

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: P438546

Luminaire Tested: **ISW-SA1D-740-U-SLL-HSS**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438546  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: ISW-SA1D-740-U-SLL-HSS  
Description: IMPACT ELITE LED WEDGE LUMINAIRE  
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4275 lumens  
Efficiency: N/A  
Efficacy: 94.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1

Input Watts (W): 45.2  
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

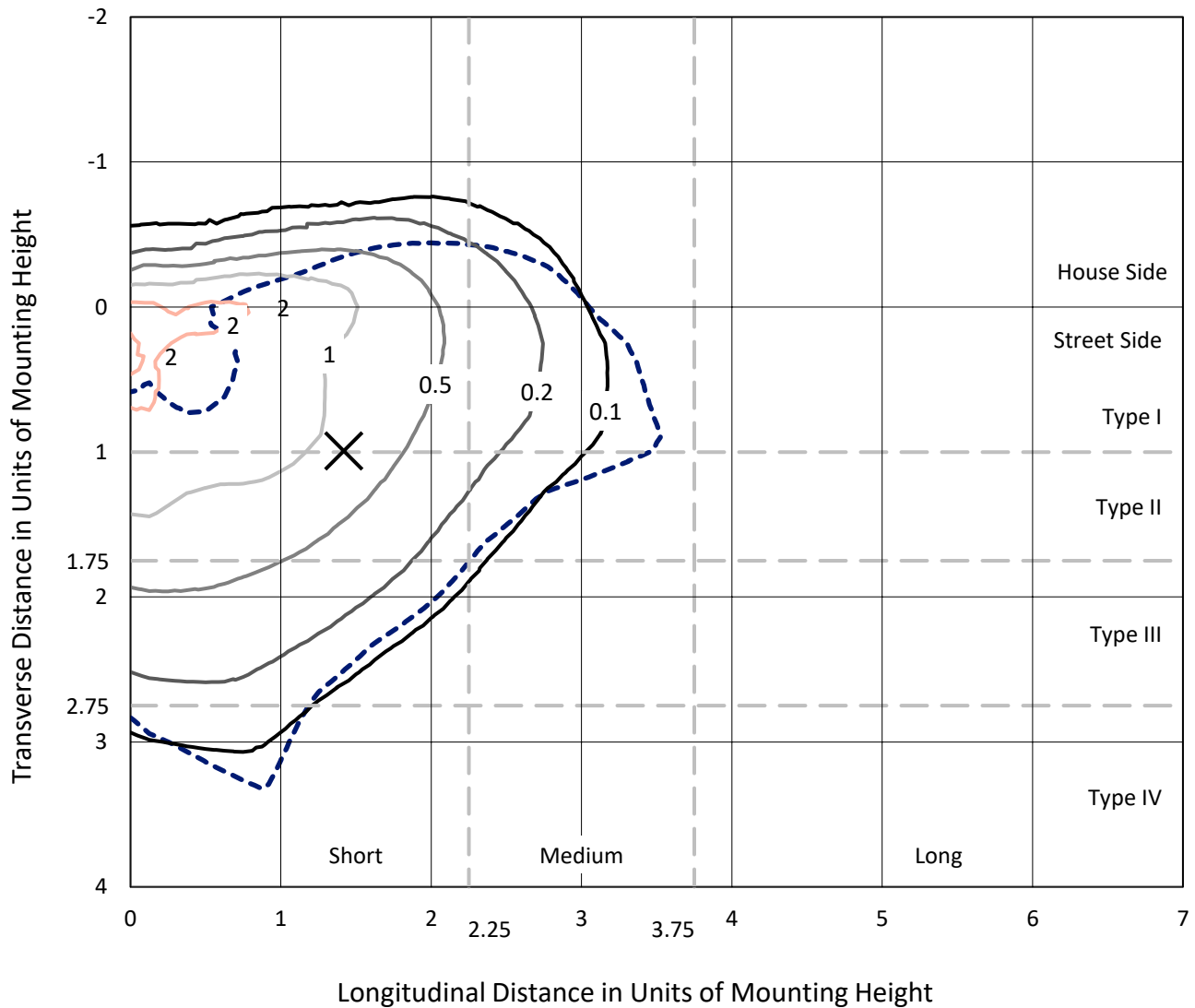


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## Iso-Footcandle Lines of Horizontal Illumination

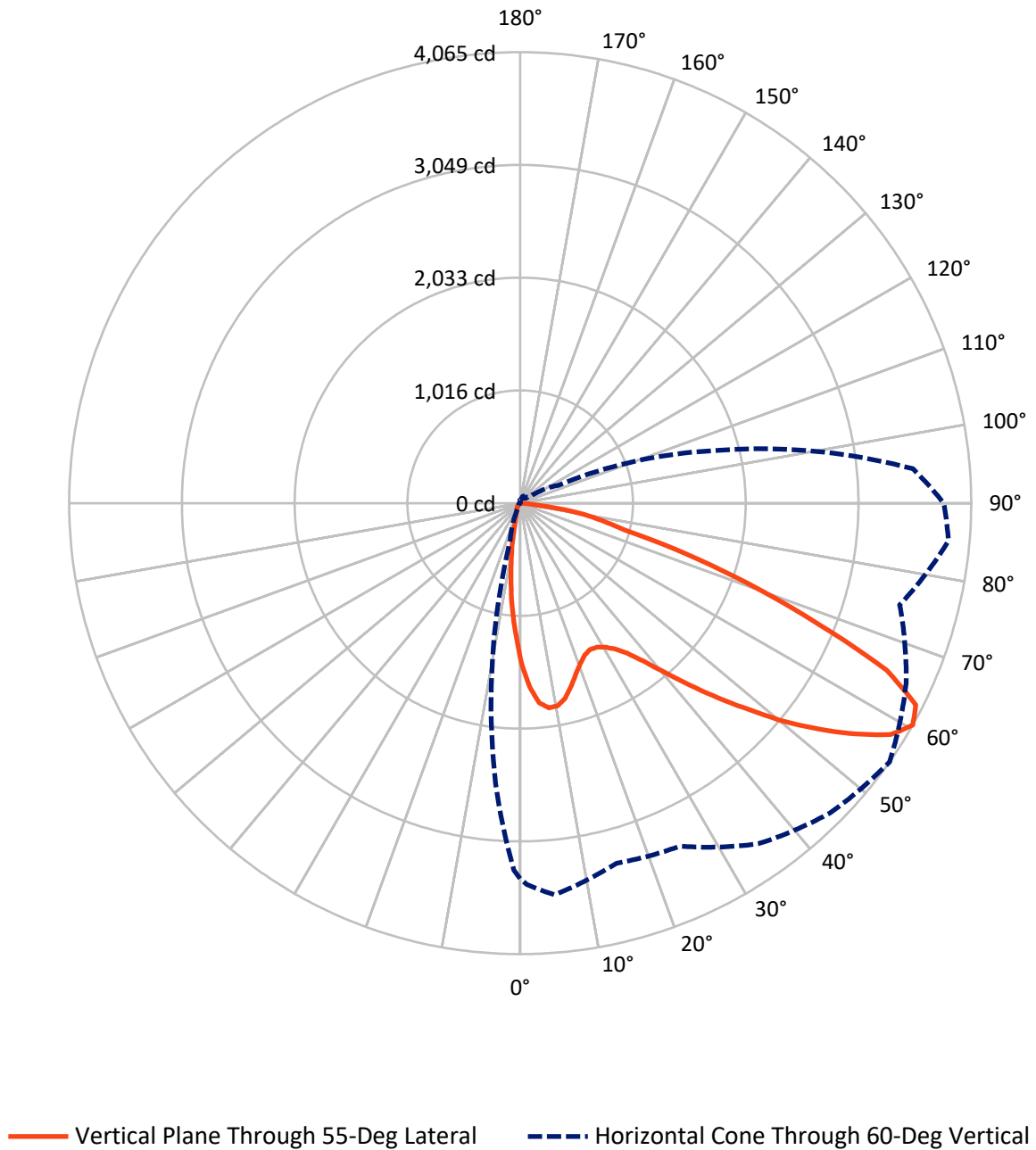
✕ Max cd  
 --- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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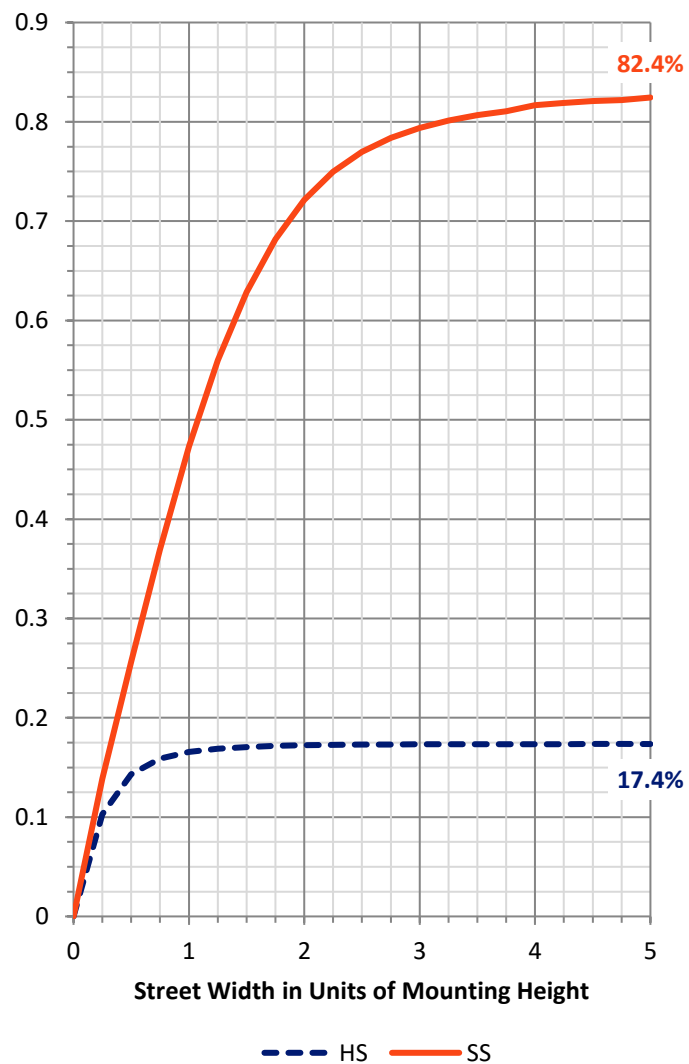
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 748.9    | 0.0    | 748.9  |
|                    | % Fixture | 17.5     | 0.0    | 17.5   |
| <b>Street Side</b> | Lumens    | 3526.1   | 0.0    | 3526.1 |
|                    | % Fixture | 82.5     | 0.0    | 82.5   |
| <b>Total</b>       | Lumens    | 4275.0   | 0.0    | 4275.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 107.5  | 2.5       |
| 10°-20°   | 210.5  | 4.9       |
| 20°-30°   | 309.5  | 7.2       |
| 30°-40°   | 462.8  | 10.8      |
| 40°-50°   | 684.7  | 16.0      |
| 50°-60°   | 984.2  | 23.0      |
| 60°-70°   | 1055.0 | 24.7      |
| 70°-80°   | 426.2  | 10.0      |
| 80°-90°   | 34.5   | 0.8       |
| 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°    | 4275.0 | 100.0     |
| 0°-180°   | 4275.0 | 100.0     |

