

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: P386291

Luminaire Tested: **GPC-SA1D-830-U-T4FT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P386291
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-SA1D-830-U-T4FT
Description: GALLEON PEDESTRIAN LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6625 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

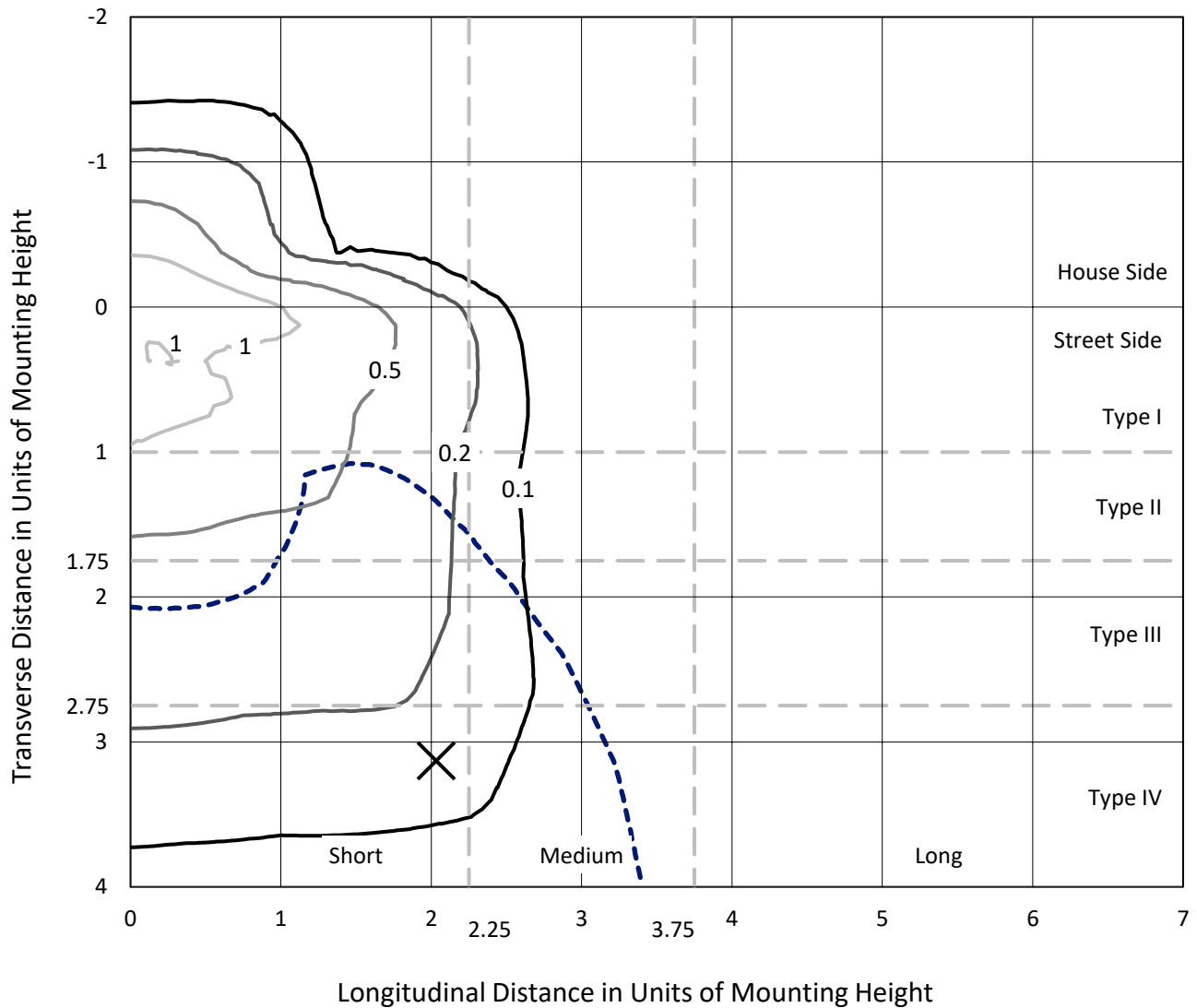
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P386291
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Iso-Footcandle Lines of Horizontal Illumination

