   | 68.0   | 98.8   | 804.0  | 3272.4 | 3973.6 | 3981.3 |
| 47.5° | 24.0   | 27.4   | 34.6   | 47.1   | 66.0   | 54.3   | 70.5   | 706.1  | 3376.6 | 4102.7 | 4082.4 |
| 50°   | 18.6   | 21.4   | 28.8   | 54.0   | 57.7   | 44.8   | 53.4   | 673.5  | 3470.0 | 4182.6 | 4130.1 |
| 52.5° | 14.6   | 17.1   | 23.7   | 50.6   | 44.8   | 37.1   | 44.8   | 704.1  | 3598.0 | 4248.9 | 4156.9 |
| 55°   | 11.7   | 14.3   | 18.6   | 28.8   | 30.6   | 31.4   | 38.3   | 732.6  | 3818.8 | 4404.3 | 4315.5 |
| 57.5° | 9.7    | 12.3   | 15.1   | 20.3   | 23.1   | 26.6   | 34.0   | 735.8  | 4079.0 | 4662.5 | 4578.5 |
| 59°   | 8.9    | 11.1   | 13.7   | 18.0   | 20.3   | 24.3   | 32.0   | 718.6  | 4170.6 | 4756.5 | 4714.5 |
| 60°   | 8.3    | 10.6   | 12.9   | 16.6   | 18.9   | 22.8   | 30.8   | 702.3  | 4174.6 | 4753.0 | 4772.5 |
| 62.5° | 7.1    | 9.4    | 11.4   | 14.0   | 16.0   | 19.4   | 27.7   | 642.1  | 4005.6 | 4597.4 | 4737.6 |
| 65°   | 6.3    | 8.3    | 10.3   | 12.0   | 13.7   | 17.4   | 25.1   | 532.1  | 3716.8 | 4346.3 | 4499.1 |
| 67.5° | 5.7    | 7.1    | 9.4    | 10.6   | 12.3   | 15.4   | 22.3   | 379.3  | 3356.1 | 4039.3 | 4138.4 |
| 70°   | 5.1    | 6.9    | 8.6    | 9.7    | 11.1   | 13.4   | 19.1   | 217.9  | 2833.9 | 3589.7 | 3660.2 |
| 72.5° | 4.9    | 6.6    | 7.7    | 9.1    | 10.0   | 12.0   | 17.4   | 102.5  | 2075.0 | 2875.6 | 3059.9 |
| 75°   | 4.3    | 6.0    | 7.1    | 8.6    | 9.4    | 10.9   | 14.9   | 49.1   | 1380.1 | 2081.0 | 2290.4 |
| 77.5° | 2.6    | 4.9    | 6.6    | 7.7    | 8.3    | 9.4    | 12.3   | 28.3   | 880.9  | 1440.4 | 1696.6 |
| 80°   | 0.0    | 1.7    | 4.9    | 6.6    | 7.1    | 8.0    | 9.4    | 22.3   | 471.3  | 822.9  | 987.7  |
| 82.5° | 0.0    | 0.0    | 3.4    | 5.1    | 4.9    | 5.4    | 7.1    | 14.0   | 212.5  | 537.8  | 606.1  |
| 85°   | 0.0    | 0.0    | 1.1    | 4.0    | 3.4    | 2.6    | 4.9    | 4.9    | 46.6   | 272.2  | 339.6  |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.3    | 1.7    | 1.1    | 2.0    | 0.6    | 0.3    | 20.3   | 82.3   |
| 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: P386336

CATALOG NUMBER: GWC-SA2A-727-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 | 1963.9 |
| 2.5°  | 2220.1 | 2241.3 | 2277.0 | 2293.8 | 2285.5 | 2250.4 | 2208.4 | 2165.6 | 2140.4 | 2150.4 |
| 5°    | 2356.7 | 2465.5 | 2528.3 | 2549.2 | 2514.3 | 2435.5 | 2332.4 | 2196.4 | 2148.2 | 2135.0 |
| 7.5°  | 2356.7 | 2561.5 | 2691.1 | 2714.0 | 2636.3 | 2481.8 | 2288.4 | 2076.2 | 2005.6 | 1979.9 |
| 10°   | 2273.8 | 2552.6 | 2733.4 | 2769.7 | 2661.1 | 2430.1 | 2171.0 | 1928.8 | 1845.1 | 1818.6 |
| 12.5° | 2180.4 | 2480.6 | 2671.1 | 2721.1 | 2632.0 | 2378.7 | 2089.6 | 1829.1 | 1730.6 | 1707.4 |
| 15°   | 2123.0 | 2392.1 | 2549.7 | 2586.0 | 2548.3 | 2348.7 | 2070.2 | 1799.1 | 1683.2 | 1660.9 |
| 17.5° | 2143.6 | 2323.5 | 2380.4 | 2401.5 | 2426.9 | 2338.1 | 2123.0 | 1864.8 | 1718.0 | 1696.9 |
| 20°   | 2221.0 | 2251.3 | 2221.9 | 2248.4 | 2317.0 | 2348.4 | 2249.0 | 2023.6 | 1847.4 | 1819.1 |
| 22.5° | 2352.4 | 2213.9 | 2131.3 | 2141.9 | 2225.3 | 2382.4 | 2441.5 | 2250.4 | 2047.1 | 2011.6 |
| 25°   | 2505.5 | 2244.1 | 2081.0 | 2071.6 | 2157.3 | 2427.2 | 2617.4 | 2497.2 | 2283.3 | 2244.1 |
| 27.5° | 2698.0 | 2312.1 | 2070.8 | 2061.3 | 2133.6 | 2469.2 | 2763.7 | 2741.1 | 2532.0 | 2465.2 |
| 30°   | 2846.5 | 2378.9 | 2101.3 | 2079.6 | 2157.3 | 2498.3 | 2881.1 | 2948.2 | 2730.3 | 2686.0 |
| 32.5° | 2953.0 | 2457.8 | 2151.0 | 2119.6 | 2224.1 | 2548.6 | 2971.6 | 3137.8 | 2913.6 | 2846.5 |
| 35°   | 3034.2 | 2543.5 | 2231.3 | 2179.6 | 2316.1 | 2624.9 | 3056.4 | 3339.8 | 3108.7 | 3035.3 |
| 37.5° | 3110.1 | 2663.7 | 2356.7 | 2295.0 | 2460.3 | 2747.7 | 3146.1 | 3568.8 | 3326.9 | 3239.2 |
| 40°   | 3216.1 | 2800.0 | 2550.0 | 2495.2 | 2702.8 | 2915.1 | 3258.1 | 3807.6 | 3575.1 | 3464.9 |
| 42.5° | 3322.1 | 2946.2 | 2748.0 | 2762.8 | 3005.3 | 3118.4 | 3402.6 | 4060.1 | 3820.2 | 3702.5 |
| 45°   | 3418.9 | 3097.0 | 3029.9 | 3098.4 | 3286.1 | 3341.5 | 3546.3 | 4206.1 | 4015.8 | 3902.2 |
| 47.5° | 3505.2 | 3285.5 | 3310.1 | 3492.6 | 3605.4 | 3543.4 | 3653.7 | 4332.0 | 4161.5 | 4061.3 |
| 50°   | 3605.4 | 3529.4 | 3679.4 | 3937.6 | 3973.0 | 3726.2 | 3751.4 | 4481.1 | 4331.7 | 4251.2 |
| 52.5° | 3715.1 | 3786.5 | 4088.4 | 4316.0 | 4304.6 | 3924.7 | 3849.6 | 4648.2 | 4565.1 | 4489.4 |
| 55°   | 3839.6 | 3994.1 | 4448.6 | 4670.2 | 4660.5 | 4146.4 | 4012.4 | 4854.7 | 4857.6 | 4789.0 |
| 57.5° | 4024.4 | 4172.9 | 4693.1 | 4956.7 | 4973.0 | 4402.3 | 4288.3 | 5086.1 | 5122.1 | 5076.4 |
| 59°   | 4156.9 | 4288.9 | 4789.9 | 5076.4 | 5142.6 | 4600.2 | 4490.0 | 5220.3 | 5196.6 | 5154.9 |
| 60°   | 4255.2 | 4362.6 | 4837.9 | 5138.9 | 5241.2 | 4734.5 | 4638.8 | 5299.1 | 5205.5 | 5154.9 |
| 62.5° | 4498.3 | 4523.1 | 4924.4 | 5209.7 | 5354.6 | 5032.7 | 5057.5 | 5433.4 | 5144.0 | 5061.5 |
| 65°   | 4611.6 | 4624.5 | 4923.3 | 5082.9 | 5244.9 | 5264.9 | 5437.4 | 5437.4 | 4994.1 | 4867.3 |
| 67.5° | 4564.2 | 4502.3 | 4679.1 | 4662.5 | 4824.2 | 5126.9 | 5580.2 | 5238.0 | 4707.3 | 4543.4 |
| 70°   | 4178.6 | 3940.2 | 3861.6 | 3868.7 | 3992.4 | 4459.4 | 5297.4 | 4651.4 | 4164.7 | 3973.0 |
| 72.5° | 3476.9 | 2904.8 | 2710.8 | 2932.2 | 2964.5 | 3427.2 | 4514.5 | 3502.9 | 3071.3 | 2891.6 |
| 75°   | 2796.5 | 2047.6 | 1732.3 | 1965.9 | 2020.8 | 2508.0 | 3492.3 | 2181.6 | 1794.0 | 1654.0 |
| 77.5° | 2009.1 | 1469.8 | 1243.0 | 1226.7 | 1297.6 | 1590.6 | 2478.1 | 1097.9 | 915.7  | 854.6  |
| 80°   | 1141.3 | 967.4  | 1041.7 | 982.8  | 1018.5 | 994.5  | 1177.3 | 481.6  | 394.4  | 368.7  |
| 82.5° | 688.9  | 571.8  | 619.2  | 515.5  | 652.4  | 568.1  | 453.6  | 154.2  | 134.0  | 127.4  |
| 85°   | 448.1  | 312.5  | 162.8  | 109.1  | 224.8  | 363.0  | 101.4  | 42.0   | 32.3   | 25.7   |
| 87.5° | 154.5  | 79.7   | 8.0    | 3.4    | 24.0   | 67.7   | 3.7    | 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-79-08: Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

