

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: P386051

Luminaire Tested: **GPC-SA1C-830-U-SL3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P386051
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GPC-SA1C-830-U-SL3
Description: GALLEON PEDESTRIAN LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6004 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

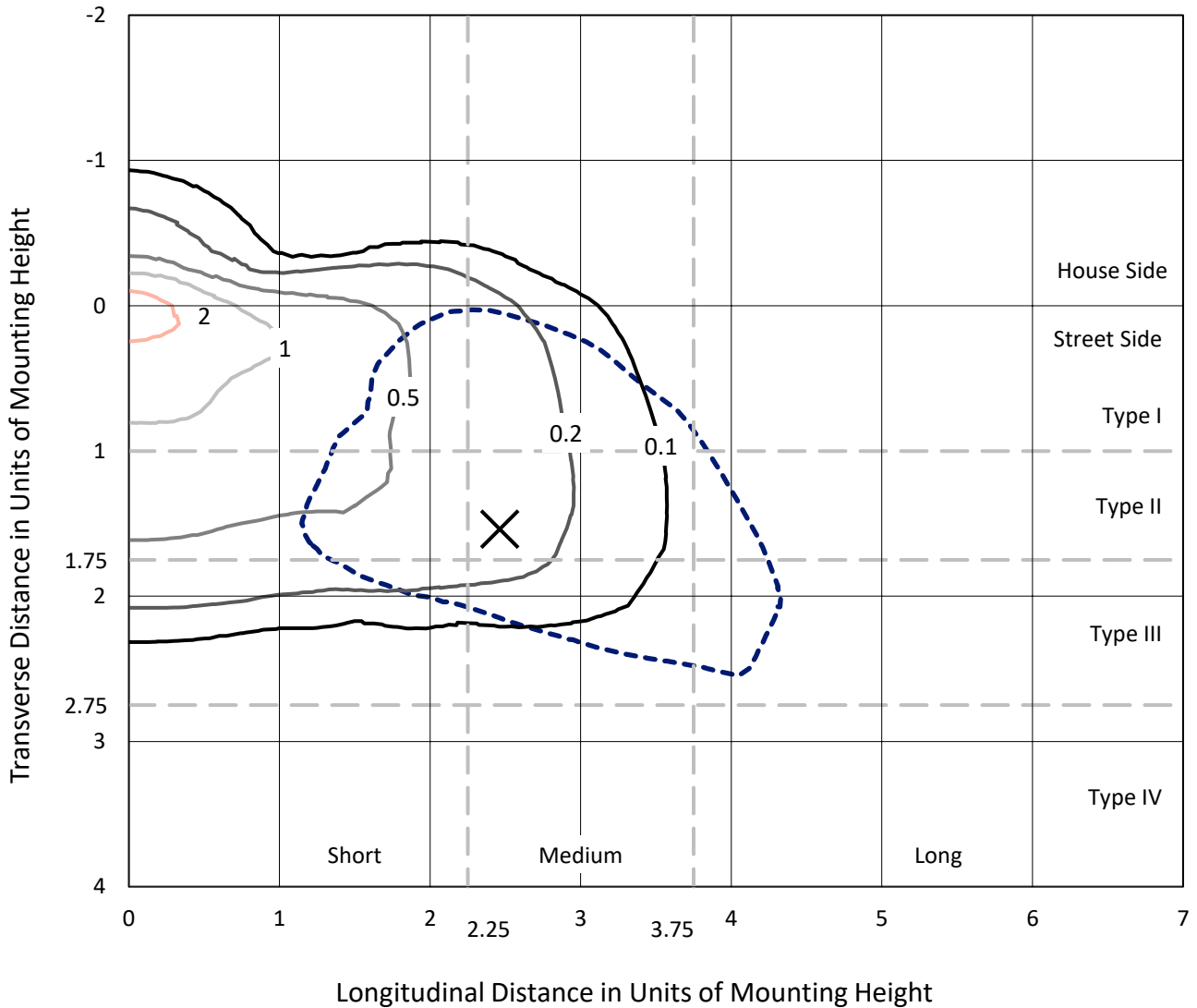
Input Watts (W): 58
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

