

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: P386168

Luminaire Tested: **GWC-SA1D-735-U-SLR-HSS**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P386168  
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-SA1D-735-U-SLR-HSS  
Description: GALLEON WALL LUMINAIRE  
(1) 70 CRI, 3500K, 1200mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 5771.6 lumens  
Efficiency: N/A  
Efficacy: 86.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B1 - U0 - G2

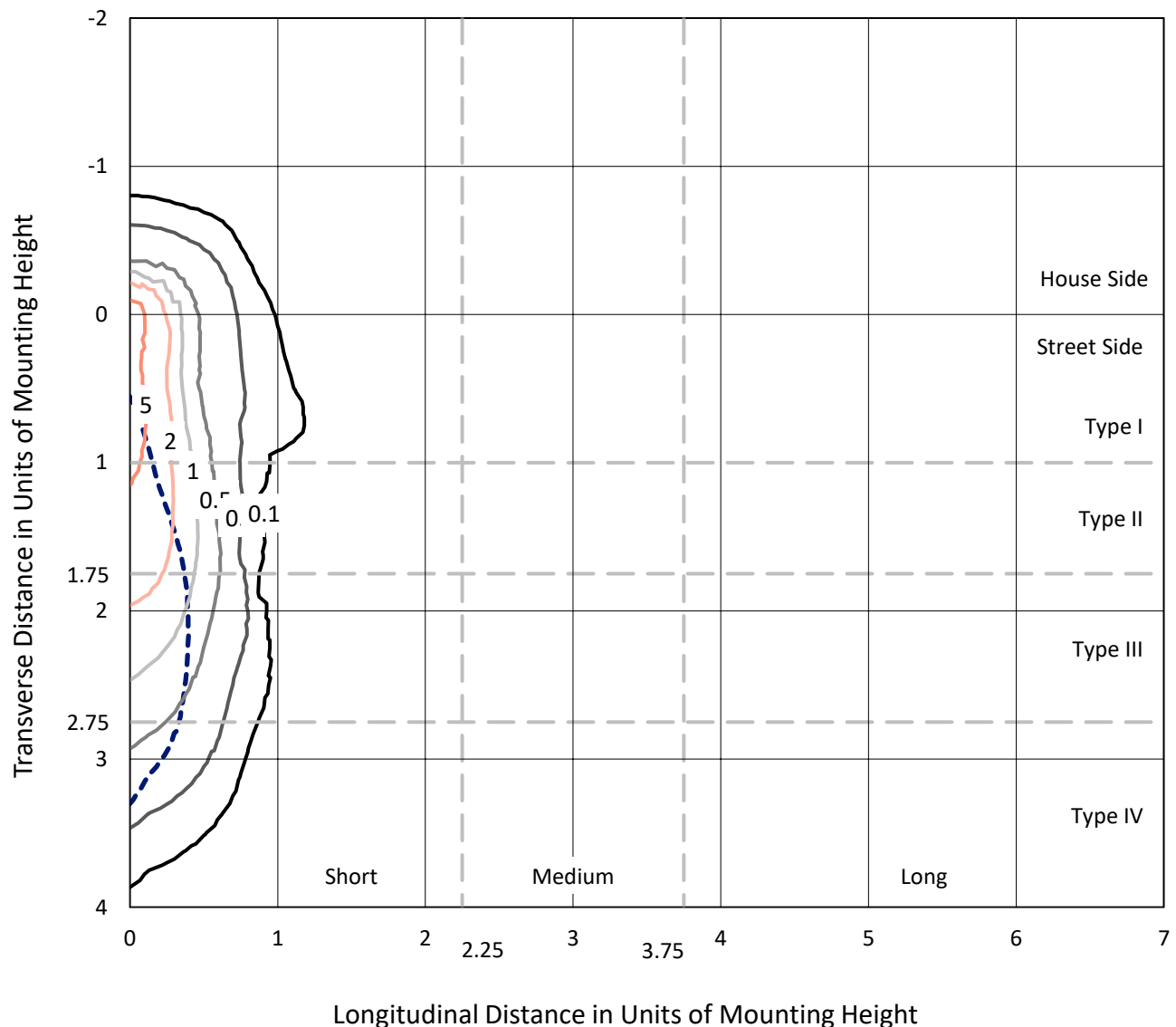
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P386168  
 CATALOG NUMBER: GWC-SA1D-735-U-SLR-HSS

## Iso-Footcandle Lines of Horizontal Illumination

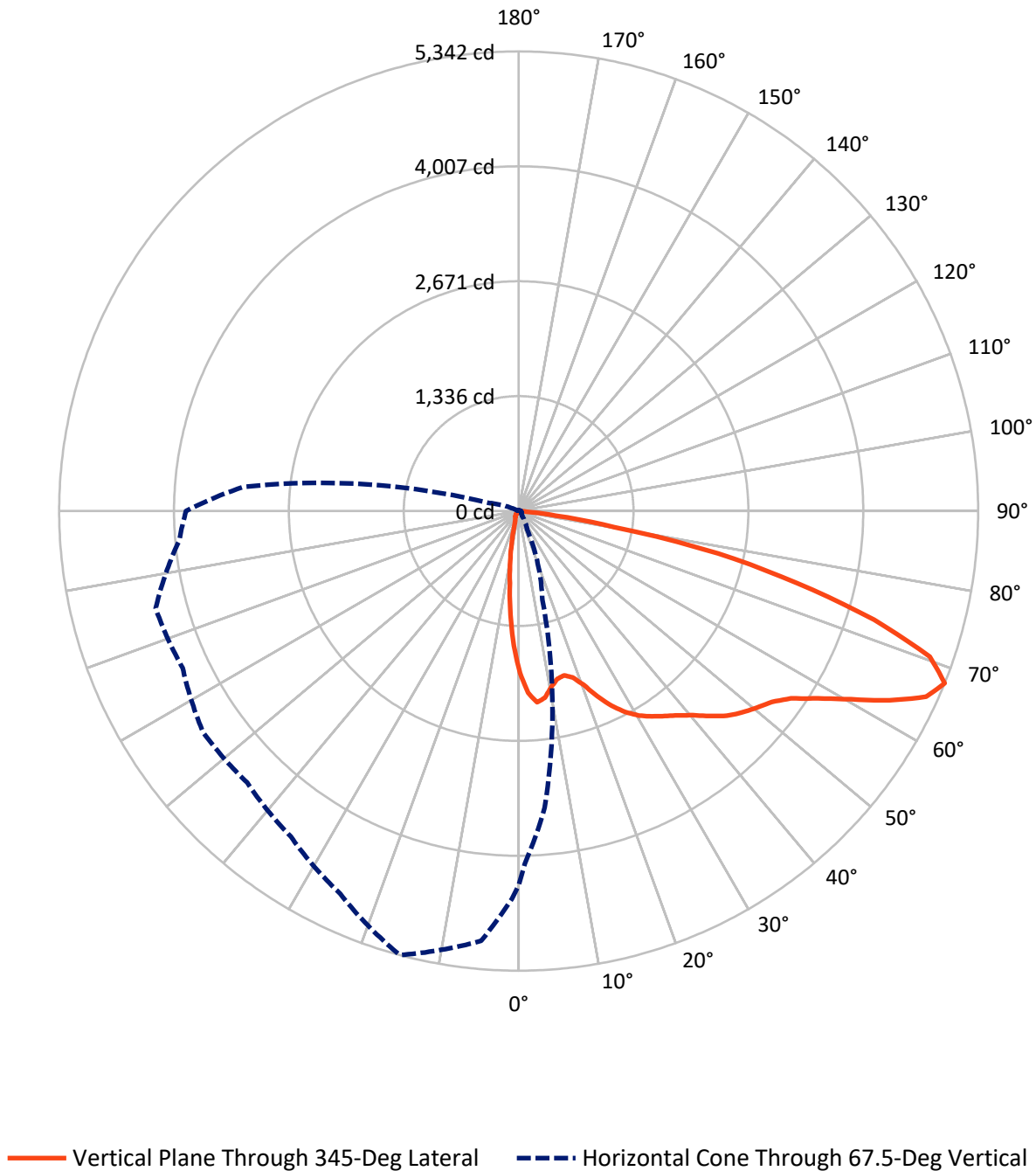
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 8.4 fc  
 Type IV - Medium - N/A

REPORT NUMBER: P386168  
CATALOG NUMBER: GWC-SA1D-735-U-SLR-HSS

## Luminous Intensity Polar Plot



REPORT NUMBER: P386168

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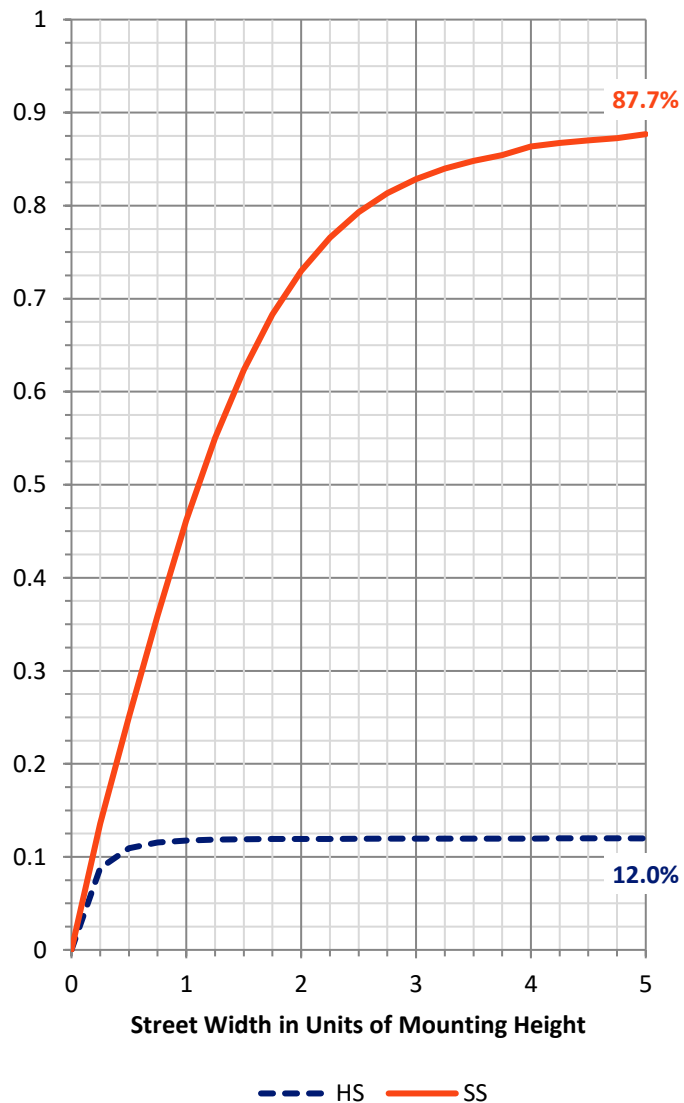
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 698.5    | 0.0    | 698.5  |
|                    | % Fixture | 12.1     | 0.0    | 12.1   |
| <b>Street Side</b> | Lumens    | 5073.1   | 0.0    | 5073.1 |
|                    | % Fixture | 87.9     | 0.0    | 87.9   |
| <b>Total</b>       | Lumens    | 5771.6   | 0.0    | 5771.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 144.3  | 2.5       |
| 10°-20°   | 287.2  | 5.0       |
| 20°-30°   | 407.9  | 7.1       |
| 30°-40°   | 602.4  | 10.4      |
| 40°-50°   | 868.8  | 15.1      |
| 50°-60°   | 1219.6 | 21.1      |
| 60°-70°   | 1421.7 | 24.6      |
| 70°-80°   | 726.8  | 12.6      |
| 80°-90°   | 92.8   | 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°    | 5771.6 | 100.0     |
| 0°-180°   | 5771.6 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P386168

