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: LUMARK

Report Number: P1461165

Luminaire Tested: PRV-P-PB1B-750-U-5MQ

Issue Date: 06/09/2026

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1461165 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 6/9/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | LUMARK |
| Catalog Number: | PRV-P-PB1B-750-U-5MQ |
| Description: | PREVAIL PETITE DISCRETE LED 1 SQUARE AT 1470MA 70CRI 5000K FIXTURE w/ TYPE V SQUARE MEDIUM DISTRIBUTION OPTIC |
| Light Source: | (10) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 6367.1 lumens |
| Efficiency: | N/A |
| Efficacy: | 121.3 lumens/watt |
| Luminous Opening: | Rectangular (W 0.33' x L: 0.33' x H: 0') |
| IES Classification: | Type V - Short |
| BUG Rating: | B3 - 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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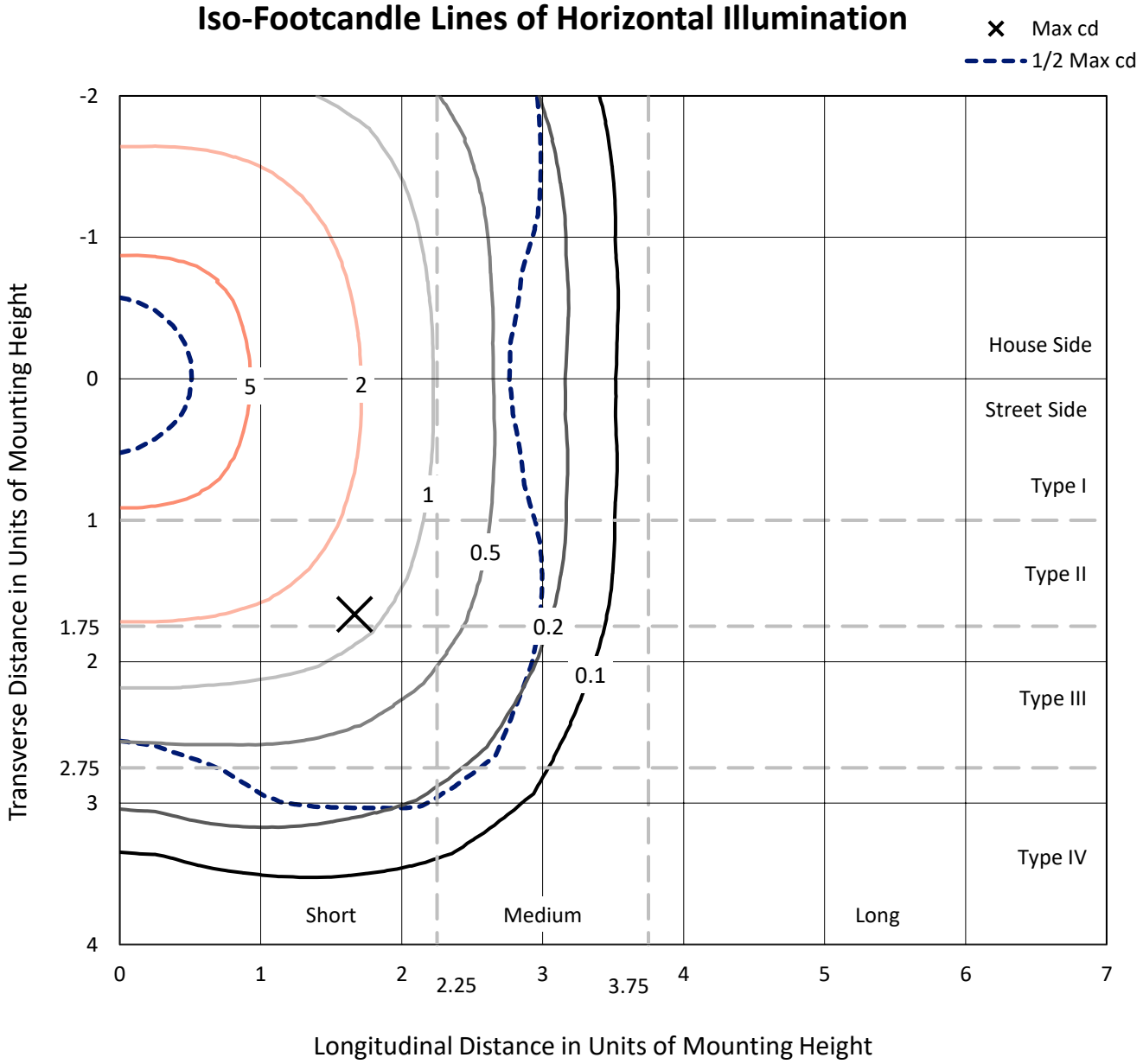
Scaled Data Report

REPORT NUMBER: P1461165
CATALOG NUMBER: PRV-P-PB1B-750-U-5MQ

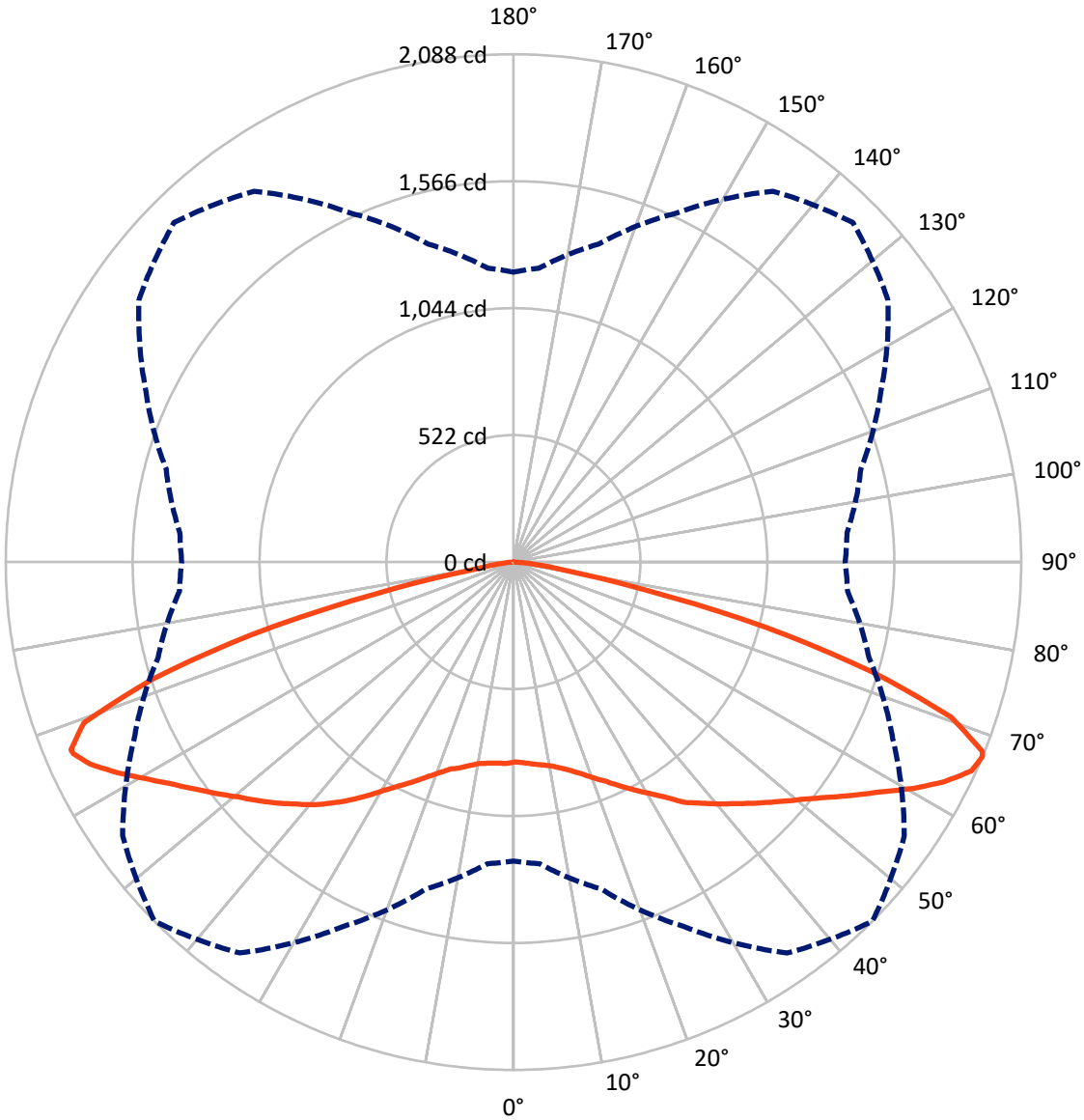
## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 8.2 fc
Type V - Short - N/A