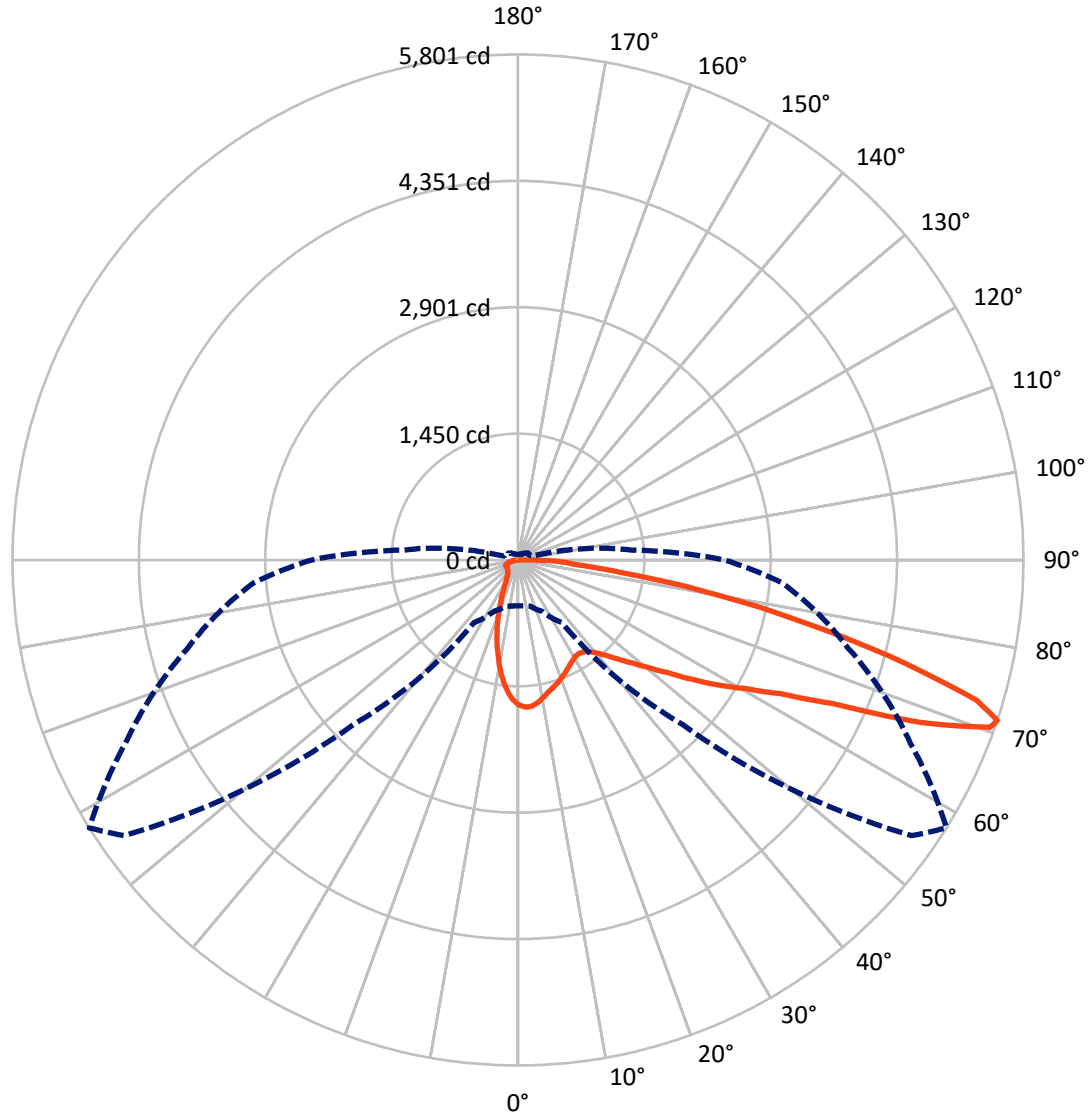
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type III - Medium - N/A