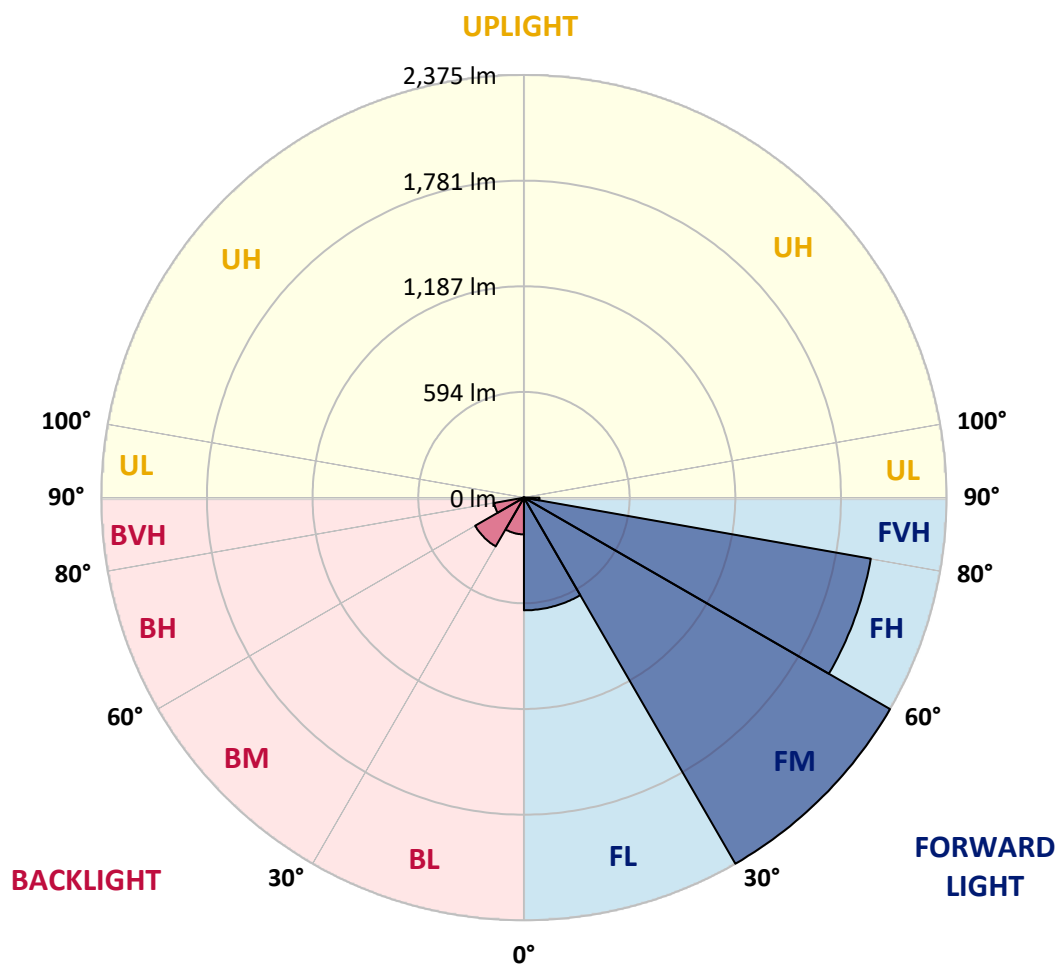
CATALOG NUMBER: GWC-SA1D-735-U-SLR-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 633.0  | 11.0      |                         |      |         |
| FM   | (30°-60°)   | 2374.5 | 41.1      |                         |      |         |
| FH   | (60°-80°)   | 1978.3 | 34.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 87.2   | 1.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 206.3  | 3.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 316.3  | 5.5       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 170.3  | 2.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 5.6    | 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



REPORT NUMBER: P386168

CATALOG NUMBER: GWC-SA1D-735-U-SLR-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 |
| 2.5°  | 2058.7 | 2042.8 | 2025.3 | 1968.1 | 1915.1 | 1854.4 | 1805.0 | 1770.5 | 1727.3 | 1671.2 | 1657.0 |
| 5°    | 2043.8 | 2026.9 | 1972.0 | 1844.8 | 1733.6 | 1625.2 | 1520.8 | 1459.5 | 1383.5 | 1306.4 | 1287.3 |
| 7.5°  | 1895.4 | 1877.7 | 1798.4 | 1624.2 | 1474.3 | 1318.0 | 1182.3 | 1098.3 | 1012.5 | 941.9  | 904.5  |
| 10°   | 1740.9 | 1721.5 | 1632.4 | 1421.0 | 1236.4 | 1095.1 | 995.6  | 915.4  | 834.3  | 758.7  | 698.6  |
| 12.5° | 1634.5 | 1609.1 | 1512.3 | 1272.8 | 1112.1 | 1016.0 | 923.1  | 827.1  | 717.2  | 636.3  | 570.1  |
| 15°   | 1590.0 | 1561.0 | 1458.8 | 1215.7 | 1068.0 | 955.4  | 834.3  | 716.4  | 587.6  | 494.9  | 434.2  |
| 17.5° | 1624.4 | 1586.7 | 1477.1 | 1211.8 | 1012.8 | 859.4  | 706.2  | 568.0  | 428.2  | 334.4  | 291.2  |
| 20°   | 1741.4 | 1691.9 | 1552.8 | 1210.8 | 945.8  | 745.4  | 551.2  | 394.8  | 282.2  | 227.0  | 204.2  |
| 22.5° | 1925.8 | 1860.4 | 1661.6 | 1219.5 | 876.6  | 625.6  | 398.1  | 268.2  | 211.9  | 183.2  | 169.8  |
| 25°   | 2148.3 | 2072.6 | 1818.3 | 1250.4 | 816.0  | 509.2  | 289.3  | 211.9  | 178.9  | 157.7  | 146.5  |
| 27.5° | 2359.9 | 2298.4 | 2016.2 | 1295.0 | 768.9  | 415.0  | 234.8  | 179.6  | 152.8  | 138.9  | 129.9  |
| 30°   | 2571.3 | 2493.9 | 2219.4 | 1348.0 | 712.2  | 351.3  | 206.5  | 163.8  | 137.0  | 122.2  | 116.5  |
| 32.5° | 2725.0 | 2660.7 | 2378.5 | 1386.3 | 651.8  | 309.8  | 184.6  | 149.8  | 127.9  | 112.9  | 104.5  |
| 35°   | 2905.7 | 2833.0 | 2515.0 | 1394.7 | 613.0  | 283.5  | 166.0  | 134.8  | 111.0  | 97.6   | 88.6   |
| 37.5° | 3100.9 | 3010.5 | 2672.5 | 1376.2 | 582.7  | 270.7  | 152.0  | 127.9  | 103.6  | 90.0   | 80.4   |
| 40°   | 3317.0 | 3214.7 | 2823.7 | 1349.3 | 552.8  | 266.3  | 141.4  | 122.8  | 97.9   | 84.0   | 74.1   |
| 42.5° | 3544.4 | 3423.9 | 2954.7 | 1321.2 | 534.0  | 251.3  | 140.3  | 117.6  | 93.5   | 78.4   | 68.7   |
| 45°   | 3735.6 | 3613.4 | 3089.2 | 1312.0 | 520.6  | 234.8  | 144.9  | 114.0  | 90.5   | 74.1   | 64.5   |
| 47.5° | 3887.9 | 3772.2 | 3227.0 | 1332.7 | 512.9  | 219.8  | 132.1  | 118.6  | 88.9   | 70.3   | 61.0   |
| 50°   | 4069.7 | 3938.8 | 3421.2 | 1394.7 | 501.7  | 204.8  | 119.5  | 135.9  | 88.9   | 67.8   | 58.0   |
| 52.5° | 4297.7 | 4168.2 | 3637.7 | 1491.0 | 479.3  | 184.0  | 107.5  | 136.2  | 89.7   | 64.5   | 54.1   |
| 55°   | 4584.6 | 4490.5 | 3947.0 | 1596.6 | 443.5  | 153.4  | 93.0   | 117.0  | 86.4   | 58.5   | 50.5   |
| 57.5° | 4859.7 | 4782.8 | 4228.9 | 1668.7 | 395.7  | 119.8  | 81.0   | 94.3   | 79.0   | 51.4   | 45.1   |
| 59°   | 4934.8 | 4850.9 | 4332.2 | 1672.0 | 359.8  | 104.5  | 75.0   | 78.0   | 77.4   | 48.1   | 41.8   |
| 60°   | 4934.8 | 4845.7 | 4362.0 | 1654.6 | 333.9  | 96.0   | 71.1   | 69.4   | 80.7   | 45.9   | 39.9   |
| 62.5° | 4845.4 | 4720.2 | 4265.2 | 1536.1 | 272.3  | 81.7   | 62.1   | 57.4   | 72.4   | 41.3   | 35.2   |
| 65°   | 4659.5 | 4477.2 | 3935.5 | 1322.0 | 242.8  | 75.0   | 53.5   | 47.1   | 50.4   | 36.4   | 30.9   |
| 67.5° | 4349.4 | 4102.2 | 3460.0 | 1068.0 | 231.1  | 73.0   | 46.2   | 39.9   | 38.0   | 31.2   | 27.1   |
| 70°   | 3803.4 | 3529.1 | 2882.7 | 839.7  | 220.9  | 72.1   | 38.8   | 33.6   | 30.6   | 26.2   | 22.9   |
| 72.5° | 2768.2 | 2482.2 | 2046.7 | 656.5  | 214.9  | 73.8   | 31.2   | 28.2   | 25.2   | 20.5   | 17.8   |
| 75°   | 1583.4 | 1396.1 | 1150.3 | 433.6  | 183.2  | 70.5   | 24.0   | 23.5   | 18.0   | 14.7   | 12.3   |
| 77.5° | 818.1  | 793.2  | 689.3  | 166.6  | 87.7   | 30.9   | 15.9   | 13.7   | 10.7   | 9.0    | 7.4    |
| 80°   | 353.0  | 349.2  | 302.1  | 48.1   | 23.2   | 17.2   | 9.0    | 5.7    | 4.9    | 3.9    | 3.0    |
| 82.5° | 121.9  | 121.9  | 107.5  | 16.2   | 10.4   | 8.5    | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 24.6   | 27.6   | 19.4   | 0.0    | 3.6    | 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: P386168

