

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

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Peachtree City, GA 30269

Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P1462022

Luminaire Tested: PRV-P-50-750-U-T4W

Issue Date: 06/10/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1462022  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 6/11/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: STREETWORKS  
Catalog Number: PRV-P-50-750-U-T4W  
Description: PREVAIL PETITE DISCRETE LED 1 SQUARE 50W 70CRI 5000K FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC  
Light Source: (10) 5000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6189.3 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1

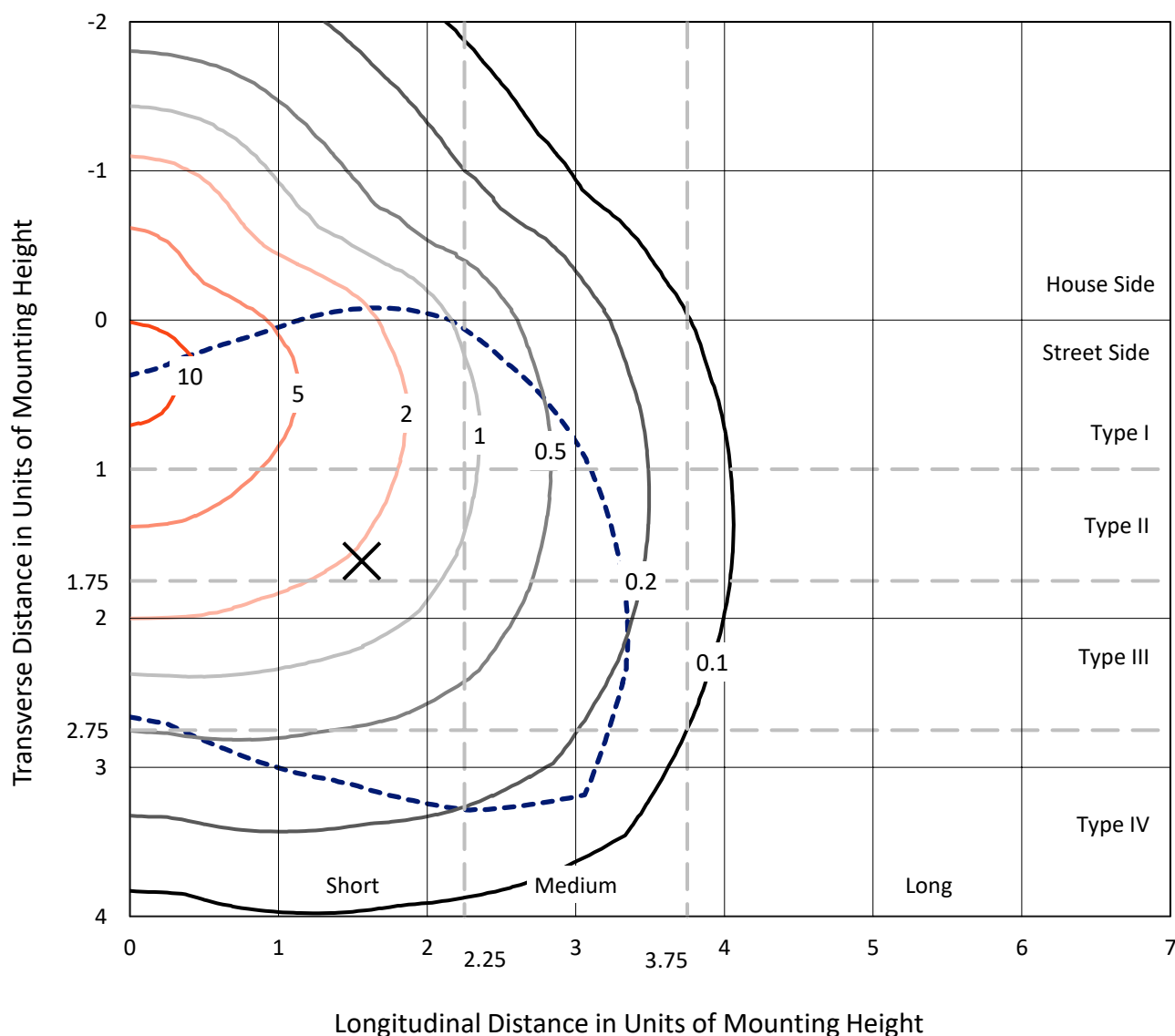
Input Watts (W): 52.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): 6.0%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 --- 1/2 Max cd