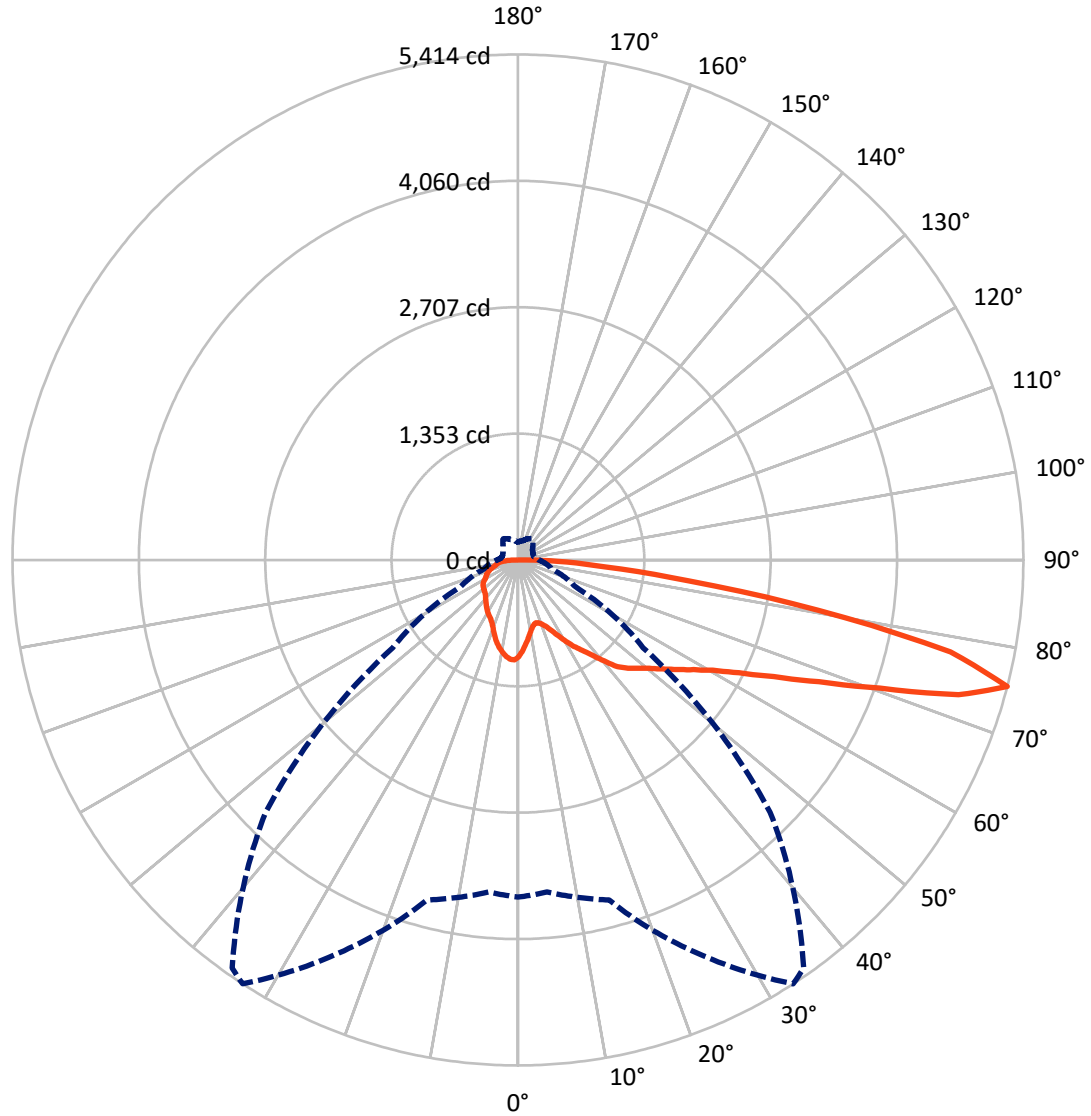
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P386291
CATALOG NUMBER: GPC-SA1D-830-U-T4FT

