

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: P629340

Luminaire Tested: GWS-SA1B-740-U-RW-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P629340
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-49)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1B-740-U-RW-W
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: (16) 4000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3689.5 lumens
Efficiency: N/A
Efficacy: 147.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

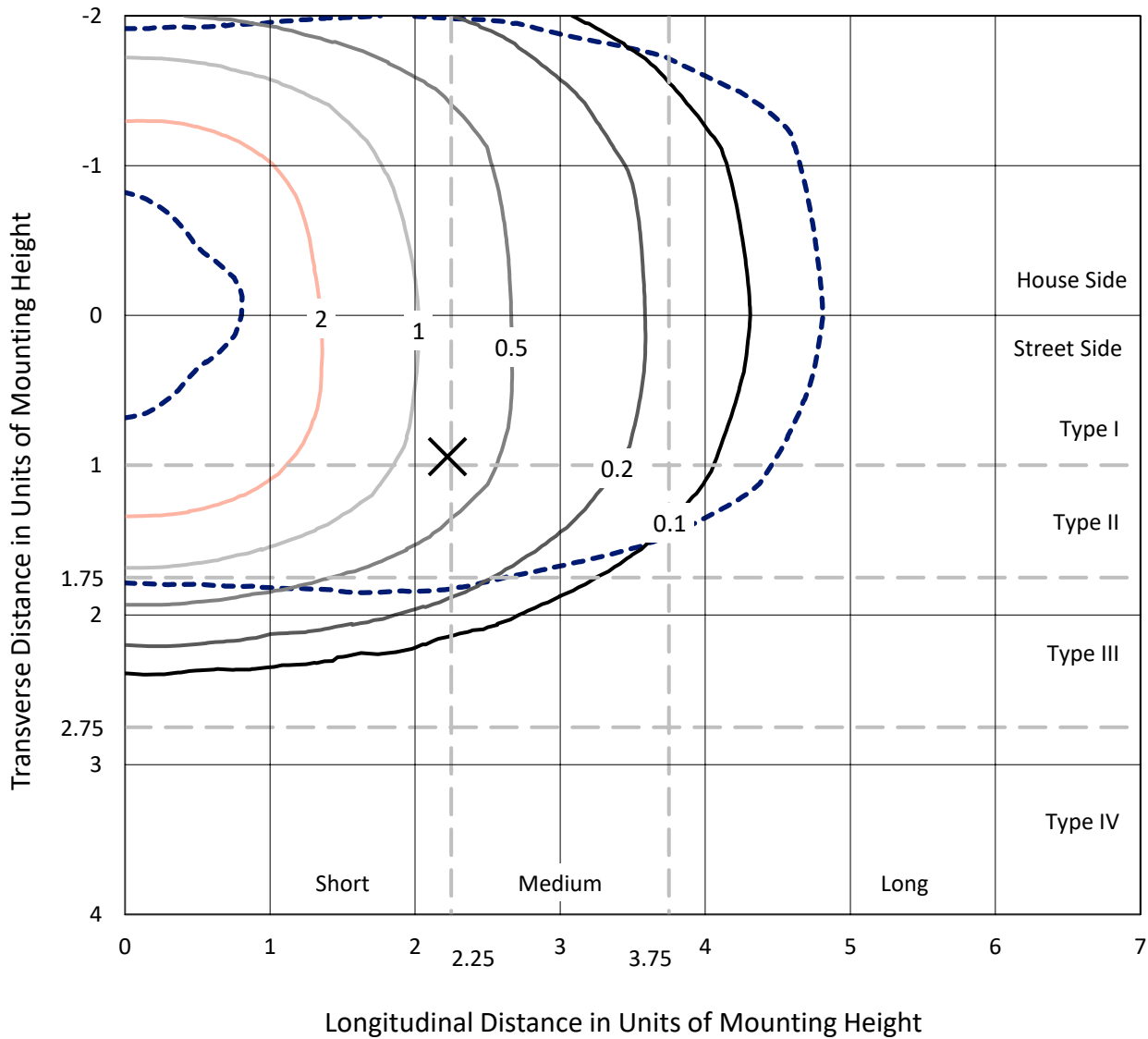
Input Watts (W): 25
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P629340
 CATALOG NUMBER: GWS-SA1B-740-U-RW-W

