

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: P629576

Luminaire Tested: GWS-SA1B-830-U-SLR-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P629576  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-43)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1B-830-U-SLR-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

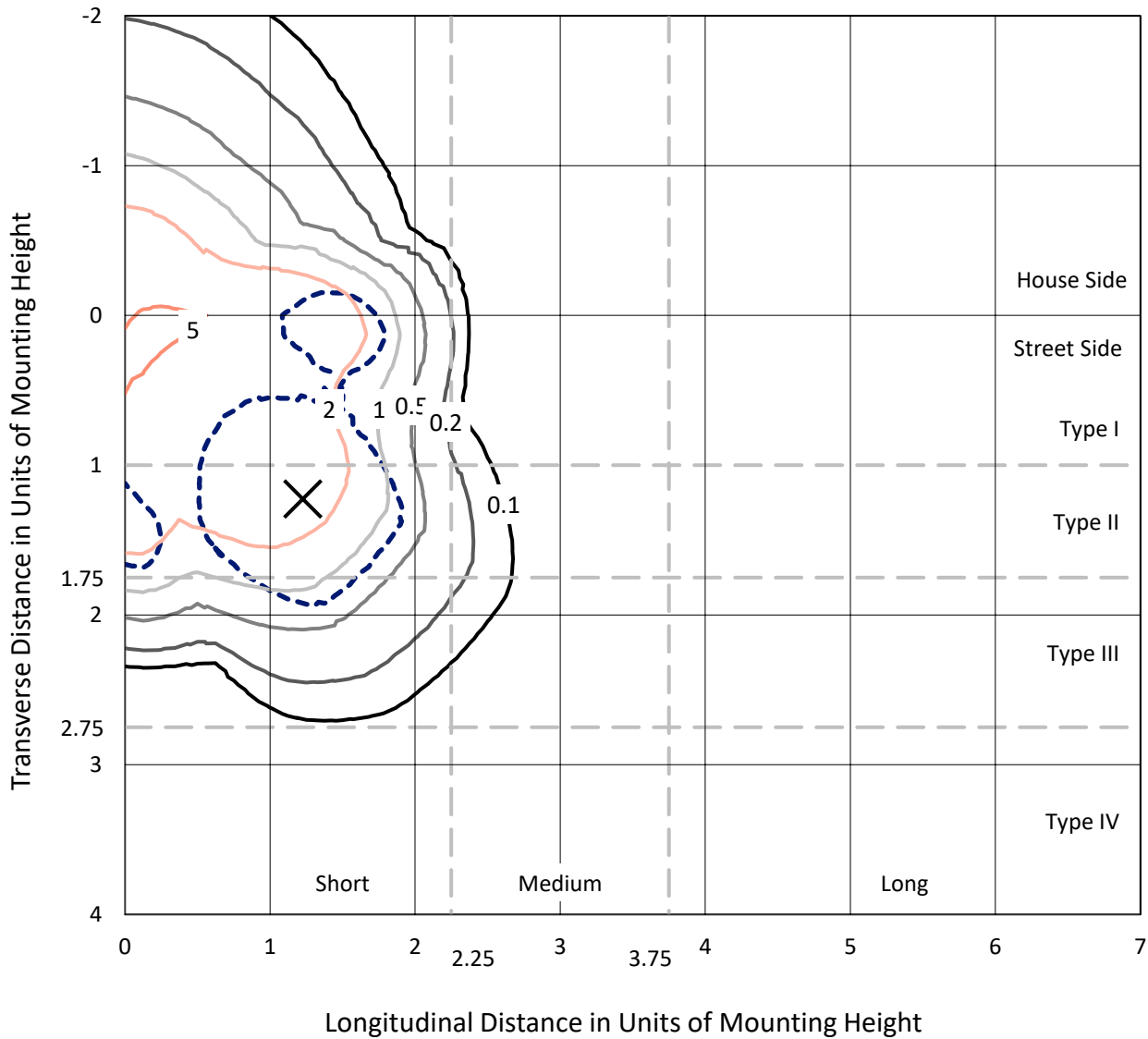
Lumens per Lamp: N/A  
Luminaire Lumens: 2227.6 lumens  
Efficiency: N/A  
Efficacy: 89.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 25  
Input Voltage (V): 120  
Input Current (Ain): NR  
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



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### Iso-Footcandle Lines of Horizontal Illumination

