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: P1367311

Luminaire Tested: **GSS-SB1A-750-U-T4W**

Issue Date: 02/18/2026

Report Generated By 670245763

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1367311 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1A-750-U-T4W |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 31W 70CRI 5000K FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC |
| Light Source: | (26) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 4121.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 133.0 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B1 - U0 - G1 |

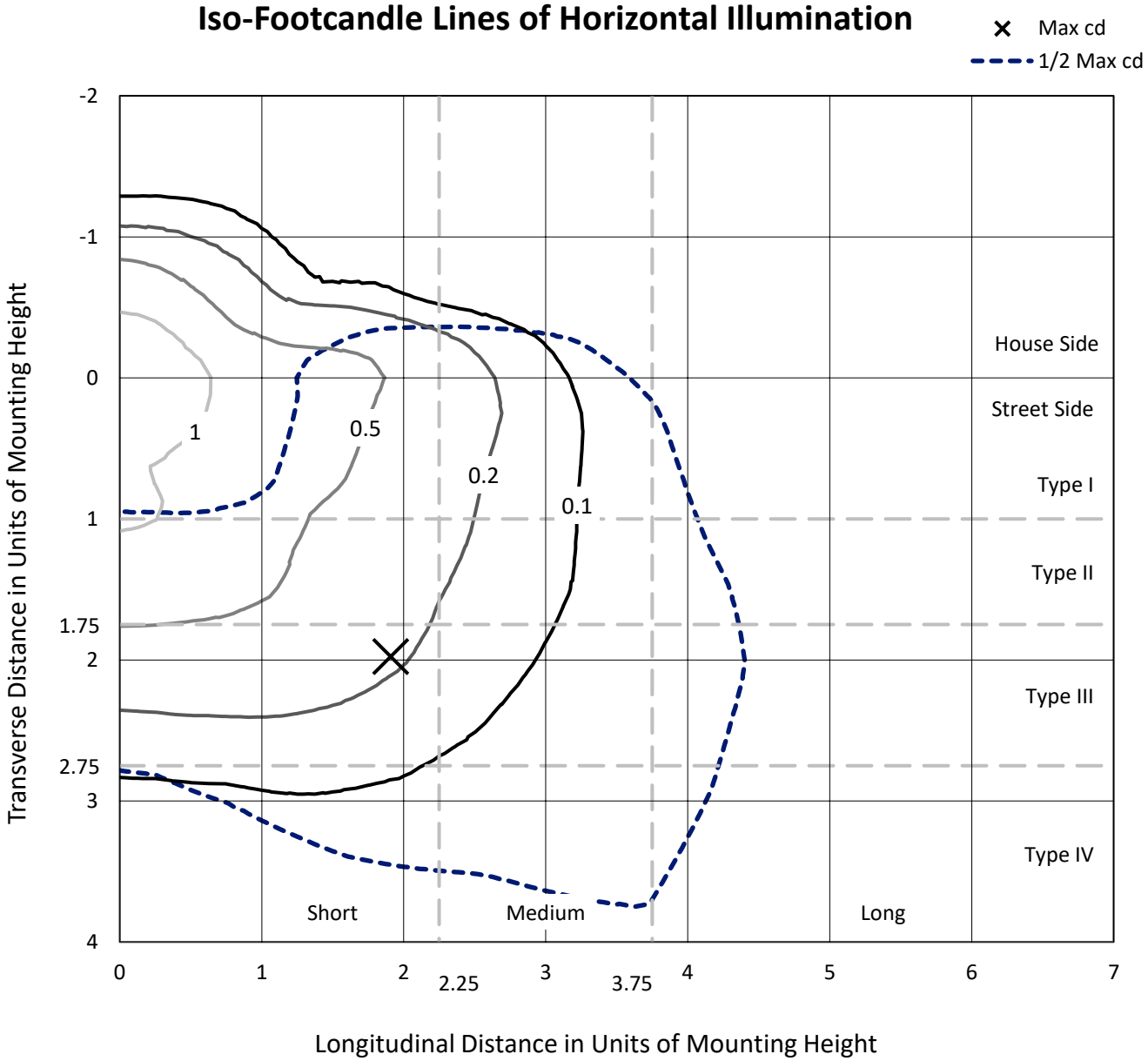
| | |
|---|---|
| Input Watts (W): | 31 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.4% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1367311
CATALOG NUMBER: GSS-SB1A-750-U-T4W

## Iso-Footcandle Lines of Horizontal Illumination



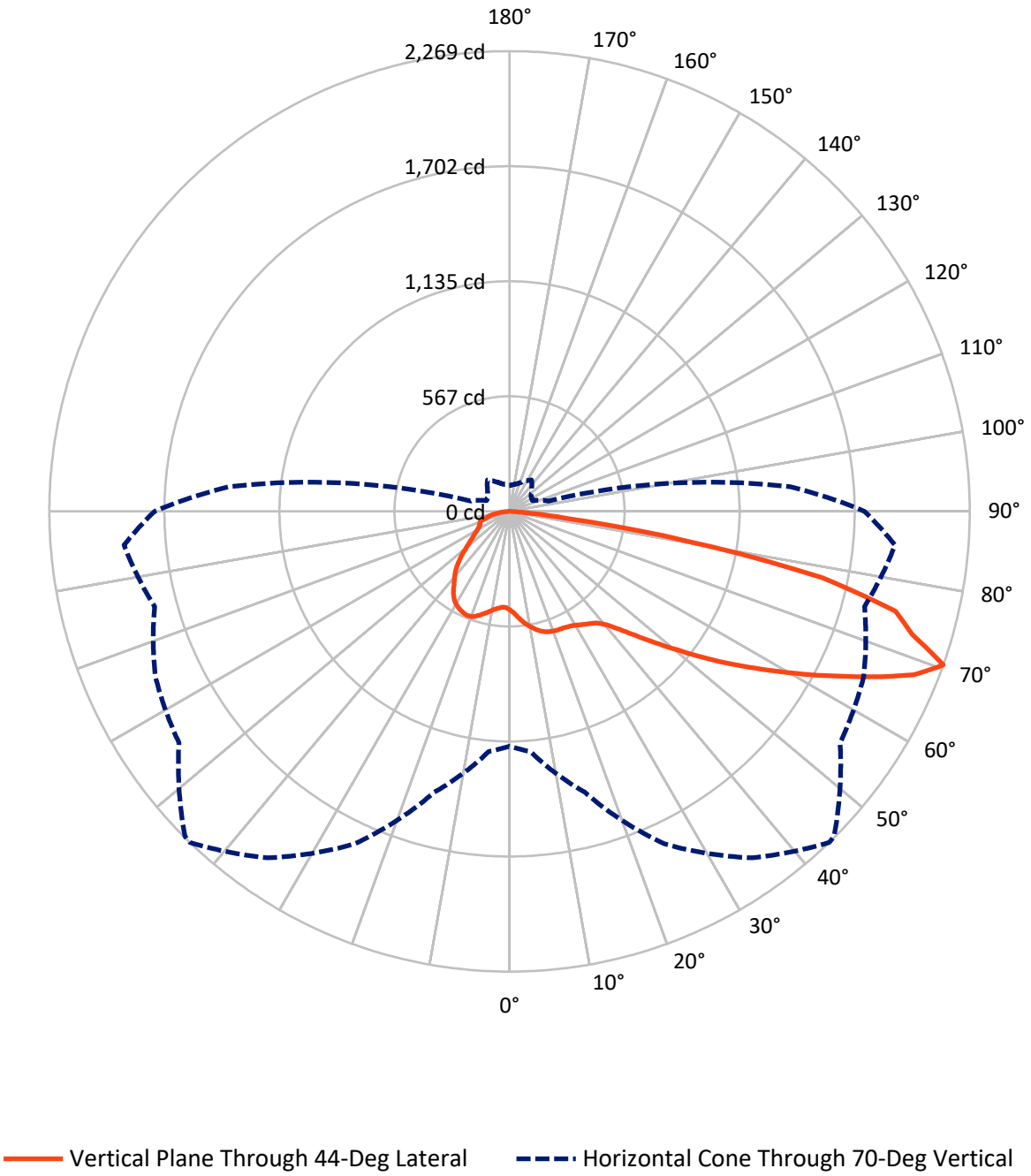

Based on 20 foot mounting height. Maximum calculated value = 1.5 fc
Type IV - Short - N/A

