

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: P324860

Luminaire Tested: **GLEON-SA6D-750-U-AFL-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P324860
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-30)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA6D-750-U-AFL-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(6) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37988 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G3

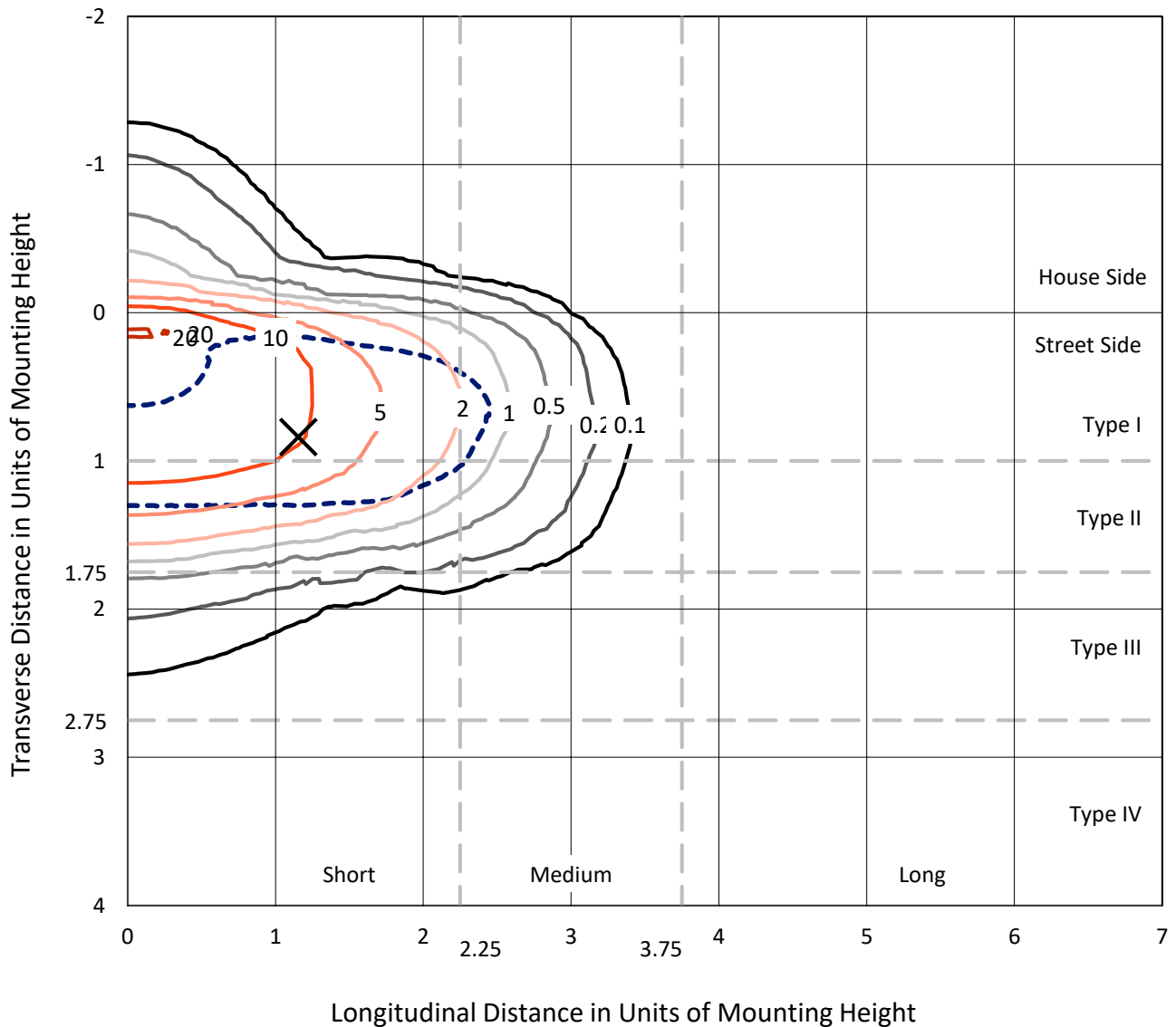
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P324860
 CATALOG NUMBER: GLEON-SA6D-750-U-AFL-HSS