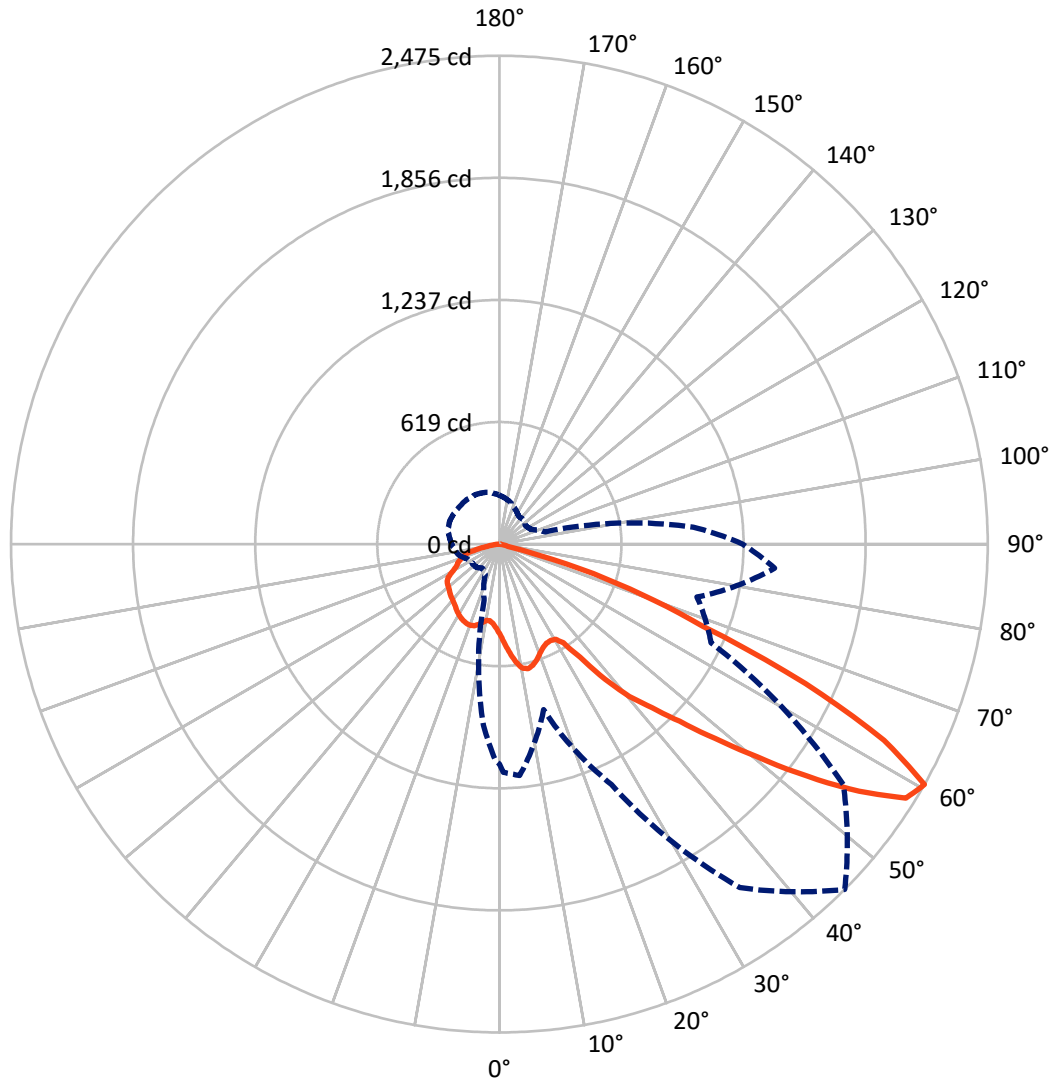
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.1 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 60-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 780.9    | 0.0    | 780.9  |
|                    | % Fixture | 35.1     | 0.0    | 35.1   |
| <b>Street Side</b> | Lumens    | 1446.7   | 0.0    | 1446.7 |
|                    | % Fixture | 64.9     | 0.0    | 64.9   |
| <b>Total</b>       | Lumens    | 2227.6   | 0.0    | 2227.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 44.6   | 2.0       |
| 10°-20°   | 141.1  | 6.3       |
| 20°-30°   | 229.2  | 10.3      |
| 30°-40°   | 323.2  | 14.5      |
| 40°-50°   | 446.7  | 20.1      |
| 50°-60°   | 575.0  | 25.8      |
| 60°-70°   | 364.3  | 16.4      |
| 70°-80°   | 93.5   | 4.2       |
| 80°-90°   | 10.0   | 0.4       |
| 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°    | 2227.6 | 100.0     |
| 0°-180°   | 2227.6 | 100.0     |

