

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: P543114

Luminaire Tested: **TT-D5-735-U-DL-UPL**

Issue Date: 5/10/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P543114  
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND  
Test Lab: INNOVATION CENTER  
Issue Date: 5/10/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TT-D5-735-U-DL-UPL  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
3500K, 70 CRI LEDS AND DRIVE LANE DISTRIBUTION  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

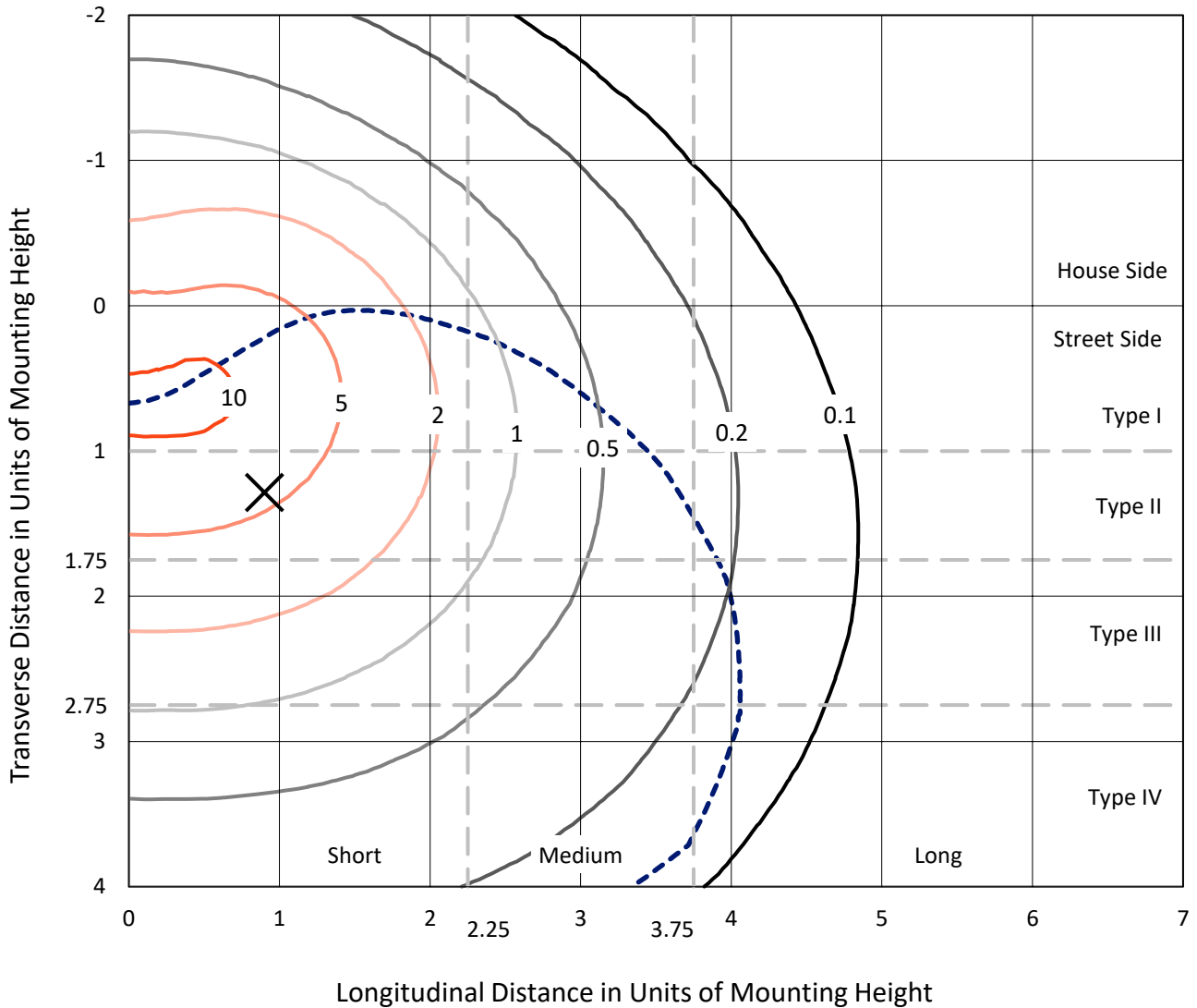
Lumens per Lamp: N/A  
Luminaire Lumens: 8773.7 lumens  
Efficiency: N/A  
Efficacy: 124.8 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U4 - G3  
  
Input Watts (W): 70.3  
Input Voltage (V): NR  
Input Current (Ain): 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

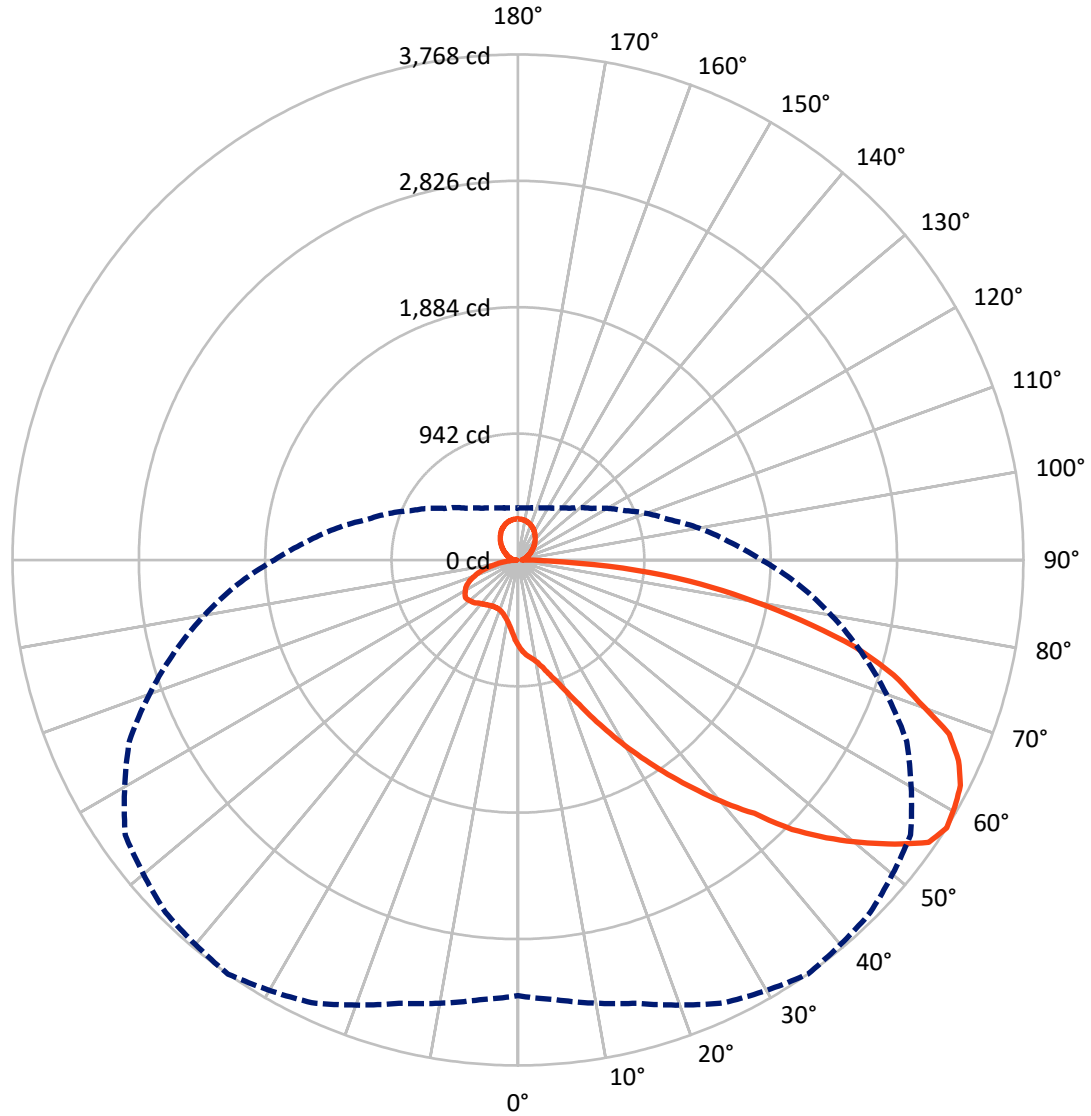
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.9 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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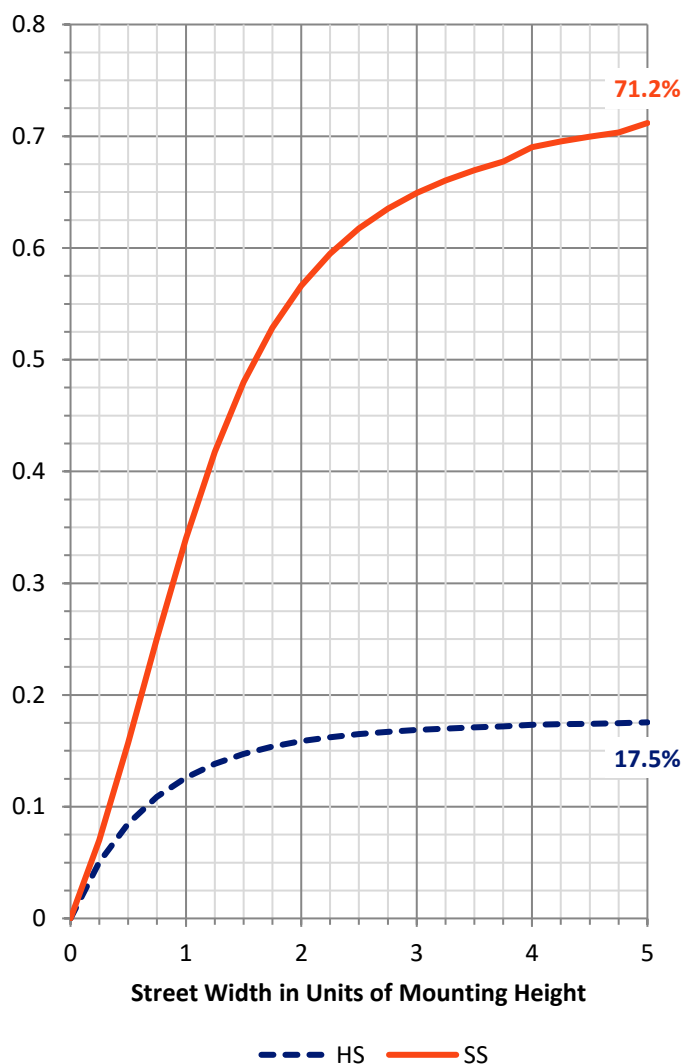
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1556.5   | 415.9  | 1972.3 |
|                    | % Fixture | 17.7     | 4.7    | 22.5   |
| <b>Street Side</b> | Lumens    | 6385.5   | 415.9  | 6801.4 |
|                    | % Fixture | 72.8     | 4.7    | 77.5   |
| <b>Total</b>       | Lumens    | 7942.0   | 831.7  | 8773.7 |
|                    | % Fixture | 90.5     | 9.5    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 59.4   | 0.7       |
| 10°-20°   | 187.3  | 2.1       |
| 20°-30°   | 396.0  | 4.5       |
| 30°-40°   | 742.0  | 8.5       |
| 40°-50°   | 1235.0 | 14.1      |
| 50°-60°   | 1743.0 | 19.9      |
| 60°-70°   | 1833.8 | 20.9      |
| 70°-80°   | 1343.4 | 15.3      |
| 80°-90°   | 402.1  | 4.6       |
| 90°-100°  | 42.6   | 0.5       |
| 100°-110° | 66.0   | 0.8       |
| 110°-120° | 91.9   | 1.0       |
| 120°-130° | 119.0  | 1.4       |
| 130°-140° | 138.7  | 1.6       |
| 140°-150° | 140.5  | 1.6       |
| 150°-160° | 121.9  | 1.4       |
| 160°-170° | 82.2   | 0.9       |
| 170°-180° | 28.9   | 0.3       |
| 0°-90°    | 7942.0 | 90.5      |
| 0°-180°   | 8773.7 | 100.0     |