REPORT NUMBER: P386051
CATALOG NUMBER: GPC-SA1C-830-U-SL3

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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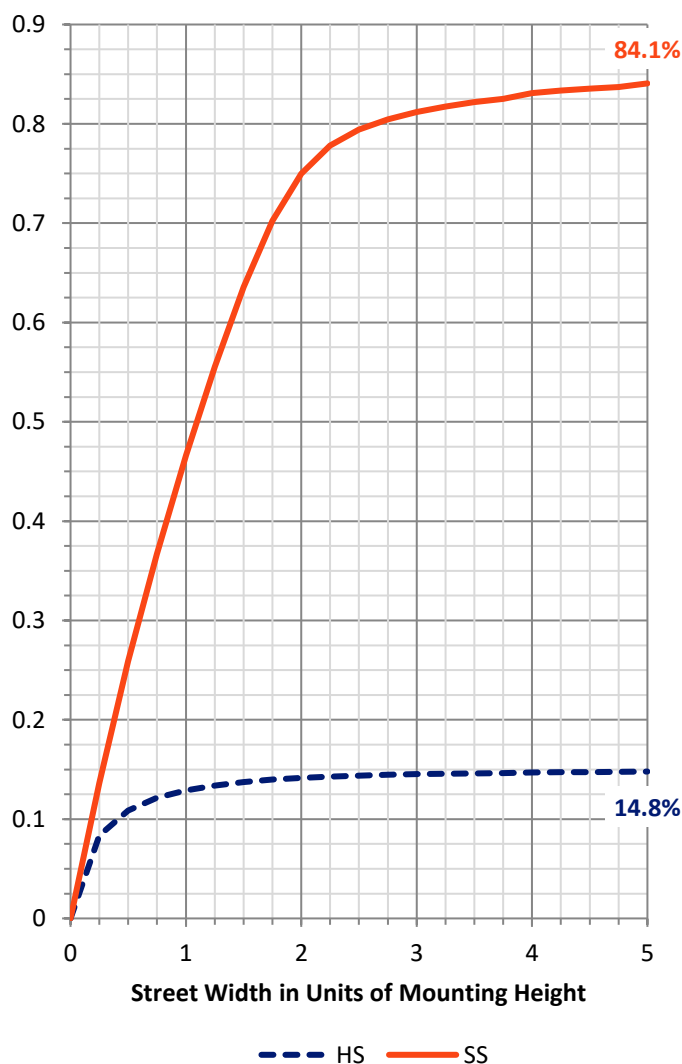
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 897.6 | 0.0 | 897.6 |
| | % Fixture | 15.0 | 0.0 | 15.0 |
| Street Side | Lumens | 5106.4 | 0.0 | 5106.4 |
| | % Fixture | 85.0 | 0.0 | 85.0 |
| Total | Lumens | 6004.0 | 0.0 | 6004.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 143.5 | 2.4 |
| 10°-20° | 319.1 | 5.3 |
| 20°-30° | 405.6 | 6.8 |
| 30°-40° | 516.6 | 8.6 |
| 40°-50° | 732.6 | 12.2 |
| 50°-60° | 1133.7 | 18.9 |
| 60°-70° | 1543.4 | 25.7 |
| 70°-80° | 1029.6 | 17.1 |
| 80°-90° | 180.0 | 3.0 |
| 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° | 6004.0 | 100.0 |
| 0°-180° | 6004.0 | 100.0 |

