

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: P385824

Luminaire Tested: **GPC-SA1B-830-U-SL2-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P385824
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-21)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GPC-SA1B-830-U-SL2-HSS
Description: GALLEON PEDESTRIAN LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4017 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G1

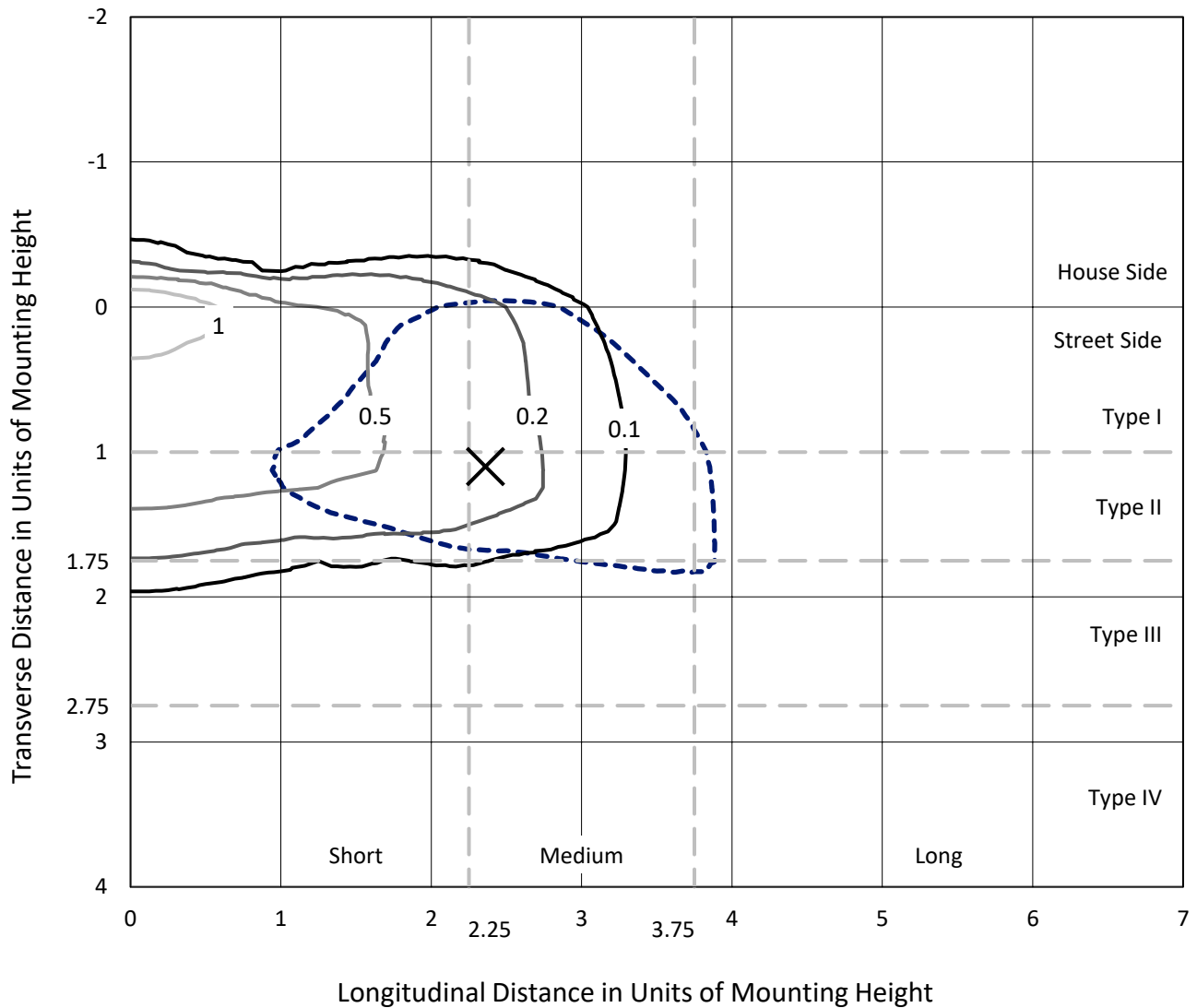
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P385824
 CATALOG NUMBER: GPC-SA1B-830-U-SL2-HSS