**Coefficient of Utilization**



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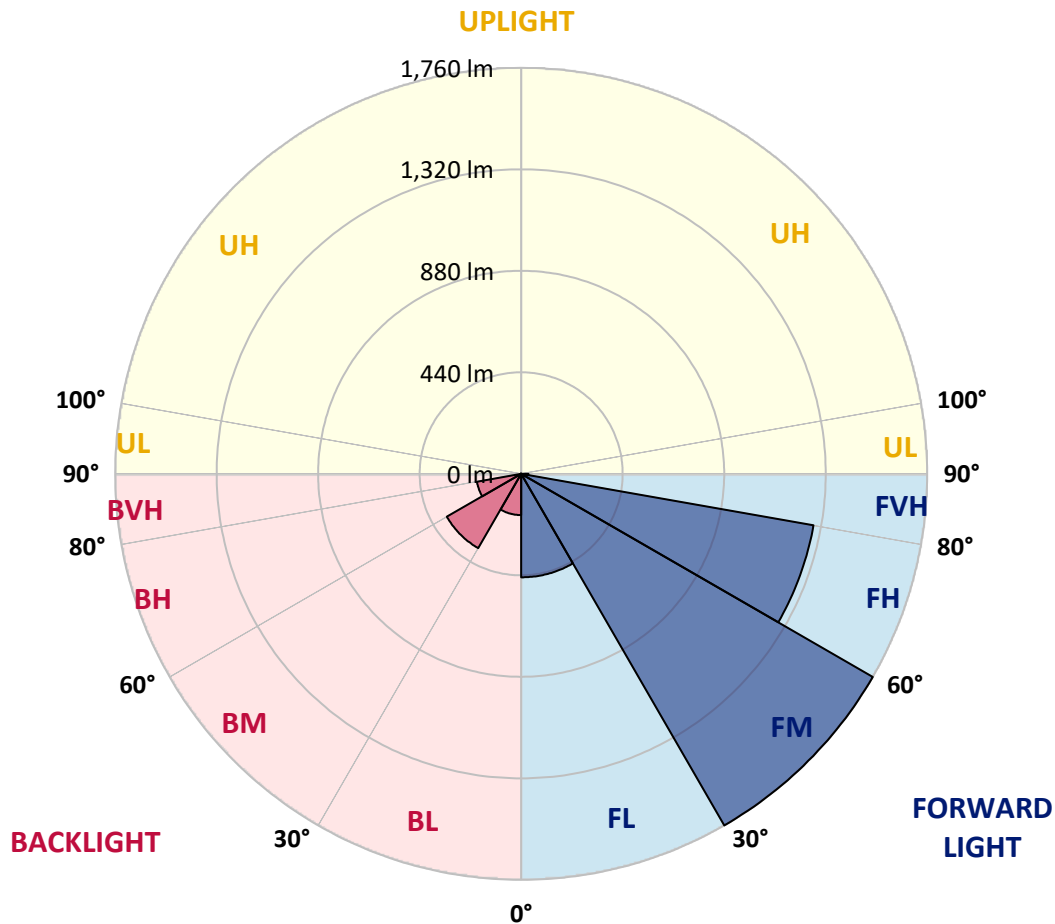
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 448.7  | 10.5      |                         |      |         |
| FM   | (30°-60°)   | 1759.7 | 41.2      |                         |      |         |
| FH   | (60°-80°)   | 1286.4 | 30.1      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 31.4   | 0.7       |                         |      | G1/100  |
| BL   | (0°-30°)    | 178.9  | 4.2       | B1/500                  |      |         |
| BM   | (30°-60°)   | 372.1  | 8.7       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 194.8  | 4.6       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 3.1    | 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-G1**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 |
| 2.5°  | 1549.7 | 1549.7 | 1562.1 | 1599.3 | 1640.5 | 1661.2 | 1683.9 | 1661.2 | 1657.0 | 1624.0 | 1599.3 |
| 5°    | 1502.3 | 1512.6 | 1551.8 | 1650.9 | 1756.1 | 1809.8 | 1838.6 | 1807.7 | 1752.0 | 1679.7 | 1588.9 |
| 7.5°  | 1395.0 | 1407.4 | 1452.8 | 1613.7 | 1758.2 | 1865.5 | 1917.1 | 1863.4 | 1768.5 | 1636.4 | 1504.3 |
| 10°   | 1279.4 | 1302.1 | 1362.0 | 1545.6 | 1712.8 | 1840.7 | 1912.9 | 1857.2 | 1739.6 | 1570.4 | 1407.4 |
| 12.5° | 1203.1 | 1219.6 | 1300.0 | 1483.7 | 1663.2 | 1776.7 | 1815.9 | 1803.6 | 1696.3 | 1539.4 | 1368.1 |
| 15°   | 1190.7 | 1211.3 | 1295.9 | 1479.6 | 1615.8 | 1683.9 | 1698.3 | 1714.8 | 1677.7 | 1543.6 | 1380.5 |
| 17.5° | 1244.3 | 1267.0 | 1362.0 | 1510.5 | 1572.4 | 1572.4 | 1586.9 | 1619.9 | 1655.0 | 1584.8 | 1454.8 |
| 20°   | 1353.7 | 1384.7 | 1489.9 | 1591.0 | 1549.7 | 1500.2 | 1502.3 | 1545.6 | 1640.5 | 1677.7 | 1586.9 |
| 22.5° | 1500.2 | 1541.5 | 1669.4 | 1716.9 | 1574.5 | 1461.0 | 1450.7 | 1487.8 | 1642.6 | 1772.6 | 1768.5 |
| 25°   | 1694.2 | 1743.7 | 1867.5 | 1865.5 | 1634.3 | 1444.5 | 1434.2 | 1461.0 | 1661.2 | 1875.8 | 1927.4 |
| 27.5° | 1869.6 | 1910.9 | 2034.7 | 1983.1 | 1694.2 | 1465.1 | 1442.4 | 1471.3 | 1675.6 | 1952.1 | 2069.8 |
| 30°   | 2018.2 | 2053.3 | 2162.6 | 2067.7 | 1745.8 | 1500.2 | 1461.0 | 1506.4 | 1706.6 | 1993.4 | 2197.7 |
| 32.5° | 2131.7 | 2183.3 | 2284.4 | 2133.7 | 1807.7 | 1545.6 | 1504.3 | 1566.3 | 1758.2 | 2047.1 | 2309.1 |
| 35°   | 2284.4 | 2311.2 | 2430.9 | 2199.8 | 1890.2 | 1642.6 | 1576.6 | 1659.1 | 1842.8 | 2117.2 | 2433.0 |
| 37.5° | 2416.4 | 2486.6 | 2565.0 | 2267.9 | 1991.3 | 1762.3 | 1690.1 | 1807.7 | 1958.3 | 2197.7 | 2577.4 |
| 40°   | 2573.3 | 2653.8 | 2738.4 | 2364.9 | 2084.2 | 1919.1 | 1888.2 | 2003.7 | 2131.7 | 2315.3 | 2719.8 |
| 42.5° | 2717.7 | 2792.0 | 2849.8 | 2478.3 | 2197.7 | 2096.6 | 2119.3 | 2241.0 | 2309.1 | 2437.1 | 2841.5 |
| 45°   | 2833.3 | 2899.3 | 2986.0 | 2556.8 | 2323.6 | 2294.7 | 2410.3 | 2505.2 | 2484.5 | 2542.3 | 2950.9 |
| 47.5° | 2953.0 | 3033.4 | 3068.5 | 2639.3 | 2486.6 | 2554.7 | 2761.1 | 2781.7 | 2668.2 | 2639.3 | 3045.8 |
| 50°   | 3035.5 | 3095.4 | 3118.1 | 2740.4 | 2686.8 | 2897.3 | 3062.3 | 3097.4 | 2868.4 | 2715.7 | 3169.6 |
| 52.5° | 3136.6 | 3194.4 | 3221.2 | 2860.1 | 2901.4 | 3204.7 | 3396.6 | 3388.4 | 3062.3 | 2841.5 | 3291.4 |
| 55°   | 3316.2 | 3369.8 | 3396.6 | 3006.6 | 3054.1 | 3468.9 | 3681.4 | 3673.2 | 3293.5 | 3023.1 | 3473.0 |
| 57.5° | 3444.1 | 3489.5 | 3532.8 | 3171.7 | 3243.9 | 3638.1 | 3875.4 | 3937.3 | 3572.0 | 3252.2 | 3671.1 |
| 60°   | 3386.3 | 3437.9 | 3543.2 | 3359.5 | 3411.1 | 3747.4 | 3949.7 | 4065.2 | 3838.2 | 3541.1 | 3875.4 |
| 62.5° | 3223.3 | 3299.7 | 3409.0 | 3508.1 | 3541.1 | 3766.0 | 3846.5 | 4001.3 | 3980.6 | 3832.1 | 3968.2 |
| 65°   | 3016.9 | 3095.4 | 3200.6 | 3528.7 | 3512.2 | 3489.5 | 3537.0 | 3629.8 | 3774.3 | 3972.4 | 3922.8 |
| 67.5° | 2645.5 | 2759.0 | 2891.1 | 3287.3 | 3054.1 | 2924.1 | 2936.5 | 2884.9 | 3175.8 | 3770.1 | 3691.7 |
| 70°   | 2154.4 | 2269.9 | 2412.3 | 2787.9 | 2354.5 | 2183.3 | 2226.6 | 2193.6 | 2422.6 | 3235.7 | 3163.5 |
| 72.5° | 1516.7 | 1640.5 | 1815.9 | 2323.6 | 1640.5 | 1364.0 | 1467.2 | 1553.9 | 1826.3 | 2596.0 | 2323.6 |
| 75°   | 1005.0 | 1093.7 | 1219.6 | 1749.9 | 1170.0 | 916.2  | 938.9  | 974.0  | 1221.6 | 1962.5 | 1467.2 |
| 77.5° | 520.0  | 608.8  | 664.5  | 936.9  | 724.3  | 722.2  | 705.7  | 751.1  | 763.5  | 1178.3 | 765.6  |
| 80°   | 291.0  | 319.9  | 348.7  | 456.0  | 363.2  | 429.2  | 443.7  | 542.7  | 503.5  | 590.2  | 319.9  |
| 82.5° | 142.4  | 179.5  | 196.0  | 280.6  | 233.2  | 171.3  | 84.6   | 177.5  | 299.2  | 319.9  | 148.6  |
| 85°   | 2.1    | 4.1    | 10.3   | 22.7   | 6.2    | 6.2    | 0.0    | 6.2    | 31.0   | 39.2   | 51.6   |
| 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°    | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 |
| 2.5°  | 1572.4 | 1555.9 | 1508.5 | 1467.2 | 1403.2 | 1376.4 | 1333.1 | 1322.7 | 1287.7 | 1252.6 | 1232.0 |
| 5°    | 1543.6 | 1496.1 | 1399.1 | 1304.2 | 1217.5 | 1137.0 | 1077.2 | 1027.7 | 971.9  | 949.2  | 963.7  |
| 7.5°  | 1428.0 | 1362.0 | 1221.6 | 1110.2 | 986.4  | 893.5  | 808.9  | 765.6  | 714.0  | 693.4  | 678.9  |
| 10°   | 1333.1 | 1252.6 | 1091.6 | 945.1  | 827.5  | 755.3  | 703.7  | 641.8  | 581.9  | 534.5  | 528.3  |
| 12.5° | 1273.2 | 1186.6 | 1007.0 | 852.3  | 765.6  | 695.4  | 635.6  | 555.1  | 487.0  | 441.6  | 421.0  |
| 15°   | 1271.2 | 1163.9 | 980.2  | 817.2  | 716.1  | 627.3  | 551.0  | 460.2  | 390.0  | 332.2  | 311.6  |
| 17.5° | 1345.4 | 1215.4 | 992.6  | 780.0  | 645.9  | 530.3  | 431.3  | 336.4  | 268.3  | 229.1  | 208.4  |
| 20°   | 1475.5 | 1333.1 | 1015.3 | 742.9  | 577.8  | 431.3  | 303.3  | 229.1  | 183.7  | 165.1  | 156.8  |
| 22.5° | 1632.3 | 1463.1 | 1056.5 | 714.0  | 507.6  | 326.0  | 214.6  | 165.1  | 144.4  | 132.1  | 130.0  |
| 25°   | 1822.1 | 1628.2 | 1114.3 | 693.4  | 443.7  | 251.8  | 167.1  | 136.2  | 123.8  | 115.6  | 111.4  |
