

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: P386907

Luminaire Tested: **GPC-SA2C-760-U-T4FT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P386907
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GPC-SA2C-760-U-T4FT
Description: GALLEON PEDESTRIAN LUMINAIRE
(2) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14850 lumens
Efficiency: N/A
Efficacy: 131.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

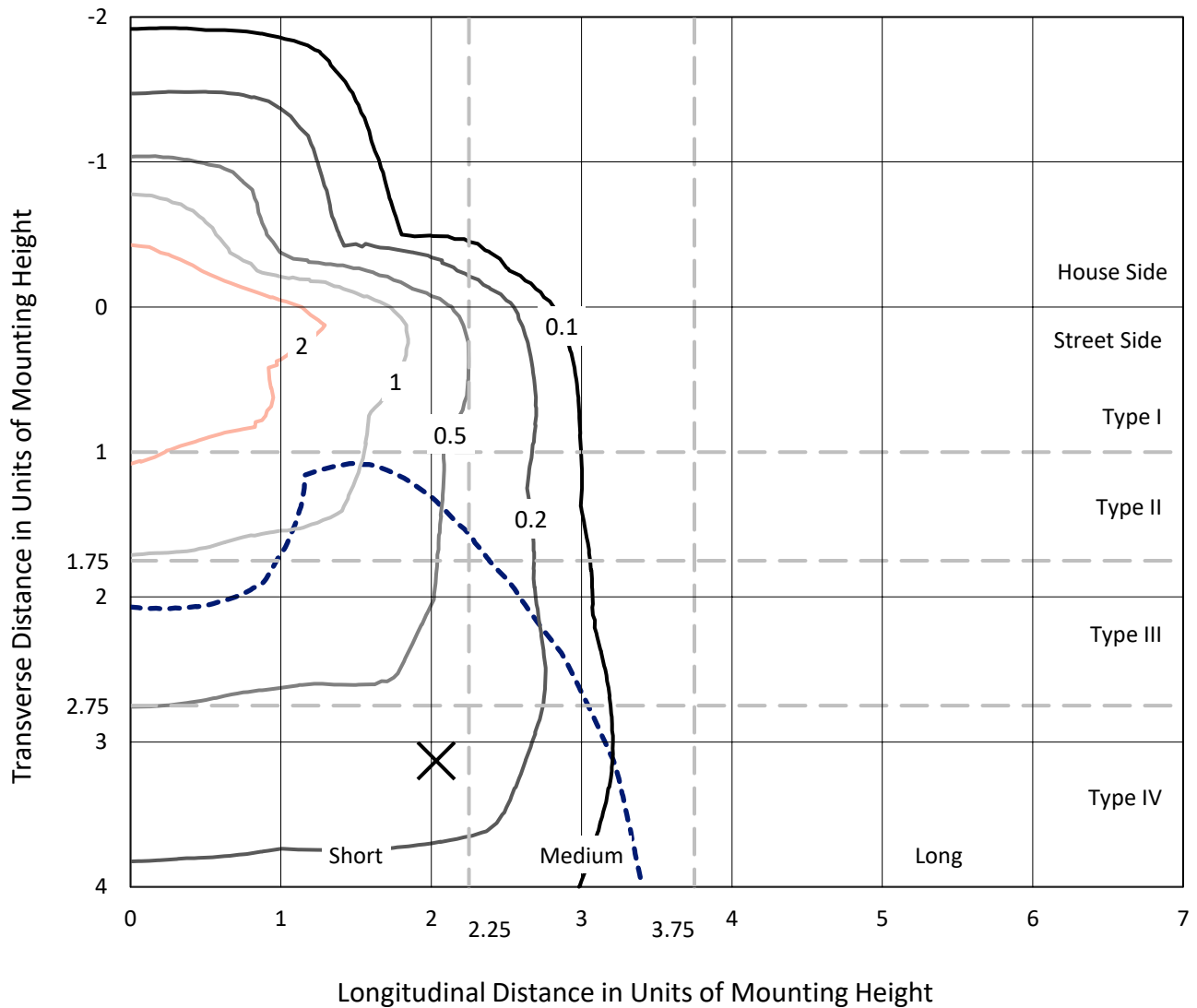
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P386907
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Iso-Footcandle Lines of Horizontal Illumination

