

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P629756

Luminaire Tested: GWS-SA1C-730-U-T3-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P629756
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-23)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1C-730-U-T3-W
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: (16) 3000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4379.9 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

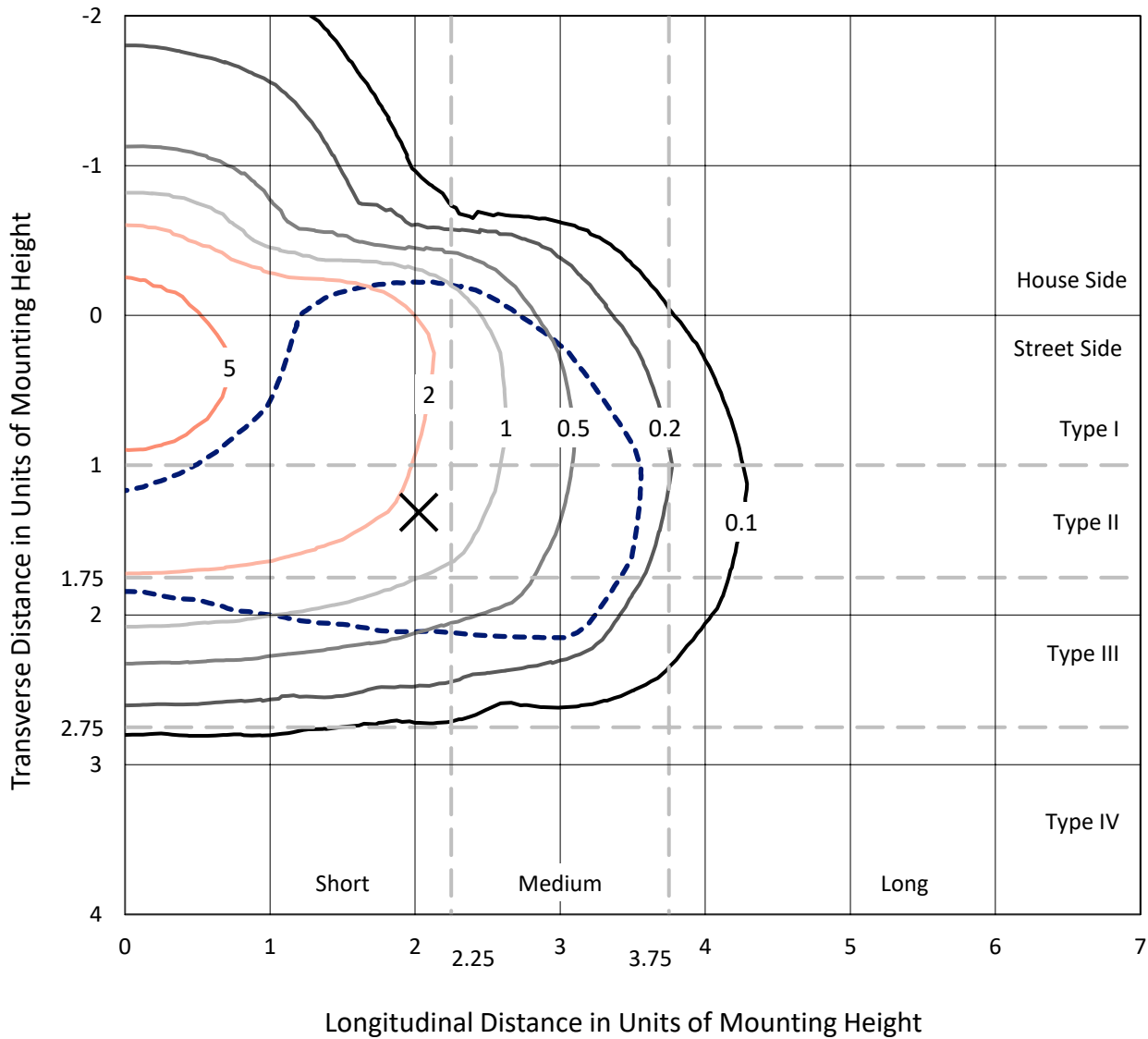
Input Watts (W): 34.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P629756
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Iso-Footcandle Lines of Horizontal Illumination