INVUE

Report Number: SP1-2012-088-8-R2

Luminaire Tested: CCW-SA1B-727-U-SL4

Test Date: 01/20/2021

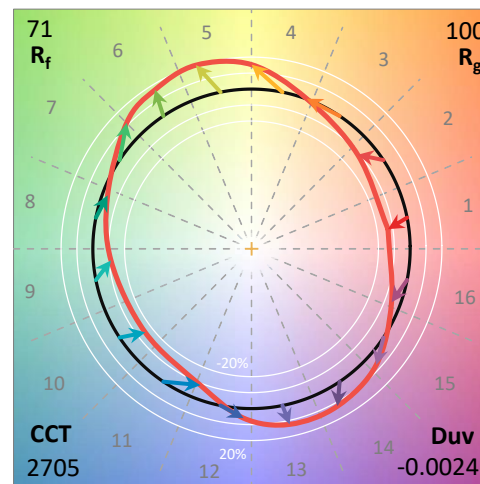
### Test Information

Test Method: LM-79-08  
 Report Number: SP1-2012-088-8-R2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry:  $4\pi$   
 Issue Date: 01/20/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: INVUE  
 Catalog Number: **CCW-SA1B-727-U-SL4**  
 Description: INVUE WALL PACK

\*\*\*THIS IS A REVISION OF SP1-2012-088-8. TO UPDATE THE CATALOG INFORMATION.\*\*\*TESTED  
 IN SITU. INVUE WALL PACK LIGHT SQUARE SL4 OPTICS 1-SQUARE

### Spectral Parameters

|                           |         |           |      |      |      |
|---------------------------|---------|-----------|------|------|------|
| CCT (K):                  | 2705    | CRI (Ra): | 73.8 |      |      |
| CIE u':                   | 0.2629  | R1:       | 72.2 | R9:  | -7.6 |
| CIE v':                   | 0.5237  | R2:       | 81.9 | R10: | 56.9 |
| Duv:                      | -0.0024 | R3:       | 89.3 | R11: | 66.0 |
| CIE x:                    | 0.4552  | R4:       | 71.3 | R12: | 47.9 |
| CIE y:                    | 0.4030  | R5:       | 69.5 | R13: | 73.4 |
| CIE z:                    | 0.1418  | R6:       | 73.6 | R14: | 93.2 |
| Peak Wavelength (nm):     | 603     | R7:       | 80.1 |      |      |
| Dominant Wavelength (nm): | 585     | R8:       | 52.8 |      |      |
| Purity:                   | 57.7    |           |      |      |      |
| Rf:                       | 71.2    |           |      |      |      |
| Rg:                       | 100.1   |           |      |      |      |



### Test Conditions

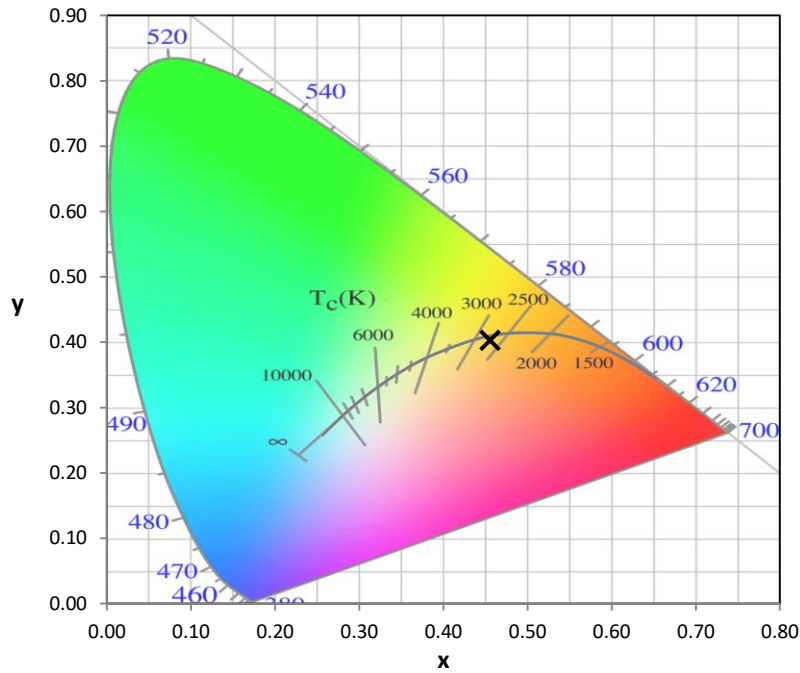
Stabilization Time: 177M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.8/34%  
 Sphere Temperature (°C): 24.7