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REPORT NUMBER: P1367311
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## Luminous Intensity Polar Plot



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Scaled Data Report

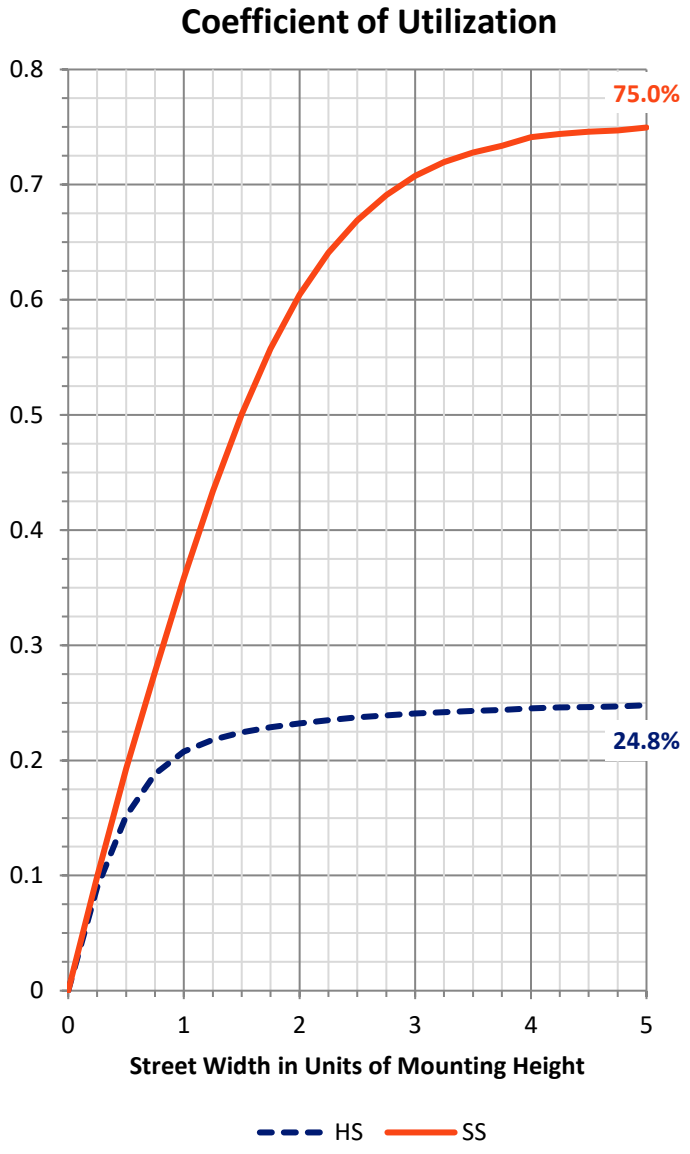
REPORT NUMBER: P1367311
CATALOG NUMBER: GSS-SB1A-750-U-T4W

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1032.7 | 0.0 | 1032.7 |
| | % Fixture | 25.1 | 0.0 | 25.1 |
| **Street Side** | Lumens | 3088.8 | 0.0 | 3088.8 |
| | % Fixture | 74.9 | 0.0 | 74.9 |
| **Total** | Lumens | 4121.5 | 0.0 | 4121.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 49.2 | 1.2 |
| 10°-20° | 161.3 | 3.9 |
| 20°-30° | 277.6 | 6.7 |
| 30°-40° | 391.4 | 9.5 |
| 40°-50° | 541.6 | 13.1 |
| 50°-60° | 804.3 | 19.5 |
| 60°-70° | 1075.0 | 26.1 |
| 70°-80° | 758.3 | 18.4 |
| 80°-90° | 62.8 | 1.5 |
| 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° | 4121.5 | 100.0 |
| 0°-180° | 4121.5 | 100.0 |



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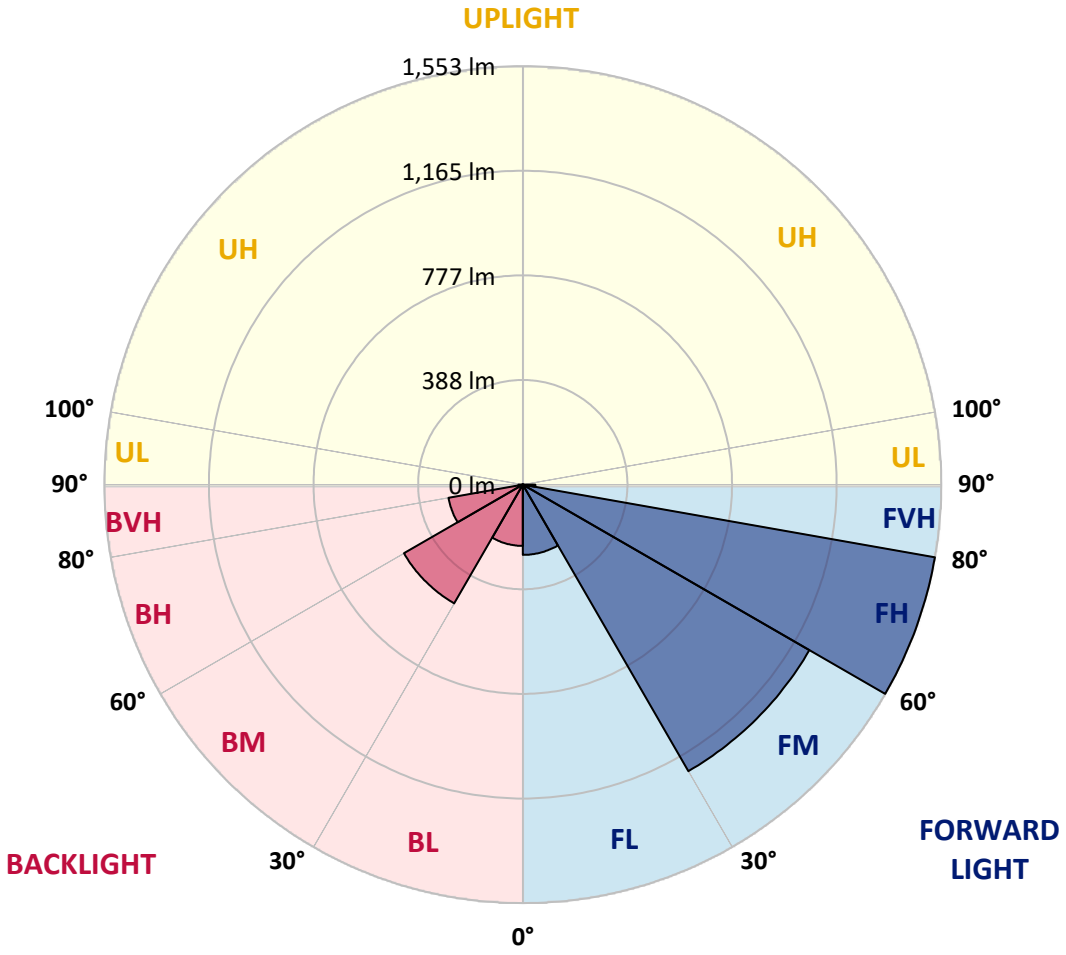
Scaled Data Report