Iso-Footcandle Lines of Horizontal Illumination

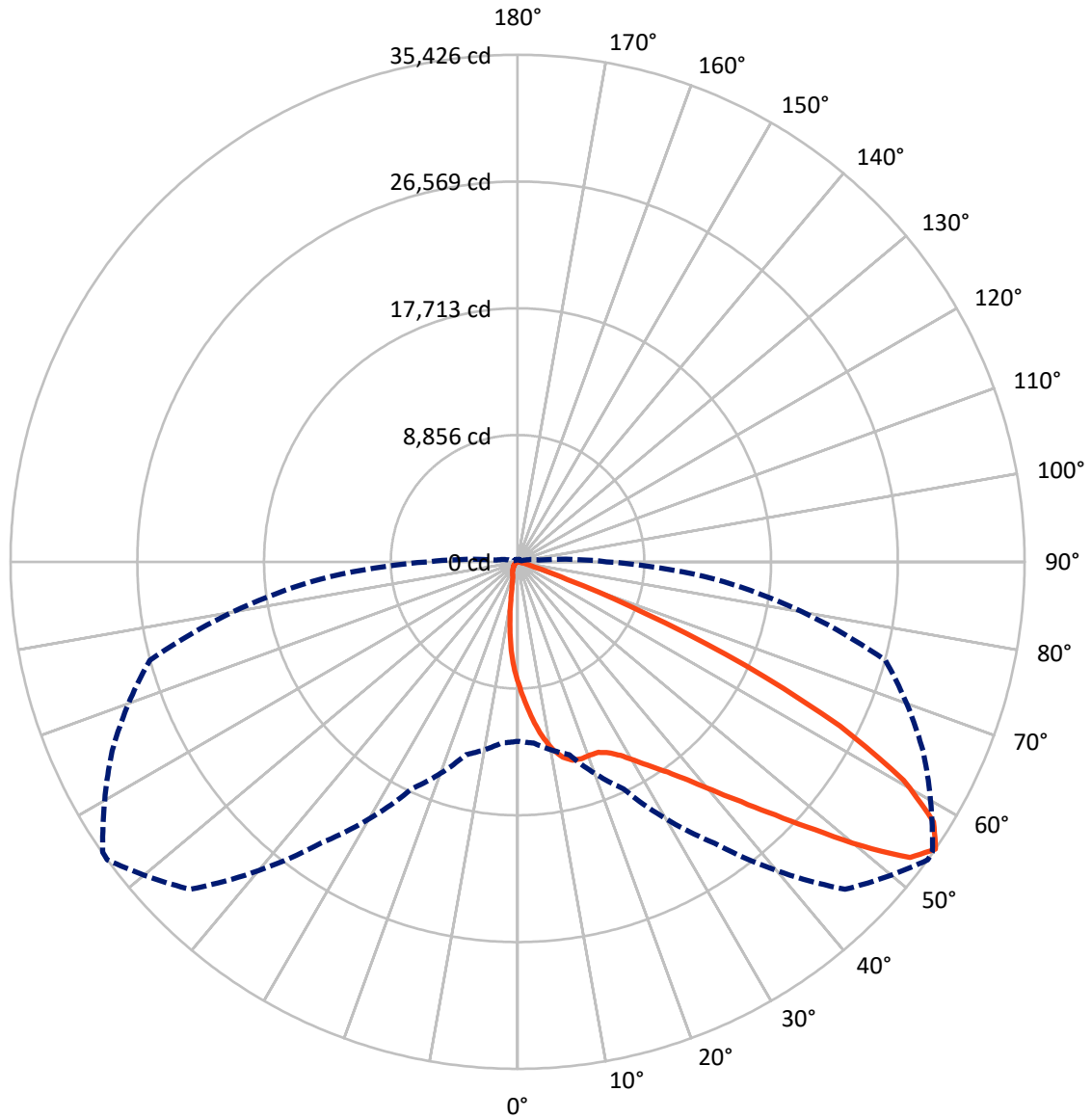
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 20.9 fc
 Type II - Short - N/A