Coefficient of Utilization

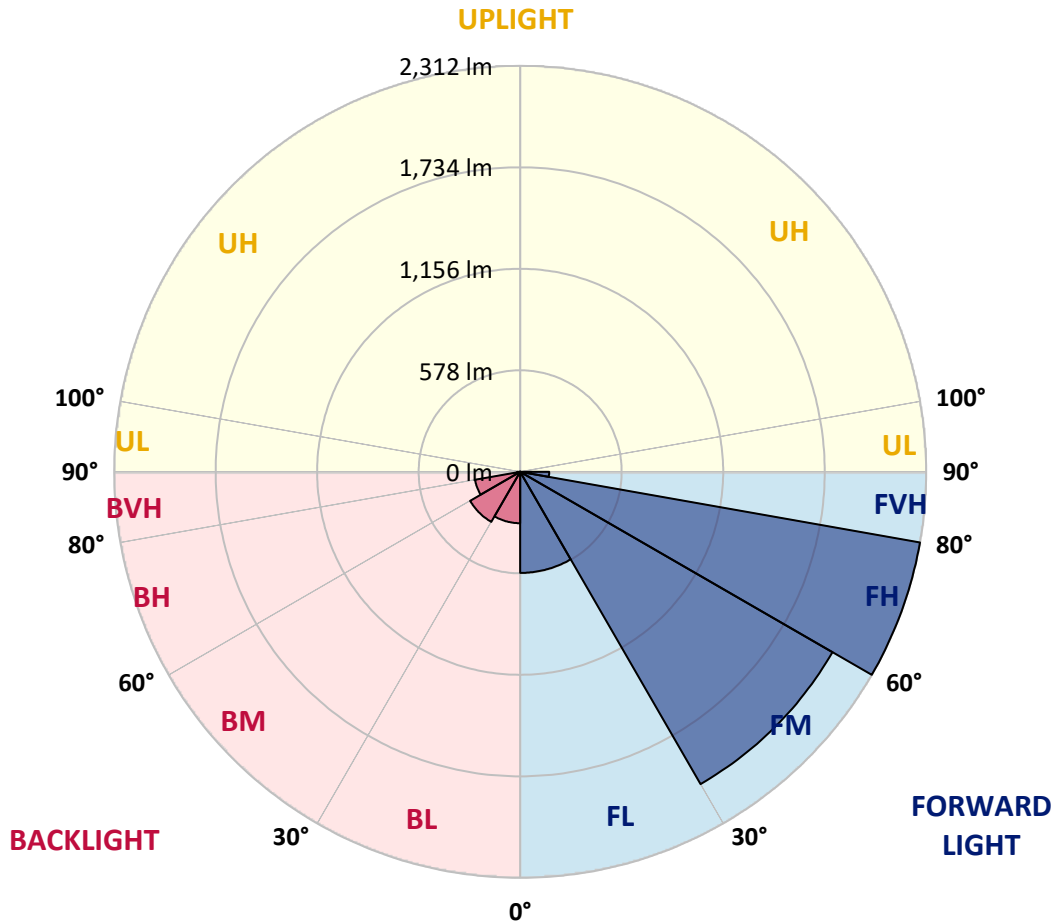


REPORT NUMBER: P386051
 CATALOG NUMBER: GPC-SA1C-830-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 575.6 | 9.6 | | | |
| FM (30°-60°) | 2053.7 | 34.2 | | | |
| FH (60°-80°) | 2312.1 | 38.5 | | | G2/5000 |
| FVH (80°-90°) | 165.1 | 2.7 | | | G2/225 |
| BL (0°-30°) | 292.6 | 4.9 | B1/500 | | |
| BM (30°-60°) | 329.2 | 5.5 | B1/1000 | | |
| BH (60°-80°) | 260.9 | 4.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 15.0 | 0.2 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2
 Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 |
| 2.5° | 1707.6 | 1705.3 | 1706.2 | 1704.5 | 1700.5 | 1696.6 | 1690.7 | 1691.7 | 1683.6 | 1671.5 | 1656.4 |
| 5° | 1675.4 | 1674.6 | 1680.9 | 1684.4 | 1687.4 | 1685.1 | 1683.4 | 1685.5 | 1673.5 | 1656.8 | 1630.7 |
| 7.5° | 1607.9 | 1598.7 | 1606.6 | 1618.5 | 1629.8 | 1638.4 | 1649.7 | 1651.2 | 1643.6 | 1626.1 | 1591.8 |
| 10° | 1511.9 | 1503.1 | 1514.8 | 1533.4 | 1556.0 | 1576.5 | 1599.3 | 1603.5 | 1604.9 | 1589.1 | 1547.4 |
| 12.5° | 1412.3 | 1405.6 | 1417.4 | 1443.5 | 1480.9 | 1512.5 | 1548.9 | 1555.2 | 1568.1 | 1557.5 | 1506.4 |
| 15° | 1323.2 | 1320.7 | 1334.9 | 1360.7 | 1403.8 | 1452.1 | 1504.6 | 1516.1 | 1538.0 | 1534.5 | 1474.4 |
| 17.5° | 1246.3 | 1245.6 | 1256.5 | 1283.5 | 1331.2 | 1392.3 | 1460.4 | 1479.9 | 1512.5 | 1516.7 | 1448.1 |
| 20° | 1189.0 | 1187.7 | 1195.2 | 1215.1 | 1264.3 | 1333.5 | 1412.7 | 1439.5 | 1486.6 | 1501.2 | 1420.9 |
