

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: P385807

Luminaire Tested: **GPC-SA1B-827-U-T2**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P385807
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-12)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GPC-SA1B-827-U-T2
Description: GALLEON PEDESTRIAN LUMINAIRE
(1) 80 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4403 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G1

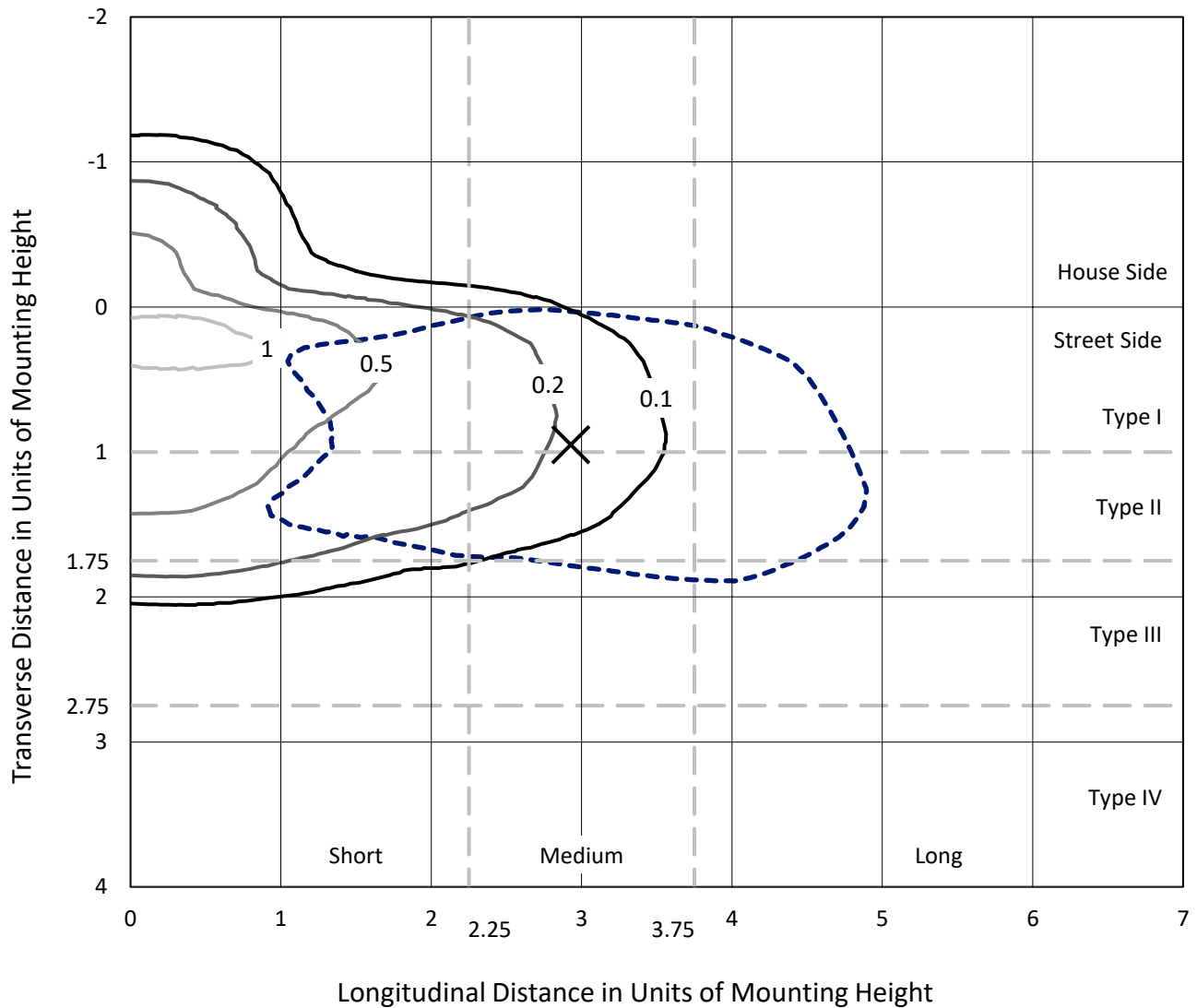
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