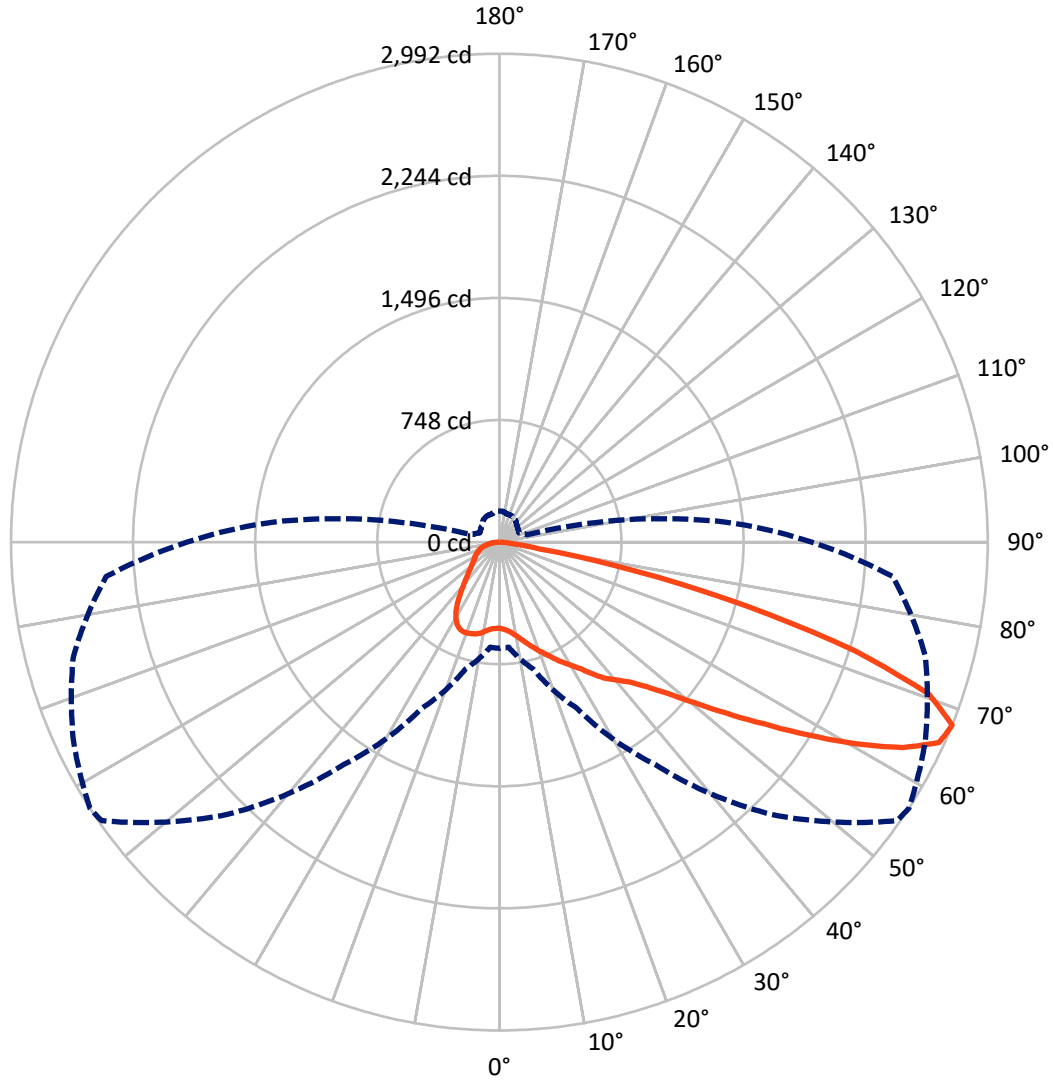
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.2 fc
 Type III - Short - N/A