REPORT NUMBER: SP1-2012-088-8-R2

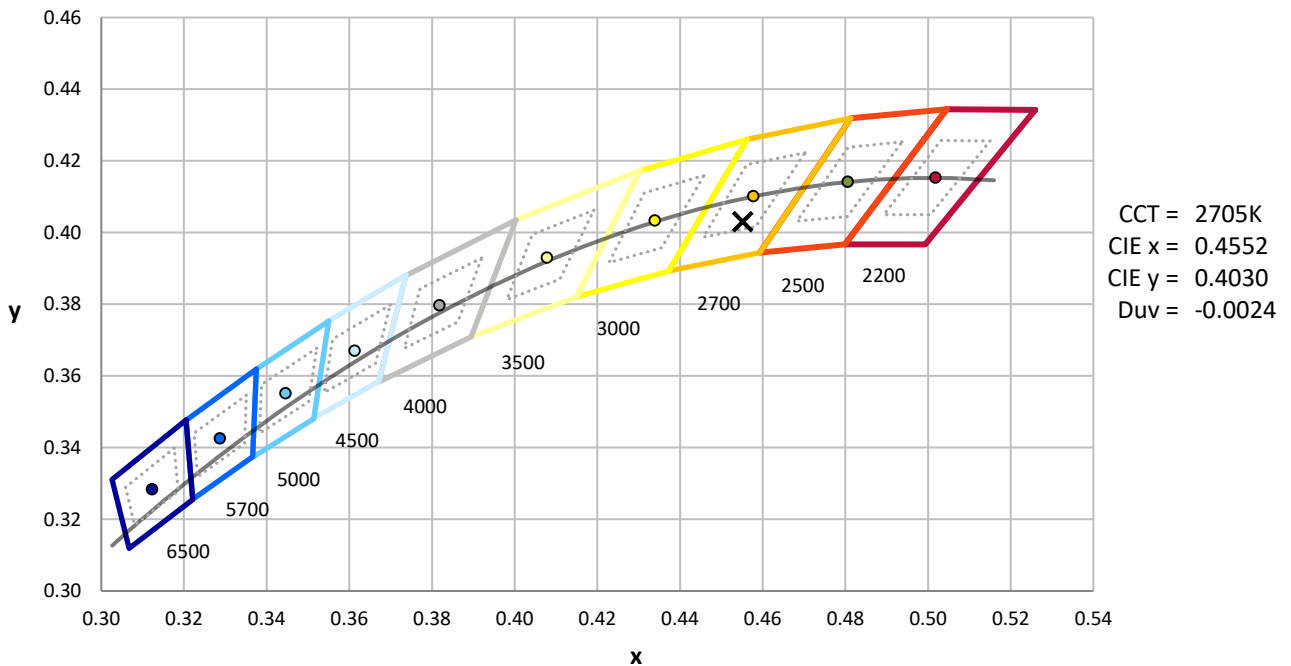
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 7/29/2020        | 1/29/2021            |
| Power Meter                    | IN0071                | 12/1/2020        | 12/1/2021            |
| AC Power Source                | IN0063                | 12/1/2020        | 12/1/2021            |
| DC Power Source                | IN0208                | 12/1/2020        | 12/1/2021            |
| Sphere Thermometer             | IN0085                | 12/1/2020        | 12/1/2021            |
| Room Thermometer               | IN0046                | 12/1/2020        | 12/1/2021            |

REPORT NUMBER: SP1-2012-088-8-R2

**CIE 1931 Chromaticity Diagram**



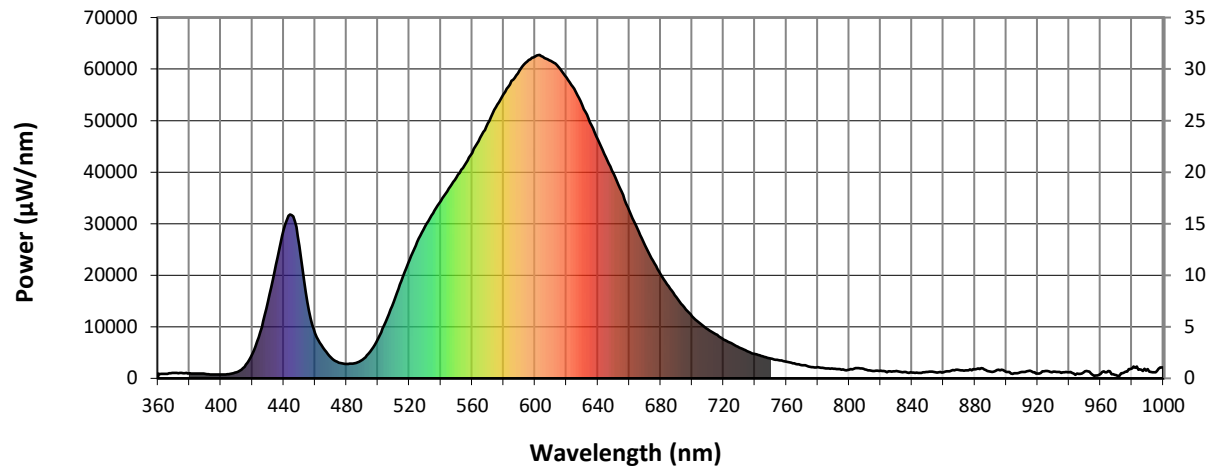
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2012-088-8-R2