| 27.5° | 1989.3 | 1787.1 | 1201.0 | 676.9  | 381.8  | 206.4  | 142.4  | 119.7  | 107.3  | 101.1  | 99.1   |
| 30°   | 2113.1 | 1917.1 | 1300.0 | 639.7  | 332.2  | 179.5  | 134.1  | 113.5  | 99.1   | 90.8   | 88.7   |
| 32.5° | 2255.5 | 2016.1 | 1347.5 | 602.6  | 303.3  | 158.9  | 117.6  | 101.1  | 90.8   | 82.5   | 80.5   |
| 35°   | 2412.3 | 2154.4 | 1395.0 | 573.7  | 284.8  | 142.4  | 107.3  | 88.7   | 76.4   | 68.1   | 66.0   |
| 37.5° | 2593.9 | 2307.1 | 1438.3 | 548.9  | 274.5  | 132.1  | 101.1  | 82.5   | 70.2   | 61.9   | 57.8   |
| 40°   | 2796.1 | 2426.8 | 1467.2 | 532.4  | 260.0  | 125.9  | 97.0   | 78.4   | 66.0   | 55.7   | 53.7   |
| 42.5° | 2957.1 | 2565.0 | 1475.5 | 526.2  | 245.6  | 123.8  | 92.9   | 76.4   | 61.9   | 53.7   | 49.5   |
| 45°   | 3072.7 | 2686.8 | 1504.3 | 520.0  | 235.2  | 115.6  | 90.8   | 74.3   | 57.8   | 49.5   | 45.4   |
| 47.5° | 3157.3 | 2816.8 | 1531.2 | 513.8  | 224.9  | 105.2  | 97.0   | 74.3   | 55.7   | 45.4   | 41.3   |
| 50°   | 3314.1 | 2969.5 | 1582.8 | 497.3  | 210.5  | 94.9   | 97.0   | 72.2   | 53.7   | 43.3   | 39.2   |
| 52.5° | 3483.3 | 3167.6 | 1698.3 | 478.7  | 191.9  | 84.6   | 88.7   | 72.2   | 51.6   | 41.3   | 37.1   |
| 55°   | 3644.3 | 3409.0 | 1805.6 | 454.0  | 161.0  | 76.4   | 82.5   | 72.2   | 47.5   | 39.2   | 35.1   |
| 57.5° | 3761.9 | 3570.0 | 1863.4 | 423.0  | 127.9  | 68.1   | 68.1   | 68.1   | 41.3   | 33.0   | 31.0   |
| 60°   | 3817.6 | 3553.5 | 1836.6 | 383.8  | 103.2  | 59.8   | 55.7   | 70.2   | 37.1   | 28.9   | 26.8   |
| 62.5° | 3774.3 | 3382.2 | 1719.0 | 342.6  | 90.8   | 51.6   | 45.4   | 61.9   | 33.0   | 24.8   | 22.7   |
| 65°   | 3640.1 | 3093.3 | 1522.9 | 309.5  | 88.7   | 43.3   | 37.1   | 37.1   | 26.8   | 20.6   | 18.6   |
| 67.5° | 3307.9 | 2713.6 | 1289.7 | 278.6  | 90.8   | 37.1   | 31.0   | 28.9   | 22.7   | 16.5   | 14.4   |
| 70°   | 2750.7 | 2181.2 | 976.1  | 264.1  | 90.8   | 31.0   | 26.8   | 22.7   | 16.5   | 14.4   | 12.4   |
| 72.5° | 1747.8 | 1353.7 | 676.9  | 233.2  | 90.8   | 24.8   | 22.7   | 20.6   | 12.4   | 10.3   | 6.2    |
| 75°   | 1035.9 | 823.4  | 317.8  | 179.5  | 76.4   | 20.6   | 16.5   | 12.4   | 6.2    | 4.1    | 4.1    |
| 77.5° | 608.8  | 528.3  | 138.3  | 99.1   | 33.0   | 12.4   | 8.3    | 4.1    | 2.1    | 0.0    | 0.0    |
| 80°   | 249.7  | 216.7  | 51.6   | 28.9   | 14.4   | 6.2    | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 146.5  | 152.7  | 18.6   | 12.4   | 4.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 45.4   | 70.2   | 0.0    | 2.1    | 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°    | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 |
| 2.5°  | 1229.9 | 1209.3 | 1201.0 | 1188.6 | 1178.3 | 1165.9 | 1182.4 | 1196.9 | 1180.4 | 1198.9 | 1227.8 |
| 5°    | 949.2  | 918.3  | 959.6  | 932.7  | 947.2  | 930.7  | 908.0  | 912.1  | 916.2  | 908.0  | 930.7  |
| 7.5°  | 658.3  | 672.7  | 683.0  | 681.0  | 693.4  | 670.7  | 670.7  | 656.2  | 635.6  | 643.8  | 639.7  |
| 10°   | 499.4  | 470.5  | 480.8  | 478.7  | 501.4  | 470.5  | 449.9  | 427.2  | 425.1  | 429.2  | 425.1  |
| 12.5° | 398.3  | 363.2  | 340.5  | 328.1  | 326.0  | 311.6  | 293.0  | 270.3  | 255.9  | 253.8  | 266.2  |
| 15°   | 299.2  | 272.4  | 251.8  | 233.2  | 231.1  | 202.2  | 177.5  | 161.0  | 146.5  | 148.6  | 156.8  |
| 17.5° | 206.4  | 198.1  | 191.9  | 175.4  | 165.1  | 140.3  | 119.7  | 109.4  | 105.2  | 105.2  | 107.3  |
| 20°   | 150.6  | 146.5  | 142.4  | 136.2  | 125.9  | 107.3  | 94.9   | 90.8   | 88.7   | 88.7   | 90.8   |
| 22.5° | 125.9  | 119.7  | 115.6  | 113.5  | 105.2  | 90.8   | 82.5   | 78.4   | 78.4   | 78.4   | 78.4   |
| 25°   | 107.3  | 103.2  | 101.1  | 97.0   | 90.8   | 78.4   | 72.2   | 70.2   | 68.1   | 68.1   | 70.2   |
| 27.5° | 97.0   | 88.7   | 84.6   | 84.6   | 78.4   | 70.2   | 64.0   | 61.9   | 59.8   | 59.8   | 61.9   |
| 30°   | 86.7   | 80.5   | 76.4   | 72.2   | 68.1   | 59.8   | 55.7   | 53.7   | 53.7   | 53.7   | 53.7   |
| 32.5° | 76.4   | 72.2   | 68.1   | 64.0   | 57.8   | 53.7   | 49.5   | 47.5   | 45.4   | 45.4   | 45.4   |
| 35°   | 61.9   | 57.8   | 57.8   | 55.7   | 49.5   | 45.4   | 41.3   | 39.2   | 37.1   | 39.2   | 39.2   |
| 37.5° | 53.7   | 47.5   | 47.5   | 47.5   | 43.3   | 39.2   | 35.1   | 33.0   | 31.0   | 31.0   | 33.0   |
| 40°   | 49.5   | 41.3   | 39.2   | 39.2   | 39.2   | 33.0   | 28.9   | 26.8   | 24.8   | 24.8   | 26.8   |
| 42.5° | 43.3   | 37.1   | 33.0   | 31.0   | 33.0   | 28.9   | 22.7   | 20.6   | 20.6   | 20.6   | 20.6   |
| 45°   | 41.3   | 33.0   | 28.9   | 24.8   | 26.8   | 24.8   | 18.6   | 16.5   | 16.5   | 16.5   | 16.5   |
| 47.5° | 37.1   | 28.9   | 24.8   | 18.6   | 18.6   | 18.6   | 14.4   | 12.4   | 12.4   | 12.4   | 12.4   |
| 50°   | 35.1   | 26.8   | 18.6   | 16.5   | 14.4   | 14.4   | 12.4   | 10.3   | 8.3    | 8.3    | 10.3   |
| 52.5° | 33.0   | 24.8   | 16.5   | 12.4   | 10.3   | 10.3   | 8.3    | 8.3    | 6.2    | 6.2    | 6.2    |
| 55°   | 31.0   | 20.6   | 14.4   | 10.3   | 8.3    | 6.2    | 6.2    | 6.2    | 6.2    | 4.1    | 6.2    |
| 57.5° | 26.8   | 18.6   | 10.3   | 8.3    | 4.1    | 4.1    | 4.1    | 4.1    | 4.1    | 4.1    | 4.1    |
| 60°   | 24.8   | 14.4   | 8.3    | 4.1    | 2.1    | 2.1    | 2.1    | 2.1    | 2.1    | 2.1    | 2.1    |
| 62.5° | 20.6   | 12.4   | 6.2    | 4.1    | 2.1    | 0.0    | 2.1    | 2.1    | 2.1    | 2.1    | 2.1    |
| 65°   | 16.5   | 10.3   | 4.1    | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 67.5° | 12.4   | 8.3    | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 70°   | 10.3   | 4.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 72.5° | 6.2    | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