**Coefficient of Utilization**



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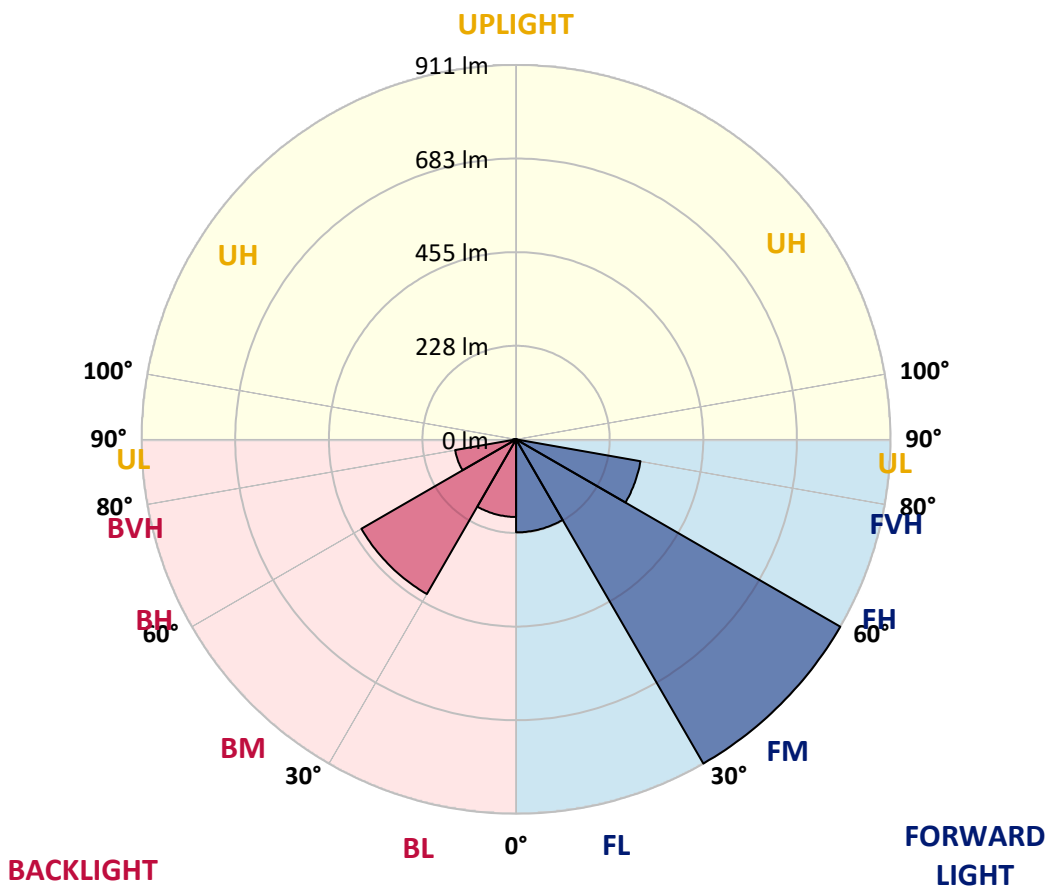
CATALOG NUMBER: GWS-SA1B-830-U-SLR-W-GRSWH