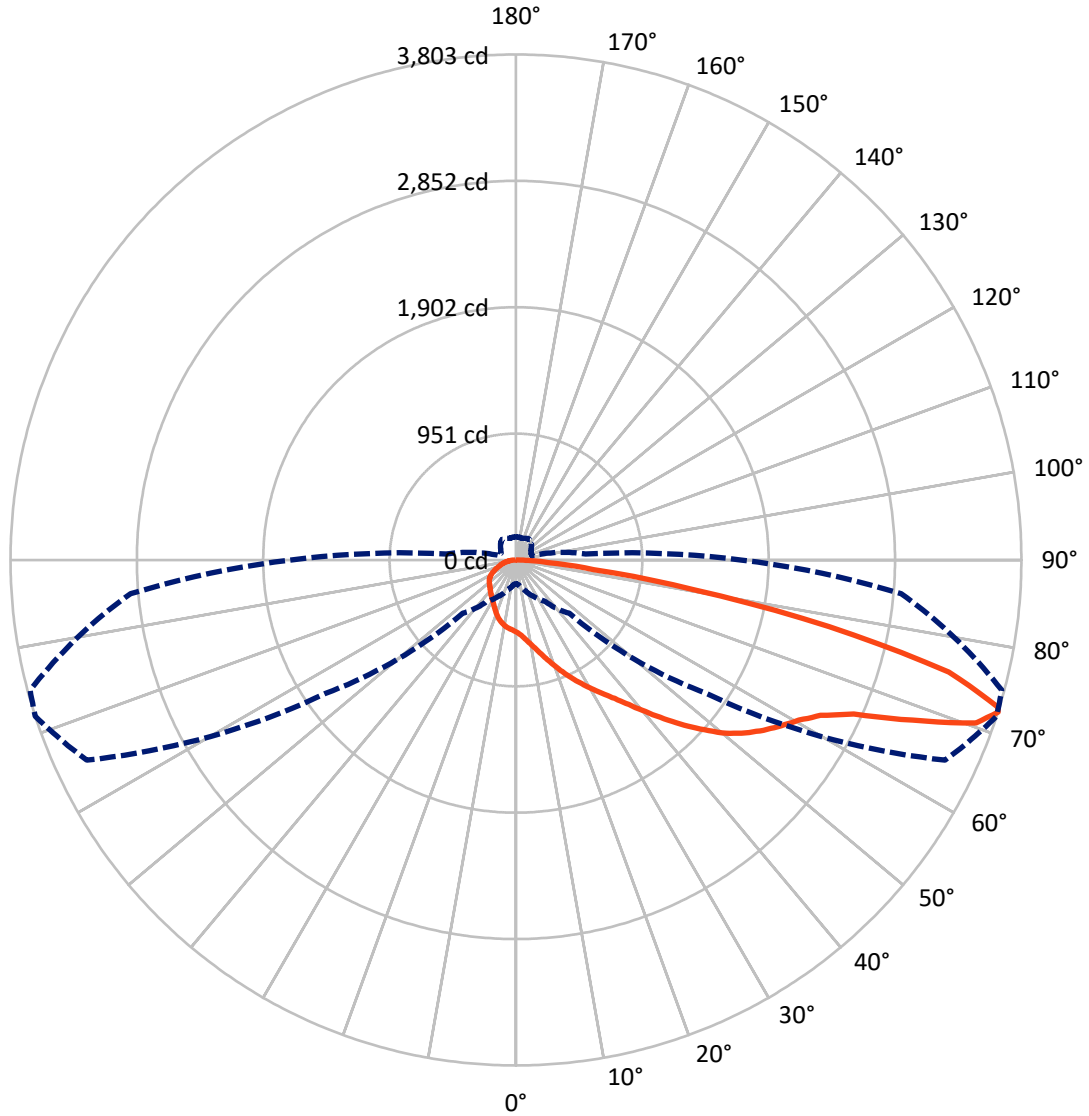
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 72-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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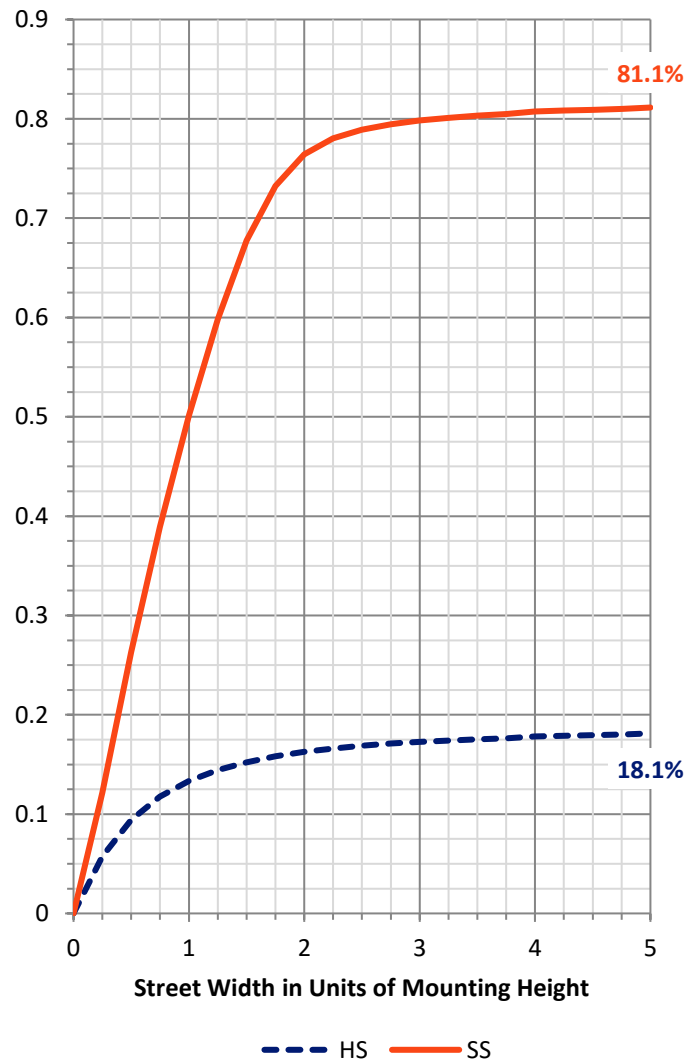
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 816.8 | 0.0 | 816.8 |
| | % Fixture | 18.6 | 0.0 | 18.6 |
| Street Side | Lumens | 3586.2 | 0.0 | 3586.2 |
| | % Fixture | 81.4 | 0.0 | 81.4 |
| Total | Lumens | 4403.0 | 0.0 | 4403.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 54.3 | 1.2 |
| 10°-20° | 175.4 | 4.0 |
| 20°-30° | 307.4 | 7.0 |
| 30°-40° | 455.7 | 10.4 |
| 40°-50° | 666.5 | 15.1 |
| 50°-60° | 917.1 | 20.8 |
| 60°-70° | 1021.0 | 23.2 |
| 70°-80° | 691.8 | 15.7 |
| 80°-90° | 113.7 | 2.6 |
| 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° | 4403.0 | 100.0 |
| 0°-180° | 4403.0 | 100.0 |

