

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: P385855

Luminaire Tested: **GPC-SA1C-722-U-SL3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P385855
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-722-U-SL3
Description: GALLEON PEDESTRIAN LUMINAIRE
(1) 70 CRI, 2200K, 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: 5554 lumens
Efficiency: N/A
Efficacy: 95.8 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

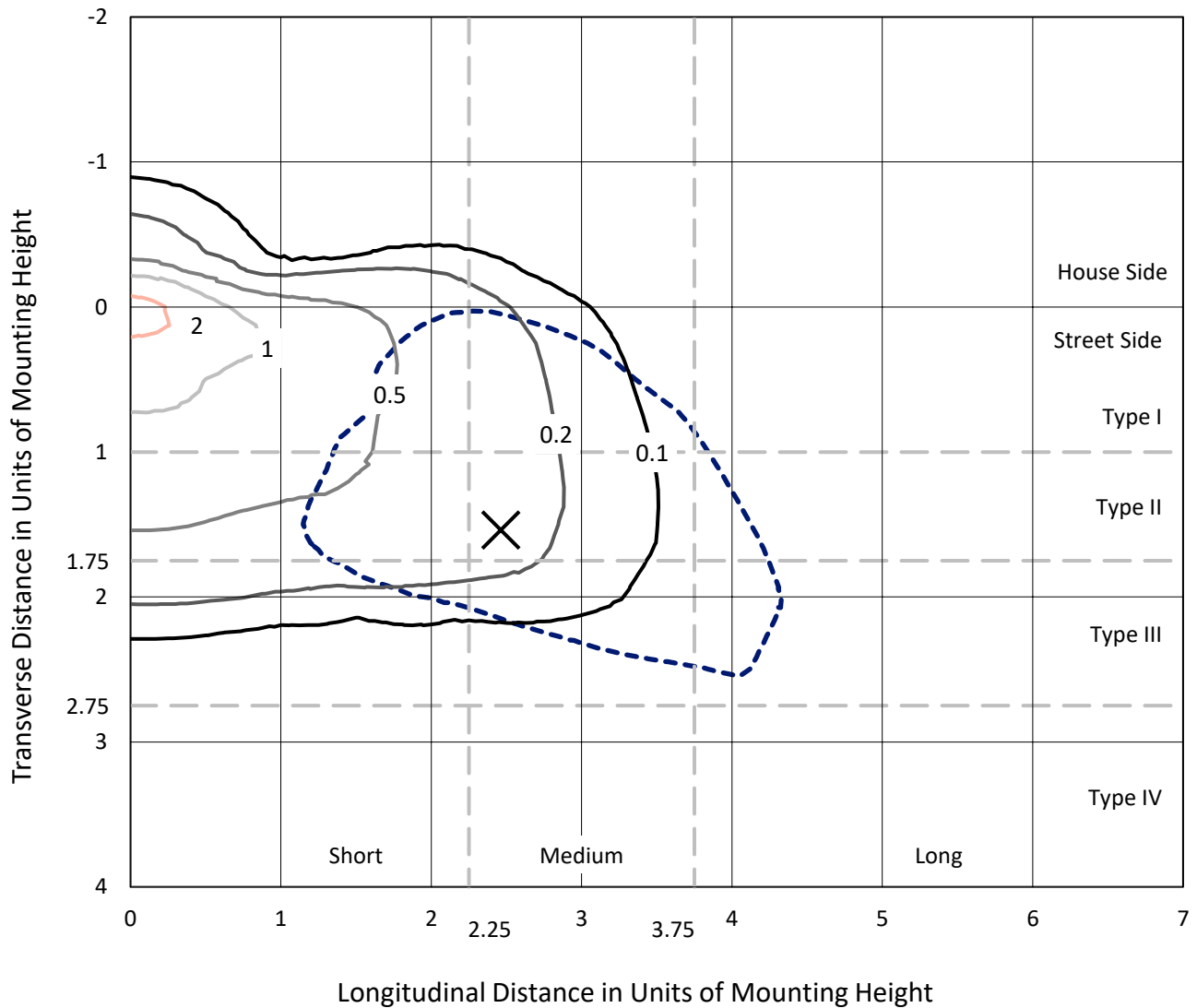
Input Watts (W): 58
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P385855
 CATALOG NUMBER: GPC-SA1C-722-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