Iso-Footcandle Lines of Horizontal Illumination

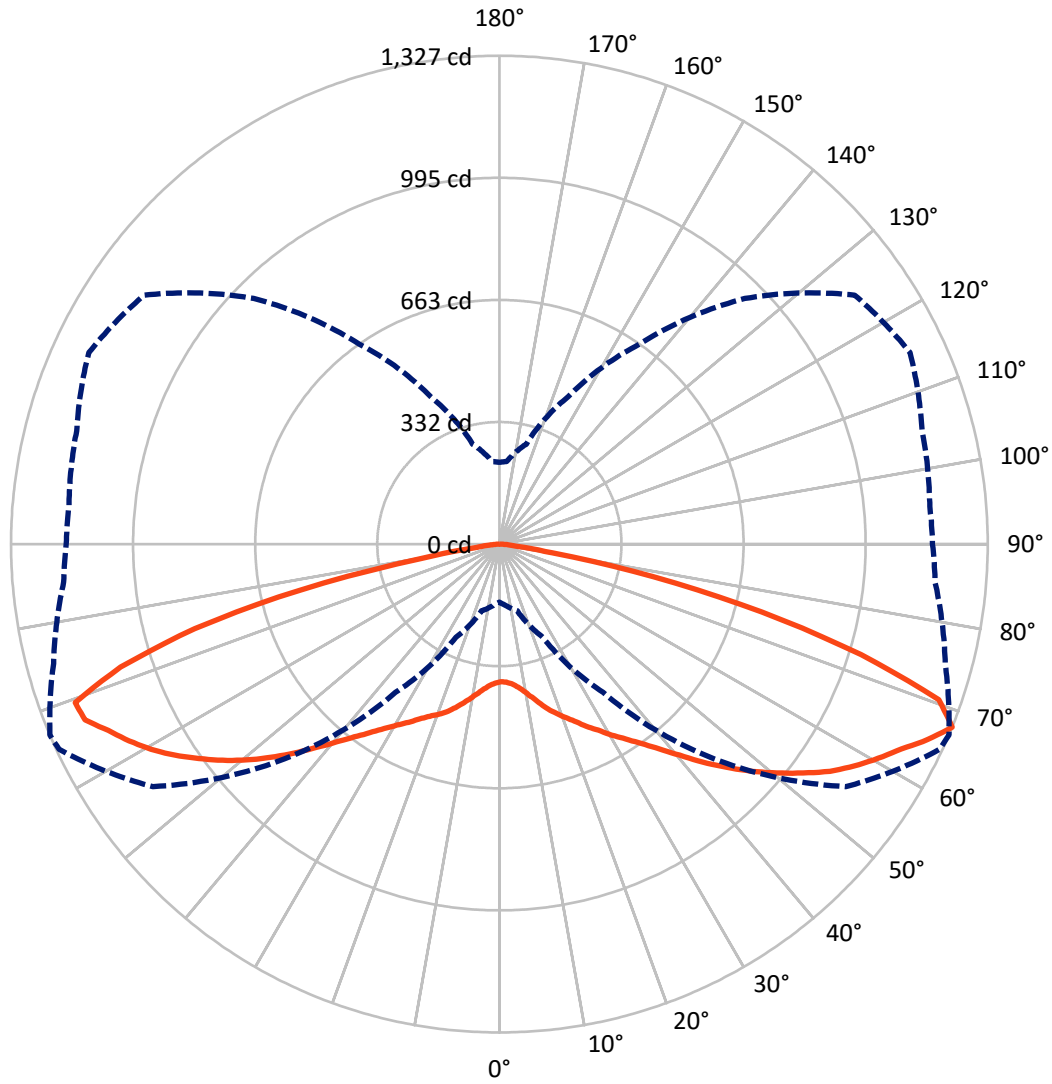
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.3 fc
 Type III - Short - N/A

REPORT NUMBER: P629340
CATALOG NUMBER: GWS-SA1B-740-U-RW-W

Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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CATALOG NUMBER: GWS-SA1B-740-U-RW-W

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1824.4 | 0.0 | 1824.4 |
| | % Fixture | 49.4 | 0.0 | 49.4 |
| Street Side | Lumens | 1865.1 | 0.0 | 1865.1 |
| | % Fixture | 50.6 | 0.0 | 50.6 |
| Total | Lumens | 3689.5 | 0.0 | 3689.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 36.7 | 1.0 |
| 10°-20° | 123.8 | 3.4 |
| 20°-30° | 243.0 | 6.6 |
| 30°-40° | 413.9 | 11.2 |
| 40°-50° | 664.7 | 18.0 |
| 50°-60° | 903.1 | 24.5 |
| 60°-70° | 863.9 | 23.4 |
| 70°-80° | 410.7 | 11.1 |
| 80°-90° | 29.8 | 0.8 |
| 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° | 3689.5 | 100.0 |
| 0°-180° | 3689.5 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P629340