REPORT NUMBER: P324860
CATALOG NUMBER: GLEON-SA6D-750-U-AFL-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

REPORT NUMBER: P324860
 CATALOG NUMBER: GLEON-SA6D-750-U-AFL-HSS

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1895.3 | 0.0 | 1895.3 |
| | % Fixture | 5.0 | 0.0 | 5.0 |
| Street Side | Lumens | 36092.7 | 0.0 | 36092.7 |
| | % Fixture | 95.0 | 0.0 | 95.0 |
| Total | Lumens | 37988.0 | 0.0 | 37988.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 783.5 | 2.1 |
| 10°-20° | 2148.7 | 5.7 |
| 20°-30° | 3668.5 | 9.7 |
| 30°-40° | 5887.4 | 15.5 |
| 40°-50° | 9408.0 | 24.8 |
| 50°-60° | 10081.0 | 26.5 |
| 60°-70° | 5175.9 | 13.6 |
| 70°-80° | 784.0 | 2.1 |
| 80°-90° | 51.1 | 0.1 |
| 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° | 37988.0 | 100.0 |
| 0°-180° | 37988.0 | 100.0 |

Coefficient of Utilization



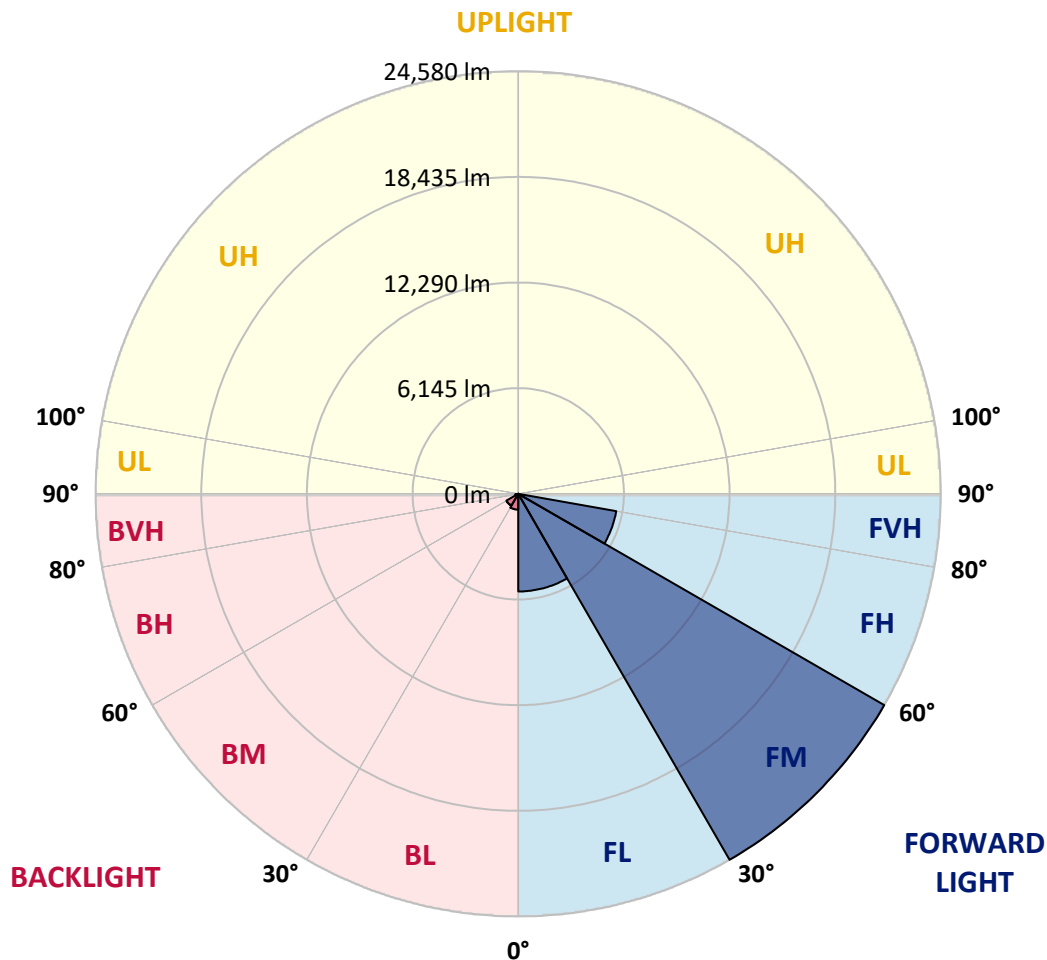
REPORT NUMBER: P324860
 CATALOG NUMBER: GLEON-SA6D-750-U-AFL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 5678.6 | 14.9 | | | |
| FM (30°-60°) | 24579.9 | 64.7 | | | |
| FH (60°-80°) | 5785.2 | 15.2 | | | G3/7500 |
| FVH (80°-90°) | 49.0 | 0.1 | | | G1/100 |
| BL (0°-30°) | 922.1 | 2.4 | B2/1000 | | |
| BM (30°-60°) | 796.5 | 2.1 | B1/1000 | | |
| BH (60°-80°) | 174.7 | 0.5 | B1/500 | | G1/500 |
| BVH (80°-90°) | 2.1 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type II Short