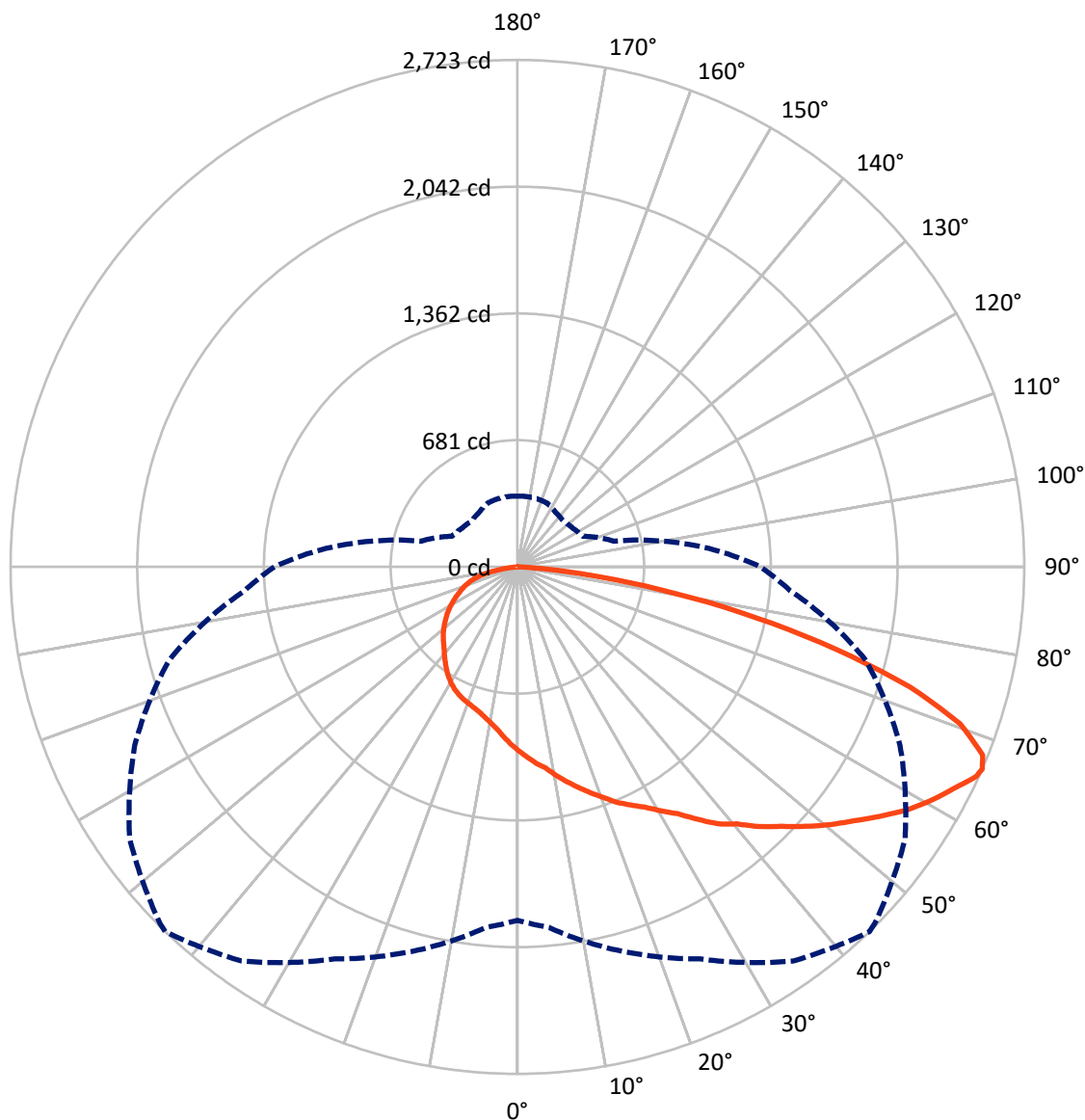


Based on 10 foot mounting height. Maximum calculated value = 11.6 fc  
 Type IV - Short - N/A

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CATALOG NUMBER: PRV-P-50-750-U-T4W

## Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral      - - - Horizontal Cone Through 66-Deg Vertical

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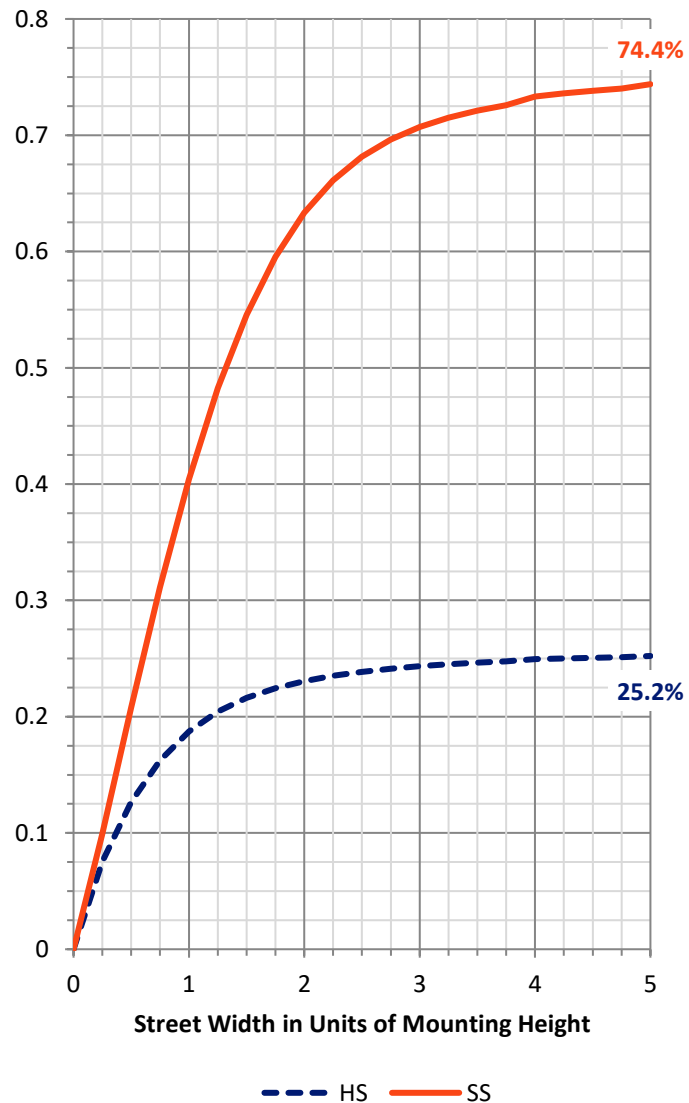
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1568.5   | 0.0    | 1568.5 |
|                    | % Fixture | 25.3     | 0.0    | 25.3   |
| <b>Street Side</b> | Lumens    | 4620.8   | 0.0    | 4620.8 |
|                    | % Fixture | 74.7     | 0.0    | 74.7   |
| <b>Total</b>       | Lumens    | 6189.3   | 0.0    | 6189.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 94.5   | 1.5       |
| 10°-20°   | 290.9  | 4.7       |
| 20°-30°   | 504.9  | 8.2       |
| 30°-40°   | 753.3  | 12.2      |
| 40°-50°   | 1030.3 | 16.6      |
| 50°-60°   | 1286.0 | 20.8      |
| 60°-70°   | 1330.7 | 21.5      |
| 70°-80°   | 774.2  | 12.5      |
| 80°-90°   | 124.6  | 2.0       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 6189.3 | 100.0     |
| 0°-180°   | 6189.3 | 100.0     |