**Coefficient of Utilization**

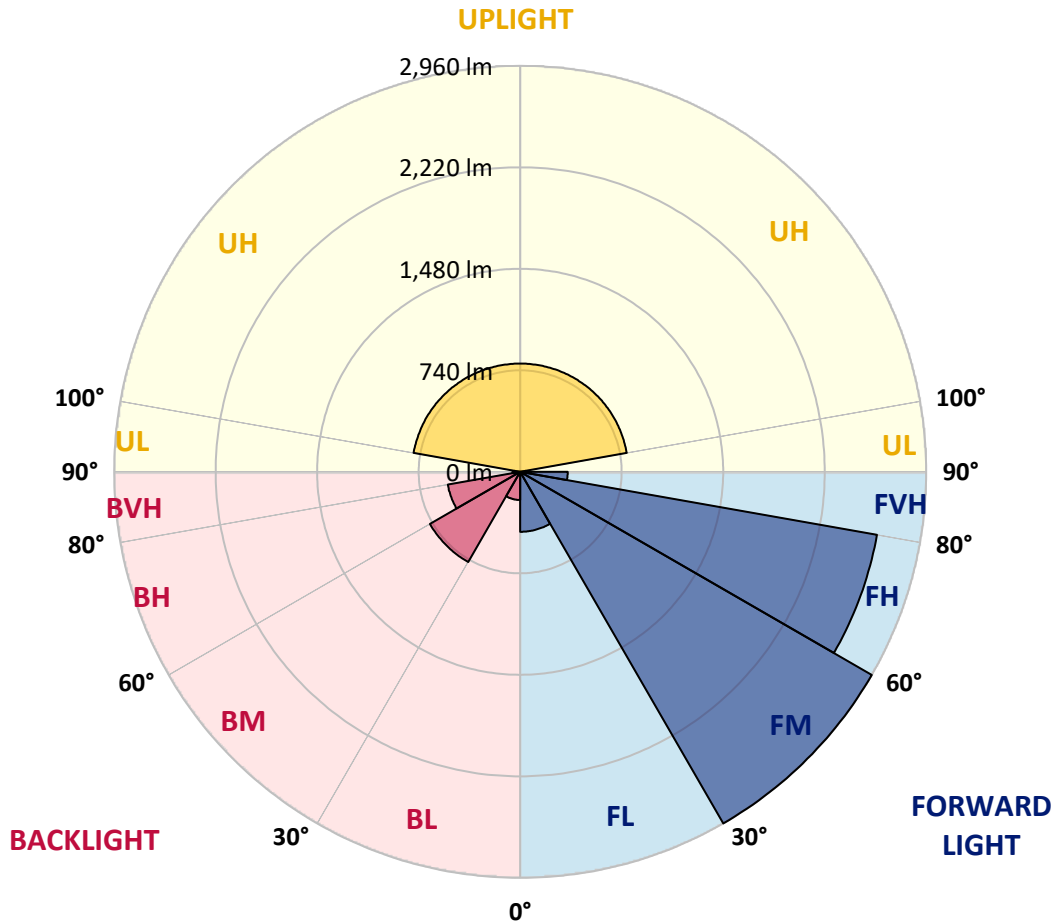


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |         |         |
|----------------|--------|-----------|-------------------------|---------|---------|
|                |        |           | B                       | U       | G       |
| FL (0°-30°)    | 437.3  | 5.0       |                         |         |         |
| FM (30°-60°)   | 2960.4 | 33.7      |                         |         |         |
| FH (60°-80°)   | 2641.4 | 30.1      |                         |         | G2/5000 |
| FVH (80°-90°)  | 346.4  | 3.9       |                         |         | G3/500  |
| BL (0°-30°)    | 205.4  | 2.3       | B1/500                  |         |         |
| BM (30°-60°)   | 759.6  | 8.7       | B1/1000                 |         |         |
| BH (60°-80°)   | 535.8  | 6.1       | B2/1000                 |         | G2/1000 |
| BVH (80°-90°)  | 55.7   | 0.6       |                         |         | G1/100  |
| UL (90°-100°)  | 42.6   | 0.5       |                         | U2/50   |         |
| UH (100°-180°) | 789.1  | 9.0       |                         | U4/1000 |         |