REPORT NUMBER: P1367311
CATALOG NUMBER: GSS-SB1A-750-U-T4W

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 260.8 | 6.3 | | | |
| FM | (30°-60°) | 1228.1 | 29.8 | | | |
| FH | (60°-80°) | 1553.4 | 37.7 | | | G1/1800 |
| FVH | (80°-90°) | 46.5 | 1.1 | | | G1/100 |
| BL | (0°-30°) | 227.3 | 5.5 | B1/500 | | |
| BM | (30°-60°) | 509.2 | 12.4 | B1/1000 | | |
| BH | (60°-80°) | 279.9 | 6.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 16.3 | 0.4 | | | 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 IV Short



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REPORT NUMBER: P1367311
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 | *487.0* | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 |
| 2.5° | 523.0 | 520.0 | 517.0 | 516.0 | 512.0 | *506.0* | 506.0 | 504.0 | 499.0 | 495.0 | 492.0 |
| 5° | 557.0 | 558.0 | 553.0 | 549.0 | 543.0 | *533.0* | 534.0 | 525.0 | 515.0 | 504.0 | 496.0 |
| 7.5° | 590.0 | 590.0 | 584.0 | 579.0 | 571.0 | *559.0* | 559.0 | 545.0 | 533.0 | 518.0 | 507.0 |
| 10° | 620.0 | 618.0 | 610.0 | 604.0 | 593.0 | *580.0* | 579.0 | 565.0 | 550.0 | 533.0 | 518.0 |
| 12.5° | 643.0 | 643.0 | 635.0 | 625.0 | 613.0 | *599.0* | 598.0 | 583.0 | 568.0 | 550.0 | 532.0 |
| 15° | 665.0 | 660.0 | 653.0 | 640.0 | 626.0 | *615.0* | 613.0 | 600.0 | 585.0 | 569.0 | 549.0 |
| 17.5° | 673.1 | 671.1 | 662.0 | 649.0 | 636.0 | *624.0* | 624.0 | 612.0 | 601.0 | 585.0 | 565.0 |
| 20° | 671.1 | 668.1 | 660.0 | 649.0 | 639.0 | *629.0* | 629.0 | 620.0 | 614.0 | 599.0 | 581.0 |
| 22.5° | 661.0 | 658.0 | 653.0 | 643.0 | 638.0 | *632.0* | 632.0 | 627.0 | 625.0 | 616.0 | 599.0 |
| 25° | 658.0 | 656.0 | 649.0 | 640.0 | 635.0 | *634.0* | 635.0 | 636.0 | 638.0 | 631.0 | 617.0 |
| 27.5° | 660.0 | 660.0 | 654.0 | 645.0 | 639.0 | *640.0* | 641.0 | 647.0 | 653.0 | 649.0 | 637.0 |
| 30° | 673.1 | 670.1 | 666.0 | 657.0 | 650.0 | *651.0* | 651.0 | 663.0 | 669.1 | 664.0 | 655.0 |
| 32.5° | 695.1 | 692.1 | 686.1 | 667.0 | 660.0 | *665.0* | 667.0 | 677.1 | 681.1 | 676.1 | 672.1 |
| 35° | 746.1 | 749.1 | 729.1 | 695.1 | 676.1 | *680.1* | 682.1 | 689.1 | 694.1 | 692.1 | 688.1 |
| 37.5° | 839.1 | 840.1 | 815.1 | 754.1 | 710.1 | *698.1* | 699.1 | 709.1 | 715.1 | 708.1 | 705.1 |
| 40° | 955.1 | 956.1 | 921.1 | 838.1 | 764.1 | *734.1* | 733.1 | 735.1 | 744.1 | 732.1 | 730.1 |
| 42.5° | 1081.1 | 1067.1 | 1037.1 | 942.1 | 844.1 | *794.1* | 785.1 | 779.1 | 790.1 | 775.1 | 765.1 |
| 45° | 1201.1 | 1191.1 | 1150.1 | 1052.1 | 940.1 | *873.1* | 864.1 | 834.1 | 852.1 | 840.1 | 822.1 |
| 47.5° | 1301.1 | 1293.1 | 1262.1 | 1171.1 | 1049.1 | *968.1* | 954.1 | 907.1 | 939.1 | 933.1 | 911.1 |
| 50° | 1375.1 | 1367.1 | 1346.1 | 1290.1 | 1187.1 | *1074.1* | 1061.1 | 1004.1 | 1037.1 | 1048.1 | 1031.1 |
| 52.5° | 1429.1 | 1427.1 | 1419.1 | 1410.1 | 1327.1 | *1197.1* | 1182.1 | 1111.1 | 1165.1 | 1186.1 | 1181.1 |
| 55° | 1511.1 | 1507.1 | 1510.1 | 1525.1 | 1477.1 | *1328.1* | 1306.1 | 1223.1 | 1297.1 | 1336.1 | 1344.1 |
| 57.5° | 1589.1 | 1589.1 | 1615.1 | 1654.1 | 1648.1 | *1469.1* | 1443.1 | 1354.1 | 1457.1 | 1476.1 | 1514.1 |
| 60° | 1662.1 | 1669.1 | 1705.1 | 1791.1 | 1808.1 | *1622.1* | 1591.1 | 1505.1 | 1609.1 | 1630.1 | 1699.1 |
| 62.5° | 1631.1 | 1648.1 | 1763.1 | 1902.1 | 1958.1 | *1786.1* | 1755.1 | 1671.1 | 1780.1 | 1755.1 | 1817.1 |
| 65° | 1473.1 | 1499.1 | 1677.1 | 1909.1 | 2104.2 | *1966.1* | 1940.1 | 1858.1 | 1874.1 | 1774.1 | 1883.1 |
| 67.5° | 1307.1 | 1345.1 | 1552.1 | 1824.1 | 2142.2 | *2150.2* | 2127.2 | 1973.1 | 1873.1 | 1794.1 | 1950.1 |
| 70° | *1158.1* | *1189.1* | *1433.1* | *1809.1* | *2085.2* | *2269.2* | *2264.2* | *1990.1* | *1927.1* | *1812.1* | *1908.1* |
| 72.5° | 812.1 | 855.1 | 1105.1 | 1670.1 | 2102.2 | *2075.2* | 2064.2 | 2109.2 | 1967.1 | 1746.1 | 1691.1 |
| 75° | 292.0 | 309.0 | 573.0 | 1130.1 | 1671.1 | *1965.1* | 1974.1 | 1954.1 | 1928.1 | 1564.1 | 1271.1 |
| 77.5° | 87.0 | 93.0 | 163.0 | 448.0 | 937.1 | *1577.1* | 1592.1 | 1539.1 | 1449.1 | 943.1 | 481.0 |
| 80° | 47.0 | 51.0 | 77.0 | 131.0 | 351.0 | *890.1* | 931.1 | 788.1 | 522.0 | 249.0 | 108.0 |
| 82.5° | 23.0 | 25.0 | 40.0 | 64.0 | 151.0 | *283.0* | 284.0 | 252.0 | 170.0 | 75.0 | 40.0 |
| 85° | 8.0 | 9.0 | 13.0 | 24.0 | 52.0 | *58.0* | 58.0 | 54.0 | 50.0 | 37.0 | 18.0 |
| 87.5° | 2.0 | 2.0 | 3.0 | 4.0 | 5.0 | *6.0* | 6.0 | 7.0 | 8.0 | 9.0 | 9.0 |
| 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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Scaled Data Report