**Coefficient of Utilization**



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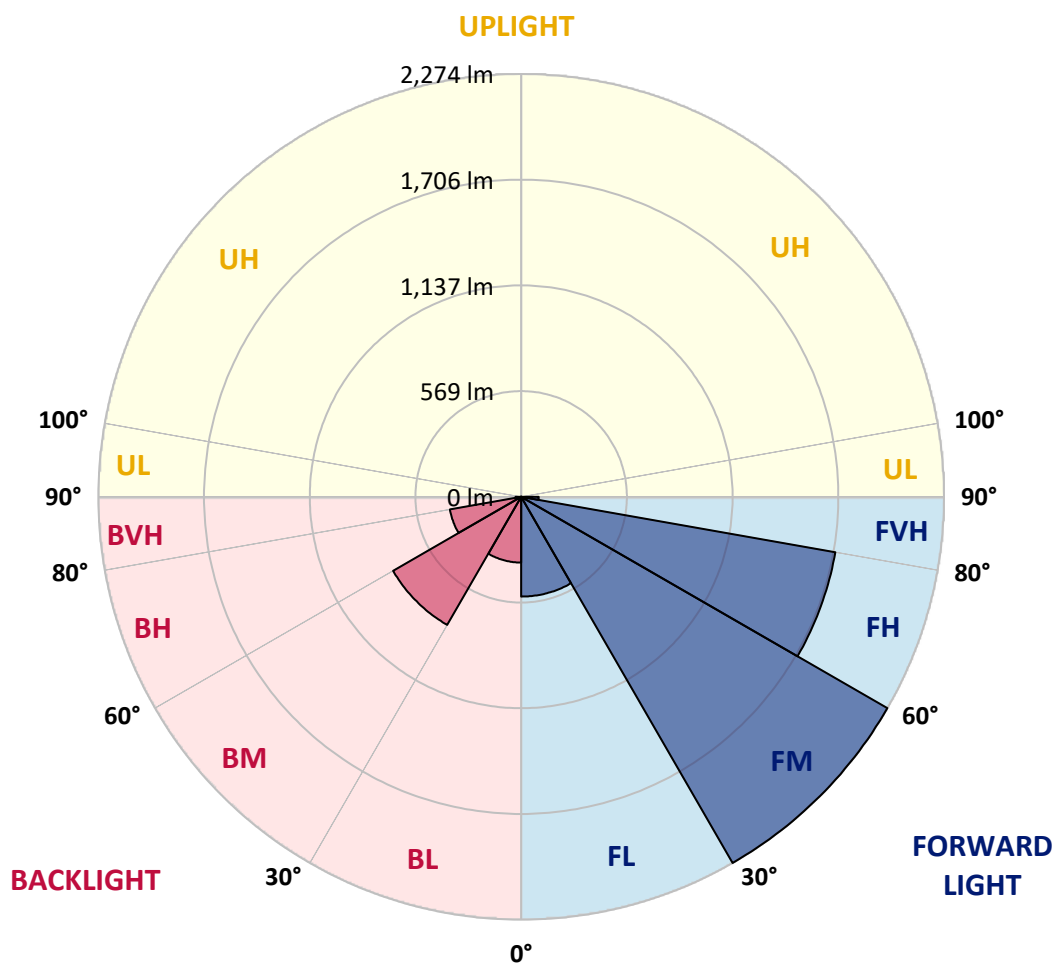
CATALOG NUMBER: PRV-P-50-750-U-T4W