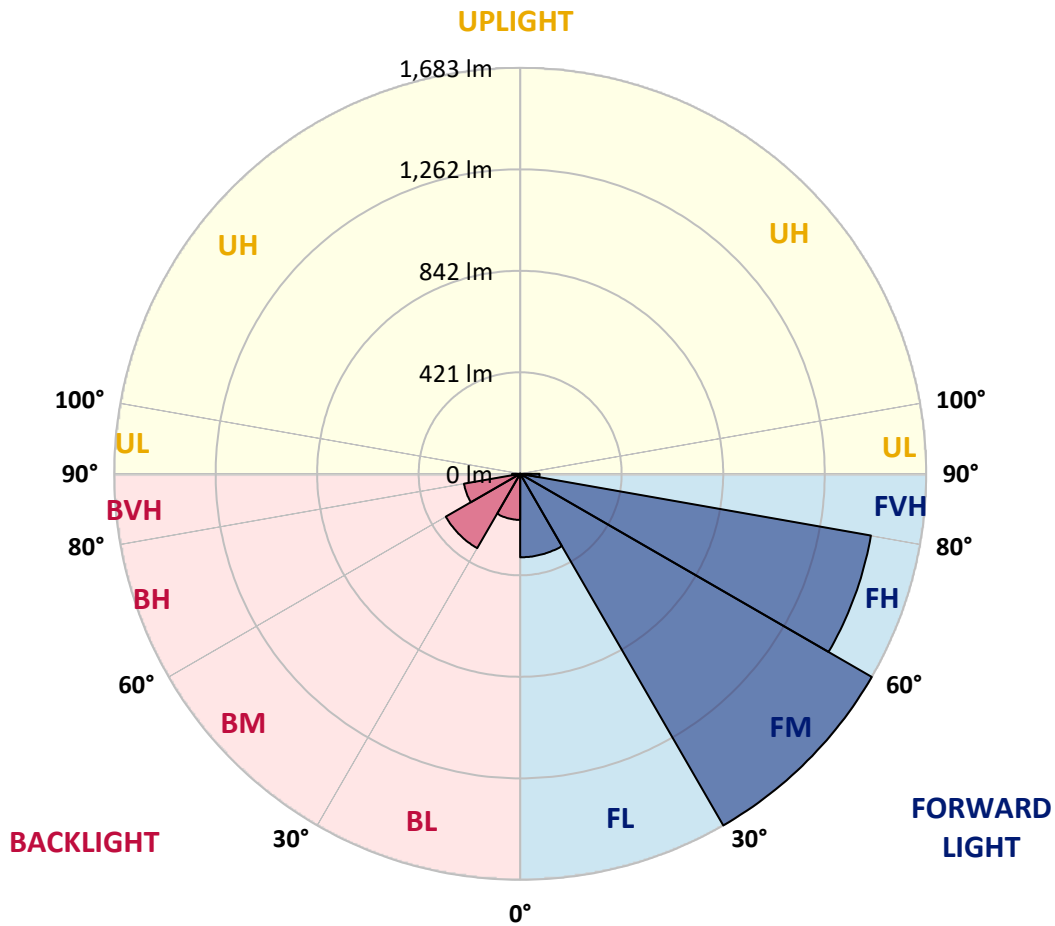


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 346.1 | 7.9 | | | |
| FM (30°-60°) | 1683.3 | 38.2 | | | |
| FH (60°-80°) | 1476.6 | 33.5 | | | G1/1800 |
| FVH (80°-90°) | 80.2 | 1.8 | | | G1/100 |
| BL (0°-30°) | 190.9 | 4.3 | B1/500 | | |
| BM (30°-60°) | 356.0 | 8.1 | B1/1000 | | |
| BH (60°-80°) | 236.3 | 5.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 33.5 | 0.8 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1
 Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 72° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 |
| 2.5° | 598.4 | 597.5 | 594.3 | 594.3 | 588.2 | 583.1 | 573.4 | 566.9 | 559.1 | 556.4 | 547.3 |
| 5° | 656.3 | 656.6 | 652.7 | 649.9 | 641.0 | 630.1 | 613.5 | 598.5 | 583.5 | 577.5 | 558.8 |
| 7.5° | 705.0 | 704.4 | 703.3 | 701.0 | 692.7 | 681.5 | 659.2 | 636.9 | 614.8 | 605.7 | 573.5 |
| 10° | 736.2 | 737.6 | 738.5 | 739.5 | 736.0 | 728.0 | 706.9 | 679.8 | 650.8 | 638.4 | 591.1 |
| 12.5° | 752.0 | 754.4 | 758.6 | 765.9 | 771.7 | 770.8 | 755.4 | 726.6 | 692.2 | 676.6 | 613.1 |
| 15° | 761.2 | 764.4 | 771.1 | 784.1 | 800.3 | 809.6 | 805.5 | 779.4 | 741.0 | 721.8 | 639.9 |
| 17.5° | 767.0 | 769.5 | 779.9 | 797.3 | 821.4 | 846.0 | 856.7 | 834.9 | 796.2 | 774.2 | 670.7 |
| 20° | 770.9 | 772.9 | 785.8 | 806.2 | 837.5 | 876.6 | 906.6 | 901.1 | 857.0 | 828.5 | 702.8 |
| 22.5° | 779.7 | 781.4 | 793.7 | 814.3 | 848.8 | 899.3 | 954.7 | 962.8 | 921.2 | 888.9 | 737.3 |
| 25° | 804.3 | 804.3 | 814.6 | 829.0 | 861.4 | 919.0 | 995.3 | 1031.5 | 986.6 | 949.0 | 769.1 |
| 27.5° | 851.1 | 850.7 | 854.4 | 859.4 | 884.0 | 939.0 | 1031.5 | 1092.2 | 1054.6 | 1013.5 | 800.0 |
| 30° | 906.6 | 909.6 | 910.1 | 907.7 | 919.2 | 964.1 | 1065.0 | 1156.1 | 1122.9 | 1078.7 | 831.7 |
| 32.5° | 978.0 | 980.0 | 977.7 | 969.7 | 968.0 | 999.5 | 1097.9 | 1223.1 | 1196.9 | 1146.7 | 860.7 |
| 35° | 1068.7 | 1064.9 | 1057.7 | 1041.4 | 1025.8 | 1047.0 | 1135.5 | 1290.2 | 1280.0 | 1229.1 | 900.5 |
| 37.5° | 1165.8 | 1166.0 | 1157.2 | 1120.1 | 1098.5 | 1107.6 | 1187.4 | 1366.1 | 1380.5 | 1327.0 | 951.6 |
| 40° | 1243.8 | 1247.9 | 1253.3 | 1204.5 | 1176.6 | 1189.2 | 1253.3 | 1454.2 | 1499.4 | 1443.1 | 1018.2 |