REPORT NUMBER: P1461165
CATALOG NUMBER: PRV-P-PB1B-750-U-5MQ

## Luminous Intensity Polar Plot




Vertical Plane Through 45-Deg Lateral  Horizontal Cone Through 67-Deg Vertical

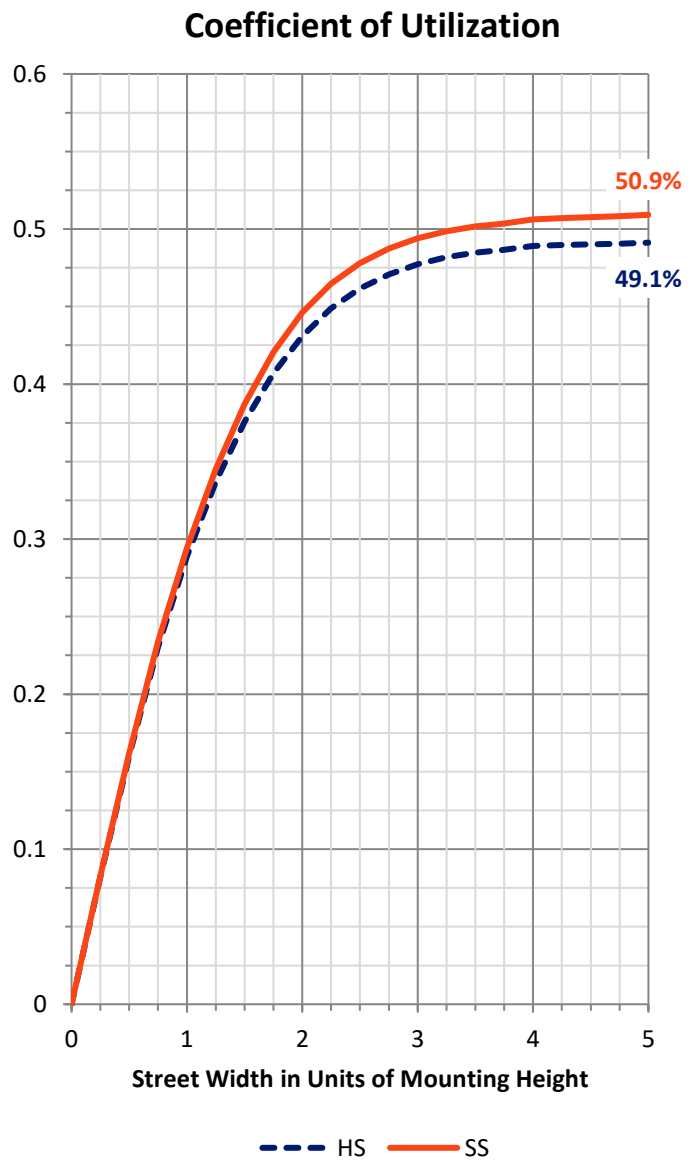
REPORT NUMBER: P1461165
CATALOG NUMBER: PRV-P-PB1B-750-U-5MQ

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 3123.9 | 0.0 | 3123.9 |
| | % Fixture | 49.1 | 0.0 | 49.1 |
| **Street Side** | Lumens | 3243.3 | 0.0 | 3243.3 |
| | % Fixture | 50.9 | 0.0 | 50.9 |
| **Total** | Lumens | 6367.1 | 0.0 | 6367.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 79.6 | 1.2 |
| 10°-20° | 251.8 | 4.0 |
| 20°-30° | 466.6 | 7.3 |
| 30°-40° | 737.7 | 11.6 |
| 40°-50° | 1033.3 | 16.2 |
| 50°-60° | 1399.8 | 22.0 |
| 60°-70° | 1626.0 | 25.5 |
| 70°-80° | 729.9 | 11.5 |
| 80°-90° | 42.5 | 0.7 |
| 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° | 6367.1 | 100.0 |
| 0°-180° | 6367.1 | 100.0 |