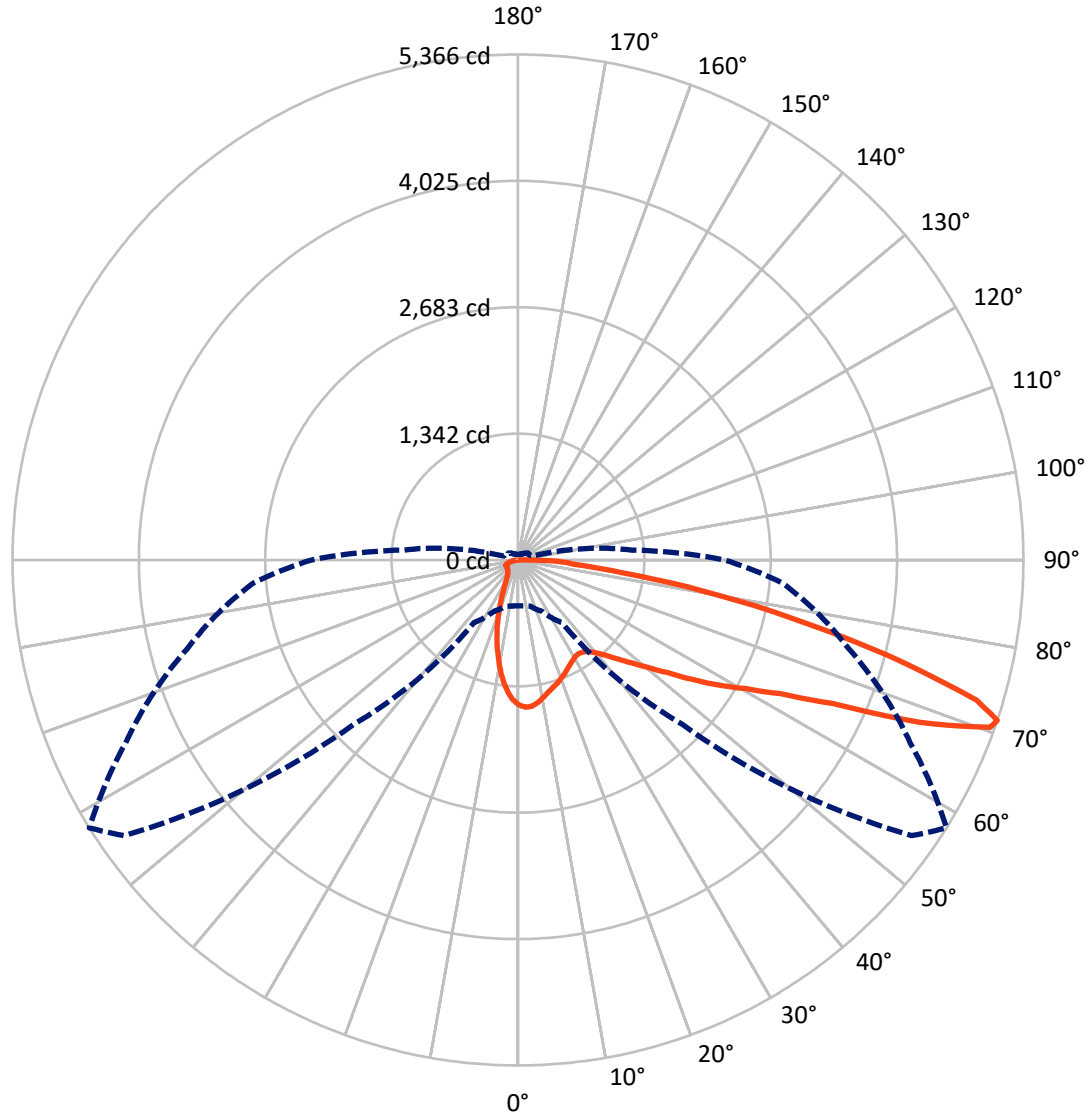
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type III - Medium - N/A

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CATALOG NUMBER: GPC-SA1C-722-U-SL3

Luminous Intensity Polar Plot



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

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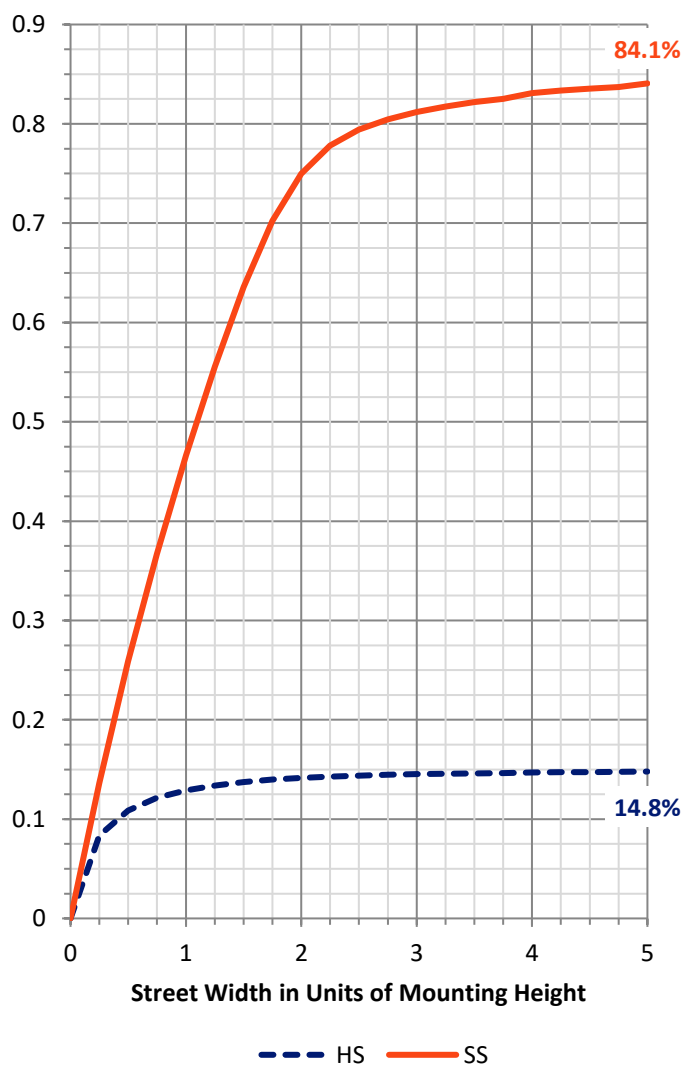
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 830.4 | 0.0 | 830.4 |
| | % Fixture | 15.0 | 0.0 | 15.0 |
| Street Side | Lumens | 4723.6 | 0.0 | 4723.6 |
| | % Fixture | 85.0 | 0.0 | 85.0 |
| Total | Lumens | 5554.0 | 0.0 | 5554.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 132.8 | 2.4 |
| 10°-20° | 295.2 | 5.3 |
| 20°-30° | 375.2 | 6.8 |
| 30°-40° | 477.9 | 8.6 |
| 40°-50° | 677.7 | 12.2 |
| 50°-60° | 1048.7 | 18.9 |
| 60°-70° | 1427.7 | 25.7 |
| 70°-80° | 952.4 | 17.1 |
| 80°-90° | 166.5 | 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° | 5554.0 | 100.0 |
| 0°-180° | 5554.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P385855