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |        |
|----------------|--------|-----------|-------------------------|------|--------|
|                |        |           | B                       | U    | G      |
| FL (0°-30°)    | 226.2  | 10.2      |                         |      |        |
| FM (30°-60°)   | 910.5  | 40.9      |                         |      |        |
| FH (60°-80°)   | 307.3  | 13.8      |                         |      | G0/660 |
| FVH (80°-90°)  | 2.7    | 0.1       |                         |      | G0/10  |
| BL (0°-30°)    | 188.7  | 8.5       | B1/500                  |      |        |
| BM (30°-60°)   | 434.4  | 19.5      | B1/1000                 |      |        |
| BH (60°-80°)   | 150.5  | 6.8       | B1/500                  |      | G1/500 |
| BVH (80°-90°)  | 7.3    | 0.3       |                         |      | 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 Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 457.6  | 457.6  | 457.6  | 457.6  | 457.6  | 457.6  | 457.6  | 457.6  | 457.6  | 457.6  | 457.6  |
| 2.5°  | 478.6  | 481.9  | 483.9  | 487.8  | 494.8  | 498.6  | 502.9  | 498.2  | 499.5  | 498.8  | 491.3  |
| 5°    | 507.0  | 510.9  | 516.2  | 527.6  | 540.5  | 547.6  | 554.4  | 553.3  | 547.0  | 536.4  | 528.8  |
| 7.5°  | 533.5  | 538.0  | 547.2  | 565.8  | 584.8  | 595.8  | 604.0  | 598.7  | 593.3  | 576.6  | 557.6  |
| 10°   | 554.4  | 557.0  | 569.5  | 594.4  | 616.4  | 628.9  | 638.9  | 637.6  | 630.3  | 611.5  | 586.0  |
| 12.5° | 574.0  | 575.8  | 589.3  | 614.2  | 634.0  | 639.5  | 647.6  | 650.3  | 647.8  | 633.8  | 608.7  |
| 15°   | 595.0  | 598.5  | 610.9  | 629.9  | 638.9  | 633.1  | 636.0  | 643.4  | 650.3  | 650.3  | 627.2  |
| 17.5° | 614.6  | 617.6  | 630.3  | 638.5  | 629.9  | 614.8  | 615.6  | 625.0  | 641.5  | 658.9  | 644.2  |
| 20°   | 631.9  | 634.8  | 647.2  | 639.5  | 612.3  | 590.3  | 589.7  | 601.1  | 627.8  | 664.4  | 662.3  |
| 22.5° | 650.9  | 655.0  | 665.4  | 640.3  | 596.0  | 568.0  | 567.8  | 579.7  | 615.8  | 669.9  | 683.2  |
| 25°   | 677.8  | 684.2  | 689.5  | 647.4  | 587.2  | 553.5  | 556.2  | 567.4  | 611.9  | 678.9  | 714.0  |
| 27.5° | 717.9  | 723.0  | 722.5  | 662.3  | 586.8  | 547.6  | 553.1  | 566.2  | 618.9  | 694.8  | 746.4  |
| 30°   | 761.1  | 763.8  | 759.5  | 683.2  | 596.2  | 551.3  | 559.5  | 575.0  | 636.4  | 721.1  | 794.2  |
| 32.5° | 809.1  | 812.4  | 804.2  | 714.4  | 618.0  | 578.4  | 596.4  | 604.0  | 661.1  | 759.1  | 844.8  |
| 35°   | 864.2  | 870.5  | 853.6  | 755.6  | 682.3  | 677.4  | 703.6  | 693.8  | 713.6  | 804.0  | 898.9  |
| 37.5° | 922.2  | 922.4  | 898.1  | 816.6  | 808.5  | 816.8  | 869.1  | 838.5  | 824.8  | 854.0  | 954.0  |
| 40°   | 971.4  | 970.1  | 932.8  | 898.9  | 918.3  | 951.6  | 1014.6 | 967.7  | 931.8  | 921.1  | 999.7  |