### Photopic Flux vs. Wavelength

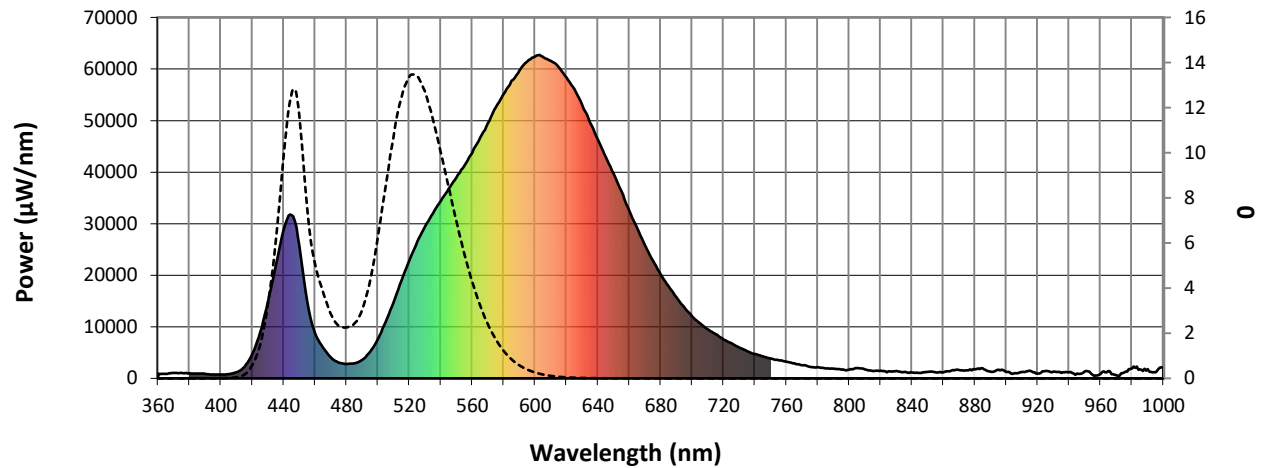


#####

| 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       | 926              | 0.0              | 490       | 3601             | 0.5              | 620       | 58340            | 15.2             | 750       | 3861             | 0.0              | 880       | 1742             | 0.0              |
| 365       | 867              | 0.0              | 495       | 5135             | 0.9              | 625       | 56180            | 12.4             | 755       | 3520             | 0.0              | 885       | 1920             | 0.0              |
| 370       | 1032             | 0.0              | 500       | 7689             | 1.7              | 630       | 53018            | 9.6              | 760       | 3223             | 0.0              | 890       | 1286             | 0.0              |
| 375       | 1034             | 0.0              | 505       | 11015            | 3.1              | 635       | 49683            | 7.5              | 765       | 2910             | 0.0              | 895       | 1660             | 0.0              |
| 380       | 979              | 0.0              | 510       | 14817            | 5.1              | 640       | 46308            | 5.5              | 770       | 2560             | 0.0              | 900       | 1274             | 0.0              |
| 385       | 938              | 0.0              | 515       | 18962            | 7.9              | 645       | 42927            | 4.1              | 775       | 2242             | 0.0              | 905       | 1020             | 0.0              |
| 390       | 893              | 0.0              | 520       | 22933            | 11.1             | 650       | 39728            | 2.9              | 780       | 2156             | 0.0              | 910       | 1258             | 0.0              |
| 395       | 757              | 0.0              | 525       | 26438            | 14.2             | 655       | 36260            | 2.1              | 785       | 1926             | 0.0              | 915       | 1481             | 0.0              |
| 400       | 728              | 0.0              | 530       | 29492            | 17.4             | 660       | 32543            | 1.4              | 790       | 1871             | 0.0              | 920       | 923              | 0.0              |
| 405       | 812              | 0.0              | 535       | 32054            | 19.9             | 665       | 29105            | 0.9              | 795       | 1697             | 0.0              | 925       | 1444             | 0.0              |
| 410       | 1197             | 0.0              | 540       | 34386            | 22.4             | 670       | 25817            | 0.6              | 800       | 1691             | 0.0              | 930       | 1315             | 0.0              |
| 415       | 2254             | 0.0              | 545       | 36784            | 24.5             | 675       | 22832            | 0.4              | 805       | 1967             | 0.0              | 935       | 1037             | 0.0              |
| 420       | 4742             | 0.0              | 550       | 39017            | 26.5             | 680       | 20201            | 0.2              | 810       | 1719             | 0.0              | 940       | 1195             | 0.0              |
| 425       | 8975             | 0.0              | 555       | 41253            | 28.2             | 685       | 17863            | 0.2              | 815       | 1436             | 0.0              | 945       | 914              | 0.0              |
| 430       | 14905            | 0.1              | 560       | 43733            | 29.7             | 690       | 15761            | 0.1              | 820       | 1465             | 0.0              | 950       | 1373             | 0.0              |
| 435       | 22096            | 0.3              | 565       | 46694            | 31.0             | 695       | 13762            | 0.1              | 825       | 1365             | 0.0              | 955       | 692              | 0.0              |
| 440       | 28868            | 0.5              | 570       | 49493            | 32.2             | 700       | 12064            | 0.0              | 830       | 1404             | 0.0              | 960       | 844              | 0.0              |
| 445       | 31683            | 0.7              | 575       | 52587            | 32.7             | 705       | 10683            | 0.0              | 835       | 1222             | 0.0              | 965       | 1427             | 0.0              |
| 450       | 25690            | 0.7              | 580       | 55129            | 32.8             | 710       | 9480             | 0.0              | 840       | 1144             | 0.0              | 970       | 654              | 0.0              |
| 455       | 14802            | 0.5              | 585       | 57737            | 32.1             | 715       | 8582             | 0.0              | 845       | 1078             | 0.0              | 975       | 1127             | 0.0              |
| 460       | 8755             | 0.4              | 590       | 59688            | 30.9             | 720       | 7530             | 0.0              | 850       | 1254             | 0.0              | 980       | 1935             | 0.0              |
| 465       | 5978             | 0.3              | 595       | 61458            | 29.1             | 725       | 6824             | 0.0              | 855       | 1203             | 0.0              | 985       | 1754             | 0.0              |
| 470       | 4047             | 0.3              | 600       | 62443            | 26.9             | 730       | 5968             | 0.0              | 860       | 1183             | 0.0              | 990       | 1822             | 0.0              |
| 475       | 3070             | 0.2              | 605       | 62403            | 24.2             | 735       | 5266             | 0.0              | 865       | 1505             | 0.0              | 995       | 1176             | 0.0              |
| 480       | 2814             | 0.3              | 610       | 61581            | 21.2             | 740       | 4712             | 0.0              | 870       | 1624             | 0.0              | 1000      | 2143             | 0.0              |
| 485       | 2926             | 0.3              | 615       | 60386            | 18.2             | 745       | 4264             | 0.0              | 875       | 1559             | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2012-088-8-R2