CATALOG NUMBER: GWC-SA1D-735-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 |
| 2.5°  | 1639.7 | 1606.6 | 1604.5 | 1583.7 | 1557.7 | 1546.0 | 1539.1 | 1551.1 | 1566.0 | 1567.6 | 1589.7 |
| 5°    | 1272.8 | 1238.1 | 1252.6 | 1215.7 | 1223.1 | 1215.7 | 1203.6 | 1205.8 | 1212.4 | 1191.9 | 1217.3 |
| 7.5°  | 893.8  | 867.6  | 884.3  | 874.4  | 887.5  | 892.7  | 885.4  | 874.4  | 842.2  | 838.3  | 860.5  |
| 10°   | 673.7  | 644.0  | 626.2  | 607.6  | 611.6  | 620.1  | 617.4  | 609.5  | 589.0  | 590.0  | 611.4  |
| 12.5° | 541.4  | 508.0  | 472.8  | 427.1  | 415.9  | 422.2  | 415.9  | 411.3  | 391.5  | 393.2  | 412.0  |
| 15°   | 410.7  | 383.4  | 346.4  | 309.8  | 289.8  | 291.8  | 274.2  | 261.9  | 249.6  | 234.8  | 246.4  |
| 17.5° | 277.2  | 260.6  | 249.6  | 238.7  | 214.9  | 209.5  | 187.3  | 163.5  | 154.2  | 147.4  | 152.3  |
| 20°   | 196.3  | 187.3  | 182.9  | 182.3  | 168.7  | 161.9  | 140.3  | 125.5  | 120.9  | 119.5  | 122.5  |
| 22.5° | 164.0  | 157.5  | 151.2  | 147.7  | 140.8  | 132.9  | 116.5  | 109.1  | 105.8  | 104.2  | 106.3  |
| 25°   | 142.7  | 137.8  | 131.2  | 125.2  | 122.5  | 114.0  | 102.3  | 96.8   | 94.6   | 93.0   | 94.0   |
| 27.5° | 126.9  | 122.5  | 114.8  | 111.0  | 108.8  | 101.5  | 91.3   | 87.0   | 85.0   | 84.5   | 84.2   |
| 30°   | 114.3  | 110.2  | 103.1  | 98.7   | 94.9   | 88.3   | 82.3   | 78.0   | 76.0   | 75.4   | 75.0   |
| 32.5° | 101.7  | 98.4   | 93.8   | 89.4   | 85.3   | 79.3   | 74.1   | 70.5   | 67.5   | 67.0   | 66.7   |
| 35°   | 85.9   | 82.6   | 80.1   | 79.8   | 76.0   | 70.3   | 66.4   | 61.8   | 59.4   | 58.5   | 58.8   |
| 37.5° | 76.3   | 72.0   | 66.4   | 68.4   | 67.3   | 63.1   | 58.0   | 53.4   | 50.8   | 50.4   | 50.4   |
| 40°   | 70.3   | 65.7   | 59.4   | 56.1   | 59.4   | 58.5   | 50.4   | 45.7   | 43.2   | 42.9   | 42.4   |
| 42.5° | 64.5   | 59.8   | 52.8   | 47.3   | 48.9   | 51.4   | 43.5   | 39.1   | 36.6   | 36.1   | 35.2   |
| 45°   | 60.4   | 55.5   | 47.5   | 41.3   | 38.0   | 43.2   | 37.2   | 31.8   | 30.3   | 29.2   | 28.7   |
| 47.5° | 56.6   | 51.9   | 42.9   | 35.8   | 30.3   | 31.2   | 29.8   | 26.0   | 24.3   | 23.2   | 22.9   |
| 50°   | 53.4   | 48.4   | 38.8   | 30.6   | 25.2   | 22.9   | 24.0   | 20.5   | 19.2   | 18.0   | 17.5   |
| 52.5° | 49.5   | 44.8   | 34.5   | 26.5   | 21.0   | 18.0   | 18.3   | 16.2   | 14.7   | 13.9   | 13.7   |
| 55°   | 46.5   | 41.8   | 30.9   | 23.2   | 18.6   | 14.7   | 13.2   | 12.6   | 11.7   | 11.2   | 10.9   |
| 57.5° | 42.4   | 38.0   | 27.3   | 19.7   | 15.9   | 12.0   | 10.1   | 10.1   | 9.9    | 9.3    | 9.0    |
| 59°   | 39.9   | 36.1   | 25.2   | 17.8   | 14.5   | 10.4   | 9.0    | 9.3    | 9.0    | 8.5    | 8.2    |
| 60°   | 38.0   | 34.5   | 23.5   | 16.4   | 13.7   | 9.6    | 8.2    | 8.7    | 8.5    | 7.9    | 7.6    |
| 62.5° | 33.6   | 31.2   | 20.2   | 13.7   | 12.0   | 7.6    | 6.9    | 7.4    | 7.4    | 7.1    | 6.9    |
| 65°   | 29.5   | 26.8   | 17.2   | 11.5   | 11.2   | 6.6    | 5.4    | 6.6    | 6.9    | 6.3    | 5.7    |
| 67.5° | 25.7   | 22.9   | 15.0   | 9.3    | 10.4   | 5.2    | 4.1    | 5.4    | 7.4    | 5.7    | 5.2    |
| 70°   | 21.9   | 19.2   | 11.7   | 7.4    | 10.9   | 3.6    | 3.3    | 4.9    | 8.7    | 6.3    | 4.9    |
| 72.5° | 16.9   | 14.7   | 8.2    | 5.4    | 11.7   | 2.4    | 2.4    | 4.1    | 9.9    | 6.9    | 4.6    |
| 75°   | 11.7   | 9.6    | 4.9    | 3.3    | 9.6    | 1.6    | 1.6    | 3.9    | 9.3    | 6.3    | 4.4    |
| 77.5° | 6.9    | 5.2    | 1.6    | 0.3    | 4.9    | 0.0    | 0.3    | 2.7    | 6.6    | 3.9    | 1.9    |
| 80°   | 2.4    | 1.1    | 0.0    | 0.0    | 3.0    | 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    |



REPORT NUMBER: P386168

CATALOG NUMBER: GWC-SA1D-735-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 185°   | 195°   | 205°   | 215°   | 225°   | 235°   | 245°   | 255°   | 265°   | 270°   | 275°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 |
| 2.5°  | 1595.5 | 1632.4 | 1665.5 | 1715.5 | 1774.8 | 1843.2 | 1902.0 | 1965.1 | 2024.5 | 2049.1 | 2066.0 |
| 5°    | 1222.5 | 1268.2 | 1321.4 | 1395.0 | 1492.9 | 1613.5 | 1726.4 | 1854.1 | 1991.4 | 2060.0 | 2124.5 |
| 7.5°  | 864.3  | 910.8  | 977.0  | 1055.1 | 1173.6 | 1317.1 | 1464.8 | 1641.1 | 1827.0 | 1935.6 | 2042.5 |
| 10°   | 621.5  | 678.6  | 740.4  | 847.3  | 967.7  | 1103.8 | 1255.9 | 1452.8 | 1660.0 | 1780.3 | 1909.1 |
| 12.5° | 423.0  | 488.1  | 581.6  | 701.4  | 842.7  | 976.1  | 1108.2 | 1296.1 | 1536.7 | 1655.9 | 1794.0 |
| 15°   | 253.7  | 289.8  | 388.8  | 527.5  | 700.8  | 867.1  | 1011.7 | 1200.1 | 1456.5 | 1602.6 | 1746.1 |
| 17.5° | 156.4  | 173.0  | 227.0  | 340.7  | 522.8  | 733.1  | 931.3  | 1167.6 | 1468.1 | 1645.7 | 1799.4 |
| 20°   | 124.7  | 131.2  | 148.5  | 201.2  | 346.4  | 585.4  | 840.8  | 1161.0 | 1561.8 | 1780.5 | 1945.5 |
| 22.5° | 108.3  | 114.6  | 126.1  | 146.3  | 217.9  | 438.3  | 754.9  | 1167.0 | 1696.4 | 1982.6 | 2175.2 |
| 25°   | 95.4   | 100.9  | 111.8  | 128.5  | 159.7  | 308.7  | 663.0  | 1193.8 | 1871.6 | 2233.4 | 2437.9 |
| 27.5° | 85.3   | 90.0   | 100.0  | 115.4  | 137.0  | 215.5  | 558.8  | 1226.3 | 2079.4 | 2489.9 | 2691.6 |
| 30°   | 76.0   | 80.1   | 89.1   | 103.3  | 118.9  | 165.7  | 444.6  | 1248.5 | 2287.5 | 2691.6 | 2872.9 |
| 32.5° | 68.1   | 71.1   | 79.3   | 91.3   | 103.3  | 132.1  | 338.0  | 1244.9 | 2442.0 | 2859.5 | 3003.3 |
| 35°   | 59.8   | 62.8   | 70.0   | 80.4   | 90.0   | 109.1  | 265.8  | 1178.5 | 2576.6 | 3033.7 | 3152.6 |
| 37.5° | 50.8   | 54.7   | 61.5   | 70.8   | 77.4   | 96.0   | 214.9  | 1098.3 | 2713.0 | 3232.7 | 3319.2 |
| 40°   | 43.2   | 47.1   | 53.1   | 63.1   | 67.3   | 91.0   | 165.1  | 1000.7 | 2866.4 | 3455.4 | 3501.8 |
| 42.5° | 35.8   | 39.4   | 45.7   | 54.4   | 63.4   | 78.4   | 122.2  | 889.2  | 3013.8 | 3645.6 | 3668.3 |
| 45°   | 29.0   | 32.5   | 39.1   | 47.8   | 67.8   | 65.1   | 94.6   | 769.7  | 3132.7 | 3804.0 | 3811.3 |
| 47.5° | 22.9   | 26.2   | 33.1   | 45.1   | 63.1   | 51.9   | 67.5   | 675.9  | 3232.5 | 3927.5 | 3908.2 |
| 50°   | 17.8   | 20.5   | 27.6   | 51.7   | 55.2   | 42.9   | 51.1   | 644.7  | 3321.9 | 4004.1 | 3953.8 |
| 52.5° | 13.9   | 16.4   | 22.7   | 48.4   | 42.9   | 35.5   | 42.9   | 674.0  | 3444.4 | 4067.6 | 3979.5 |
| 55°   | 11.2   | 13.7   | 17.8   | 27.6   | 29.2   | 30.1   | 36.6   | 701.4  | 3655.7 | 4216.3 | 4131.3 |
| 57.5° | 9.3    | 11.7   | 14.5   | 19.4   | 22.2   | 25.5   | 32.5   | 704.4  | 3904.9 | 4463.4 | 4383.1 |
| 59°   | 8.5    | 10.7   | 13.2   | 17.2   | 19.4   | 23.2   | 30.6   | 687.9  | 3992.6 | 4553.4 | 4513.2 |
| 60°   | 7.9    | 10.1   | 12.3   | 15.9   | 18.0   | 21.9   | 29.5   | 672.3  | 3996.5 | 4550.1 | 4568.7 |
| 62.5° | 6.9    | 9.0    | 10.9   | 13.4   | 15.3   | 18.6   | 26.5   | 614.6  | 3834.6 | 4401.2 | 4535.4 |
| 65°   | 6.0    | 7.9    | 9.9    | 11.5   | 13.2   | 16.7   | 24.0   | 509.4  | 3558.1 | 4160.8 | 4307.0 |
| 67.5° | 5.4    | 6.9    | 9.0    | 10.1   | 11.7   | 14.7   | 21.3   | 363.1  | 3212.8 | 3866.8 | 3961.7 |
| 70°   | 4.9    | 6.6    | 8.2    | 9.3    | 10.7   | 12.9   | 18.3   | 208.6  | 2713.0 | 3436.5 | 3504.0 |
| 72.5° | 4.6    | 6.3    | 7.4    | 8.7    | 9.6    | 11.5   | 16.7   | 98.2   | 1986.4 | 2752.9 | 2929.2 |
| 75°   | 4.1    | 5.7    | 6.9    | 8.2    | 9.0    | 10.4   | 14.2   | 47.1   | 1321.2 | 1992.2 | 2192.6 |
| 77.5° | 2.4    | 4.6    | 6.3    | 7.4    | 7.9    | 9.0    | 11.7   | 27.1   | 843.3  | 1378.9 | 1624.2 |
| 80°   | 0.0    | 1.6    | 4.6    | 6.3    | 6.9    | 7.6    | 9.0    | 21.3   | 451.2  | 787.8  | 945.5  |
| 82.5° | 0.0    | 0.0    | 3.3    | 4.9    | 4.6    | 5.2    | 6.9    | 13.4   | 203.5  | 514.9  | 580.3  |
| 85°   | 0.0    | 0.0    | 1.1    | 3.9    | 3.3    | 2.4    | 4.6    | 4.6    | 44.5   | 260.6  | 325.1  |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.3    | 1.6    | 1.1    | 1.9    | 0.6    | 0.3    | 19.4   | 78.7   |
| 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: P386168