**BUG Rating: B2-U4-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 640.6  | 640.6  | 640.6  | 640.6  | 640.6  | 640.6  | 640.6  | 640.6  | 640.6  | 640.6  | 640.6  |
| 2.5°   | 697.5  | 694.1  | 691.1  | 686.2  | 682.8  | 681.8  | 675.4  | 667.6  | 656.8  | 647.5  | 642.6  |
| 5°     | 734.3  | 733.8  | 732.3  | 726.4  | 715.6  | 700.4  | 686.2  | 670.0  | 652.4  | 634.8  | 626.4  |
| 7.5°   | 769.1  | 765.6  | 763.7  | 755.3  | 739.6  | 723.0  | 701.4  | 677.4  | 651.9  | 626.9  | 614.2  |
| 10°    | 812.7  | 807.8  | 804.4  | 788.2  | 772.0  | 748.5  | 720.0  | 689.2  | 658.8  | 627.4  | 612.2  |
| 12.5°  | 868.6  | 864.6  | 850.4  | 842.6  | 822.0  | 795.0  | 759.3  | 722.0  | 682.8  | 642.6  | 623.0  |
| 15°    | 928.4  | 929.3  | 923.9  | 903.9  | 887.2  | 854.8  | 816.6  | 770.0  | 717.1  | 668.6  | 644.1  |
| 17.5°  | 1008.3 | 1006.8 | 996.5  | 983.3  | 957.8  | 924.9  | 877.9  | 828.4  | 766.6  | 702.9  | 674.9  |
| 20°    | 1102.4 | 1097.5 | 1088.2 | 1070.0 | 1054.8 | 1016.1 | 962.7  | 900.9  | 827.4  | 751.9  | 714.2  |
| 22.5°  | 1222.0 | 1211.2 | 1205.3 | 1189.1 | 1170.5 | 1134.2 | 1077.4 | 995.5  | 909.2  | 815.6  | 767.1  |
| 25°    | 1339.1 | 1345.0 | 1342.1 | 1332.7 | 1309.2 | 1264.6 | 1204.3 | 1114.1 | 996.0  | 886.7  | 831.8  |
| 27.5°  | 1486.2 | 1488.6 | 1489.6 | 1485.7 | 1462.6 | 1422.0 | 1360.7 | 1241.6 | 1109.7 | 973.9  | 901.4  |
| 30°    | 1639.1 | 1633.7 | 1640.6 | 1642.5 | 1631.2 | 1584.2 | 1509.2 | 1378.8 | 1221.0 | 1058.7 | 977.4  |
| 32.5°  | 1791.0 | 1796.9 | 1811.1 | 1802.3 | 1804.3 | 1750.8 | 1669.0 | 1515.6 | 1339.6 | 1148.4 | 1062.7 |
| 35°    | 1954.8 | 1962.6 | 1972.4 | 1989.1 | 1988.1 | 1945.4 | 1827.3 | 1673.4 | 1468.0 | 1251.9 | 1140.6 |
| 37.5°  | 2122.4 | 2120.4 | 2135.1 | 2173.4 | 2180.7 | 2140.0 | 2016.5 | 1839.1 | 1602.8 | 1356.3 | 1232.3 |
| 40°    | 2281.2 | 2299.3 | 2327.8 | 2353.7 | 2385.1 | 2327.3 | 2207.2 | 2006.2 | 1749.4 | 1464.6 | 1318.5 |
| 42.5°  | 2466.5 | 2473.8 | 2516.0 | 2574.3 | 2582.6 | 2538.0 | 2407.2 | 2198.9 | 1895.0 | 1567.5 | 1412.6 |
| 45°    | 2663.0 | 2672.8 | 2712.5 | 2796.8 | 2865.0 | 2836.1 | 2658.6 | 2411.1 | 2075.3 | 1707.7 | 1516.6 |
| 47.5°  | 2832.6 | 2861.5 | 2925.3 | 3022.8 | 3095.4 | 3080.2 | 2910.1 | 2619.4 | 2247.9 | 1825.4 | 1617.0 |
| 50°    | 2983.6 | 3018.4 | 3105.2 | 3245.8 | 3310.5 | 3290.4 | 3124.8 | 2825.3 | 2373.8 | 1927.3 | 1690.1 |
| 52.5°  | 3136.5 | 3185.1 | 3264.5 | 3418.4 | 3519.3 | 3527.2 | 3342.4 | 2982.6 | 2519.9 | 2034.2 | 1770.0 |
| 55°    | 3219.4 | 3254.7 | 3387.5 | 3574.2 | 3716.9 | 3720.8 | 3512.0 | 3130.2 | 2620.9 | 2081.2 | 1807.7 |
| 57.5°  | 3248.3 | 3290.9 | 3420.3 | 3641.4 | 3767.9 | 3715.4 | 3573.3 | 3196.8 | 2649.3 | 2098.4 | 1815.5 |
| 60°    | 3208.1 | 3250.7 | 3398.3 | 3634.0 | 3740.9 | 3766.4 | 3546.3 | 3196.3 | 2635.1 | 2076.3 | 1791.5 |
| 62.5°  | 3150.7 | 3205.1 | 3348.3 | 3578.2 | 3701.7 | 3715.9 | 3511.5 | 3160.1 | 2614.0 | 2038.6 | 1756.2 |
| 65°    | 3005.2 | 3038.0 | 3247.3 | 3418.9 | 3609.5 | 3592.4 | 3431.6 | 3033.6 | 2539.5 | 1941.0 | 1670.0 |
| 67.5°  | 2860.1 | 2894.4 | 3048.3 | 3283.6 | 3468.4 | 3449.7 | 3291.4 | 2911.1 | 2396.4 | 1850.4 | 1579.8 |
| 70°    | 2615.5 | 2637.5 | 2849.8 | 3032.6 | 3170.8 | 3239.5 | 3035.1 | 2706.7 | 2246.4 | 1698.4 | 1442.5 |
| 72.5°  | 2356.7 | 2391.5 | 2543.4 | 2772.8 | 2929.2 | 2907.1 | 2804.7 | 2455.2 | 2001.8 | 1521.9 | 1300.4 |
| 75°    | 2025.8 | 2059.2 | 2227.3 | 2448.8 | 2600.8 | 2583.1 | 2466.5 | 2156.2 | 1779.3 | 1317.1 | 1125.9 |
| 77.5°  | 1713.1 | 1702.8 | 1851.3 | 2019.5 | 2157.7 | 2198.4 | 2067.0 | 1823.4 | 1467.5 | 1082.3 | 916.6  |
| 80°    | 1316.1 | 1355.3 | 1448.4 | 1604.8 | 1709.2 | 1732.2 | 1630.8 | 1443.0 | 1172.5 | 847.0  | 702.9  |
| 82.5°  | 926.9  | 947.5  | 1061.2 | 1159.7 | 1290.6 | 1282.3 | 1212.2 | 1048.0 | 851.4  | 594.6  | 484.3  |
| 85°    | 505.8  | 510.3  | 613.2  | 682.3  | 783.3  | 795.5  | 746.0  | 633.8  | 487.2  | 338.2  | 249.5  |
| 87.5°  | 88.7   | 87.2   | 126.5  | 185.3  | 235.3  | 252.9  | 210.3  | 164.7  | 66.7   | 39.7   | 20.6   |
| 90°    | 30.1   | 29.1   | 29.1   | 29.1   | 29.1   | 29.1   | 29.1   | 29.1   | 29.1   | 29.1   | 29.1   |
| 92.5°  | 34.8   | 34.2   | 34.2   | 33.8   | 33.8   | 33.8   | 33.8   | 33.8   | 33.8   | 33.8   | 33.8   |
| 95°    | 39.4   | 39.4   | 39.4   | 38.5   | 38.5   | 38.5   | 38.5   | 38.5   | 38.5   | 38.5   | 38.5   |
| 97.5°  | 44.6   | 44.6   | 44.6   | 44.2   | 44.2   | 44.2   | 44.2   | 44.2   | 44.2   | 44.2   | 44.2   |
| 100°   | 49.8   | 49.8   | 49.8   | 49.8   | 49.8   | 49.8   | 49.8   | 49.8   | 49.8   | 49.8   | 49.8   |
| 102.5° | 55.9   | 55.9   | 55.9   | 55.9   | 55.9   | 55.9   | 55.9   | 56.4   | 55.9   | 55.9   | 55.9   |
| 105°   | 62.0   | 62.0   | 62.0   | 62.0   | 62.0   | 62.0   | 62.0   | 62.9   | 62.0   | 62.0   | 62.0   |
| 107.5° | 68.6   | 68.6   | 69.0   | 69.0   | 69.0   | 69.0   | 69.0   | 69.5   | 69.0   | 69.0   | 69.0   |
| 110°   | 75.1   | 75.1   | 76.1   | 76.1   | 76.1   | 76.1   | 76.1   | 76.1   | 76.1   | 76.1   | 76.1   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 5°    | 15°   | 25°   | 35°   | 45°   | 55°   | 65°   | 75°   | 85°   | 90°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 83.1  | 83.1  | 84.0  | 84.0  | 84.0  | 84.0  | 84.6  | 84.6  | 84.0  | 84.0  | 84.0  |
| 115°   | 91.1  | 91.1  | 92.0  | 92.0  | 92.0  | 92.0  | 93.0  | 93.0  | 92.0  | 92.0  | 92.0  |
| 117.5° | 100.5 | 100.5 | 101.0 | 101.4 | 101.4 | 101.4 | 102.4 | 102.4 | 101.4 | 101.4 | 101.4 |
| 120°   | 109.9 | 109.9 | 109.9 | 110.8 | 110.8 | 110.8 | 111.8 | 111.8 | 110.8 | 110.8 | 110.8 |
| 122.5° | 120.7 | 120.7 | 121.2 | 121.6 | 121.6 | 121.6 | 122.6 | 122.6 | 122.1 | 122.1 | 121.6 |
| 125°   | 131.5 | 131.5 | 132.4 | 132.4 | 132.4 | 132.4 | 133.4 | 133.4 | 133.4 | 133.4 | 132.4 |
| 127.5° | 143.2 | 143.2 | 144.2 | 144.2 | 144.2 | 144.2 | 145.1 | 145.1 | 145.1 | 145.1 | 144.2 |
| 130°   | 155.0 | 155.0 | 155.9 | 155.9 | 155.9 | 155.9 | 156.8 | 156.8 | 156.8 | 156.8 | 155.9 |
| 132.5° | 167.2 | 167.2 | 167.6 | 167.6 | 167.6 | 168.1 | 168.6 | 168.6 | 168.6 | 168.6 | 168.1 |
| 135°   | 179.4 | 179.4 | 179.4 | 179.4 | 179.4 | 180.3 | 180.3 | 180.3 | 180.3 | 180.3 | 180.3 |
| 137.5° | 191.2 | 190.6 | 191.2 | 190.6 | 191.2 | 191.6 | 191.6 | 191.6 | 191.6 | 191.6 | 191.6 |
| 140°   | 202.9 | 201.9 | 202.9 | 201.9 | 202.9 | 202.9 | 202.9 | 202.9 | 202.9 | 202.9 | 202.9 |
| 142.5° | 213.7 | 213.2 | 213.7 | 212.7 | 213.7 | 213.7 | 213.7 | 213.7 | 213.7 | 213.7 | 213.7 |
| 145°   | 224.5 | 224.5 | 224.5 | 223.5 | 224.5 | 224.5 | 224.5 | 224.5 | 224.5 | 224.5 | 224.5 |
| 147.5° | 235.8 | 235.3 | 235.8 | 234.8 | 235.8 | 235.8 | 235.8 | 235.8 | 235.8 | 235.8 | 235.8 |
| 150°   | 247.0 | 246.1 | 247.0 | 246.1 | 247.0 | 247.0 | 247.0 | 247.0 | 247.0 | 247.0 | 247.0 |
| 152.5° | 256.0 | 255.5 | 256.4 | 255.5 | 256.0 | 256.0 | 256.4 | 256.0 | 256.0 | 256.0 | 256.0 |
| 155°   | 264.9 | 264.9 | 265.8 | 264.9 | 264.9 | 264.9 | 265.8 | 264.9 | 264.9 | 264.9 | 264.9 |
| 157.5° | 272.4 | 272.4 | 273.3 | 272.4 | 272.4 | 272.4 | 273.3 | 272.4 | 272.4 | 272.4 | 272.4 |
| 160°   | 279.9 | 279.9 | 280.8 | 279.9 | 279.9 | 279.9 | 280.8 | 279.9 | 279.9 | 279.9 | 279.9 |
| 162.5° | 286.0 | 286.0 | 286.9 | 286.0 | 286.0 | 286.0 | 286.9 | 286.0 | 286.0 | 286.0 | 286.0 |
| 165°   | 292.1 | 292.1 | 293.0 | 292.1 | 292.1 | 292.1 | 293.0 | 292.1 | 292.1 | 292.1 | 292.1 |
| 167.5° | 295.8 | 295.8 | 296.8 | 295.8 | 295.8 | 295.8 | 296.8 | 295.8 | 295.8 | 295.8 | 295.8 |
| 170°   | 299.6 | 299.6 | 300.5 | 299.6 | 299.6 | 299.6 | 300.5 | 299.6 | 299.6 | 299.6 | 299.6 |
| 172.5° | 302.0 | 302.0 | 302.8 | 302.0 | 302.0 | 302.0 | 302.8 | 302.0 | 302.0 | 302.0 | 302.0 |
| 175°   | 304.3 | 304.3 | 305.2 | 304.3 | 305.2 | 304.3 | 305.2 | 304.3 | 304.3 | 304.3 | 304.3 |
| 177.5° | 305.2 | 305.2 | 305.7 | 305.2 | 305.2 | 305.2 | 305.7 | 305.2 | 305.2 | 305.2 | 305.2 |
| 180°   | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 |