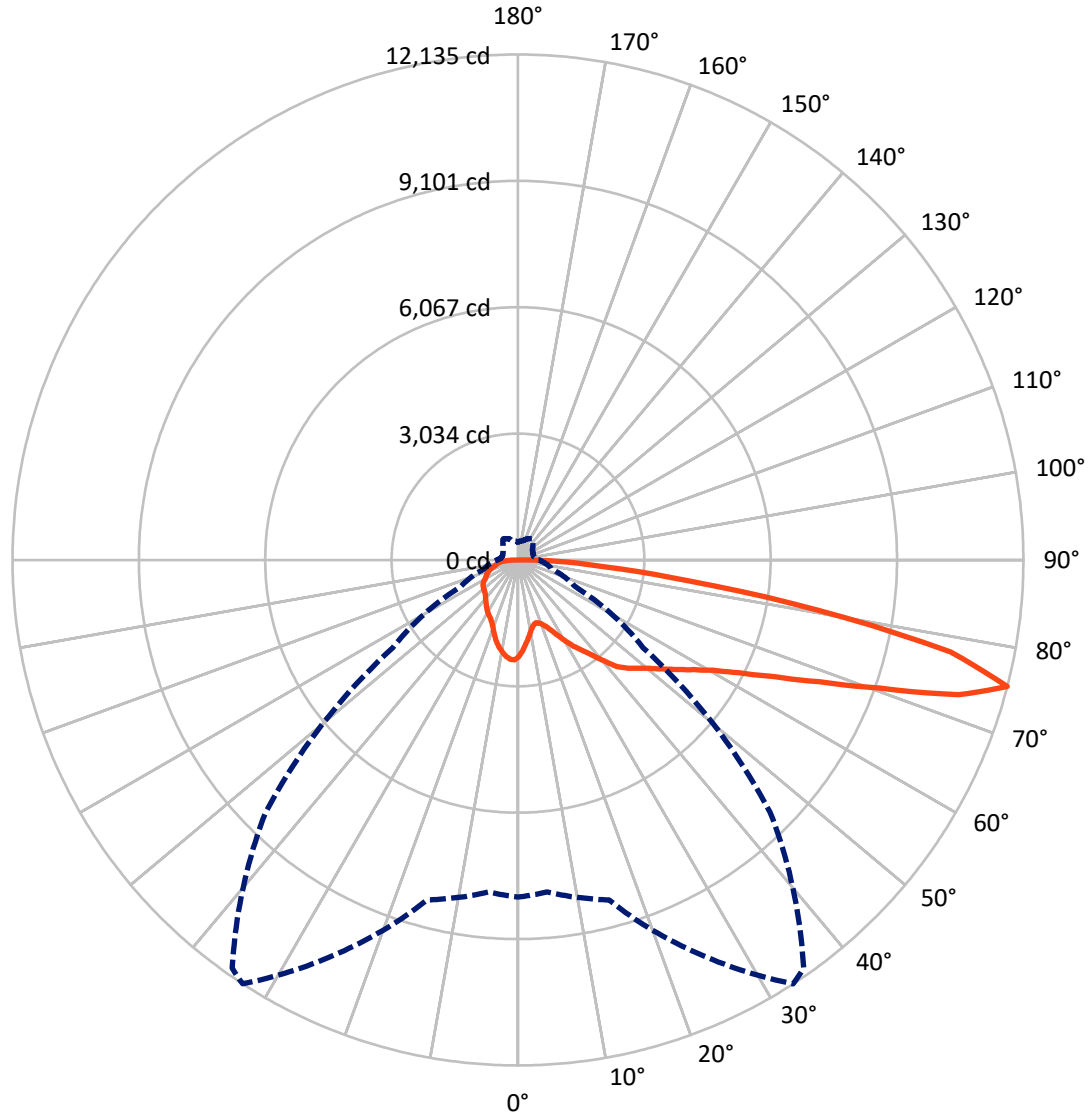
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P386907
CATALOG NUMBER: GPC-SA2C-760-U-T4FT

Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

REPORT NUMBER: P386907
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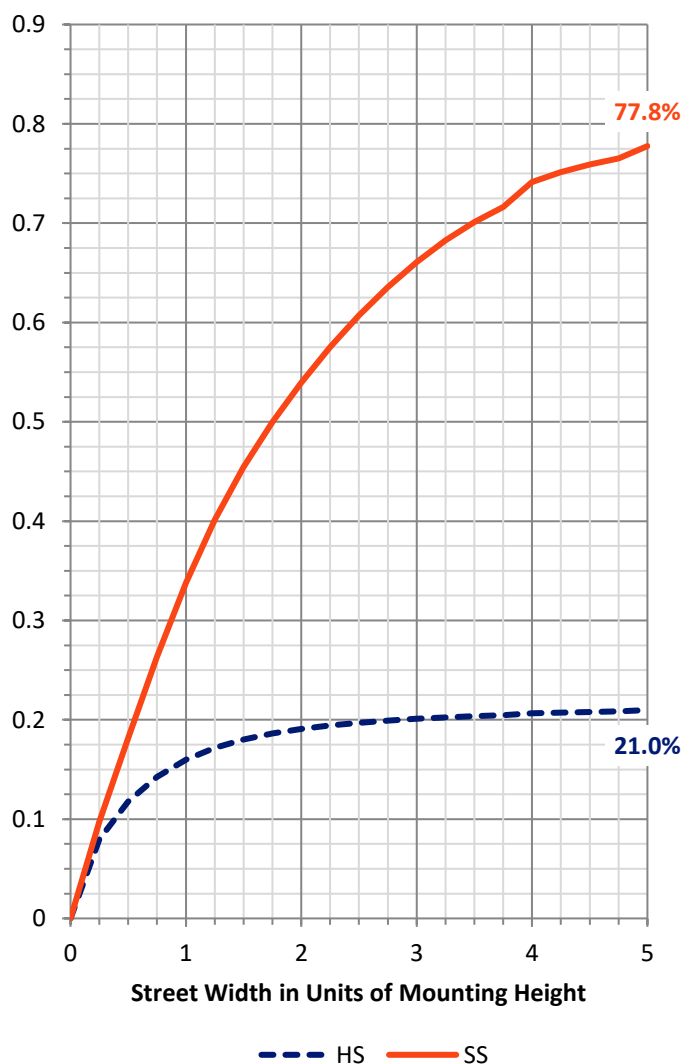
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3188.7 | 0.0 | 3188.7 |
| | % Fixture | 21.5 | 0.0 | 21.5 |
| Street Side | Lumens | 11661.3 | 0.0 | 11661.3 |
| | % Fixture | 78.5 | 0.0 | 78.5 |
| Total | Lumens | 14850.0 | 0.0 | 14850.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 209.9 | 1.4 |
| 10°-20° | 568.5 | 3.8 |
| 20°-30° | 928.5 | 6.3 |
| 30°-40° | 1382.8 | 9.3 |
| 40°-50° | 1983.3 | 13.4 |
| 50°-60° | 2722.7 | 18.3 |
| 60°-70° | 3408.8 | 23.0 |
| 70°-80° | 3083.7 | 20.8 |
| 80°-90° | 561.7 | 3.8 |
| 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° | 14850.0 | 100.0 |
| 0°-180° | 14850.0 | 100.0 |