| 22.5° | 1158.2 | 1158.0 | 1158.2 | 1167.6 | 1207.8 | 1272.2 | 1366.3 | 1398.9 | 1461.3 | 1488.9 | 1390.8 |
| 25° | 1153.0 | 1152.4 | 1147.8 | 1146.7 | 1169.5 | 1221.0 | 1320.3 | 1356.3 | 1437.2 | 1480.3 | 1362.1 |
| 27.5° | 1166.6 | 1167.4 | 1161.4 | 1151.5 | 1156.1 | 1187.3 | 1280.4 | 1318.8 | 1418.0 | 1478.6 | 1342.3 |
| 30° | 1194.8 | 1194.4 | 1189.2 | 1178.9 | 1169.9 | 1174.7 | 1251.9 | 1290.4 | 1405.0 | 1485.9 | 1328.7 |
| 32.5° | 1226.0 | 1228.3 | 1227.2 | 1221.6 | 1208.2 | 1189.0 | 1243.3 | 1281.0 | 1401.2 | 1503.5 | 1322.8 |
| 35° | 1263.4 | 1265.9 | 1273.5 | 1277.9 | 1262.2 | 1231.2 | 1261.7 | 1294.4 | 1412.1 | 1536.6 | 1332.2 |
| 37.5° | 1299.0 | 1305.5 | 1326.6 | 1345.2 | 1331.8 | 1297.3 | 1310.7 | 1333.9 | 1445.8 | 1588.6 | 1357.5 |
| 40° | 1340.0 | 1345.6 | 1380.1 | 1419.7 | 1417.6 | 1381.8 | 1389.5 | 1405.0 | 1505.2 | 1663.3 | 1403.3 |
| 42.5° | 1380.3 | 1391.6 | 1441.6 | 1497.7 | 1513.8 | 1482.2 | 1494.5 | 1502.7 | 1588.8 | 1762.2 | 1483.2 |
| 45° | 1434.1 | 1446.2 | 1515.6 | 1583.2 | 1620.8 | 1603.1 | 1622.7 | 1625.9 | 1694.0 | 1896.9 | 1599.3 |
| 47.5° | 1515.4 | 1529.2 | 1610.2 | 1681.1 | 1738.6 | 1740.5 | 1772.9 | 1771.6 | 1825.4 | 2051.0 | 1745.5 |
| 50° | 1642.2 | 1662.0 | 1728.3 | 1794.6 | 1864.5 | 1903.4 | 1946.7 | 1940.6 | 1982.9 | 2215.2 | 1913.9 |
| 52.5° | 1808.2 | 1817.4 | 1866.6 | 1915.5 | 2002.3 | 2089.5 | 2151.6 | 2146.2 | 2161.5 | 2384.0 | 2105.0 |
| 55° | 1980.4 | 1987.3 | 2007.5 | 2034.3 | 2151.0 | 2293.2 | 2424.6 | 2416.0 | 2377.3 | 2559.3 | 2293.9 |