REPORT NUMBER: P438546

CATALOG NUMBER: ISW-SA1D-740-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 | 1442.4 |
| 2.5°  | 1225.8 | 1238.1 | 1283.5 | 1324.8 | 1370.2 | 1419.7 | 1461.0 | 1520.9 | 1539.4 | 1549.7 |
| 5°    | 926.5  | 971.9  | 1027.7 | 1077.2 | 1165.9 | 1248.5 | 1345.4 | 1450.7 | 1494.0 | 1502.3 |
| 7.5°  | 668.6  | 699.6  | 759.4  | 858.4  | 938.9  | 1062.7 | 1188.6 | 1328.9 | 1395.0 | 1395.0 |
| 10°   | 460.2  | 511.8  | 588.1  | 681.0  | 788.3  | 897.7  | 1044.2 | 1203.1 | 1265.0 | 1279.4 |
| 12.5° | 293.0  | 350.8  | 454.0  | 555.1  | 678.9  | 786.2  | 932.7  | 1112.3 | 1182.4 | 1203.1 |
| 15°   | 169.2  | 208.4  | 303.3  | 414.8  | 563.4  | 699.6  | 864.6  | 1083.4 | 1170.0 | 1190.7 |
| 17.5° | 113.5  | 127.9  | 179.5  | 276.5  | 441.6  | 623.2  | 844.0  | 1114.3 | 1219.6 | 1244.3 |
| 20°   | 94.9   | 101.1  | 119.7  | 171.3  | 311.6  | 542.7  | 835.7  | 1182.4 | 1310.4 | 1353.7 |
| 22.5° | 82.5   | 88.7   | 101.1  | 125.9  | 222.9  | 458.1  | 829.6  | 1281.5 | 1454.8 | 1500.2 |
| 25°   | 72.2   | 78.4   | 88.7   | 107.3  | 156.8  | 373.5  | 839.9  | 1421.8 | 1640.5 | 1694.2 |
| 27.5° | 64.0   | 70.2   | 80.5   | 92.9   | 125.9  | 288.9  | 841.9  | 1553.9 | 1813.9 | 1869.6 |
| 30°   | 55.7   | 61.9   | 70.2   | 80.5   | 101.1  | 222.9  | 804.8  | 1688.0 | 1954.2 | 2018.2 |
| 32.5° | 49.5   | 53.7   | 61.9   | 70.2   | 84.6   | 173.3  | 728.4  | 1791.2 | 2069.8 | 2131.7 |
| 35°   | 41.3   | 45.4   | 53.7   | 59.8   | 74.3   | 140.3  | 643.8  | 1886.1 | 2208.0 | 2284.4 |
| 37.5° | 35.1   | 39.2   | 45.4   | 53.7   | 66.0   | 109.4  | 559.2  | 1968.6 | 2342.2 | 2416.4 |
| 40°   | 28.9   | 35.1   | 41.3   | 47.5   | 59.8   | 84.6   | 466.4  | 2057.4 | 2494.9 | 2573.3 |
| 42.5° | 24.8   | 28.9   | 35.1   | 43.3   | 51.6   | 68.1   | 383.8  | 2113.1 | 2624.9 | 2717.7 |
| 45°   | 18.6   | 24.8   | 33.0   | 43.3   | 43.3   | 53.7   | 330.2  | 2154.4 | 2717.7 | 2833.3 |
| 47.5° | 14.4   | 20.6   | 28.9   | 41.3   | 39.2   | 45.4   | 303.3  | 2226.6 | 2845.7 | 2953.0 |
| 50°   | 12.4   | 16.5   | 28.9   | 35.1   | 33.0   | 39.2   | 311.6  | 2290.6 | 2942.7 | 3035.5 |
| 52.5° | 10.3   | 14.4   | 24.8   | 26.8   | 28.9   | 35.1   | 328.1  | 2408.2 | 3064.4 | 3136.6 |
| 55°   | 8.3    | 12.4   | 18.6   | 22.7   | 24.8   | 33.0   | 354.9  | 2554.7 | 3223.3 | 3316.2 |
| 57.5° | 6.2    | 10.3   | 14.4   | 18.6   | 22.7   | 31.0   | 373.5  | 2647.6 | 3371.9 | 3444.1 |
| 60°   | 6.2    | 8.3    | 12.4   | 16.5   | 20.6   | 28.9   | 346.7  | 2538.2 | 3307.9 | 3386.3 |
| 62.5° | 4.1    | 8.3    | 10.3   | 14.4   | 16.5   | 22.7   | 255.9  | 2298.8 | 3116.0 | 3223.3 |
| 65°   | 2.1    | 6.2    | 8.3    | 10.3   | 12.4   | 16.5   | 146.5  | 2009.9 | 2889.0 | 3016.9 |
| 67.5° | 0.0    | 4.1    | 6.2    | 8.3    | 8.3    | 12.4   | 68.1   | 1622.0 | 2515.5 | 2645.5 |
| 70°   | 0.0    | 2.1    | 4.1    | 4.1    | 6.2    | 10.3   | 35.1   | 1145.3 | 1979.0 | 2154.4 |
| 72.5° | 2.1    | 2.1    | 4.1    | 4.1    | 4.1    | 8.3    | 22.7   | 693.4  | 1331.0 | 1516.7 |
| 75°   | 2.1    | 2.1    | 2.1    | 2.1    | 4.1    | 6.2    | 14.4   | 445.7  | 837.8  | 1005.0 |
| 77.5° | 2.1    | 4.1    | 2.1    | 2.1    | 2.1    | 4.1    | 8.3    | 247.6  | 458.1  | 520.0  |
| 80°   | 2.1    | 2.1    | 2.1    | 2.1    | 2.1    | 4.1    | 4.1    | 22.7   | 216.7  | 291.0  |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 2.1    | 2.1    | 2.1    | 2.1    | 111.4  | 142.4  |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 2.1    | 0.0    | 0.0    | 2.1    | 2.1    |
| 87.5° | 0.0    | 0.0    | 0.0    | 2.1    | 2.1    | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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



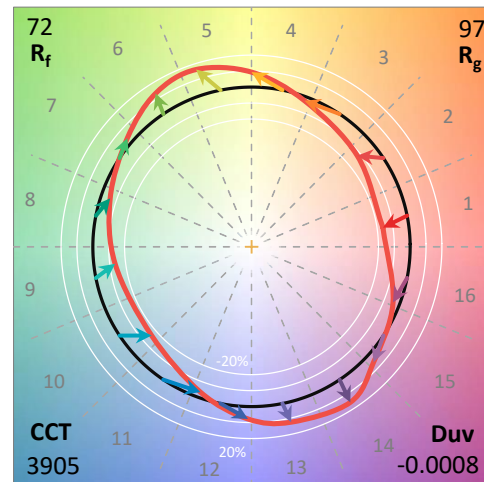
### Test Information

Test Method: LM-79-08  
 Report Number: SP1-2101-121-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry:  $4\pi$   
 Issue Date: 03/05/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: STREETWORKS  
 Catalog Number: **IFLD-S-SA2A-740-U-T3R-HSS**  
 Description: STREETWORKS INF FLOOD

SHIELD, DRIVER PROGRAMMED @ 615mA.

### Spectral Parameters

|                           |         |           |      |      |       |
|---------------------------|---------|-----------|------|------|-------|
| CCT (K):                  | 3905    | CRI (Ra): | 71.2 |      |       |
| CIE u':                   | 0.2273  | R1:       | 68.9 | R9:  | -29.7 |
| CIE v':                   | 0.5024  | R2:       | 77.0 | R10: | 46.2  |
| Duv:                      | -0.0008 | R3:       | 84.0 | R11: | 68.8  |
| CIE x:                    | 0.3841  | R4:       | 71.6 | R12: | 45.6  |
| CIE y:                    | 0.3774  | R5:       | 68.9 | R13: | 69.5  |
| CIE z:                    | 0.2385  | R6:       | 68.3 | R14: | 90.7  |
| Peak Wavelength (nm):     | 443     | R7:       | 78.7 |      |       |
| Dominant Wavelength (nm): | 579     | R8:       | 52.2 |      |       |
| Purity:                   | 28.7    |           |      |      |       |
| Rf:                       | 71.7    |           |      |      |       |
| Rg:                       | 96.9    |           |      |      |       |



### Test Conditions

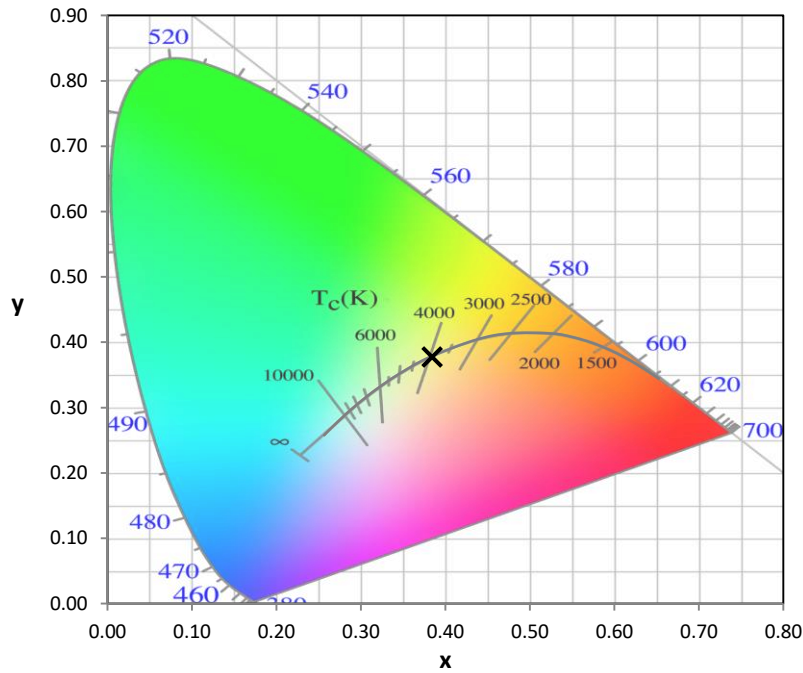
Stabilization Time: 211M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.8/312%  
 Sphere Temperature (°C): 24.1