CATALOG NUMBER: GWC-SA1D-735-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 | 1880.1 |
| 2.5°  | 2125.4 | 2145.6 | 2179.8 | 2195.9 | 2187.9 | 2154.3 | 2114.2 | 2073.1 | 2049.1 | 2058.7 |
| 5°    | 2256.0 | 2360.2 | 2420.4 | 2440.4 | 2407.0 | 2331.6 | 2232.8 | 2102.6 | 2056.4 | 2043.8 |
| 7.5°  | 2256.0 | 2452.1 | 2576.3 | 2598.1 | 2523.8 | 2375.8 | 2190.8 | 1987.6 | 1920.0 | 1895.4 |
| 10°   | 2176.8 | 2443.6 | 2616.7 | 2651.4 | 2547.5 | 2326.3 | 2078.3 | 1846.5 | 1766.3 | 1740.9 |
| 12.5° | 2087.3 | 2374.7 | 2557.1 | 2604.9 | 2519.6 | 2277.1 | 2000.4 | 1751.0 | 1656.7 | 1634.5 |
| 15°   | 2032.4 | 2290.0 | 2440.9 | 2475.6 | 2439.5 | 2248.4 | 1981.8 | 1722.3 | 1611.3 | 1590.0 |
| 17.5° | 2052.1 | 2224.4 | 2278.8 | 2299.0 | 2323.3 | 2238.3 | 2032.4 | 1785.2 | 1644.7 | 1624.4 |
| 20°   | 2126.2 | 2155.2 | 2127.0 | 2152.4 | 2218.1 | 2248.2 | 2153.0 | 1937.2 | 1768.5 | 1741.4 |
| 22.5° | 2252.0 | 2119.4 | 2040.4 | 2050.4 | 2130.3 | 2280.7 | 2337.3 | 2154.3 | 1959.7 | 1925.8 |
| 25°   | 2398.6 | 2148.3 | 1992.2 | 1983.2 | 2065.3 | 2323.6 | 2505.7 | 2390.6 | 2185.8 | 2148.3 |
| 27.5° | 2582.8 | 2213.4 | 1982.4 | 1973.4 | 2042.5 | 2363.8 | 2645.7 | 2624.1 | 2423.9 | 2359.9 |
| 30°   | 2725.0 | 2277.4 | 2011.6 | 1990.9 | 2065.3 | 2391.7 | 2758.1 | 2822.3 | 2613.7 | 2571.3 |
| 32.5° | 2827.0 | 2352.9 | 2059.2 | 2029.1 | 2129.2 | 2439.8 | 2844.8 | 3003.9 | 2789.2 | 2725.0 |
| 35°   | 2904.6 | 2434.9 | 2136.0 | 2086.6 | 2217.3 | 2512.8 | 2925.9 | 3197.2 | 2976.0 | 2905.7 |
| 37.5° | 2977.4 | 2550.0 | 2256.0 | 2197.0 | 2355.3 | 2630.4 | 3011.8 | 3416.5 | 3184.9 | 3100.9 |
| 40°   | 3078.8 | 2680.5 | 2441.2 | 2388.7 | 2587.5 | 2790.7 | 3119.0 | 3645.1 | 3422.5 | 3317.0 |
| 42.5° | 3180.2 | 2820.4 | 2630.7 | 2644.9 | 2877.0 | 2985.3 | 3257.3 | 3886.8 | 3657.2 | 3544.4 |
| 45°   | 3272.9 | 2964.8 | 2900.6 | 2966.1 | 3145.8 | 3198.8 | 3394.9 | 4026.5 | 3844.4 | 3735.6 |
| 47.5° | 3355.5 | 3145.3 | 3168.8 | 3343.5 | 3451.5 | 3392.2 | 3497.7 | 4147.1 | 3983.9 | 3887.9 |
| 50°   | 3451.5 | 3378.8 | 3522.4 | 3769.5 | 3803.4 | 3567.2 | 3591.2 | 4289.8 | 4146.9 | 4069.7 |
| 52.5° | 3556.5 | 3624.8 | 3913.9 | 4131.8 | 4120.8 | 3757.2 | 3685.2 | 4449.8 | 4370.2 | 4297.7 |
| 55°   | 3675.8 | 3823.6 | 4258.6 | 4470.9 | 4461.6 | 3969.4 | 3841.1 | 4647.5 | 4650.2 | 4584.6 |
| 57.5° | 3852.6 | 3994.8 | 4492.7 | 4745.1 | 4760.7 | 4214.4 | 4105.2 | 4869.0 | 4903.4 | 4859.7 |
| 59°   | 3979.5 | 4105.8 | 4585.4 | 4859.7 | 4923.1 | 4403.9 | 4298.3 | 4997.5 | 4974.7 | 4934.8 |
| 60°   | 4073.6 | 4176.4 | 4631.3 | 4919.5 | 5017.4 | 4532.4 | 4440.8 | 5072.9 | 4983.2 | 4934.8 |
| 62.5° | 4306.3 | 4330.0 | 4714.2 | 4987.3 | 5126.0 | 4817.9 | 4841.6 | 5201.4 | 4924.5 | 4845.4 |
| 65°   | 4414.8 | 4427.1 | 4713.1 | 4866.0 | 5021.0 | 5040.1 | 5205.3 | 5205.3 | 4781.0 | 4659.5 |
| 67.5° | 4369.4 | 4310.0 | 4479.3 | 4463.4 | 4618.2 | 4908.1 | 5342.0 | 5014.4 | 4506.4 | 4349.4 |
| 70°   | 4000.3 | 3771.9 | 3696.8 | 3703.6 | 3822.0 | 4269.1 | 5071.3 | 4452.8 | 3986.9 | 3803.4 |
| 72.5° | 3328.5 | 2780.8 | 2595.1 | 2807.0 | 2837.9 | 3280.8 | 4321.9 | 3353.4 | 2940.2 | 2768.2 |
| 75°   | 2677.2 | 1960.2 | 1658.3 | 1882.0 | 1934.5 | 2401.0 | 3343.2 | 2088.5 | 1717.4 | 1583.4 |
| 77.5° | 1923.3 | 1407.0 | 1189.9 | 1174.3 | 1242.2 | 1522.8 | 2372.3 | 1051.1 | 876.6  | 818.1  |
| 80°   | 1092.6 | 926.1  | 997.2  | 940.9  | 975.1  | 952.1  | 1127.1 | 461.0  | 377.6  | 353.0  |
| 82.5° | 659.5  | 547.4  | 592.8  | 493.6  | 624.5  | 543.8  | 434.2  | 147.7  | 128.2  | 121.9  |
| 85°   | 429.0  | 299.1  | 155.8  | 104.5  | 215.2  | 347.5  | 97.0   | 40.2   | 30.9   | 24.6   |
| 87.5° | 148.0  | 76.3   | 7.6    | 3.3    | 22.9   | 64.8   | 3.6    | 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    |

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

INVUE

Report Number: SP1-2104-224-2

Luminaire Tested: CCW-SA-2A-735-U-SL4

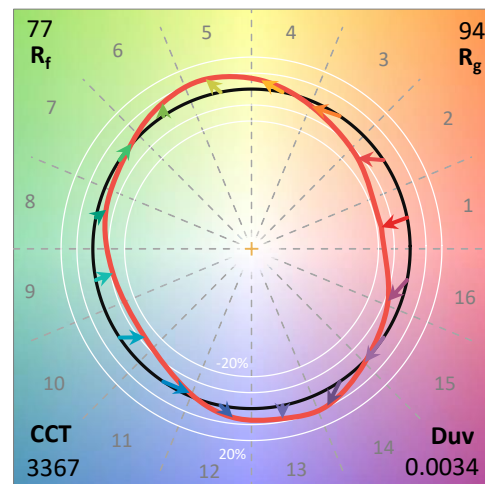
Test Date: 04/26/2021

### Test Information

Test Method: LM-79-08  
 Report Number: SP1-2104-224-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry:  $4\pi$   
 Issue Date: 04/26/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: INVUE  
 Catalog Number: **CCW-SA-2A-735-U-SL4**  
 Description: INVUE WALL PACK ClearCurve Light Square

### Spectral Parameters

|                           |        |           |      |      |       |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K):                  | 3367   | CRI (Ra): | 73.3 |      |       |
| CIE u':                   | 0.2376 | R1:       | 69.1 | R9:  | -34.3 |
| CIE v':                   | 0.5184 | R2:       | 81.3 | R10: | 58.3  |
| Duv:                      | 0.0034 | R3:       | 93.4 | R11: | 69.1  |
| CIE x:                    | 0.4168 | R4:       | 71.8 | R12: | 54.2  |
| CIE y:                    | 0.4041 | R5:       | 69.6 | R13: | 71.1  |
| CIE z:                    | 0.1791 | R6:       | 75.4 | R14: | 96.4  |
| Peak Wavelength (nm):     | 590    | R7:       | 79.5 |      |       |
| Dominant Wavelength (nm): | 580    | R8:       | 46.4 |      |       |
| Purity:                   | 46.5   |           |      |      |       |
| Rf:                       | 77.2   |           |      |      |       |
| Rg:                       | 94.4   |           |      |      |       |