Luminous Intensity Polar Plot



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

REPORT NUMBER: P386291
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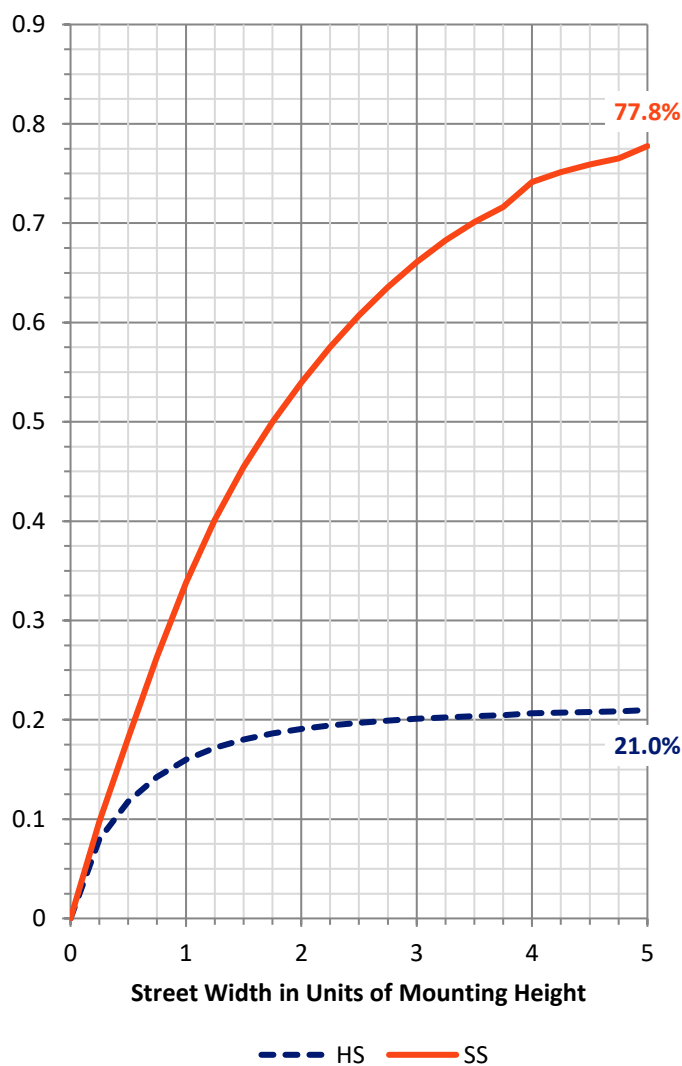
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1422.6 | 0.0 | 1422.6 |
| | % Fixture | 21.5 | 0.0 | 21.5 |
| Street Side | Lumens | 5202.4 | 0.0 | 5202.4 |
| | % Fixture | 78.5 | 0.0 | 78.5 |
| Total | Lumens | 6625.0 | 0.0 | 6625.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 93.6 | 1.4 |
| 10°-20° | 253.6 | 3.8 |
| 20°-30° | 414.2 | 6.3 |
| 30°-40° | 616.9 | 9.3 |
| 40°-50° | 884.8 | 13.4 |
| 50°-60° | 1214.7 | 18.3 |
| 60°-70° | 1520.7 | 23.0 |
| 70°-80° | 1375.7 | 20.8 |
| 80°-90° | 250.6 | 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° | 6625.0 | 100.0 |
| 0°-180° | 6625.0 | 100.0 |