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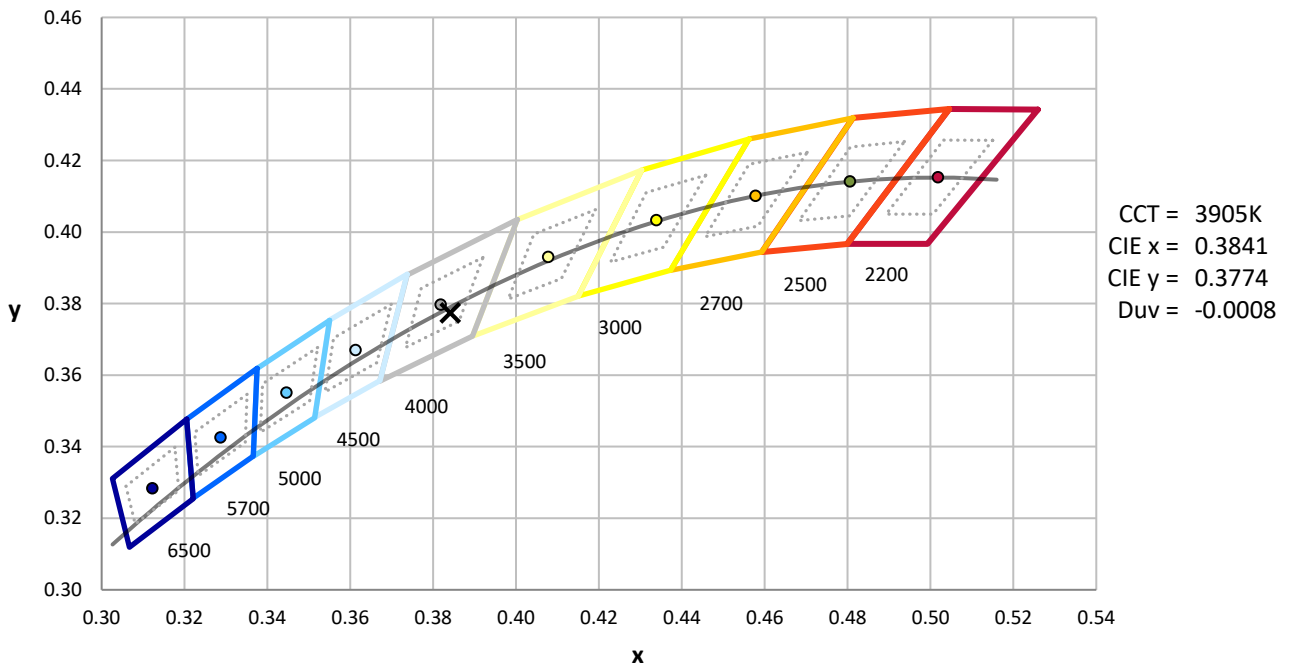
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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            |

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**CIE 1931 Chromaticity Diagram**



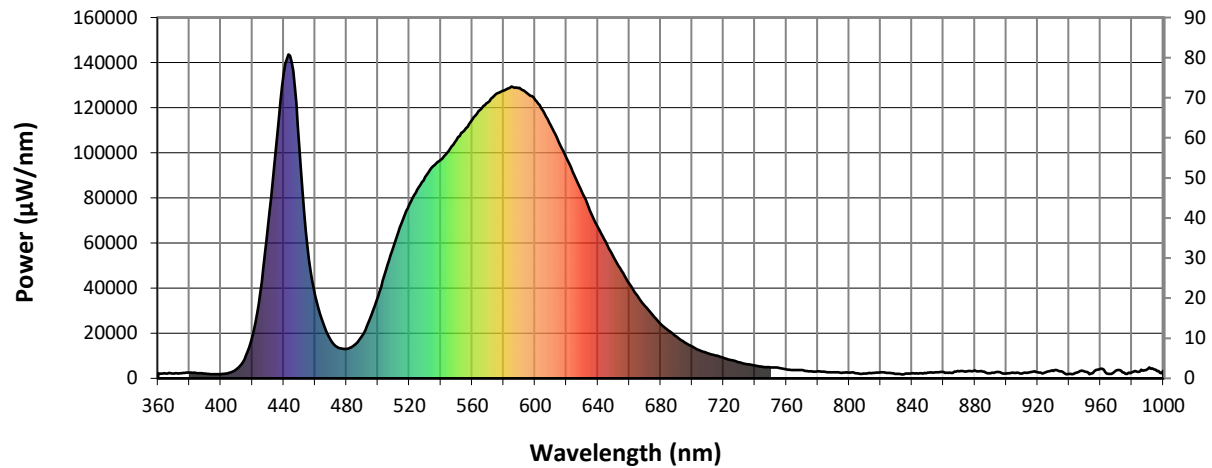
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 4000K 4-step quadrangle

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### Photopic Flux vs. Wavelength

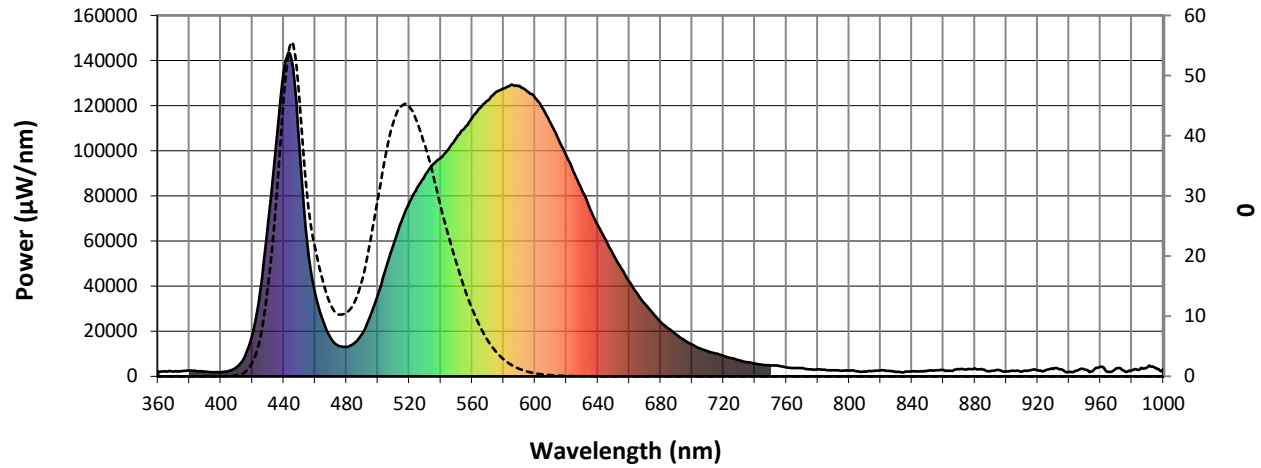


#####

| 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       | 2304             | 0.0              | 490       | 19043            | 2.7              | 620       | 97577            | 25.4             | 750       | 4830             | 0.0              | 880       | 3505             | 0.0              |
| 365       | 2150             | 0.0              | 495       | 26606            | 4.8              | 625       | 90158            | 19.9             | 755       | 4664             | 0.0              | 885       | 2991             | 0.0              |
| 370       | 2146             | 0.0              | 500       | 36376            | 8.0              | 630       | 82240            | 14.9             | 760       | 4006             | 0.0              | 890       | 2327             | 0.0              |
| 375       | 2332             | 0.0              | 505       | 47714            | 13.3             | 635       | 74361            | 11.2             | 765       | 3715             | 0.0              | 895       | 2775             | 0.0              |
| 380       | 2527             | 0.0              | 510       | 58741            | 20.2             | 640       | 66994            | 8.0              | 770       | 3696             | 0.0              | 900       | 2141             | 0.0              |
| 385       | 2304             | 0.0              | 515       | 68716            | 28.5             | 645       | 60405            | 5.8              | 775       | 3117             | 0.0              | 905       | 2421             | 0.0              |
| 390       | 2064             | 0.0              | 520       | 77136            | 37.4             | 650       | 53806            | 3.9              | 780       | 3062             | 0.0              | 910       | 2200             | 0.0              |
| 395       | 1856             | 0.0              | 525       | 83567            | 44.9             | 655       | 47610            | 2.7              | 785       | 2907             | 0.0              | 915       | 2716             | 0.0              |
| 400       | 1856             | 0.0              | 530       | 89283            | 52.6             | 660       | 42018            | 1.8              | 790       | 2655             | 0.0              | 920       | 2656             | 0.0              |
| 405       | 2374             | 0.0              | 535       | 94097            | 58.4             | 665       | 36742            | 1.2              | 795       | 2467             | 0.0              | 925       | 2671             | 0.0              |
| 410       | 4084             | 0.0              | 540       | 96845            | 63.1             | 670       | 32105            | 0.7              | 800       | 2609             | 0.0              | 930       | 3292             | 0.0              |
| 415       | 8543             | 0.0              | 545       | 100829           | 67.1             | 675       | 27946            | 0.5              | 805       | 2293             | 0.0              | 935       | 3188             | 0.0              |
| 420       | 18394            | 0.1              | 550       | 105648           | 71.8             | 680       | 24146            | 0.3              | 810       | 2188             | 0.0              | 940       | 1997             | 0.0              |
| 425       | 37987            | 0.2              | 555       | 110017           | 75.1             | 685       | 21191            | 0.2              | 815       | 2386             | 0.0              | 945       | 2623             | 0.0              |
| 430       | 67605            | 0.5              | 560       | 114586           | 77.9             | 690       | 18544            | 0.1              | 820       | 2712             | 0.0              | 950       | 2969             | 0.0              |
| 435       | 102160           | 1.2              | 565       | 118987           | 79.1             | 695       | 16058            | 0.1              | 825       | 2473             | 0.0              | 955       | 2277             | 0.0              |
| 440       | 135103           | 2.1              | 570       | 122326           | 79.5             | 700       | 14133            | 0.0              | 830       | 1969             | 0.0              | 960       | 4267             | 0.0              |
| 445       | 140126           | 2.9              | 575       | 125968           | 78.4             | 705       | 12309            | 0.0              | 835       | 1917             | 0.0              | 965       | 2034             | 0.0              |
| 450       | 102339           | 2.7              | 580       | 127613           | 75.8             | 710       | 11142            | 0.0              | 840       | 2248             | 0.0              | 970       | 3586             | 0.0              |
| 455       | 58751            | 2.0              | 585       | 129466           | 71.9             | 715       | 10143            | 0.0              | 845       | 2266             | 0.0              | 975       | 2505             | 0.0              |
| 460       | 36892            | 1.5              | 590       | 128813           | 66.6             | 720       | 9072             | 0.0              | 850       | 2558             | 0.0              | 980       | 2666             | 0.0              |
| 465       | 24637            | 1.3              | 595       | 126387           | 59.9             | 725       | 8130             | 0.0              | 855       | 2767             | 0.0              | 985       | 2934             | 0.0              |
| 470       | 16738            | 1.0              | 600       | 123477           | 53.2             | 730       | 7149             | 0.0              | 860       | 2826             | 0.0              | 990       | 4120             | 0.0              |
| 475       | 13456            | 1.1              | 605       | 118718           | 46.0             | 735       | 6311             | 0.0              | 865       | 2385             | 0.0              | 995       | 3858             | 0.0              |
| 480       | 13081            | 1.2              | 610       | 112091           | 38.5             | 740       | 5711             | 0.0              | 870       | 3194             | 0.0              | 1000      | 3405             | 0.0              |
| 485       | 14734            | 1.7              | 615       | 105039           | 31.7             | 745       | 5111             | 0.0              | 875       | 3189             | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2101-121-2