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**CANDELA DISTRIBUTION (continued):**

|        | 95°    | 105°   | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 640.6  | 640.6  | 640.6 | 640.6 | 640.6 | 640.6 | 640.6 | 640.6 | 640.6 | 640.6 |
| 2.5°   | 637.2  | 627.4  | 618.1 | 609.3 | 600.9 | 594.1 | 591.1 | 588.7 | 588.2 | 583.8 |
| 5°     | 616.1  | 600.4  | 583.3 | 567.6 | 553.4 | 538.2 | 525.9 | 522.0 | 521.5 | 524.0 |
| 7.5°   | 602.4  | 578.4  | 554.9 | 536.2 | 515.2 | 495.1 | 476.9 | 465.7 | 462.7 | 461.7 |
| 10°    | 597.5  | 568.1  | 539.7 | 511.2 | 487.7 | 463.2 | 441.1 | 427.4 | 419.6 | 417.6 |
| 12.5°  | 603.9  | 566.6  | 531.3 | 498.0 | 466.1 | 439.2 | 414.2 | 397.0 | 388.2 | 385.3 |
| 15°    | 621.0  | 573.0  | 528.4 | 488.2 | 453.4 | 419.6 | 395.1 | 373.0 | 362.7 | 361.2 |
| 17.5°  | 643.6  | 587.2  | 530.4 | 483.3 | 442.1 | 406.3 | 377.9 | 354.9 | 342.1 | 340.2 |
| 20°    | 675.9  | 605.3  | 539.7 | 483.8 | 437.2 | 397.0 | 365.2 | 340.7 | 326.9 | 325.5 |
| 22.5°  | 721.5  | 634.3  | 554.9 | 490.2 | 437.2 | 391.6 | 357.3 | 331.8 | 317.6 | 316.2 |
| 25°    | 773.5  | 667.6  | 575.4 | 499.0 | 438.7 | 390.7 | 352.9 | 326.0 | 311.7 | 310.3 |
| 27.5°  | 833.3  | 708.3  | 597.5 | 510.3 | 444.1 | 391.6 | 351.4 | 324.5 | 310.8 | 308.8 |
| 30°    | 900.4  | 748.5  | 621.5 | 522.5 | 450.9 | 393.6 | 351.9 | 324.0 | 310.8 | 308.8 |
| 32.5°  | 967.6  | 792.6  | 648.5 | 538.7 | 458.8 | 399.0 | 354.9 | 327.4 | 313.7 | 312.2 |
| 35°    | 1038.2 | 841.1  | 678.4 | 555.4 | 470.1 | 406.3 | 359.8 | 331.3 | 317.6 | 316.2 |
| 37.5°  | 1111.2 | 890.1  | 709.3 | 575.9 | 481.8 | 413.7 | 366.6 | 338.2 | 325.0 | 323.5 |
| 40°    | 1187.2 | 940.6  | 742.1 | 597.0 | 493.1 | 423.5 | 375.0 | 347.0 | 333.3 | 331.8 |
| 42.5°  | 1252.8 | 986.2  | 772.5 | 615.1 | 507.8 | 432.8 | 385.8 | 356.3 | 343.6 | 342.1 |
| 45°    | 1345.5 | 1038.2 | 803.9 | 637.7 | 525.5 | 449.5 | 398.5 | 371.1 | 359.3 | 356.3 |
| 47.5°  | 1422.9 | 1091.1 | 835.7 | 659.3 | 540.2 | 460.7 | 410.8 | 382.8 | 370.6 | 368.6 |
| 50°    | 1486.2 | 1124.4 | 860.7 | 670.5 | 548.0 | 468.1 | 420.6 | 392.1 | 381.3 | 377.9 |
| 52.5°  | 1552.8 | 1162.2 | 874.0 | 683.8 | 560.7 | 478.4 | 427.4 | 402.9 | 391.1 | 387.7 |
| 55°    | 1574.4 | 1164.1 | 883.8 | 686.2 | 558.8 | 480.8 | 431.8 | 403.4 | 394.1 | 390.7 |
| 57.5°  | 1575.9 | 1163.6 | 870.5 | 669.6 | 545.1 | 470.1 | 427.4 | 400.5 | 389.7 | 386.7 |
| 60°    | 1548.4 | 1134.7 | 844.1 | 649.5 | 530.4 | 454.9 | 415.2 | 389.2 | 380.9 | 377.9 |
| 62.5°  | 1514.1 | 1108.2 | 811.2 | 622.0 | 509.3 | 439.7 | 401.0 | 380.9 | 369.6 | 366.1 |
| 65°    | 1427.3 | 1038.6 | 761.2 | 584.8 | 478.9 | 416.6 | 378.4 | 358.8 | 350.0 | 347.5 |
| 67.5°  | 1350.4 | 964.1  | 711.2 | 546.0 | 444.6 | 388.2 | 353.4 | 336.2 | 329.4 | 327.9 |
| 70°    | 1225.4 | 883.3  | 633.8 | 485.7 | 400.5 | 346.1 | 320.1 | 307.3 | 299.0 | 296.1 |
| 72.5°  | 1098.4 | 775.4  | 558.8 | 427.9 | 347.0 | 311.3 | 285.3 | 271.5 | 267.1 | 264.7 |
| 75°    | 932.8  | 651.9  | 471.0 | 362.7 | 298.0 | 260.3 | 242.1 | 231.8 | 226.5 | 226.0 |
| 77.5°  | 763.2  | 522.0  | 379.4 | 287.2 | 235.8 | 209.8 | 197.0 | 187.2 | 186.3 | 188.2 |
| 80°    | 584.8  | 394.1  | 281.8 | 215.2 | 174.5 | 158.3 | 151.5 | 145.1 | 144.1 | 142.6 |
| 82.5°  | 388.7  | 261.3  | 178.4 | 136.3 | 117.1 | 107.8 | 105.9 | 101.5 | 100.5 | 99.5  |
| 85°    | 189.7  | 125.5  | 86.3  | 67.6  | 62.3  | 57.8  | 57.3  | 59.3  | 58.8  | 57.3  |
| 87.5°  | 19.6   | 16.2   | 15.7  | 12.3  | 11.3  | 10.3  | 10.3  | 9.3   | 11.3  | 8.3   |
| 90°    | 29.1   | 29.1   | 29.1  | 29.1  | 29.1  | 29.1  | 29.1  | 29.1  | 29.1  | 30.1  |
| 92.5°  | 33.8   | 33.8   | 33.8  | 33.8  | 33.8  | 33.8  | 33.8  | 34.2  | 34.2  | 34.8  |
| 95°    | 38.5   | 38.5   | 38.5  | 38.5  | 38.5  | 38.5  | 38.5  | 39.4  | 39.4  | 39.4  |
| 97.5°  | 44.2   | 44.2   | 44.2  | 44.2  | 44.2  | 44.2  | 44.2  | 44.6  | 44.6  | 44.6  |
| 100°   | 49.8   | 49.8   | 49.8  | 49.8  | 49.8  | 49.8  | 49.8  | 49.8  | 49.8  | 49.8  |
| 102.5° | 55.9   | 55.9   | 56.4  | 55.9  | 55.9  | 55.9  | 55.9  | 55.9  | 55.9  | 55.9  |
| 105°   | 62.0   | 62.0   | 62.9  | 62.0  | 62.0  | 62.0  | 62.0  | 62.0  | 62.0  | 62.0  |
| 107.5° | 69.0   | 69.0   | 69.5  | 69.0  | 69.0  | 69.0  | 69.0  | 69.0  | 68.6  | 68.6  |
| 110°   | 76.1   | 76.1   | 76.1  | 76.1  | 76.1  | 76.1  | 76.1  | 76.1  | 75.1  | 75.1  |



REPORT NUMBER: P543114  
 CATALOG NUMBER: TT-D5-735-U-DL-UPL

**CANDELA DISTRIBUTION (continued):**

|        | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 84.0  | 84.0  | 84.6  | 84.6  | 84.0  | 84.0  | 84.0  | 84.0  | 83.1  | 83.1  |
| 115°   | 92.0  | 92.0  | 93.0  | 93.0  | 92.0  | 92.0  | 92.0  | 92.0  | 91.1  | 91.1  |
| 117.5° | 101.4 | 101.4 | 102.4 | 102.4 | 101.4 | 101.4 | 101.4 | 101.0 | 100.5 | 100.5 |
| 120°   | 110.8 | 110.8 | 111.8 | 111.8 | 110.8 | 110.8 | 110.8 | 109.9 | 109.9 | 109.9 |
| 122.5° | 122.1 | 122.1 | 122.6 | 122.6 | 121.6 | 121.6 | 121.6 | 121.2 | 120.7 | 120.7 |
| 125°   | 133.4 | 133.4 | 133.4 | 133.4 | 132.4 | 132.4 | 132.4 | 132.4 | 131.5 | 131.5 |
| 127.5° | 145.1 | 145.1 | 145.1 | 145.1 | 144.2 | 144.2 | 144.2 | 144.2 | 143.2 | 143.2 |
| 130°   | 156.8 | 156.8 | 156.8 | 156.8 | 155.9 | 155.9 | 155.9 | 155.9 | 155.0 | 155.0 |
| 132.5° | 168.6 | 168.6 | 168.6 | 168.6 | 168.1 | 167.6 | 167.6 | 167.6 | 167.2 | 167.2 |
| 135°   | 180.3 | 180.3 | 180.3 | 180.3 | 180.3 | 179.4 | 179.4 | 179.4 | 179.4 | 179.4 |
| 137.5° | 191.6 | 191.6 | 191.6 | 191.6 | 191.6 | 191.2 | 190.6 | 191.2 | 190.6 | 191.2 |
| 140°   | 202.9 | 202.9 | 202.9 | 202.9 | 202.9 | 202.9 | 201.9 | 202.9 | 201.9 | 202.9 |
| 142.5° | 213.7 | 213.7 | 213.7 | 213.7 | 213.7 | 213.7 | 212.7 | 213.7 | 213.2 | 213.7 |
| 145°   | 224.5 | 224.5 | 224.5 | 224.5 | 224.5 | 224.5 | 223.5 | 224.5 | 224.5 | 224.5 |
| 147.5° | 235.8 | 235.8 | 235.8 | 235.8 | 235.8 | 235.8 | 234.8 | 235.8 | 235.3 | 235.8 |
| 150°   | 247.0 | 247.0 | 247.0 | 247.0 | 247.0 | 247.0 | 246.1 | 247.0 | 246.1 | 247.0 |
| 152.5° | 256.0 | 256.0 | 256.0 | 256.4 | 256.0 | 256.0 | 255.5 | 256.4 | 255.5 | 256.0 |
| 155°   | 264.9 | 264.9 | 264.9 | 265.8 | 264.9 | 264.9 | 264.9 | 265.8 | 264.9 | 264.9 |
| 157.5° | 272.4 | 272.4 | 272.4 | 273.3 | 272.4 | 272.4 | 272.4 | 273.3 | 272.4 | 272.4 |
| 160°   | 279.9 | 279.9 | 279.9 | 280.8 | 279.9 | 279.9 | 279.9 | 280.8 | 279.9 | 279.9 |
| 162.5° | 286.0 | 286.0 | 286.0 | 286.9 | 286.0 | 286.0 | 286.0 | 286.9 | 286.0 | 286.0 |
| 165°   | 292.1 | 292.1 | 292.1 | 293.0 | 292.1 | 292.1 | 292.1 | 293.0 | 292.1 | 292.1 |
| 167.5° | 295.8 | 295.8 | 295.8 | 296.8 | 295.8 | 295.8 | 295.8 | 296.8 | 295.8 | 295.8 |
| 170°   | 299.6 | 299.6 | 299.6 | 300.5 | 299.6 | 299.6 | 299.6 | 300.5 | 299.6 | 299.6 |
| 172.5° | 302.0 | 302.0 | 302.0 | 302.8 | 302.0 | 302.4 | 302.0 | 302.8 | 302.0 | 302.0 |
| 175°   | 304.3 | 304.3 | 304.3 | 305.2 | 304.3 | 305.2 | 304.3 | 305.2 | 304.3 | 304.3 |
| 177.5° | 305.2 | 305.2 | 305.2 | 305.7 | 305.2 | 305.7 | 305.2 | 305.7 | 305.2 | 305.2 |
| 180°   | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 | 306.2 |