### Test Conditions

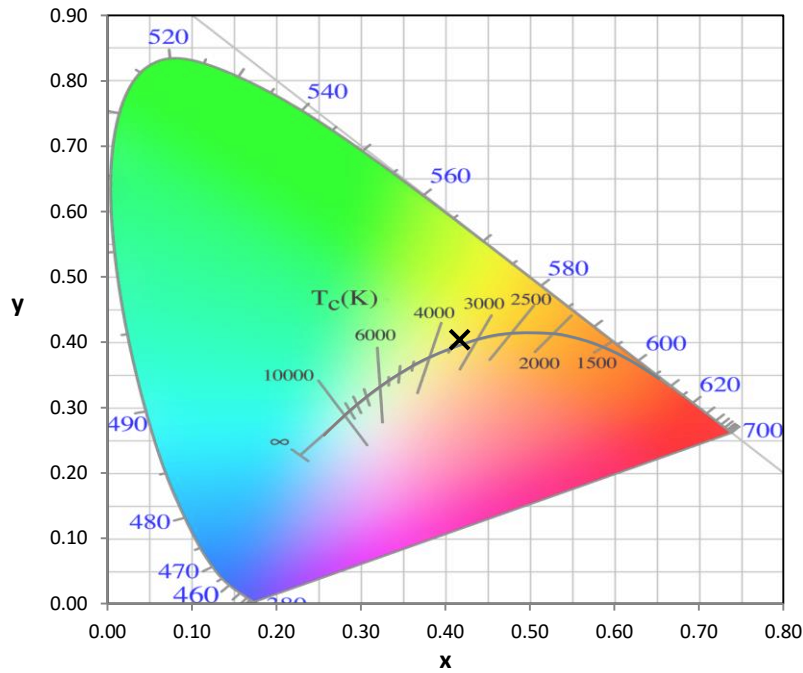
Stabilization Time: 71M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.9/38%  
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2104-224-2

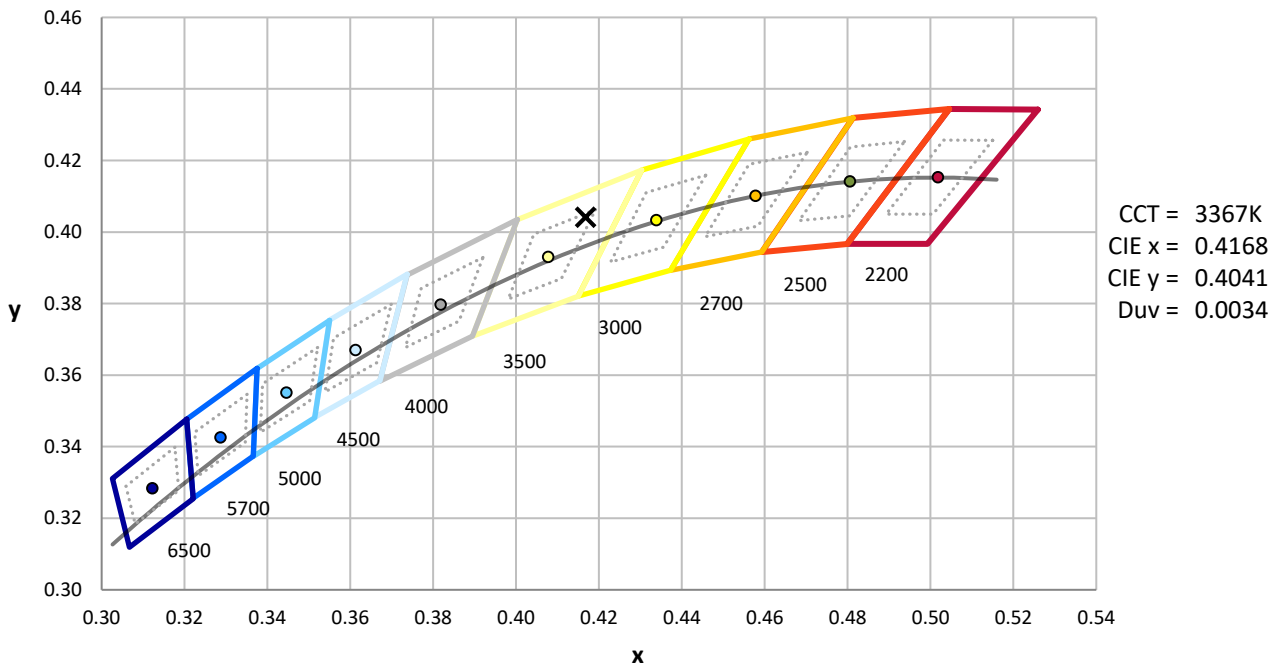
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 1/31/2021        | 7/31/2021            |
| 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: SP1-2104-224-2