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 536.7  | 8.7       |                         |      |         |
| FM   | (30°-60°)   | 2274.2 | 36.7      |                         |      |         |
| FH   | (60°-80°)   | 1715.8 | 27.7      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 94.1   | 1.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 353.6  | 5.7       | B1/500                  |      |         |
| BM   | (30°-60°)   | 795.4  | 12.9      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 389.1  | 6.3       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 30.5   | 0.5       |                         |      | G1/100  |
| 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°     | 5°     | 15°    | 25°    | 35°    | 44°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 988.0  | 988.0  | 988.0  | 988.0  | 988.0  | 988.0  | 988.0  | 988.0  | 988.0  | 988.0  | 988.0  |
| 2.5°  | 1033.0 | 1033.0 | 1035.0 | 1033.0 | 1028.0 | 1023.0 | 1023.0 | 1019.0 | 1005.0 | 1003.0 | 992.0  |
| 5°    | 1079.0 | 1082.0 | 1079.0 | 1075.0 | 1071.0 | 1060.0 | 1059.0 | 1046.0 | 1025.0 | 1010.0 | 996.0  |
| 7.5°  | 1122.0 | 1127.0 | 1127.0 | 1122.0 | 1108.0 | 1090.0 | 1091.0 | 1076.0 | 1046.0 | 1024.0 | 1004.0 |
| 10°   | 1182.0 | 1180.0 | 1183.0 | 1170.0 | 1157.0 | 1138.0 | 1130.0 | 1107.0 | 1075.0 | 1047.0 | 1014.0 |
| 12.5° | 1244.0 | 1238.0 | 1239.0 | 1225.0 | 1208.0 | 1184.0 | 1175.0 | 1141.0 | 1104.0 | 1068.0 | 1027.0 |
| 15°   | 1283.0 | 1286.0 | 1289.0 | 1273.0 | 1263.0 | 1229.0 | 1222.0 | 1189.0 | 1136.0 | 1088.0 | 1040.0 |
| 17.5° | 1324.0 | 1317.0 | 1331.0 | 1317.0 | 1309.0 | 1276.0 | 1277.0 | 1229.0 | 1167.0 | 1115.0 | 1056.0 |
| 20°   | 1352.0 | 1354.0 | 1360.0 | 1359.0 | 1353.0 | 1322.0 | 1322.0 | 1283.0 | 1211.0 | 1139.0 | 1069.0 |
| 22.5° | 1382.0 | 1383.0 | 1392.0 | 1393.0 | 1385.0 | 1374.0 | 1372.0 | 1325.0 | 1254.0 | 1173.0 | 1087.0 |
| 25°   | 1434.0 | 1430.0 | 1434.0 | 1426.0 | 1427.0 | 1417.0 | 1417.0 | 1389.0 | 1307.0 | 1209.0 | 1111.0 |
| 27.5° | 1505.1 | 1506.1 | 1496.0 | 1486.0 | 1474.0 | 1461.0 | 1468.0 | 1436.0 | 1364.0 | 1254.0 | 1137.0 |
| 30°   | 1597.1 | 1599.1 | 1587.1 | 1558.1 | 1533.1 | 1520.1 | 1514.1 | 1498.0 | 1424.0 | 1300.0 | 1168.0 |
| 32.5° | 1735.1 | 1722.1 | 1699.1 | 1653.1 | 1613.1 | 1580.1 | 1582.1 | 1560.1 | 1492.0 | 1354.0 | 1198.0 |
| 35°   | 1838.1 | 1829.1 | 1811.1 | 1773.1 | 1727.1 | 1664.1 | 1664.1 | 1626.1 | 1556.1 | 1410.0 | 1229.0 |
| 37.5° | 1935.1 | 1936.1 | 1919.1 | 1872.1 | 1837.1 | 1751.1 | 1737.1 | 1686.1 | 1616.1 | 1464.0 | 1267.0 |
| 40°   | 2089.1 | 2057.1 | 2019.1 | 1972.1 | 1909.1 | 1815.1 | 1809.1 | 1759.1 | 1684.1 | 1526.1 | 1305.0 |
| 42.5° | 2182.1 | 2164.1 | 2125.1 | 2065.1 | 1989.1 | 1907.1 | 1896.1 | 1830.1 | 1757.1 | 1589.1 | 1353.0 |
| 45°   | 2309.1 | 2279.1 | 2228.1 | 2187.1 | 2065.1 | 1988.1 | 1979.1 | 1915.1 | 1837.1 | 1658.1 | 1397.0 |
| 47.5° | 2404.1 | 2338.1 | 2325.1 | 2297.1 | 2154.1 | 2082.1 | 2070.1 | 2004.1 | 1921.1 | 1744.1 | 1452.0 |
| 50°   | 2438.1 | 2401.1 | 2415.1 | 2365.1 | 2234.1 | 2176.1 | 2172.1 | 2104.1 | 2005.1 | 1819.1 | 1502.1 |
| 52.5° | 2450.1 | 2459.1 | 2474.1 | 2405.1 | 2312.1 | 2266.1 | 2262.1 | 2197.1 | 2090.1 | 1889.1 | 1548.1 |
| 55°   | 2518.1 | 2516.1 | 2536.1 | 2466.1 | 2410.1 | 2364.1 | 2358.1 | 2301.1 | 2167.1 | 1950.1 | 1589.1 |
| 57.5° | 2580.1 | 2555.1 | 2578.1 | 2525.1 | 2501.1 | 2465.1 | 2464.1 | 2397.1 | 2241.1 | 2000.1 | 1613.1 |
| 60°   | 2557.1 | 2521.1 | 2561.1 | 2518.1 | 2550.1 | 2550.1 | 2559.1 | 2474.1 | 2299.1 | 2042.1 | 1625.1 |
| 62.5° | 2364.1 | 2363.1 | 2456.1 | 2469.1 | 2580.1 | 2627.1 | 2617.1 | 2521.1 | 2326.1 | 2047.1 | 1606.1 |
| 65°   | 2039.1 | 2077.1 | 2250.1 | 2386.1 | 2592.1 | 2711.1 | 2701.1 | 2540.1 | 2295.1 | 1978.1 | 1531.1 |
| 66°   | 1898.1 | 1944.1 | 2135.1 | 2323.1 | 2584.1 | 2723.1 | 2713.1 | 2543.1 | 2268.1 | 1937.1 | 1472.0 |
| 67.5° | 1653.1 | 1704.1 | 1949.1 | 2213.1 | 2532.1 | 2696.1 | 2700.1 | 2527.1 | 2187.1 | 1835.1 | 1384.0 |
| 70°   | 1262.0 | 1316.0 | 1609.1 | 1913.1 | 2326.1 | 2523.1 | 2522.1 | 2358.1 | 1987.1 | 1604.1 | 1171.0 |
| 72.5° | 913.0  | 945.0  | 1251.0 | 1541.1 | 1981.1 | 2206.1 | 2219.1 | 2030.1 | 1674.1 | 1309.0 | 925.0  |
| 75°   | 648.0  | 664.0  | 897.0  | 1148.0 | 1530.1 | 1770.1 | 1755.1 | 1591.1 | 1280.0 | 981.0  | 702.0  |
| 77.5° | 442.0  | 475.0  | 637.0  | 804.0  | 1096.0 | 1309.0 | 1287.0 | 1105.0 | 908.0  | 689.0  | 512.0  |
| 80°   | 276.0  | 295.0  | 391.0  | 497.0  | 700.0  | 857.0  | 861.0  | 727.0  | 573.0  | 470.0  | 376.0  |
| 82.5° | 152.0  | 160.0  | 228.0  | 275.0  | 342.0  | 451.0  | 468.0  | 437.0  | 356.0  | 307.0  | 264.0  |
| 85°   | 42.0   | 42.0   | 71.0   | 81.0   | 109.0  | 151.0  | 151.0  | 158.0  | 139.0  | 110.0  | 85.0   |
| 87.5° | 2.0    | 2.0    | 2.0    | 3.0    | 3.0    | 3.0    | 3.0    | 5.0    | 4.0    | 2.0    | 2.0    |
| 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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CATALOG NUMBER: PRV-P-50-750-U-T4W