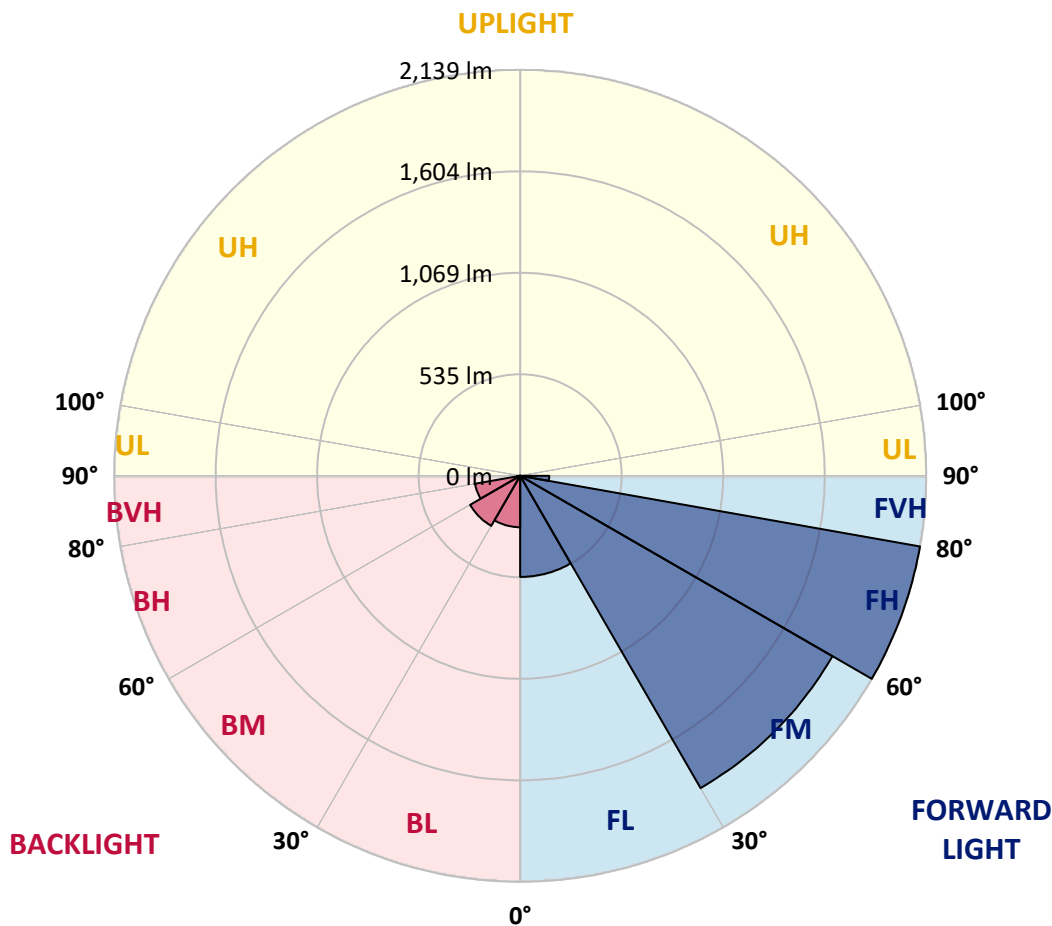
CATALOG NUMBER: GPC-SA1C-722-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 532.4 | 9.6 | | | |
| FM (30°-60°) | 1899.7 | 34.2 | | | |
| FH (60°-80°) | 2138.8 | 38.5 | | | G2/5000 |
| FVH (80°-90°) | 152.7 | 2.7 | | | G2/225 |
| BL (0°-30°) | 270.7 | 4.9 | B1/500 | | |
| BM (30°-60°) | 304.5 | 5.5 | B1/1000 | | |
| BH (60°-80°) | 241.3 | 4.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 13.8 | 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