Iso-Footcandle Lines of Horizontal Illumination

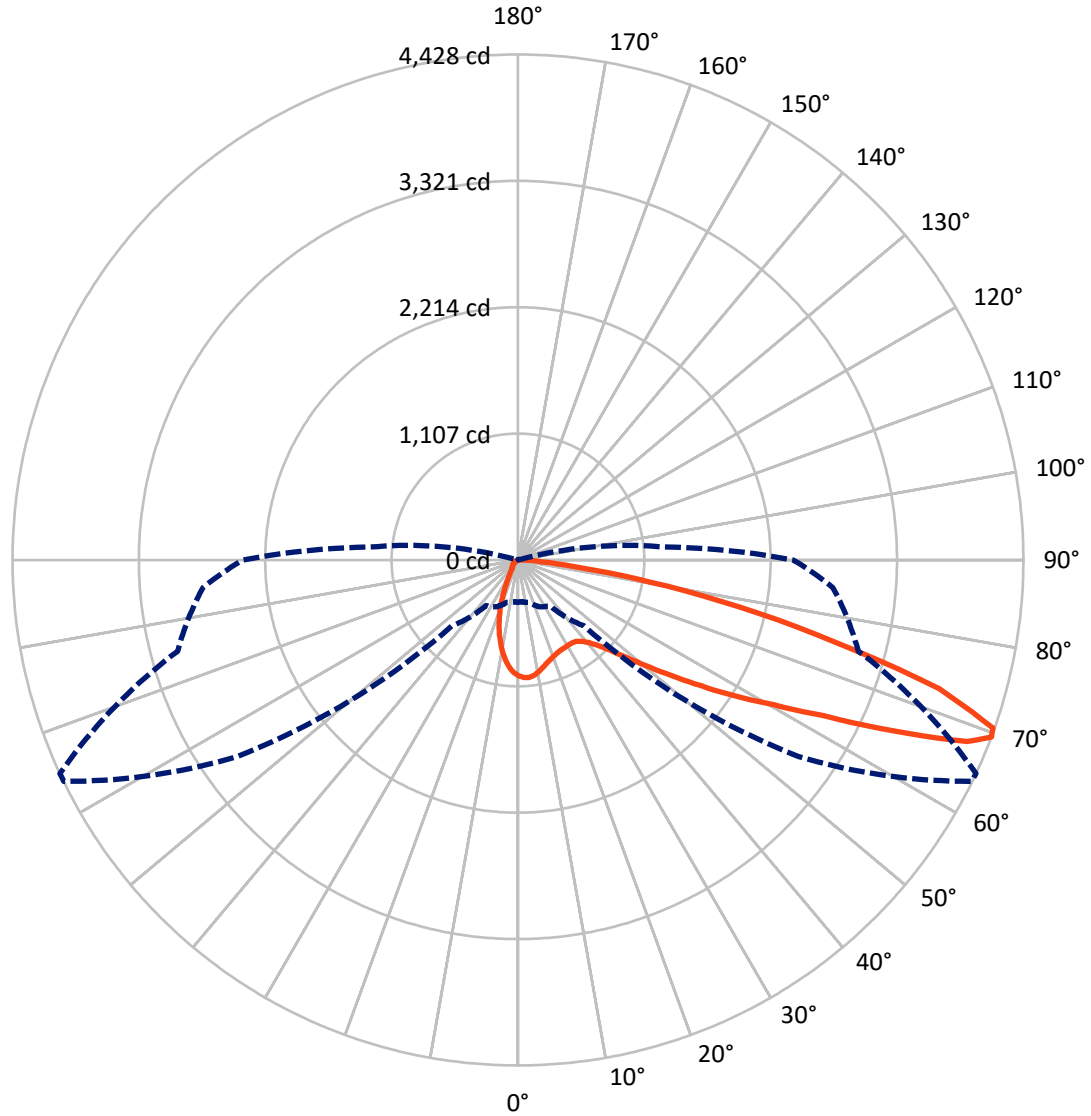
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc
 Type III - Medium - N/A