Coefficient of Utilization

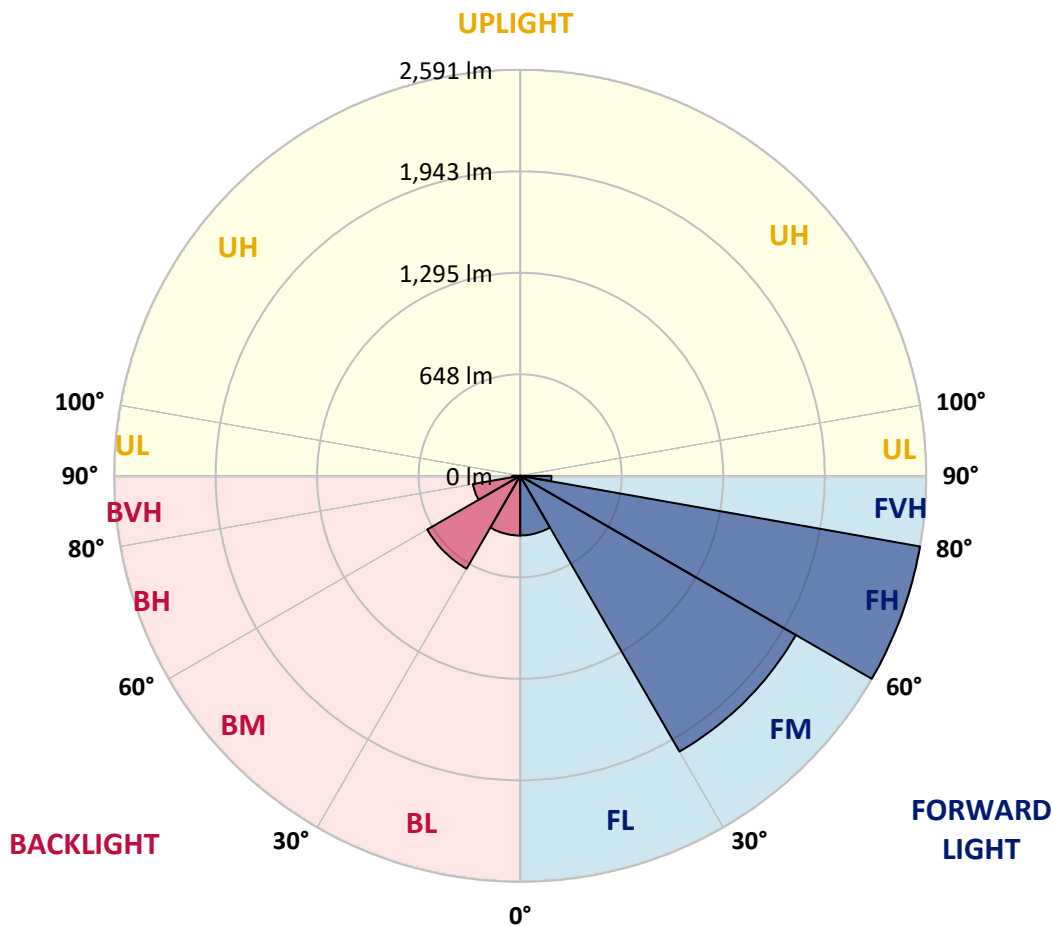


REPORT NUMBER: P386291
 CATALOG NUMBER: GPC-SA1D-830-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 380.5 | 5.7 | | | |
| FM (30°-60°) | 2031.7 | 30.7 | | | |
| FH (60°-80°) | 2590.6 | 39.1 | | | G2/5000 |
| FVH (80°-90°) | 199.6 | 3.0 | | | G2/225 |
| BL (0°-30°) | 381.0 | 5.8 | B1/500 | | |
| BM (30°-60°) | 684.6 | 10.3 | B1/1000 | | |
| BH (60°-80°) | 305.9 | 4.6 | B1/500 | | G1/500 |
| BVH (80°-90°) | 51.0 | 0.8 | | | 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 IV Short