REPORT NUMBER: P629756
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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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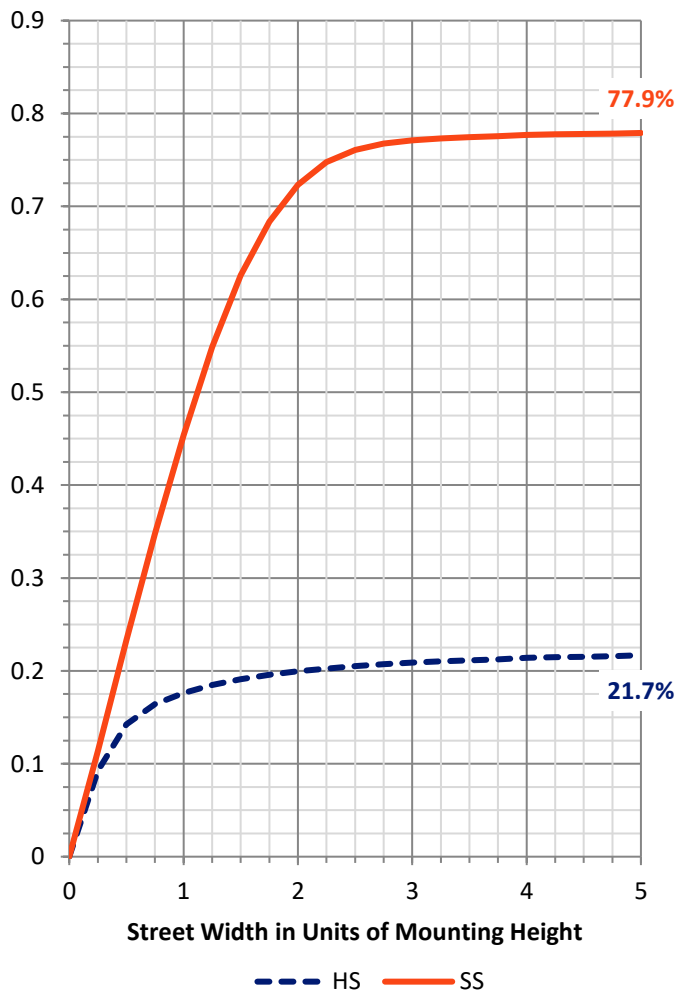
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 963.0 | 0.0 | 963.0 |
| | % Fixture | 22.0 | 0.0 | 22.0 |
| Street Side | Lumens | 3416.9 | 0.0 | 3416.9 |
| | % Fixture | 78.0 | 0.0 | 78.0 |
| Total | Lumens | 4379.9 | 0.0 | 4379.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 52.3 | 1.2 |
| 10°-20° | 173.3 | 4.0 |
| 20°-30° | 308.9 | 7.1 |
| 30°-40° | 449.1 | 10.3 |
| 40°-50° | 650.0 | 14.8 |
| 50°-60° | 1017.3 | 23.2 |
| 60°-70° | 1186.7 | 27.1 |
| 70°-80° | 495.4 | 11.3 |
| 80°-90° | 46.7 | 1.1 |
| 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° | 4379.9 | 100.0 |
| 0°-180° | 4379.9 | 100.0 |