### Scotopic Flux vs. Wavelength



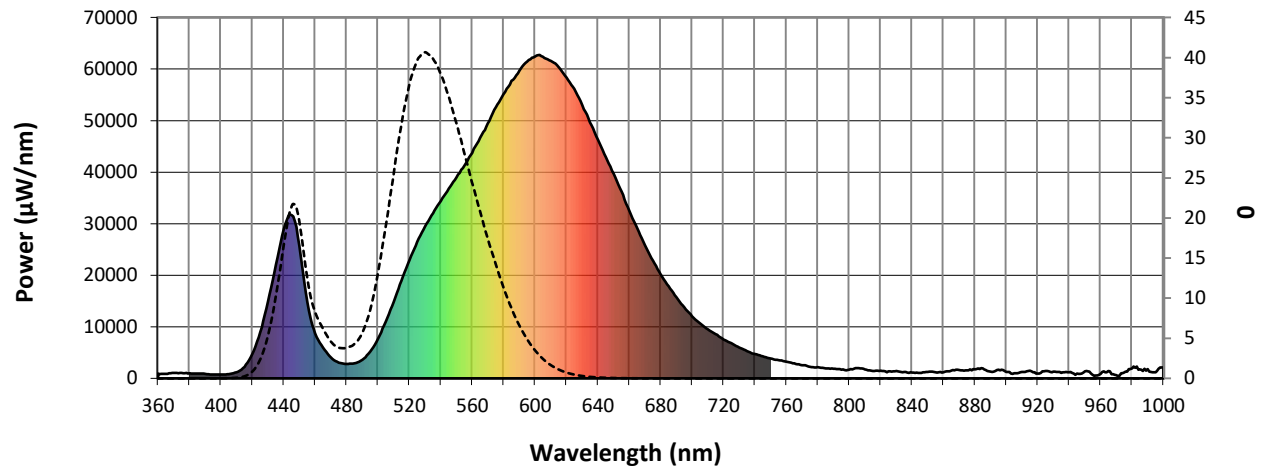
Scotopic Lumens: 1073.3

S/P: 0.36

| 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       | 926              | 0.0              | 490       | 3601             | 5.5              | 620       | 58340            | 0.7              | 750       | 3861             | 0.0              | 880       | 1742             | 0.0              |
| 365       | 867              | 0.0              | 495       | 5135             | 8.3              | 625       | 56180            | 0.5              | 755       | 3520             | 0.0              | 885       | 1920             | 0.0              |
| 370       | 1032             | 0.0              | 500       | 7689             | 12.9             | 630       | 53018            | 0.3              | 760       | 3223             | 0.0              | 890       | 1286             | 0.0              |
| 375       | 1034             | 0.0              | 505       | 11015            | 18.7             | 635       | 49683            | 0.2              | 765       | 2910             | 0.0              | 895       | 1660             | 0.0              |
| 380       | 979              | 0.0              | 510       | 14817            | 25.1             | 640       | 46308            | 0.1              | 770       | 2560             | 0.0              | 900       | 1274             | 0.0              |
| 385       | 938              | 0.0              | 515       | 18962            | 31.4             | 645       | 42927            | 0.1              | 775       | 2242             | 0.0              | 905       | 1020             | 0.0              |
| 390       | 893              | 0.0              | 520       | 22933            | 36.5             | 650       | 39728            | 0.0              | 780       | 2156             | 0.0              | 910       | 1258             | 0.0              |
| 395       | 757              | 0.0              | 525       | 26438            | 39.6             | 655       | 36260            | 0.0              | 785       | 1926             | 0.0              | 915       | 1481             | 0.0              |
| 400       | 728              | 0.0              | 530       | 29492            | 40.7             | 660       | 32543            | 0.0              | 790       | 1871             | 0.0              | 920       | 923              | 0.0              |
| 405       | 812              | 0.0              | 535       | 32054            | 39.9             | 665       | 29105            | 0.0              | 795       | 1697             | 0.0              | 925       | 1444             | 0.0              |
| 410       | 1197             | 0.1              | 540       | 34386            | 38.0             | 670       | 25817            | 0.0              | 800       | 1691             | 0.0              | 930       | 1315             | 0.0              |
| 415       | 2254             | 0.2              | 545       | 36784            | 35.3             | 675       | 22832            | 0.0              | 805       | 1967             | 0.0              | 935       | 1037             | 0.0              |
| 420       | 4742             | 0.8              | 550       | 39017            | 31.9             | 680       | 20201            | 0.0              | 810       | 1719             | 0.0              | 940       | 1195             | 0.0              |
| 425       | 8975             | 2.2              | 555       | 41253            | 28.2             | 685       | 17863            | 0.0              | 815       | 1436             | 0.0              | 945       | 914              | 0.0              |
| 430       | 14905            | 5.1              | 560       | 43733            | 24.4             | 690       | 15761            | 0.0              | 820       | 1465             | 0.0              | 950       | 1373             | 0.0              |
| 435       | 22096            | 9.9              | 565       | 46694            | 20.9             | 695       | 13762            | 0.0              | 825       | 1365             | 0.0              | 955       | 692              | 0.0              |
| 440       | 28868            | 16.1             | 570       | 49493            | 17.5             | 700       | 12064            | 0.0              | 830       | 1404             | 0.0              | 960       | 844              | 0.0              |
| 445       | 31683            | 21.2             | 575       | 52587            | 14.3             | 705       | 10683            | 0.0              | 835       | 1222             | 0.0              | 965       | 1427             | 0.0              |
| 450       | 25690            | 19.9             | 580       | 55129            | 11.4             | 710       | 9480             | 0.0              | 840       | 1144             | 0.0              | 970       | 654              | 0.0              |
| 455       | 14802            | 12.9             | 585       | 57737            | 8.8              | 715       | 8582             | 0.0              | 845       | 1078             | 0.0              | 975       | 1127             | 0.0              |
| 460       | 8755             | 8.5              | 590       | 59688            | 6.6              | 720       | 7530             | 0.0              | 850       | 1254             | 0.0              | 980       | 1935             | 0.0              |
| 465       | 5978             | 6.3              | 595       | 61458            | 4.9              | 725       | 6824             | 0.0              | 855       | 1203             | 0.0              | 985       | 1754             | 0.0              |
| 470       | 4047             | 4.7              | 600       | 62443            | 3.5              | 730       | 5968             | 0.0              | 860       | 1183             | 0.0              | 990       | 1822             | 0.0              |
| 475       | 3070             | 3.8              | 605       | 62403            | 2.5              | 735       | 5266             | 0.0              | 865       | 1505             | 0.0              | 995       | 1176             | 0.0              |
| 480       | 2814             | 3.8              | 610       | 61581            | 1.7              | 740       | 4712             | 0.0              | 870       | 1624             | 0.0              | 1000      | 2143             | 0.0              |
| 485       | 2926             | 4.2              | 615       | 60386            | 1.1              | 745       | 4264             | 0.0              | 875       | 1559             | 0.0              |           |                  |                  |

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### Melanopic Flux vs. Wavelength