Coefficient of Utilization



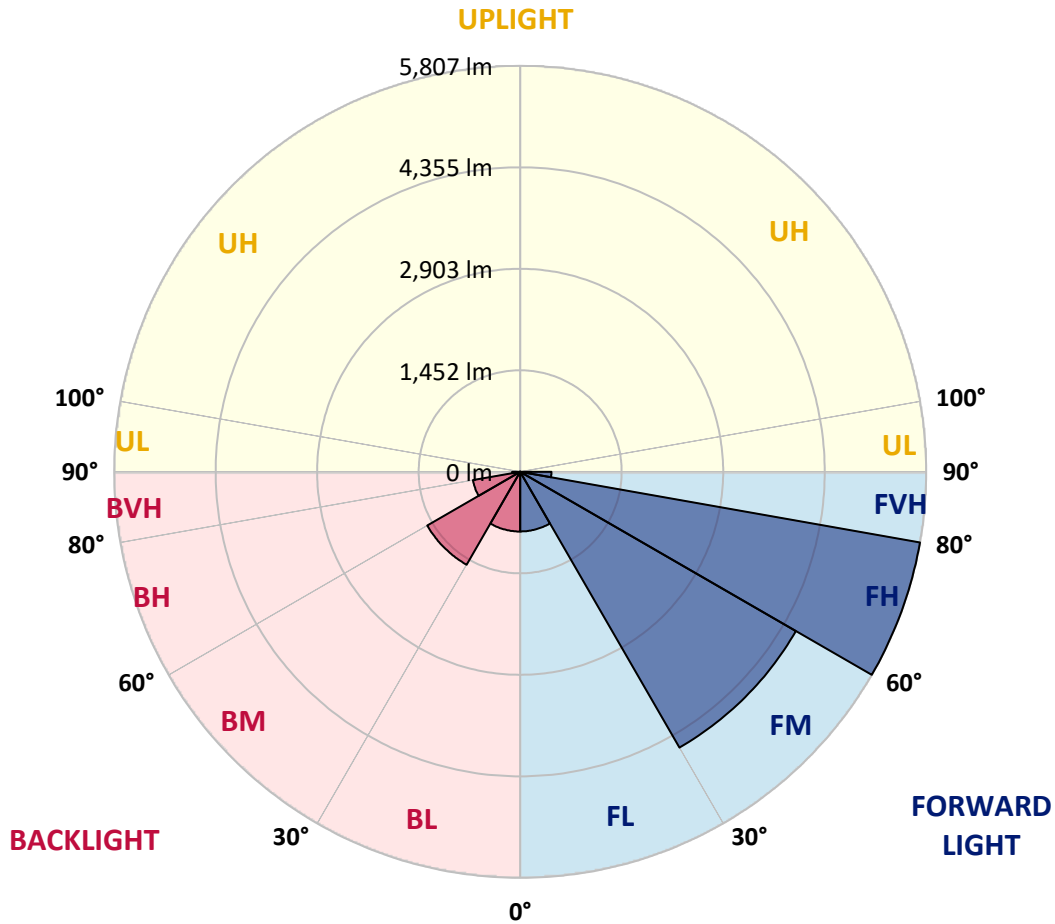
REPORT NUMBER: P386907
 CATALOG NUMBER: GPC-SA2C-760-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 852.9 | 5.7 | | | |
| FM (30°-60°) | 4554.2 | 30.7 | | | |
| FH (60°-80°) | 5806.9 | 39.1 | | | G3/7500 |
| FVH (80°-90°) | 447.4 | 3.0 | | | G3/500 |
| BL (0°-30°) | 854.1 | 5.8 | B2/1000 | | |
| BM (30°-60°) | 1534.6 | 10.3 | B2/2500 | | |
| BH (60°-80°) | 685.6 | 4.6 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 114.4 | 0.8 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type IV Short





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CATALOG NUMBER: GPC-SA2C-760-U-T4FT