| 42.5° | 1298.2 | 1302.9 | 1318.4 | 1287.7 | 1258.8 | 1282.1 | 1330.9 | 1548.2 | 1632.8 | 1577.1 | 1096.1 |
| 45° | 1355.8 | 1358.4 | 1369.3 | 1356.1 | 1337.6 | 1390.2 | 1418.4 | 1645.5 | 1773.9 | 1720.0 | 1183.3 |
| 47.5° | 1416.4 | 1419.2 | 1430.4 | 1421.6 | 1411.9 | 1491.2 | 1509.7 | 1737.2 | 1909.2 | 1876.9 | 1276.4 |
| 50° | 1491.3 | 1493.2 | 1503.8 | 1487.8 | 1490.9 | 1567.3 | 1591.2 | 1821.4 | 2050.9 | 2017.9 | 1369.7 |
| 52.5° | 1593.5 | 1594.0 | 1608.7 | 1594.3 | 1580.0 | 1623.1 | 1661.4 | 1900.7 | 2162.0 | 2146.4 | 1463.1 |
| 55° | 1673.6 | 1678.4 | 1726.6 | 1723.6 | 1715.4 | 1673.7 | 1720.1 | 1976.2 | 2261.2 | 2268.6 | 1562.3 |
| 57.5° | 1622.5 | 1641.4 | 1739.1 | 1807.9 | 1874.9 | 1799.7 | 1799.4 | 2061.2 | 2353.4 | 2388.5 | 1671.3 |
| 60° | 1421.0 | 1446.8 | 1590.6 | 1743.3 | 1953.0 | 2018.9 | 1964.0 | 2165.1 | 2446.4 | 2507.4 | 1807.9 |
| 62.5° | 1014.8 | 1057.3 | 1252.3 | 1496.0 | 1845.9 | 2164.2 | 2299.1 | 2329.9 | 2573.0 | 2645.0 | 1985.4 |
| 65° | 513.0 | 545.2 | 708.6 | 1002.3 | 1474.8 | 2069.3 | 2663.2 | 2690.7 | 2793.0 | 2857.0 | 2258.8 |
| 67.5° | 311.7 | 323.8 | 403.6 | 557.5 | 904.2 | 1611.9 | 2782.1 | 3292.1 | 3218.7 | 3252.7 | 2648.5 |
| 70° | 229.7 | 238.6 | 288.4 | 370.2 | 520.0 | 945.9 | 2417.3 | 3721.3 | 3673.1 | 3669.3 | 2936.6 |
| 72° | 178.9 | 185.4 | 229.4 | 299.1 | 380.2 | 567.5 | 1752.1 | 3562.9 | 3803.2 | 3784.1 | 2910.2 |
| 72.5° | 169.6 | 175.4 | 215.4 | 281.5 | 359.3 | 514.4 | 1575.3 | 3456.0 | 3793.8 | 3785.1 | 2876.1 |
| 75° | 133.6 | 137.7 | 159.5 | 217.7 | 281.2 | 291.8 | 863.2 | 2678.2 | 3365.5 | 3505.4 | 2586.8 |
| 77.5° | 110.5 | 111.1 | 122.6 | 158.4 | 219.2 | 206.3 | 424.0 | 1858.2 | 2409.9 | 2563.8 | 1832.4 |
| 80° | 90.1 | 90.8 | 96.3 | 111.1 | 165.9 | 152.7 | 201.3 | 1068.5 | 1349.3 | 1351.0 | 871.4 |
| 82.5° | 71.7 | 71.9 | 77.9 | 81.3 | 119.2 | 109.2 | 115.4 | 501.7 | 589.6 | 567.2 | 313.2 |
| 85° | 50.5 | 49.4 | 76.1 | 66.7 | 77.9 | 70.0 | 63.7 | 198.6 | 243.8 | 233.2 | 98.1 |
| 87.5° | 16.8 | 17.4 | 33.8 | 43.2 | 45.5 | 39.7 | 28.4 | 76.1 | 92.0 | 91.3 | 31.1 |
| 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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 CATALOG NUMBER: GPC-SA1B-827-U-T2