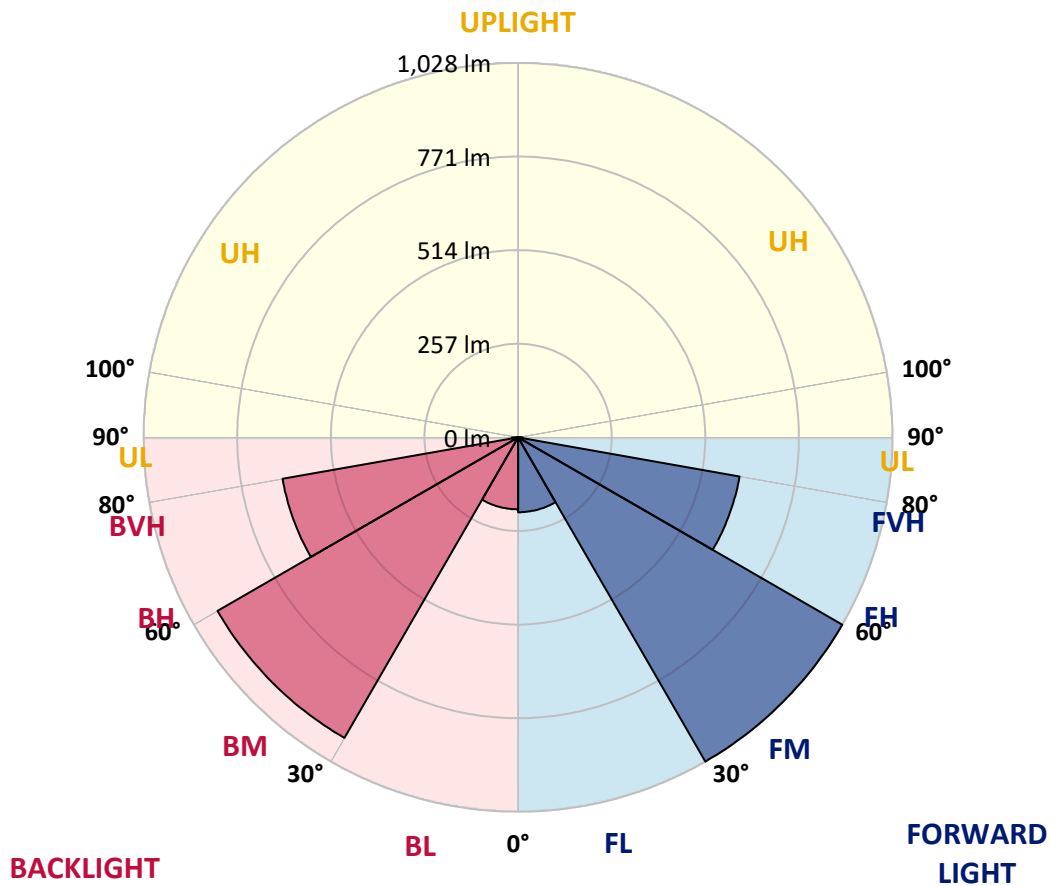
CATALOG NUMBER: GWS-SA1B-740-U-RW-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 205.7 | 5.6 | | | |
| FM (30°-60°) | 1028.3 | 27.9 | | | |
| FH (60°-80°) | 617.7 | 16.7 | | | G0/660 |
| FVH (80°-90°) | 13.4 | 0.4 | | | G1/100 |
| BL (0°-30°) | 197.7 | 5.4 | B1/500 | | |
| BM (30°-60°) | 953.4 | 25.8 | B1/1000 | | |
| BH (60°-80°) | 656.9 | 17.8 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 16.4 | 0.4 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type III Short