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|---------|---------|---------|--------|--------|--------|--------|--------|
| 0° | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 |
| 2.5° | 2155.5 | 2147.2 | 2162.6 | 2164.7 | 2178.0 | 2183.2 | 2201.6 | 2230.3 | 2253.9 | 2281.1 | 2305.7 |
| 5° | 1960.0 | 1954.4 | 1975.9 | 1991.3 | 2020.5 | 2032.9 | 2076.5 | 2137.5 | 2191.9 | 2253.4 | 2309.3 |
| 7.5° | 1774.3 | 1771.2 | 1795.4 | 1830.2 | 1864.1 | 1881.0 | 1956.4 | 2045.2 | 2136.0 | 2235.5 | 2321.1 |
| 10° | 1617.9 | 1616.8 | 1639.9 | 1674.3 | 1724.1 | 1743.0 | 1840.5 | 1957.5 | 2084.7 | 2221.6 | 2341.1 |
| 12.5° | 1530.2 | 1533.7 | 1544.5 | 1573.2 | 1619.4 | 1638.4 | 1746.6 | 1884.1 | 2041.6 | 2217.0 | 2370.4 |
| 15° | 1551.7 | 1557.3 | 1538.9 | 1537.9 | 1570.7 | 1585.6 | 1687.1 | 1831.8 | 2010.8 | 2224.7 | 2413.0 |
| 17.5° | 1643.5 | 1644.5 | 1595.8 | 1565.0 | 1585.0 | 1592.7 | 1668.7 | 1802.0 | 1992.8 | 2242.1 | 2466.3 |
| 20° | 1772.8 | 1770.2 | 1684.0 | 1632.7 | 1643.5 | 1645.6 | 1694.8 | 1802.5 | 1991.3 | 2272.4 | 2535.6 |
| 22.5° | 1944.1 | 1925.1 | 1809.2 | 1739.4 | 1736.9 | 1733.8 | 1762.0 | 1840.5 | 2013.9 | 2321.7 | 2618.1 |
| 25° | 2167.8 | 2149.8 | 1990.3 | 1894.9 | 1874.4 | 1866.7 | 1870.8 | 1921.5 | 2058.5 | 2374.5 | 2710.5 |
| 27.5° | 2416.5 | 2385.3 | 2231.4 | 2096.5 | 2053.9 | 2043.1 | 2018.5 | 2035.9 | 2107.2 | 2425.3 | 2820.2 |
| 30° | 2624.8 | 2607.9 | 2473.5 | 2313.4 | 2263.2 | 2247.8 | 2183.2 | 2164.2 | 2177.5 | 2494.5 | 2958.7 |
| 32.5° | 2741.3 | 2730.0 | 2648.4 | 2519.1 | 2472.5 | 2450.9 | 2359.6 | 2321.7 | 2290.4 | 2603.8 | 3146.5 |
| 35° | 2882.3 | 2875.1 | 2825.9 | 2732.0 | 2662.8 | 2640.2 | 2569.4 | 2529.9 | 2449.4 | 2754.1 | 3389.1 |
| 37.5° | 3061.9 | 3054.2 | 3055.2 | 2979.3 | 2896.7 | 2875.6 | 2829.0 | 2787.4 | 2655.6 | 2951.6 | 3652.8 |
| 40° | 3265.0 | 3250.1 | 3244.5 | 3240.9 | 3188.6 | 3176.8 | 3152.1 | 3095.7 | 2914.1 | 3187.5 | 3912.8 |
| 42.5° | 3570.7 | 3517.9 | 3405.0 | 3447.6 | 3499.4 | 3493.2 | 3513.3 | 3432.2 | 3201.4 | 3466.6 | 4166.8 |
| 45° | 3865.7 | 3779.0 | 3584.0 | 3593.3 | 3706.6 | 3741.0 | 3890.8 | 3833.3 | 3512.7 | 3772.3 | 4429.4 |
| 47.5° | 4000.1 | 3934.4 | 3768.7 | 3769.2 | 3881.6 | 3952.9 | 4281.2 | 4240.1 | 3840.0 | 4119.6 | 4750.0 |
| 50° | 4150.3 | 4084.7 | 3935.9 | 3991.8 | 4089.8 | 4165.7 | 4658.2 | 4637.1 | 4151.4 | 4499.7 | 5134.2 |
| 52.5° | 4314.5 | 4203.2 | 4108.8 | 4208.8 | 4346.3 | 4434.5 | 5035.7 | 4978.3 | 4437.1 | 4882.3 | 5575.9 |
| 55° | 4316.5 | 4286.3 | 4358.1 | 4431.5 | 4637.1 | 4745.4 | 5431.2 | 5279.4 | 4670.0 | 5258.3 | 5935.4 |
| 57.5° | 4562.3 | 4513.0 | 4665.4 | 4699.2 | 4968.0 | 5090.1 | 5824.6 | 5541.5 | 4907.0 | 5546.6 | 6129.3 |
| 60° | 4887.5 | 4845.4 | 4970.1 | 5059.3 | 5377.3 | 5540.5 | 6244.8 | 5810.8 | 5093.2 | 5764.1 | 6120.1 |
| 62.5° | 5449.2 | 5401.5 | 5399.9 | 5525.1 | 5953.4 | 6143.2 | 6716.2 | 6075.0 | 5167.0 | 5807.2 | 5859.0 |
| 65° | 6271.4 | 6195.5 | 6052.4 | 6111.9 | 6749.0 | 6938.3 | 7243.0 | 6266.3 | 5069.6 | 5576.4 | 5186.5 |
| 67.5° | 7071.6 | 7069.1 | 6893.1 | 7015.2 | 7799.5 | 7951.4 | 7843.1 | 6285.3 | 4765.4 | 4772.6 | 3993.4 |
| 70° | 7869.3 | 7879.6 | 7849.8 | 8274.5 | 9218.9 | 9376.9 | 8482.3 | 6030.3 | 4081.6 | 3446.6 | 2392.4 |
| 72.5° | 8501.3 | 8498.7 | 8648.5 | 9743.7 | 11060.9 | 11025.5 | 9020.9 | 5257.8 | 2930.5 | 1860.5 | 1143.4 |
| 75° | 8091.9 | 8002.7 | 8448.9 | 10471.0 | 12134.6 | 11961.7 | 8562.8 | 3667.7 | 1520.9 | 846.9 | 615.6 |
| 77.5° | 5277.8 | 5362.5 | 6017.5 | 8650.0 | 10614.1 | 10403.8 | 6282.2 | 1711.2 | 716.6 | 555.5 | 446.3 |
| 80° | 1911.3 | 2000.5 | 2817.7 | 4899.8 | 7312.7 | 7278.4 | 3093.7 | 703.3 | 484.7 | 419.6 | 325.2 |
| 82.5° | 657.6 | 690.4 | 1111.6 | 2176.0 | 4128.8 | 4282.7 | 1163.9 | 399.6 | 352.4 | 297.5 | 222.6 |
| 85° | 258.0 | 295.5 | 508.3 | 1046.9 | 2082.6 | 2098.0 | 471.4 | 239.0 | 245.2 | 194.9 | 122.1 |
| 87.5° | 98.0 | 119.0 | 243.1 | 486.3 | 951.0 | 873.6 | 168.8 | 113.9 | 139.5 | 115.9 | 58.0 |
| 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: P386907
 CATALOG NUMBER: GPC-SA2C-760-U-T4FT