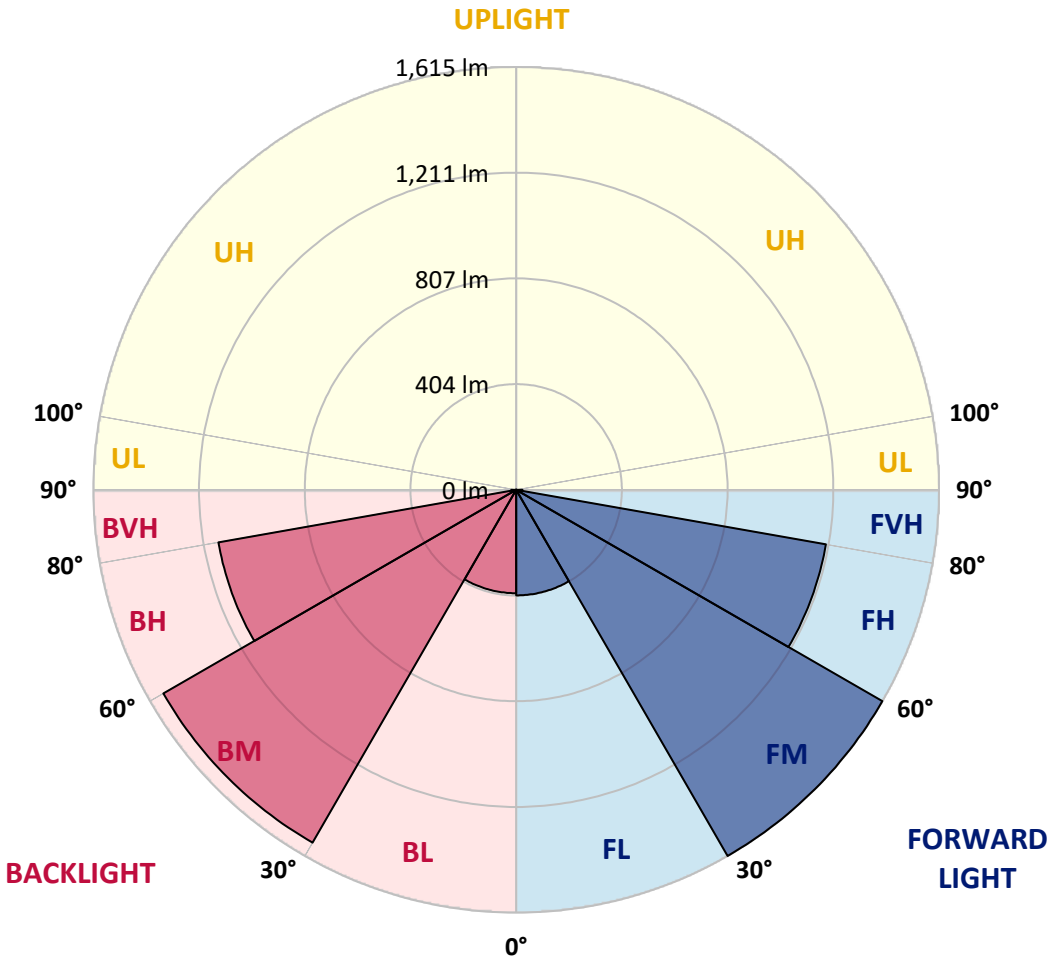


REPORT NUMBER: P1461165
CATALOG NUMBER: PRV-P-PB1B-750-U-5MQ

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

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 403.1 | 6.3 | | | |
| FM | (30°-60°) | 1614.8 | 25.4 | | | |
| FH | (60°-80°) | 1201.1 | 18.9 | | | G1/1800 |
| FVH | (80°-90°) | 24.2 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 394.9 | 6.2 | B1/500 | | |
| BM | (30°-60°) | 1555.9 | 24.4 | B2/2500 | | |
| BH | (60°-80°) | 1154.8 | 18.1 | B3/2500 | | G1/1800 |
| BVH | (80°-90°) | 18.3 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G1**
Type V Short



REPORT NUMBER: P1461165
CATALOG NUMBER: PRV-P-PB1B-750-U-5MQ

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 822.0 | 822.0 | 822.0 | 822.0 | 822.0 | *822.0* | 822.0 | 822.0 | 822.0 | 822.0 | 822.0 |
| 2.5° | 822.0 | 822.0 | 825.0 | 826.0 | 824.0 | *826.0* | 826.0 | 823.0 | 824.0 | 824.0 | 824.0 |
| 5° | 827.0 | 828.0 | 830.0 | 833.0 | 832.0 | *834.0* | 831.0 | 828.0 | 829.0 | 828.0 | 827.0 |
| 7.5° | 833.0 | 833.0 | 838.0 | 842.0 | 842.0 | *842.0* | 837.0 | 836.0 | 837.0 | 835.0 | 834.0 |
| 10° | 847.0 | 848.0 | 853.0 | 853.0 | 853.0 | *852.0* | 850.0 | 847.0 | 848.0 | 848.0 | 846.0 |
| 12.5° | 865.0 | 865.0 | 871.0 | 871.0 | 872.0 | *869.0* | 868.0 | 866.0 | 866.0 | 865.0 | 865.0 |
| 15° | 886.0 | 888.0 | 894.0 | 893.0 | 893.0 | *890.0* | 890.0 | 888.0 | 888.0 | 885.0 | 885.0 |
| 17.5° | 911.0 | 912.0 | 917.0 | 917.0 | 918.0 | *916.0* | 915.0 | 911.0 | 913.0 | 910.0 | 910.0 |
| 20° | 940.0 | 943.0 | 947.0 | 947.0 | 948.0 | *948.0* | 944.0 | 939.0 | 941.0 | 941.0 | 938.0 |
| 22.5° | 971.0 | 974.0 | 981.0 | 982.0 | 982.0 | *980.0* | 976.0 | 969.0 | 971.0 | 973.0 | 971.0 |
| 25° | 1005.0 | 1006.0 | 1015.0 | 1019.0 | 1023.0 | *1020.0* | 1013.0 | 1007.0 | 1008.0 | 1009.0 | 1009.0 |
| 27.5° | 1038.0 | 1041.0 | 1051.0 | 1059.0 | 1060.0 | *1061.0* | 1055.0 | 1049.0 | 1051.0 | 1052.0 | 1050.0 |
| 30° | 1075.0 | 1080.0 | 1091.0 | 1100.0 | 1103.0 | *1104.0* | 1099.0 | 1094.0 | 1092.0 | 1091.0 | 1091.0 |
| 32.5° | 1118.0 | 1119.0 | 1131.0 | 1143.0 | 1154.0 | *1153.0* | 1147.0 | 1140.0 | 1135.0 | 1133.0 | 1133.0 |
| 35° | 1152.0 | 1156.0 | 1172.0 | 1189.0 | 1206.0 | *1213.0* | 1203.0 | 1184.0 | 1175.0 | 1170.0 | 1169.0 |
| 37.5° | 1180.0 | 1185.0 | 1205.0 | 1228.0 | 1249.0 | *1258.0* | 1248.0 | 1225.0 | 1210.0 | 1203.0 | 1201.0 |
| 40° | 1212.0 | 1216.0 | 1237.0 | 1267.0 | 1295.0 | *1307.0* | 1291.0 | 1262.0 | 1243.0 | 1234.0 | 1232.0 |
| 42.5° | 1239.0 | 1243.0 | 1269.0 | 1307.0 | 1342.0 | *1357.0* | 1338.0 | 1304.0 | 1277.0 | 1262.0 | 1262.0 |
| 45° | 1272.0 | 1274.0 | 1305.0 | 1352.0 | 1397.9 | *1412.9* | 1389.9 | 1347.0 | 1317.0 | 1298.0 | 1296.0 |
| 47.5° | 1324.0 | 1326.0 | 1360.9 | 1402.9 | 1454.9 | *1470.9* | 1449.9 | 1395.9 | 1358.9 | 1339.0 | 1338.0 |
| 50° | 1390.9 | 1395.9 | 1433.9 | 1477.9 | 1521.9 | *1533.9* | 1517.9 | 1461.9 | 1412.9 | 1385.9 | 1382.9 |
| 52.5° | 1457.9 | 1465.9 | 1508.9 | 1559.9 | 1597.9 | *1606.9* | 1591.9 | 1528.9 | 1470.9 | 1434.9 | 1431.9 |
| 55° | 1527.9 | 1535.9 | 1581.9 | 1648.9 | 1685.9 | *1692.9* | 1665.9 | 1597.9 | 1531.9 | 1487.9 | 1481.9 |
| 57.5° | 1568.9 | 1576.9 | 1641.9 | 1729.9 | 1777.9 | *1781.9* | 1750.9 | 1665.9 | 1593.9 | 1536.9 | 1528.9 |
| 60° | 1567.9 | 1577.9 | 1665.9 | 1788.9 | 1875.9 | *1888.9* | 1835.9 | 1738.9 | 1644.9 | 1575.9 | 1561.9 |
| 62.5° | 1544.9 | 1558.9 | 1648.9 | 1816.9 | 1968.9 | *1987.9* | 1923.9 | 1793.9 | 1668.9 | 1585.9 | 1572.9 |
| 65° | 1423.9 | 1438.9 | 1557.9 | 1774.9 | 2004.9 | *2069.9* | 1984.9 | 1790.9 | 1619.9 | 1506.9 | 1497.9 |
| 67° | *1229.0* | *1245.0* | *1390.9* | *1651.9* | *1961.9* | *2087.9* | *1961.9* | *1720.9* | *1512.9* | *1378.9* | *1363.9* |
| 67.5° | 1180.0 | 1199.0 | 1350.0 | 1617.9 | 1938.9 | *2078.9* | 1944.9 | 1683.9 | 1478.9 | 1345.0 | 1333.0 |
| 70° | 884.0 | 924.0 | 1110.0 | 1403.9 | 1737.9 | *1908.9* | 1762.9 | 1487.9 | 1236.0 | 1088.0 | 1056.0 |
| 72.5° | 563.0 | 600.0 | 892.0 | 1197.0 | 1439.9 | *1540.9* | 1455.9 | 1176.0 | 890.0 | 731.0 | 715.0 |
| 75° | 161.0 | 191.0 | 457.0 | 729.0 | 1024.0 | *1070.0* | 880.0 | 674.0 | 466.0 | 373.0 | 366.0 |
| 77.5° | 83.0 | 84.0 | 140.0 | 301.0 | 495.0 | *557.0* | 353.0 | 250.0 | 197.0 | 174.0 | 178.0 |
| 80° | 40.0 | 41.0 | 60.0 | 151.0 | 212.0 | *239.0* | 171.0 | 134.0 | 137.0 | 125.0 | 118.0 |
| 82.5° | 21.0 | 22.0 | 31.0 | 66.0 | 97.0 | *123.0* | 123.0 | 94.0 | 92.0 | 87.0 | 78.0 |
| 85° | 6.0 | 5.0 | 9.0 | 14.0 | 27.0 | *46.0* | 33.0 | 34.0 | 32.0 | 27.0 | 26.0 |
| 87.5° | 1.0 | 1.0 | 1.0 | 1.0 | 2.0 | *2.0* | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