REPORT NUMBER: P324860

CATALOG NUMBER: GLEON-SA6D-750-U-AFL-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 54° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 |
| 2.5° | 10676.6 | 10517.4 | 10522.4 | 10450.2 | 10186.0 | 9979.3 | 9764.4 | 9713.6 | 9378.9 | 9027.8 | 8689.9 |
| 5° | 12522.2 | 12405.7 | 12377.8 | 12238.4 | 11870.9 | 11482.1 | 11065.4 | 10968.6 | 10314.0 | 9595.5 | 8888.4 |
| 7.5° | 13470.4 | 13472.0 | 13449.1 | 13398.2 | 13168.5 | 12791.2 | 12282.6 | 12180.9 | 11290.1 | 10212.3 | 9095.1 |
| 10° | 13194.8 | 13257.1 | 13385.1 | 13554.1 | 13729.6 | 13682.0 | 13299.8 | 13207.9 | 12240.0 | 10865.2 | 9324.8 |
| 12.5° | 12551.7 | 12559.9 | 12702.6 | 12979.9 | 13485.2 | 14003.6 | 14010.1 | 13979.0 | 13147.2 | 11547.7 | 9577.4 |
| 15° | 12231.8 | 12263.0 | 12315.5 | 12494.3 | 12973.3 | 13803.4 | 14397.3 | 14441.6 | 13979.0 | 12272.8 | 9846.5 |
| 17.5° | 12441.8 | 12486.1 | 12441.8 | 12463.1 | 12740.4 | 13486.8 | 14464.6 | 14577.7 | 14705.7 | 12989.7 | 10100.7 |
| 20° | 13011.0 | 13052.1 | 12973.3 | 12886.4 | 12940.5 | 13394.9 | 14417.0 | 14569.5 | 15275.0 | 13626.2 | 10314.0 |
| 22.5° | 13778.8 | 13795.2 | 13675.5 | 13532.7 | 13493.4 | 13706.6 | 14456.3 | 14613.8 | 15731.0 | 14202.1 | 10448.5 |
| 25° | 14623.7 | 14638.4 | 14489.2 | 14325.1 | 14231.6 | 14318.5 | 14779.5 | 14897.7 | 16133.0 | 14751.6 | 10525.6 |
| 27.5° | 15544.0 | 15557.1 | 15370.1 | 15168.3 | 15060.1 | 15063.3 | 15312.7 | 15439.0 | 16561.1 | 15378.3 | 10588.0 |
| 30° | 16516.9 | 16510.3 | 16338.0 | 16057.5 | 15919.7 | 15916.4 | 16080.5 | 16208.4 | 17181.3 | 16182.2 | 10673.3 |
| 32.5° | 17609.4 | 17596.3 | 17351.9 | 17004.1 | 16848.2 | 16871.2 | 17017.2 | 17091.0 | 17950.7 | 17038.5 | 10825.9 |
| 35° | 19048.2 | 19010.5 | 18641.3 | 18209.9 | 17922.8 | 17914.6 | 18037.6 | 18096.7 | 18931.7 | 18075.4 | 11080.1 |
| 37.5° | 20915.1 | 20880.7 | 20380.3 | 19753.6 | 19350.0 | 19199.1 | 19345.1 | 19420.6 | 20331.1 | 19405.8 | 11488.6 |
| 40° | 22755.8 | 22721.3 | 22424.4 | 21850.2 | 21228.5 | 20865.9 | 20980.7 | 21061.1 | 22078.2 | 21020.1 | 12003.8 |