REPORT NUMBER: P385824
CATALOG NUMBER: GPC-SA1B-830-U-SL2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P385824

CATALOG NUMBER: GPC-SA1B-830-U-SL2-HSS

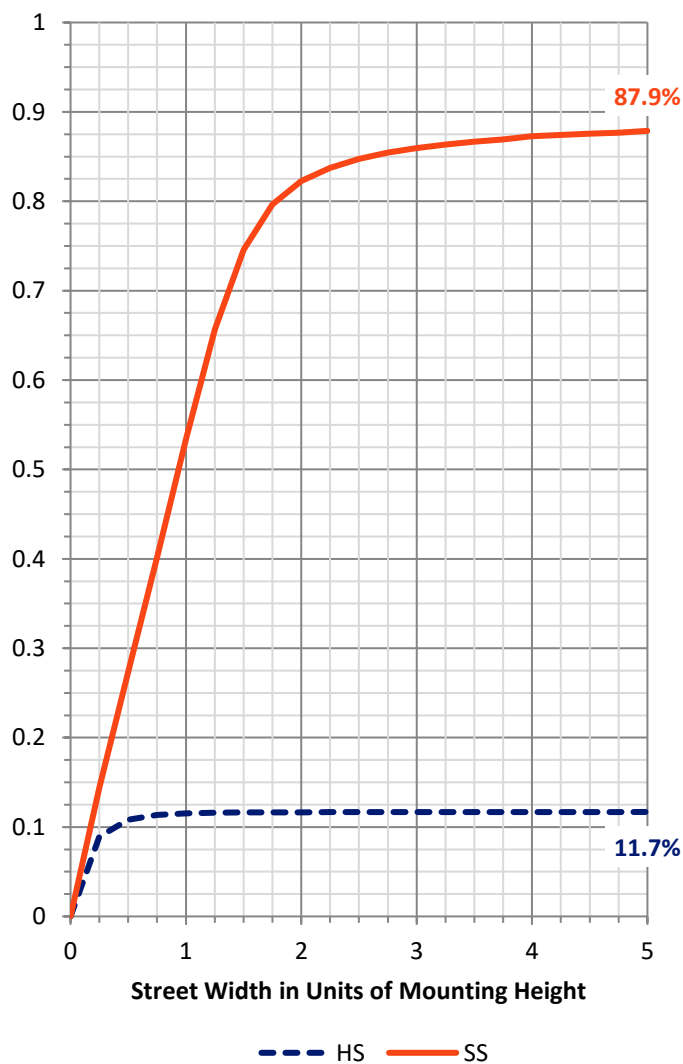
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 473.5 | 0.0 | 473.5 |
| | % Fixture | 11.8 | 0.0 | 11.8 |
| Street Side | Lumens | 3543.5 | 0.0 | 3543.5 |
| | % Fixture | 88.2 | 0.0 | 88.2 |
| Total | Lumens | 4017.0 | 0.0 | 4017.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 84.9 | 2.1 |
| 10°-20° | 185.8 | 4.6 |
| 20°-30° | 257.4 | 6.4 |
| 30°-40° | 358.8 | 8.9 |
| 40°-50° | 557.8 | 13.9 |
| 50°-60° | 895.4 | 22.3 |
| 60°-70° | 1012.9 | 25.2 |
| 70°-80° | 594.9 | 14.8 |
| 80°-90° | 69.2 | 1.7 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 4017.0 | 100.0 |
| 0°-180° | 4017.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P385824