REPORT NUMBER: P1461165
CATALOG NUMBER: PRV-P-PB1B-750-U-5MQ

**CANDELA DISTRIBUTION (continued):**

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 822.0 | 822.0 | 822.0 | 822.0 | 822.0 | 822.0 | 822.0 | 822.0 | 822.0 | 822.0 |
| 2.5° | 824.0 | 824.0 | 824.0 | 825.0 | 828.0 | 822.0 | 826.0 | 823.0 | 820.0 | 821.0 |
| 5° | 829.0 | 826.0 | 825.0 | 828.0 | 829.0 | 826.0 | 829.0 | 825.0 | 825.0 | 821.0 |
| 7.5° | 833.0 | 833.0 | 829.0 | 833.0 | 833.0 | 831.0 | 830.0 | 829.0 | 829.0 | 820.0 |
| 10° | 846.0 | 843.0 | 838.0 | 838.0 | 839.0 | 839.0 | 838.0 | 836.0 | 833.0 | 829.0 |
| 12.5° | 864.0 | 860.0 | 854.0 | 854.0 | 854.0 | 857.0 | 854.0 | 851.0 | 846.0 | 845.0 |
| 15° | 887.0 | 880.0 | 874.0 | 873.0 | 873.0 | 872.0 | 872.0 | 868.0 | 863.0 | 861.0 |
| 17.5° | 910.0 | 901.0 | 893.0 | 895.0 | 890.0 | 890.0 | 886.0 | 889.0 | 883.0 | 884.0 |
| 20° | 936.0 | 929.0 | 922.0 | 923.0 | 919.0 | 921.0 | 915.0 | 914.0 | 908.0 | 908.0 |
| 22.5° | 968.0 | 962.0 | 954.0 | 956.0 | 953.0 | 953.0 | 946.0 | 941.0 | 935.0 | 931.0 |
| 25° | 1007.0 | 998.0 | 992.0 | 992.0 | 992.0 | 987.0 | 982.0 | 977.0 | 970.0 | 967.0 |
| 27.5° | 1050.0 | 1042.0 | 1037.0 | 1036.0 | 1032.0 | 1025.0 | 1019.0 | 1019.0 | 1008.0 | 1003.0 |
| 30° | 1091.0 | 1087.0 | 1084.0 | 1080.0 | 1077.0 | 1076.0 | 1065.0 | 1055.0 | 1048.0 | 1043.0 |
| 32.5° | 1129.0 | 1128.0 | 1129.0 | 1130.0 | 1132.0 | 1123.0 | 1111.0 | 1100.0 | 1084.0 | 1087.0 |
| 35° | 1170.0 | 1168.0 | 1172.0 | 1183.0 | 1187.0 | 1178.0 | 1160.0 | 1137.0 | 1123.0 | 1119.0 |
| 37.5° | 1202.0 | 1204.0 | 1217.0 | 1233.0 | 1240.0 | 1226.0 | 1196.0 | 1166.0 | 1146.0 | 1143.0 |
| 40° | 1233.0 | 1240.0 | 1256.0 | 1280.0 | 1293.0 | 1272.0 | 1231.0 | 1194.0 | 1165.0 | 1162.0 |
| 42.5° | 1266.0 | 1272.0 | 1293.0 | 1326.0 | 1338.0 | 1315.0 | 1266.0 | 1217.0 | 1181.0 | 1173.0 |
| 45° | 1297.0 | 1305.0 | 1334.0 | 1375.9 | 1388.9 | 1360.9 | 1298.0 | 1235.0 | 1193.0 | 1186.0 |
| 47.5° | 1336.0 | 1349.0 | 1381.9 | 1427.9 | 1437.9 | 1407.9 | 1337.0 | 1265.0 | 1216.0 | 1209.0 |
| 50° | 1382.9 | 1394.9 | 1435.9 | 1482.9 | 1486.9 | 1455.9 | 1389.9 | 1315.0 | 1259.0 | 1248.0 |
| 52.5° | 1430.9 | 1450.9 | 1497.9 | 1539.9 | 1545.9 | 1512.9 | 1447.9 | 1371.9 | 1307.0 | 1301.0 |
| 55° | 1480.9 | 1500.9 | 1555.9 | 1599.9 | 1606.9 | 1581.9 | 1521.9 | 1438.9 | 1366.9 | 1354.0 |
| 57.5° | 1528.9 | 1548.9 | 1606.9 | 1664.9 | 1674.9 | 1661.9 | 1590.9 | 1492.9 | 1417.9 | 1407.9 |
| 60° | 1558.9 | 1587.9 | 1656.9 | 1728.9 | 1753.9 | 1736.9 | 1641.9 | 1523.9 | 1440.9 | 1426.9 |
| 62.5° | 1574.9 | 1614.9 | 1702.9 | 1798.9 | 1843.9 | 1810.9 | 1663.9 | 1521.9 | 1423.9 | 1410.9 |
| 65° | 1503.9 | 1588.9 | 1726.9 | 1868.9 | 1928.9 | 1863.9 | 1655.9 | 1475.9 | 1372.9 | 1351.0 |
| 67° | *1376.9* | *1478.9* | *1667.9* | *1879.9* | *1973.9* | *1860.9* | *1582.9* | *1353.0* | *1213.0* | *1192.0* |
| 67.5° | 1344.0 | 1447.9 | 1644.9 | 1868.9 | 1976.9 | 1854.9 | 1550.9 | 1313.0 | 1163.0 | 1147.0 |
| 70° | 1067.0 | 1204.0 | 1449.9 | 1717.9 | 1885.9 | 1719.9 | 1355.0 | 1073.0 | 887.0 | 840.0 |
| 72.5° | 752.0 | 887.0 | 1155.0 | 1428.9 | 1562.9 | 1453.9 | 1154.0 | 862.0 | 573.0 | 530.0 |
| 75° | 380.0 | 472.0 | 685.0 | 942.0 | 1123.0 | 1069.0 | 725.0 | 390.0 | 122.0 | 96.0 |
| 77.5° | 168.0 | 181.0 | 265.0 | 403.0 | 584.0 | 455.0 | 237.0 | 87.0 | 39.0 | 35.0 |
| 80° | 117.0 | 130.0 | 129.0 | 147.0 | 159.0 | 139.0 | 94.0 | 37.0 | 13.0 | 5.0 |
| 82.5° | 82.0 | 92.0 | 86.0 | 82.0 | 79.0 | 64.0 | 42.0 | 15.0 | 3.0 | 0.0 |
| 85° | 27.0 | 34.0 | 29.0 | 32.0 | 33.0 | 17.0 | 4.0 | 1.0 | 0.0 | 0.0 |
| 87.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