REPORT NUMBER: P386291

CATALOG NUMBER: GPC-SA1D-830-U-T4FT

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 |
| 2.5° | 961.6 | 957.9 | 964.8 | 965.7 | 971.7 | 974.0 | 982.2 | 995.0 | 1005.5 | 1017.7 | 1028.7 |
| 5° | 874.4 | 871.9 | 881.5 | 888.4 | 901.4 | 906.9 | 926.4 | 953.6 | 977.9 | 1005.3 | 1030.3 |
| 7.5° | 791.6 | 790.2 | 801.0 | 816.5 | 831.6 | 839.2 | 872.8 | 912.4 | 952.9 | 997.3 | 1035.5 |
| 10° | 721.8 | 721.3 | 731.6 | 747.0 | 769.1 | 777.6 | 821.1 | 873.3 | 930.0 | 991.1 | 1044.4 |
| 12.5° | 682.6 | 684.2 | 689.1 | 701.9 | 722.5 | 730.9 | 779.2 | 840.5 | 910.8 | 989.1 | 1057.5 |
| 15° | 692.3 | 694.8 | 686.5 | 686.1 | 700.7 | 707.4 | 752.7 | 817.2 | 897.1 | 992.5 | 1076.5 |
| 17.5° | 733.2 | 733.7 | 711.9 | 698.2 | 707.1 | 710.6 | 744.4 | 803.9 | 889.1 | 1000.3 | 1100.3 |
| 20° | 790.9 | 789.7 | 751.3 | 728.4 | 733.2 | 734.1 | 756.1 | 804.2 | 888.4 | 1013.8 | 1131.2 |
| 22.5° | 867.3 | 858.9 | 807.1 | 776.0 | 774.9 | 773.5 | 786.1 | 821.1 | 898.4 | 1035.8 | 1168.0 |
| 25° | 967.1 | 959.1 | 887.9 | 845.4 | 836.2 | 832.8 | 834.6 | 857.3 | 918.4 | 1059.3 | 1209.2 |
| 27.5° | 1078.1 | 1064.1 | 995.5 | 935.3 | 916.3 | 911.5 | 900.5 | 908.3 | 940.1 | 1082.0 | 1258.2 |
| 30° | 1171.0 | 1163.4 | 1103.5 | 1032.1 | 1009.7 | 1002.8 | 974.0 | 965.5 | 971.4 | 1112.9 | 1320.0 |
| 32.5° | 1222.9 | 1217.9 | 1181.5 | 1123.9 | 1103.0 | 1093.4 | 1052.7 | 1035.8 | 1021.8 | 1161.6 | 1403.7 |
| 35° | 1285.9 | 1282.7 | 1260.7 | 1218.8 | 1187.9 | 1177.9 | 1146.3 | 1128.7 | 1092.7 | 1228.7 | 1512.0 |
| 37.5° | 1366.0 | 1362.5 | 1363.0 | 1329.1 | 1292.3 | 1282.9 | 1262.1 | 1243.5 | 1184.7 | 1316.8 | 1629.6 |
| 40° | 1456.6 | 1450.0 | 1447.4 | 1445.8 | 1422.5 | 1417.2 | 1406.3 | 1381.1 | 1300.1 | 1422.0 | 1745.6 |
| 42.5° | 1593.0 | 1569.4 | 1519.1 | 1538.1 | 1561.2 | 1558.4 | 1567.4 | 1531.2 | 1428.2 | 1546.5 | 1858.9 |
| 45° | 1724.6 | 1685.9 | 1598.9 | 1603.1 | 1653.6 | 1669.0 | 1735.8 | 1710.2 | 1567.1 | 1682.9 | 1976.1 |