REPORT NUMBER: P629340
 CATALOG NUMBER: GWS-SA1B-740-U-RW-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 |
| 2.5° | 365.9 | 366.4 | 367.2 | 368.7 | 370.2 | 372.6 | 374.9 | 374.6 | 375.6 | 376.4 | 377.2 |
| 5° | 363.8 | 364.3 | 365.6 | 367.7 | 370.0 | 373.8 | 378.7 | 380.8 | 382.3 | 385.1 | 387.7 |
| 7.5° | 368.2 | 369.2 | 371.0 | 373.8 | 377.4 | 382.3 | 389.0 | 392.6 | 394.9 | 400.0 | 404.4 |
| 10° | 374.1 | 375.4 | 379.0 | 384.4 | 389.8 | 397.2 | 405.7 | 411.1 | 412.6 | 419.3 | 427.5 |
| 12.5° | 379.7 | 381.3 | 387.2 | 397.0 | 406.7 | 416.7 | 426.8 | 433.4 | 434.0 | 443.0 | 452.2 |
| 15° | 388.7 | 390.0 | 398.0 | 410.6 | 425.5 | 439.4 | 451.7 | 456.3 | 458.4 | 464.8 | 476.4 |
| 17.5° | 408.5 | 410.1 | 420.3 | 434.0 | 449.6 | 464.3 | 476.6 | 480.5 | 480.5 | 485.9 | 495.4 |
| 20° | 429.9 | 431.4 | 445.0 | 462.5 | 481.5 | 496.4 | 505.9 | 502.3 | 501.0 | 502.6 | 509.2 |
| 22.5° | 453.7 | 456.6 | 469.7 | 490.0 | 513.4 | 531.6 | 536.5 | 525.7 | 522.1 | 518.5 | 520.0 |
| 25° | 484.3 | 487.7 | 500.5 | 522.1 | 545.0 | 564.2 | 567.1 | 550.4 | 548.3 | 535.7 | 531.1 |
| 27.5° | 519.5 | 522.1 | 538.0 | 559.3 | 580.7 | 596.9 | 599.9 | 579.4 | 572.4 | 555.0 | 544.2 |
| 30° | 565.0 | 567.3 | 581.2 | 602.3 | 620.8 | 632.1 | 635.9 | 607.6 | 602.3 | 575.5 | 558.8 |
| 32.5° | 614.6 | 615.6 | 629.7 | 650.0 | 666.5 | 677.3 | 671.9 | 639.0 | 631.0 | 601.0 | 578.1 |
| 35° | 671.4 | 671.4 | 689.6 | 706.1 | 719.2 | 722.2 | 712.0 | 674.5 | 665.2 | 632.6 | 604.1 |
| 37.5° | 727.1 | 728.7 | 745.6 | 765.2 | 776.7 | 776.2 | 757.4 | 716.3 | 705.8 | 670.3 | 638.7 |
| 40° | 787.5 | 790.8 | 807.8 | 829.6 | 840.7 | 839.1 | 810.4 | 764.6 | 753.8 | 712.0 | 681.1 |
| 42.5° | 843.0 | 848.4 | 868.2 | 890.5 | 902.6 | 901.6 | 871.5 | 820.1 | 809.6 | 762.3 | 731.5 |
| 45° | 887.2 | 892.8 | 917.5 | 948.6 | 967.9 | 966.1 | 935.8 | 877.7 | 864.8 | 815.3 | 781.3 |
| 47.5° | 926.0 | 931.9 | 959.4 | 992.3 | 1022.9 | 1025.9 | 998.2 | 935.8 | 922.1 | 872.0 | 833.8 |
| 50° | 955.8 | 958.6 | 989.5 | 1025.4 | 1060.9 | 1078.1 | 1053.9 | 994.1 | 977.6 | 928.0 | 884.9 |
| 52.5° | 953.5 | 957.3 | 995.4 | 1044.2 | 1091.7 | 1120.0 | 1103.3 | 1049.1 | 1033.1 | 979.2 | 937.0 |
| 55° | 906.5 | 910.3 | 955.5 | 1026.7 | 1108.9 | 1150.6 | 1148.8 | 1101.5 | 1089.9 | 1031.3 | 991.3 |
| 57.5° | 837.9 | 846.3 | 891.3 | 968.1 | 1086.3 | 1175.0 | 1182.2 | 1149.3 | 1137.2 | 1082.5 | 1045.0 |