REPORT NUMBER: P385855

CATALOG NUMBER: GPC-SA1C-722-U-SL3

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 |
| 2.5° | 1579.7 | 1577.5 | 1578.3 | 1576.7 | 1573.1 | 1569.4 | 1564.0 | 1564.9 | 1557.4 | 1546.2 | 1532.3 |
| 5° | 1549.9 | 1549.1 | 1554.9 | 1558.2 | 1560.9 | 1558.8 | 1557.2 | 1559.1 | 1548.1 | 1532.6 | 1508.5 |
| 7.5° | 1487.4 | 1478.9 | 1486.2 | 1497.2 | 1507.7 | 1515.6 | 1526.1 | 1527.4 | 1520.5 | 1504.2 | 1472.5 |
| 10° | 1398.6 | 1390.4 | 1401.3 | 1418.5 | 1439.4 | 1458.3 | 1479.4 | 1483.3 | 1484.7 | 1470.0 | 1431.5 |
| 12.5° | 1306.5 | 1300.3 | 1311.1 | 1335.3 | 1369.9 | 1399.1 | 1432.8 | 1438.6 | 1450.6 | 1440.7 | 1393.5 |
| 15° | 1224.1 | 1221.7 | 1234.9 | 1258.7 | 1298.5 | 1343.2 | 1391.8 | 1402.4 | 1422.7 | 1419.5 | 1363.9 |
| 17.5° | 1152.9 | 1152.3 | 1162.3 | 1187.3 | 1231.4 | 1287.9 | 1351.0 | 1369.0 | 1399.1 | 1403.0 | 1339.6 |
| 20° | 1099.9 | 1098.7 | 1105.7 | 1124.0 | 1169.5 | 1233.5 | 1306.9 | 1331.6 | 1375.2 | 1388.7 | 1314.4 |
| 22.5° | 1071.4 | 1071.2 | 1071.4 | 1080.1 | 1117.3 | 1176.9 | 1263.9 | 1294.1 | 1351.7 | 1377.3 | 1286.5 |
| 25° | 1066.6 | 1066.0 | 1061.7 | 1060.8 | 1081.9 | 1129.5 | 1221.4 | 1254.6 | 1329.5 | 1369.4 | 1260.0 |
| 27.5° | 1079.2 | 1079.9 | 1074.3 | 1065.2 | 1069.5 | 1098.3 | 1184.4 | 1220.0 | 1311.7 | 1367.8 | 1241.7 |
| 30° | 1105.3 | 1104.9 | 1100.0 | 1090.6 | 1082.2 | 1086.7 | 1158.1 | 1193.7 | 1299.7 | 1374.6 | 1229.1 |
| 32.5° | 1134.1 | 1136.2 | 1135.3 | 1130.0 | 1117.7 | 1099.9 | 1150.2 | 1185.0 | 1296.2 | 1390.8 | 1223.7 |
| 35° | 1168.7 | 1171.1 | 1178.0 | 1182.1 | 1167.6 | 1138.9 | 1167.2 | 1197.4 | 1306.3 | 1421.4 | 1232.4 |
| 37.5° | 1201.6 | 1207.6 | 1227.2 | 1244.4 | 1232.0 | 1200.1 | 1212.5 | 1233.9 | 1337.4 | 1469.6 | 1255.8 |
| 40° | 1239.5 | 1244.8 | 1276.7 | 1313.2 | 1311.3 | 1278.2 | 1285.4 | 1299.7 | 1392.4 | 1538.6 | 1298.2 |
| 42.5° | 1276.9 | 1287.3 | 1333.6 | 1385.4 | 1400.3 | 1371.1 | 1382.5 | 1390.1 | 1469.8 | 1630.1 | 1372.1 |
| 45° | 1326.6 | 1337.8 | 1402.0 | 1464.5 | 1499.4 | 1482.9 | 1501.1 | 1504.0 | 1567.1 | 1754.7 | 1479.4 |
| 47.5° | 1401.9 | 1414.6 | 1489.5 | 1555.1 | 1608.3 | 1610.0 | 1640.0 | 1638.9 | 1688.6 | 1897.3 | 1614.7 |
| 50° | 1519.1 | 1537.5 | 1598.8 | 1660.1 | 1724.8 | 1760.7 | 1800.8 | 1795.2 | 1834.3 | 2049.2 | 1770.4 |
| 52.5° | 1672.7 | 1681.2 | 1726.7 | 1772.0 | 1852.2 | 1932.9 | 1990.4 | 1985.3 | 1999.5 | 2205.3 | 1947.2 |
| 55° | 1831.9 | 1838.3 | 1857.1 | 1881.8 | 1989.8 | 2121.4 | 2242.9 | 2234.9 | 2199.1 | 2367.4 | 2121.9 |
| 57.5° | 1975.1 | 1988.1 | 2001.0 | 2011.3 | 2128.3 | 2318.3 | 2501.1 | 2501.7 | 2415.8 | 2542.3 | 2302.4 |
| 60° | 1997.3 | 2008.8 | 2094.5 | 2175.3 | 2365.3 | 2581.0 | 2777.6 | 2771.8 | 2640.0 | 2732.1 | 2503.6 |
| 62.5° | 1765.6 | 1791.3 | 1934.5 | 2149.6 | 2593.6 | 3061.6 | 3130.3 | 3123.1 | 2908.2 | 2966.0 | 2737.9 |
| 65° | 1265.3 | 1294.5 | 1467.2 | 1790.5 | 2482.9 | 3591.1 | 3766.8 | 3670.4 | 3273.8 | 3253.7 | 3012.3 |
| 67.5° | 729.9 | 736.9 | 811.8 | 1071.4 | 1890.6 | 3618.8 | 4737.8 | 4602.9 | 3841.7 | 3580.1 | 3146.5 |
| 70° | 539.8 | 539.6 | 557.4 | 659.3 | 1023.0 | 2953.5 | 5199.6 | 5320.5 | 4439.5 | 3687.5 | 2956.7 |
| 71° | 488.1 | 488.7 | 508.6 | 600.1 | 810.2 | 2472.1 | 5101.5 | 5366.2 | 4596.9 | 3634.5 | 2819.4 |
| 72.5° | 417.5 | 419.4 | 447.1 | 538.2 | 681.6 | 1704.8 | 4679.0 | 5092.2 | 4671.6 | 3503.7 | 2604.4 |
| 75° | 316.7 | 321.2 | 359.5 | 453.7 | 623.0 | 864.6 | 3434.0 | 4066.3 | 4150.0 | 3091.6 | 1935.2 |
| 77.5° | 226.0 | 231.0 | 274.3 | 381.5 | 592.2 | 651.6 | 2299.7 | 2966.0 | 3054.1 | 1981.3 | 872.9 |
| 80° | 142.8 | 148.8 | 181.5 | 303.5 | 556.4 | 618.7 | 1445.2 | 1993.7 | 1665.4 | 634.0 | 222.1 |
| 82.5° | 83.8 | 88.4 | 112.6 | 198.3 | 454.5 | 595.9 | 850.3 | 1105.1 | 648.1 | 191.5 | 101.0 |
| 85° | 48.6 | 50.7 | 70.2 | 126.3 | 330.1 | 562.4 | 624.7 | 617.7 | 281.3 | 93.6 | 47.8 |
| 87.5° | 22.6 | 25.2 | 41.6 | 66.0 | 183.2 | 407.6 | 493.7 | 426.6 | 174.9 | 43.9 | 22.4 |
| 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: P385855
 CATALOG NUMBER: GPC-SA1C-722-U-SL3