Coefficient of Utilization



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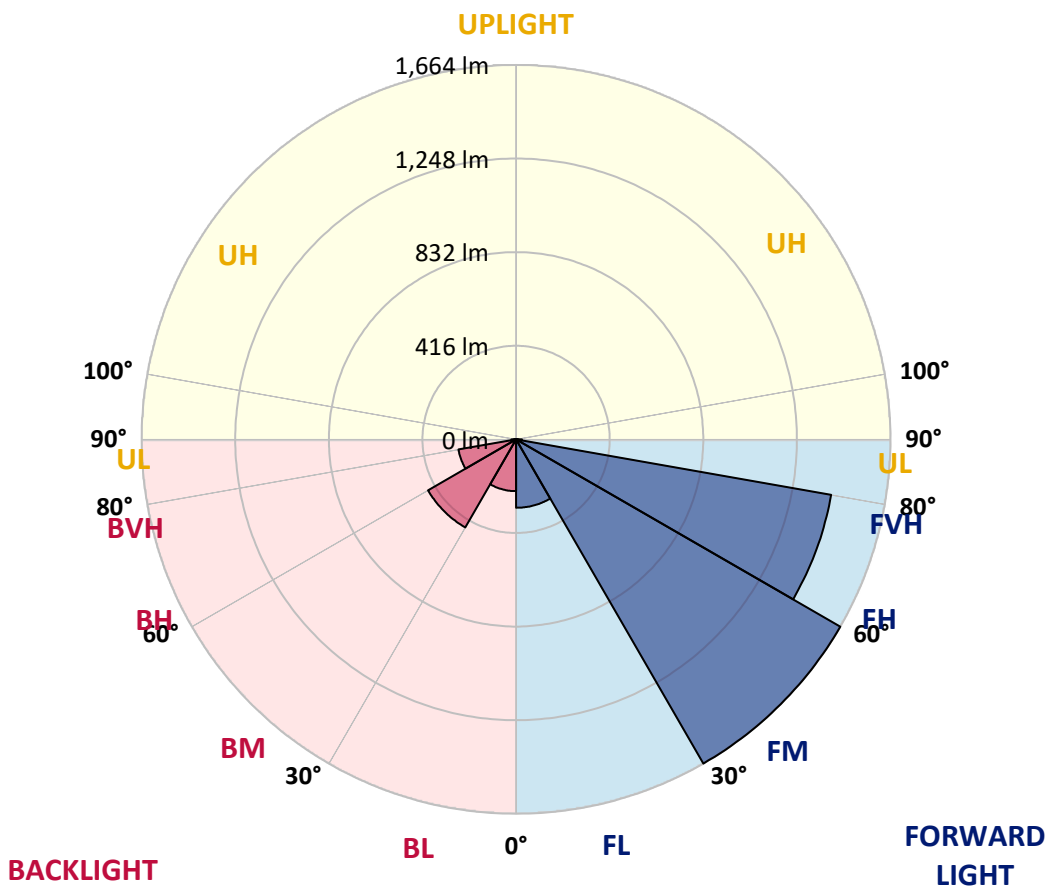
CATALOG NUMBER: GWS-SA1C-730-U-T3-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 304.2 | 6.9 | | | |
| FM (30°-60°) | 1664.4 | 38.0 | | | |
| FH (60°-80°) | 1422.2 | 32.5 | | | G1/1800 |
| FVH (80°-90°) | 26.0 | 0.6 | | | G1/100 |
| BL (0°-30°) | 230.3 | 5.3 | B1/500 | | |
| BM (30°-60°) | 452.1 | 10.3 | B1/1000 | | |
| BH (60°-80°) | 259.9 | 5.9 | B1/500 | | G1/500 |
| BVH (80°-90°) | 20.7 | 0.5 | | | G1/100 |
| 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 Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 57° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 |
| 2.5° | 535.3 | 534.7 | 534.3 | 536.2 | 535.6 | 535.3 | 535.3 | 535.0 | 534.3 | 531.8 | 528.4 |
| 5° | 550.0 | 548.8 | 547.5 | 549.1 | 547.8 | 546.6 | 546.3 | 545.6 | 543.4 | 539.7 | 534.3 |
| 7.5° | 565.4 | 564.1 | 564.5 | 565.4 | 564.5 | 563.8 | 562.9 | 562.3 | 558.8 | 552.8 | 545.6 |
| 10° | 587.0 | 587.0 | 587.7 | 588.6 | 588.9 | 588.0 | 586.1 | 585.2 | 581.1 | 573.6 | 563.5 |
| 12.5° | 618.4 | 617.8 | 617.8 | 617.2 | 618.1 | 617.2 | 615.3 | 613.7 | 608.7 | 599.0 | 584.5 |
| 15° | 659.8 | 657.3 | 655.1 | 651.1 | 649.8 | 646.4 | 647.0 | 646.0 | 641.3 | 628.2 | 610.0 |
| 17.5° | 704.1 | 703.8 | 700.3 | 692.2 | 684.0 | 678.4 | 679.6 | 679.3 | 676.8 | 658.9 | 635.7 |
| 20° | 743.0 | 744.6 | 741.4 | 735.1 | 724.2 | 713.5 | 712.9 | 714.4 | 711.3 | 693.4 | 661.1 |
| 22.5° | 786.6 | 785.3 | 782.2 | 774.1 | 765.9 | 754.6 | 750.8 | 749.6 | 748.3 | 727.9 | 687.1 |
| 25° | 828.0 | 831.8 | 827.7 | 820.2 | 807.6 | 795.4 | 792.2 | 793.5 | 790.1 | 763.1 | 715.1 |
| 27.5° | 880.4 | 882.0 | 879.5 | 869.1 | 858.5 | 841.2 | 835.2 | 835.2 | 834.0 | 796.0 | 737.0 |
| 30° | 936.3 | 940.7 | 936.3 | 927.8 | 916.8 | 892.0 | 879.2 | 877.9 | 874.1 | 829.9 | 762.8 |
| 32.5° | 992.4 | 995.6 | 992.4 | 984.3 | 971.7 | 950.1 | 931.6 | 928.7 | 923.7 | 866.9 | 789.1 |