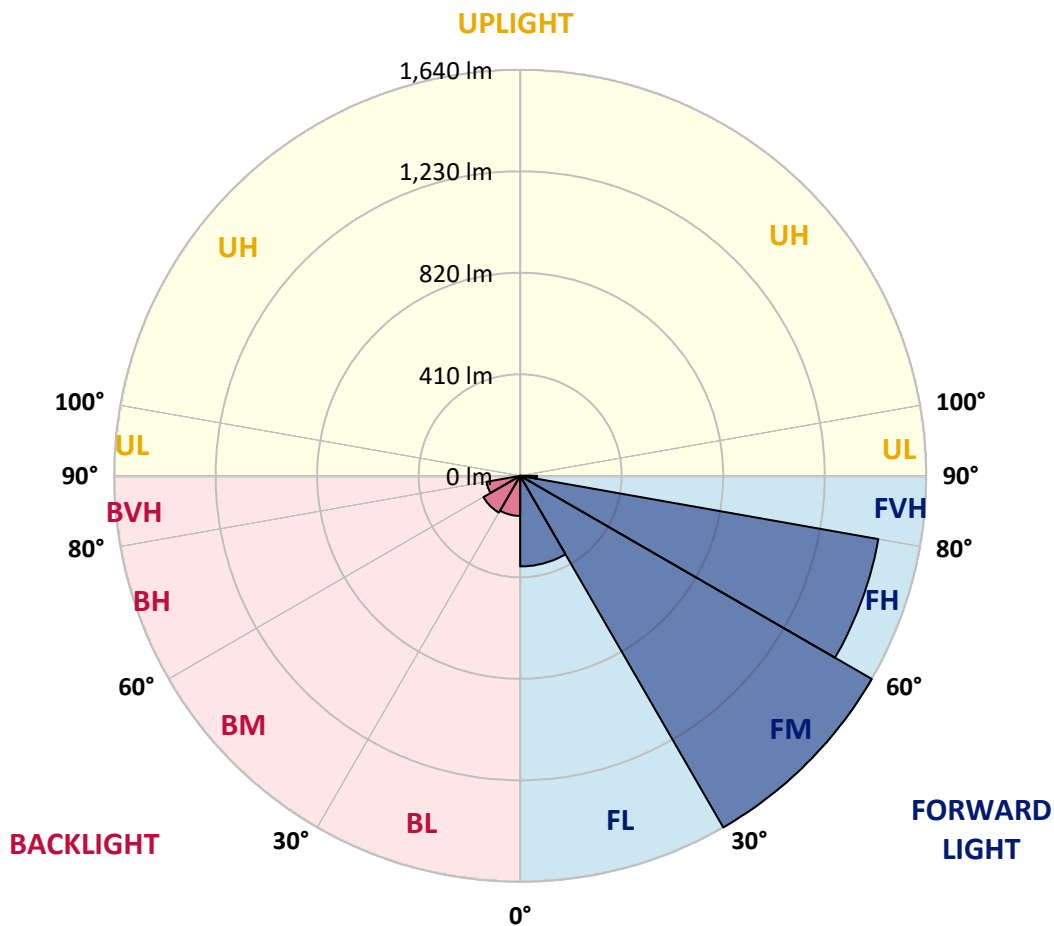
CATALOG NUMBER: GPC-SA1B-830-U-SL2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 366.0 | 9.1 | | | |
| FM (30°-60°) | 1640.4 | 40.8 | | | |
| FH (60°-80°) | 1469.4 | 36.6 | | | G1/1800 |
| FVH (80°-90°) | 67.6 | 1.7 | | | G1/100 |
| BL (0°-30°) | 162.0 | 4.0 | B1/500 | | |
| BM (30°-60°) | 171.6 | 4.3 | B0/220 | | |
| BH (60°-80°) | 138.4 | 3.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 1.6 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type III Medium