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

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2411-284-1

Test Date: 11/15/2024

Luminaire Tested: TTN-D0-735-U-WQ

Data in this report applies to families of products including TT-xx-735 and TTN-xx-735

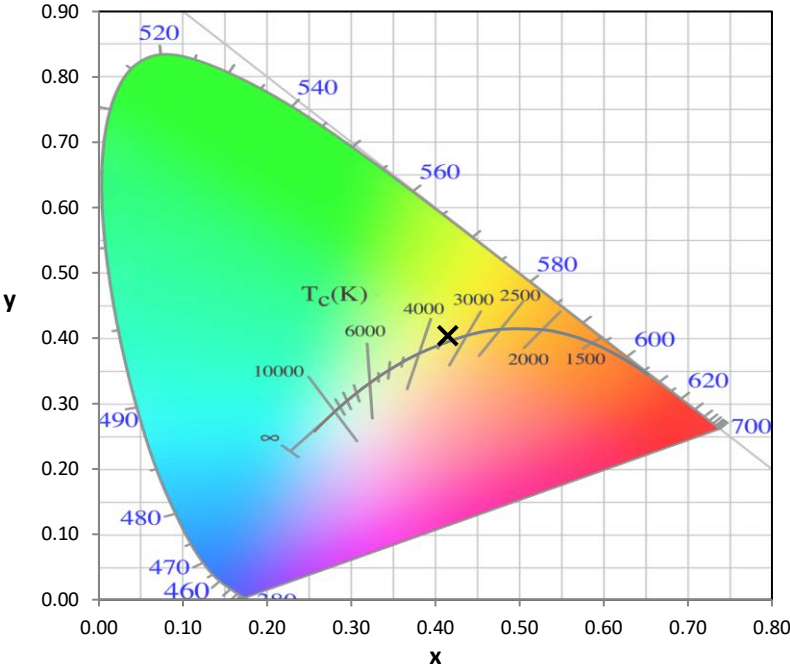


REPORT NUMBER: SP1-2411-284-1

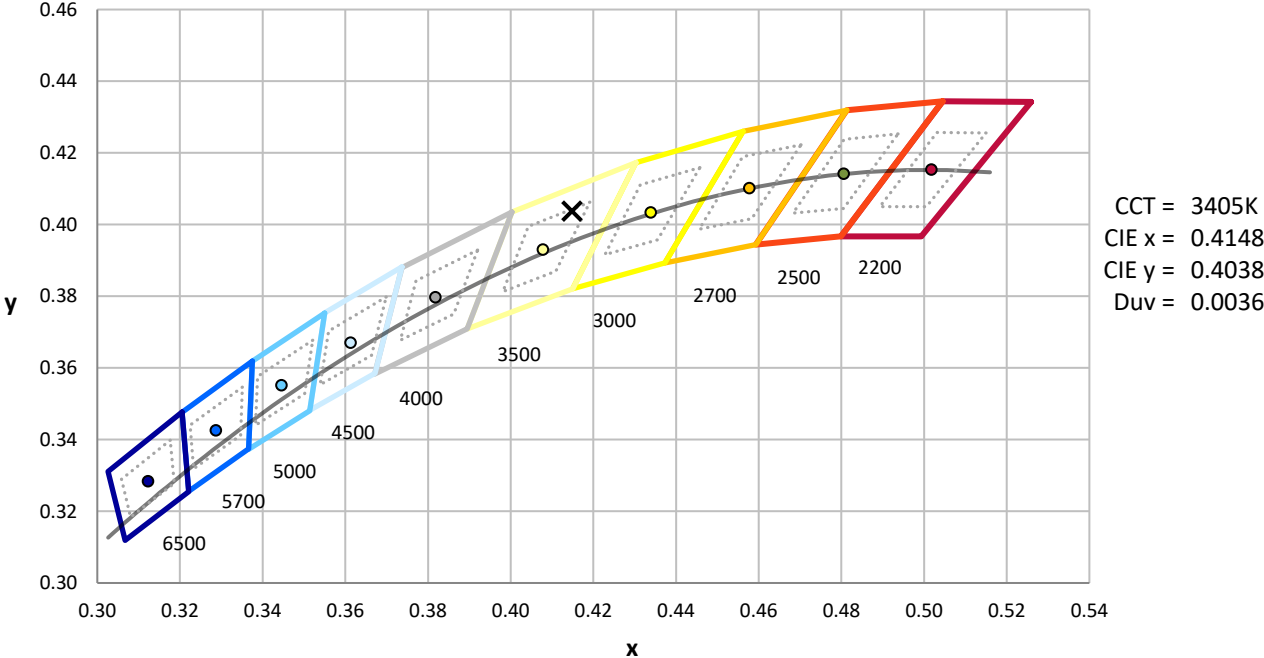
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 6/18/2024        | 12/18/2024           |
| Power Meter                    | INXT2011004           | 2/8/2024         | 2/8/2025             |
| AC Power Source                | IN0063                | 10/22/2024       | 10/22/2025           |
| DC Power Source                | IN0208                | 10/22/2024       | 10/22/2025           |
| Sphere Thermometer             | IN0085                | 10/22/2024       | 10/22/2025           |
| Room Thermometer               | IN0046                | 10/22/2024       | 10/22/2025           |

REPORT NUMBER: SP1-2411-284-1

CIE 1931 Chromaticity Diagram



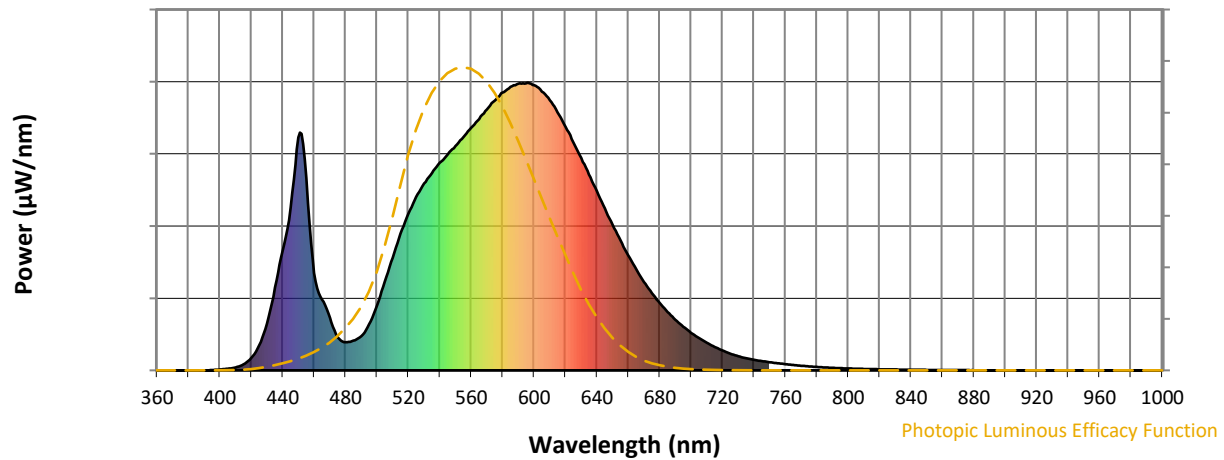
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2411-284-1