| 60° | 715.0 | 726.4 | 778.3 | 877.9 | 1013.9 | 1166.7 | 1217.9 | 1189.6 | 1182.2 | 1130.0 | 1093.5 |
| 62.5° | 519.5 | 527.7 | 596.9 | 727.6 | 906.5 | 1108.2 | 1247.9 | 1231.2 | 1225.6 | 1172.6 | 1137.4 |
| 65° | 311.1 | 329.9 | 385.4 | 514.6 | 731.2 | 997.7 | 1231.5 | 1285.7 | 1279.8 | 1216.6 | 1175.0 |
| 67.5° | 157.5 | 166.0 | 187.8 | 279.0 | 491.8 | 825.5 | 1149.0 | 1319.6 | 1326.8 | 1254.1 | 1188.3 |
| 70° | 97.6 | 99.9 | 106.1 | 137.7 | 245.6 | 542.4 | 939.6 | 1231.2 | 1266.4 | 1248.2 | 1153.6 |
| 72.5° | 78.4 | 78.9 | 79.9 | 85.8 | 117.9 | 253.6 | 594.0 | 964.3 | 1027.7 | 1165.7 | 1104.0 |
| 75° | 65.0 | 65.3 | 65.5 | 67.3 | 73.5 | 103.5 | 289.1 | 662.6 | 736.9 | 990.7 | 1023.6 |
| 77.5° | 52.2 | 50.9 | 51.9 | 52.7 | 54.2 | 57.8 | 99.7 | 353.5 | 428.8 | 650.3 | 791.6 |
| 80° | 33.9 | 33.4 | 35.5 | 36.2 | 37.8 | 40.1 | 53.2 | 120.0 | 145.7 | 236.6 | 251.8 |
| 82.5° | 18.2 | 17.2 | 21.6 | 20.8 | 21.6 | 23.4 | 31.3 | 43.9 | 49.3 | 71.4 | 60.4 |
| 85° | 5.7 | 5.7 | 5.9 | 6.9 | 8.5 | 8.2 | 13.6 | 21.6 | 23.9 | 30.6 | 22.6 |
| 87.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 2.8 | 4.4 | 5.9 | 10.5 | 8.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P629340
 CATALOG NUMBER: GWS-SA1B-740-U-RW-W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 0° | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 | 373.6 |
| 2.5° | 378.7 | 376.4 | 377.7 | 378.5 | 378.2 | 377.7 | 375.1 | 374.6 | 373.3 | 371.3 | 370.8 |
| 5° | 390.0 | 387.5 | 387.7 | 386.9 | 384.4 | 381.0 | 375.4 | 372.6 | 370.2 | 367.7 | 367.4 |
| 7.5° | 407.8 | 404.9 | 404.2 | 400.6 | 393.4 | 385.7 | 376.7 | 371.5 | 367.7 | 364.3 | 363.8 |
| 10° | 430.4 | 427.5 | 425.0 | 416.5 | 404.7 | 394.4 | 382.6 | 375.1 | 369.5 | 365.4 | 364.6 |
| 12.5° | 455.5 | 453.2 | 446.8 | 434.5 | 420.3 | 408.3 | 396.2 | 386.9 | 378.7 | 372.6 | 371.8 |
| 15° | 483.6 | 478.4 | 468.6 | 452.7 | 439.4 | 429.6 | 414.9 | 402.4 | 389.3 | 381.0 | 379.2 |
| 17.5° | 503.1 | 498.7 | 487.1 | 471.7 | 461.2 | 452.7 | 435.5 | 417.5 | 399.8 | 387.7 | 385.1 |
| 20° | 517.0 | 512.3 | 499.2 | 487.9 | 484.6 | 477.4 | 457.3 | 436.5 | 416.0 | 401.1 | 397.7 |
| 22.5° | 527.0 | 522.1 | 508.7 | 503.1 | 507.7 | 506.4 | 486.9 | 463.3 | 438.8 | 421.1 | 417.0 |
| 25° | 536.5 | 531.9 | 520.0 | 522.1 | 534.4 | 538.3 | 517.2 | 489.7 | 462.0 | 441.2 | 436.3 |
| 27.5° | 545.5 | 539.6 | 534.2 | 545.5 | 562.9 | 570.1 | 547.8 | 516.7 | 486.6 | 465.3 | 461.5 |