REPORT NUMBER: P385824
 CATALOG NUMBER: GPC-SA1B-830-U-SL2-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 |
| 2.5° | 1024.1 | 1021.6 | 1023.6 | 1028.0 | 1030.2 | 1030.2 | 1031.9 | 1029.9 | 1030.6 | 1025.6 | 1018.5 |
| 5° | 960.0 | 956.1 | 961.7 | 974.1 | 989.4 | 1002.5 | 1021.9 | 1032.1 | 1033.1 | 1033.3 | 1025.0 |
| 7.5° | 891.0 | 887.5 | 895.8 | 910.4 | 930.1 | 954.4 | 988.2 | 1017.8 | 1019.5 | 1035.5 | 1029.4 |
| 10° | 834.9 | 832.4 | 842.1 | 857.7 | 880.8 | 908.0 | 949.5 | 990.6 | 995.6 | 1030.9 | 1028.7 |
| 12.5° | 790.4 | 788.4 | 797.5 | 815.5 | 839.2 | 869.3 | 912.6 | 960.4 | 967.0 | 1020.5 | 1025.3 |
| 15° | 757.9 | 757.6 | 765.2 | 782.6 | 808.8 | 836.8 | 881.2 | 932.3 | 940.0 | 1009.3 | 1024.8 |
| 17.5° | 740.9 | 741.4 | 747.0 | 761.8 | 784.3 | 812.2 | 854.6 | 908.7 | 917.0 | 999.3 | 1027.3 |
| 20° | 739.2 | 739.7 | 742.8 | 751.1 | 769.3 | 794.0 | 833.1 | 888.8 | 897.5 | 991.8 | 1031.4 |
| 22.5° | 754.2 | 753.8 | 754.7 | 753.8 | 764.0 | 782.7 | 818.8 | 873.5 | 883.5 | 986.9 | 1034.7 |
| 25° | 782.9 | 782.4 | 782.1 | 775.8 | 769.0 | 779.0 | 812.8 | 864.8 | 874.4 | 983.3 | 1036.5 |
| 27.5° | 822.9 | 822.5 | 822.0 | 811.6 | 791.2 | 785.0 | 813.5 | 861.6 | 869.6 | 980.4 | 1036.2 |
| 30° | 875.4 | 877.8 | 877.1 | 862.6 | 830.8 | 803.1 | 820.6 | 859.9 | 866.9 | 974.8 | 1032.6 |
| 32.5° | 937.1 | 941.8 | 945.6 | 930.1 | 890.3 | 839.2 | 837.1 | 861.8 | 866.9 | 970.6 | 1026.2 |
| 35° | 1001.2 | 1007.3 | 1021.1 | 1015.6 | 963.3 | 893.4 | 865.5 | 873.0 | 877.3 | 972.9 | 1023.1 |
| 37.5° | 1064.2 | 1071.5 | 1101.5 | 1117.3 | 1058.8 | 965.1 | 909.7 | 900.7 | 902.9 | 987.4 | 1026.5 |
| 40° | 1137.5 | 1148.5 | 1193.9 | 1219.4 | 1172.8 | 1061.2 | 975.8 | 948.3 | 949.2 | 1019.2 | 1042.3 |
| 42.5° | 1233.7 | 1245.1 | 1294.2 | 1334.1 | 1301.3 | 1182.5 | 1065.6 | 1021.1 | 1020.2 | 1078.7 | 1079.5 |
| 45° | 1351.0 | 1362.9 | 1413.7 | 1458.1 | 1443.3 | 1326.3 | 1180.5 | 1127.3 | 1126.3 | 1172.5 | 1150.1 |
| 47.5° | 1483.9 | 1495.6 | 1541.0 | 1586.7 | 1602.7 | 1494.3 | 1326.8 | 1272.3 | 1269.9 | 1302.9 | 1259.0 |
| 50° | 1598.0 | 1605.6 | 1647.4 | 1708.9 | 1781.0 | 1700.6 | 1508.9 | 1456.4 | 1453.8 | 1476.1 | 1419.0 |
| 52.5° | 1639.4 | 1643.8 | 1686.3 | 1772.5 | 1952.4 | 1980.1 | 1748.0 | 1680.4 | 1678.5 | 1688.2 | 1631.9 |
| 55° | 1555.5 | 1563.4 | 1615.6 | 1743.5 | 2045.2 | 2295.9 | 2049.9 | 1957.8 | 1943.7 | 1922.8 | 1854.6 |
| 57.5° | 1326.7 | 1339.4 | 1395.5 | 1565.5 | 2001.8 | 2546.4 | 2493.6 | 2271.6 | 2250.8 | 2123.0 | 2035.6 |