| 42.5° | 1020.5 | 1016.1 | 978.3  | 951.2  | 994.0  | 1062.4 | 1133.6 | 1076.1 | 1000.3 | 982.2  | 1044.8 |
| 45°   | 1083.4 | 1082.0 | 1036.5 | 972.0  | 1062.4 | 1186.5 | 1281.0 | 1187.7 | 1041.0 | 1017.7 | 1120.0 |
| 47.5° | 1184.9 | 1177.9 | 1093.2 | 970.3  | 1126.5 | 1351.8 | 1471.2 | 1328.3 | 1069.3 | 1018.5 | 1241.2 |
| 50°   | 1284.1 | 1275.5 | 1161.0 | 970.1  | 1192.6 | 1523.3 | 1695.7 | 1499.2 | 1098.3 | 1023.4 | 1364.5 |
| 52.5° | 1384.3 | 1384.3 | 1272.2 | 993.2  | 1262.0 | 1714.7 | 1955.2 | 1712.1 | 1147.7 | 1087.5 | 1516.1 |
| 55°   | 1443.9 | 1459.8 | 1397.3 | 1032.2 | 1343.2 | 1940.1 | 2211.7 | 1941.9 | 1224.0 | 1203.2 | 1656.1 |
| 57.5° | 1368.1 | 1397.9 | 1389.0 | 1005.0 | 1391.2 | 2105.6 | 2429.3 | 2116.2 | 1261.8 | 1216.9 | 1635.1 |
| 60°   | 1114.8 | 1156.3 | 1176.9 | 867.9  | 1343.9 | 2124.8 | 2474.8 | 2127.6 | 1183.8 | 1036.3 | 1400.6 |
| 62.5° | 741.1  | 775.2  | 806.6  | 620.1  | 1163.4 | 1911.5 | 2188.9 | 1912.1 | 988.7  | 773.4  | 970.3  |
| 65°   | 363.5  | 388.8  | 422.7  | 366.6  | 908.9  | 1597.2 | 1706.6 | 1545.1 | 715.2  | 432.9  | 495.0  |
| 67.5° | 95.1   | 102.3  | 107.0  | 142.3  | 651.1  | 1147.5 | 1113.0 | 1130.2 | 459.5  | 141.4  | 129.4  |
| 70°   | 49.4   | 49.8   | 49.6   | 58.8   | 440.1  | 729.3  | 767.0  | 709.7  | 320.7  | 59.2   | 51.0   |
| 72.5° | 35.3   | 35.5   | 34.9   | 39.6   | 212.5  | 417.8  | 432.9  | 428.2  | 168.0  | 35.1   | 34.9   |
| 75°   | 23.1   | 23.3   | 22.9   | 23.3   | 32.0   | 47.6   | 43.9   | 46.1   | 28.0   | 22.2   | 22.2   |
| 77.5° | 13.7   | 13.9   | 13.7   | 14.1   | 13.7   | 13.7   | 12.7   | 12.7   | 12.0   | 12.0   | 12.2   |
| 80°   | 9.2    | 9.2    | 9.0    | 9.4    | 8.6    | 8.6    | 8.2    | 8.0    | 7.3    | 7.1    | 7.1    |
| 82.5° | 5.5    | 5.7    | 5.5    | 5.5    | 5.1    | 5.1    | 4.7    | 4.5    | 3.9    | 3.9    | 3.7    |
| 85°   | 2.9    | 2.9    | 2.7    | 2.7    | 2.2    | 2.0    | 1.6    | 1.6    | 1.2    | 1.0    | 1.0    |
| 87.5° | 0.4    | 0.4    | 0.2    | 0.2    | 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    |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 457.6  | 457.6  | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 |
| 2.5°  | 489.3  | 485.2  | 479.0 | 473.1 | 467.6 | 461.9 | 455.4 | 448.6 | 442.9 | 437.0 | 433.9 |
| 5°    | 518.8  | 510.5  | 494.6 | 480.5 | 467.8 | 457.4 | 446.2 | 436.6 | 427.6 | 420.3 | 416.6 |
| 7.5°  | 545.6  | 532.5  | 508.4 | 486.2 | 469.0 | 454.8 | 439.2 | 425.0 | 412.9 | 403.9 | 400.5 |
| 10°   | 570.3  | 554.8  | 523.1 | 495.0 | 475.0 | 459.0 | 440.1 | 420.7 | 404.7 | 392.9 | 390.1 |
| 12.5° | 590.3  | 572.5  | 534.8 | 502.1 | 478.4 | 461.3 | 444.6 | 427.8 | 412.1 | 396.8 | 394.3 |
| 15°   | 608.0  | 587.0  | 543.5 | 506.6 | 477.2 | 455.4 | 441.3 | 439.2 | 439.2 | 421.9 | 417.0 |
| 17.5° | 623.4  | 600.3  | 550.7 | 508.6 | 469.5 | 437.8 | 429.2 | 447.0 | 467.0 | 454.6 | 443.5 |