# 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

Report Generated By FNC07603 / LDUCLS01DT447
Version: v7.04

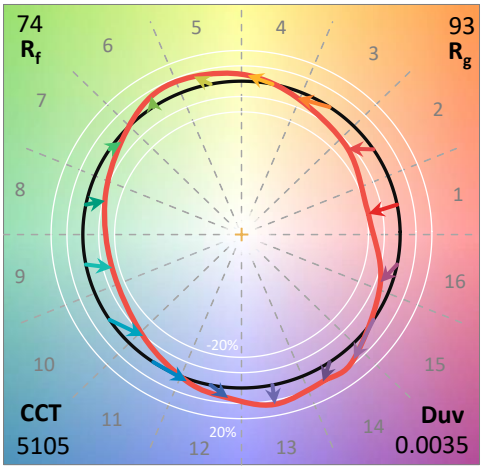
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP2-2501-321-5 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP2 - 165CM SPHERE |
| Measurement Geometry: | 4π |
| 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 |



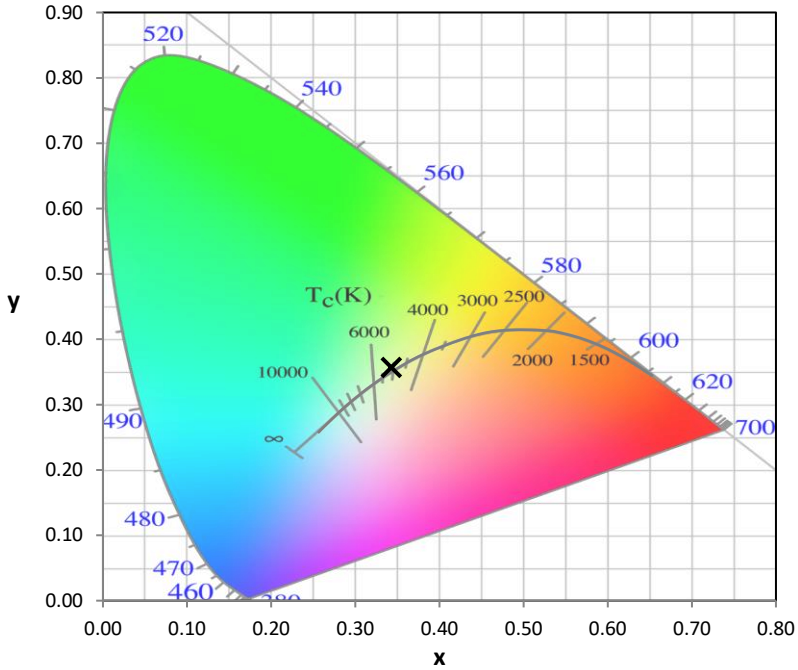

## Test Conditions

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

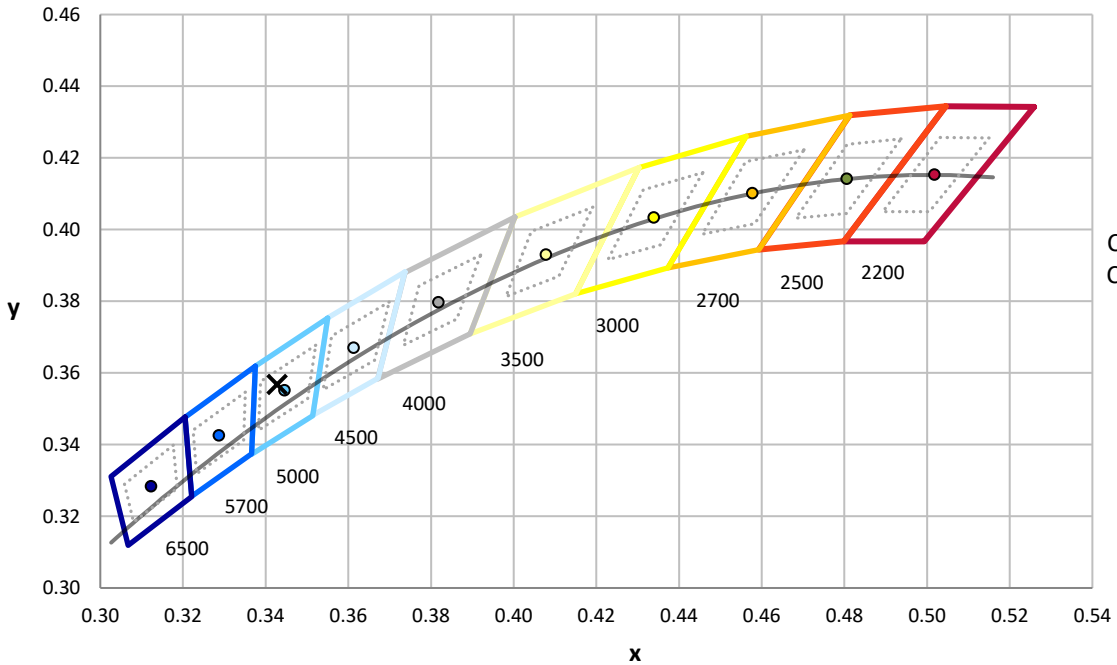
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN2187 | 1/6/2025 | 7/6/2025 |
| Power Meter | INXT2011002 | 1/21/2025 | 1/21/2026 |
| AC Power Source | IN0458 | 10/22/2024 | 10/22/2025 |
| DC Power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