**Photopic Flux vs. Wavelength**

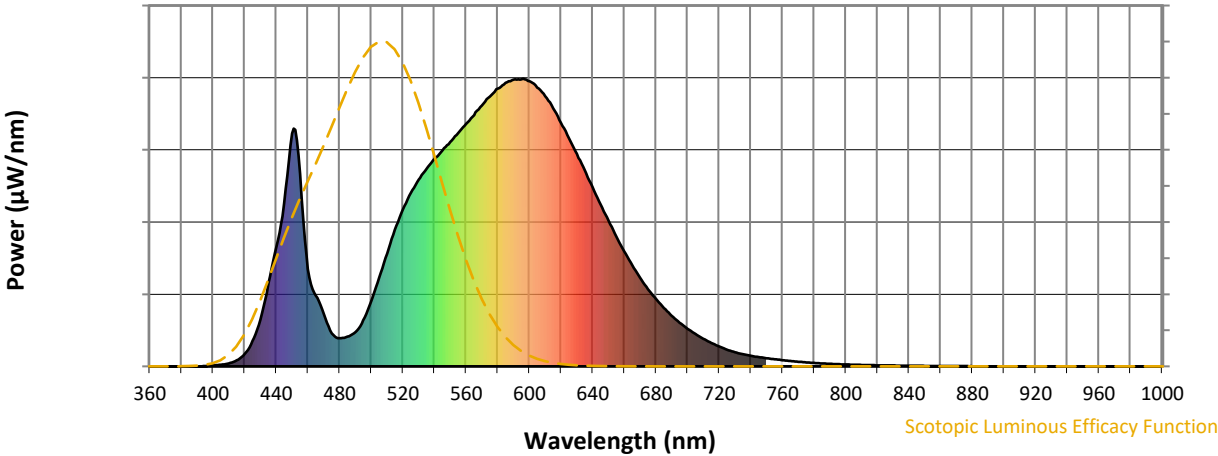


**Photopic Lumens: NR**

| $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360               | 0                           | NR                      | 490               | 119                         | NR                      | 620               | 846                         | NR                      | 750               | 28                          | NR                      | 880               | 1                           | NR                      |
| 365               | 0                           | NR                      | 495               | 160                         | NR                      | 625               | 793                         | NR                      | 755               | 25                          | NR                      | 885               | 0                           | NR                      |
| 370               | 0                           | NR                      | 500               | 225                         | NR                      | 630               | 739                         | NR                      | 760               | 22                          | NR                      | 890               | 0                           | NR                      |
| 375               | 0                           | NR                      | 505               | 308                         | NR                      | 635               | 681                         | NR                      | 765               | 19                          | NR                      | 895               | 0                           | NR                      |
| 380               | 0                           | NR                      | 510               | 392                         | NR                      | 640               | 623                         | NR                      | 770               | 16                          | NR                      | 900               | 0                           | NR                      |
| 385               | 0                           | NR                      | 515               | 474                         | NR                      | 645               | 563                         | NR                      | 775               | 14                          | NR                      | 905               | 0                           | NR                      |
| 390               | 0                           | NR                      | 520               | 545                         | NR                      | 650               | 506                         | NR                      | 780               | 12                          | NR                      | 910               | 0                           | NR                      |
| 395               | 1                           | NR                      | 525               | 603                         | NR                      | 655               | 451                         | NR                      | 785               | 10                          | NR                      | 915               | 0                           | NR                      |
| 400               | 3                           | NR                      | 530               | 649                         | NR                      | 660               | 399                         | NR                      | 790               | 9                           | NR                      | 920               | 0                           | NR                      |
| 405               | 5                           | NR                      | 535               | 687                         | NR                      | 665               | 352                         | NR                      | 795               | 8                           | NR                      | 925               | 0                           | NR                      |
| 410               | 11                          | NR                      | 540               | 721                         | NR                      | 670               | 307                         | NR                      | 800               | 6                           | NR                      | 930               | 0                           | NR                      |
| 415               | 21                          | NR                      | 545               | 751                         | NR                      | 675               | 268                         | NR                      | 805               | 6                           | NR                      | 935               | 0                           | NR                      |
| 420               | 43                          | NR                      | 550               | 779                         | NR                      | 680               | 234                         | NR                      | 810               | 5                           | NR                      | 940               | 0                           | NR                      |
| 425               | 88                          | NR                      | 555               | 811                         | NR                      | 685               | 203                         | NR                      | 815               | 4                           | NR                      | 945               | 0                           | NR                      |
| 430               | 163                         | NR                      | 560               | 843                         | NR                      | 690               | 176                         | NR                      | 820               | 4                           | NR                      | 950               | 0                           | NR                      |
| 435               | 288                         | NR                      | 565               | 873                         | NR                      | 695               | 152                         | NR                      | 825               | 3                           | NR                      | 955               | 0                           | NR                      |
| 440               | 416                         | NR                      | 570               | 907                         | NR                      | 700               | 131                         | NR                      | 830               | 3                           | NR                      | 960               | 0                           | NR                      |
| 445               | 566                         | NR                      | 575               | 938                         | NR                      | 705               | 112                         | NR                      | 835               | 3                           | NR                      | 965               | 0                           | NR                      |
| 450               | 810                         | NR                      | 580               | 965                         | NR                      | 710               | 96                          | NR                      | 840               | 2                           | NR                      | 970               | 0                           | NR                      |
| 455               | 669                         | NR                      | 585               | 986                         | NR                      | 715               | 81                          | NR                      | 845               | 2                           | NR                      | 975               | 0                           | NR                      |
| 460               | 338                         | NR                      | 590               | 997                         | NR                      | 720               | 69                          | NR                      | 850               | 2                           | NR                      | 980               | 0                           | NR                      |
| 465               | 246                         | NR                      | 595               | 997                         | NR                      | 725               | 58                          | NR                      | 855               | 1                           | NR                      | 985               | 0                           | NR                      |
| 470               | 182                         | NR                      | 600               | 991                         | NR                      | 730               | 49                          | NR                      | 860               | 1                           | NR                      | 990               | 0                           | NR                      |
| 475               | 115                         | NR                      | 605               | 968                         | NR                      | 735               | 42                          | NR                      | 865               | 1                           | NR                      | 995               | 0                           | NR                      |
| 480               | 97                          | NR                      | 610               | 939                         | NR                      | 740               | 37                          | NR                      | 870               | 1                           | NR                      | 1000              | 0                           | NR                      |
| 485               | 103                         | NR                      | 615               | 896                         | NR                      | 745               | 32                          | NR                      | 875               | 1                           | NR                      |                   |                             |                         |

REPORT NUMBER: SP1-2411-284-1

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

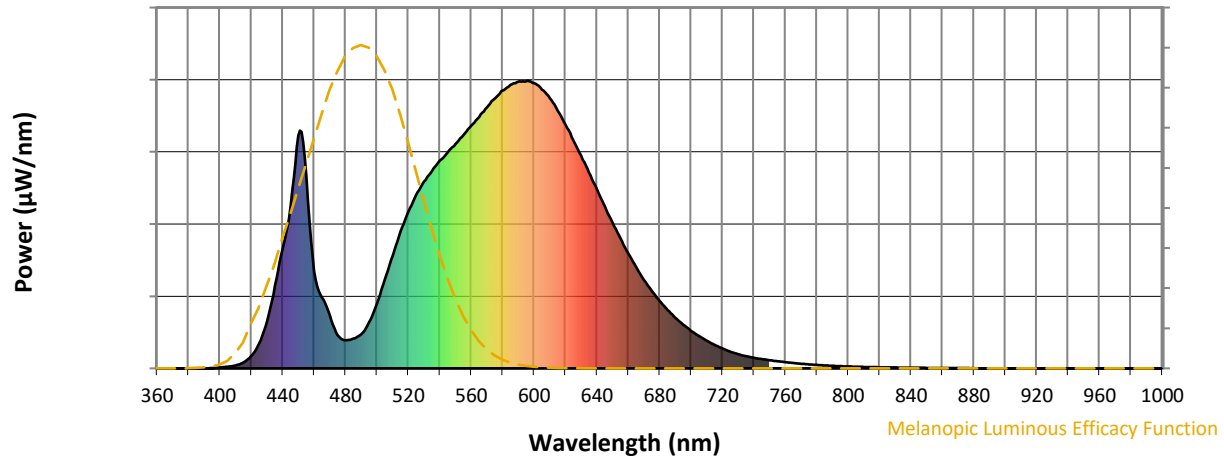
**S/P: 1.33**

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 119                      | NR            | 620    | 846                      | NR            | 750    | 28                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 160                      | NR            | 625    | 793                      | NR            | 755    | 25                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 225                      | NR            | 630    | 739                      | NR            | 760    | 22                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 308                      | NR            | 635    | 681                      | NR            | 765    | 19                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 392                      | NR            | 640    | 623                      | NR            | 770    | 16                       | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 474                      | NR            | 645    | 563                      | NR            | 775    | 14                       | NR            | 905    | 0                        | NR            |
| 390    | 0                        | NR            | 520    | 545                      | NR            | 650    | 506                      | NR            | 780    | 12                       | NR            | 910    | 0                        | NR            |
| 395    | 1                        | NR            | 525    | 603                      | NR            | 655    | 451                      | NR            | 785    | 10                       | NR            | 915    | 0                        | NR            |
| 400    | 3                        | NR            | 530    | 649                      | NR            | 660    | 399                      | NR            | 790    | 9                        | NR            | 920    | 0                        | NR            |
| 405    | 5                        | NR            | 535    | 687                      | NR            | 665    | 352                      | NR            | 795    | 8                        | NR            | 925    | 0                        | NR            |
| 410    | 11                       | NR            | 540    | 721                      | NR            | 670    | 307                      | NR            | 800    | 6                        | NR            | 930    | 0                        | NR            |
| 415    | 21                       | NR            | 545    | 751                      | NR            | 675    | 268                      | NR            | 805    | 6                        | NR            | 935    | 0                        | NR            |
| 420    | 43                       | NR            | 550    | 779                      | NR            | 680    | 234                      | NR            | 810    | 5                        | NR            | 940    | 0                        | NR            |
| 425    | 88                       | NR            | 555    | 811                      | NR            | 685    | 203                      | NR            | 815    | 4                        | NR            | 945    | 0                        | NR            |
| 430    | 163                      | NR            | 560    | 843                      | NR            | 690    | 176                      | NR            | 820    | 4                        | NR            | 950    | 0                        | NR            |
| 435    | 288                      | NR            | 565    | 873                      | NR            | 695    | 152                      | NR            | 825    | 3                        | NR            | 955    | 0                        | NR            |
| 440    | 416                      | NR            | 570    | 907                      | NR            | 700    | 131                      | NR            | 830    | 3                        | NR            | 960    | 0                        | NR            |
| 445    | 566                      | NR            | 575    | 938                      | NR            | 705    | 112                      | NR            | 835    | 3                        | NR            | 965    | 0                        | NR            |
| 450    | 810                      | NR            | 580    | 965                      | NR            | 710    | 96                       | NR            | 840    | 2                        | NR            | 970    | 0                        | NR            |
| 455    | 669                      | NR            | 585    | 986                      | NR            | 715    | 81                       | NR            | 845    | 2                        | NR            | 975    | 0                        | NR            |
| 460    | 338                      | NR            | 590    | 997                      | NR            | 720    | 69                       | NR            | 850    | 2                        | NR            | 980    | 0                        | NR            |
| 465    | 246                      | NR            | 595    | 997                      | NR            | 725    | 58                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 182                      | NR            | 600    | 991                      | NR            | 730    | 49                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 115                      | NR            | 605    | 968                      | NR            | 735    | 42                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 97                       | NR            | 610    | 939                      | NR            | 740    | 37                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 103                      | NR            | 615    | 896                      | NR            | 745    | 32                       | NR            | 875    | 1                        | NR            |        |                          |               |