REPORT NUMBER: P1367311
CATALOG NUMBER: GSS-SB1A-750-U-T4W

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 | 487.0 |
| 2.5° | 490.0 | 486.0 | 483.0 | 480.0 | 478.0 | 474.0 | 473.0 | 473.0 | 472.0 | 473.0 | 472.0 |
| 5° | 493.0 | 487.0 | 482.0 | 478.0 | 476.0 | 474.0 | 474.0 | 475.0 | 474.0 | 475.0 | 474.0 |
| 7.5° | 499.0 | 495.0 | 490.0 | 484.0 | 483.0 | 482.0 | 483.0 | 485.0 | 486.0 | 487.0 | 485.0 |
| 10° | 511.0 | 505.0 | 498.0 | 495.0 | 493.0 | 492.0 | 495.0 | 499.0 | 500.0 | 502.0 | 500.0 |
| 12.5° | 525.0 | 518.0 | 513.0 | 506.0 | 506.0 | 507.0 | 510.0 | 515.0 | 518.0 | 521.0 | 518.0 |
| 15° | 541.0 | 534.0 | 527.0 | 521.0 | 520.0 | 522.0 | 527.0 | 532.0 | 533.0 | 534.0 | 532.0 |
| 17.5° | 557.0 | 550.0 | 541.0 | 534.0 | 533.0 | 538.0 | 540.0 | 540.0 | 538.0 | 538.0 | 535.0 |
| 20° | 573.0 | 568.0 | 559.0 | 546.0 | 550.0 | 552.0 | 546.0 | 541.0 | 538.0 | 537.0 | 534.0 |
| 22.5° | 592.0 | 584.0 | 574.0 | 560.0 | 563.0 | 555.0 | 544.0 | 542.0 | 539.0 | 540.0 | 537.0 |
| 25° | 610.0 | 605.0 | 589.0 | 571.0 | 563.0 | 550.0 | 543.0 | 543.0 | 540.0 | 542.0 | 541.0 |
| 27.5° | 631.0 | 625.0 | 603.0 | 577.0 | 556.0 | 542.0 | 541.0 | 541.0 | 536.0 | 537.0 | 536.0 |
| 30° | 652.0 | 643.0 | 614.0 | 572.0 | 539.0 | 530.0 | 533.0 | 532.0 | 530.0 | 533.0 | 535.0 |
| 32.5° | 670.1 | 663.0 | 620.0 | 560.0 | 518.0 | 514.0 | 516.0 | 521.0 | 526.0 | 529.0 | 533.0 |
| 35° | 689.1 | 681.1 | 625.0 | 539.0 | 495.0 | 489.0 | 488.0 | 503.0 | 512.0 | 517.0 | 520.0 |
| 37.5° | 709.1 | 699.1 | 628.0 | 516.0 | 473.0 | 455.0 | 458.0 | 470.0 | 480.0 | 489.0 | 496.0 |
| 40° | 736.1 | 726.1 | 632.0 | 491.0 | 450.0 | 426.0 | 422.0 | 425.0 | 432.0 | 445.0 | 452.0 |
| 42.5° | 776.1 | 760.1 | 632.0 | 459.0 | 417.0 | 400.0 | 386.0 | 375.0 | 371.0 | 379.0 | 383.0 |
| 45° | 831.1 | 807.1 | 628.0 | 426.0 | 379.0 | 367.0 | 344.0 | 326.0 | 310.0 | 302.0 | 300.0 |
| 47.5° | 922.1 | 880.1 | 624.0 | 394.0 | 343.0 | 328.0 | 300.0 | 279.0 | 256.0 | 235.0 | 230.0 |
| 50° | 1044.1 | 977.1 | 625.0 | 362.0 | 307.0 | 287.0 | 262.0 | 240.0 | 213.0 | 193.0 | 190.0 |
| 52.5° | 1205.1 | 1113.1 | 631.0 | 327.0 | 272.0 | 254.0 | 233.0 | 211.0 | 184.0 | 169.0 | 168.0 |
| 55° | 1392.1 | 1277.1 | 652.0 | 288.0 | 240.0 | 226.0 | 211.0 | 190.0 | 167.0 | 154.0 | 152.0 |
| 57.5° | 1610.1 | 1467.1 | 694.1 | 247.0 | 211.0 | 206.0 | 194.0 | 174.0 | 155.0 | 142.0 | 140.0 |
| 60° | 1825.1 | 1651.1 | 726.1 | 211.0 | 188.0 | 188.0 | 177.0 | 162.0 | 136.0 | 125.0 | 123.0 |
| 62.5° | 1925.1 | 1708.1 | 665.0 | 182.0 | 170.0 | 173.0 | 166.0 | 145.0 | 137.0 | 132.0 | 129.0 |
| 65° | 1949.1 | 1676.1 | 500.0 | 160.0 | 155.0 | 165.0 | 154.0 | 155.0 | 148.0 | 143.0 | 140.0 |
| 67.5° | 1920.1 | 1585.1 | 320.0 | 141.0 | 144.0 | 155.0 | 170.0 | 171.0 | 148.0 | 137.0 | 135.0 |
| 70° | *1750.1* | *1390.1* | *197.0* | *125.0* | *129.0* | *153.0* | *189.0* | *161.0* | *140.0* | *131.0* | *127.0* |
| 72.5° | 1460.1 | 1147.1 | 138.0 | 110.0 | 110.0 | 145.0 | 170.0 | 151.0 | 129.0 | 124.0 | 119.0 |
| 75° | 1025.1 | 776.1 | 101.0 | 92.0 | 92.0 | 113.0 | 157.0 | 138.0 | 121.0 | 123.0 | 121.0 |
| 77.5° | 349.0 | 252.0 | 73.0 | 71.0 | 68.0 | 97.0 | 140.0 | 132.0 | 112.0 | 106.0 | 98.0 |
| 80° | 103.0 | 81.0 | 54.0 | 50.0 | 49.0 | 78.0 | 118.0 | 97.0 | 80.0 | 73.0 | 68.0 |
| 82.5° | 40.0 | 36.0 | 35.0 | 32.0 | 31.0 | 52.0 | 78.0 | 67.0 | 60.0 | 50.0 | 49.0 |
| 85° | 16.0 | 16.0 | 18.0 | 18.0 | 16.0 | 28.0 | 47.0 | 37.0 | 35.0 | 31.0 | 30.0 |
| 87.5° | 8.0 | 8.0 | 7.0 | 5.0 | 5.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 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
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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: SP1-2407-184-6