| 60° | 994.0 | 1009.7 | 1056.2 | 1239.6 | 1770.5 | 2635.7 | 2978.3 | 2621.2 | 2574.5 | 2282.5 | 2202.1 |
| 62.5° | 682.1 | 689.9 | 721.6 | 841.0 | 1303.9 | 2489.5 | 3383.9 | 3089.5 | 3004.2 | 2455.8 | 2382.1 |
| 65° | 521.0 | 523.7 | 536.6 | 577.8 | 776.5 | 2022.2 | 3545.2 | 3707.4 | 3604.2 | 2663.2 | 2568.9 |
| 67.5° | 419.8 | 417.6 | 435.5 | 494.3 | 520.0 | 1233.7 | 3357.0 | 4291.9 | 4243.6 | 2940.4 | 2756.9 |
| 69° | 370.2 | 367.2 | 385.3 | 453.7 | 488.3 | 815.5 | 3001.1 | 4424.7 | 4427.7 | 3086.8 | 2769.8 |
| 70° | 333.2 | 335.2 | 353.2 | 429.5 | 477.6 | 640.1 | 2661.2 | 4390.8 | 4415.0 | 3141.5 | 2692.3 |
| 72.5° | 222.5 | 227.9 | 264.1 | 356.6 | 459.3 | 484.4 | 1606.8 | 3767.9 | 3860.7 | 3018.3 | 2309.8 |
| 75° | 125.4 | 129.5 | 172.5 | 268.9 | 432.8 | 461.3 | 848.7 | 2775.9 | 2865.6 | 2524.0 | 1781.2 |
| 77.5° | 61.5 | 63.7 | 97.6 | 173.5 | 361.9 | 439.6 | 481.4 | 1885.6 | 1988.1 | 1647.4 | 1007.5 |
| 80° | 26.0 | 27.2 | 48.8 | 107.1 | 258.7 | 419.5 | 357.5 | 1160.4 | 1173.2 | 645.4 | 268.4 |
| 82.5° | 10.0 | 10.4 | 20.6 | 66.8 | 164.4 | 327.0 | 299.0 | 550.2 | 537.0 | 121.5 | 61.2 |
| 85° | 1.2 | 1.4 | 7.5 | 40.1 | 91.4 | 168.3 | 242.9 | 237.1 | 219.4 | 24.1 | 31.4 |
| 87.5° | 0.0 | 0.0 | 0.5 | 12.2 | 27.2 | 78.9 | 126.3 | 98.4 | 88.7 | 7.8 | 16.3 |
| 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: P385824
 CATALOG NUMBER: GPC-SA1B-830-U-SL2-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 | 1015.1 |
| 2.5° | 1012.6 | 1010.9 | 1001.7 | 988.4 | 975.8 | 960.2 | 945.2 | 936.2 | 929.1 | 924.3 | 929.9 |
| 5° | 1015.3 | 1007.8 | 979.9 | 944.2 | 909.2 | 869.8 | 833.1 | 802.0 | 789.7 | 776.1 | 782.2 |
| 7.5° | 1014.4 | 1000.3 | 950.2 | 886.6 | 822.3 | 755.9 | 693.0 | 644.6 | 619.4 | 594.7 | 601.0 |
| 10° | 1010.2 | 986.4 | 910.4 | 816.2 | 720.0 | 624.5 | 535.3 | 467.4 | 429.5 | 395.2 | 400.1 |
| 12.5° | 1000.8 | 967.7 | 863.5 | 735.7 | 607.0 | 481.0 | 376.5 | 289.6 | 243.1 | 222.5 | 225.0 |
| 15° | 995.2 | 949.5 | 813.9 | 654.1 | 486.3 | 335.0 | 230.1 | 171.2 | 149.9 | 143.1 | 144.0 |
| 17.5° | 992.5 | 932.0 | 762.5 | 560.8 | 362.9 | 213.3 | 148.7 | 131.2 | 126.6 | 125.4 | 125.8 |
| 20° | 989.8 | 914.3 | 709.7 | 468.5 | 250.0 | 143.5 | 122.2 | 117.1 | 115.4 | 113.9 | 114.2 |
| 22.5° | 985.2 | 897.3 | 652.9 | 375.0 | 168.6 | 116.4 | 110.1 | 105.2 | 101.6 | 99.8 | 100.1 |
| 25° | 979.6 | 879.5 | 594.9 | 279.3 | 123.1 | 103.9 | 97.9 | 90.9 | 86.7 | 83.3 | 83.5 |