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 | 541.7 |
| 2.5° | 544.4 | 539.6 | 532.4 | 524.6 | 518.3 | 512.0 | 507.3 | 504.8 | 502.1 | 499.8 | 502.6 |
| 5° | 550.2 | 541.1 | 525.9 | 511.1 | 500.1 | 490.4 | 483.5 | 479.8 | 476.5 | 474.2 | 474.5 |
| 7.5° | 559.6 | 544.9 | 519.4 | 497.7 | 482.6 | 472.1 | 465.0 | 462.5 | 460.4 | 459.8 | 460.6 |
| 10° | 569.6 | 547.9 | 510.8 | 482.0 | 464.7 | 456.0 | 452.8 | 454.5 | 456.0 | 457.4 | 458.9 |
| 12.5° | 580.9 | 550.6 | 498.2 | 463.5 | 448.8 | 445.4 | 448.6 | 455.9 | 461.2 | 464.4 | 466.3 |
| 15° | 595.8 | 553.1 | 483.6 | 445.0 | 435.1 | 438.9 | 449.7 | 462.2 | 471.5 | 477.4 | 478.3 |
| 17.5° | 609.5 | 552.9 | 465.0 | 426.3 | 424.0 | 435.1 | 451.3 | 469.1 | 481.5 | 489.8 | 491.5 |
| 20° | 623.6 | 548.8 | 443.3 | 408.1 | 412.8 | 431.0 | 452.1 | 473.5 | 488.5 | 498.2 | 500.4 |
| 22.5° | 636.7 | 541.7 | 419.5 | 391.6 | 403.4 | 425.6 | 449.2 | 470.9 | 485.9 | 493.8 | 496.2 |
| 25° | 645.7 | 529.3 | 395.4 | 377.6 | 395.1 | 418.9 | 439.8 | 457.2 | 468.5 | 472.4 | 473.0 |
| 27.5° | 650.2 | 513.0 | 372.6 | 365.5 | 386.4 | 408.0 | 422.4 | 431.0 | 434.2 | 433.9 | 433.3 |
| 30° | 650.8 | 491.7 | 353.1 | 355.7 | 376.4 | 391.9 | 398.7 | 397.1 | 393.0 | 386.0 | 386.6 |
| 32.5° | 648.9 | 467.5 | 336.7 | 346.3 | 363.7 | 372.3 | 372.6 | 364.6 | 353.7 | 342.6 | 339.6 |
| 35° | 649.5 | 443.9 | 322.3 | 335.7 | 348.2 | 352.0 | 348.5 | 336.7 | 321.9 | 307.6 | 304.6 |
| 37.5° | 656.1 | 423.3 | 309.9 | 323.4 | 331.1 | 332.0 | 327.0 | 314.6 | 303.7 | 289.7 | 288.5 |
| 40° | 672.1 | 408.6 | 298.1 | 309.6 | 314.0 | 314.4 | 307.3 | 298.5 | 299.4 | 292.0 | 291.8 |
| 42.5° | 700.7 | 402.2 | 287.6 | 295.2 | 297.9 | 298.8 | 293.4 | 287.7 | 295.6 | 290.8 | 289.1 |
| 45° | 737.7 | 403.7 | 278.8 | 281.1 | 286.1 | 290.3 | 287.0 | 280.2 | 283.2 | 262.1 | 255.2 |
| 47.5° | 780.5 | 413.4 | 271.8 | 268.9 | 277.6 | 285.6 | 280.5 | 270.2 | 259.4 | 238.5 | 234.5 |
| 50° | 830.5 | 428.4 | 265.5 | 257.0 | 268.3 | 279.3 | 274.1 | 259.4 | 243.2 | 233.0 | 231.7 |
| 52.5° | 882.6 | 446.8 | 259.1 | 243.8 | 256.7 | 274.4 | 271.8 | 257.0 | 237.0 | 227.0 | 225.1 |
| 55° | 941.8 | 465.3 | 251.1 | 228.5 | 244.1 | 272.1 | 270.8 | 248.2 | 232.3 | 226.6 | 225.3 |
| 57.5° | 1015.3 | 486.3 | 240.4 | 212.5 | 232.3 | 263.9 | 259.7 | 242.9 | 227.4 | 223.2 | 222.7 |
| 60° | 1111.1 | 517.4 | 225.1 | 195.6 | 217.9 | 251.4 | 250.5 | 235.1 | 219.7 | 216.6 | 216.0 |
| 62.5° | 1254.8 | 568.8 | 204.1 | 178.6 | 201.8 | 230.0 | 238.3 | 224.7 | 211.5 | 211.3 | 211.6 |
| 65° | 1477.7 | 646.1 | 181.2 | 163.7 | 185.6 | 211.9 | 224.2 | 213.9 | 203.2 | 206.2 | 206.6 |
| 67.5° | 1736.0 | 710.3 | 158.7 | 149.2 | 169.0 | 194.8 | 211.5 | 203.2 | 192.1 | 200.0 | 200.1 |
| 70° | 1822.0 | 653.0 | 139.0 | 134.8 | 151.9 | 178.3 | 197.7 | 191.3 | 180.1 | 188.0 | 187.2 |
| 72° | 1695.5 | 527.1 | 126.3 | 123.9 | 139.0 | 164.6 | 185.4 | 180.3 | 169.2 | 174.5 | 172.5 |
| 72.5° | 1655.7 | 502.6 | 123.1 | 121.1 | 135.5 | 161.2 | 182.2 | 177.5 | 166.5 | 171.0 | 169.2 |
| 75° | 1476.9 | 436.5 | 105.8 | 106.3 | 118.3 | 144.2 | 164.3 | 162.8 | 151.5 | 151.9 | 151.3 |
| 77.5° | 1071.2 | 320.0 | 89.1 | 92.2 | 100.7 | 126.7 | 146.3 | 145.4 | 133.0 | 130.7 | 130.2 |
| 80° | 497.1 | 163.3 | 72.6 | 74.0 | 82.8 | 106.0 | 124.8 | 123.6 | 113.6 | 110.7 | 109.0 |
| 82.5° | 170.3 | 77.6 | 54.6 | 55.5 | 64.1 | 85.4 | 108.2 | 107.5 | 99.1 | 93.5 | 90.1 |
| 85° | 60.8 | 38.7 | 38.2 | 37.3 | 45.8 | 67.2 | 94.3 | 90.2 | 77.9 | 66.4 | 66.1 |
| 87.5° | 19.7 | 16.5 | 19.7 | 19.6 | 26.7 | 45.5 | 68.5 | 58.4 | 56.5 | 47.0 | 46.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-157-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/03/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Invue
 Catalog Number: **EMM2-HTN-SA1A-827-U-5WQ**
 Description: Epic Modern Light Square 40W 5WQ Optic