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-750-U-5WQ

Data in this report applies to families of products including GSS-SB1A-750-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

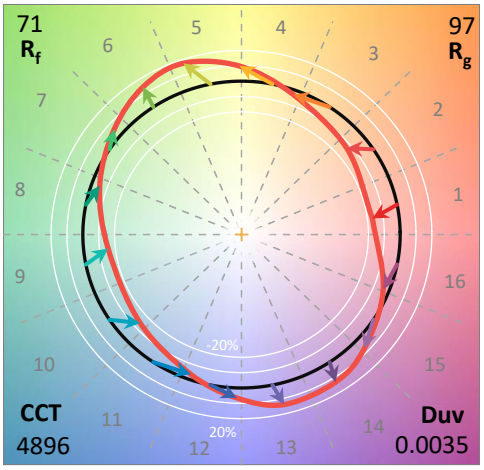
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-6 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-750-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4896 |
| CIE u': | 0.2101 |
| CIE v': | 0.4901 |
| Duv: | 0.0035 |
| CIE x: | 0.3489 |
| CIE y: | 0.3618 |
| CIE z: | 0.2893 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 570 |
| Purity: | 13.25435 |
| Rf: | 70.7 |
| Rg: | 96.8 |

| | |
|---|---|
| CRI (Ra): | 70.2 |
| R1: | 68.1 |
| R2: | 73.9 |
| R3: | 79.4 |
| R4: | 72.1 |
| R5: | 69.2 |
| R6: | 65.7 |
| R7: | 78.1 |
| R8: | 55.3 |
| R9: | -35.1 |
| R10: | 39.3 |
| R11: | 71.1 |
| R12: | 43.8 |
| R13: | 68.1 |
| R14: | 88.4 |
| R15: | 59.7 |




## Test Conditions

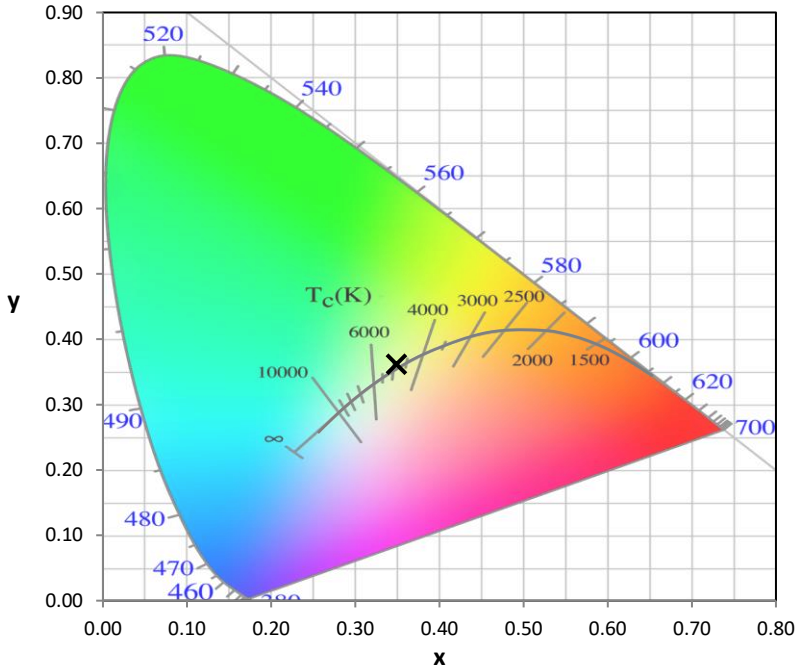
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-6

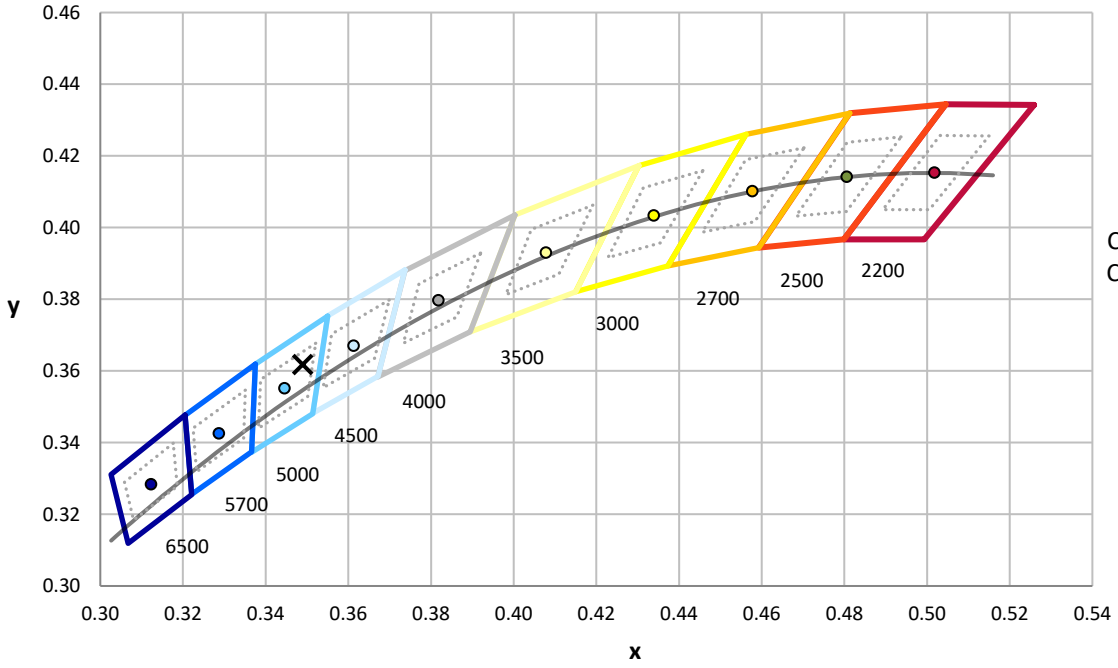
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-6

## CIE 1931 Chromaticity Diagram




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

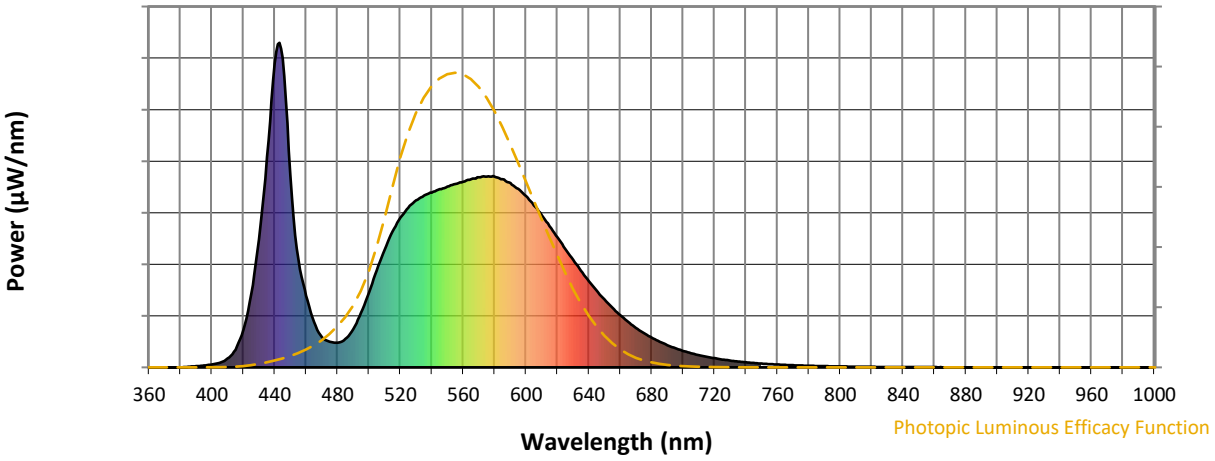



CCT = 4896K
CIE x = 0.3489
CIE y = 0.3618
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-6