### Scotopic Flux vs. Wavelength

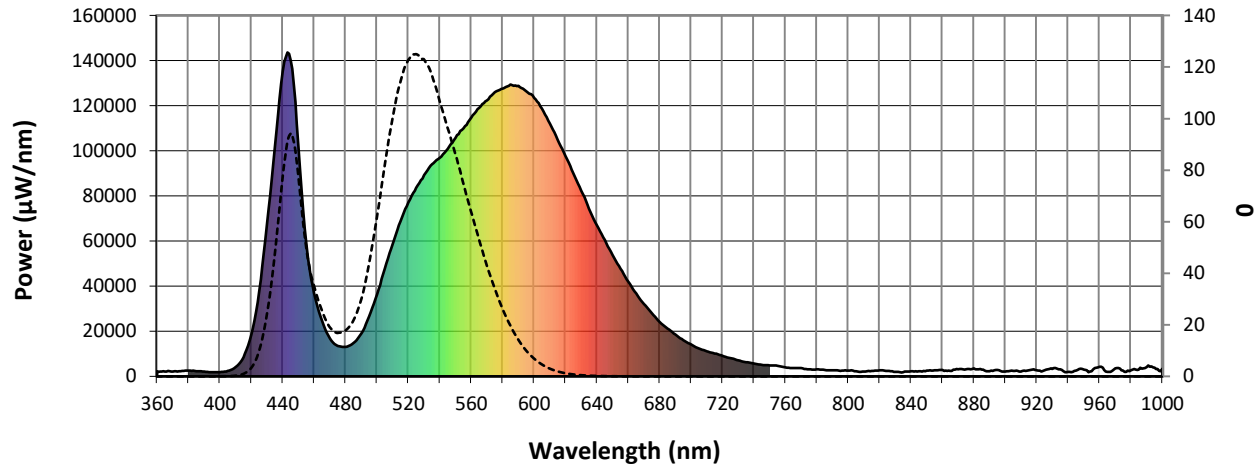

**Scotopic Lumens: 10425.8**
**S/P: 1.47**

| $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) |
|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|
| 360               | 2304                          | 0.0                            | 490               | 19043                         | 29.3                           | 620               | 97577                         | 1.2                            | 750               | 4830                          | 0.0                            | 880               | 3505                          | 0.0                            |
| 365               | 2150                          | 0.0                            | 495               | 26606                         | 43.0                           | 625               | 90158                         | 0.8                            | 755               | 4664                          | 0.0                            | 885               | 2991                          | 0.0                            |
| 370               | 2146                          | 0.0                            | 500               | 36376                         | 60.8                           | 630               | 82240                         | 0.5                            | 760               | 4006                          | 0.0                            | 890               | 2327                          | 0.0                            |
| 375               | 2332                          | 0.0                            | 505               | 47714                         | 81.1                           | 635               | 74361                         | 0.3                            | 765               | 3715                          | 0.0                            | 895               | 2775                          | 0.0                            |
| 380               | 2527                          | 0.0                            | 510               | 58741                         | 99.6                           | 640               | 66994                         | 0.2                            | 770               | 3696                          | 0.0                            | 900               | 2141                          | 0.0                            |
| 385               | 2304                          | 0.0                            | 515               | 68716                         | 113.9                          | 645               | 60405                         | 0.1                            | 775               | 3117                          | 0.0                            | 905               | 2421                          | 0.0                            |
| 390               | 2064                          | 0.0                            | 520               | 77136                         | 122.6                          | 650               | 53806                         | 0.1                            | 780               | 3062                          | 0.0                            | 910               | 2200                          | 0.0                            |
| 395               | 1856                          | 0.0                            | 525               | 83567                         | 125.0                          | 655               | 47610                         | 0.0                            | 785               | 2907                          | 0.0                            | 915               | 2716                          | 0.0                            |
| 400               | 1856                          | 0.0                            | 530               | 89283                         | 123.1                          | 660               | 42018                         | 0.0                            | 790               | 2655                          | 0.0                            | 920               | 2656                          | 0.0                            |
| 405               | 2374                          | 0.1                            | 535               | 94097                         | 117.3                          | 665               | 36742                         | 0.0                            | 795               | 2467                          | 0.0                            | 925               | 2671                          | 0.0                            |
| 410               | 4084                          | 0.2                            | 540               | 96845                         | 107.0                          | 670               | 32105                         | 0.0                            | 800               | 2609                          | 0.0                            | 930               | 3292                          | 0.0                            |
| 415               | 8543                          | 0.9                            | 545               | 100829                        | 96.7                           | 675               | 27946                         | 0.0                            | 805               | 2293                          | 0.0                            | 935               | 3188                          | 0.0                            |
| 420               | 18394                         | 3.0                            | 550               | 105648                        | 86.4                           | 680               | 24146                         | 0.0                            | 810               | 2188                          | 0.0                            | 940               | 1997                          | 0.0                            |
| 425               | 37987                         | 9.3                            | 555               | 110017                        | 75.2                           | 685               | 21191                         | 0.0                            | 815               | 2386                          | 0.0                            | 945               | 2623                          | 0.0                            |
| 430               | 67605                         | 23.0                           | 560               | 114586                        | 64.0                           | 690               | 18544                         | 0.0                            | 820               | 2712                          | 0.0                            | 950               | 2969                          | 0.0                            |
| 435               | 102160                        | 45.7                           | 565               | 118987                        | 53.4                           | 695               | 16058                         | 0.0                            | 825               | 2473                          | 0.0                            | 955               | 2277                          | 0.0                            |
| 440               | 135103                        | 75.5                           | 570               | 122326                        | 43.2                           | 700               | 14133                         | 0.0                            | 830               | 1969                          | 0.0                            | 960               | 4267                          | 0.0                            |
| 445               | 140126                        | 93.8                           | 575               | 125968                        | 34.3                           | 705               | 12309                         | 0.0                            | 835               | 1917                          | 0.0                            | 965               | 2034                          | 0.0                            |
| 450               | 102339                        | 79.3                           | 580               | 127613                        | 26.3                           | 710               | 11142                         | 0.0                            | 840               | 2248                          | 0.0                            | 970               | 3586                          | 0.0                            |
| 455               | 58751                         | 51.3                           | 585               | 129466                        | 19.8                           | 715               | 10143                         | 0.0                            | 845               | 2266                          | 0.0                            | 975               | 2505                          | 0.0                            |
| 460               | 36892                         | 35.6                           | 590               | 128813                        | 14.3                           | 720               | 9072                          | 0.0                            | 850               | 2558                          | 0.0                            | 980               | 2666                          | 0.0                            |
| 465               | 24637                         | 26.0                           | 595               | 126387                        | 10.1                           | 725               | 8130                          | 0.0                            | 855               | 2767                          | 0.0                            | 985               | 2934                          | 0.0                            |
| 470               | 16738                         | 19.3                           | 600               | 123477                        | 7.0                            | 730               | 7149                          | 0.0                            | 860               | 2826                          | 0.0                            | 990               | 4120                          | 0.0                            |
| 475               | 13456                         | 16.8                           | 605               | 118718                        | 4.7                            | 735               | 6311                          | 0.0                            | 865               | 2385                          | 0.0                            | 995               | 3858                          | 0.0                            |
| 480               | 13081                         | 17.7                           | 610               | 112091                        | 3.0                            | 740               | 5711                          | 0.0                            | 870               | 3194                          | 0.0                            | 1000              | 3405                          | 0.0                            |
| 485               | 14734                         | 21.4                           | 615               | 105039                        | 1.9                            | 745               | 5111                          | 0.0                            | 875               | 3189                          | 0.0                            |                   |                               |                                |



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### Melanopic Flux vs. Wavelength