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 988.0  | 988.0  | 988.0 | 988.0 | 988.0 | 988.0 | 988.0 | 988.0 | 988.0 | 988.0 | 988.0 |
| 2.5°  | 987.0  | 984.0  | 976.0 | 969.0 | 960.0 | 955.0 | 948.0 | 942.0 | 940.0 | 934.0 | 934.0 |
| 5°    | 984.0  | 979.0  | 957.0 | 943.0 | 931.0 | 917.0 | 910.0 | 900.0 | 896.0 | 889.0 | 890.0 |
| 7.5°  | 988.0  | 978.0  | 948.0 | 921.0 | 902.0 | 881.0 | 870.0 | 864.0 | 857.0 | 851.0 | 849.0 |
| 10°   | 995.0  | 979.0  | 940.0 | 903.0 | 872.0 | 852.0 | 838.0 | 828.0 | 827.0 | 824.0 | 823.0 |
| 12.5° | 1002.0 | 980.0  | 935.0 | 889.0 | 855.0 | 830.0 | 814.0 | 806.0 | 808.0 | 813.0 | 811.0 |
| 15°   | 1013.0 | 986.0  | 926.0 | 870.0 | 833.0 | 808.0 | 798.0 | 794.0 | 804.0 | 808.0 | 809.0 |
| 17.5° | 1020.0 | 989.0  | 915.0 | 853.0 | 812.0 | 792.0 | 787.0 | 791.0 | 800.0 | 812.0 | 814.0 |
| 20°   | 1029.0 | 991.0  | 904.0 | 835.0 | 793.0 | 779.0 | 783.0 | 793.0 | 805.0 | 821.0 | 824.0 |
| 22.5° | 1042.0 | 996.0  | 898.0 | 814.0 | 773.0 | 767.0 | 779.0 | 796.0 | 809.0 | 829.0 | 831.0 |
| 25°   | 1058.0 | 1005.0 | 883.0 | 793.0 | 750.0 | 752.0 | 775.0 | 797.0 | 810.0 | 829.0 | 835.0 |
| 27.5° | 1079.0 | 1015.0 | 873.0 | 769.0 | 728.0 | 737.0 | 764.0 | 792.0 | 808.0 | 827.0 | 833.0 |
| 30°   | 1099.0 | 1024.0 | 862.0 | 744.0 | 702.0 | 716.0 | 749.0 | 778.0 | 797.0 | 814.0 | 823.0 |
| 32.5° | 1123.0 | 1038.0 | 852.0 | 723.0 | 678.0 | 693.0 | 729.0 | 765.0 | 785.0 | 802.0 | 809.0 |
| 35°   | 1146.0 | 1052.0 | 847.0 | 702.0 | 654.0 | 668.0 | 704.0 | 746.0 | 768.0 | 779.0 | 791.0 |
| 37.5° | 1175.0 | 1073.0 | 844.0 | 684.0 | 629.0 | 639.0 | 680.0 | 724.0 | 747.0 | 758.0 | 769.0 |
| 40°   | 1212.0 | 1102.0 | 845.0 | 666.0 | 603.0 | 611.0 | 655.0 | 703.0 | 729.0 | 734.0 | 744.0 |
| 42.5° | 1248.0 | 1128.0 | 847.0 | 649.0 | 580.0 | 584.0 | 630.0 | 679.0 | 701.0 | 705.0 | 715.0 |
| 45°   | 1288.0 | 1164.0 | 847.0 | 628.0 | 556.0 | 562.0 | 606.0 | 653.0 | 678.0 | 680.0 | 688.0 |
| 47.5° | 1332.0 | 1199.0 | 843.0 | 606.0 | 533.0 | 539.0 | 582.0 | 623.0 | 646.0 | 649.0 | 657.0 |
| 50°   | 1376.0 | 1227.0 | 834.0 | 579.0 | 510.0 | 518.0 | 554.0 | 592.0 | 608.0 | 613.0 | 619.0 |
| 52.5° | 1418.0 | 1252.0 | 812.0 | 551.0 | 487.0 | 493.0 | 525.0 | 556.0 | 569.0 | 575.0 | 578.0 |
| 55°   | 1450.0 | 1269.0 | 782.0 | 520.0 | 467.0 | 469.0 | 492.0 | 518.0 | 527.0 | 527.0 | 532.0 |
| 57.5° | 1467.0 | 1272.0 | 740.0 | 488.0 | 444.0 | 444.0 | 460.0 | 483.0 | 487.0 | 486.0 | 487.0 |
| 60°   | 1472.0 | 1255.0 | 689.0 | 458.0 | 421.0 | 416.0 | 429.0 | 444.0 | 445.0 | 445.0 | 450.0 |
| 62.5° | 1447.0 | 1208.0 | 628.0 | 429.0 | 398.0 | 387.0 | 397.0 | 412.0 | 415.0 | 415.0 | 416.0 |
| 65°   | 1363.0 | 1108.0 | 561.0 | 400.0 | 373.0 | 360.0 | 369.0 | 388.0 | 394.0 | 393.0 | 392.0 |
| 66°   | 1306.0 | 1059.0 | 534.0 | 388.0 | 363.0 | 348.0 | 358.0 | 378.0 | 381.0 | 381.0 | 380.0 |
| 67.5° | 1209.0 | 958.0  | 487.0 | 370.0 | 345.0 | 332.0 | 343.0 | 358.0 | 363.0 | 366.0 | 366.0 |
| 70°   | 1005.0 | 789.0  | 426.0 | 338.0 | 314.0 | 305.0 | 313.0 | 324.0 | 327.0 | 331.0 | 329.0 |
| 72.5° | 793.0  | 618.0  | 371.0 | 306.0 | 286.0 | 275.0 | 279.0 | 289.0 | 297.0 | 300.0 | 296.0 |
| 75°   | 602.0  | 479.0  | 323.0 | 274.0 | 255.0 | 242.0 | 242.0 | 240.0 | 240.0 | 248.0 | 237.0 |
| 77.5° | 452.0  | 379.0  | 281.0 | 233.0 | 213.0 | 199.0 | 191.0 | 193.0 | 180.0 | 170.0 | 162.0 |
| 80°   | 334.0  | 288.0  | 230.0 | 183.0 | 160.0 | 138.0 | 139.0 | 144.0 | 113.0 | 80.0  | 40.0  |
| 82.5° | 237.0  | 209.0  | 165.0 | 125.0 | 95.0  | 83.0  | 83.0  | 87.0  | 63.0  | 23.0  | 0.0   |
| 85°   | 75.0   | 72.0   | 65.0  | 47.0  | 42.0  | 32.0  | 25.0  | 23.0  | 26.0  | 5.0   | 0.0   |
| 87.5° | 2.0    | 2.0    | 2.0   | 2.0   | 1.0   | 1.0   | 1.0   | 1.0   | 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   |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP2-2501-321-5