REPORT NUMBER: SP2-2501-321-5

**CIE 1931 Chromaticity Diagram**




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




CCT = 5105K
CIE x = 0.3428
CIE y = 0.3567
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

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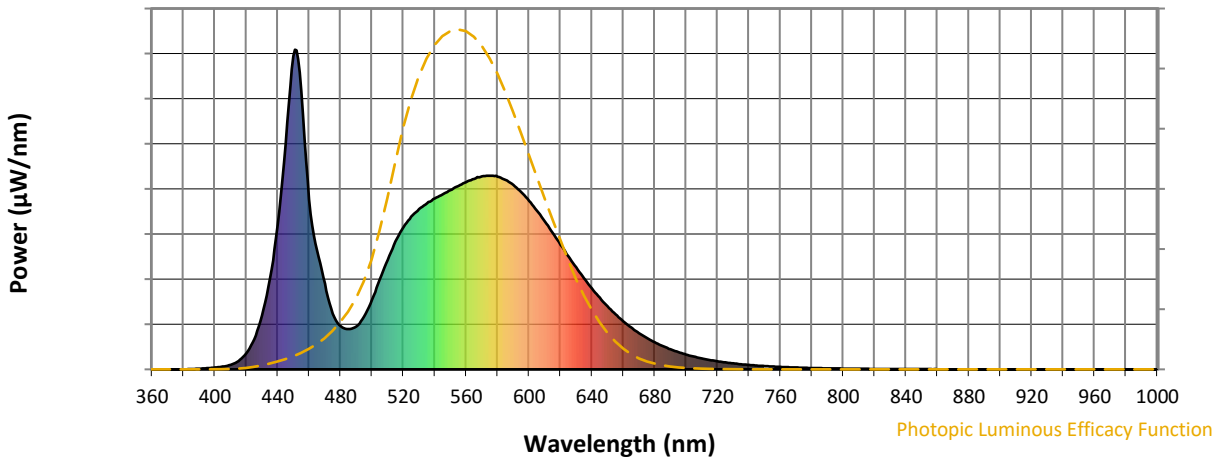
## Photopic Flux vs. Wavelength




**Photopic Lumens: NR**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (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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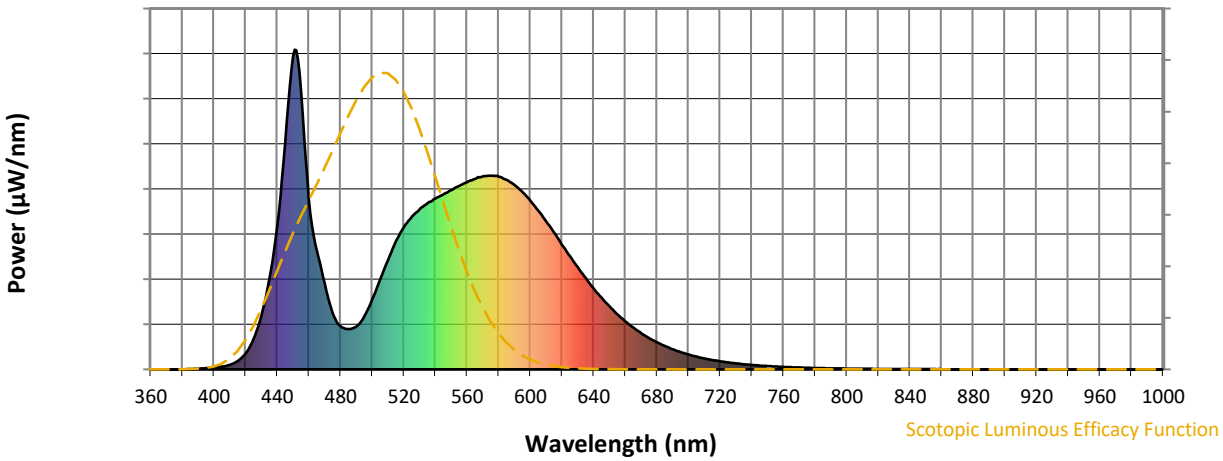
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.82**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (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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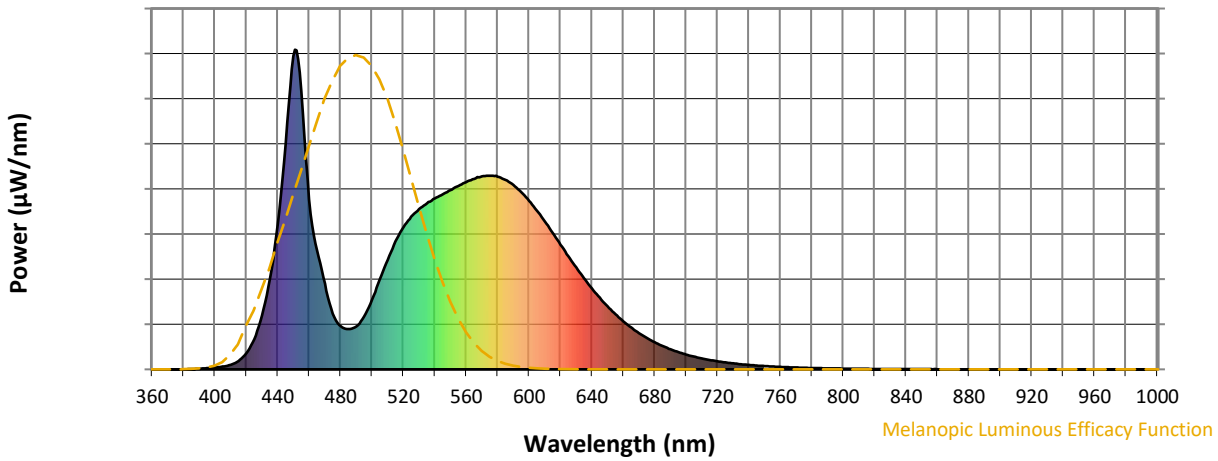
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.75**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (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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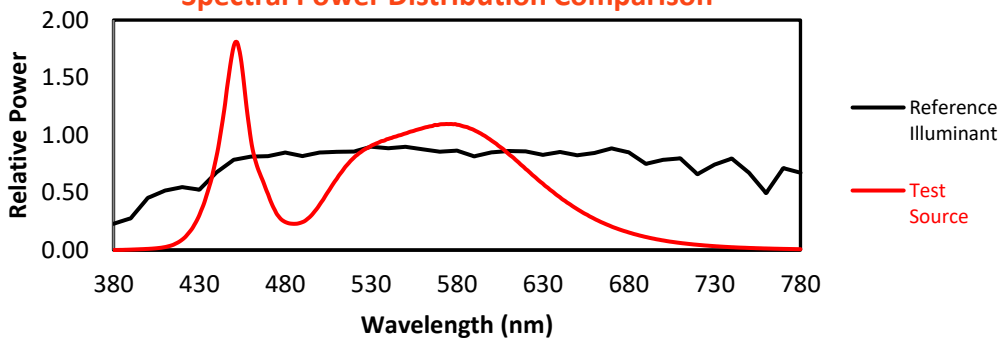
# TM-30-18