| 57.5° | 2135.1 | 2149.1 | 2163.1 | 2174.2 | 2300.8 | 2506.1 | 2703.8 | 2704.4 | 2611.5 | 2748.3 | 2489.0 |
| 60° | 2159.2 | 2171.5 | 2264.2 | 2351.6 | 2557.0 | 2790.2 | 3002.6 | 2996.4 | 2853.9 | 2953.5 | 2706.5 |
| 62.5° | 1908.6 | 1936.4 | 2091.2 | 2323.8 | 2803.7 | 3309.7 | 3383.9 | 3376.2 | 3143.8 | 3206.3 | 2959.8 |
| 65° | 1367.8 | 1399.4 | 1586.1 | 1935.6 | 2684.1 | 3882.1 | 4072.0 | 3967.8 | 3539.1 | 3517.3 | 3256.3 |
| 67.5° | 789.1 | 796.6 | 877.6 | 1158.2 | 2043.7 | 3912.0 | 5121.7 | 4975.9 | 4152.9 | 3870.2 | 3401.5 |
| 70° | 583.5 | 583.3 | 602.5 | 712.8 | 1105.9 | 3192.8 | 5620.9 | 5751.6 | 4799.2 | 3986.2 | 3196.3 |
| 71° | 527.7 | 528.3 | 549.8 | 648.8 | 875.9 | 2672.4 | 5514.8 | 5801.0 | 4969.4 | 3928.9 | 3047.8 |
| 72.5° | 451.3 | 453.4 | 483.3 | 581.8 | 736.8 | 1843.0 | 5058.1 | 5504.8 | 5050.1 | 3787.5 | 2815.5 |
| 75° | 342.4 | 347.2 | 388.6 | 490.4 | 673.4 | 934.7 | 3712.3 | 4395.7 | 4486.3 | 3342.1 | 2092.0 |
| 77.5° | 244.3 | 249.7 | 296.6 | 412.4 | 640.2 | 704.4 | 2486.1 | 3206.3 | 3301.5 | 2141.8 | 943.6 |
| 80° | 154.3 | 160.8 | 196.2 | 328.1 | 601.5 | 668.8 | 1562.3 | 2155.2 | 1800.3 | 685.4 | 240.1 |
| 82.5° | 90.6 | 95.6 | 121.7 | 214.4 | 491.3 | 644.2 | 919.2 | 1194.6 | 700.6 | 207.0 | 109.2 |
| 85° | 52.5 | 54.8 | 75.9 | 136.6 | 356.8 | 608.0 | 675.3 | 667.8 | 304.1 | 101.2 | 51.7 |
| 87.5° | 24.5 | 27.2 | 45.0 | 71.3 | 198.1 | 440.7 | 533.7 | 461.2 | 189.1 | 47.5 | 24.3 |
| 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: P386051
 CATALOG NUMBER: GPC-SA1C-830-U-SL3