| 35° | 1042.3 | 1045.1 | 1044.5 | 1046.4 | 1036.0 | 1008.7 | 997.5 | 996.2 | 983.0 | 915.2 | 824.9 |
| 37.5° | 1096.9 | 1100.4 | 1095.7 | 1099.4 | 1095.3 | 1069.6 | 1066.2 | 1059.9 | 1041.1 | 960.7 | 862.5 |
| 40° | 1159.0 | 1162.2 | 1154.6 | 1156.2 | 1151.5 | 1137.1 | 1119.5 | 1111.0 | 1083.1 | 1010.0 | 921.8 |
| 42.5° | 1225.6 | 1232.8 | 1236.2 | 1233.4 | 1222.4 | 1214.3 | 1183.5 | 1172.8 | 1149.6 | 1098.8 | 1019.4 |
| 45° | 1321.9 | 1332.5 | 1337.6 | 1330.4 | 1325.6 | 1314.0 | 1276.4 | 1263.5 | 1251.3 | 1224.0 | 1155.6 |
| 47.5° | 1425.7 | 1435.5 | 1451.5 | 1454.6 | 1458.4 | 1449.6 | 1396.6 | 1384.0 | 1386.2 | 1383.1 | 1323.1 |
| 50° | 1508.6 | 1516.7 | 1552.8 | 1591.4 | 1623.4 | 1625.9 | 1558.1 | 1544.7 | 1556.6 | 1566.6 | 1524.9 |
| 52.5° | 1568.8 | 1576.0 | 1623.7 | 1703.4 | 1775.9 | 1829.5 | 1756.4 | 1741.1 | 1750.8 | 1773.4 | 1754.2 |
| 55° | 1617.8 | 1627.8 | 1677.7 | 1800.1 | 1946.6 | 2031.3 | 1984.5 | 1965.1 | 1961.0 | 1988.9 | 1999.9 |
| 57.5° | 1643.5 | 1646.6 | 1716.6 | 1875.7 | 2071.8 | 2229.3 | 2249.7 | 2227.7 | 2188.8 | 2204.2 | 2261.3 |
| 60° | 1584.8 | 1590.1 | 1685.8 | 1895.1 | 2170.6 | 2425.7 | 2528.0 | 2509.8 | 2427.0 | 2435.4 | 2498.5 |
| 62.5° | 1422.6 | 1430.1 | 1545.3 | 1802.6 | 2178.8 | 2556.8 | 2785.0 | 2773.3 | 2662.3 | 2616.5 | 2635.3 |
| 65° | 1141.2 | 1143.7 | 1262.9 | 1573.5 | 2016.6 | 2573.2 | 2964.1 | 2961.3 | 2826.7 | 2719.4 | 2638.7 |
| 67.5° | 650.7 | 646.4 | 805.7 | 1122.3 | 1664.2 | 2361.1 | 2975.7 | 2992.4 | 2880.0 | 2702.4 | 2419.1 |
| 70° | 282.1 | 282.7 | 356.1 | 553.8 | 1077.1 | 1908.3 | 2763.9 | 2792.5 | 2725.7 | 2420.4 | 1924.6 |
| 72.5° | 130.5 | 132.4 | 164.1 | 239.7 | 460.0 | 1183.8 | 2253.8 | 2279.5 | 2222.1 | 1937.2 | 1400.3 |
| 75° | 92.2 | 93.8 | 109.5 | 137.4 | 211.5 | 461.2 | 1507.6 | 1561.6 | 1589.5 | 1449.0 | 922.8 |
| 77.5° | 70.0 | 72.2 | 80.0 | 95.4 | 130.5 | 163.5 | 721.3 | 850.0 | 1012.5 | 901.4 | 475.3 |