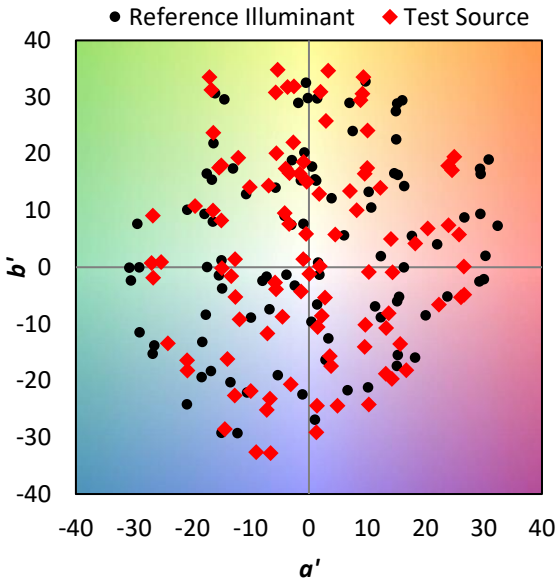
## Summary

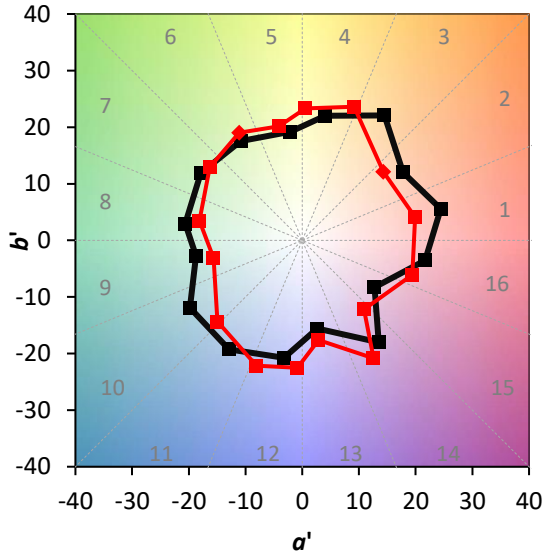
$R_f$ = 74.2
$R_g$ = 92.7
CIE $R_a$ = 72.2
$R_9$ = -38.2

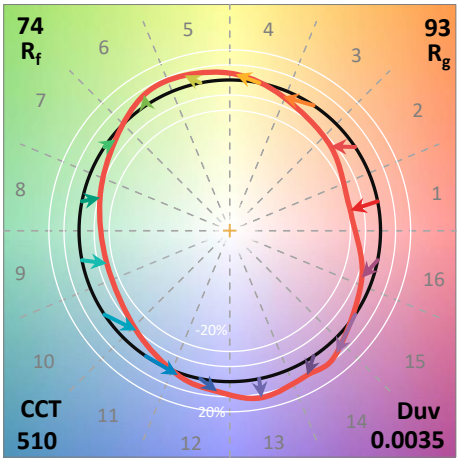
## Spectral Power Distribution Comparison