| 30° | 559.3 | 552.4 | 551.6 | 568.1 | 595.8 | 602.0 | 577.3 | 546.2 | 516.4 | 494.9 | 490.0 |
| 32.5° | 576.8 | 570.4 | 570.9 | 595.6 | 627.7 | 632.8 | 611.8 | 582.7 | 552.9 | 531.3 | 524.7 |
| 35° | 600.5 | 592.5 | 596.9 | 627.2 | 659.6 | 669.1 | 652.1 | 627.9 | 598.9 | 576.8 | 569.4 |
| 37.5° | 633.1 | 621.5 | 630.5 | 662.4 | 695.0 | 709.1 | 696.0 | 678.0 | 649.3 | 626.9 | 620.0 |
| 40° | 674.7 | 665.2 | 668.8 | 704.0 | 737.7 | 754.6 | 746.4 | 728.7 | 700.1 | 676.8 | 668.8 |
| 42.5° | 724.0 | 714.5 | 713.2 | 750.8 | 784.4 | 810.1 | 802.1 | 786.0 | 756.4 | 729.7 | 722.0 |
| 45° | 772.3 | 763.6 | 765.4 | 803.7 | 841.5 | 869.5 | 861.5 | 842.5 | 810.4 | 779.5 | 773.4 |
| 47.5° | 822.7 | 815.5 | 817.1 | 857.6 | 899.3 | 927.3 | 917.3 | 894.1 | 856.6 | 823.7 | 816.3 |
| 50° | 874.3 | 866.1 | 868.4 | 911.1 | 956.1 | 982.5 | 967.1 | 932.9 | 891.6 | 859.4 | 853.0 |
| 52.5° | 925.7 | 916.0 | 921.9 | 962.2 | 1008.7 | 1029.8 | 1001.3 | 959.9 | 919.8 | 888.0 | 880.8 |
| 55° | 984.8 | 974.6 | 968.1 | 1011.3 | 1057.3 | 1066.0 | 1027.0 | 978.7 | 931.1 | 894.9 | 890.5 |
| 57.5° | 1038.8 | 1030.0 | 1018.0 | 1061.1 | 1095.1 | 1088.6 | 1046.8 | 973.5 | 903.6 | 857.1 | 851.0 |
| 60° | 1087.1 | 1079.6 | 1069.1 | 1105.8 | 1121.3 | 1106.9 | 1030.8 | 912.6 | 835.8 | 787.2 | 784.4 |
| 62.5° | 1131.5 | 1123.6 | 1113.8 | 1145.2 | 1143.1 | 1109.7 | 958.4 | 819.1 | 716.3 | 664.2 | 659.6 |
| 65° | 1166.7 | 1159.5 | 1156.7 | 1181.4 | 1178.0 | 1054.5 | 845.6 | 666.0 | 523.4 | 464.5 | 462.7 |
| 67.5° | 1176.8 | 1173.9 | 1189.1 | 1231.0 | 1178.8 | 943.5 | 663.1 | 441.7 | 281.1 | 225.3 | 222.0 |
| 70° | 1139.2 | 1139.0 | 1182.4 | 1242.3 | 1071.9 | 720.7 | 391.3 | 199.1 | 141.3 | 125.4 | 123.3 |
| 72.5° | 1090.4 | 1089.7 | 1124.1 | 1071.7 | 795.0 | 394.4 | 164.7 | 106.6 | 88.4 | 84.0 | 84.0 |
| 75° | 1010.3 | 1008.2 | 1034.2 | 815.3 | 447.1 | 148.5 | 87.4 | 73.2 | 69.4 | 68.6 | 68.6 |
| 77.5° | 823.5 | 806.3 | 765.4 | 503.8 | 156.0 | 73.0 | 57.8 | 57.6 | 55.2 | 55.0 | 55.0 |
| 80° | 270.8 | 270.8 | 314.7 | 192.2 | 68.9 | 45.0 | 40.9 | 42.9 | 40.6 | 39.1 | 38.8 |
| 82.5° | 44.2 | 60.9 | 86.6 | 55.0 | 37.3 | 28.0 | 25.2 | 26.7 | 28.0 | 22.4 | 22.4 |
| 85° | 17.5 | 22.9 | 33.4 | 25.7 | 17.2 | 11.3 | 12.1 | 13.4 | 11.8 | 10.3 | 10.0 |
| 87.5° | 6.7 | 8.2 | 11.8 | 6.2 | 3.6 | 2.1 | 1.3 | 1.3 | 1.0 | 1.0 | 1.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW, INVUE, LUMARK AND STREETWORKS