Test Date: 04/10/2025

Luminaire Tested: GKO-PB1E-750-U-T4W

Data in this report applies to families of products including GKO-PB1E-750-U-T4W

### Test Information

Test Method: LM-79-2019  
 Report Number: SP2-2501-321-5  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP2 - 165CM SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 04/10/2025  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GKO-PB1E-750-U-T4W**  
 Description: Gekko Wedge Wall Pack Fixture 1 SQ w/ T4W distribution

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 5105     | CRI (Ra): | 72.2 |      |       |
| CIE u':                   | 0.2079   | R1:       | 68.8 | R9:  | -38.2 |
| CIE v':                   | 0.4868   | R2:       | 78.3 | R10: | 48.2  |
| Duv:                      | 0.0035   | R3:       | 84.9 | R11: | 68.1  |
| CIE x:                    | 0.3428   | R4:       | 71.7 | R12: | 42.9  |
| CIE y:                    | 0.3567   | R5:       | 69.8 | R13: | 70.6  |
| CIE z:                    | 0.3005   | R6:       | 69.8 | R14: | 91.6  |
| Peak Wavelength (nm):     | 451      | R7:       | 81.2 | R15: | 61.7  |
| Dominant Wavelength (nm): | 567      | R8:       | 53.5 |      |       |
| Purity:                   | 9.884628 |           |      |      |       |
| Rf:                       | 74.2     |           |      |      |       |
| Rg:                       | 92.7     |           |      |      |       |



### Test Conditions

Stabilization Time: 30M  
 Operation Time: 1H 30M  
 Sphere Temperature (°C): 25.0

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| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN2187                | 1/6/2025         | 7/6/2025             |
| Power Meter                    | INXT2011002           | 1/21/2025        | 1/21/2026            |
| AC Power Source                | IN0458                | 10/22/2024       | 10/22/2025           |
| DC Power Source                | IN0212                | 10/22/2024       | 10/22/2025           |
| Sphere Thermometer             | IN4036B               | 10/22/2024       | 10/22/2025           |
| Room Thermometer               | IN0046                | 10/22/2024       | 10/22/2025           |

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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 5000K 4-step quadrangle

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### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 134                         | NR               | 620       | 390                         | NR               | 750       | 10                          | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 165                         | NR               | 625       | 354                         | NR               | 755       | 9                           | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 218                         | NR               | 630       | 319                         | NR               | 760       | 8                           | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 281                         | NR               | 635       | 285                         | NR               | 765       | 7                           | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 343                         | NR               | 640       | 254                         | NR               | 770       | 6                           | NR               | 900       | 0                           | NR               |
| 385       | 1                           | NR               | 515       | 400                         | NR               | 645       | 224                         | NR               | 775       | 5                           | NR               | 905       | 0                           | NR               |
| 390       | 2                           | NR               | 520       | 444                         | NR               | 650       | 197                         | NR               | 780       | 4                           | NR               | 910       | 0                           | NR               |
| 395       | 4                           | NR               | 525       | 477                         | NR               | 655       | 173                         | NR               | 785       | 4                           | NR               | 915       | 0                           | NR               |
| 400       | 6                           | NR               | 530       | 501                         | NR               | 660       | 150                         | NR               | 790       | 3                           | NR               | 920       | 0                           | NR               |
| 405       | 9                           | NR               | 535       | 520                         | NR               | 665       | 131                         | NR               | 795       | 3                           | NR               | 925       | 0                           | NR               |
| 410       | 14                          | NR               | 540       | 534                         | NR               | 670       | 113                         | NR               | 800       | 2                           | NR               | 930       | 0                           | NR               |
| 415       | 26                          | NR               | 545       | 547                         | NR               | 675       | 98                          | NR               | 805       | 2                           | NR               | 935       | 0                           | NR               |
| 420       | 50                          | NR               | 550       | 561                         | NR               | 680       | 85                          | NR               | 810       | 2                           | NR               | 940       | 0                           | NR               |
| 425       | 95                          | NR               | 555       | 574                         | NR               | 685       | 73                          | NR               | 815       | 2                           | NR               | 945       | 0                           | NR               |
| 430       | 168                         | NR               | 560       | 586                         | NR               | 690       | 63                          | NR               | 820       | 1                           | NR               | 950       | 0                           | NR               |
| 435       | 284                         | NR               | 565       | 596                         | NR               | 695       | 54                          | NR               | 825       | 1                           | NR               | 955       | 0                           | NR               |
| 440       | 452                         | NR               | 570       | 604                         | NR               | 700       | 46                          | NR               | 830       | 1                           | NR               | 960       | 0                           | NR               |
| 445       | 705                         | NR               | 575       | 606                         | NR               | 705       | 40                          | NR               | 835       | 1                           | NR               | 965       | 0                           | NR               |
| 450       | 980                         | NR               | 580       | 603                         | NR               | 710       | 34                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 869                         | NR               | 585       | 592                         | NR               | 715       | 29                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 531                         | NR               | 590       | 577                         | NR               | 720       | 25                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 372                         | NR               | 595       | 554                         | NR               | 725       | 22                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 268                         | NR               | 600       | 527                         | NR               | 730       | 19                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 174                         | NR               | 605       | 497                         | NR               | 735       | 16                          | NR               | 865       | 0                           | NR               | 995       | 0                           | NR               |
| 480       | 135                         | NR               | 610       | 462                         | NR               | 740       | 14                          | NR               | 870       | 0                           | NR               | 1000      | 0                           | NR               |
| 485       | 126                         | NR               | 615       | 428                         | NR               | 745       | 12                          | NR               | 875       | 0                           | NR               |           |                             |                  |