| 80° | 44.6 | 44.6 | 53.0 | 63.7 | 79.7 | 85.0 | 208.3 | 246.9 | 495.4 | 371.5 | 186.7 |
| 82.5° | 30.1 | 31.1 | 36.1 | 40.5 | 45.8 | 48.3 | 89.4 | 95.4 | 143.1 | 126.4 | 76.9 |
| 85° | 16.0 | 16.6 | 18.8 | 18.5 | 22.0 | 19.1 | 37.7 | 37.3 | 52.4 | 57.4 | 29.2 |
| 87.5° | 0.0 | 0.0 | 0.3 | 0.3 | 0.6 | 0.9 | 4.1 | 4.4 | 11.0 | 17.6 | 9.7 |
| 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: P629756
 CATALOG NUMBER: GWS-SA1C-730-U-T3-W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 | 527.7 |
| 2.5° | 530.3 | 526.5 | 528.4 | 527.7 | 529.6 | 529.6 | 526.2 | 525.2 | 525.6 | 521.8 | 520.5 |
| 5° | 535.0 | 530.6 | 531.5 | 530.3 | 532.1 | 533.7 | 532.1 | 532.1 | 534.0 | 531.2 | 529.6 |
| 7.5° | 545.6 | 540.6 | 540.6 | 539.0 | 541.2 | 542.5 | 541.2 | 543.1 | 546.6 | 543.8 | 542.2 |
| 10° | 562.6 | 556.6 | 556.9 | 555.0 | 556.0 | 555.4 | 550.3 | 548.8 | 549.7 | 547.2 | 545.9 |
| 12.5° | 584.5 | 576.4 | 576.4 | 572.6 | 570.4 | 563.8 | 553.5 | 549.7 | 550.3 | 548.1 | 547.2 |
| 15° | 605.6 | 598.0 | 596.5 | 588.9 | 578.9 | 566.7 | 557.2 | 554.7 | 555.4 | 553.2 | 551.6 |
| 17.5° | 630.3 | 620.6 | 615.0 | 601.2 | 582.7 | 570.1 | 560.7 | 554.7 | 549.7 | 544.7 | 543.4 |
| 20° | 653.3 | 641.0 | 630.7 | 609.3 | 586.7 | 569.5 | 551.9 | 537.2 | 524.9 | 518.3 | 516.8 |
| 22.5° | 676.8 | 661.1 | 642.9 | 615.0 | 586.4 | 558.2 | 525.9 | 503.6 | 485.4 | 475.7 | 477.5 |
| 25° | 699.1 | 679.3 | 654.5 | 620.3 | 576.4 | 533.1 | 489.2 | 455.9 | 435.2 | 427.7 | 425.5 |
| 27.5° | 717.6 | 693.1 | 665.2 | 617.8 | 555.7 | 497.0 | 439.0 | 401.9 | 381.8 | 373.4 | 371.2 |
| 30° | 738.3 | 710.7 | 680.6 | 606.2 | 523.0 | 446.5 | 382.2 | 352.0 | 337.6 | 329.5 | 329.8 |
| 32.5° | 762.1 | 733.3 | 702.2 | 583.9 | 481.3 | 391.9 | 335.4 | 314.7 | 303.1 | 294.9 | 293.7 |
| 35° | 794.1 | 765.6 | 716.6 | 550.3 | 428.3 | 341.7 | 303.4 | 286.5 | 272.0 | 261.4 | 259.2 |
| 37.5° | 833.7 | 814.2 | 718.2 | 505.5 | 371.5 | 307.2 | 280.5 | 262.3 | 244.7 | 230.6 | 229.0 |