Spectral Parameters

CCT (K): 2764
 CIE u': 0.2591
 CIE v': 0.5290
 Duv: 0.0020
 CIE x: 0.4581
 CIE y: 0.4156
 CIE z: 0.1263
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 583
 Purity: 62.2537
 Rf: 84.7
 Rg: 94.6

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 80.9 | | |
| R1: | 78.8 | R9: | -1.5 |
| R2: | 89.9 | R10: | 77.9 |
| R3: | 96.2 | R11: | 78.9 |
| R4: | 79.1 | R12: | 71.6 |
| R5: | 79.1 | R13: | 81.2 |
| R6: | 88.8 | R14: | 98.5 |
| R7: | 81.3 | R15: | 69.9 |
| R8: | 54.3 | | |



Test Conditions

Stabilization Time: 81M
 Operation Time: 2H 21M
 Sphere Temperature (°C): 25.2

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| 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 |

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CIE 1931 Chromaticity Diagram



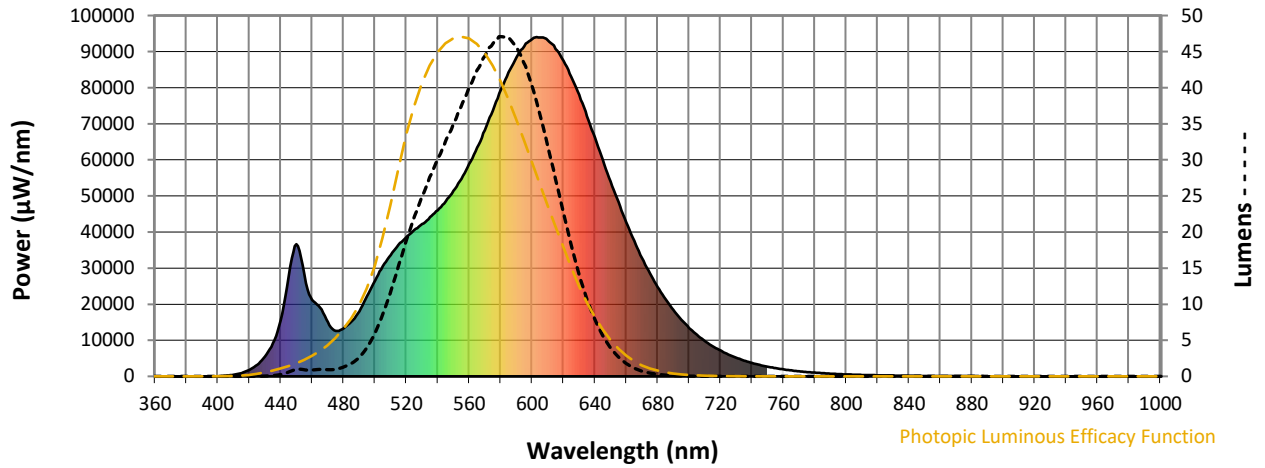
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2700K 4-step quadrangle

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Photopic Flux vs. Wavelength



Photopic Lumens: 4337.9

| 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 | 0 | 0.0 | 490 | 18018 | 2.6 | 620 | 87426 | 22.8 | 750 | 2680 | 0.0 | 880 | 58 | 0.0 |
| 365 | 0 | 0.0 | 495 | 22295 | 3.9 | 625 | 83013 | 18.2 | 755 | 2287 | 0.0 | 885 | 46 | 0.0 |
| 370 | 0 | 0.0 | 500 | 26478 | 5.8 | 630 | 78077 | 14.1 | 760 | 1944 | 0.0 | 890 | 45 | 0.0 |
| 375 | 0 | 0.0 | 505 | 30524 | 8.5 | 635 | 72080 | 10.7 | 765 | 1653 | 0.0 | 895 | 41 | 0.0 |
| 380 | 0 | 0.0 | 510 | 33611 | 11.5 | 640 | 66249 | 7.9 | 770 | 1413 | 0.0 | 900 | 38 | 0.0 |
| 385 | 0 | 0.0 | 515 | 36490 | 15.2 | 645 | 59973 | 5.7 | 775 | 1198 | 0.0 | 905 | 33 | 0.0 |
| 390 | 0 | 0.0 | 520 | 38610 | 18.7 | 650 | 53972 | 3.9 | 780 | 1025 | 0.0 | 910 | 30 | 0.0 |
| 395 | 0 | 0.0 | 525 | 40511 | 21.9 | 655 | 48369 | 2.7 | 785 | 874 | 0.0 | 915 | 23 | 0.0 |
| 400 | 48 | 0.0 | 530 | 42223 | 24.9 | 660 | 42641 | 1.8 | 790 | 747 | 0.0 | 920 | 24 | 0.0 |
| 405 | 201 | 0.0 | 535 | 44137 | 27.6 | 665 | 37602 | 1.1 | 795 | 639 | 0.0 | 925 | 22 | 0.0 |
| 410 | 457 | 0.0 | 540 | 46032 | 30.0 | 670 | 32798 | 0.7 | 800 | 547 | 0.0 | 930 | 22 | 0.0 |
| 415 | 925 | 0.0 | 545 | 48553 | 32.5 | 675 | 28558 | 0.5 | 805 | 473 | 0.0 | 935 | 17 | 0.0 |
| 420 | 1816 | 0.0 | 550 | 51408 | 34.9 | 680 | 24782 | 0.3 | 810 | 401 | 0.0 | 940 | 13 | 0.0 |
| 425 | 3217 | 0.0 | 555 | 54711 | 37.4 | 685 | 21386 | 0.2 | 815 | 351 | 0.0 | 945 | 6 | 0.0 |
| 430 | 5520 | 0.0 | 560 | 58847 | 40.0 | 690 | 18413 | 0.1 | 820 | 307 | 0.0 | 950 | 10 | 0.0 |
| 435 | 9225 | 0.1 | 565 | 63386 | 42.4 | 695 | 15721 | 0.1 | 825 | 261 | 0.0 | 955 | 11 | 0.0 |
| 440 | 15522 | 0.2 | 570 | 68196 | 44.3 | 700 | 13432 | 0.0 | 830 | 228 | 0.0 | 960 | 8 | 0.0 |
| 445 | 27642 | 0.6 | 575 | 73613 | 46.0 | 705 | 11513 | 0.0 | 835 | 193 | 0.0 | 965 | 12 | 0.0 |
| 450 | 36602 | 0.9 | 580 | 79207 | 47.1 | 710 | 9780 | 0.0 | 840 | 174 | 0.0 | 970 | 3 | 0.0 |
| 455 | 28292 | 0.9 | 585 | 84248 | 47.0 | 715 | 8356 | 0.0 | 845 | 151 | 0.0 | 975 | 8 | 0.0 |
| 460 | 21166 | 0.9 | 590 | 88397 | 45.7 | 720 | 7161 | 0.0 | 850 | 123 | 0.0 | 980 | 2 | 0.0 |
| 465 | 19092 | 1.0 | 595 | 91428 | 43.4 | 725 | 6067 | 0.0 | 855 | 106 | 0.0 | 985 | 13 | 0.0 |
| 470 | 14951 | 0.9 | 600 | 93452 | 40.3 | 730 | 5164 | 0.0 | 860 | 95 | 0.0 | 990 | 16 | 0.0 |
| 475 | 12606 | 1.0 | 605 | 93959 | 36.4 | 735 | 4393 | 0.0 | 865 | 82 | 0.0 | 995 | 20 | 0.0 |
| 480 | 13323 | 1.3 | 610 | 93079 | 32.0 | 740 | 3694 | 0.0 | 870 | 77 | 0.0 | 1000 | 0 | 0.0 |
| 485 | 15164 | 1.8 | 615 | 90707 | 27.3 | 745 | 3157 | 0.0 | 875 | 65 | 0.0 | | | |