## Photopic Flux vs. Wavelength

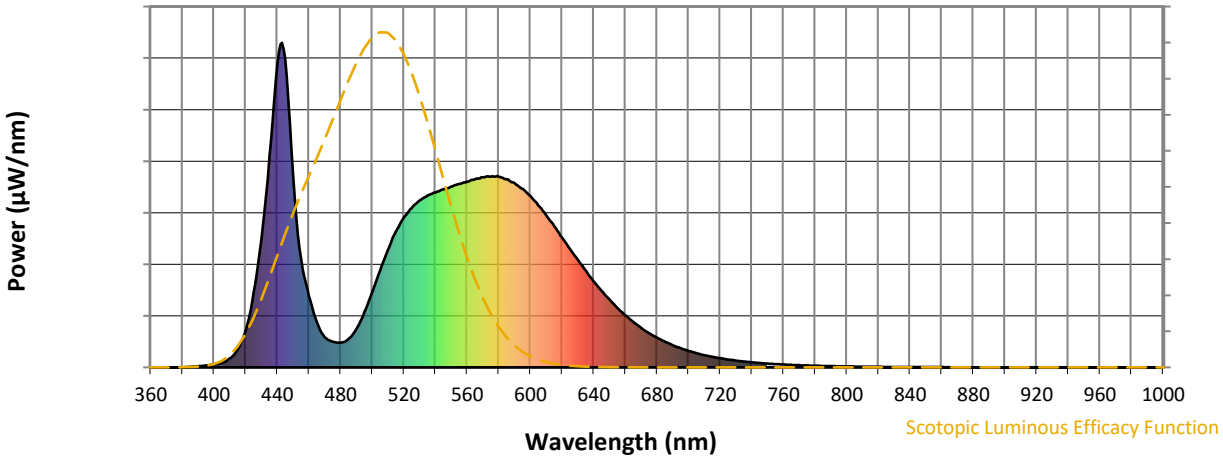



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2407-184-6

## Scotopic Flux vs. Wavelength

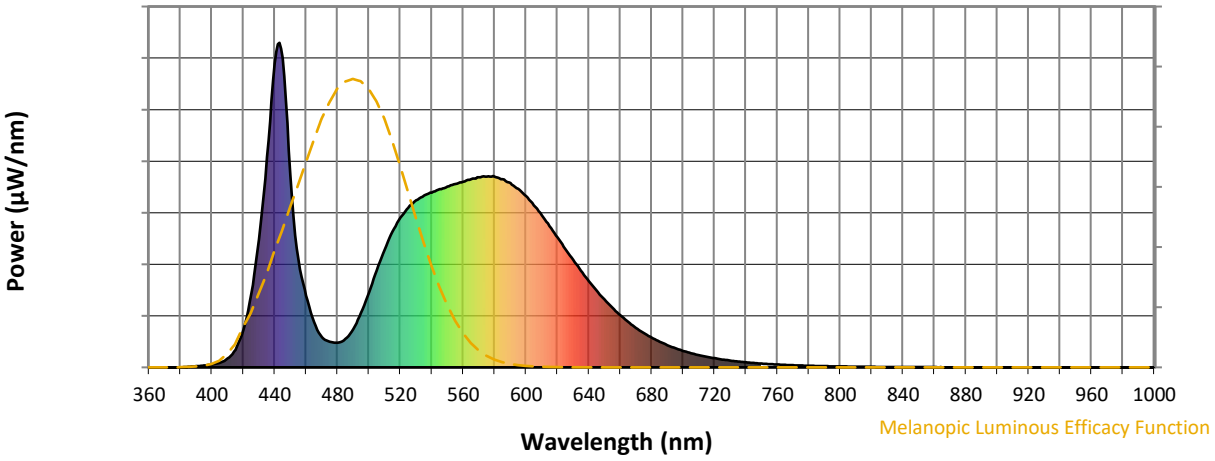



**Scotopic Lumens: NR** **S/P: 1.7**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2407-184-6

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.37**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

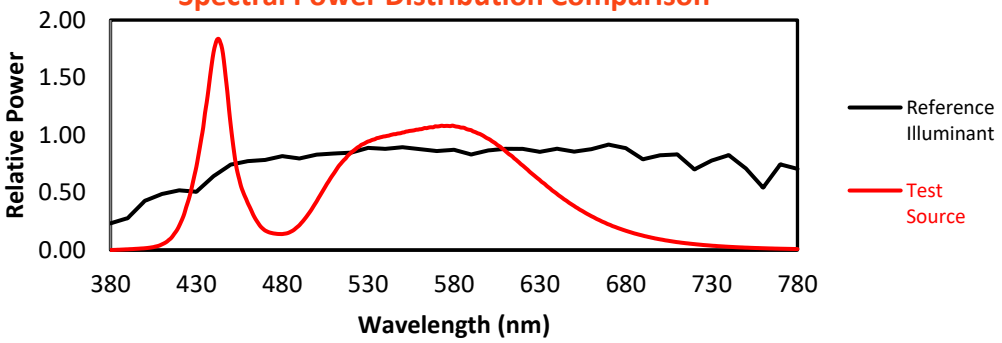
REPORT NUMBER: SP1-2407-184-6

# TM-30-18

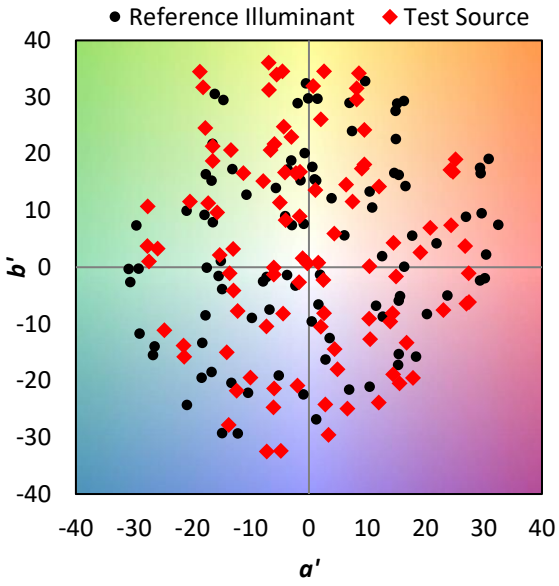
## Summary

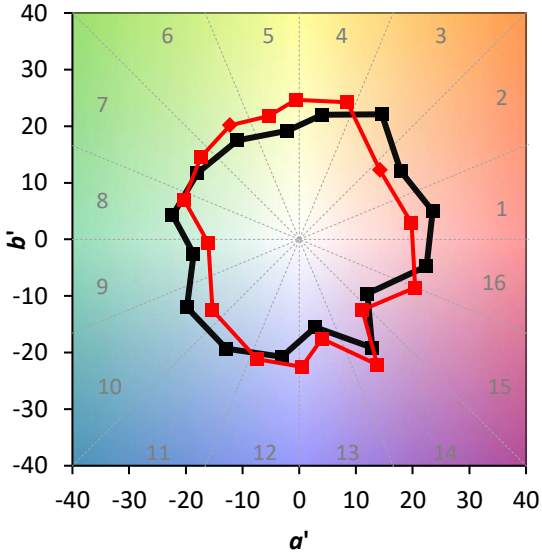
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