| 40° | 901.4 | 879.2 | 705.3 | 449.3 | 323.2 | 284.9 | 261.4 | 240.3 | 219.9 | 204.3 | 202.1 |
| 42.5° | 998.1 | 952.3 | 677.7 | 385.9 | 286.8 | 267.3 | 243.2 | 216.5 | 195.8 | 184.8 | 183.2 |
| 45° | 1121.1 | 1033.8 | 636.3 | 326.3 | 259.8 | 250.1 | 224.0 | 196.1 | 185.1 | 177.3 | 175.7 |
| 47.5° | 1271.7 | 1128.9 | 588.6 | 279.9 | 238.8 | 234.4 | 204.6 | 189.2 | 179.5 | 172.9 | 171.3 |
| 50° | 1451.8 | 1250.0 | 549.4 | 243.5 | 219.9 | 216.2 | 198.3 | 185.1 | 177.3 | 171.9 | 170.7 |
| 52.5° | 1657.3 | 1384.6 | 530.3 | 217.4 | 203.6 | 199.9 | 196.1 | 184.2 | 177.6 | 173.5 | 171.9 |
| 55° | 1870.7 | 1526.5 | 512.4 | 197.4 | 189.8 | 192.0 | 196.4 | 187.3 | 182.3 | 177.0 | 175.4 |
| 57.5° | 2076.8 | 1659.5 | 468.4 | 181.7 | 179.8 | 188.3 | 198.0 | 190.5 | 184.5 | 179.2 | 177.3 |
| 60° | 2218.9 | 1732.3 | 394.1 | 169.1 | 172.3 | 183.6 | 193.9 | 185.7 | 178.2 | 176.0 | 175.1 |
| 62.5° | 2257.2 | 1723.5 | 305.9 | 156.3 | 163.2 | 173.2 | 183.2 | 177.9 | 170.1 | 173.5 | 173.8 |
| 65° | 2167.8 | 1629.4 | 229.7 | 143.7 | 151.2 | 159.7 | 172.3 | 170.1 | 167.2 | 176.6 | 177.0 |
| 67.5° | 1914.6 | 1398.1 | 175.1 | 132.7 | 139.0 | 149.4 | 168.8 | 177.9 | 178.5 | 190.5 | 189.2 |
| 70° | 1448.6 | 1044.5 | 137.1 | 122.4 | 129.6 | 149.4 | 179.8 | 183.9 | 176.3 | 187.3 | 184.8 |
| 72.5° | 1001.5 | 689.3 | 116.7 | 113.3 | 118.0 | 142.4 | 179.5 | 179.5 | 171.3 | 171.3 | 166.6 |
| 75° | 622.2 | 405.4 | 101.7 | 101.7 | 101.7 | 124.6 | 174.5 | 165.4 | 150.9 | 144.3 | 140.6 |
| 77.5° | 307.2 | 197.0 | 85.3 | 88.5 | 85.0 | 104.2 | 142.4 | 135.2 | 126.4 | 119.5 | 117.0 |
| 80° | 131.2 | 98.5 | 69.0 | 72.5 | 68.4 | 78.4 | 113.0 | 111.4 | 102.9 | 93.8 | 91.0 |
| 82.5° | 60.2 | 50.8 | 55.2 | 56.8 | 49.9 | 59.0 | 82.5 | 82.5 | 77.8 | 65.3 | 60.6 |
| 85° | 25.7 | 27.0 | 38.3 | 38.3 | 31.4 | 33.3 | 44.2 | 42.0 | 37.7 | 30.7 | 28.2 |
| 87.5° | 8.8 | 13.2 | 19.5 | 16.9 | 6.6 | 2.8 | 1.6 | 0.6 | 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 |