REPORT NUMBER: SP1-2407-157-9

Scotopic Flux vs. Wavelength



Scotopic Lumens: 5286.7

S/P: 1.22

| λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360 | 0 | 0.0 | 490 | 18018 | 75.9 | 620 | 87426 | 0.4 | 750 | 2680 | 0.0 | 880 | 58 | 0.0 |
| 365 | 0 | 0.0 | 495 | 22295 | 93.2 | 625 | 83013 | 0.2 | 755 | 2287 | 0.0 | 885 | 46 | 0.0 |
| 370 | 0 | 0.0 | 500 | 26478 | 107.8 | 630 | 78077 | 0.1 | 760 | 1944 | 0.0 | 890 | 45 | 0.0 |
| 375 | 0 | 0.0 | 505 | 30524 | 118.7 | 635 | 72080 | 0.1 | 765 | 1653 | 0.0 | 895 | 41 | 0.0 |
| 380 | 0 | 0.0 | 510 | 33611 | 122.2 | 640 | 66249 | 0.1 | 770 | 1413 | 0.0 | 900 | 38 | 0.0 |
| 385 | 0 | 0.0 | 515 | 36490 | 120.8 | 645 | 59973 | 0.0 | 775 | 1198 | 0.0 | 905 | 33 | 0.0 |
| 390 | 0 | 0.0 | 520 | 38610 | 113.9 | 650 | 53972 | 0.0 | 780 | 1025 | 0.0 | 910 | 30 | 0.0 |
| 395 | 0 | 0.0 | 525 | 40511 | 104.1 | 655 | 48369 | 0.0 | 785 | 874 | 0.0 | 915 | 23 | 0.0 |
| 400 | 48 | 0.0 | 530 | 42223 | 92.4 | 660 | 42641 | 0.0 | 790 | 747 | 0.0 | 920 | 24 | 0.0 |
| 405 | 201 | 0.0 | 535 | 44137 | 80.5 | 665 | 37602 | 0.0 | 795 | 639 | 0.0 | 925 | 22 | 0.0 |
| 410 | 457 | 0.1 | 540 | 46032 | 68.2 | 670 | 32798 | 0.0 | 800 | 547 | 0.0 | 930 | 22 | 0.0 |
| 415 | 925 | 0.3 | 545 | 48553 | 57.1 | 675 | 28558 | 0.0 | 805 | 473 | 0.0 | 935 | 17 | 0.0 |
| 420 | 1816 | 1.1 | 550 | 51408 | 46.7 | 680 | 24782 | 0.0 | 810 | 401 | 0.0 | 940 | 13 | 0.0 |
| 425 | 3217 | 2.5 | 555 | 54711 | 37.4 | 685 | 21386 | 0.0 | 815 | 351 | 0.0 | 945 | 6 | 0.0 |
| 430 | 5520 | 5.9 | 560 | 58847 | 29.4 | 690 | 18413 | 0.0 | 820 | 307 | 0.0 | 950 | 10 | 0.0 |
| 435 | 9225 | 12.5 | 565 | 63386 | 22.5 | 695 | 15721 | 0.0 | 825 | 261 | 0.0 | 955 | 11 | 0.0 |
| 440 | 15522 | 26.3 | 570 | 68196 | 16.9 | 700 | 13432 | 0.0 | 830 | 228 | 0.0 | 960 | 8 | 0.0 |
| 445 | 27642 | 55.2 | 575 | 73613 | 12.4 | 705 | 11513 | 0.0 | 835 | 193 | 0.0 | 965 | 12 | 0.0 |
| 450 | 36602 | 85.4 | 580 | 79207 | 9.0 | 710 | 9780 | 0.0 | 840 | 174 | 0.0 | 970 | 3 | 0.0 |
| 455 | 28292 | 75.1 | 585 | 84248 | 6.3 | 715 | 8356 | 0.0 | 845 | 151 | 0.0 | 975 | 8 | 0.0 |
| 460 | 21166 | 63.2 | 590 | 88397 | 4.4 | 720 | 7161 | 0.0 | 850 | 123 | 0.0 | 980 | 2 | 0.0 |
| 465 | 19092 | 63.2 | 595 | 91428 | 3.0 | 725 | 6067 | 0.0 | 855 | 106 | 0.0 | 985 | 13 | 0.0 |
| 470 | 14951 | 54.2 | 600 | 93452 | 2.0 | 730 | 5164 | 0.0 | 860 | 95 | 0.0 | 990 | 16 | 0.0 |
| 475 | 12606 | 48.8 | 605 | 93959 | 1.3 | 735 | 4393 | 0.0 | 865 | 82 | 0.0 | 995 | 20 | 0.0 |
| 480 | 13323 | 54.2 | 610 | 93079 | 0.9 | 740 | 3694 | 0.0 | 870 | 77 | 0.0 | 1000 | 0 | 0.0 |
| 485 | 15164 | 63.3 | 615 | 90707 | 0.5 | 745 | 3157 | 0.0 | 875 | 65 | 0.0 | | | |

REPORT NUMBER: SP1-2407-157-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: 9797