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 | 2321.1 |
| 2.5° | 2324.7 | 2335.5 | 2358.1 | 2373.5 | 2389.9 | 2394.5 | 2396.5 | 2400.6 | 2404.8 | 2403.2 | 2403.7 |
| 5° | 2339.1 | 2360.1 | 2396.5 | 2411.9 | 2419.1 | 2410.9 | 2395.0 | 2382.2 | 2372.9 | 2367.8 | 2366.3 |
| 7.5° | 2362.7 | 2392.4 | 2431.4 | 2428.9 | 2412.4 | 2376.0 | 2335.0 | 2304.2 | 2278.6 | 2269.3 | 2264.2 |
| 10° | 2394.0 | 2428.9 | 2456.0 | 2426.8 | 2379.1 | 2316.0 | 2254.5 | 2206.7 | 2168.3 | 2153.4 | 2150.8 |
| 12.5° | 2434.0 | 2469.4 | 2474.5 | 2412.4 | 2333.4 | 2247.3 | 2163.7 | 2100.6 | 2043.1 | 2024.6 | 2020.5 |
| 15° | 2485.8 | 2519.1 | 2487.3 | 2387.3 | 2277.0 | 2161.1 | 2052.9 | 1967.2 | 1906.7 | 1884.1 | 1875.9 |
| 17.5° | 2540.2 | 2572.0 | 2489.9 | 2345.8 | 2203.2 | 2059.0 | 1923.1 | 1835.4 | 1766.1 | 1740.0 | 1736.9 |
| 20° | 2605.3 | 2619.7 | 2479.1 | 2286.3 | 2101.6 | 1926.7 | 1783.6 | 1701.0 | 1664.0 | 1645.6 | 1643.5 |
| 22.5° | 2685.9 | 2670.5 | 2454.5 | 2205.7 | 1972.8 | 1773.8 | 1657.4 | 1618.9 | 1609.7 | 1605.6 | 1607.1 |
| 25° | 2771.0 | 2723.8 | 2418.1 | 2100.6 | 1810.2 | 1620.9 | 1565.0 | 1575.8 | 1588.1 | 1586.6 | 1586.6 |
| 27.5° | 2864.9 | 2778.2 | 2362.2 | 1961.0 | 1630.2 | 1495.8 | 1502.5 | 1542.0 | 1560.4 | 1559.9 | 1559.4 |
| 30° | 2985.4 | 2839.7 | 2290.9 | 1793.3 | 1461.9 | 1407.6 | 1448.1 | 1496.3 | 1521.4 | 1520.4 | 1520.9 |
| 32.5° | 3133.7 | 2907.5 | 2193.9 | 1606.1 | 1340.4 | 1342.4 | 1389.1 | 1436.8 | 1466.0 | 1463.5 | 1464.0 |
| 35° | 3307.0 | 2983.4 | 2062.6 | 1421.4 | 1259.8 | 1290.6 | 1327.5 | 1360.9 | 1388.6 | 1385.0 | 1381.4 |
| 37.5° | 3495.8 | 3057.7 | 1888.2 | 1256.2 | 1194.2 | 1242.4 | 1273.2 | 1278.8 | 1291.6 | 1282.4 | 1275.7 |
| 40° | 3675.3 | 3114.7 | 1663.5 | 1120.8 | 1128.0 | 1201.3 | 1221.4 | 1198.8 | 1175.7 | 1172.6 | 1163.4 |
| 42.5° | 3831.8 | 3133.7 | 1436.3 | 1012.6 | 1058.2 | 1158.3 | 1170.6 | 1123.4 | 1081.8 | 1062.3 | 1054.1 |
| 45° | 3997.0 | 3140.3 | 1224.4 | 921.8 | 991.0 | 1119.8 | 1133.1 | 1070.0 | 1011.6 | 969.5 | 955.6 |
| 47.5° | 4212.9 | 3188.6 | 1059.8 | 854.6 | 939.7 | 1094.1 | 1113.1 | 1027.5 | 951.5 | 891.5 | 878.7 |
| 50° | 4495.6 | 3284.0 | 925.9 | 803.3 | 906.4 | 1077.2 | 1098.8 | 985.9 | 902.3 | 830.0 | 817.1 |