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 | 1663.5 |
| 2.5° | 1649.1 | 1645.5 | 1630.7 | 1617.5 | 1603.7 | 1585.7 | 1565.8 | 1563.3 | 1551.2 | 1553.5 | 1549.3 |
| 5° | 1616.5 | 1607.5 | 1571.7 | 1539.3 | 1501.0 | 1466.7 | 1429.5 | 1412.3 | 1387.7 | 1386.0 | 1379.7 |
| 7.5° | 1569.8 | 1553.1 | 1497.7 | 1436.2 | 1374.7 | 1316.1 | 1258.2 | 1220.1 | 1181.2 | 1164.7 | 1163.2 |
| 10° | 1517.3 | 1488.9 | 1407.3 | 1316.3 | 1227.7 | 1142.1 | 1059.3 | 998.0 | 942.8 | 916.7 | 915.6 |
| 12.5° | 1467.5 | 1425.5 | 1313.6 | 1189.8 | 1068.5 | 957.7 | 844.1 | 763.6 | 694.3 | 671.1 | 661.3 |
| 15° | 1425.3 | 1366.1 | 1222.4 | 1064.1 | 916.9 | 762.9 | 633.7 | 549.0 | 485.0 | 462.8 | 458.6 |
| 17.5° | 1384.3 | 1308.2 | 1128.9 | 937.2 | 759.2 | 590.0 | 460.5 | 397.6 | 363.5 | 354.5 | 354.3 |
| 20° | 1343.5 | 1248.6 | 1031.3 | 807.3 | 606.7 | 441.3 | 354.1 | 325.8 | 314.3 | 313.3 | 311.6 |
| 22.5° | 1297.3 | 1185.4 | 928.6 | 677.0 | 473.5 | 347.0 | 301.0 | 289.7 | 288.2 | 292.0 | 292.0 |
| 25° | 1254.0 | 1122.7 | 824.4 | 549.4 | 368.3 | 289.5 | 268.7 | 266.4 | 270.4 | 277.1 | 277.7 |
| 27.5° | 1213.6 | 1062.2 | 722.8 | 436.1 | 295.1 | 254.9 | 246.4 | 249.1 | 256.2 | 263.9 | 264.1 |
| 30° | 1180.4 | 1005.1 | 624.1 | 343.6 | 249.3 | 229.2 | 227.8 | 233.2 | 240.9 | 247.0 | 248.5 |
| 32.5° | 1154.7 | 956.4 | 528.7 | 276.3 | 219.4 | 210.0 | 211.2 | 215.8 | 220.6 | 224.0 | 226.3 |
| 35° | 1142.7 | 914.6 | 440.7 | 233.0 | 200.4 | 195.1 | 196.8 | 199.3 | 201.4 | 203.9 | 205.8 |
| 37.5° | 1144.8 | 882.2 | 362.0 | 206.0 | 187.6 | 184.9 | 184.9 | 184.9 | 184.9 | 186.1 | 186.3 |
| 40° | 1164.3 | 863.5 | 298.0 | 188.9 | 179.0 | 176.1 | 173.8 | 171.7 | 170.0 | 170.9 | 170.5 |
| 42.5° | 1214.1 | 861.9 | 251.2 | 178.0 | 172.1 | 167.3 | 162.7 | 159.8 | 157.7 | 158.5 | 158.9 |
| 45° | 1298.6 | 882.8 | 219.6 | 170.2 | 165.6 | 158.3 | 152.5 | 149.3 | 147.9 | 150.6 | 151.0 |
| 47.5° | 1407.9 | 928.4 | 200.4 | 164.6 | 159.6 | 150.0 | 143.7 | 140.8 | 141.2 | 145.1 | 146.2 |
| 50° | 1548.9 | 1002.4 | 191.2 | 161.0 | 155.4 | 142.8 | 136.4 | 133.9 | 135.1 | 140.8 | 142.0 |
| 52.5° | 1703.7 | 1109.1 | 192.2 | 160.0 | 152.7 | 137.6 | 130.7 | 127.8 | 129.9 | 135.1 | 136.2 |
| 55° | 1882.3 | 1237.3 | 209.6 | 161.5 | 148.7 | 134.3 | 126.1 | 121.1 | 122.8 | 127.6 | 128.4 |
| 57.5° | 2080.7 | 1384.1 | 244.5 | 161.0 | 143.7 | 131.1 | 121.3 | 113.8 | 115.0 | 118.0 | 118.8 |
| 60° | 2287.4 | 1561.4 | 298.7 | 162.3 | 141.4 | 127.4 | 114.8 | 105.4 | 105.0 | 107.5 | 107.9 |
| 62.5° | 2535.4 | 1766.6 | 360.6 | 163.1 | 142.8 | 122.6 | 106.2 | 97.0 | 95.8 | 96.4 | 96.8 |
| 65° | 2791.0 | 1915.1 | 337.3 | 159.8 | 147.4 | 118.6 | 98.7 | 88.9 | 86.6 | 86.2 | 86.4 |
| 67.5° | 2798.9 | 1755.9 | 236.5 | 153.1 | 149.3 | 116.5 | 93.1 | 82.0 | 78.2 | 76.8 | 76.5 |
| 70° | 2510.1 | 1426.6 | 184.3 | 146.0 | 141.8 | 113.1 | 87.8 | 76.3 | 70.7 | 68.4 | 68.2 |
| 71° | 2369.2 | 1313.2 | 174.6 | 142.4 | 136.2 | 109.8 | 85.5 | 73.8 | 68.0 | 65.5 | 65.0 |
| 72.5° | 2148.1 | 1177.3 | 162.9 | 136.8 | 125.3 | 101.2 | 81.1 | 70.3 | 64.2 | 61.3 | 60.7 |
| 75° | 1541.6 | 769.8 | 139.9 | 121.9 | 103.7 | 80.7 | 71.1 | 63.2 | 57.9 | 54.4 | 54.0 |
| 77.5° | 594.0 | 306.4 | 105.8 | 101.4 | 79.5 | 63.2 | 58.6 | 54.6 | 50.8 | 47.3 | 47.1 |
| 80° | 183.6 | 137.0 | 77.2 | 76.3 | 57.5 | 47.1 | 45.6 | 44.5 | 43.1 | 39.3 | 38.5 |
| 82.5° | 98.1 | 78.6 | 53.1 | 49.4 | 37.6 | 31.4 | 33.0 | 33.5 | 33.7 | 29.7 | 29.3 |
| 85° | 46.8 | 41.6 | 29.9 | 28.0 | 22.0 | 17.6 | 20.3 | 22.0 | 22.2 | 18.2 | 16.9 |
| 87.5° | 22.4 | 21.8 | 14.0 | 10.7 | 8.2 | 5.9 | 7.1 | 8.8 | 9.6 | 6.9 | 6.1 |
| 90° | 0.0 | 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: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2408-195-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/07/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **GALN-SB1A-830-U-5WQ**
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K): 3050
 CIE u': 0.2476
 CIE v': 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 Rf: 81.5
 Rg: 99.2