REPORT NUMBER: SP2-2501-321-5

### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.82

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 134                         | NR               | 620       | 390                         | NR               | 750       | 10                          | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 165                         | NR               | 625       | 354                         | NR               | 755       | 9                           | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 218                         | NR               | 630       | 319                         | NR               | 760       | 8                           | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 281                         | NR               | 635       | 285                         | NR               | 765       | 7                           | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 343                         | NR               | 640       | 254                         | NR               | 770       | 6                           | NR               | 900       | 0                           | NR               |
| 385       | 1                           | NR               | 515       | 400                         | NR               | 645       | 224                         | NR               | 775       | 5                           | NR               | 905       | 0                           | NR               |
| 390       | 2                           | NR               | 520       | 444                         | NR               | 650       | 197                         | NR               | 780       | 4                           | NR               | 910       | 0                           | NR               |
| 395       | 4                           | NR               | 525       | 477                         | NR               | 655       | 173                         | NR               | 785       | 4                           | NR               | 915       | 0                           | NR               |
| 400       | 6                           | NR               | 530       | 501                         | NR               | 660       | 150                         | NR               | 790       | 3                           | NR               | 920       | 0                           | NR               |
| 405       | 9                           | NR               | 535       | 520                         | NR               | 665       | 131                         | NR               | 795       | 3                           | NR               | 925       | 0                           | NR               |
| 410       | 14                          | NR               | 540       | 534                         | NR               | 670       | 113                         | NR               | 800       | 2                           | NR               | 930       | 0                           | NR               |
| 415       | 26                          | NR               | 545       | 547                         | NR               | 675       | 98                          | NR               | 805       | 2                           | NR               | 935       | 0                           | NR               |
| 420       | 50                          | NR               | 550       | 561                         | NR               | 680       | 85                          | NR               | 810       | 2                           | NR               | 940       | 0                           | NR               |
| 425       | 95                          | NR               | 555       | 574                         | NR               | 685       | 73                          | NR               | 815       | 2                           | NR               | 945       | 0                           | NR               |
| 430       | 168                         | NR               | 560       | 586                         | NR               | 690       | 63                          | NR               | 820       | 1                           | NR               | 950       | 0                           | NR               |
| 435       | 284                         | NR               | 565       | 596                         | NR               | 695       | 54                          | NR               | 825       | 1                           | NR               | 955       | 0                           | NR               |
| 440       | 452                         | NR               | 570       | 604                         | NR               | 700       | 46                          | NR               | 830       | 1                           | NR               | 960       | 0                           | NR               |
| 445       | 705                         | NR               | 575       | 606                         | NR               | 705       | 40                          | NR               | 835       | 1                           | NR               | 965       | 0                           | NR               |
| 450       | 980                         | NR               | 580       | 603                         | NR               | 710       | 34                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 869                         | NR               | 585       | 592                         | NR               | 715       | 29                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 531                         | NR               | 590       | 577                         | NR               | 720       | 25                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 372                         | NR               | 595       | 554                         | NR               | 725       | 22                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 268                         | NR               | 600       | 527                         | NR               | 730       | 19                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 174                         | NR               | 605       | 497                         | NR               | 735       | 16                          | NR               | 865       | 0                           | NR               | 995       | 0                           | NR               |
| 480       | 135                         | NR               | 610       | 462                         | NR               | 740       | 14                          | NR               | 870       | 0                           | NR               | 1000      | 0                           | NR               |
| 485       | 126                         | NR               | 615       | 428                         | NR               | 745       | 12                          | NR               | 875       | 0                           | NR               |           |                             |                  |

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### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.75

| $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|
| 360               | 0                                      | NR                             | 490               | 134                                    | NR                             | 620               | 390                                    | NR                             | 750               | 10                                     | NR                             | 880               | 0                                      | NR                             |
| 365               | 0                                      | NR                             | 495               | 165                                    | NR                             | 625               | 354                                    | NR                             | 755               | 9                                      | NR                             | 885               | 0                                      | NR                             |
| 370               | 0                                      | NR                             | 500               | 218                                    | NR                             | 630               | 319                                    | NR                             | 760               | 8                                      | NR                             | 890               | 0                                      | NR                             |
| 375               | 0                                      | NR                             | 505               | 281                                    | NR                             | 635               | 285                                    | NR                             | 765               | 7                                      | NR                             | 895               | 0                                      | NR                             |
| 380               | 0                                      | NR                             | 510               | 343                                    | NR                             | 640               | 254                                    | NR                             | 770               | 6                                      | NR                             | 900               | 0                                      | NR                             |
| 385               | 1                                      | NR                             | 515               | 400                                    | NR                             | 645               | 224                                    | NR                             | 775               | 5                                      | NR                             | 905               | 0                                      | NR                             |
| 390               | 2                                      | NR                             | 520               | 444                                    | NR                             | 650               | 197                                    | NR                             | 780               | 4                                      | NR                             | 910               | 0                                      | NR                             |
| 395               | 4                                      | NR                             | 525               | 477                                    | NR                             | 655               | 173                                    | NR                             | 785               | 4                                      | NR                             | 915               | 0                                      | NR                             |
| 400               | 6                                      | NR                             | 530               | 501                                    | NR                             | 660               | 150                                    | NR                             | 790               | 3                                      | NR                             | 920               | 0                                      | NR                             |
| 405               | 9                                      | NR                             | 535               | 520                                    | NR                             | 665               | 131                                    | NR                             | 795               | 3                                      | NR                             | 925               | 0                                      | NR                             |
| 410               | 14                                     | NR                             | 540               | 534                                    | NR                             | 670               | 113                                    | NR                             | 800               | 2                                      | NR                             | 930               | 0                                      | NR                             |
| 415               | 26                                     | NR                             | 545               | 547                                    | NR                             | 675               | 98                                     | NR                             | 805               | 2                                      | NR                             | 935               | 0                                      | NR                             |
| 420               | 50                                     | NR                             | 550               | 561                                    | NR                             | 680               | 85                                     | NR                             | 810               | 2                                      | NR                             | 940               | 0                                      | NR                             |
| 425               | 95                                     | NR                             | 555               | 574                                    | NR                             | 685               | 73                                     | NR                             | 815               | 2                                      | NR                             | 945               | 0                                      | NR                             |
| 430               | 168                                    | NR                             | 560               | 586                                    | NR                             | 690               | 63                                     | NR                             | 820               | 1                                      | NR                             | 950               | 0                                      | NR                             |
| 435               | 284                                    | NR                             | 565               | 596                                    | NR                             | 695               | 54                                     | NR                             | 825               | 1                                      | NR                             | 955               | 0                                      | NR                             |
| 440               | 452                                    | NR                             | 570               | 604                                    | NR                             | 700               | 46                                     | NR                             | 830               | 1                                      | NR                             | 960               | 0                                      | NR                             |
| 445               | 705                                    | NR                             | 575               | 606                                    | NR                             | 705               | 40                                     | NR                             | 835               | 1                                      | NR                             | 965               | 0                                      | NR                             |
| 450               | 980                                    | NR                             | 580               | 603                                    | NR                             | 710               | 34                                     | NR                             | 840               | 1                                      | NR                             | 970               | 0                                      | NR                             |
| 455               | 869                                    | NR                             | 585               | 592                                    | NR                             | 715               | 29                                     | NR                             | 845               | 1                                      | NR                             | 975               | 0                                      | NR                             |
| 460               | 531                                    | NR                             | 590               | 577                                    | NR                             | 720               | 25                                     | NR                             | 850               | 1                                      | NR                             | 980               | 0                                      | NR                             |
| 465               | 372                                    | NR                             | 595               | 554                                    | NR                             | 725               | 22                                     | NR                             | 855               | 1                                      | NR                             | 985               | 0                                      | NR                             |
| 470               | 268                                    | NR                             | 600               | 527                                    | NR                             | 730               | 19                                     | NR                             | 860               | 1                                      | NR                             | 990               | 0                                      | NR                             |
| 475               | 174                                    | NR                             | 605               | 497                                    | NR                             | 735               | 16                                     | NR                             | 865               | 0                                      | NR                             | 995               | 0                                      | NR                             |
| 480               | 135                                    | NR                             | 610               | 462                                    | NR                             | 740               | 14                                     | NR                             | 870               | 0                                      | NR                             | 1000              | 0                                      | NR                             |
| 485               | 126                                    | NR                             | 615               | 428                                    | NR                             | 745               | 12                                     | NR                             | 875               | 0                                      | NR                             |                   |                                        |                                |