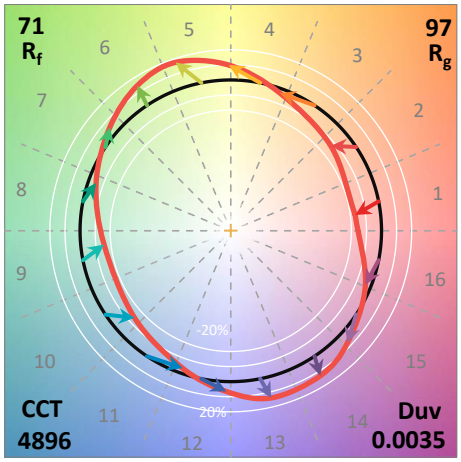
## Spectral Power Distribution Comparison

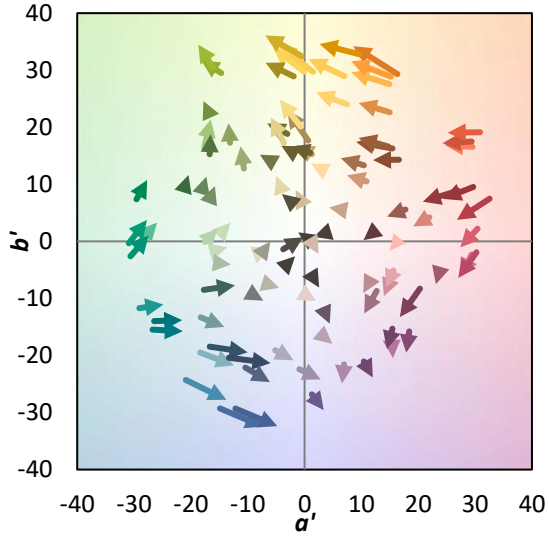



## Color Vector Graphics



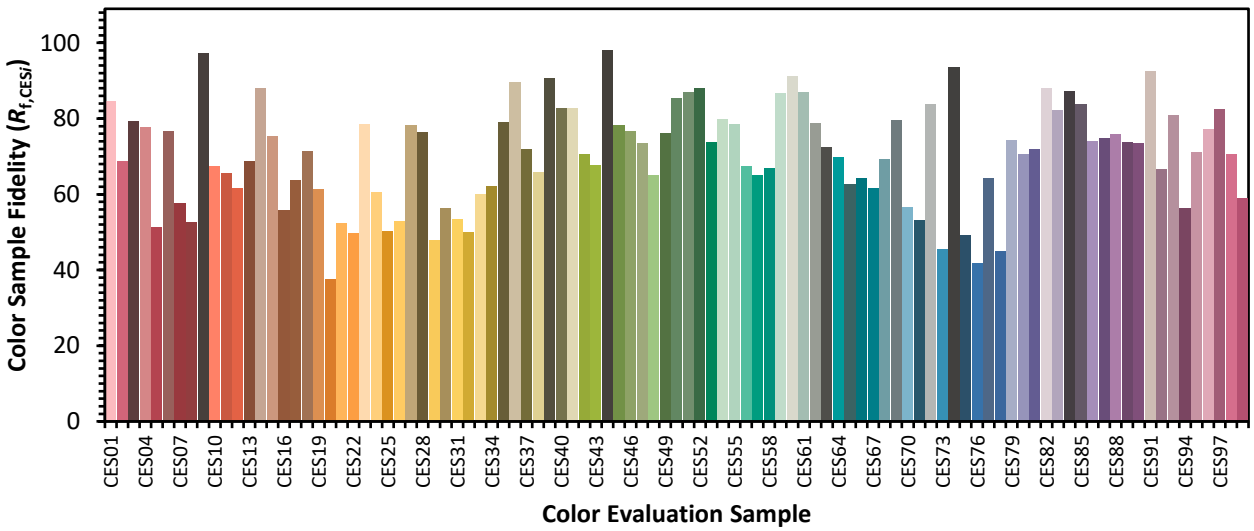



REPORT NUMBER: SP1-2407-184-6

# TM-30-18

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

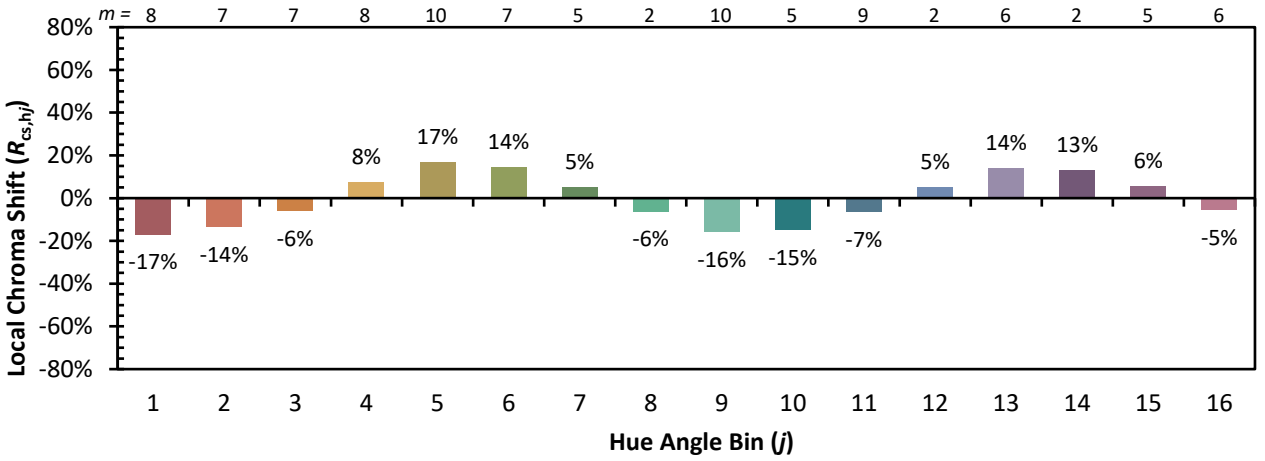
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 50 | CES31 = 54 | CES56 = 68 | CES81 = 72 |
| CES07 = 39 | CES32 = 50 | CES57 = 65 | CES82 = 88 |
| CES08 = 38 | CES33 = 60 | CES58 = 67 | CES83 = 82 |
| CES09 = 29 | CES34 = 62 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 91 | CES85 = 84 |
| CES11 = 56 | CES36 = 90 | CES61 = 87 | CES86 = 74 |
| CES12 = 61 | CES37 = 72 | CES62 = 79 | CES87 = 75 |
| CES13 = 41 | CES38 = 66 | CES63 = 72 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 74 |
| CES15 = 70 | CES40 = 83 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 83 | CES66 = 64 | CES91 = 92 |
| CES17 = 49 | CES42 = 70 | CES67 = 62 | CES92 = 67 |
| CES18 = 55 | CES43 = 68 | CES68 = 69 | CES93 = 81 |
| CES19 = 71 | CES44 = 98 | CES69 = 80 | CES94 = 56 |
| CES20 = 64 | CES45 = 78 | CES70 = 56 | CES95 = 71 |
| CES21 = 85 | CES46 = 77 | CES71 = 53 | CES96 = 77 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 46 | CES98 = 71 |
| CES24 = 90 | CES49 = 76 | CES74 = 94 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 | |