M/P: 2.26

| 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 | 0 | 0.0 | 490 | 18018 | 27.7 | 620 | 87426 | 1.1 | 750 | 2680 | 0.0 | 880 | 58 | 0.0 |
| 365 | 0 | 0.0 | 495 | 22295 | 36.0 | 625 | 83013 | 0.7 | 755 | 2287 | 0.0 | 885 | 46 | 0.0 |
| 370 | 0 | 0.0 | 500 | 26478 | 44.2 | 630 | 78077 | 0.4 | 760 | 1944 | 0.0 | 890 | 45 | 0.0 |
| 375 | 0 | 0.0 | 505 | 30524 | 51.8 | 635 | 72080 | 0.3 | 765 | 1653 | 0.0 | 895 | 41 | 0.0 |
| 380 | 0 | 0.0 | 510 | 33611 | 57.0 | 640 | 66249 | 0.2 | 770 | 1413 | 0.0 | 900 | 38 | 0.0 |
| 385 | 0 | 0.0 | 515 | 36490 | 60.5 | 645 | 59973 | 0.1 | 775 | 1198 | 0.0 | 905 | 33 | 0.0 |
| 390 | 0 | 0.0 | 520 | 38610 | 61.4 | 650 | 53972 | 0.1 | 780 | 1025 | 0.0 | 910 | 30 | 0.0 |
| 395 | 0 | 0.0 | 525 | 40511 | 60.6 | 655 | 48369 | 0.0 | 785 | 874 | 0.0 | 915 | 23 | 0.0 |
| 400 | 48 | 0.0 | 530 | 42223 | 58.2 | 660 | 42641 | 0.0 | 790 | 747 | 0.0 | 920 | 24 | 0.0 |
| 405 | 201 | 0.0 | 535 | 44137 | 55.0 | 665 | 37602 | 0.0 | 795 | 639 | 0.0 | 925 | 22 | 0.0 |
| 410 | 457 | 0.0 | 540 | 46032 | 50.9 | 670 | 32798 | 0.0 | 800 | 547 | 0.0 | 930 | 22 | 0.0 |
| 415 | 925 | 0.1 | 545 | 48553 | 46.6 | 675 | 28558 | 0.0 | 805 | 473 | 0.0 | 935 | 17 | 0.0 |
| 420 | 1816 | 0.3 | 550 | 51408 | 42.0 | 680 | 24782 | 0.0 | 810 | 401 | 0.0 | 940 | 13 | 0.0 |
| 425 | 3217 | 0.8 | 555 | 54711 | 37.4 | 685 | 21386 | 0.0 | 815 | 351 | 0.0 | 945 | 6 | 0.0 |
| 430 | 5520 | 1.9 | 560 | 58847 | 32.9 | 690 | 18413 | 0.0 | 820 | 307 | 0.0 | 950 | 10 | 0.0 |
| 435 | 9225 | 4.1 | 565 | 63386 | 28.4 | 695 | 15721 | 0.0 | 825 | 261 | 0.0 | 955 | 11 | 0.0 |
| 440 | 15522 | 8.7 | 570 | 68196 | 24.1 | 700 | 13432 | 0.0 | 830 | 228 | 0.0 | 960 | 8 | 0.0 |
| 445 | 27642 | 18.5 | 575 | 73613 | 20.0 | 705 | 11513 | 0.0 | 835 | 193 | 0.0 | 965 | 12 | 0.0 |
| 450 | 36602 | 28.3 | 580 | 79207 | 16.3 | 710 | 9780 | 0.0 | 840 | 174 | 0.0 | 970 | 3 | 0.0 |
| 455 | 28292 | 24.7 | 585 | 84248 | 12.9 | 715 | 8356 | 0.0 | 845 | 151 | 0.0 | 975 | 8 | 0.0 |
| 460 | 21166 | 20.4 | 590 | 88397 | 9.8 | 720 | 7161 | 0.0 | 850 | 123 | 0.0 | 980 | 2 | 0.0 |
| 465 | 19092 | 20.1 | 595 | 91428 | 7.3 | 725 | 6067 | 0.0 | 855 | 106 | 0.0 | 985 | 13 | 0.0 |
| 470 | 14951 | 17.2 | 600 | 93452 | 5.3 | 730 | 5164 | 0.0 | 860 | 95 | 0.0 | 990 | 16 | 0.0 |
| 475 | 12606 | 15.7 | 605 | 93959 | 3.7 | 735 | 4393 | 0.0 | 865 | 82 | 0.0 | 995 | 20 | 0.0 |
| 480 | 13323 | 18.0 | 610 | 93079 | 2.5 | 740 | 3694 | 0.0 | 870 | 77 | 0.0 | 1000 | 0 | 0.0 |
| 485 | 15164 | 21.9 | 615 | 90707 | 1.7 | 745 | 3157 | 0.0 | 875 | 65 | 0.0 | | | |

Summary

$R_f = 84.7$
 $R_g = 94.6$
 CIE $R_a = 80.9$
 $R_9 = -1.5$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 84 | CES51 = 95 | CES76 = 81 |
| CES02 = 63 | CES27 = 95 | CES52 = 94 | CES77 = 84 |
| CES03 = 31 | CES28 = 94 | CES53 = 89 | CES78 = 81 |
| CES04 = 71 | CES29 = 87 | CES54 = 91 | CES79 = 89 |
| CES05 = 50 | CES30 = 94 | CES55 = 90 | CES80 = 89 |
| CES06 = 52 | CES31 = 89 | CES56 = 86 | CES81 = 69 |
| CES07 = 43 | CES32 = 82 | CES57 = 85 | CES82 = 96 |
| CES08 = 41 | CES33 = 91 | CES58 = 86 | CES83 = 93 |
| CES09 = 29 | CES34 = 92 | CES59 = 91 | CES84 = 92 |
| CES10 = 77 | CES35 = 96 | CES60 = 94 | CES85 = 76 |
| CES11 = 60 | CES36 = 90 | CES61 = 89 | CES86 = 65 |
| CES12 = 66 | CES37 = 96 | CES62 = 94 | CES87 = 84 |
| CES13 = 44 | CES38 = 98 | CES63 = 87 | CES88 = 86 |
| CES14 = 74 | CES39 = 98 | CES64 = 82 | CES89 = 73 |
| CES15 = 72 | CES40 = 95 | CES65 = 78 | CES90 = 88 |
| CES16 = 48 | CES41 = 96 | CES66 = 81 | CES91 = 82 |
| CES17 = 50 | CES42 = 97 | CES67 = 80 | CES92 = 64 |
| CES18 = 57 | CES43 = 91 | CES68 = 83 | CES93 = 78 |
| CES19 = 73 | CES44 = 99 | CES69 = 88 | CES94 = 59 |
| CES20 = 67 | CES45 = 93 | CES70 = 80 | CES95 = 74 |
| CES21 = 87 | CES46 = 89 | CES71 = 79 | CES96 = 83 |
| CES22 = 79 | CES47 = 92 | CES72 = 92 | CES97 = 88 |
| CES23 = 92 | CES48 = 83 | CES73 = 75 | CES98 = 83 |
| CES24 = 91 | CES49 = 90 | CES74 = 91 | CES99 = 74 |
| CES25 = 72 | CES50 = 94 | CES75 = 81 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)