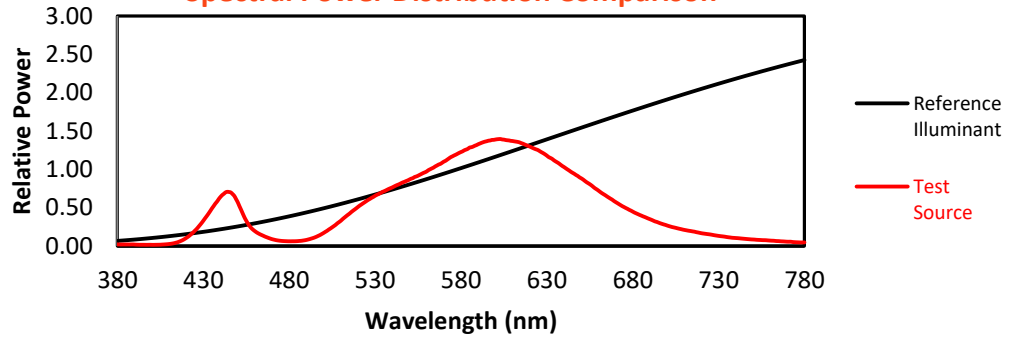

**Melanopic Lumens: 3157.6**
**S/P: 1.07**

| 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       | 926              | 0.0              | 490       | 3601             | 3.0              | 620       | 58340            | 0.0              | 750       | 3861             | 0.0              | 880       | 1742             | 0.0              |
| 365       | 867              | 0.0              | 495       | 5135             | 4.2              | 625       | 56180            | 0.0              | 755       | 3520             | 0.0              | 885       | 1920             | 0.0              |
| 370       | 1032             | 0.0              | 500       | 7689             | 6.2              | 630       | 53018            | 0.0              | 760       | 3223             | 0.0              | 890       | 1286             | 0.0              |
| 375       | 1034             | 0.0              | 505       | 11015            | 8.5              | 635       | 49683            | 0.0              | 765       | 2910             | 0.0              | 895       | 1660             | 0.0              |
| 380       | 979              | 0.0              | 510       | 14817            | 10.6             | 640       | 46308            | 0.0              | 770       | 2560             | 0.0              | 900       | 1274             | 0.0              |
| 385       | 938              | 0.0              | 515       | 18962            | 12.4             | 645       | 42927            | 0.0              | 775       | 2242             | 0.0              | 905       | 1020             | 0.0              |
| 390       | 893              | 0.0              | 520       | 22933            | 13.4             | 650       | 39728            | 0.0              | 780       | 2156             | 0.0              | 910       | 1258             | 0.0              |
| 395       | 757              | 0.0              | 525       | 26438            | 13.4             | 655       | 36260            | 0.0              | 785       | 1926             | 0.0              | 915       | 1481             | 0.0              |
| 400       | 728              | 0.0              | 530       | 29492            | 12.7             | 660       | 32543            | 0.0              | 790       | 1871             | 0.0              | 920       | 923              | 0.0              |
| 405       | 812              | 0.0              | 535       | 32054            | 11.5             | 665       | 29105            | 0.0              | 795       | 1697             | 0.0              | 925       | 1444             | 0.0              |
| 410       | 1197             | 0.0              | 540       | 34386            | 10.1             | 670       | 25817            | 0.0              | 800       | 1691             | 0.0              | 930       | 1315             | 0.0              |
| 415       | 2254             | 0.1              | 545       | 36784            | 8.5              | 675       | 22832            | 0.0              | 805       | 1967             | 0.0              | 935       | 1037             | 0.0              |
| 420       | 4742             | 0.5              | 550       | 39017            | 7.0              | 680       | 20201            | 0.0              | 810       | 1719             | 0.0              | 940       | 1195             | 0.0              |
| 425       | 8975             | 1.4              | 555       | 41253            | 5.6              | 685       | 17863            | 0.0              | 815       | 1436             | 0.0              | 945       | 914              | 0.0              |
| 430       | 14905            | 3.1              | 560       | 43733            | 4.3              | 690       | 15761            | 0.0              | 820       | 1465             | 0.0              | 950       | 1373             | 0.0              |
| 435       | 22096            | 5.9              | 565       | 46694            | 3.3              | 695       | 13762            | 0.0              | 825       | 1365             | 0.0              | 955       | 692              | 0.0              |
| 440       | 28868            | 9.6              | 570       | 49493            | 2.4              | 700       | 12064            | 0.0              | 830       | 1404             | 0.0              | 960       | 844              | 0.0              |
| 445       | 31683            | 12.5             | 575       | 52587            | 1.8              | 705       | 10683            | 0.0              | 835       | 1222             | 0.0              | 965       | 1427             | 0.0              |
| 450       | 25690            | 11.8             | 580       | 55129            | 1.2              | 710       | 9480             | 0.0              | 840       | 1144             | 0.0              | 970       | 654              | 0.0              |
| 455       | 14802            | 7.8              | 585       | 57737            | 0.9              | 715       | 8582             | 0.0              | 845       | 1078             | 0.0              | 975       | 1127             | 0.0              |
| 460       | 8755             | 5.2              | 590       | 59688            | 0.6              | 720       | 7530             | 0.0              | 850       | 1254             | 0.0              | 980       | 1935             | 0.0              |
| 465       | 5978             | 3.9              | 595       | 61458            | 0.4              | 725       | 6824             | 0.0              | 855       | 1203             | 0.0              | 985       | 1754             | 0.0              |
| 470       | 4047             | 2.9              | 600       | 62443            | 0.3              | 730       | 5968             | 0.0              | 860       | 1183             | 0.0              | 990       | 1822             | 0.0              |
| 475       | 3070             | 2.3              | 605       | 62403            | 0.2              | 735       | 5266             | 0.0              | 865       | 1505             | 0.0              | 995       | 1176             | 0.0              |
| 480       | 2814             | 2.3              | 610       | 61581            | 0.1              | 740       | 4712             | 0.0              | 870       | 1624             | 0.0              | 1000      | 2143             | 0.0              |
| 485       | 2926             | 2.4              | 615       | 60386            | 0.1              | 745       | 4264             | 0.0              | 875       | 1559             | 0.0              |           |                  |                  |

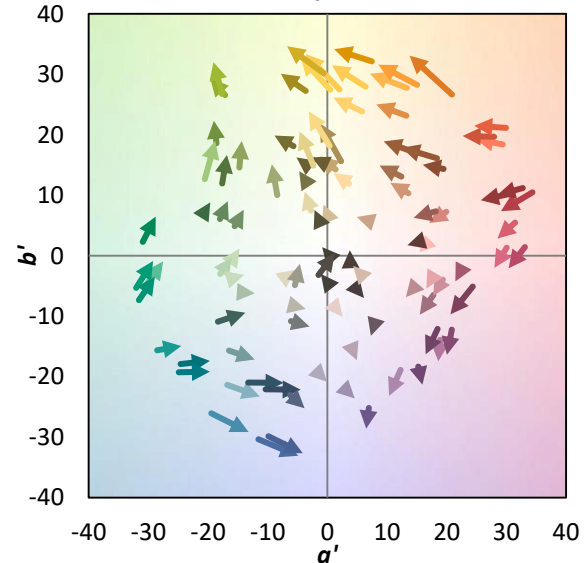
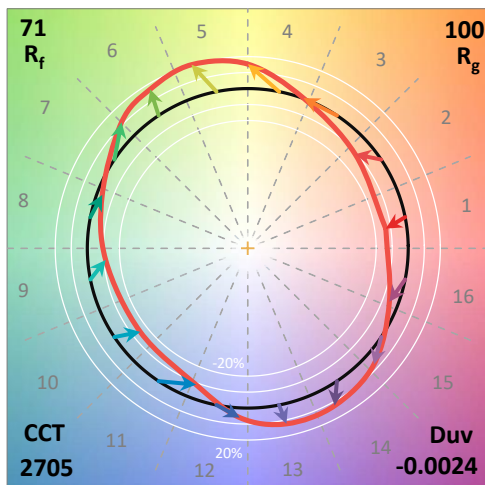
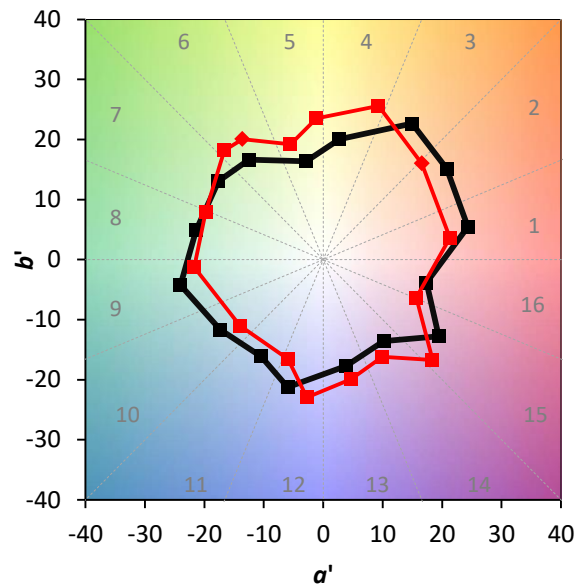
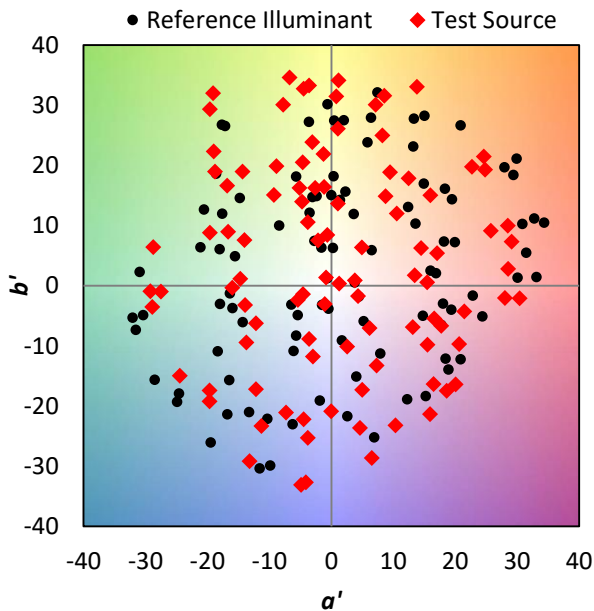
### Summary