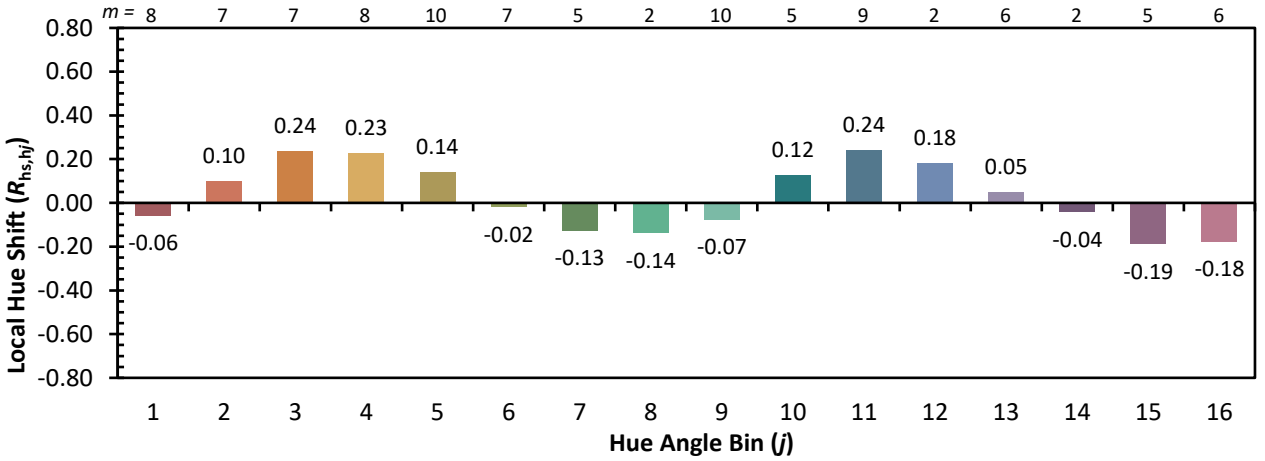


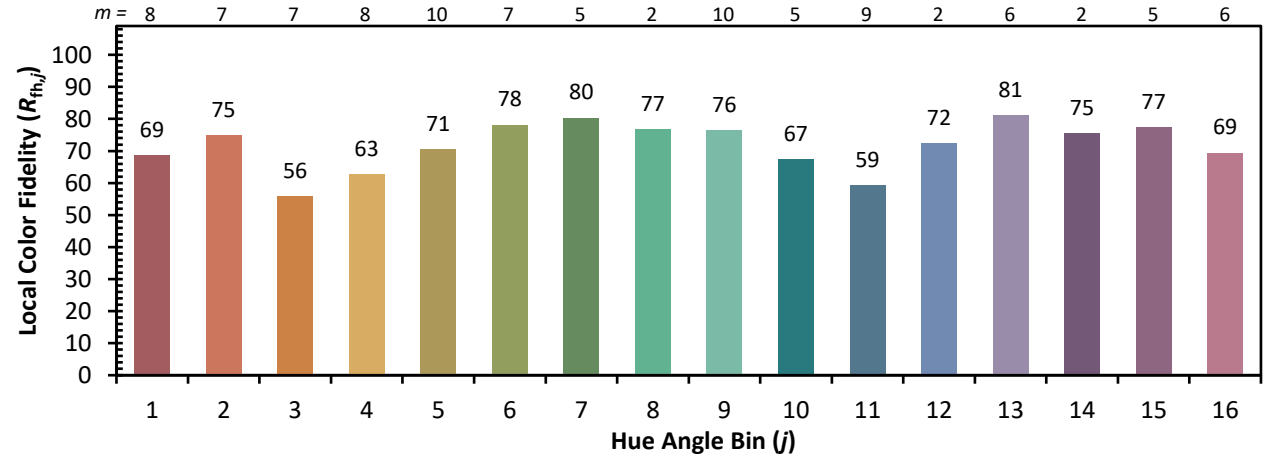
REPORT NUMBER: SP1-2407-184-6

**TM-30-18**

## Color Rendition by Hue-Angle Bin



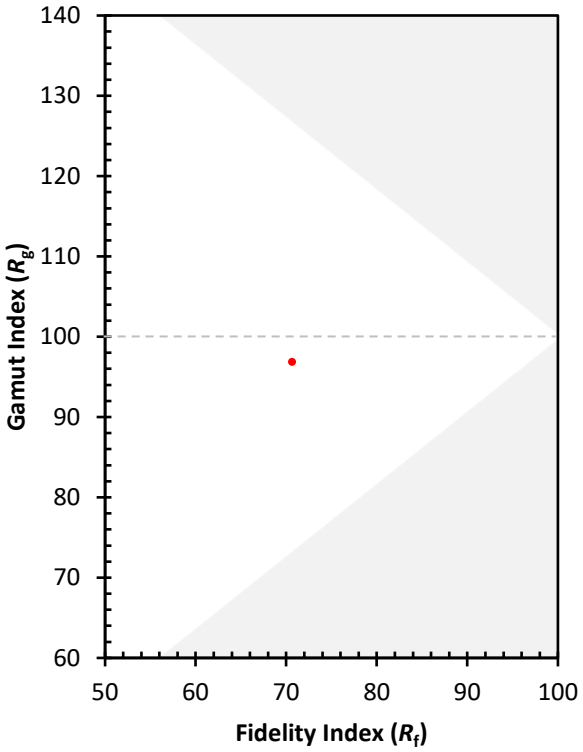



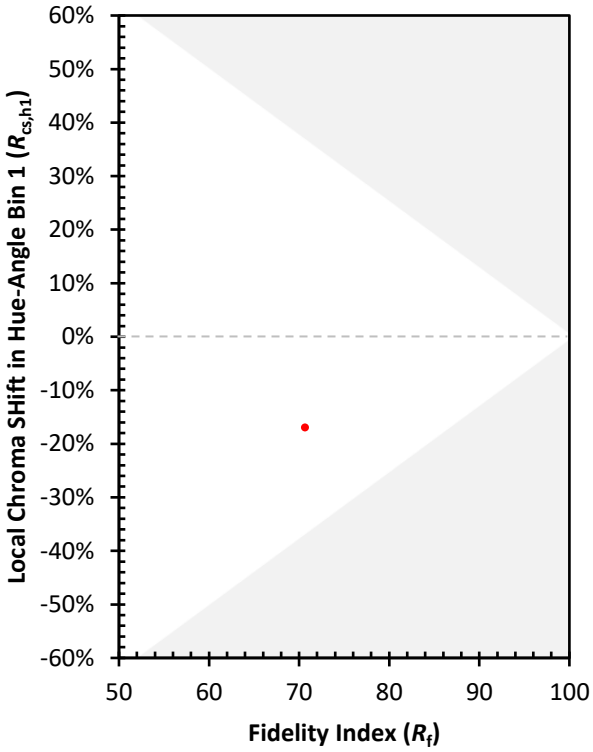



REPORT NUMBER: SP1-2407-184-6

# TM-30-18

## Measure Comparisons




(END OF REPORT)