| 52.5° | 4809.5 | 3371.7 | 817.7 | 761.7 | 874.1 | 1047.5 | 1080.3 | 956.2 | 856.1 | 773.0 | 759.2 |
| 55° | 5029.0 | 3304.5 | 730.5 | 718.7 | 832.0 | 1004.9 | 1054.6 | 931.0 | 790.0 | 717.6 | 705.3 |
| 57.5° | 5071.1 | 3074.7 | 664.3 | 674.0 | 781.2 | 951.5 | 1015.1 | 875.1 | 754.0 | 693.5 | 680.7 |
| 60° | 4956.2 | 2754.6 | 615.0 | 633.0 | 726.9 | 884.3 | 941.3 | 835.6 | 719.7 | 667.9 | 657.1 |
| 62.5° | 4667.4 | 2426.8 | 578.6 | 596.1 | 676.1 | 816.1 | 895.1 | 794.1 | 684.8 | 638.6 | 627.9 |
| 65° | 4084.2 | 2037.5 | 543.7 | 563.2 | 628.9 | 757.1 | 853.6 | 755.6 | 650.4 | 615.0 | 604.8 |
| 67.5° | 3082.9 | 1526.1 | 510.9 | 528.3 | 586.8 | 705.8 | 808.4 | 717.6 | 617.1 | 594.5 | 582.2 |
| 70° | 1815.4 | 955.6 | 473.5 | 491.9 | 542.7 | 652.5 | 760.2 | 676.1 | 575.5 | 565.3 | 549.4 |
| 72.5° | 844.8 | 575.0 | 430.9 | 448.8 | 487.3 | 581.2 | 698.1 | 621.7 | 526.3 | 503.7 | 482.2 |
| 75° | 504.2 | 420.6 | 380.6 | 396.5 | 423.7 | 505.3 | 620.2 | 566.3 | 479.6 | 449.9 | 427.3 |
| 77.5° | 377.0 | 321.6 | 325.2 | 342.1 | 364.2 | 442.2 | 549.4 | 522.7 | 443.7 | 420.6 | 405.2 |
| 80° | 271.4 | 244.2 | 265.2 | 283.7 | 306.7 | 402.2 | 526.3 | 483.2 | 401.1 | 370.4 | 356.0 |
| 82.5° | 181.1 | 175.4 | 199.5 | 218.5 | 241.1 | 351.9 | 494.5 | 423.2 | 342.7 | 303.7 | 271.9 |
| 85° | 100.0 | 105.7 | 134.4 | 142.6 | 162.1 | 247.8 | 405.2 | 340.1 | 258.0 | 207.7 | 198.5 |
| 87.5° | 41.5 | 48.7 | 72.3 | 69.8 | 86.2 | 147.7 | 266.7 | 205.2 | 164.1 | 122.6 | 95.4 |
| 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: SP1-1908-441-9-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-760-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): | 5474 | CRI (Ra): | 71.7 | R9: | -27.1 |
| CIE u': | 0.2052 | R1: | 70.6 | R10: | 40.8 |
| CIE v': | 0.4804 | R2: | 74.6 | R11: | 74.6 |
| Duv: | 0.0025 | R3: | 78.3 | R12: | 50.4 |
| CIE x: | 0.3330 | R4: | 73.8 | R13: | 70.0 |
| CIE y: | 0.3466 | R5: | 72.4 | R14: | 87.8 |
| CIE z: | 0.3204 | R6: | 67.5 | | |
| Peak Wavelength (nm): | 442 | R7: | 77.5 | | |
| Dominant Wavelength (nm): | 554 | R8: | 58.9 | | |
| Purity: | 4.1 | | | | |
| Rf: | 72.1 | | | | |
| Rg: | 97.2 | | | | |