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 | 1538.8 |
| 2.5° | 1525.5 | 1522.2 | 1508.5 | 1496.3 | 1483.5 | 1466.9 | 1448.5 | 1446.2 | 1434.9 | 1437.1 | 1433.2 |
| 5° | 1495.3 | 1487.0 | 1453.9 | 1423.9 | 1388.5 | 1356.8 | 1322.3 | 1306.5 | 1283.6 | 1282.1 | 1276.3 |
| 7.5° | 1452.2 | 1436.7 | 1385.4 | 1328.5 | 1271.7 | 1217.5 | 1163.9 | 1128.7 | 1092.7 | 1077.4 | 1076.1 |
| 10° | 1403.6 | 1377.3 | 1301.8 | 1217.7 | 1135.6 | 1056.5 | 979.9 | 923.2 | 872.1 | 848.0 | 847.0 |
| 12.5° | 1357.6 | 1318.7 | 1215.2 | 1100.6 | 988.4 | 885.9 | 780.8 | 706.3 | 642.3 | 620.8 | 611.7 |
| 15° | 1318.5 | 1263.7 | 1130.8 | 984.4 | 848.2 | 705.8 | 586.2 | 507.8 | 448.6 | 428.1 | 424.3 |
| 17.5° | 1280.6 | 1210.1 | 1044.3 | 866.9 | 702.3 | 545.8 | 426.0 | 367.8 | 336.2 | 327.9 | 327.7 |
| 20° | 1242.8 | 1155.0 | 954.0 | 746.8 | 561.2 | 408.2 | 327.5 | 301.4 | 290.8 | 289.8 | 288.3 |
| 22.5° | 1200.1 | 1096.6 | 859.0 | 626.2 | 438.0 | 321.0 | 278.4 | 268.0 | 266.6 | 270.1 | 270.1 |
| 25° | 1160.0 | 1038.5 | 762.6 | 508.2 | 340.7 | 267.8 | 248.6 | 246.5 | 250.2 | 256.3 | 256.9 |
| 27.5° | 1122.7 | 982.6 | 668.6 | 403.4 | 273.0 | 235.8 | 227.9 | 230.4 | 237.0 | 244.2 | 244.3 |
| 30° | 1091.9 | 929.8 | 577.3 | 317.9 | 230.6 | 212.0 | 210.7 | 215.7 | 222.9 | 228.5 | 229.8 |
| 32.5° | 1068.1 | 884.7 | 489.1 | 255.6 | 202.9 | 194.2 | 195.4 | 199.7 | 204.1 | 207.2 | 209.3 |
| 35° | 1057.1 | 846.0 | 407.6 | 215.5 | 185.3 | 180.5 | 182.1 | 184.4 | 186.3 | 188.6 | 190.4 |
| 37.5° | 1059.0 | 816.0 | 334.9 | 190.6 | 173.5 | 171.0 | 171.0 | 171.0 | 171.0 | 172.2 | 172.4 |
| 40° | 1077.0 | 798.8 | 275.7 | 174.7 | 165.6 | 162.9 | 160.8 | 158.8 | 157.3 | 158.1 | 157.7 |
| 42.5° | 1123.1 | 797.3 | 232.4 | 164.6 | 159.2 | 154.8 | 150.5 | 147.8 | 145.9 | 146.6 | 147.0 |
| 45° | 1201.2 | 816.6 | 203.1 | 157.5 | 153.2 | 146.5 | 141.0 | 138.1 | 136.8 | 139.3 | 139.7 |
| 47.5° | 1302.4 | 858.8 | 185.3 | 152.3 | 147.6 | 138.7 | 132.9 | 130.2 | 130.6 | 134.3 | 135.2 |
| 50° | 1432.8 | 927.3 | 176.8 | 149.0 | 143.7 | 132.1 | 126.1 | 123.8 | 125.0 | 130.2 | 131.4 |
| 52.5° | 1576.0 | 1026.0 | 177.8 | 148.0 | 141.2 | 127.3 | 120.9 | 118.2 | 120.1 | 125.0 | 125.9 |
| 55° | 1741.2 | 1144.5 | 193.9 | 149.4 | 137.6 | 124.2 | 116.7 | 112.0 | 113.6 | 118.0 | 118.8 |
| 57.5° | 1924.8 | 1280.4 | 226.2 | 149.0 | 132.9 | 121.3 | 112.2 | 105.2 | 106.4 | 109.1 | 109.9 |
| 60° | 2115.9 | 1444.4 | 276.3 | 150.1 | 130.8 | 117.8 | 106.2 | 97.5 | 97.1 | 99.4 | 99.8 |
| 62.5° | 2345.4 | 1634.2 | 333.5 | 150.9 | 132.1 | 113.4 | 98.3 | 89.8 | 88.6 | 89.2 | 89.6 |
| 65° | 2581.8 | 1771.6 | 312.1 | 147.8 | 136.4 | 109.7 | 91.3 | 82.2 | 80.1 | 79.7 | 79.9 |
| 67.5° | 2589.2 | 1624.3 | 218.8 | 141.6 | 138.1 | 107.8 | 86.1 | 75.8 | 72.4 | 71.0 | 70.8 |
| 70° | 2322.0 | 1319.6 | 170.4 | 135.0 | 131.2 | 104.7 | 81.3 | 70.6 | 65.4 | 63.3 | 63.1 |
| 71° | 2191.6 | 1214.8 | 161.5 | 131.8 | 125.9 | 101.6 | 79.1 | 68.3 | 62.9 | 60.6 | 60.2 |
| 72.5° | 1987.1 | 1089.0 | 150.7 | 126.5 | 115.9 | 93.6 | 75.1 | 65.0 | 59.4 | 56.7 | 56.1 |
| 75° | 1426.0 | 712.1 | 129.4 | 112.8 | 96.0 | 74.7 | 65.8 | 58.4 | 53.6 | 50.3 | 49.9 |
| 77.5° | 549.4 | 283.4 | 97.9 | 93.8 | 73.5 | 58.4 | 54.2 | 50.5 | 47.0 | 43.7 | 43.5 |
| 80° | 169.9 | 126.7 | 71.4 | 70.6 | 53.2 | 43.5 | 42.2 | 41.2 | 39.9 | 36.4 | 35.6 |
| 82.5° | 90.7 | 72.7 | 49.1 | 45.7 | 34.8 | 29.0 | 30.6 | 31.0 | 31.1 | 27.5 | 27.1 |
| 85° | 43.3 | 38.5 | 27.7 | 25.9 | 20.3 | 16.3 | 18.8 | 20.3 | 20.5 | 16.8 | 15.7 |
| 87.5° | 20.7 | 20.1 | 13.0 | 9.9 | 7.5 | 5.4 | 6.6 | 8.1 | 8.9 | 6.4 | 5.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Test Information