DATA VALID FOR LUMINIAIRES UTILIZING SA LIGHT ENGINES

Report Number: SP1-2101-121-2

Luminaire Tested: IFLD-S-SA2A-740-U-T3R-HSS

Test Date: 03/05/2021

Test Information

Test Method: LM-79-08
 Report Number: SP1-2101-121-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 03/05/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: **IFLD-S-SA2A-740-U-T3R-HSS**
 Description: STREETWORKS INF FLOOD

SHIELD, DRIVER PROGRAMMED @ 615mA.

Spectral Parameters

| | | | | | |
|---------------------------|---------|-----------|------|------|-------|
| CCT (K): | 3905 | CRI (Ra): | 71.2 | R9: | -29.7 |
| CIE u': | 0.2273 | R1: | 68.9 | R10: | 46.2 |
| CIE v': | 0.5024 | R2: | 77.0 | R11: | 68.8 |
| Duv: | -0.0008 | R3: | 84.0 | R12: | 45.6 |
| CIE x: | 0.3841 | R4: | 71.6 | R13: | 69.5 |
| CIE y: | 0.3774 | R5: | 68.9 | R14: | 90.7 |
| CIE z: | 0.2385 | R6: | 68.3 | | |
| Peak Wavelength (nm): | 443 | R7: | 78.7 | | |
| Dominant Wavelength (nm): | 579 | R8: | 52.2 | | |
| Purity: | 28.7 | | | | |
| Rf: | 71.7 | | | | |
| Rg: | 96.9 | | | | |



Test Conditions

Stabilization Time: 211M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.8/312%
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2101-121-2

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 1/31/2021 | 7/31/2021 |
| Power Meter | IN0071 | 12/1/2020 | 12/1/2021 |
| AC Power Source | IN0063 | 12/1/2020 | 12/1/2021 |
| DC Power Source | IN0208 | 12/1/2020 | 12/1/2021 |
| Sphere Thermometer | IN0085 | 12/1/2020 | 12/1/2021 |
| Room Thermometer | IN0046 | 12/1/2020 | 12/1/2021 |

REPORT NUMBER: SP1-2101-121-2

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-2

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 | 2304 | 0.0 | 490 | 19043 | 2.7 | 620 | 97577 | 25.4 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 4.8 | 625 | 90158 | 19.9 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 8.0 | 630 | 82240 | 14.9 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 13.3 | 635 | 74361 | 11.2 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 20.2 | 640 | 66994 | 8.0 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 28.5 | 645 | 60405 | 5.8 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 37.4 | 650 | 53806 | 3.9 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 44.9 | 655 | 47610 | 2.7 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 52.6 | 660 | 42018 | 1.8 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.0 | 535 | 94097 | 58.4 | 665 | 36742 | 1.2 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.0 | 540 | 96845 | 63.1 | 670 | 32105 | 0.7 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.0 | 545 | 100829 | 67.1 | 675 | 27946 | 0.5 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 0.1 | 550 | 105648 | 71.8 | 680 | 24146 | 0.3 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 0.2 | 555 | 110017 | 75.1 | 685 | 21191 | 0.2 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 0.5 | 560 | 114586 | 77.9 | 690 | 18544 | 0.1 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 1.2 | 565 | 118987 | 79.1 | 695 | 16058 | 0.1 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 2.1 | 570 | 122326 | 79.5 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 2.9 | 575 | 125968 | 78.4 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 2.7 | 580 | 127613 | 75.8 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 2.0 | 585 | 129466 | 71.9 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 1.5 | 590 | 128813 | 66.6 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 1.3 | 595 | 126387 | 59.9 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 1.0 | 600 | 123477 | 53.2 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 1.1 | 605 | 118718 | 46.0 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 1.2 | 610 | 112091 | 38.5 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 1.7 | 615 | 105039 | 31.7 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-2

Scotopic Flux vs. Wavelength



Scotopic Lumens: 10425.8 S/P: 1.47

| 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 | 2304 | 0.0 | 490 | 19043 | 29.3 | 620 | 97577 | 1.2 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 43.0 | 625 | 90158 | 0.8 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 60.8 | 630 | 82240 | 0.5 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 81.1 | 635 | 74361 | 0.3 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 99.6 | 640 | 66994 | 0.2 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 113.9 | 645 | 60405 | 0.1 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 122.6 | 650 | 53806 | 0.1 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 125.0 | 655 | 47610 | 0.0 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 123.1 | 660 | 42018 | 0.0 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.1 | 535 | 94097 | 117.3 | 665 | 36742 | 0.0 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.2 | 540 | 96845 | 107.0 | 670 | 32105 | 0.0 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.9 | 545 | 100829 | 96.7 | 675 | 27946 | 0.0 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 3.0 | 550 | 105648 | 86.4 | 680 | 24146 | 0.0 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 9.3 | 555 | 110017 | 75.2 | 685 | 21191 | 0.0 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 23.0 | 560 | 114586 | 64.0 | 690 | 18544 | 0.0 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 45.7 | 565 | 118987 | 53.4 | 695 | 16058 | 0.0 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 75.5 | 570 | 122326 | 43.2 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 93.8 | 575 | 125968 | 34.3 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 79.3 | 580 | 127613 | 26.3 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 51.3 | 585 | 129466 | 19.8 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 35.6 | 590 | 128813 | 14.3 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 26.0 | 595 | 126387 | 10.1 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 19.3 | 600 | 123477 | 7.0 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 16.8 | 605 | 118718 | 4.7 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 17.7 | 610 | 112091 | 3.0 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 21.4 | 615 | 105039 | 1.9 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: 3927.2 M/P: 0.55