**CIE 1931 Chromaticity Diagram**

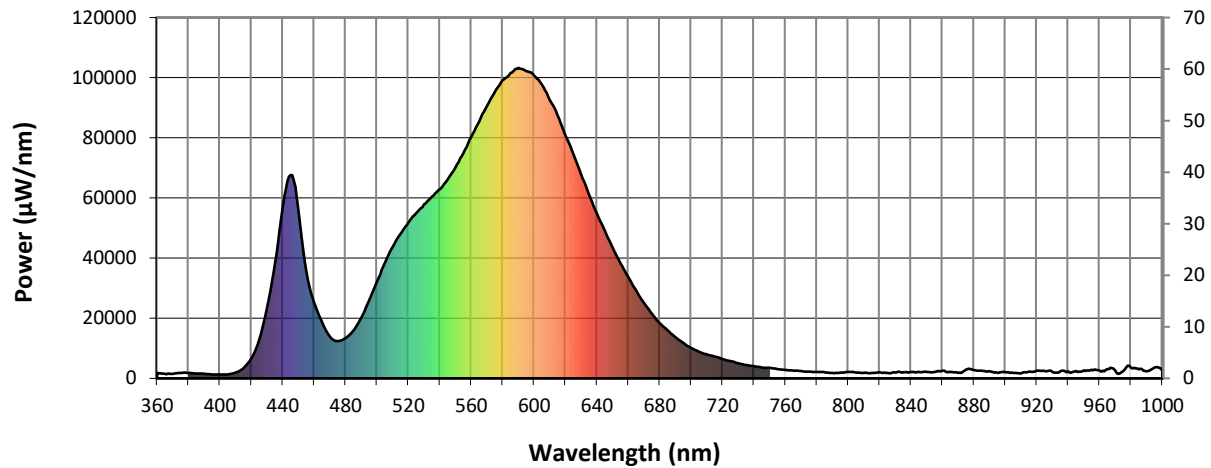


**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



REPORT NUMBER: SP1-2104-224-2

### Photopic Flux vs. Wavelength

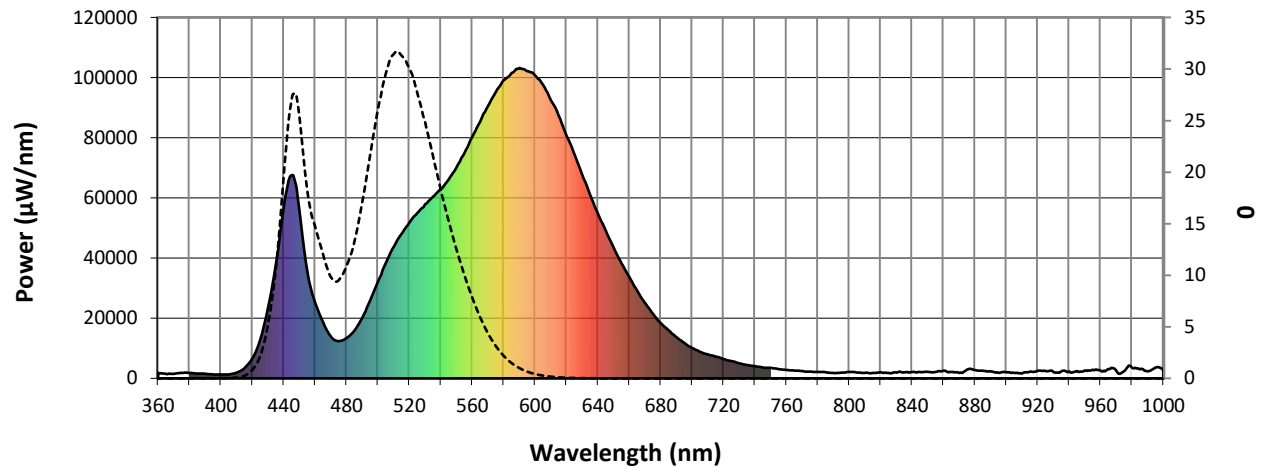


#####

| 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       | 1840             | 0.0              | 490       | 20271            | 2.9              | 620       | 80709            | 21.0             | 750       | 3465             | 0.0              | 880       | 2800             | 0.0              |
| 365       | 1514             | 0.0              | 495       | 25910            | 4.7              | 625       | 74695            | 16.5             | 755       | 3075             | 0.0              | 885       | 2582             | 0.0              |
| 370       | 1514             | 0.0              | 500       | 32216            | 7.1              | 630       | 67709            | 12.3             | 760       | 2794             | 0.0              | 890       | 2353             | 0.0              |
| 375       | 1843             | 0.0              | 505       | 38336            | 10.7             | 635       | 61156            | 9.2              | 765       | 2593             | 0.0              | 895       | 1819             | 0.0              |
| 380       | 1796             | 0.0              | 510       | 43738            | 15.0             | 640       | 54795            | 6.5              | 770       | 2401             | 0.0              | 900       | 2024             | 0.0              |
| 385       | 1575             | 0.0              | 515       | 47977            | 19.9             | 645       | 49111            | 4.7              | 775       | 2233             | 0.0              | 905       | 1851             | 0.0              |
| 390       | 1527             | 0.0              | 520       | 51818            | 25.1             | 650       | 43533            | 3.2              | 780       | 2166             | 0.0              | 910       | 1602             | 0.0              |
| 395       | 1326             | 0.0              | 525       | 54890            | 29.5             | 655       | 38234            | 2.2              | 785       | 2051             | 0.0              | 915       | 2200             | 0.0              |
| 400       | 1233             | 0.0              | 530       | 57872            | 34.1             | 660       | 33754            | 1.4              | 790       | 1765             | 0.0              | 920       | 2530             | 0.0              |
| 405       | 1329             | 0.0              | 535       | 60410            | 37.5             | 665       | 29162            | 0.9              | 795       | 1903             | 0.0              | 925       | 2487             | 0.0              |
| 410       | 1902             | 0.0              | 540       | 62857            | 41.0             | 670       | 25117            | 0.5              | 800       | 2127             | 0.0              | 930       | 2089             | 0.0              |
| 415       | 3436             | 0.0              | 545       | 66165            | 44.0             | 675       | 21511            | 0.4              | 805       | 1867             | 0.0              | 935       | 2293             | 0.0              |
| 420       | 6571             | 0.0              | 550       | 70124            | 47.7             | 680       | 18435            | 0.2              | 810       | 1775             | 0.0              | 940       | 2315             | 0.0              |
| 425       | 12957            | 0.1              | 555       | 74973            | 51.2             | 685       | 16004            | 0.1              | 815       | 1812             | 0.0              | 945       | 2481             | 0.0              |
| 430       | 23376            | 0.2              | 560       | 80227            | 54.5             | 690       | 13701            | 0.1              | 820       | 1973             | 0.0              | 950       | 2701             | 0.0              |
| 435       | 38205            | 0.5              | 565       | 85358            | 56.8             | 695       | 11765            | 0.0              | 825       | 1773             | 0.0              | 955       | 2892             | 0.0              |
| 440       | 56691            | 0.9              | 570       | 90422            | 58.8             | 700       | 10145            | 0.0              | 830       | 1925             | 0.0              | 960       | 2609             | 0.0              |
| 445       | 67585            | 1.4              | 575       | 95259            | 59.3             | 705       | 8865             | 0.0              | 835       | 2001             | 0.0              | 965       | 3066             | 0.0              |
| 450       | 55963            | 1.5              | 580       | 99033            | 58.8             | 710       | 7954             | 0.0              | 840       | 2142             | 0.0              | 970       | 2566             | 0.0              |
| 455       | 35549            | 1.2              | 585       | 101572           | 56.4             | 715       | 7285             | 0.0              | 845       | 2101             | 0.0              | 975       | 2375             | 0.0              |
| 460       | 25268            | 1.0              | 590       | 103264           | 53.4             | 720       | 6412             | 0.0              | 850       | 2097             | 0.0              | 980       | 3526             | 0.0              |
| 465       | 18712            | 1.0              | 595       | 102194           | 48.4             | 725       | 5721             | 0.0              | 855       | 2090             | 0.0              | 985       | 2982             | 0.0              |
| 470       | 13835            | 0.9              | 600       | 100645           | 43.4             | 730       | 5017             | 0.0              | 860       | 2535             | 0.0              | 990       | 2305             | 0.0              |
| 475       | 12398            | 1.0              | 605       | 97644            | 37.8             | 735       | 4459             | 0.0              | 865       | 2101             | 0.0              | 995       | 3671             | 0.0              |
| 480       | 13406            | 1.3              | 610       | 92487            | 31.8             | 740       | 4062             | 0.0              | 870       | 1798             | 0.0              | 1000      | 2560             | 0.0              |
| 485       | 15865            | 1.9              | 615       | 87436            | 26.4             | 745       | 3636             | 0.0              | 875       | 2857             | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2104-224-2

### Scotopic Flux vs. Wavelength



Scotopic Lumens: 7088.7

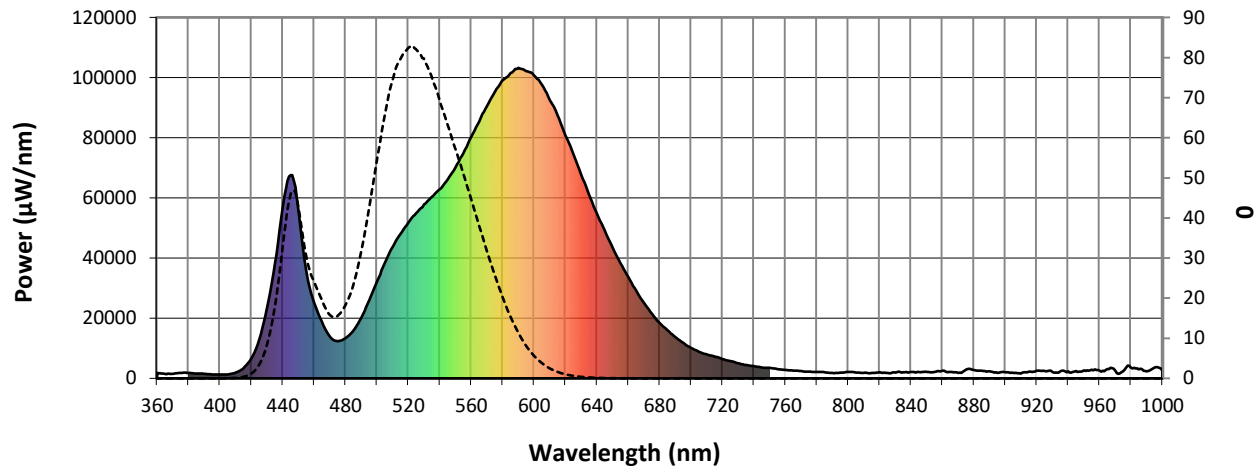
S/P: 1.35

| 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       | 1840             | 0.0              | 490       | 20271            | 31.2             | 620       | 80709            | 1.0              | 750       | 3465             | 0.0              | 880       | 2800             | 0.0              |
| 365       | 1514             | 0.0              | 495       | 25910            | 41.9             | 625       | 74695            | 0.6              | 755       | 3075             | 0.0              | 885       | 2582             | 0.0              |
| 370       | 1514             | 0.0              | 500       | 32216            | 53.9             | 630       | 67709            | 0.4              | 760       | 2794             | 0.0              | 890       | 2353             | 0.0              |
| 375       | 1843             | 0.0              | 505       | 38336            | 65.2             | 635       | 61156            | 0.2              | 765       | 2593             | 0.0              | 895       | 1819             | 0.0              |
| 380       | 1796             | 0.0              | 510       | 43738            | 74.1             | 640       | 54795            | 0.1              | 770       | 2401             | 0.0              | 900       | 2024             | 0.0              |
| 385       | 1575             | 0.0              | 515       | 47977            | 79.5             | 645       | 49111            | 0.1              | 775       | 2233             | 0.0              | 905       | 1851             | 0.0              |
| 390       | 1527             | 0.0              | 520       | 51818            | 82.4             | 650       | 43533            | 0.1              | 780       | 2166             | 0.0              | 910       | 1602             | 0.0              |
| 395       | 1326             | 0.0              | 525       | 54890            | 82.1             | 655       | 38234            | 0.0              | 785       | 2051             | 0.0              | 915       | 2200             | 0.0              |
| 400       | 1233             | 0.0              | 530       | 57872            | 79.8             | 660       | 33754            | 0.0              | 790       | 1765             | 0.0              | 920       | 2530             | 0.0              |
| 405       | 1329             | 0.0              | 535       | 60410            | 75.3             | 665       | 29162            | 0.0              | 795       | 1903             | 0.0              | 925       | 2487             | 0.0              |
| 410       | 1902             | 0.1              | 540       | 62857            | 69.5             | 670       | 25117            | 0.0              | 800       | 2127             | 0.0              | 930       | 2089             | 0.0              |
| 415       | 3436             | 0.4              | 545       | 66165            | 63.4             | 675       | 21511            | 0.0              | 805       | 1867             | 0.0              | 935       | 2293             | 0.0              |
| 420       | 6571             | 1.1              | 550       | 70124            | 57.3             | 680       | 18435            | 0.0              | 810       | 1775             | 0.0              | 940       | 2315             | 0.0              |
| 425       | 12957            | 3.2              | 555       | 74973            | 51.2             | 685       | 16004            | 0.0              | 815       | 1812             | 0.0              | 945       | 2481             | 0.0              |
| 430       | 23376            | 8.0              | 560       | 80227            | 44.8             | 690       | 13701            | 0.0              | 820       | 1973             | 0.0              | 950       | 2701             | 0.0              |
| 435       | 38205            | 17.1             | 565       | 85358            | 38.3             | 695       | 11765            | 0.0              | 825       | 1773             | 0.0              | 955       | 2892             | 0.0              |
| 440       | 56691            | 31.7             | 570       | 90422            | 31.9             | 700       | 10145            | 0.0              | 830       | 1925             | 0.0              | 960       | 2609             | 0.0              |
| 445       | 67585            | 45.3             | 575       | 95259            | 25.9             | 705       | 8865             | 0.0              | 835       | 2001             | 0.0              | 965       | 3066             | 0.0              |
| 450       | 55963            | 43.4             | 580       | 99033            | 20.4             | 710       | 7954             | 0.0              | 840       | 2142             | 0.0              | 970       | 2566             | 0.0              |
| 455       | 35549            | 31.1             | 585       | 101572           | 15.5             | 715       | 7285             | 0.0              | 845       | 2101             | 0.0              | 975       | 2375             | 0.0              |
| 460       | 25268            | 24.4             | 590       | 103264           | 11.5             | 720       | 6412             | 0.0              | 850       | 2097             | 0.0              | 980       | 3526             | 0.0              |
| 465       | 18712            | 19.8             | 595       | 102194           | 8.1              | 725       | 5721             | 0.0              | 855       | 2090             | 0.0              | 985       | 2982             | 0.0              |
| 470       | 13835            | 15.9             | 600       | 100645           | 5.7              | 730       | 5017             | 0.0              | 860       | 2535             | 0.0              | 990       | 2305             | 0.0              |
| 475       | 12398            | 15.5             | 605       | 97644            | 3.8              | 735       | 4459             | 0.0              | 865       | 2101             | 0.0              | 995       | 3671             | 0.0              |
| 480       | 13406            | 18.1             | 610       | 92487            | 2.5              | 740       | 4062             | 0.0              | 870       | 1798             | 0.0              | 1000      | 2560             | 0.0              |
| 485       | 15865            | 23.0             | 615       | 87436            | 1.6              | 745       | 3636             | 0.0              | 875       | 2857             | 0.0              |           |                  |                  |