| 42.5° | 24025.6 | 24055.1 | 24158.4 | 24206.0 | 23623.6 | 22862.4 | 22914.9 | 22998.6 | 23914.0 | 22745.9 | 12592.7 |
| 45° | 24360.2 | 24424.2 | 25008.2 | 26155.0 | 26373.2 | 25779.3 | 25229.7 | 25275.6 | 25779.3 | 24471.8 | 13181.7 |
| 47.5° | 23354.6 | 23472.7 | 24599.7 | 26732.4 | 28579.7 | 28999.6 | 27959.5 | 27898.8 | 27569.1 | 25867.9 | 13600.0 |
| 50° | 21069.3 | 21177.6 | 22637.7 | 25792.4 | 29249.0 | 32074.0 | 31230.8 | 31051.9 | 29139.1 | 26702.9 | 13747.6 |
| 52.5° | 17762.0 | 17893.3 | 19079.4 | 22832.9 | 27987.4 | 33445.5 | 34328.1 | 34178.8 | 30290.7 | 26768.5 | 13772.2 |
| 55° | 12543.5 | 12702.6 | 13957.6 | 17499.5 | 23989.5 | 32354.5 | 35425.6 | 35381.3 | 31247.2 | 26594.6 | 13824.7 |
| 57.5° | 7049.4 | 7164.2 | 8517.6 | 11217.9 | 17570.1 | 28181.0 | 34278.9 | 34572.5 | 31824.6 | 26292.8 | 13903.5 |
| 60° | 3130.1 | 3161.3 | 3861.8 | 5584.4 | 10286.1 | 21536.9 | 30996.2 | 31491.6 | 31329.2 | 25889.2 | 14036.4 |
| 62.5° | 1735.7 | 1709.4 | 1709.4 | 2321.3 | 4470.4 | 13332.6 | 25275.6 | 26094.3 | 29214.6 | 25411.8 | 14042.9 |
| 65° | 1360.0 | 1335.4 | 1264.8 | 1274.7 | 1702.9 | 5917.4 | 17502.8 | 18958.0 | 25198.5 | 24012.4 | 13570.5 |
| 67.5° | 1153.3 | 1132.0 | 1061.4 | 1033.5 | 1058.1 | 1952.2 | 9616.8 | 11127.7 | 19120.4 | 20375.4 | 11754.4 |
| 70° | 974.5 | 959.7 | 923.6 | 889.2 | 826.8 | 964.6 | 3679.7 | 4706.7 | 11782.3 | 13554.1 | 8023.8 |
| 72.5° | 784.2 | 777.6 | 790.7 | 761.2 | 685.7 | 643.1 | 1258.3 | 1524.1 | 5292.3 | 6048.6 | 3305.7 |
| 75° | 675.9 | 672.6 | 679.2 | 649.6 | 564.3 | 447.9 | 639.8 | 698.9 | 1492.9 | 1479.8 | 669.3 |
| 77.5° | 439.7 | 444.6 | 562.7 | 549.6 | 485.6 | 298.6 | 331.4 | 357.6 | 452.8 | 339.6 | 203.4 |
| 80° | 280.5 | 277.2 | 285.5 | 456.1 | 436.4 | 228.0 | 165.7 | 173.9 | 218.2 | 167.3 | 98.4 |
| 82.5° | 170.6 | 167.3 | 187.0 | 213.3 | 219.8 | 159.1 | 101.7 | 103.4 | 136.2 | 108.3 | 52.5 |
| 85° | 14.8 | 19.7 | 113.2 | 105.0 | 75.5 | 49.2 | 49.2 | 52.5 | 72.2 | 64.0 | 29.5 |
| 87.5° | 0.0 | 0.0 | 19.7 | 29.5 | 16.4 | 18.0 | 18.0 | 19.7 | 27.9 | 27.9 | 14.8 |
| 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: P324860