| 47.5° | 1784.5 | 1755.2 | 1681.3 | 1681.6 | 1731.7 | 1763.5 | 1909.9 | 1891.6 | 1713.1 | 1837.9 | 2119.1 |
| 50° | 1851.6 | 1822.3 | 1755.9 | 1780.9 | 1824.6 | 1858.5 | 2078.1 | 2068.8 | 1852.0 | 2007.4 | 2290.5 |
| 52.5° | 1924.8 | 1875.2 | 1833.1 | 1877.7 | 1939.0 | 1978.4 | 2246.6 | 2220.9 | 1979.5 | 2178.1 | 2487.5 |
| 55° | 1925.7 | 1912.2 | 1944.3 | 1977.0 | 2068.8 | 2117.0 | 2423.0 | 2355.3 | 2083.4 | 2345.9 | 2648.0 |
| 57.5° | 2035.3 | 2013.4 | 2081.3 | 2096.5 | 2216.4 | 2270.8 | 2598.5 | 2472.2 | 2189.1 | 2474.5 | 2734.5 |
| 60° | 2180.4 | 2161.7 | 2217.3 | 2257.1 | 2399.0 | 2471.8 | 2786.0 | 2592.4 | 2272.2 | 2571.5 | 2730.4 |
| 62.5° | 2431.0 | 2409.7 | 2409.1 | 2464.9 | 2656.0 | 2740.7 | 2996.3 | 2710.2 | 2305.2 | 2590.8 | 2613.9 |
| 65° | 2797.9 | 2764.0 | 2700.1 | 2726.7 | 3010.9 | 3095.4 | 3231.3 | 2795.6 | 2261.7 | 2487.8 | 2313.9 |
| 67.5° | 3154.9 | 3153.7 | 3075.2 | 3129.7 | 3479.6 | 3547.3 | 3499.0 | 2804.0 | 2126.0 | 2129.2 | 1781.6 |
| 70° | 3510.7 | 3515.3 | 3502.0 | 3691.5 | 4112.8 | 4183.3 | 3784.2 | 2690.3 | 1820.9 | 1537.6 | 1067.3 |
| 72.5° | 3792.7 | 3791.5 | 3858.3 | 4346.9 | 4934.6 | 4918.8 | 4024.5 | 2345.7 | 1307.4 | 830.0 | 510.1 |
| 75° | 3610.0 | 3570.2 | 3769.3 | 4671.4 | 5413.6 | 5336.4 | 3820.1 | 1636.2 | 678.5 | 377.8 | 274.6 |
| 77.5° | 2354.6 | 2392.3 | 2684.6 | 3859.0 | 4735.3 | 4641.4 | 2802.7 | 763.4 | 319.7 | 247.8 | 199.1 |
| 80° | 852.7 | 892.5 | 1257.0 | 2185.9 | 3262.4 | 3247.1 | 1380.2 | 313.7 | 216.3 | 187.2 | 145.1 |
| 82.5° | 293.4 | 308.0 | 495.9 | 970.8 | 1842.0 | 1910.6 | 519.2 | 178.3 | 157.2 | 132.7 | 99.3 |
| 85° | 115.1 | 131.8 | 226.8 | 467.1 | 929.1 | 936.0 | 210.3 | 106.6 | 109.4 | 87.0 | 54.5 |
| 87.5° | 43.7 | 53.1 | 108.5 | 216.9 | 424.3 | 389.7 | 75.3 | 50.8 | 62.2 | 51.7 | 25.9 |
| 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: P386291
 CATALOG NUMBER: GPC-SA1D-830-U-T4FT