| 27.5° | 970.6 | 857.5 | 535.1 | 203.3 | 103.3 | 93.0 | 85.0 | 77.3 | 70.2 | 66.3 | 66.3 |
| 30° | 958.0 | 832.7 | 468.6 | 145.5 | 92.6 | 82.3 | 72.6 | 63.1 | 55.4 | 51.8 | 51.5 |
| 32.5° | 944.1 | 806.9 | 401.5 | 110.3 | 84.1 | 72.2 | 61.2 | 51.2 | 44.4 | 41.5 | 41.3 |
| 35° | 932.2 | 779.0 | 334.5 | 92.5 | 75.6 | 62.6 | 50.5 | 42.0 | 36.5 | 34.2 | 34.0 |
| 37.5° | 924.5 | 751.1 | 269.2 | 82.6 | 68.0 | 53.5 | 42.3 | 34.7 | 30.8 | 28.9 | 28.7 |
| 40° | 923.3 | 730.4 | 209.6 | 75.1 | 60.9 | 45.6 | 35.4 | 29.4 | 25.8 | 23.8 | 23.6 |
| 42.5° | 938.8 | 718.5 | 160.8 | 68.8 | 53.5 | 38.6 | 30.1 | 25.2 | 21.4 | 19.4 | 19.2 |
| 45° | 979.4 | 722.2 | 123.7 | 63.2 | 46.2 | 32.6 | 25.5 | 20.9 | 17.5 | 16.0 | 15.6 |
| 47.5° | 1053.5 | 748.1 | 98.4 | 57.6 | 39.3 | 27.7 | 21.8 | 17.3 | 14.4 | 12.9 | 12.7 |
| 50° | 1185.4 | 808.8 | 82.3 | 51.5 | 32.8 | 23.6 | 18.0 | 14.1 | 11.7 | 10.4 | 10.2 |
| 52.5° | 1360.5 | 916.9 | 73.4 | 45.6 | 27.2 | 20.1 | 14.8 | 11.2 | 9.2 | 8.2 | 8.0 |
| 55° | 1553.6 | 1047.7 | 67.7 | 39.1 | 22.3 | 16.7 | 11.7 | 8.8 | 7.1 | 6.3 | 5.9 |
| 57.5° | 1742.1 | 1161.1 | 62.2 | 32.8 | 18.5 | 13.6 | 9.3 | 7.0 | 5.6 | 4.8 | 4.6 |
| 60° | 1915.3 | 1265.3 | 55.9 | 26.3 | 15.1 | 10.7 | 7.3 | 5.4 | 4.4 | 3.6 | 3.6 |
| 62.5° | 2100.7 | 1345.9 | 47.3 | 20.6 | 12.4 | 8.2 | 5.9 | 4.9 | 3.6 | 3.1 | 2.9 |
| 65° | 2297.2 | 1405.7 | 37.1 | 16.0 | 9.7 | 6.1 | 4.9 | 5.1 | 2.9 | 2.2 | 2.0 |
| 67.5° | 2442.4 | 1393.8 | 27.4 | 12.6 | 7.5 | 4.8 | 4.8 | 5.4 | 2.5 | 1.7 | 1.5 |
| 69° | 2410.4 | 1297.1 | 22.9 | 10.9 | 6.5 | 4.1 | 4.4 | 5.4 | 2.4 | 1.5 | 1.4 |
| 70° | 2317.8 | 1190.0 | 20.2 | 9.7 | 5.8 | 3.7 | 4.2 | 5.3 | 2.2 | 1.5 | 1.4 |
| 72.5° | 1930.3 | 896.3 | 15.8 | 7.3 | 4.6 | 3.1 | 3.6 | 4.6 | 2.2 | 1.5 | 1.2 |
| 75° | 1451.9 | 573.7 | 12.1 | 5.3 | 3.4 | 2.4 | 2.7 | 3.4 | 2.2 | 1.4 | 1.2 |
| 77.5° | 790.1 | 206.9 | 8.7 | 3.6 | 2.4 | 1.9 | 1.9 | 2.5 | 2.0 | 1.0 | 0.7 |
| 80° | 203.1 | 52.0 | 5.4 | 2.4 | 1.9 | 1.4 | 1.2 | 1.7 | 1.2 | 0.2 | 0.0 |
| 82.5° | 50.1 | 11.7 | 2.9 | 1.7 | 1.4 | 0.5 | 0.5 | 0.8 | 0.5 | 0.0 | 0.0 |
| 85° | 27.5 | 5.8 | 1.9 | 1.2 | 0.7 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 87.5° | 14.1 | 1.7 | 0.5 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 |

REPORT NUMBER: SP1-2408-195-9

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

REPORT NUMBER: SP1-2408-195-9

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)