Test Conditions

Stabilization Time: 240M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.6/31%
 Sphere Temperature (°C): 25.9

REPORT NUMBER: SP1-1908-441-9-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 |

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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 5700K 4-step quadrangle

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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 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

REPORT NUMBER: SP1-1908-441-9-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 13759.3 S/P: 1.85

| 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 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

REPORT NUMBER: SP1-1908-441-9-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 5527.6 M/P: 0.74

| 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 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

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Summary

$R_f = 72.1$
 $R_g = 97.2$
 CIE $R_a = 71.7$
 $R_g = -27.1$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 54 | CES51 = 88 | CES76 = 43 |
| CES02 = 59 | CES27 = 79 | CES52 = 90 | CES77 = 64 |
| CES03 = 30 | CES28 = 77 | CES53 = 77 | CES78 = 46 |
| CES04 = 69 | CES29 = 50 | CES54 = 81 | CES79 = 74 |
| CES05 = 46 | CES30 = 59 | CES55 = 80 | CES80 = 70 |
| CES06 = 50 | CES31 = 55 | CES56 = 70 | CES81 = 71 |
| CES07 = 38 | CES32 = 52 | CES57 = 68 | CES82 = 88 |
| CES08 = 38 | CES33 = 63 | CES58 = 70 | CES83 = 82 |
| CES09 = 29 | CES34 = 63 | CES59 = 88 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 92 | CES85 = 84 |
| CES11 = 55 | CES36 = 90 | CES61 = 88 | CES86 = 76 |
| CES12 = 61 | CES37 = 72 | CES62 = 81 | CES87 = 75 |
| CES13 = 41 | CES38 = 68 | CES63 = 75 | CES88 = 77 |
| CES14 = 74 | CES39 = 91 | CES64 = 72 | CES89 = 76 |
| CES15 = 70 | CES40 = 83 | CES65 = 65 | CES90 = 76 |
| CES16 = 46 | CES41 = 84 | CES66 = 66 | CES91 = 92 |
| CES17 = 48 | CES42 = 70 | CES67 = 64 | CES92 = 70 |
| CES18 = 55 | CES43 = 69 | CES68 = 71 | CES93 = 83 |
| CES19 = 70 | CES44 = 98 | CES69 = 80 | CES94 = 60 |
| CES20 = 64 | CES45 = 79 | CES70 = 58 | CES95 = 73 |
| CES21 = 85 | CES46 = 78 | CES71 = 55 | CES96 = 79 |
| CES22 = 77 | CES47 = 76 | CES72 = 84 | CES97 = 84 |
| CES23 = 91 | CES48 = 68 | CES73 = 47 | CES98 = 73 |
| CES24 = 90 | CES49 = 78 | CES74 = 94 | CES99 = 62 |
| CES25 = 71 | CES50 = 87 | CES75 = 51 | |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)