$R_f = 71.2$   
 $R_g = 100.1$   
 CIE  $R_a = 73.8$   
 $R_g = -7.6$

### Spectral Power Distribution Comparison

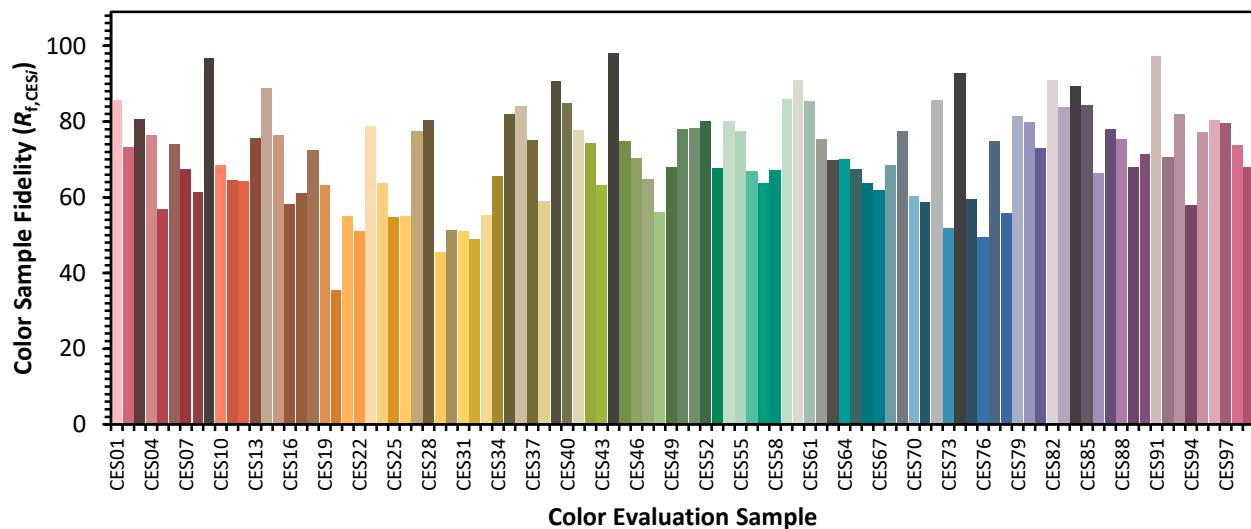


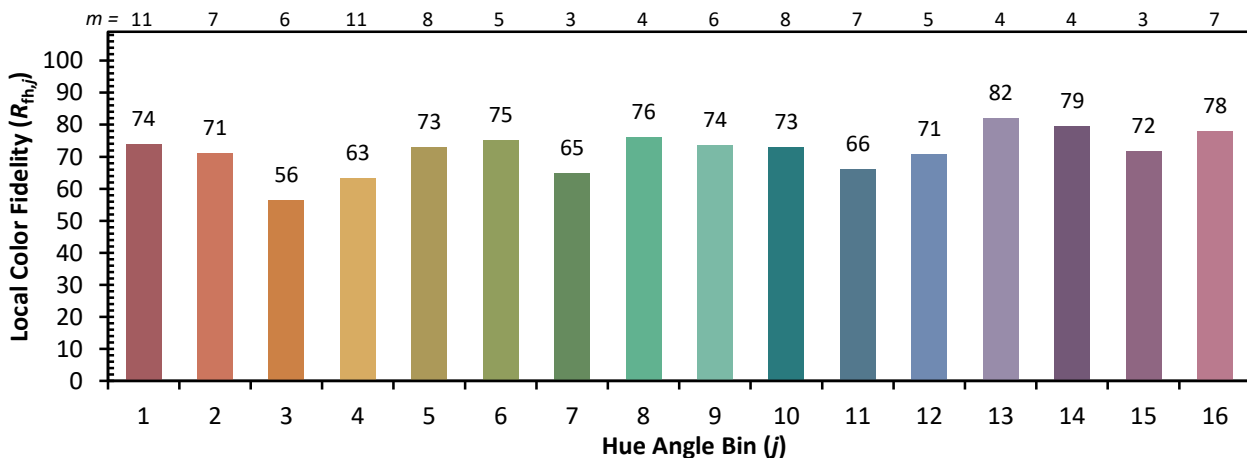
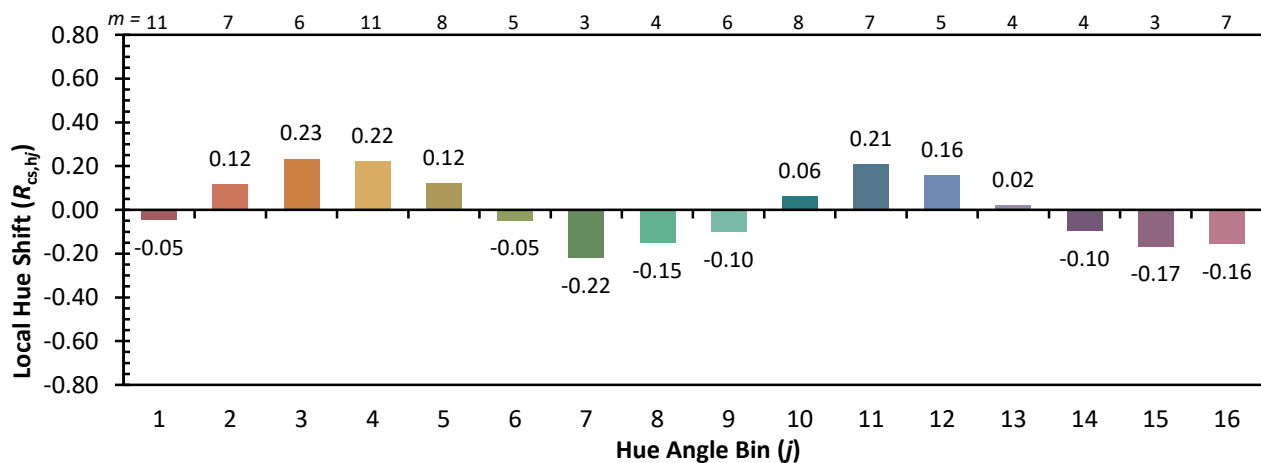
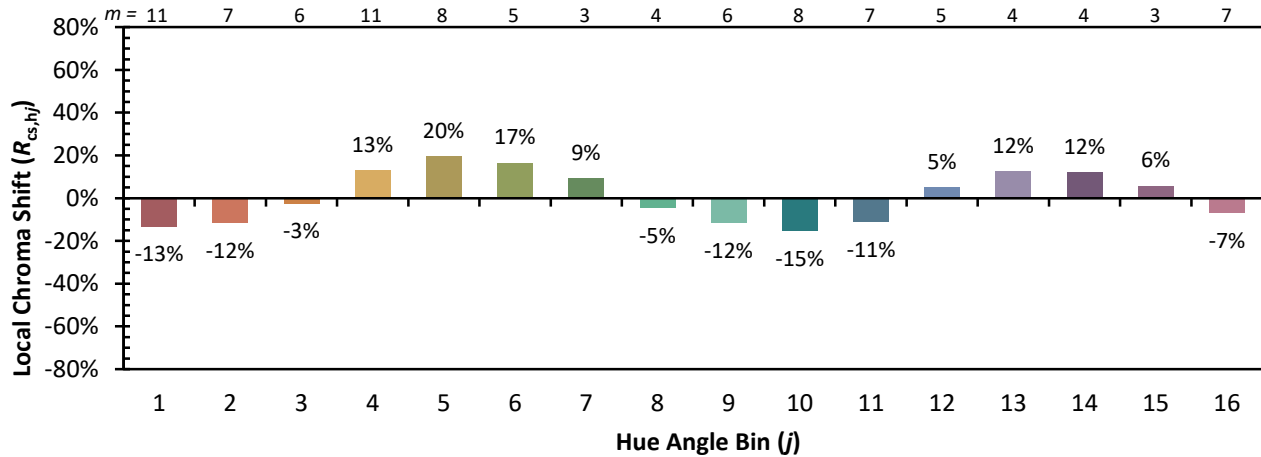
### Color Vector Graphics