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 | 1035.5 |
| 2.5° | 1037.1 | 1041.9 | 1052.0 | 1058.9 | 1066.2 | 1068.2 | 1069.2 | 1071.0 | 1072.8 | 1072.1 | 1072.4 |
| 5° | 1043.5 | 1052.9 | 1069.2 | 1076.0 | 1079.2 | 1075.6 | 1068.5 | 1062.8 | 1058.6 | 1056.3 | 1055.7 |
| 7.5° | 1054.1 | 1067.3 | 1084.7 | 1083.6 | 1076.3 | 1060.0 | 1041.7 | 1028.0 | 1016.5 | 1012.4 | 1010.1 |
| 10° | 1068.0 | 1083.6 | 1095.7 | 1082.7 | 1061.4 | 1033.2 | 1005.8 | 984.5 | 967.3 | 960.7 | 959.5 |
| 12.5° | 1085.9 | 1101.7 | 1103.9 | 1076.3 | 1041.0 | 1002.6 | 965.3 | 937.1 | 911.5 | 903.3 | 901.4 |
| 15° | 1109.0 | 1123.9 | 1109.7 | 1065.0 | 1015.8 | 964.1 | 915.8 | 877.6 | 850.6 | 840.5 | 836.9 |
| 17.5° | 1133.2 | 1147.4 | 1110.8 | 1046.5 | 982.9 | 918.6 | 857.9 | 818.8 | 787.9 | 776.2 | 774.9 |
| 20° | 1162.3 | 1168.7 | 1106.0 | 1020.0 | 937.6 | 859.5 | 795.7 | 758.9 | 742.4 | 734.1 | 733.2 |
| 22.5° | 1198.2 | 1191.4 | 1095.0 | 984.0 | 880.1 | 791.3 | 739.4 | 722.2 | 718.1 | 716.3 | 717.0 |
| 25° | 1236.2 | 1215.2 | 1078.8 | 937.1 | 807.6 | 723.2 | 698.2 | 703.0 | 708.5 | 707.8 | 707.8 |
| 27.5° | 1278.1 | 1239.4 | 1053.8 | 874.9 | 727.3 | 667.3 | 670.3 | 687.9 | 696.1 | 695.9 | 695.7 |
| 30° | 1331.9 | 1266.9 | 1022.0 | 800.0 | 652.2 | 628.0 | 646.0 | 667.5 | 678.8 | 678.3 | 678.5 |
| 32.5° | 1398.0 | 1297.1 | 978.8 | 716.5 | 598.0 | 598.9 | 619.7 | 641.0 | 654.0 | 652.9 | 653.1 |
| 35° | 1475.4 | 1331.0 | 920.2 | 634.1 | 562.0 | 575.8 | 592.3 | 607.1 | 619.5 | 617.9 | 616.3 |
| 37.5° | 1559.6 | 1364.1 | 842.4 | 560.4 | 532.8 | 554.3 | 568.0 | 570.5 | 576.2 | 572.1 | 569.1 |
| 40° | 1639.7 | 1389.5 | 742.1 | 500.0 | 503.2 | 536.0 | 544.9 | 534.8 | 524.5 | 523.1 | 519.0 |
| 42.5° | 1709.5 | 1398.0 | 640.8 | 451.7 | 472.1 | 516.7 | 522.2 | 501.2 | 482.6 | 473.9 | 470.3 |
| 45° | 1783.2 | 1401.0 | 546.3 | 411.2 | 442.1 | 499.6 | 505.5 | 477.4 | 451.3 | 432.5 | 426.3 |
| 47.5° | 1879.5 | 1422.5 | 472.8 | 381.3 | 419.2 | 488.1 | 496.6 | 458.4 | 424.5 | 397.7 | 392.0 |
| 50° | 2005.6 | 1465.1 | 413.1 | 358.4 | 404.4 | 480.6 | 490.2 | 439.8 | 402.5 | 370.3 | 364.6 |
| 52.5° | 2145.7 | 1504.2 | 364.8 | 339.8 | 390.0 | 467.3 | 481.9 | 426.6 | 381.9 | 344.9 | 338.7 |
| 55° | 2243.6 | 1474.2 | 325.9 | 320.6 | 371.2 | 448.3 | 470.5 | 415.4 | 352.4 | 320.2 | 314.7 |
| 57.5° | 2262.4 | 1371.7 | 296.4 | 300.7 | 348.5 | 424.5 | 452.9 | 390.4 | 336.4 | 309.4 | 303.7 |
| 60° | 2211.1 | 1228.9 | 274.4 | 282.4 | 324.3 | 394.5 | 419.9 | 372.8 | 321.1 | 298.0 | 293.2 |
| 62.5° | 2082.3 | 1082.7 | 258.1 | 265.9 | 301.6 | 364.1 | 399.3 | 354.3 | 305.5 | 284.9 | 280.1 |
| 65° | 1822.1 | 909.0 | 242.6 | 251.3 | 280.6 | 337.8 | 380.8 | 337.1 | 290.2 | 274.4 | 269.8 |
| 67.5° | 1375.4 | 680.8 | 227.9 | 235.7 | 261.8 | 314.9 | 360.7 | 320.2 | 275.3 | 265.2 | 259.7 |
| 70° | 809.9 | 426.3 | 211.2 | 219.5 | 242.1 | 291.1 | 339.1 | 301.6 | 256.8 | 252.2 | 245.1 |
| 72.5° | 376.9 | 256.5 | 192.2 | 200.2 | 217.4 | 259.3 | 311.5 | 277.4 | 234.8 | 224.7 | 215.1 |
| 75° | 225.0 | 187.7 | 169.8 | 176.9 | 189.0 | 225.4 | 276.7 | 252.6 | 214.0 | 200.7 | 190.6 |
| 77.5° | 168.2 | 143.5 | 145.1 | 152.6 | 162.5 | 197.3 | 245.1 | 233.2 | 198.0 | 187.7 | 180.8 |
| 80° | 121.1 | 108.9 | 118.3 | 126.6 | 136.8 | 179.4 | 234.8 | 215.6 | 179.0 | 165.2 | 158.8 |
| 82.5° | 80.8 | 78.3 | 89.0 | 97.5 | 107.6 | 157.0 | 220.6 | 188.8 | 152.9 | 135.5 | 121.3 |
| 85° | 44.6 | 47.1 | 60.0 | 63.6 | 72.3 | 110.5 | 180.8 | 151.7 | 115.1 | 92.7 | 88.6 |
| 87.5° | 18.5 | 21.7 | 32.3 | 31.1 | 38.4 | 65.9 | 119.0 | 91.5 | 73.2 | 54.7 | 42.6 |
| 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)