CATALOG NUMBER: GLEON-SA6D-750-U-AFL-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 | 8507.8 |
| 2.5° | 8514.3 | 8343.7 | 7999.2 | 7667.8 | 7387.3 | 7116.6 | 6808.2 | 6503.1 | 6360.3 | 6302.9 | 6243.9 |
| 5° | 8529.1 | 8178.0 | 7467.7 | 6752.4 | 6010.9 | 5343.2 | 4773.9 | 4189.9 | 3897.9 | 3769.9 | 3710.9 |
| 7.5° | 8548.8 | 8014.0 | 6865.6 | 5664.7 | 4470.4 | 3564.9 | 2774.1 | 2265.6 | 2045.7 | 2011.3 | 1926.0 |
| 10° | 8552.1 | 7815.5 | 6166.8 | 4463.9 | 2997.2 | 2149.1 | 1653.7 | 1391.2 | 1294.4 | 1278.0 | 1250.1 |
| 12.5° | 8558.6 | 7580.9 | 5390.8 | 3305.7 | 1998.2 | 1437.1 | 1195.9 | 1109.0 | 1082.7 | 1081.1 | 1081.1 |
| 15° | 8578.3 | 7334.8 | 4585.3 | 2382.0 | 1435.5 | 1138.5 | 1049.9 | 1015.5 | 1005.6 | 1010.6 | 1008.9 |
| 17.5° | 8578.3 | 7044.4 | 3794.5 | 1775.1 | 1159.9 | 1023.7 | 974.5 | 951.5 | 948.2 | 953.1 | 954.8 |
| 20° | 8516.0 | 6691.7 | 3069.4 | 1381.3 | 1028.6 | 949.9 | 905.6 | 884.2 | 876.0 | 879.3 | 881.0 |
| 22.5° | 8366.7 | 6258.6 | 2478.8 | 1143.4 | 941.7 | 882.6 | 835.0 | 802.2 | 789.1 | 790.7 | 790.7 |
| 25° | 8133.7 | 5745.1 | 1939.1 | 989.2 | 871.1 | 810.4 | 754.6 | 716.9 | 708.7 | 707.1 | 710.3 |
| 27.5° | 7835.2 | 5177.5 | 1543.7 | 871.1 | 787.5 | 730.0 | 674.3 | 643.1 | 636.5 | 638.2 | 639.8 |
| 30° | 7541.5 | 4588.6 | 1217.3 | 771.0 | 693.9 | 639.8 | 597.2 | 582.4 | 582.4 | 587.3 | 589.0 |
| 32.5° | 7272.5 | 4022.6 | 963.0 | 684.1 | 610.3 | 561.1 | 536.5 | 534.8 | 543.0 | 546.3 | 547.9 |
| 35° | 7041.2 | 3499.2 | 797.3 | 616.8 | 544.7 | 502.0 | 493.8 | 500.4 | 510.2 | 516.8 | 518.4 |
| 37.5° | 6877.1 | 3031.7 | 697.2 | 561.1 | 493.8 | 459.3 | 457.7 | 470.8 | 484.0 | 498.7 | 502.0 |
| 40° | 6808.2 | 2636.3 | 628.3 | 511.8 | 452.8 | 426.5 | 421.6 | 439.7 | 464.3 | 485.6 | 488.9 |