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 81.0 | | |
| R1: | 79.6 | R9: | 7.1 |
| R2: | 85.6 | R10: | 67.0 |
| R3: | 92.0 | R11: | 82.7 |
| R4: | 82.6 | R12: | 63.2 |
| R5: | 78.9 | R13: | 80.3 |
| R6: | 81.7 | R14: | 95.0 |
| R7: | 85.2 | R15: | 71.7 |
| R8: | 62.0 | | |



Test Conditions

Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

| 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 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

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CIE 1931 Chromaticity Diagram



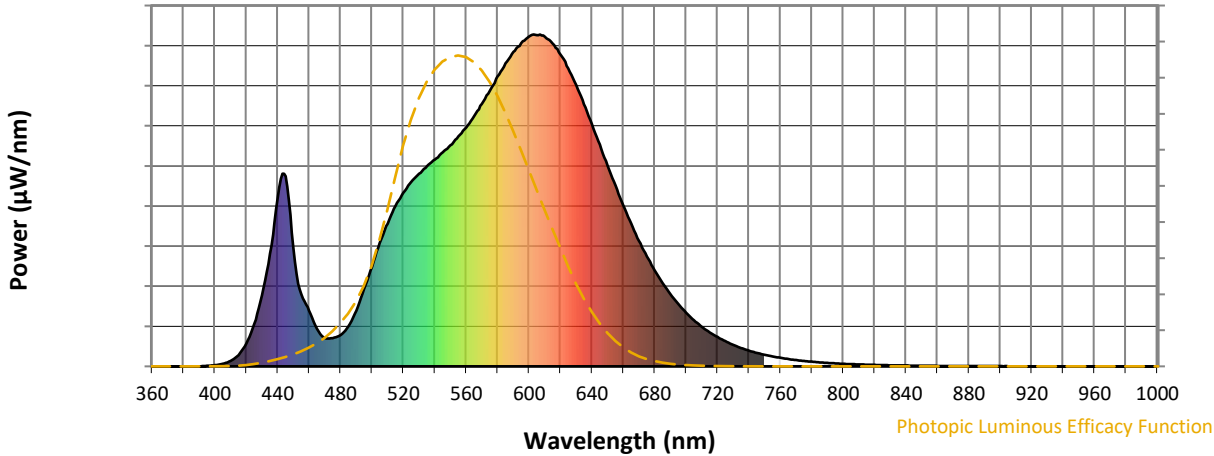
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 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 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

| 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 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

| 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 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 92 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 94 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 91 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 78 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)