| 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 | 2304 | 0.0 | 490 | 19043 | 15.8 | 620 | 97577 | 0.1 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 22.0 | 625 | 90158 | 0.0 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 29.2 | 630 | 82240 | 0.0 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 36.6 | 635 | 74361 | 0.0 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 42.2 | 640 | 66994 | 0.0 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 44.9 | 645 | 60405 | 0.0 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 44.9 | 650 | 53806 | 0.0 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 42.4 | 655 | 47610 | 0.0 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 38.6 | 660 | 42018 | 0.0 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.0 | 535 | 94097 | 33.9 | 665 | 36742 | 0.0 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.2 | 540 | 96845 | 28.3 | 670 | 32105 | 0.0 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.6 | 545 | 100829 | 23.4 | 675 | 27946 | 0.0 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 2.1 | 550 | 105648 | 19.0 | 680 | 24146 | 0.0 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 5.9 | 555 | 110017 | 14.8 | 685 | 21191 | 0.0 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 14.3 | 560 | 114586 | 11.3 | 690 | 18544 | 0.0 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 27.3 | 565 | 118987 | 8.4 | 695 | 16058 | 0.0 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 45.1 | 570 | 122326 | 6.0 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 55.3 | 575 | 125968 | 4.2 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 47.2 | 580 | 127613 | 2.9 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 30.8 | 585 | 129466 | 1.9 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 21.7 | 590 | 128813 | 1.3 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 16.1 | 595 | 126387 | 0.8 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 12.0 | 600 | 123477 | 0.5 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 10.3 | 605 | 118718 | 0.3 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 10.5 | 610 | 112091 | 0.2 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 12.1 | 615 | 105039 | 0.1 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

Summary

$R_f = 71.7$
 $R_g = 96.9$
 CIE $R_a = 71.2$
 $R_g = -29.7$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 55 | CES51 = 86 | CES76 = 45 |
| CES02 = 61 | CES27 = 80 | CES52 = 87 | CES77 = 68 |
| CES03 = 30 | CES28 = 79 | CES53 = 74 | CES78 = 49 |
| CES04 = 70 | CES29 = 51 | CES54 = 81 | CES79 = 77 |
| CES05 = 47 | CES30 = 60 | CES55 = 80 | CES80 = 75 |
| CES06 = 50 | CES31 = 56 | CES56 = 69 | CES81 = 75 |
| CES07 = 40 | CES32 = 52 | CES57 = 67 | CES82 = 90 |
| CES08 = 39 | CES33 = 62 | CES58 = 69 | CES83 = 85 |
| CES09 = 29 | CES34 = 65 | CES59 = 86 | CES84 = 87 |
| CES10 = 74 | CES35 = 81 | CES60 = 91 | CES85 = 83 |
| CES11 = 57 | CES36 = 92 | CES61 = 85 | CES86 = 72 |
| CES12 = 63 | CES37 = 74 | CES62 = 81 | CES87 = 77 |
| CES13 = 42 | CES38 = 69 | CES63 = 72 | CES88 = 77 |
| CES14 = 74 | CES39 = 92 | CES64 = 69 | CES89 = 72 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 75 |
| CES16 = 46 | CES41 = 84 | CES66 = 63 | CES91 = 91 |
| CES17 = 49 | CES42 = 75 | CES67 = 60 | CES92 = 66 |
| CES18 = 56 | CES43 = 70 | CES68 = 67 | CES93 = 80 |
| CES19 = 72 | CES44 = 98 | CES69 = 77 | CES94 = 56 |
| CES20 = 65 | CES45 = 80 | CES70 = 57 | CES95 = 72 |
| CES21 = 86 | CES46 = 77 | CES71 = 53 | CES96 = 78 |
| CES22 = 78 | CES47 = 74 | CES72 = 84 | CES97 = 83 |
| CES23 = 92 | CES48 = 66 | CES73 = 47 | CES98 = 73 |
| CES24 = 91 | CES49 = 76 | CES74 = 96 | CES99 = 63 |
| CES25 = 72 | CES50 = 85 | CES75 = 52 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)