| 42.5° | 6750.8 | 2313.1 | 569.3 | 464.3 | 420.0 | 382.2 | 380.6 | 403.6 | 433.1 | 454.4 | 459.3 |
| 45° | 6701.6 | 2053.9 | 515.1 | 413.4 | 377.3 | 328.1 | 333.0 | 362.6 | 385.5 | 408.5 | 413.4 |
| 47.5° | 6599.9 | 1840.7 | 456.1 | 359.3 | 311.7 | 280.5 | 290.4 | 316.6 | 334.7 | 369.1 | 374.0 |
| 50° | 6417.8 | 1666.8 | 395.4 | 293.7 | 254.3 | 242.8 | 257.6 | 275.6 | 298.6 | 328.1 | 331.4 |
| 52.5° | 6294.7 | 1535.5 | 342.9 | 246.1 | 210.0 | 213.3 | 228.0 | 234.6 | 247.7 | 259.2 | 255.9 |
| 55° | 6224.2 | 1463.4 | 300.2 | 213.3 | 178.8 | 188.7 | 191.9 | 183.7 | 177.2 | 165.7 | 160.8 |
| 57.5° | 6216.0 | 1397.7 | 267.4 | 185.4 | 157.5 | 162.4 | 150.9 | 123.0 | 100.1 | 86.9 | 83.7 |
| 60° | 6202.8 | 1317.3 | 241.2 | 155.9 | 139.4 | 132.9 | 108.3 | 67.3 | 47.6 | 44.3 | 44.3 |
| 62.5° | 6060.1 | 1192.7 | 221.5 | 131.2 | 118.1 | 100.1 | 62.3 | 31.2 | 26.2 | 27.9 | 27.9 |
| 65° | 5605.7 | 1018.8 | 201.8 | 106.6 | 93.5 | 72.2 | 31.2 | 18.0 | 9.8 | 11.5 | 11.5 |
| 67.5° | 4765.7 | 812.1 | 180.5 | 82.0 | 70.5 | 45.9 | 18.0 | 8.2 | 0.0 | 0.0 | 0.0 |
| 70° | 3190.8 | 503.6 | 152.6 | 57.4 | 45.9 | 27.9 | 13.1 | 1.6 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1223.8 | 272.3 | 123.0 | 34.5 | 29.5 | 19.7 | 8.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 275.6 | 178.8 | 85.3 | 24.6 | 21.3 | 13.1 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 105.0 | 129.6 | 49.2 | 16.4 | 14.8 | 8.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 50.9 | 77.1 | 23.0 | 9.8 | 8.2 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 26.2 | 29.5 | 9.8 | 4.9 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 14.8 | 14.8 | 4.9 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 8.2 | 4.9 | 1.6 | 1.6 | 0.0 | 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 |