Test Method: LM-79-2008 Report
 Number: SP1-1908-441-10-R4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/28/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW-EDISON
 Catalog Number: **SA1C-722-U-5WQ**
 Description: MCGRAW EDISON ROADWAY AND AREA LUMINAIRE

THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

Spectral Parameters

CCT (K): 2237
 CIE u': 0.2876
 CIE v': 0.5346
 Duv: -0.0006
 CIE x: 0.5005
 CIE y: 0.4134
 CIE z: 0.0860
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 587
 Purity: 74.5
 Rf: 69.8
 Rg: 99.2

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 72.0 | | |
| R1: | 68.9 | R9: | -17.4 |
| R2: | 83.0 | R10: | 61.3 |
| R3: | 95.2 | R11: | 59.8 |
| R4: | 66.2 | R12: | 50.5 |
| R5: | 65.9 | R13: | 71.1 |
| R6: | 76.3 | R14: | 96.9 |
| R7: | 76.7 | | |
| R8: | 43.8 | | |



Test Conditions
 Stabilization Time: 71M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.7/41%
 Sphere Temperature (°C): 25.6

REPORT NUMBER: SP1-1908-441-10-R4

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

REPORT NUMBER: SP1-1908-441-10-R4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 2200K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-10-R4

Photopic Flux vs. Wavelength



#####

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 1768 | NR | 490 | 5206 | NR | 620 | 130919 | NR | 750 | 8553 | NR | 880 | 2713 | NR |
| 365 | 1569 | NR | 495 | 7286 | NR | 625 | 125335 | NR | 755 | 7696 | NR | 885 | 2316 | NR |
| 370 | 1594 | NR | 500 | 10654 | NR | 630 | 118388 | NR | 760 | 6978 | NR | 890 | 2539 | NR |
| 375 | 1744 | NR | 505 | 15189 | NR | 635 | 111855 | NR | 765 | 6377 | NR | 895 | 1933 | NR |
| 380 | 1659 | NR | 510 | 20541 | NR | 640 | 104062 | NR | 770 | 5600 | NR | 900 | 2216 | NR |
| 385 | 1504 | NR | 515 | 26492 | NR | 645 | 96365 | NR | 775 | 5000 | NR | 905 | 2067 | NR |
| 390 | 1541 | NR | 520 | 32294 | NR | 650 | 88651 | NR | 780 | 4709 | NR | 910 | 1959 | NR |
| 395 | 1355 | NR | 525 | 38123 | NR | 655 | 81152 | NR | 785 | 4305 | NR | 915 | 1874 | NR |
| 400 | 1243 | NR | 530 | 43232 | NR | 660 | 73523 | NR | 790 | 4040 | NR | 920 | 1484 | NR |
| 405 | 1417 | NR | 535 | 48012 | NR | 665 | 66123 | NR | 795 | 3642 | NR | 925 | 1914 | NR |
| 410 | 2147 | NR | 540 | 52623 | NR | 670 | 58677 | NR | 800 | 3594 | NR | 930 | 1948 | NR |
| 415 | 3837 | NR | 545 | 57516 | NR | 675 | 52349 | NR | 805 | 3190 | NR | 935 | 2079 | NR |
| 420 | 7159 | NR | 550 | 62613 | NR | 680 | 46159 | NR | 810 | 3241 | NR | 940 | 2263 | NR |
| 425 | 12599 | NR | 555 | 68554 | NR | 685 | 40525 | NR | 815 | 2732 | NR | 945 | 1688 | NR |
| 430 | 19019 | NR | 560 | 75325 | NR | 690 | 35615 | NR | 820 | 2612 | NR | 950 | 1560 | NR |
| 435 | 24875 | NR | 565 | 82533 | NR | 695 | 31158 | NR | 825 | 2966 | NR | 955 | 2826 | NR |
| 440 | 29103 | NR | 570 | 90909 | NR | 700 | 27409 | NR | 830 | 2574 | NR | 960 | 1477 | NR |
| 445 | 29901 | NR | 575 | 99621 | NR | 705 | 24204 | NR | 835 | 2633 | NR | 965 | 1568 | NR |
| 450 | 24862 | NR | 580 | 108484 | NR | 710 | 21558 | NR | 840 | 2526 | NR | 970 | 2030 | NR |
| 455 | 15942 | NR | 585 | 116679 | NR | 715 | 19222 | NR | 845 | 2631 | NR | 975 | 1986 | NR |
| 460 | 9916 | NR | 590 | 123752 | NR | 720 | 17310 | NR | 850 | 2079 | NR | 980 | 2540 | NR |
| 465 | 7051 | NR | 595 | 129324 | NR | 725 | 15280 | NR | 855 | 2309 | NR | 985 | 1139 | NR |
| 470 | 5227 | NR | 600 | 134082 | NR | 730 | 13282 | NR | 860 | 2528 | NR | 990 | 2018 | NR |
| 475 | 4257 | NR | 605 | 135698 | NR | 735 | 11753 | NR | 865 | 2121 | NR | 995 | 3445 | NR |
| 480 | 4052 | NR | 610 | 135144 | NR | 740 | 10654 | NR | 870 | 2751 | NR | 1000 | 3704 | NR |
| 485 | 4298 | NR | 615 | 134180 | NR | 745 | 9451 | NR | 875 | 2317 | NR | | | |