REPORT NUMBER: SP1-2411-284-1

Melanopic Flux vs. Wavelength



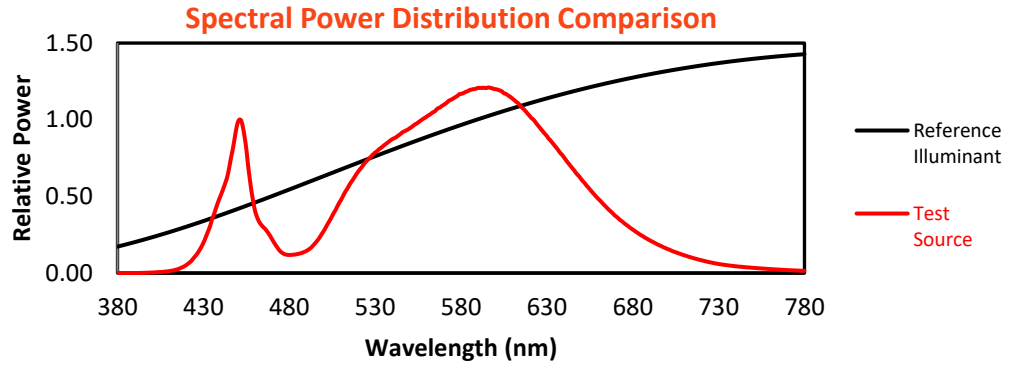
Melanopic Lumens: NR

M/P: 2.47

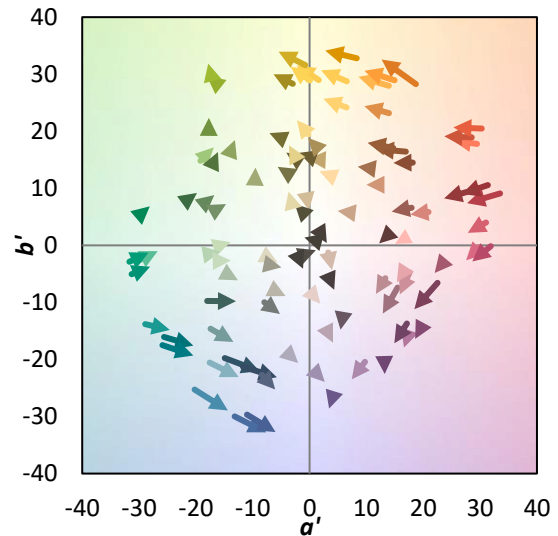
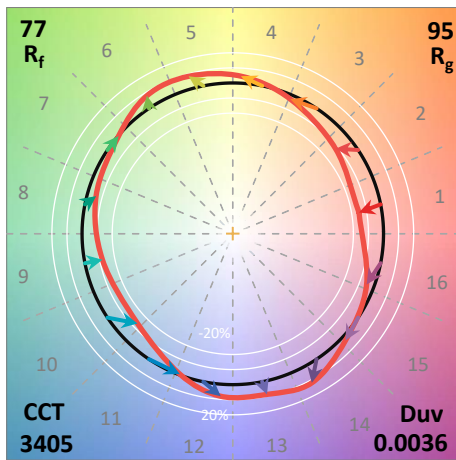
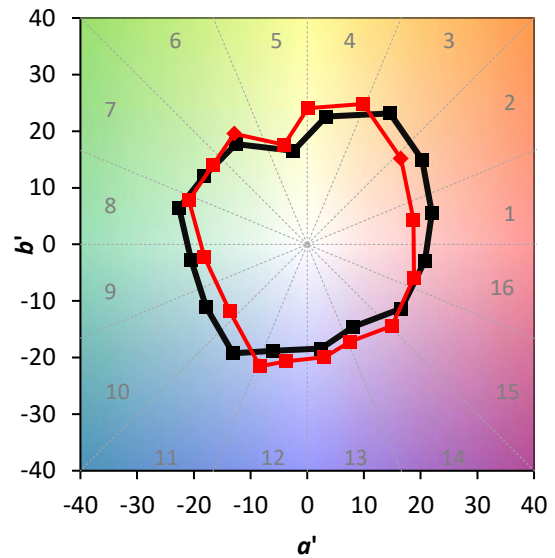
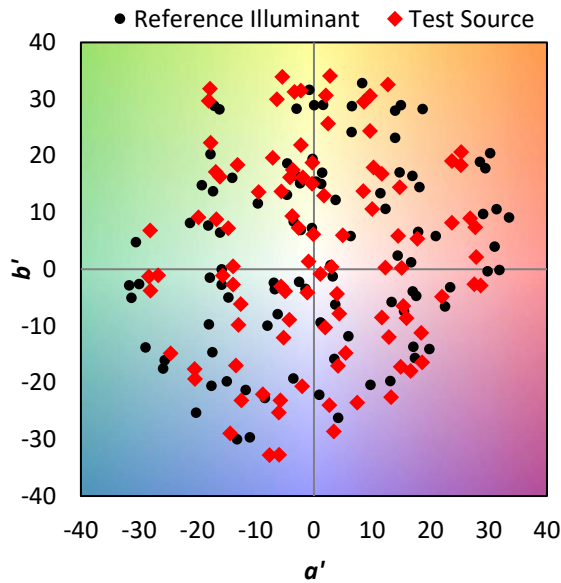
| $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) |
|----------------|--------------------------|----------------------|----------------|--------------------------|----------------------|----------------|--------------------------|----------------------|----------------|--------------------------|----------------------|----------------|--------------------------|----------------------|
| 360            | 0                        | NR                   | 490            | 119                      | NR                   | 620            | 846                      | NR                   | 750            | 28                       | NR                   | 880            | 1                        | NR                   |
| 365            | 0                        | NR                   | 495            | 160                      | NR                   | 625            | 793                      | NR                   | 755            | 25                       | NR                   | 885            | 0                        | NR                   |
| 370            | 0                        | NR                   | 500            | 225                      | NR                   | 630            | 739                      | NR                   | 760            | 22                       | NR                   | 890            | 0                        | NR                   |
| 375            | 0                        | NR                   | 505            | 308                      | NR                   | 635            | 681                      | NR                   | 765            | 19                       | NR                   | 895            | 0                        | NR                   |
| 380            | 0                        | NR                   | 510            | 392                      | NR                   | 640            | 623                      | NR                   | 770            | 16                       | NR                   | 900            | 0                        | NR                   |
| 385            | 0                        | NR                   | 515            | 474                      | NR                   | 645            | 563                      | NR                   | 775            | 14                       | NR                   | 905            | 0                        | NR                   |
| 390            | 0                        | NR                   | 520            | 545                      | NR                   | 650            | 506                      | NR                   | 780            | 12                       | NR                   | 910            | 0                        | NR                   |
| 395            | 1                        | NR                   | 525            | 603                      | NR                   | 655            | 451                      | NR                   | 785            | 10                       | NR                   | 915            | 0                        | NR                   |
| 400            | 3                        | NR                   | 530            | 649                      | NR                   | 660            | 399                      | NR                   | 790            | 9                        | NR                   | 920            | 0                        | NR                   |
| 405            | 5                        | NR                   | 535            | 687                      | NR                   | 665            | 352                      | NR                   | 795            | 8                        | NR                   | 925            | 0                        | NR                   |
| 410            | 11                       | NR                   | 540            | 721                      | NR                   | 670            | 307                      | NR                   | 800            | 6                        | NR                   | 930            | 0                        | NR                   |
| 415            | 21                       | NR                   | 545            | 751                      | NR                   | 675            | 268                      | NR                   | 805            | 6                        | NR                   | 935            | 0                        | NR                   |
| 420            | 43                       | NR                   | 550            | 779                      | NR                   | 680            | 234                      | NR                   | 810            | 5                        | NR                   | 940            | 0                        | NR                   |
| 425            | 88                       | NR                   | 555            | 811                      | NR                   | 685            | 203                      | NR                   | 815            | 4                        | NR                   | 945            | 0                        | NR                   |
| 430            | 163                      | NR                   | 560            | 843                      | NR                   | 690            | 176                      | NR                   | 820            | 4                        | NR                   | 950            | 0                        | NR                   |
| 435            | 288                      | NR                   | 565            | 873                      | NR                   | 695            | 152                      | NR                   | 825            | 3                        | NR                   | 955            | 0                        | NR                   |
| 440            | 416                      | NR                   | 570            | 907                      | NR                   | 700            | 131                      | NR                   | 830            | 3                        | NR                   | 960            | 0                        | NR                   |
| 445            | 566                      | NR                   | 575            | 938                      | NR                   | 705            | 112                      | NR                   | 835            | 3                        | NR                   | 965            | 0                        | NR                   |
| 450            | 810                      | NR                   | 580            | 965                      | NR                   | 710            | 96                       | NR                   | 840            | 2                        | NR                   | 970            | 0                        | NR                   |
| 455            | 669                      | NR                   | 585            | 986                      | NR                   | 715            | 81                       | NR                   | 845            | 2                        | NR                   | 975            | 0                        | NR                   |
| 460            | 338                      | NR                   | 590            | 997                      | NR                   | 720            | 69                       | NR                   | 850            | 2                        | NR                   | 980            | 0                        | NR                   |
| 465            | 246                      | NR                   | 595            | 997                      | NR                   | 725            | 58                       | NR                   | 855            | 1                        | NR                   | 985            | 0                        | NR                   |
| 470            | 182                      | NR                   | 600            | 991                      | NR                   | 730            | 49                       | NR                   | 860            | 1                        | NR                   | 990            | 0                        | NR                   |
| 475            | 115                      | NR                   | 605            | 968                      | NR                   | 735            | 42                       | NR                   | 865            | 1                        | NR                   | 995            | 0                        | NR                   |
| 480            | 97                       | NR                   | 610            | 939                      | NR                   | 740            | 37                       | NR                   | 870            | 1                        | NR                   | 1000           | 0                        | NR                   |
| 485            | 103                      | NR                   | 615            | 896                      | NR                   | 745            | 32                       | NR                   | 875            | 1                        | NR                   |                |                          |                      |