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TM-30-18

### Summary

$R_f = 74.2$   
 $R_g = 92.7$   
 $CIE R_a = 72.2$   
 $R_g = -38.2$



### Color Vector Graphics

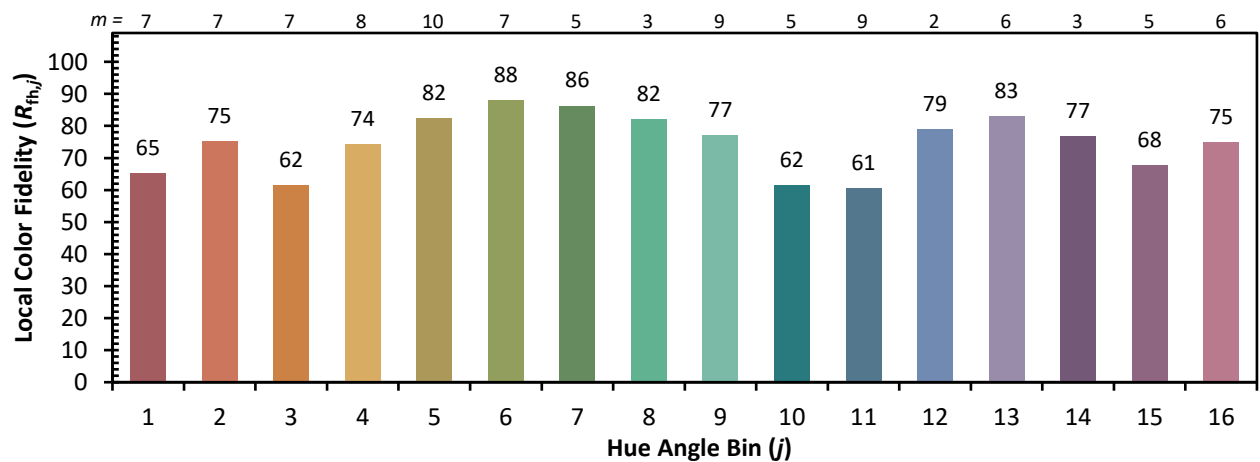


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 63 | CES51 = 89 | CES76 = 51 |
| CES02 = 59 | CES27 = 89 | CES52 = 89 | CES77 = 68 |
| CES03 = 30 | CES28 = 81 | CES53 = 79 | CES78 = 54 |
| CES04 = 69 | CES29 = 69 | CES54 = 84 | CES79 = 80 |
| CES05 = 46 | CES30 = 88 | CES55 = 83 | CES80 = 77 |
| CES06 = 50 | CES31 = 72 | CES56 = 74 | CES81 = 79 |
| CES07 = 38 | CES32 = 63 | CES57 = 73 | CES82 = 91 |
| CES08 = 38 | CES33 = 82 | CES58 = 74 | CES83 = 90 |
| CES09 = 29 | CES34 = 70 | CES59 = 86 | CES84 = 85 |
| CES10 = 72 | CES35 = 83 | CES60 = 88 | CES85 = 78 |
| CES11 = 56 | CES36 = 88 | CES61 = 82 | CES86 = 75 |
| CES12 = 61 | CES37 = 78 | CES62 = 81 | CES87 = 77 |
| CES13 = 41 | CES38 = 98 | CES63 = 73 | CES88 = 81 |
| CES14 = 74 | CES39 = 97 | CES64 = 64 | CES89 = 73 |
| CES15 = 70 | CES40 = 91 | CES65 = 61 | CES90 = 80 |
| CES16 = 46 | CES41 = 96 | CES66 = 56 | CES91 = 72 |
| CES17 = 49 | CES42 = 80 | CES67 = 54 | CES92 = 58 |
| CES18 = 55 | CES43 = 79 | CES68 = 64 | CES93 = 75 |
| CES19 = 71 | CES44 = 99 | CES69 = 73 | CES94 = 53 |
| CES20 = 63 | CES45 = 87 | CES70 = 56 | CES95 = 64 |
| CES21 = 85 | CES46 = 85 | CES71 = 47 | CES96 = 76 |
| CES22 = 77 | CES47 = 90 | CES72 = 82 | CES97 = 86 |
| CES23 = 91 | CES48 = 80 | CES73 = 47 | CES98 = 76 |
| CES24 = 90 | CES49 = 83 | CES74 = 90 | CES99 = 62 |
| CES25 = 71 | CES50 = 89 | CES75 = 50 |            |



### Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)