REPORT NUMBER: SP1-1908-441-10-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 4696.9

S/P: 0.85

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 1768 | NR | 490 | 5206 | NR | 620 | 130919 | NR | 750 | 8553 | NR | 880 | 2713 | NR |
| 365 | 1569 | NR | 495 | 7286 | NR | 625 | 125335 | NR | 755 | 7696 | NR | 885 | 2316 | NR |
| 370 | 1594 | NR | 500 | 10654 | NR | 630 | 118388 | NR | 760 | 6978 | NR | 890 | 2539 | NR |
| 375 | 1744 | NR | 505 | 15189 | NR | 635 | 111855 | NR | 765 | 6377 | NR | 895 | 1933 | NR |
| 380 | 1659 | NR | 510 | 20541 | NR | 640 | 104062 | NR | 770 | 5600 | NR | 900 | 2216 | NR |
| 385 | 1504 | NR | 515 | 26492 | NR | 645 | 96365 | NR | 775 | 5000 | NR | 905 | 2067 | NR |
| 390 | 1541 | NR | 520 | 32294 | NR | 650 | 88651 | NR | 780 | 4709 | NR | 910 | 1959 | NR |
| 395 | 1355 | NR | 525 | 38123 | NR | 655 | 81152 | NR | 785 | 4305 | NR | 915 | 1874 | NR |
| 400 | 1243 | NR | 530 | 43232 | NR | 660 | 73523 | NR | 790 | 4040 | NR | 920 | 1484 | NR |
| 405 | 1417 | NR | 535 | 48012 | NR | 665 | 66123 | NR | 795 | 3642 | NR | 925 | 1914 | NR |
| 410 | 2147 | NR | 540 | 52623 | NR | 670 | 58677 | NR | 800 | 3594 | NR | 930 | 1948 | NR |
| 415 | 3837 | NR | 545 | 57516 | NR | 675 | 52349 | NR | 805 | 3190 | NR | 935 | 2079 | NR |
| 420 | 7159 | NR | 550 | 62613 | NR | 680 | 46159 | NR | 810 | 3241 | NR | 940 | 2263 | NR |
| 425 | 12599 | NR | 555 | 68554 | NR | 685 | 40525 | NR | 815 | 2732 | NR | 945 | 1688 | NR |
| 430 | 19019 | NR | 560 | 75325 | NR | 690 | 35615 | NR | 820 | 2612 | NR | 950 | 1560 | NR |
| 435 | 24875 | NR | 565 | 82533 | NR | 695 | 31158 | NR | 825 | 2966 | NR | 955 | 2826 | NR |
| 440 | 29103 | NR | 570 | 90909 | NR | 700 | 27409 | NR | 830 | 2574 | NR | 960 | 1477 | NR |
| 445 | 29901 | NR | 575 | 99621 | NR | 705 | 24204 | NR | 835 | 2633 | NR | 965 | 1568 | NR |
| 450 | 24862 | NR | 580 | 108484 | NR | 710 | 21558 | NR | 840 | 2526 | NR | 970 | 2030 | NR |
| 455 | 15942 | NR | 585 | 116679 | NR | 715 | 19222 | NR | 845 | 2631 | NR | 975 | 1986 | NR |
| 460 | 9916 | NR | 590 | 123752 | NR | 720 | 17310 | NR | 850 | 2079 | NR | 980 | 2540 | NR |
| 465 | 7051 | NR | 595 | 129324 | NR | 725 | 15280 | NR | 855 | 2309 | NR | 985 | 1139 | NR |
| 470 | 5227 | NR | 600 | 134082 | NR | 730 | 13282 | NR | 860 | 2528 | NR | 990 | 2018 | NR |
| 475 | 4257 | NR | 605 | 135698 | NR | 735 | 11753 | NR | 865 | 2121 | NR | 995 | 3445 | NR |
| 480 | 4052 | NR | 610 | 135144 | NR | 740 | 10654 | NR | 870 | 2751 | NR | 1000 | 3704 | NR |
| 485 | 4298 | NR | 615 | 134180 | NR | 745 | 9451 | NR | 875 | 2317 | NR | | | |

REPORT NUMBER: SP1-1908-441-10-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 1470.8 M/P: 0.27