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: SP1-1908-441-4-R4

Test Date: 10/02/2019

Luminaire Tested: SA1C-750-U-5WQ

Data in this report applies to families of products SA1C-760-U-5WQ .

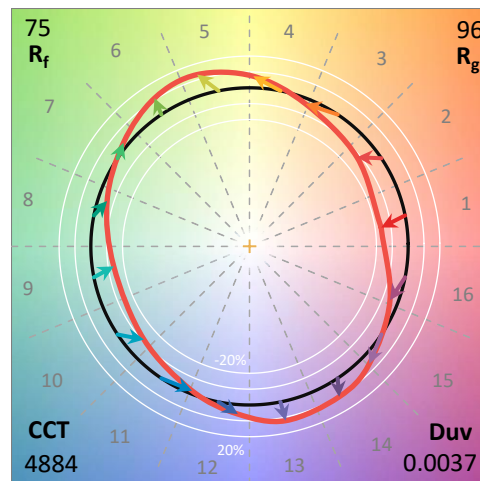
Test Information

Test Method: LM-79-2008
 Report Number: SP1-1908-441-4-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-750-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): | 4884 | CRI (Ra): | 73.5 | R9: | -28.4 |
| CIE u': | 0.2101 | R1: | 70.5 | R10: | 48.6 |
| CIE v': | 0.4904 | R2: | 77.7 | R11: | 73.2 |
| Duv: | 0.0037 | R3: | 84.6 | R12: | 50.7 |
| CIE x: | 0.3493 | R4: | 74.7 | R13: | 71.2 |
| CIE y: | 0.3624 | R5: | 71.9 | R14: | 91.4 |
| CIE z: | 0.2884 | R6: | 70.7 | | |
| Peak Wavelength (nm): | 444 | R7: | 81.2 | | |
| Dominant Wavelength (nm): | 571 | R8: | 56.9 | | |
| Purity: | 13.7 | | | | |
| Rf: | 74.9 | | | | |
| Rg: | 96.3 | | | | |



Test Conditions

Stabilization Time: 240M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0./44%
 Sphere Temperature (°C): 25.7

REPORT NUMBER: SP1-1908-441-4-R4

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

REPORT NUMBER: SP1-1908-441-4-R4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-4-R4

Photopic Flux vs. Wavelength



#####

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

REPORT NUMBER: SP1-1908-441-4-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 13493.5 S/P: 1.77

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

REPORT NUMBER: SP1-1908-441-4-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 5378.9

M/P: 0.71

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

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TM-30-18

Summary

$R_f = 74.9$
 $R_g = 96.3$
 CIE $R_a = 73.5$
 $R_g = -28.4$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 61 | CES51 = 90 | CES76 = 52 |
| CES02 = 60 | CES27 = 84 | CES52 = 91 | CES77 = 71 |
| CES03 = 30 | CES28 = 81 | CES53 = 79 | CES78 = 54 |
| CES04 = 69 | CES29 = 58 | CES54 = 83 | CES79 = 80 |
| CES05 = 46 | CES30 = 67 | CES55 = 83 | CES80 = 77 |
| CES06 = 50 | CES31 = 63 | CES56 = 73 | CES81 = 77 |
| CES07 = 39 | CES32 = 59 | CES57 = 72 | CES82 = 90 |
| CES08 = 38 | CES33 = 69 | CES58 = 73 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 88 | CES84 = 88 |
| CES10 = 73 | CES35 = 83 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 95 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 78 | CES62 = 85 | CES87 = 78 |
| CES13 = 41 | CES38 = 76 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 93 | CES64 = 74 | CES89 = 75 |
| CES15 = 70 | CES40 = 86 | CES65 = 67 | CES90 = 77 |
| CES16 = 46 | CES41 = 87 | CES66 = 69 | CES91 = 89 |
| CES17 = 49 | CES42 = 78 | CES67 = 67 | CES92 = 66 |
| CES18 = 55 | CES43 = 75 | CES68 = 73 | CES93 = 80 |
| CES19 = 71 | CES44 = 99 | CES69 = 81 | CES94 = 57 |
| CES20 = 64 | CES45 = 83 | CES70 = 63 | CES95 = 71 |
| CES21 = 85 | CES46 = 81 | CES71 = 60 | CES96 = 78 |
| CES22 = 77 | CES47 = 80 | CES72 = 86 | CES97 = 85 |
| CES23 = 91 | CES48 = 72 | CES73 = 53 | CES98 = 75 |
| CES24 = 90 | CES49 = 81 | CES74 = 96 | CES99 = 62 |
| CES25 = 71 | CES50 = 89 | CES75 = 58 | |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)