| 20°   | 640.9  | 612.9  | 556.6 | 508.6 | 455.2 | 415.6 | 414.8 | 445.0 | 474.6 | 474.8 | 463.1 |
| 22.5° | 658.7  | 627.6  | 563.5 | 506.8 | 435.6 | 389.8 | 405.0 | 436.8 | 463.1 | 474.4 | 466.4 |
| 25°   | 687.4  | 648.0  | 574.6 | 505.4 | 412.7 | 372.3 | 396.2 | 426.0 | 448.2 | 460.1 | 455.0 |
| 27.5° | 724.0  | 675.0  | 591.3 | 507.6 | 390.1 | 361.9 | 386.8 | 411.9 | 432.1 | 442.5 | 438.8 |
| 30°   | 764.8  | 706.0  | 609.3 | 511.5 | 373.7 | 356.6 | 375.6 | 395.8 | 413.7 | 424.1 | 422.5 |
| 32.5° | 816.8  | 739.7  | 624.8 | 506.2 | 364.5 | 353.9 | 363.7 | 378.2 | 395.6 | 402.1 | 403.5 |
| 35°   | 879.1  | 776.8  | 636.6 | 485.4 | 356.2 | 351.1 | 350.9 | 359.8 | 372.1 | 382.5 | 383.5 |
| 37.5° | 936.5  | 820.3  | 649.7 | 449.7 | 341.1 | 343.9 | 335.8 | 341.1 | 353.1 | 363.5 | 367.6 |
| 40°   | 993.2  | 864.4  | 667.8 | 404.1 | 321.3 | 328.0 | 318.4 | 322.1 | 331.7 | 345.4 | 351.9 |
| 42.5° | 1048.3 | 904.2  | 687.0 | 357.6 | 301.5 | 305.8 | 298.6 | 302.3 | 312.3 | 329.4 | 336.8 |
| 45°   | 1108.3 | 958.1  | 701.9 | 313.7 | 284.3 | 282.5 | 276.8 | 282.1 | 297.2 | 316.0 | 324.7 |
| 47.5° | 1221.8 | 1043.0 | 711.7 | 284.5 | 275.1 | 261.9 | 255.3 | 266.8 | 283.9 | 302.9 | 313.5 |
| 50°   | 1360.4 | 1165.9 | 708.9 | 266.0 | 267.2 | 240.6 | 238.4 | 253.5 | 271.9 | 291.7 | 303.3 |
| 52.5° | 1470.2 | 1286.5 | 676.4 | 248.2 | 251.7 | 227.2 | 220.6 | 242.7 | 260.2 | 280.4 | 292.5 |
| 55°   | 1554.1 | 1327.1 | 576.8 | 227.2 | 226.4 | 217.4 | 203.7 | 231.5 | 248.6 | 267.4 | 280.4 |
| 57.5° | 1485.7 | 1236.7 | 427.6 | 198.2 | 193.3 | 198.0 | 184.7 | 212.5 | 234.3 | 252.9 | 264.5 |
| 60°   | 1233.0 | 986.1  | 238.2 | 175.5 | 161.7 | 173.1 | 171.0 | 192.5 | 218.8 | 238.4 | 248.4 |
| 62.5° | 837.1  | 656.6  | 141.2 | 138.8 | 131.0 | 147.4 | 158.2 | 172.3 | 198.2 | 214.1 | 223.5 |
| 65°   | 417.2  | 319.0  | 93.9  | 103.9 | 104.9 | 121.2 | 141.7 | 157.2 | 178.8 | 195.1 | 204.5 |
| 67.5° | 121.0  | 99.2   | 71.4  | 79.4  | 90.4  | 103.5 | 119.8 | 138.2 | 159.2 | 178.6 | 189.6 |
| 70°   | 52.3   | 52.9   | 56.7  | 66.1  | 76.9  | 90.4  | 106.7 | 124.7 | 142.5 | 157.4 | 165.7 |
| 72.5° | 36.9   | 38.4   | 42.7  | 52.3  | 62.5  | 75.3  | 91.6  | 109.0 | 121.9 | 137.0 | 145.7 |
| 75°   | 23.7   | 24.7   | 28.2  | 35.5  | 43.1  | 55.5  | 71.0  | 87.0  | 100.2 | 111.0 | 119.4 |
| 77.5° | 13.1   | 13.3   | 16.1  | 20.4  | 25.5  | 33.5  | 44.9  | 57.4  | 67.2  | 73.3  | 80.8  |
| 80°   | 7.6    | 7.6    | 9.0   | 11.6  | 14.7  | 19.6  | 25.9  | 32.0  | 38.0  | 41.8  | 45.5  |
| 82.5° | 4.1    | 4.1    | 4.7   | 6.3   | 8.0   | 10.8  | 14.5  | 17.6  | 21.2  | 23.3  | 25.7  |
| 85°   | 1.2    | 1.2    | 1.6   | 2.2   | 2.9   | 4.1   | 5.7   | 7.3   | 9.0   | 10.4  | 11.8  |
| 87.5° | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.2   |
| 90°   | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |