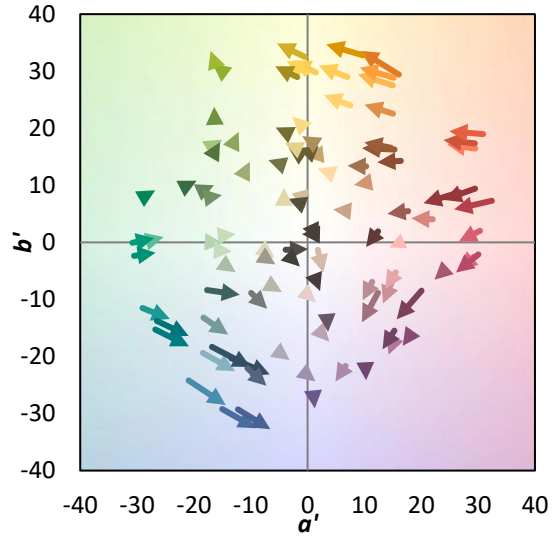



## Color Vector Graphics



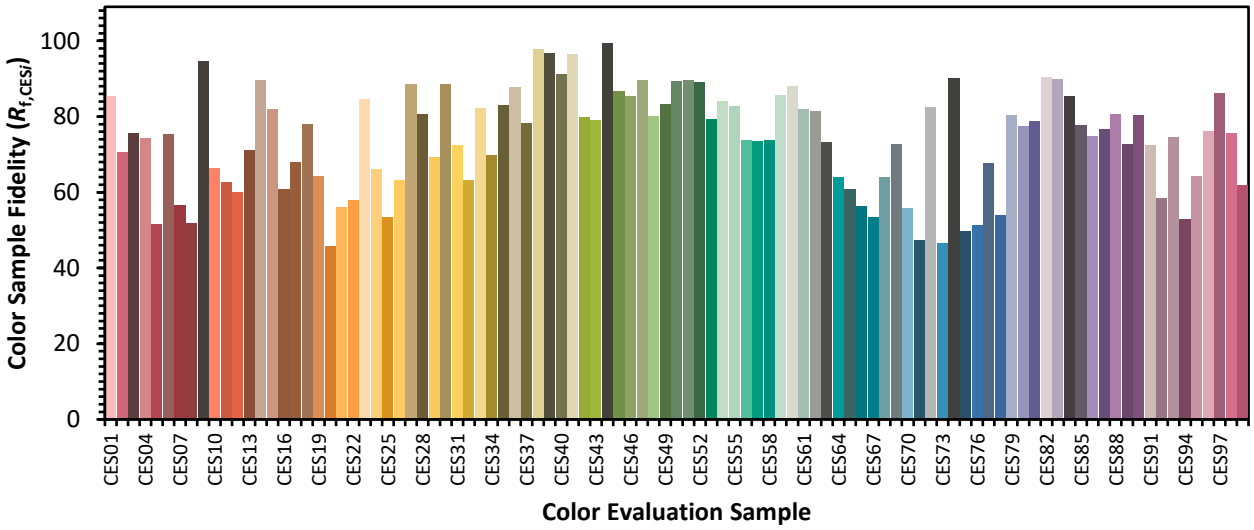



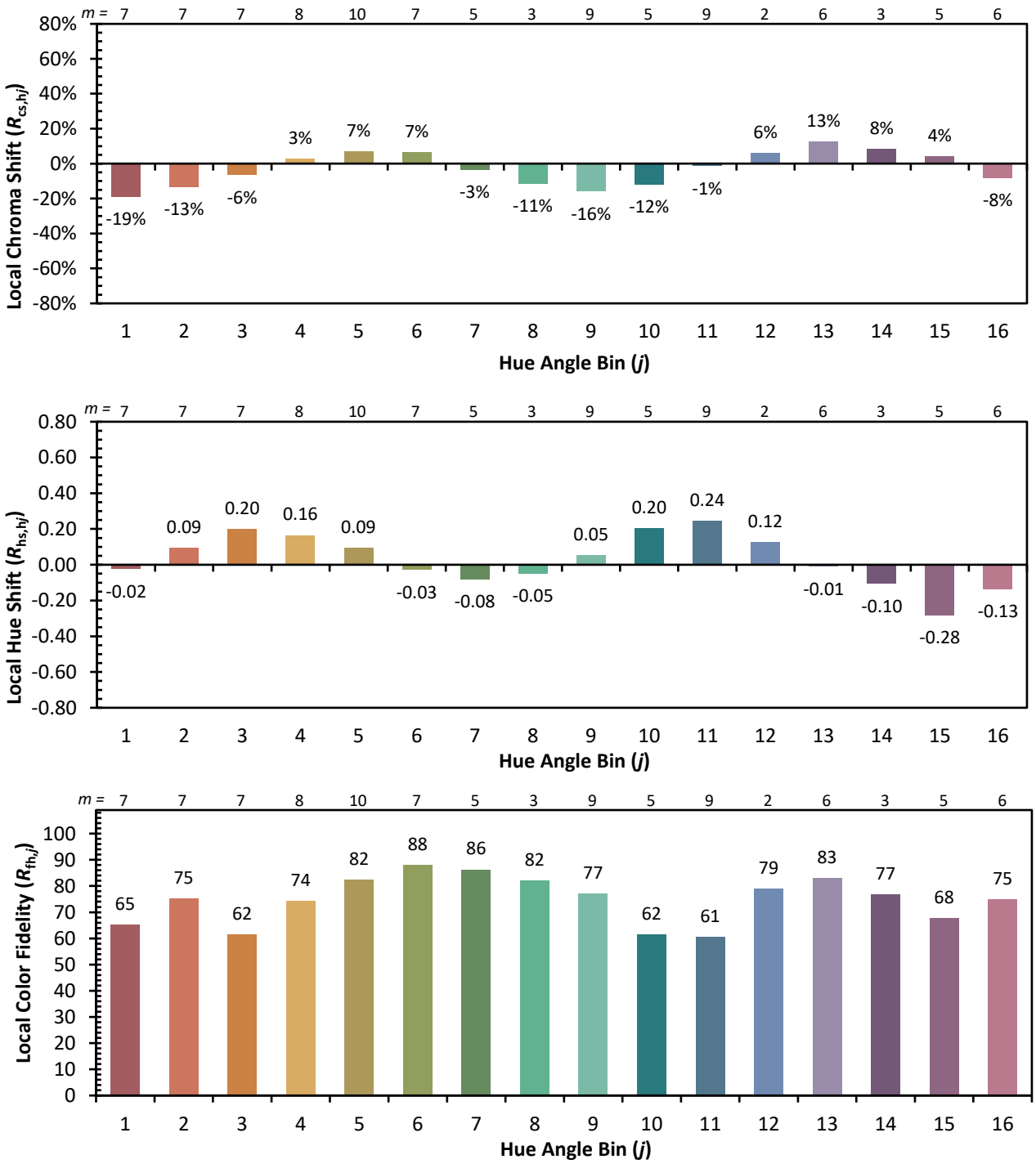



**Individual Sample Fidelity Index ($R_{f,i}$)**

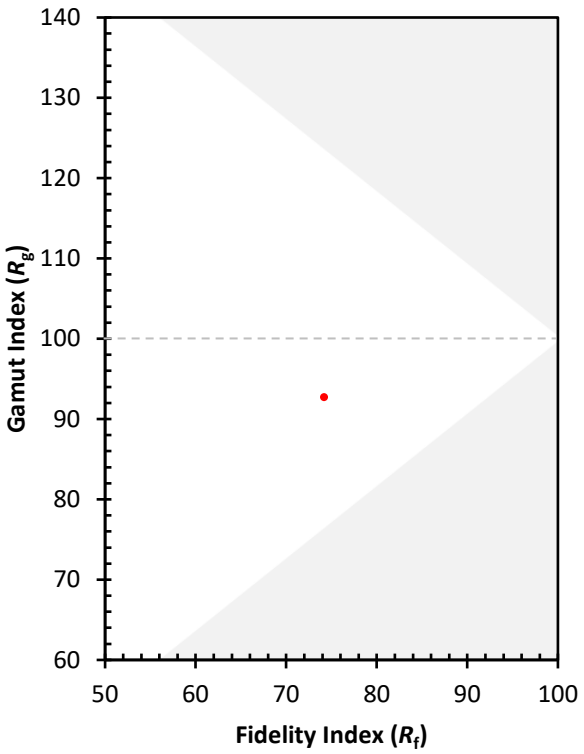
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 63 | CES51 = 89 | CES76 = 51 |
| CES02 = 59 | CES27 = 89 | CES52 = 89 | CES77 = 68 |
| CES03 = 30 | CES28 = 81 | CES53 = 79 | CES78 = 54 |
| CES04 = 69 | CES29 = 69 | CES54 = 84 | CES79 = 80 |
| CES05 = 46 | CES30 = 88 | CES55 = 83 | CES80 = 77 |
| CES06 = 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 | |

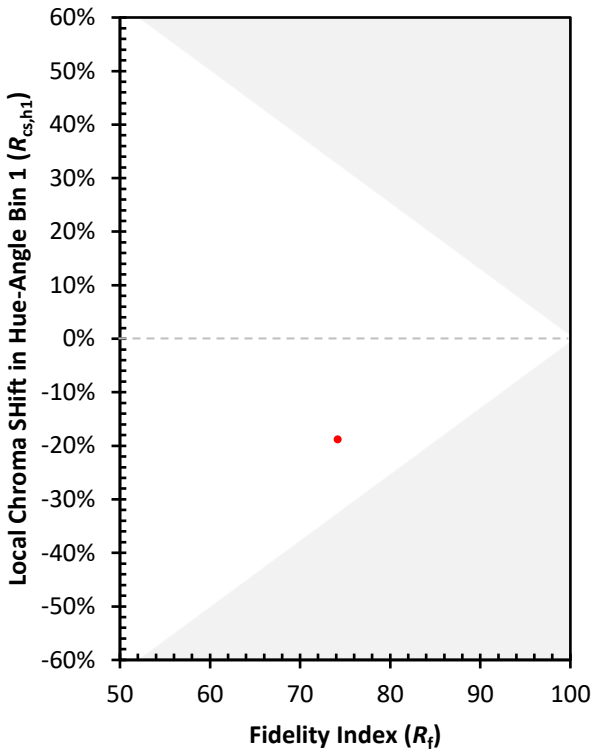


## Color Rendition by Hue-Angle Bin



## Measure Comparisons




(END OF REPORT)