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



LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-2-R4

Test Date: 10/03/2019

Luminaire Tested: SA1C-730-U-5WQ

Data in this report applies to families of products SA1C-730-U-5WQ .

Test Information

Test Method: LM-79-2008
 Report Number: SP1-1908-441-2-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-730-U-5WQ**
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

THIS IS A REVISION OF SP1-1908-441-2-R3. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. (1) 70 CRI, 3000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

Spectral Parameters

CCT (K): 2993
 CIE u': 0.2508
 CIE v': 0.5215
 Duv: 0.0000
 CIE x: 0.4374
 CIE y: 0.4043
 CIE z: 0.1583
 Peak Wavelength (nm): 593
 Dominant Wavelength (nm): 582
 Purity: 53

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 71.8 | | |
| R1: | 67.5 | R9: | -38.3 |
| R2: | 82.9 | R10: | 62.5 |
| R3: | 94.7 | R11: | 63.7 |
| R4: | 67.7 | R12: | 57.8 |
| R5: | 67.9 | R13: | 70.4 |
| R6: | 77.6 | R14: | 97.3 |
| R7: | 76.0 | | |
| R8: | 40.5 | | |

Rf: 75.7
 Rg: 93.9



Test Conditions

Stabilization Time: 53M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0./44%
 Sphere Temperature (°C): 25.7

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| 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 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength



#####

| λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

REPORT NUMBER: SP1-1908-441-2-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 8494.8

S/P: 1.23

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

REPORT NUMBER: SP1-1908-441-2-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 3101.5 M/P: 0.45

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

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Summary

$R_f = 75.7$
 $R_g = 93.9$
 CIE $R_a = 71.8$
 $R_9 = -38.3$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 67 | CES51 = 87 | CES76 = 63 |
| CES02 = 63 | CES27 = 88 | CES52 = 86 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 78 | CES78 = 67 |
| CES04 = 71 | CES29 = 66 | CES54 = 84 | CES79 = 87 |
| CES05 = 49 | CES30 = 73 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 70 | CES56 = 75 | CES81 = 71 |
| CES07 = 41 | CES32 = 65 | CES57 = 74 | CES82 = 94 |
| CES08 = 40 | CES33 = 73 | CES58 = 76 | CES83 = 90 |
| CES09 = 29 | CES34 = 79 | CES59 = 85 | CES84 = 89 |
| CES10 = 76 | CES35 = 89 | CES60 = 93 | CES85 = 77 |
| CES11 = 59 | CES36 = 97 | CES61 = 84 | CES86 = 61 |
| CES12 = 65 | CES37 = 87 | CES62 = 91 | CES87 = 78 |
| CES13 = 43 | CES38 = 81 | CES63 = 77 | CES88 = 77 |
| CES14 = 74 | CES39 = 95 | CES64 = 72 | CES89 = 67 |
| CES15 = 71 | CES40 = 92 | CES65 = 68 | CES90 = 76 |
| CES16 = 47 | CES41 = 88 | CES66 = 69 | CES91 = 89 |
| CES17 = 50 | CES42 = 89 | CES67 = 67 | CES92 = 58 |
| CES18 = 56 | CES43 = 79 | CES68 = 72 | CES93 = 74 |
| CES19 = 73 | CES44 = 99 | CES69 = 81 | CES94 = 49 |
| CES20 = 66 | CES45 = 85 | CES70 = 66 | CES95 = 68 |
| CES21 = 87 | CES46 = 80 | CES71 = 67 | CES96 = 76 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 69 | CES73 = 59 | CES98 = 75 |
| CES24 = 91 | CES49 = 80 | CES74 = 95 | CES99 = 62 |
| CES25 = 73 | CES50 = 87 | CES75 = 69 | |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)