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**CANDELA DISTRIBUTION (continued):**

|       | 185°  | 195°  | 205°  | 215°  | 225°  | 235°  | 245°  | 255°  | 265°  | 270°  | 275°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 |
| 2.5°  | 433.3 | 430.5 | 428.8 | 426.8 | 427.4 | 425.6 | 424.5 | 425.2 | 421.5 | 425.2 | 428.8 |
| 5°    | 415.2 | 411.1 | 407.8 | 405.2 | 403.9 | 401.5 | 400.1 | 400.1 | 397.8 | 401.5 | 406.0 |
| 7.5°  | 399.2 | 396.0 | 394.3 | 392.7 | 390.9 | 388.6 | 386.2 | 385.4 | 383.9 | 387.8 | 391.7 |
| 10°   | 388.6 | 389.0 | 390.1 | 392.3 | 391.9 | 390.5 | 386.8 | 384.7 | 384.7 | 389.2 | 395.2 |
| 12.5° | 393.5 | 397.8 | 400.3 | 404.3 | 405.2 | 403.9 | 400.3 | 398.6 | 402.7 | 409.4 | 419.2 |
| 15°   | 412.5 | 415.4 | 417.4 | 420.7 | 420.5 | 419.4 | 416.6 | 417.8 | 431.3 | 444.3 | 453.1 |
| 17.5° | 433.1 | 429.9 | 429.4 | 431.5 | 432.1 | 430.9 | 429.2 | 434.8 | 457.0 | 469.2 | 473.7 |
| 20°   | 448.0 | 436.8 | 434.3 | 435.2 | 436.8 | 436.2 | 436.2 | 445.2 | 468.2 | 473.9 | 468.2 |
| 22.5° | 452.5 | 436.6 | 432.9 | 433.1 | 435.4 | 435.6 | 436.6 | 446.0 | 459.5 | 459.7 | 450.9 |
| 25°   | 445.4 | 430.1 | 427.4 | 427.8 | 430.5 | 430.3 | 430.7 | 436.0 | 441.9 | 439.4 | 432.9 |
| 27.5° | 431.9 | 418.6 | 417.8 | 420.1 | 423.5 | 421.7 | 420.5 | 421.9 | 424.8 | 421.7 | 416.0 |
| 30°   | 416.6 | 405.4 | 405.8 | 410.1 | 413.7 | 410.7 | 407.6 | 408.4 | 408.6 | 405.4 | 398.8 |
| 32.5° | 400.5 | 392.1 | 393.5 | 398.0 | 402.3 | 399.0 | 395.8 | 395.4 | 391.5 | 387.6 | 381.3 |
| 35°   | 384.3 | 381.1 | 382.9 | 386.6 | 390.3 | 387.6 | 385.6 | 384.3 | 376.0 | 370.3 | 364.9 |
| 37.5° | 369.6 | 372.1 | 375.4 | 377.6 | 378.8 | 378.6 | 377.4 | 374.5 | 363.5 | 356.8 | 349.8 |
| 40°   | 356.6 | 364.1 | 367.6 | 368.6 | 370.5 | 370.1 | 369.8 | 365.8 | 351.3 | 344.1 | 336.2 |
| 42.5° | 344.7 | 355.4 | 361.3 | 362.3 | 363.3 | 363.5 | 362.9 | 357.0 | 340.5 | 332.1 | 324.5 |
| 45°   | 333.3 | 347.2 | 354.7 | 353.7 | 355.2 | 355.2 | 355.8 | 348.0 | 329.8 | 321.3 | 313.3 |
| 47.5° | 323.3 | 339.6 | 346.6 | 345.4 | 346.2 | 346.8 | 347.4 | 338.4 | 318.2 | 310.0 | 301.9 |
| 50°   | 314.1 | 331.5 | 337.4 | 337.8 | 337.8 | 339.2 | 339.0 | 330.2 | 308.4 | 299.6 | 291.5 |
| 52.5° | 304.3 | 323.1 | 329.4 | 332.1 | 332.9 | 333.5 | 330.7 | 320.5 | 298.4 | 287.8 | 280.2 |
| 55°   | 292.9 | 314.5 | 320.2 | 323.7 | 325.4 | 324.9 | 321.1 | 310.7 | 288.2 | 277.6 | 269.0 |
| 57.5° | 275.5 | 296.2 | 304.3 | 306.0 | 308.6 | 307.0 | 302.5 | 293.7 | 271.9 | 261.3 | 252.5 |
| 60°   | 256.6 | 271.5 | 278.0 | 279.4 | 277.4 | 278.0 | 277.4 | 269.0 | 250.0 | 241.7 | 232.7 |
| 62.5° | 231.7 | 244.9 | 251.9 | 253.7 | 250.2 | 252.5 | 251.7 | 241.3 | 222.3 | 213.5 | 205.5 |
| 65°   | 212.9 | 227.4 | 235.5 | 236.6 | 235.5 | 236.6 | 233.7 | 221.1 | 203.1 | 194.1 | 185.9 |
| 67.5° | 198.2 | 213.1 | 221.7 | 224.5 | 223.5 | 223.3 | 218.8 | 204.1 | 185.5 | 175.7 | 165.3 |
| 70°   | 172.9 | 185.9 | 197.0 | 203.9 | 203.9 | 200.0 | 191.5 | 177.8 | 162.9 | 154.5 | 146.3 |
| 72.5° | 153.1 | 169.6 | 180.4 | 187.6 | 189.0 | 186.8 | 174.7 | 160.2 | 143.1 | 134.7 | 126.1 |
| 75°   | 126.1 | 142.3 | 153.9 | 163.3 | 165.1 | 162.7 | 148.8 | 134.5 | 118.6 | 110.4 | 101.9 |
| 77.5° | 84.3  | 93.9  | 103.3 | 111.9 | 110.0 | 111.6 | 102.3 | 91.4  | 81.6  | 75.5  | 71.6  |
| 80°   | 47.6  | 53.9  | 56.7  | 61.4  | 61.4  | 61.4  | 55.3  | 50.2  | 44.7  | 41.2  | 37.4  |
| 82.5° | 26.9  | 31.0  | 32.2  | 36.1  | 37.1  | 37.4  | 33.3  | 30.0  | 26.5  | 24.7  | 22.0  |
| 85°   | 12.5  | 14.7  | 14.9  | 17.1  | 18.0  | 19.6  | 17.8  | 15.5  | 13.5  | 12.7  | 11.0  |
| 87.5° | 0.4   | 1.2   | 1.6   | 3.1   | 4.1   | 4.7   | 5.1   | 5.1   | 4.3   | 3.9   | 3.3   |
| 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: P629576