**Melanopic Lumens: 3927.2**

**M/P: 0.55**

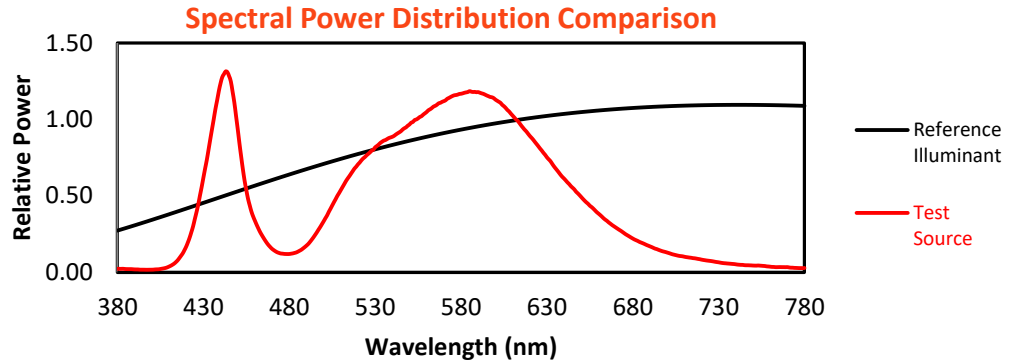
| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 2304             | 0.0              | 490       | 19043            | 15.8             | 620       | 97577            | 0.1              | 750       | 4830             | 0.0              | 880       | 3505             | 0.0              |
| 365       | 2150             | 0.0              | 495       | 26606            | 22.0             | 625       | 90158            | 0.0              | 755       | 4664             | 0.0              | 885       | 2991             | 0.0              |
| 370       | 2146             | 0.0              | 500       | 36376            | 29.2             | 630       | 82240            | 0.0              | 760       | 4006             | 0.0              | 890       | 2327             | 0.0              |
| 375       | 2332             | 0.0              | 505       | 47714            | 36.6             | 635       | 74361            | 0.0              | 765       | 3715             | 0.0              | 895       | 2775             | 0.0              |
| 380       | 2527             | 0.0              | 510       | 58741            | 42.2             | 640       | 66994            | 0.0              | 770       | 3696             | 0.0              | 900       | 2141             | 0.0              |
| 385       | 2304             | 0.0              | 515       | 68716            | 44.9             | 645       | 60405            | 0.0              | 775       | 3117             | 0.0              | 905       | 2421             | 0.0              |
| 390       | 2064             | 0.0              | 520       | 77136            | 44.9             | 650       | 53806            | 0.0              | 780       | 3062             | 0.0              | 910       | 2200             | 0.0              |
| 395       | 1856             | 0.0              | 525       | 83567            | 42.4             | 655       | 47610            | 0.0              | 785       | 2907             | 0.0              | 915       | 2716             | 0.0              |
| 400       | 1856             | 0.0              | 530       | 89283            | 38.6             | 660       | 42018            | 0.0              | 790       | 2655             | 0.0              | 920       | 2656             | 0.0              |
| 405       | 2374             | 0.0              | 535       | 94097            | 33.9             | 665       | 36742            | 0.0              | 795       | 2467             | 0.0              | 925       | 2671             | 0.0              |
| 410       | 4084             | 0.2              | 540       | 96845            | 28.3             | 670       | 32105            | 0.0              | 800       | 2609             | 0.0              | 930       | 3292             | 0.0              |
| 415       | 8543             | 0.6              | 545       | 100829           | 23.4             | 675       | 27946            | 0.0              | 805       | 2293             | 0.0              | 935       | 3188             | 0.0              |
| 420       | 18394            | 2.1              | 550       | 105648           | 19.0             | 680       | 24146            | 0.0              | 810       | 2188             | 0.0              | 940       | 1997             | 0.0              |
| 425       | 37987            | 5.9              | 555       | 110017           | 14.8             | 685       | 21191            | 0.0              | 815       | 2386             | 0.0              | 945       | 2623             | 0.0              |
| 430       | 67605            | 14.3             | 560       | 114586           | 11.3             | 690       | 18544            | 0.0              | 820       | 2712             | 0.0              | 950       | 2969             | 0.0              |
| 435       | 102160           | 27.3             | 565       | 118987           | 8.4              | 695       | 16058            | 0.0              | 825       | 2473             | 0.0              | 955       | 2277             | 0.0              |
| 440       | 135103           | 45.1             | 570       | 122326           | 6.0              | 700       | 14133            | 0.0              | 830       | 1969             | 0.0              | 960       | 4267             | 0.0              |
| 445       | 140126           | 55.3             | 575       | 125968           | 4.2              | 705       | 12309            | 0.0              | 835       | 1917             | 0.0              | 965       | 2034             | 0.0              |
| 450       | 102339           | 47.2             | 580       | 127613           | 2.9              | 710       | 11142            | 0.0              | 840       | 2248             | 0.0              | 970       | 3586             | 0.0              |
| 455       | 58751            | 30.8             | 585       | 129466           | 1.9              | 715       | 10143            | 0.0              | 845       | 2266             | 0.0              | 975       | 2505             | 0.0              |
| 460       | 36892            | 21.7             | 590       | 128813           | 1.3              | 720       | 9072             | 0.0              | 850       | 2558             | 0.0              | 980       | 2666             | 0.0              |
| 465       | 24637            | 16.1             | 595       | 126387           | 0.8              | 725       | 8130             | 0.0              | 855       | 2767             | 0.0              | 985       | 2934             | 0.0              |
| 470       | 16738            | 12.0             | 600       | 123477           | 0.5              | 730       | 7149             | 0.0              | 860       | 2826             | 0.0              | 990       | 4120             | 0.0              |
| 475       | 13456            | 10.3             | 605       | 118718           | 0.3              | 735       | 6311             | 0.0              | 865       | 2385             | 0.0              | 995       | 3858             | 0.0              |
| 480       | 13081            | 10.5             | 610       | 112091           | 0.2              | 740       | 5711             | 0.0              | 870       | 3194             | 0.0              | 1000      | 3405             | 0.0              |
| 485       | 14734            | 12.1             | 615       | 105039           | 0.1              | 745       | 5111             | 0.0              | 875       | 3189             | 0.0              |           |                  |                  |

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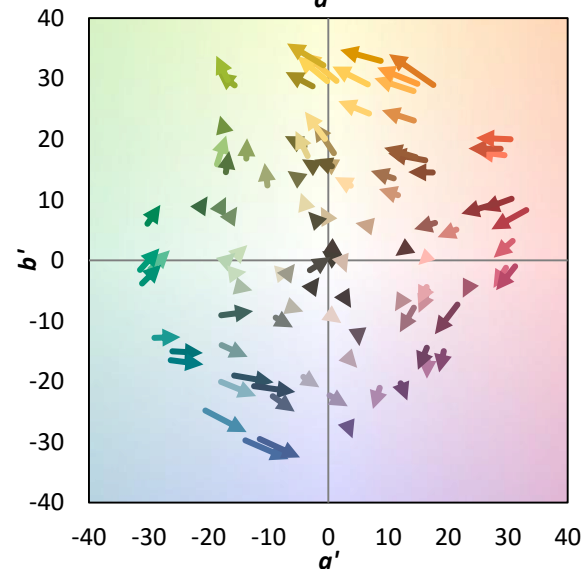
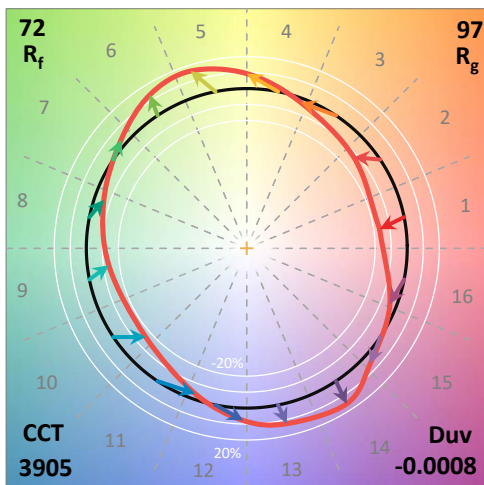
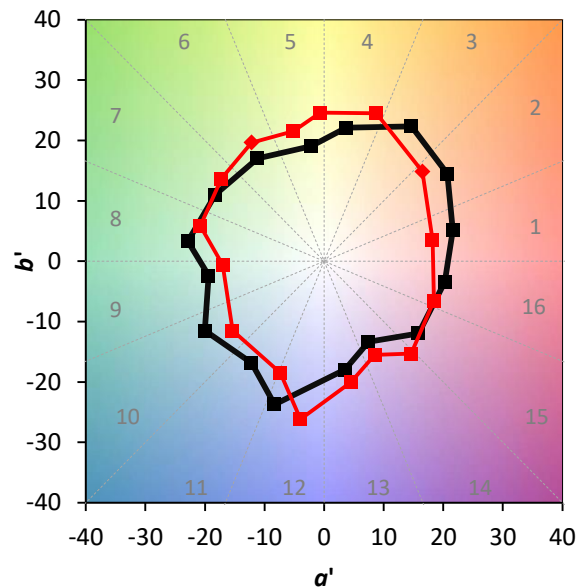
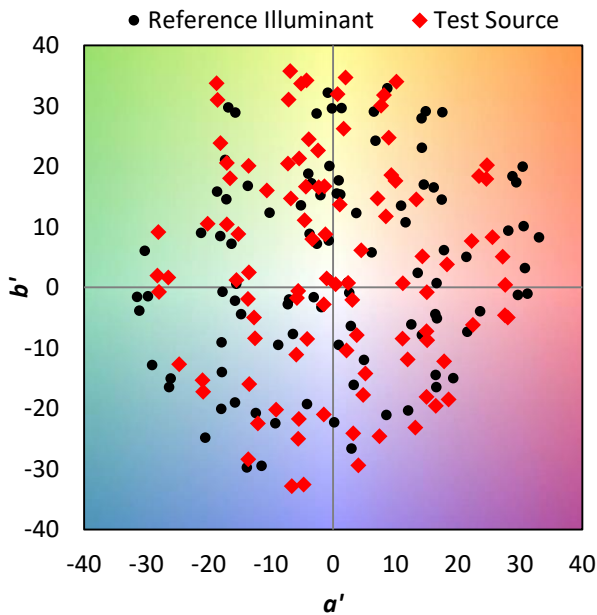
TM-30-18