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 1768 | NR | 490 | 5206 | NR | 620 | 130919 | NR | 750 | 8553 | NR | 880 | 2713 | NR |
| 365 | 1569 | NR | 495 | 7286 | NR | 625 | 125335 | NR | 755 | 7696 | NR | 885 | 2316 | NR |
| 370 | 1594 | NR | 500 | 10654 | NR | 630 | 118388 | NR | 760 | 6978 | NR | 890 | 2539 | NR |
| 375 | 1744 | NR | 505 | 15189 | NR | 635 | 111855 | NR | 765 | 6377 | NR | 895 | 1933 | NR |
| 380 | 1659 | NR | 510 | 20541 | NR | 640 | 104062 | NR | 770 | 5600 | NR | 900 | 2216 | NR |
| 385 | 1504 | NR | 515 | 26492 | NR | 645 | 96365 | NR | 775 | 5000 | NR | 905 | 2067 | NR |
| 390 | 1541 | NR | 520 | 32294 | NR | 650 | 88651 | NR | 780 | 4709 | NR | 910 | 1959 | NR |
| 395 | 1355 | NR | 525 | 38123 | NR | 655 | 81152 | NR | 785 | 4305 | NR | 915 | 1874 | NR |
| 400 | 1243 | NR | 530 | 43232 | NR | 660 | 73523 | NR | 790 | 4040 | NR | 920 | 1484 | NR |
| 405 | 1417 | NR | 535 | 48012 | NR | 665 | 66123 | NR | 795 | 3642 | NR | 925 | 1914 | NR |
| 410 | 2147 | NR | 540 | 52623 | NR | 670 | 58677 | NR | 800 | 3594 | NR | 930 | 1948 | NR |
| 415 | 3837 | NR | 545 | 57516 | NR | 675 | 52349 | NR | 805 | 3190 | NR | 935 | 2079 | NR |
| 420 | 7159 | NR | 550 | 62613 | NR | 680 | 46159 | NR | 810 | 3241 | NR | 940 | 2263 | NR |
| 425 | 12599 | NR | 555 | 68554 | NR | 685 | 40525 | NR | 815 | 2732 | NR | 945 | 1688 | NR |
| 430 | 19019 | NR | 560 | 75325 | NR | 690 | 35615 | NR | 820 | 2612 | NR | 950 | 1560 | NR |
| 435 | 24875 | NR | 565 | 82533 | NR | 695 | 31158 | NR | 825 | 2966 | NR | 955 | 2826 | NR |
| 440 | 29103 | NR | 570 | 90909 | NR | 700 | 27409 | NR | 830 | 2574 | NR | 960 | 1477 | NR |
| 445 | 29901 | NR | 575 | 99621 | NR | 705 | 24204 | NR | 835 | 2633 | NR | 965 | 1568 | NR |
| 450 | 24862 | NR | 580 | 108484 | NR | 710 | 21558 | NR | 840 | 2526 | NR | 970 | 2030 | NR |
| 455 | 15942 | NR | 585 | 116679 | NR | 715 | 19222 | NR | 845 | 2631 | NR | 975 | 1986 | NR |
| 460 | 9916 | NR | 590 | 123752 | NR | 720 | 17310 | NR | 850 | 2079 | NR | 980 | 2540 | NR |
| 465 | 7051 | NR | 595 | 129324 | NR | 725 | 15280 | NR | 855 | 2309 | NR | 985 | 1139 | NR |
| 470 | 5227 | NR | 600 | 134082 | NR | 730 | 13282 | NR | 860 | 2528 | NR | 990 | 2018 | NR |
| 475 | 4257 | NR | 605 | 135698 | NR | 735 | 11753 | NR | 865 | 2121 | NR | 995 | 3445 | NR |
| 480 | 4052 | NR | 610 | 135144 | NR | 740 | 10654 | NR | 870 | 2751 | NR | 1000 | 3704 | NR |
| 485 | 4298 | NR | 615 | 134180 | NR | 745 | 9451 | NR | 875 | 2317 | NR | | | |

REPORT NUMBER: SP1-1908-441-10-R4

TM-30-18

Summary

$R_f = 69.8$
 $R_g = 99.2$
 $CIE R_a = 72.0$
 $R_g = -17.4$



Color Vector Graphics



REPORT NUMBER: SP1-1908-441-10-R4

TM-30-18

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

| | | | |
|------------|------------|------------|------------|
| CES01 = 87 | CES26 = 56 | CES51 = 74 | CES76 = 56 |
| CES02 = 65 | CES27 = 76 | CES52 = 76 | CES77 = 81 |
| CES03 = 32 | CES28 = 83 | CES53 = 65 | CES78 = 63 |
| CES04 = 72 | CES29 = 46 | CES54 = 78 | CES79 = 84 |
| CES05 = 52 | CES30 = 48 | CES55 = 75 | CES80 = 84 |
| CES06 = 52 | CES31 = 51 | CES56 = 65 | CES81 = 63 |
| CES07 = 44 | CES32 = 51 | CES57 = 62 | CES82 = 92 |
| CES08 = 42 | CES33 = 53 | CES58 = 66 | CES83 = 83 |
| CES09 = 29 | CES34 = 70 | CES59 = 84 | CES84 = 92 |
| CES10 = 78 | CES35 = 85 | CES60 = 90 | CES85 = 81 |
| CES11 = 61 | CES36 = 78 | CES61 = 84 | CES86 = 56 |
| CES12 = 68 | CES37 = 80 | CES62 = 70 | CES87 = 78 |
| CES13 = 45 | CES38 = 53 | CES63 = 68 | CES88 = 72 |
| CES14 = 75 | CES39 = 90 | CES64 = 69 | CES89 = 62 |
| CES15 = 72 | CES40 = 84 | CES65 = 67 | CES90 = 67 |
| CES16 = 49 | CES41 = 75 | CES66 = 64 | CES91 = 90 |
| CES17 = 51 | CES42 = 79 | CES67 = 63 | CES92 = 67 |
| CES18 = 57 | CES43 = 64 | CES68 = 69 | CES93 = 79 |
| CES19 = 74 | CES44 = 98 | CES69 = 80 | CES94 = 52 |
| CES20 = 68 | CES45 = 73 | CES70 = 63 | CES95 = 76 |
| CES21 = 89 | CES46 = 67 | CES71 = 63 | CES96 = 78 |
| CES22 = 81 | CES47 = 60 | CES72 = 87 | CES97 = 77 |
| CES23 = 92 | CES48 = 48 | CES73 = 56 | CES98 = 71 |
| CES24 = 92 | CES49 = 64 | CES74 = 87 | CES99 = 65 |
| CES25 = 74 | CES50 = 74 | CES75 = 66 | |



REPORT NUMBER: SP1-1908-441-10-R4

TM-30-18

Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-1908-441-10-R4

TM-30-18

Measure Comparisons



(END OF REPORT)