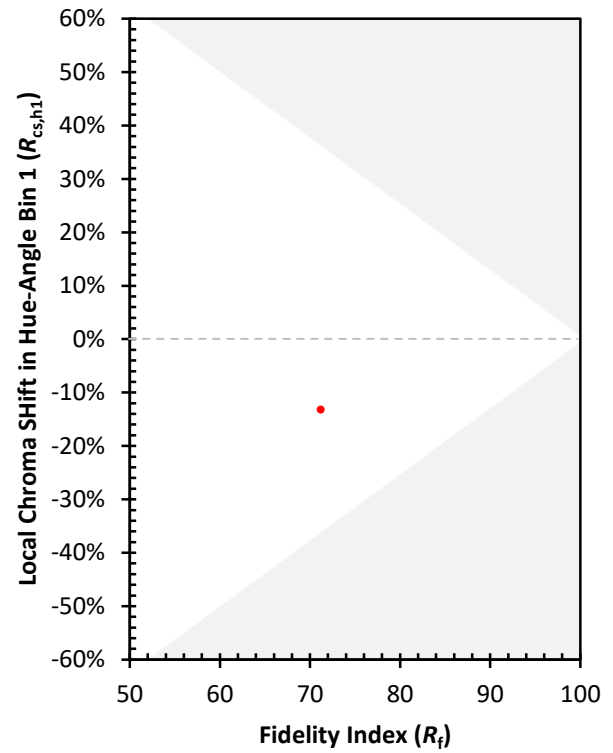
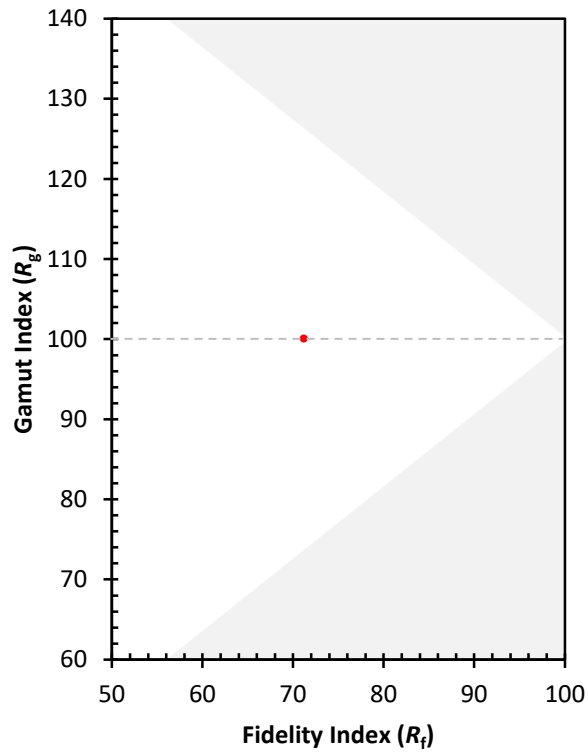
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 55 | CES51 = 78 | CES76 = 50 |
| CES02 = 63 | CES27 = 77 | CES52 = 80 | CES77 = 75 |
| CES03 = 31 | CES28 = 80 | CES53 = 68 | CES78 = 56 |
| CES04 = 71 | CES29 = 46 | CES54 = 80 | CES79 = 81 |
| CES05 = 50 | CES30 = 51 | CES55 = 78 | CES80 = 80 |
| CES06 = 52 | CES31 = 51 | CES56 = 67 | CES81 = 73 |
| CES07 = 43 | CES32 = 49 | CES57 = 64 | CES82 = 91 |
| CES08 = 41 | CES33 = 55 | CES58 = 67 | CES83 = 84 |
| CES09 = 29 | CES34 = 65 | CES59 = 86 | CES84 = 89 |
| CES10 = 77 | CES35 = 82 | CES60 = 91 | CES85 = 84 |
| CES11 = 60 | CES36 = 84 | CES61 = 85 | CES86 = 66 |
| CES12 = 66 | CES37 = 75 | CES62 = 75 | CES87 = 78 |
| CES13 = 44 | CES38 = 59 | CES63 = 70 | CES88 = 75 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 68 |
| CES15 = 72 | CES40 = 85 | CES65 = 67 | CES90 = 71 |
| CES16 = 48 | CES41 = 78 | CES66 = 64 | CES91 = 97 |
| CES17 = 51 | CES42 = 74 | CES67 = 62 | CES92 = 71 |
| CES18 = 57 | CES43 = 63 | CES68 = 68 | CES93 = 82 |
| CES19 = 73 | CES44 = 98 | CES69 = 77 | CES94 = 58 |
| CES20 = 67 | CES45 = 75 | CES70 = 60 | CES95 = 77 |
| CES21 = 88 | CES46 = 70 | CES71 = 59 | CES96 = 80 |
| CES22 = 80 | CES47 = 65 | CES72 = 86 | CES97 = 80 |
| CES23 = 92 | CES48 = 56 | CES73 = 52 | CES98 = 74 |
| CES24 = 91 | CES49 = 68 | CES74 = 93 | CES99 = 68 |
| CES25 = 73 | CES50 = 78 | CES75 = 59 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)