CATALOG NUMBER: GWS-SA1B-830-U-SLR-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

|       | 285°  | 295°  | 305°  | 315°  | 325°  | 335°  | 345°  | 355°   | 359°   | 360°   |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 0°    | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6 | 457.6  | 457.6  | 457.6  |
| 2.5°  | 433.3 | 438.2 | 443.9 | 448.0 | 455.4 | 461.5 | 467.8 | 474.8  | 479.9  | 478.6  |
| 5°    | 411.5 | 419.6 | 430.1 | 439.7 | 453.3 | 467.2 | 482.5 | 498.2  | 507.4  | 507.0  |
| 7.5°  | 399.2 | 410.9 | 423.5 | 436.4 | 452.5 | 472.5 | 496.0 | 520.5  | 532.9  | 533.5  |
| 10°   | 405.8 | 418.2 | 426.8 | 437.6 | 454.6 | 479.7 | 507.8 | 537.2  | 551.5  | 554.4  |
| 12.5° | 426.4 | 425.4 | 424.8 | 432.5 | 452.9 | 484.8 | 519.3 | 554.4  | 570.5  | 574.0  |
| 15°   | 446.0 | 425.0 | 412.3 | 417.6 | 445.6 | 488.0 | 530.5 | 573.1  | 591.3  | 595.0  |
| 17.5° | 449.7 | 417.8 | 394.3 | 398.0 | 433.9 | 489.0 | 541.3 | 591.5  | 611.1  | 614.6  |
| 20°   | 439.4 | 408.6 | 381.3 | 376.2 | 419.2 | 486.4 | 548.0 | 606.8  | 628.3  | 631.9  |
| 22.5° | 426.6 | 400.5 | 371.5 | 358.2 | 401.3 | 483.7 | 555.6 | 622.9  | 647.6  | 650.9  |
| 25°   | 413.1 | 390.1 | 362.3 | 342.1 | 380.9 | 482.1 | 568.2 | 644.2  | 674.0  | 677.8  |
| 27.5° | 398.8 | 377.4 | 354.3 | 334.3 | 362.1 | 484.1 | 586.2 | 678.5  | 712.3  | 717.9  |
| 30°   | 383.5 | 364.7 | 349.2 | 331.7 | 349.2 | 486.0 | 606.0 | 713.6  | 753.4  | 761.1  |
| 32.5° | 367.6 | 353.1 | 343.9 | 332.9 | 341.3 | 481.7 | 623.4 | 753.0  | 802.4  | 809.1  |
| 35°   | 351.7 | 341.3 | 337.2 | 335.1 | 330.7 | 466.0 | 637.4 | 792.8  | 858.3  | 864.2  |
| 37.5° | 336.8 | 329.0 | 327.8 | 330.0 | 314.3 | 440.3 | 653.8 | 843.4  | 913.2  | 922.2  |
| 40°   | 322.9 | 315.8 | 315.6 | 315.1 | 296.4 | 405.2 | 675.8 | 894.8  | 967.3  | 971.4  |
| 42.5° | 310.0 | 301.1 | 302.7 | 297.8 | 281.7 | 367.2 | 696.6 | 938.7  | 1017.7 | 1020.5 |
| 45°   | 298.6 | 286.8 | 288.6 | 282.5 | 274.7 | 327.4 | 715.0 | 990.5  | 1081.6 | 1083.4 |
| 47.5° | 287.6 | 274.9 | 269.8 | 269.4 | 273.5 | 290.7 | 733.0 | 1090.4 | 1181.6 | 1184.9 |
| 50°   | 277.4 | 263.7 | 249.2 | 258.2 | 266.0 | 263.1 | 755.4 | 1197.3 | 1284.9 | 1284.1 |
| 52.5° | 267.6 | 249.6 | 229.0 | 246.4 | 246.4 | 242.7 | 749.1 | 1262.2 | 1370.2 | 1384.3 |
| 55°   | 256.4 | 227.0 | 208.0 | 226.6 | 217.6 | 224.3 | 637.0 | 1283.4 | 1423.9 | 1443.9 |
| 57.5° | 234.1 | 199.0 | 182.5 | 192.5 | 179.0 | 208.0 | 457.6 | 1178.1 | 1332.6 | 1368.1 |
| 60°   | 212.7 | 178.4 | 167.6 | 165.7 | 148.2 | 169.6 | 296.6 | 922.4  | 1096.9 | 1114.8 |
| 62.5° | 187.6 | 160.6 | 151.4 | 137.4 | 119.2 | 123.5 | 179.6 | 607.0  | 737.0  | 741.1  |
| 65°   | 168.6 | 145.5 | 128.0 | 111.2 | 97.6  | 89.6  | 106.1 | 292.7  | 368.4  | 363.5  |
| 67.5° | 144.7 | 124.7 | 108.0 | 95.9  | 84.7  | 74.7  | 70.6  | 87.0   | 98.4   | 95.1   |
| 70°   | 128.8 | 109.6 | 93.5  | 82.1  | 71.6  | 61.6  | 54.5  | 51.2   | 50.2   | 49.4   |
| 72.5° | 111.0 | 94.3  | 77.6  | 66.5  | 56.7  | 47.6  | 41.0  | 37.1   | 36.1   | 35.3   |
| 75°   | 88.6  | 72.9  | 57.6  | 47.1  | 38.6  | 32.0  | 27.8  | 24.5   | 23.9   | 23.1   |
| 77.5° | 58.6  | 46.7  | 34.3  | 28.0  | 22.9  | 19.4  | 16.5  | 14.5   | 14.1   | 13.7   |
| 80°   | 32.2  | 26.9  | 21.0  | 16.9  | 13.7  | 11.8  | 10.8  | 9.6    | 9.4    | 9.2    |
| 82.5° | 19.2  | 16.1  | 12.0  | 9.6   | 8.0   | 7.1   | 6.5   | 5.9    | 5.7    | 5.5    |
| 85°   | 9.6   | 7.6   | 5.3   | 4.5   | 4.1   | 3.7   | 3.7   | 3.1    | 2.9    | 2.9    |
| 87.5° | 2.4   | 2.0   | 1.2   | 1.0   | 1.0   | 1.0   | 0.8   | 0.6    | 0.6    | 0.4    |
| 90°   | 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**

| $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /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 <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /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 <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /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**

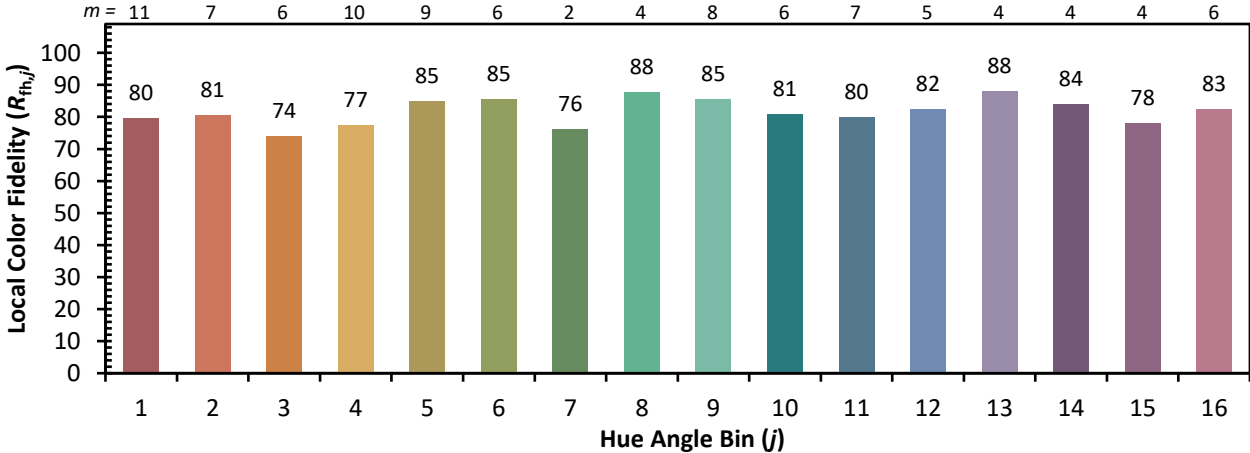


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| 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)