REPORT NUMBER: SP1-2104-224-2

### Melanopic Flux vs. Wavelength



Melanopic Lumens: 2621

M/P: 0.5

| 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       | 1840             | 0.0              | 490       | 20271            | 16.9             | 620       | 80709            | 0.1              | 750       | 3465             | 0.0              | 880       | 2800             | 0.0              |
| 365       | 1514             | 0.0              | 495       | 25910            | 21.4             | 625       | 74695            | 0.0              | 755       | 3075             | 0.0              | 885       | 2582             | 0.0              |
| 370       | 1514             | 0.0              | 500       | 32216            | 25.9             | 630       | 67709            | 0.0              | 760       | 2794             | 0.0              | 890       | 2353             | 0.0              |
| 375       | 1843             | 0.0              | 505       | 38336            | 29.4             | 635       | 61156            | 0.0              | 765       | 2593             | 0.0              | 895       | 1819             | 0.0              |
| 380       | 1796             | 0.0              | 510       | 43738            | 31.4             | 640       | 54795            | 0.0              | 770       | 2401             | 0.0              | 900       | 2024             | 0.0              |
| 385       | 1575             | 0.0              | 515       | 47977            | 31.3             | 645       | 49111            | 0.0              | 775       | 2233             | 0.0              | 905       | 1851             | 0.0              |
| 390       | 1527             | 0.0              | 520       | 51818            | 30.2             | 650       | 43533            | 0.0              | 780       | 2166             | 0.0              | 910       | 1602             | 0.0              |
| 395       | 1326             | 0.0              | 525       | 54890            | 27.8             | 655       | 38234            | 0.0              | 785       | 2051             | 0.0              | 915       | 2200             | 0.0              |
| 400       | 1233             | 0.0              | 530       | 57872            | 25.0             | 660       | 33754            | 0.0              | 790       | 1765             | 0.0              | 920       | 2530             | 0.0              |
| 405       | 1329             | 0.0              | 535       | 60410            | 21.7             | 665       | 29162            | 0.0              | 795       | 1903             | 0.0              | 925       | 2487             | 0.0              |
| 410       | 1902             | 0.1              | 540       | 62857            | 18.4             | 670       | 25117            | 0.0              | 800       | 2127             | 0.0              | 930       | 2089             | 0.0              |
| 415       | 3436             | 0.2              | 545       | 66165            | 15.4             | 675       | 21511            | 0.0              | 805       | 1867             | 0.0              | 935       | 2293             | 0.0              |
| 420       | 6571             | 0.8              | 550       | 70124            | 12.6             | 680       | 18435            | 0.0              | 810       | 1775             | 0.0              | 940       | 2315             | 0.0              |
| 425       | 12957            | 2.0              | 555       | 74973            | 10.1             | 685       | 16004            | 0.0              | 815       | 1812             | 0.0              | 945       | 2481             | 0.0              |
| 430       | 23376            | 4.9              | 560       | 80227            | 7.9              | 690       | 13701            | 0.0              | 820       | 1973             | 0.0              | 950       | 2701             | 0.0              |
| 435       | 38205            | 10.2             | 565       | 85358            | 6.0              | 695       | 11765            | 0.0              | 825       | 1773             | 0.0              | 955       | 2892             | 0.0              |
| 440       | 56691            | 18.9             | 570       | 90422            | 4.4              | 700       | 10145            | 0.0              | 830       | 1925             | 0.0              | 960       | 2609             | 0.0              |
| 445       | 67585            | 26.7             | 575       | 95259            | 3.2              | 705       | 8865             | 0.0              | 835       | 2001             | 0.0              | 965       | 3066             | 0.0              |
| 450       | 55963            | 25.8             | 580       | 99033            | 2.2              | 710       | 7954             | 0.0              | 840       | 2142             | 0.0              | 970       | 2566             | 0.0              |
| 455       | 35549            | 18.6             | 585       | 101572           | 1.5              | 715       | 7285             | 0.0              | 845       | 2101             | 0.0              | 975       | 2375             | 0.0              |
| 460       | 25268            | 14.9             | 590       | 103264           | 1.0              | 720       | 6412             | 0.0              | 850       | 2097             | 0.0              | 980       | 3526             | 0.0              |
| 465       | 18712            | 12.2             | 595       | 102194           | 0.7              | 725       | 5721             | 0.0              | 855       | 2090             | 0.0              | 985       | 2982             | 0.0              |
| 470       | 13835            | 9.9              | 600       | 100645           | 0.4              | 730       | 5017             | 0.0              | 860       | 2535             | 0.0              | 990       | 2305             | 0.0              |
| 475       | 12398            | 9.5              | 605       | 97644            | 0.3              | 735       | 4459             | 0.0              | 865       | 2101             | 0.0              | 995       | 3671             | 0.0              |
| 480       | 13406            | 10.8             | 610       | 92487            | 0.2              | 740       | 4062             | 0.0              | 870       | 1798             | 0.0              | 1000      | 2560             | 0.0              |
| 485       | 15865            | 13.1             | 615       | 87436            | 0.1              | 745       | 3636             | 0.0              | 875       | 2857             | 0.0              |           |                  |                  |

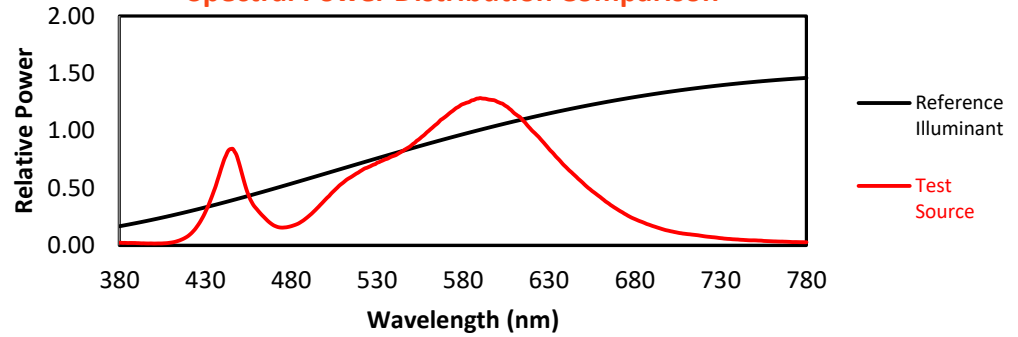
REPORT NUMBER: SP1-2104-224-2

TM-30-18

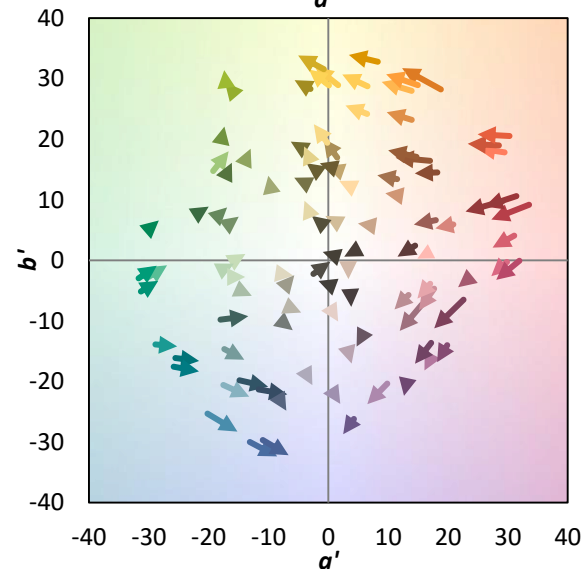
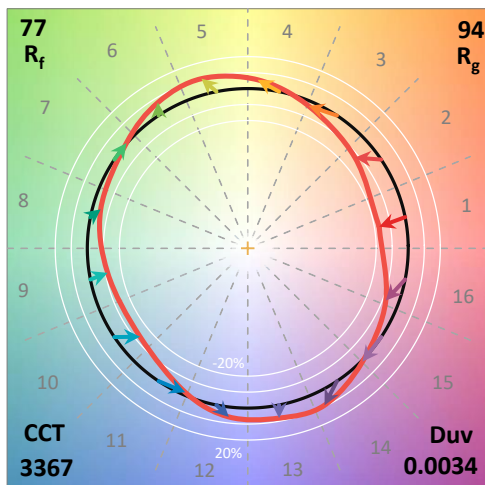
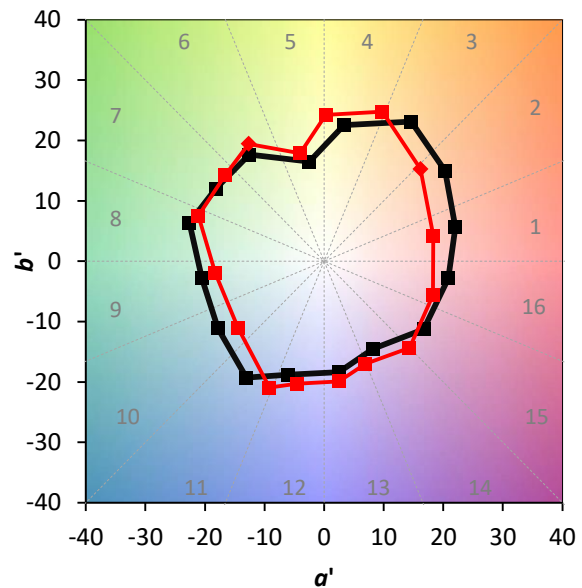
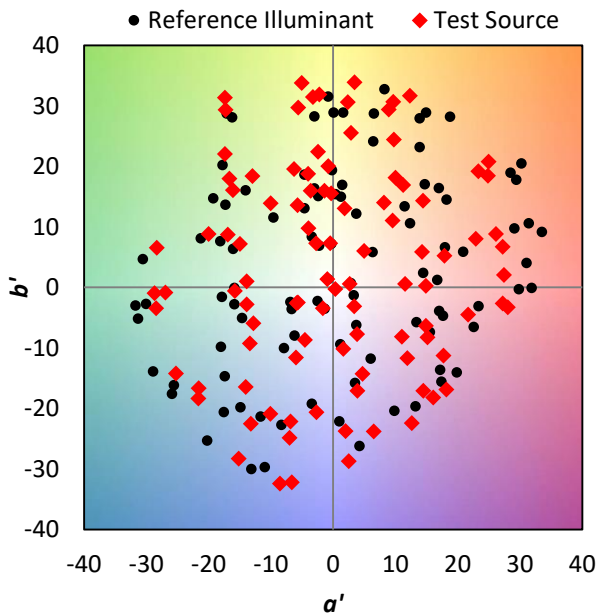
### Summary