### Summary

$R_f = 71.7$   
 $R_g = 96.9$   
 CIE  $R_a = 71.2$   
 $R_g = -29.7$

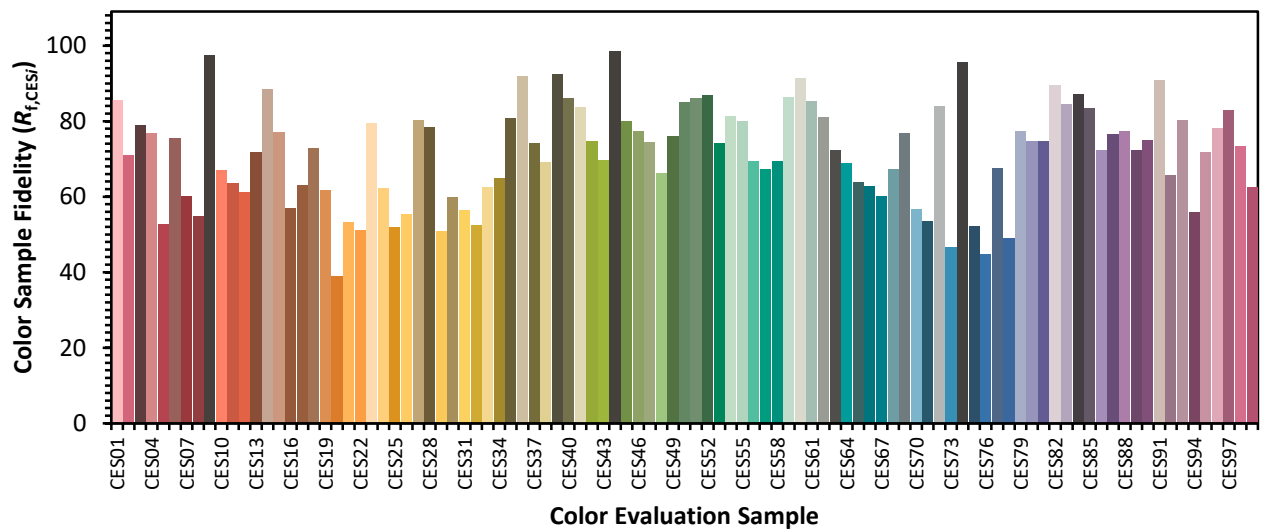


### Color Vector Graphics

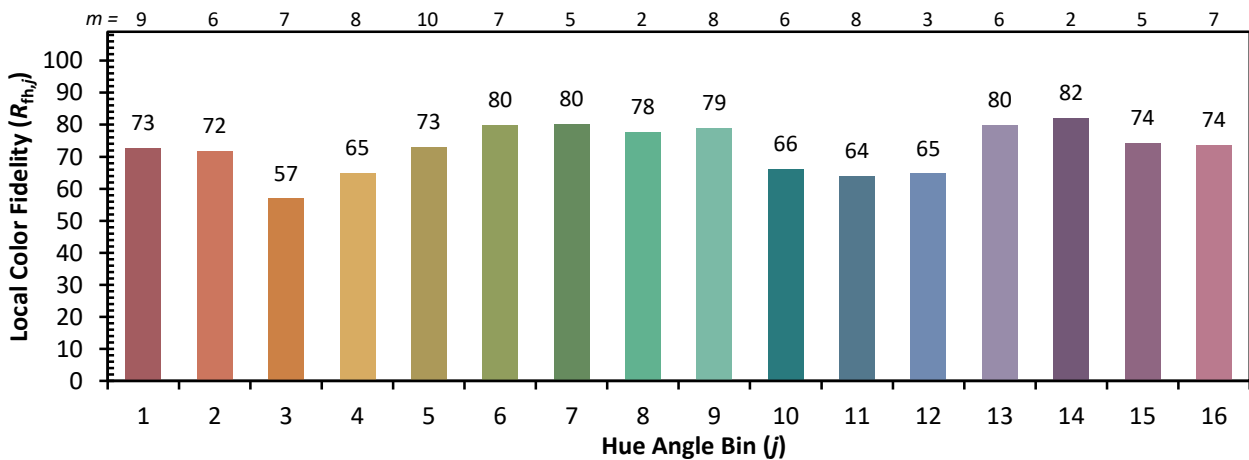
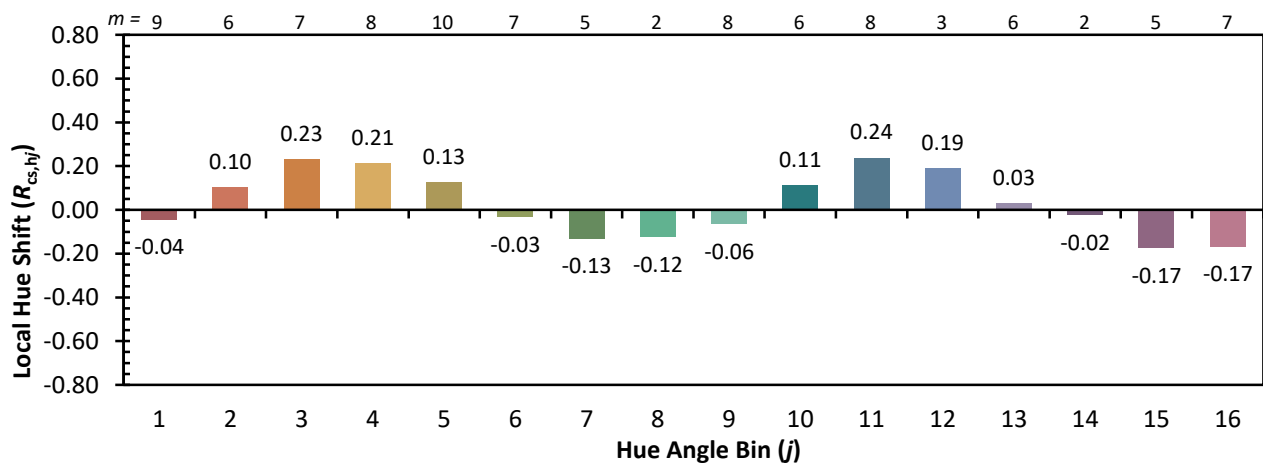
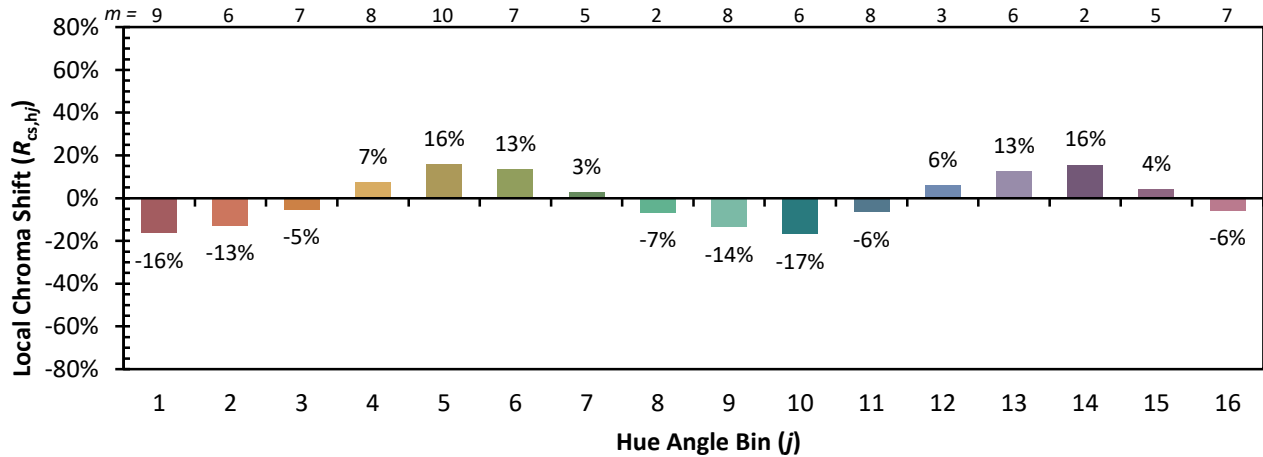


Individual Sample Fidelity Index ( $R_{f,i}$ )

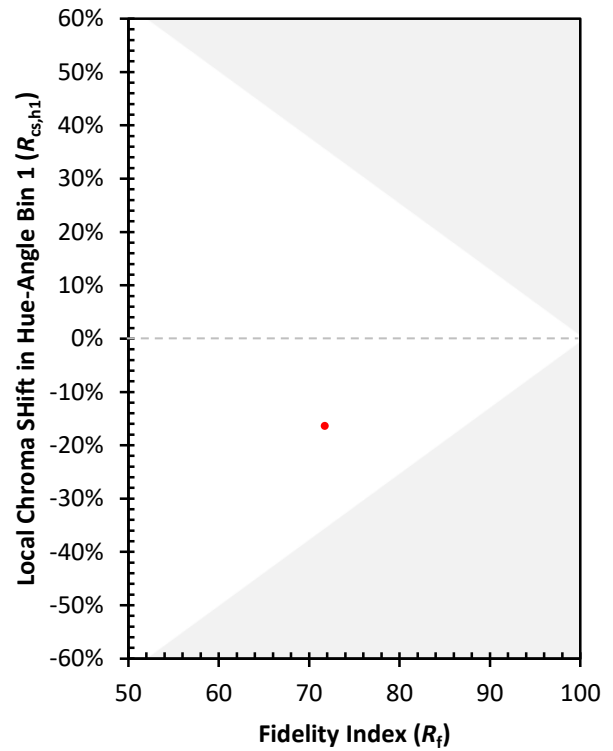
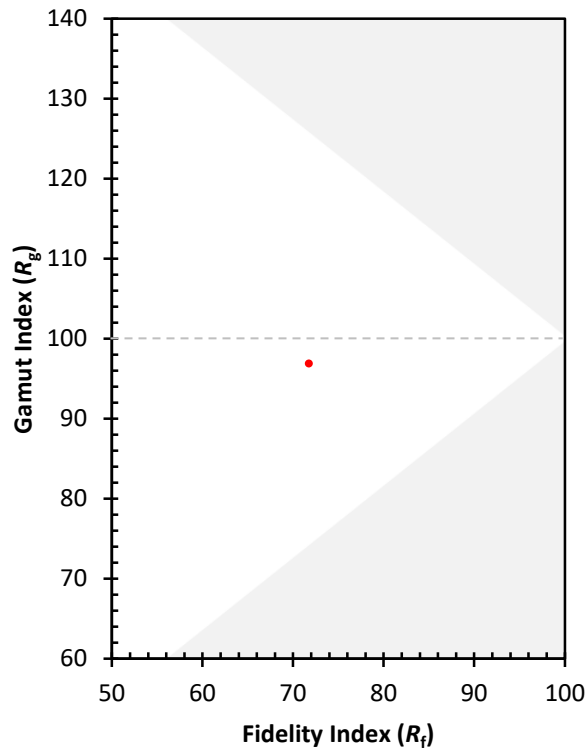
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 55 | CES51 = 86 | CES76 = 45 |
| CES02 = 61 | CES27 = 80 | CES52 = 87 | CES77 = 68 |
| CES03 = 30 | CES28 = 79 | CES53 = 74 | CES78 = 49 |
| CES04 = 70 | CES29 = 51 | CES54 = 81 | CES79 = 77 |
| CES05 = 47 | CES30 = 60 | CES55 = 80 | CES80 = 75 |
| CES06 = 50 | CES31 = 56 | CES56 = 69 | CES81 = 75 |
| CES07 = 40 | CES32 = 52 | CES57 = 67 | CES82 = 90 |
| CES08 = 39 | CES33 = 62 | CES58 = 69 | CES83 = 85 |
| CES09 = 29 | CES34 = 65 | CES59 = 86 | CES84 = 87 |
| CES10 = 74 | CES35 = 81 | CES60 = 91 | CES85 = 83 |
| CES11 = 57 | CES36 = 92 | CES61 = 85 | CES86 = 72 |
| CES12 = 63 | CES37 = 74 | CES62 = 81 | CES87 = 77 |
| CES13 = 42 | CES38 = 69 | CES63 = 72 | CES88 = 77 |
| CES14 = 74 | CES39 = 92 | CES64 = 69 | CES89 = 72 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 75 |
| CES16 = 46 | CES41 = 84 | CES66 = 63 | CES91 = 91 |
| CES17 = 49 | CES42 = 75 | CES67 = 60 | CES92 = 66 |
| CES18 = 56 | CES43 = 70 | CES68 = 67 | CES93 = 80 |
| CES19 = 72 | CES44 = 98 | CES69 = 77 | CES94 = 56 |
| CES20 = 65 | CES45 = 80 | CES70 = 57 | CES95 = 72 |
| CES21 = 86 | CES46 = 77 | CES71 = 53 | CES96 = 78 |
| CES22 = 78 | CES47 = 74 | CES72 = 84 | CES97 = 83 |
| CES23 = 92 | CES48 = 66 | CES73 = 47 | CES98 = 73 |
| CES24 = 91 | CES49 = 76 | CES74 = 96 | CES99 = 63 |
| CES25 = 72 | CES50 = 85 | CES75 = 52 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)