**Summary**

$R_f = 76.6$   
 $R_g = 95.4$   
 $CIE R_a = 73.9$   
 $R_9 = -18.0$

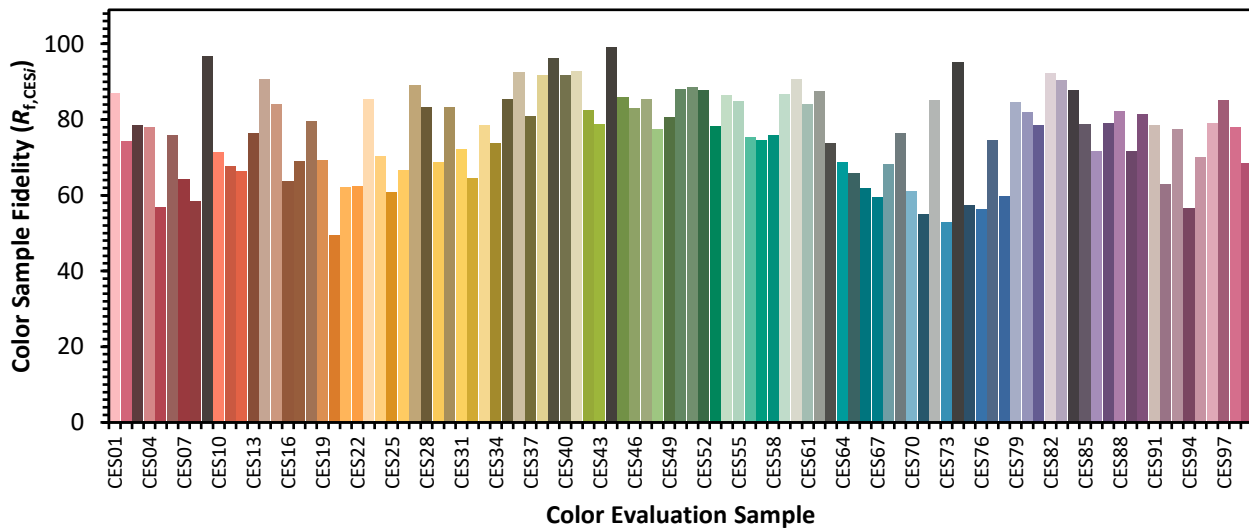


**Color Vector Graphics**

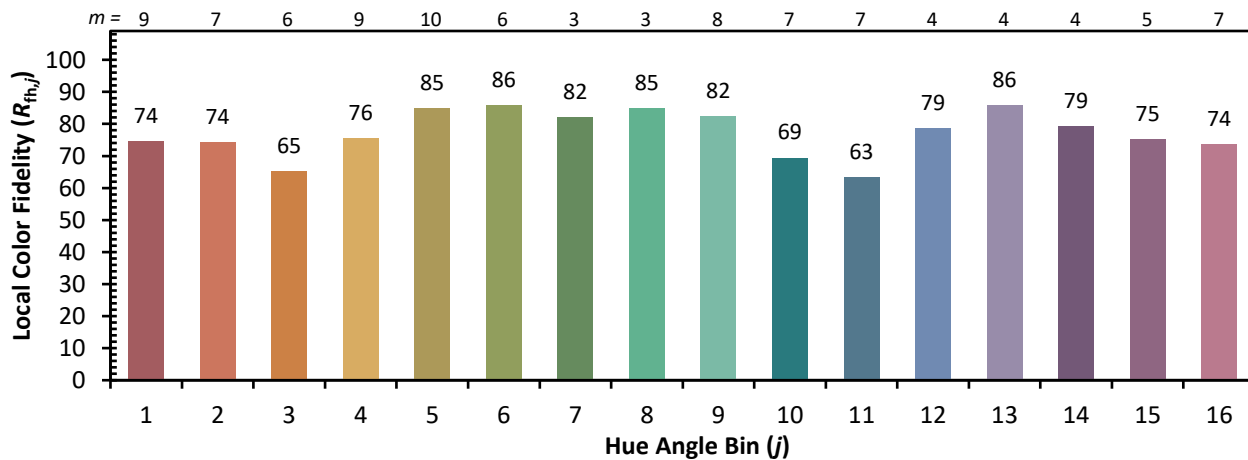
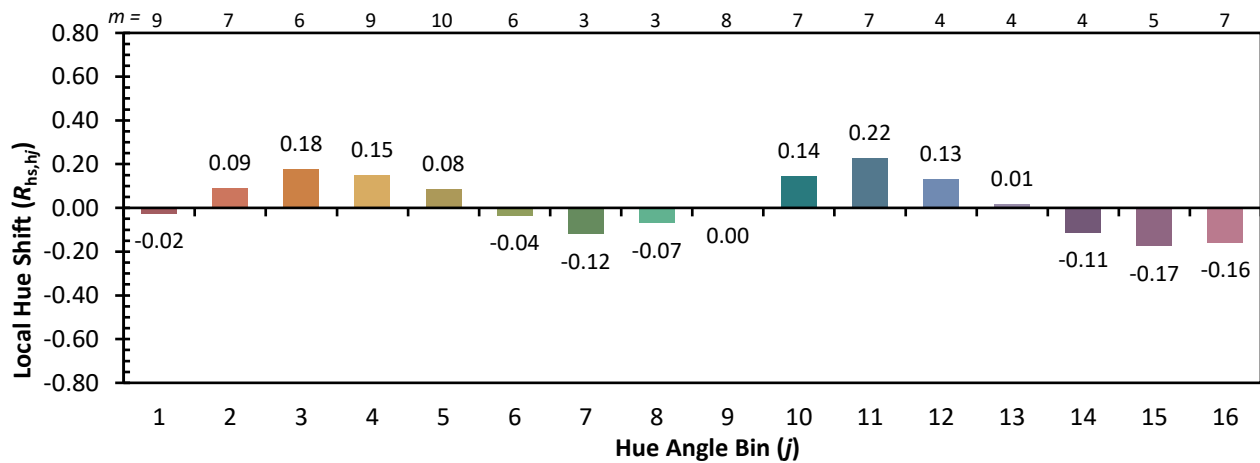
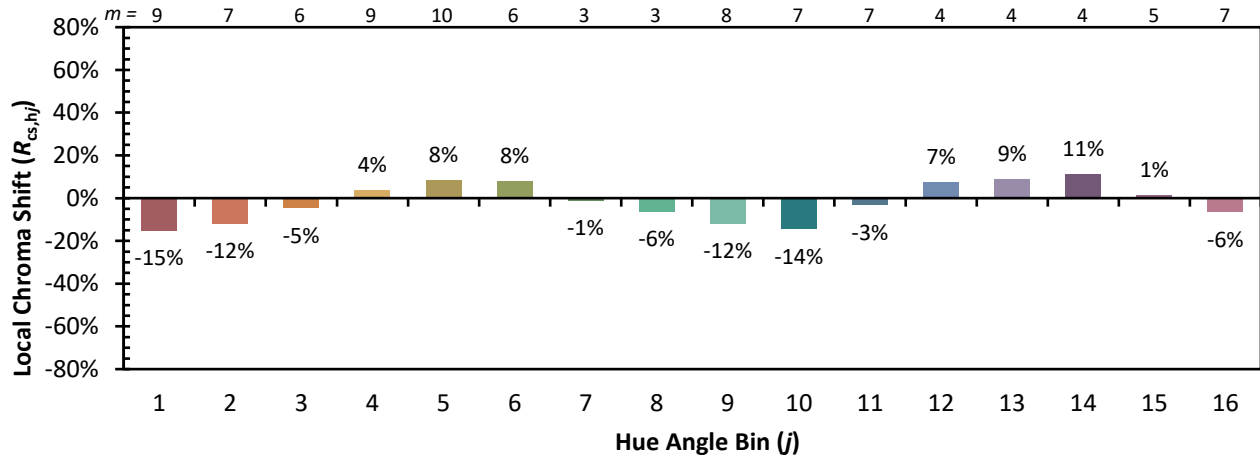


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

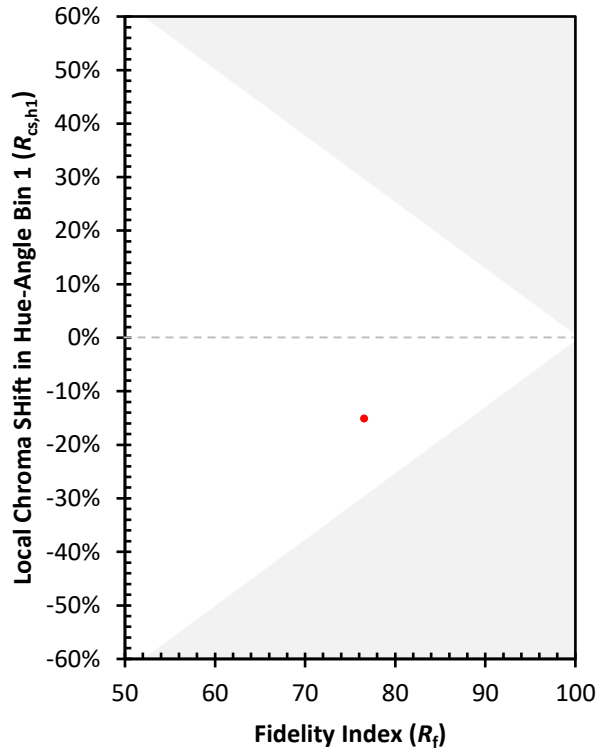
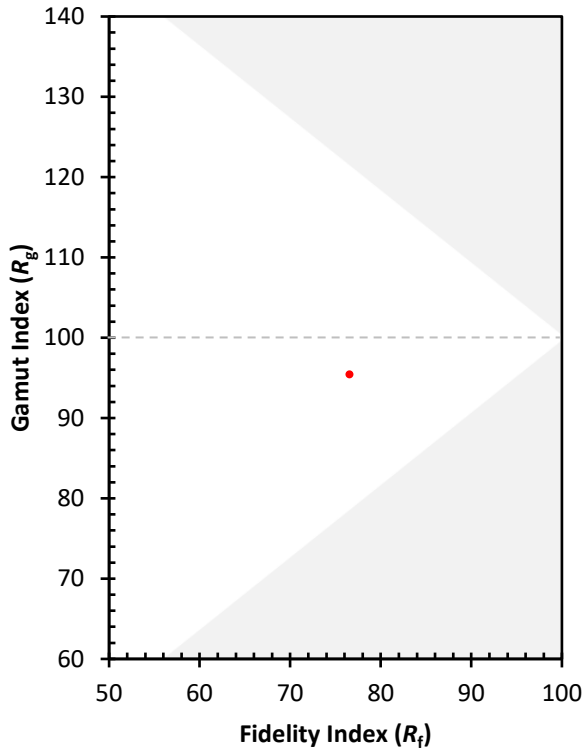
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 67 | CES51 = 88 | CES76 = 56 |
| CES02 = 62 | CES27 = 89 | CES52 = 88 | CES77 = 75 |
| CES03 = 31 | CES28 = 83 | CES53 = 78 | CES78 = 60 |
| CES04 = 70 | CES29 = 69 | CES54 = 86 | CES79 = 85 |
| CES05 = 48 | CES30 = 83 | CES55 = 85 | CES80 = 82 |
| CES06 = 51 | CES31 = 72 | CES56 = 75 | CES81 = 78 |
| CES07 = 41 | CES32 = 65 | CES57 = 75 | CES82 = 92 |
| CES08 = 40 | CES33 = 78 | CES58 = 76 | CES83 = 90 |
| CES09 = 29 | CES34 = 74 | CES59 = 87 | CES84 = 88 |
| CES10 = 75 | CES35 = 86 | CES60 = 91 | CES85 = 79 |
| CES11 = 58 | CES36 = 93 | CES61 = 84 | CES86 = 72 |
| CES12 = 64 | CES37 = 81 | CES62 = 88 | CES87 = 79 |
| CES13 = 43 | CES38 = 92 | CES63 = 74 | CES88 = 82 |
| CES14 = 74 | CES39 = 96 | CES64 = 69 | CES89 = 72 |
| CES15 = 71 | CES40 = 92 | CES65 = 66 | CES90 = 82 |
| CES16 = 47 | CES41 = 93 | CES66 = 62 | CES91 = 79 |
| CES17 = 50 | CES42 = 83 | CES67 = 60 | CES92 = 63 |
| CES18 = 56 | CES43 = 79 | CES68 = 68 | CES93 = 77 |
| CES19 = 72 | CES44 = 99 | CES69 = 76 | CES94 = 56 |
| CES20 = 65 | CES45 = 86 | CES70 = 61 | CES95 = 70 |
| CES21 = 86 | CES46 = 83 | CES71 = 55 | CES96 = 79 |
| CES22 = 79 | CES47 = 85 | CES72 = 85 | CES97 = 85 |
| CES23 = 92 | CES48 = 78 | CES73 = 53 | CES98 = 78 |
| CES24 = 91 | CES49 = 81 | CES74 = 95 | CES99 = 68 |
| CES25 = 72 | CES50 = 88 | CES75 = 57 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)