$R_f = 77.2$   
 $R_g = 94.4$   
 CIE  $R_a = 73.3$   
 $R_g = -34.3$

### Spectral Power Distribution Comparison

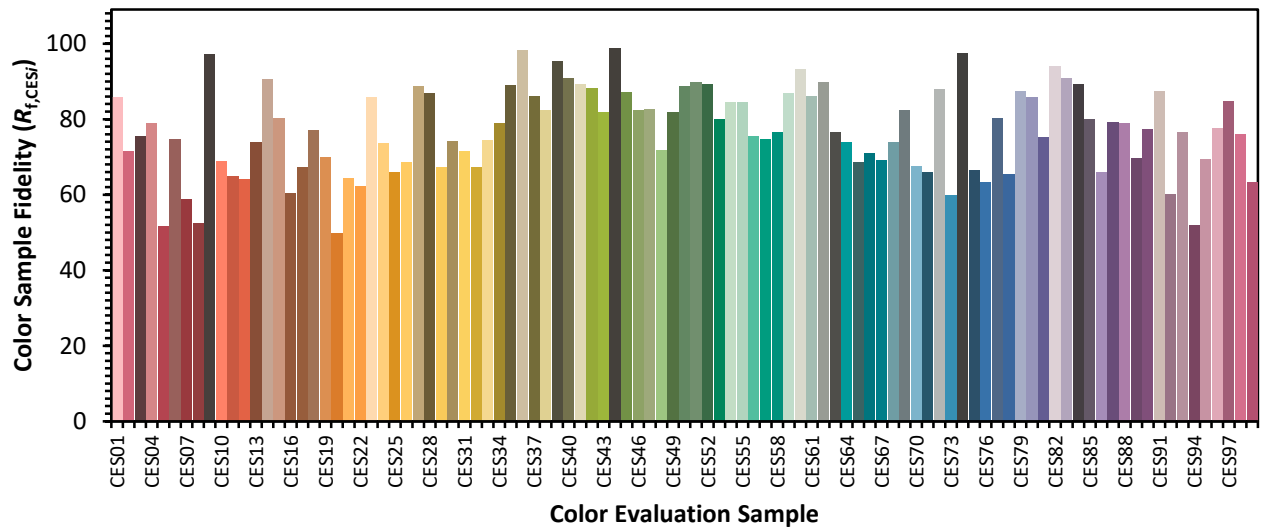


### Color Vector Graphics

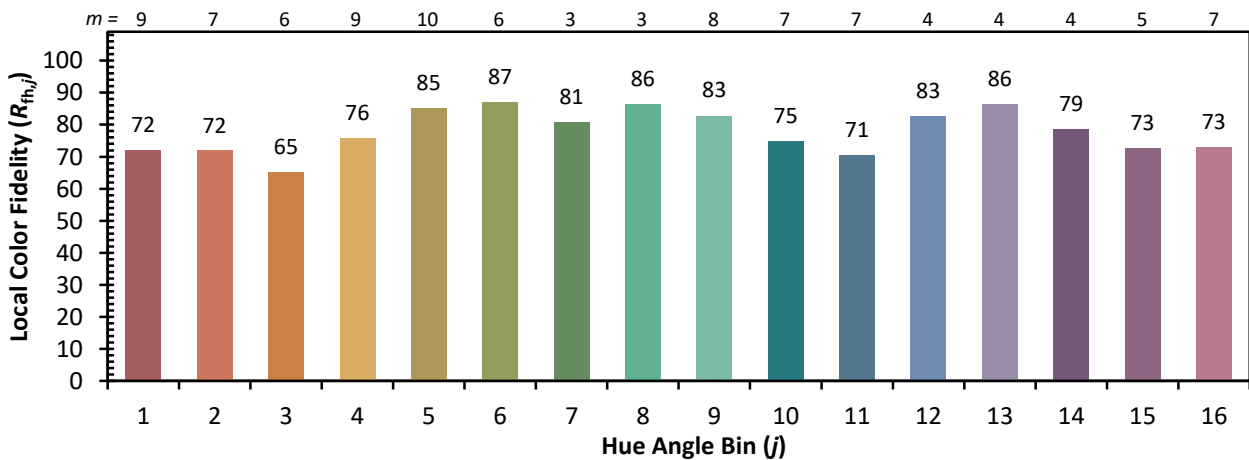
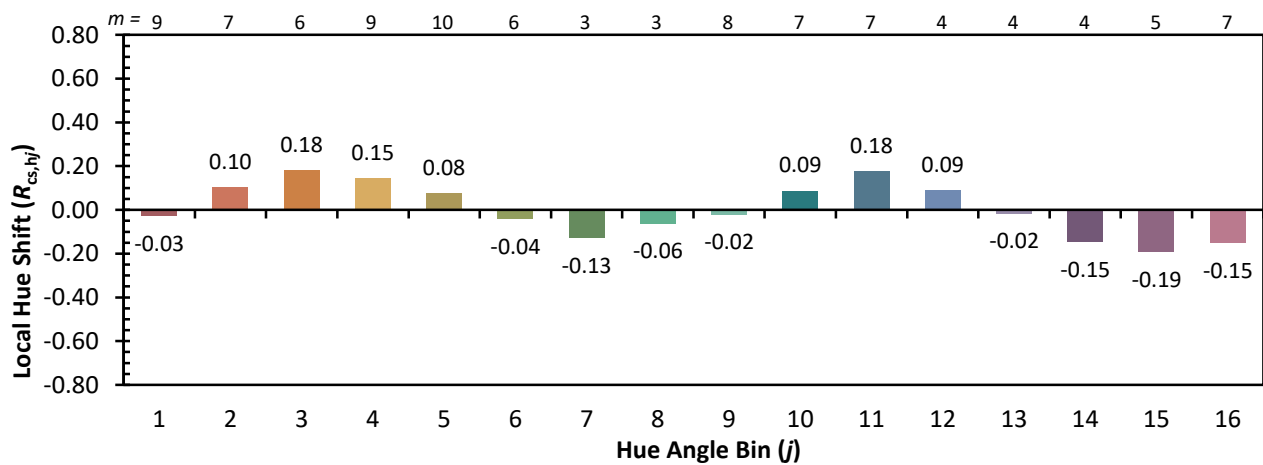
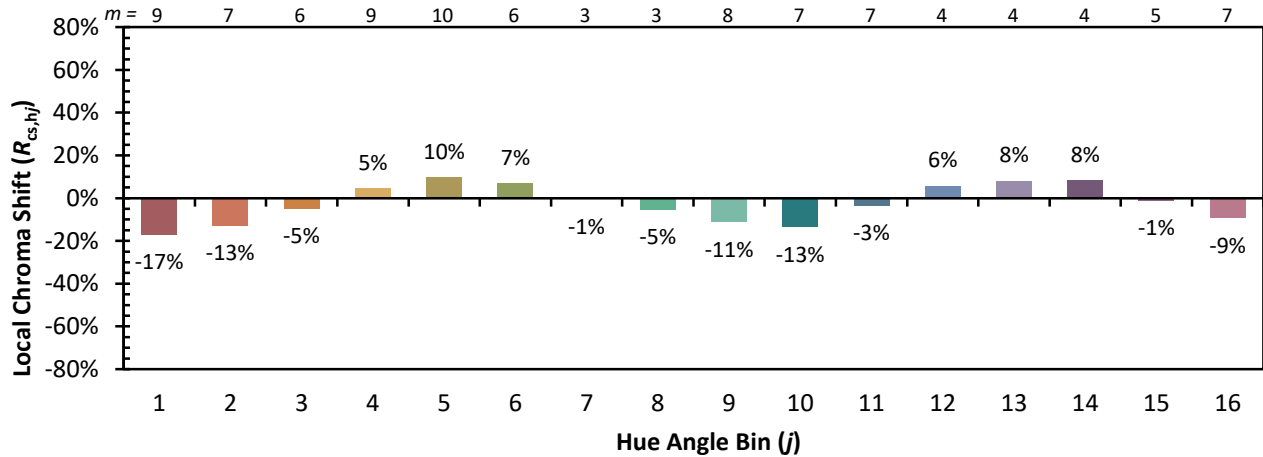


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

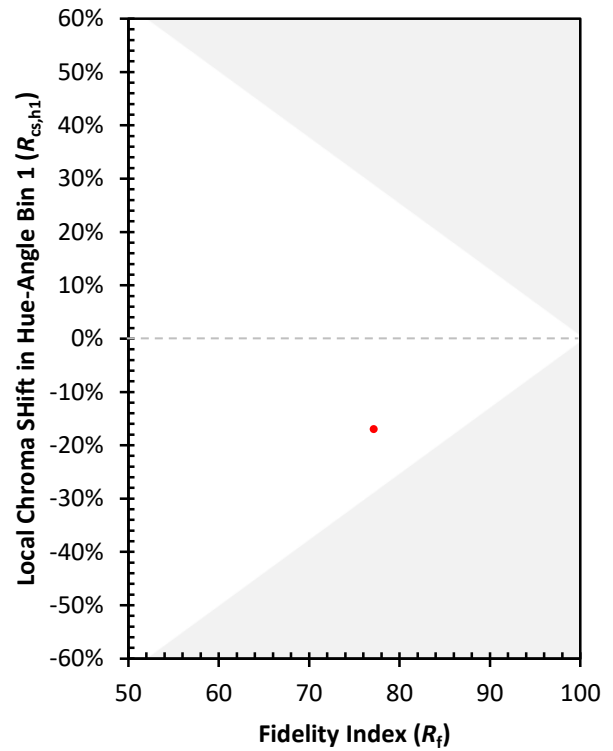
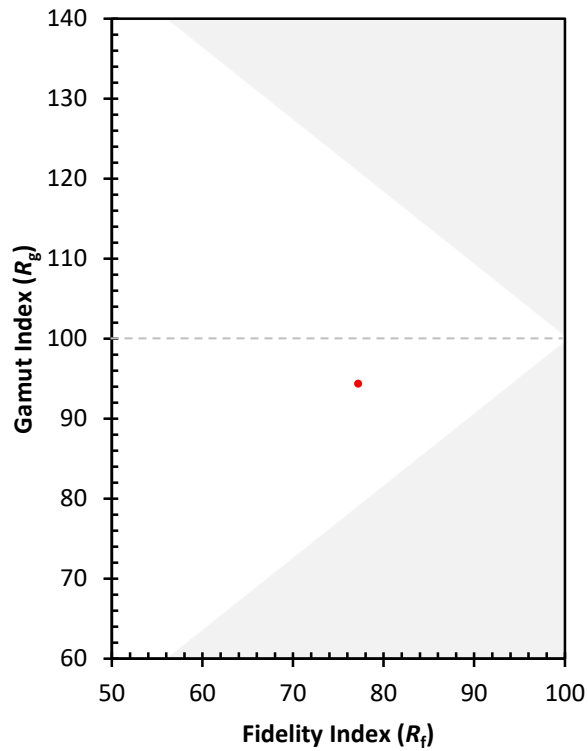
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 69 | CES51 = 90 | CES76 = 63 |
| CES02 = 62 | CES27 = 89 | CES52 = 89 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 80 | CES78 = 65 |
| CES04 = 70 | CES29 = 67 | CES54 = 85 | CES79 = 87 |
| CES05 = 48 | CES30 = 74 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 71 | CES56 = 76 | CES81 = 75 |
| CES07 = 41 | CES32 = 67 | CES57 = 75 | CES82 = 94 |
| CES08 = 39 | CES33 = 75 | CES58 = 77 | CES83 = 91 |
| CES09 = 29 | CES34 = 79 | CES59 = 87 | CES84 = 89 |
| CES10 = 75 | CES35 = 89 | CES60 = 93 | CES85 = 80 |
| CES11 = 58 | CES36 = 98 | CES61 = 86 | CES86 = 66 |
| CES12 = 64 | CES37 = 86 | CES62 = 90 | CES87 = 79 |
| CES13 = 43 | CES38 = 82 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 95 | CES64 = 74 | CES89 = 70 |
| CES15 = 71 | CES40 = 91 | CES65 = 69 | CES90 = 77 |
| CES16 = 47 | CES41 = 89 | CES66 = 71 | CES91 = 87 |
| CES17 = 50 | CES42 = 88 | CES67 = 69 | CES92 = 60 |
| CES18 = 56 | CES43 = 82 | CES68 = 74 | CES93 = 76 |
| CES19 = 72 | CES44 = 99 | CES69 = 82 | CES94 = 52 |
| CES20 = 65 | CES45 = 87 | CES70 = 67 | CES95 = 69 |
| CES21 = 86 | CES46 = 82 | CES71 = 66 | CES96 = 78 |
| CES22 = 79 | CES47 = 83 | CES72 = 88 | CES97 = 85 |
| CES23 = 92 | CES48 = 72 | CES73 = 60 | CES98 = 76 |
| CES24 = 91 | CES49 = 82 | CES74 = 97 | CES99 = 63 |
| CES25 = 72 | CES50 = 89 | CES75 = 67 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)