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: P1358793

Luminaire Tested: **GSS-SB1C-727-U-SL4-HSS**

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: | P1358793 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1C-727-U-SL4-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 52W 70CRI 2700K FIXTURE w/ TYPE IV SPILL CONTROL DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (26) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 4000.1 lumens |
| Efficiency: | N/A |
| Efficacy: | 76.9 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 |

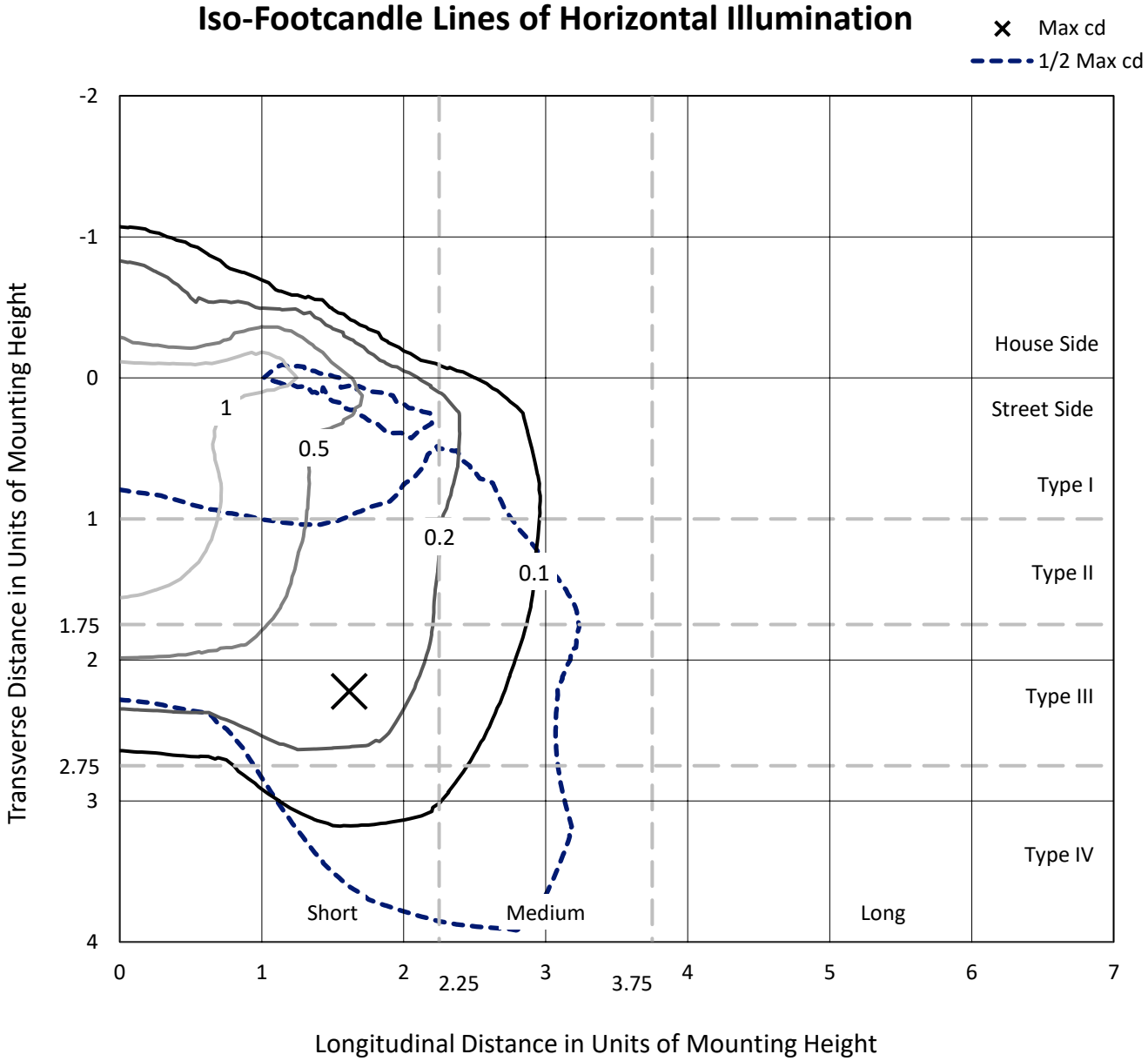
| | |
|---|---|
| Input Watts (W): | 52 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 10.1% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1358793
CATALOG NUMBER: GSS-SB1C-727-U-SL4-HSS

## Iso-Footcandle Lines of Horizontal Illumination



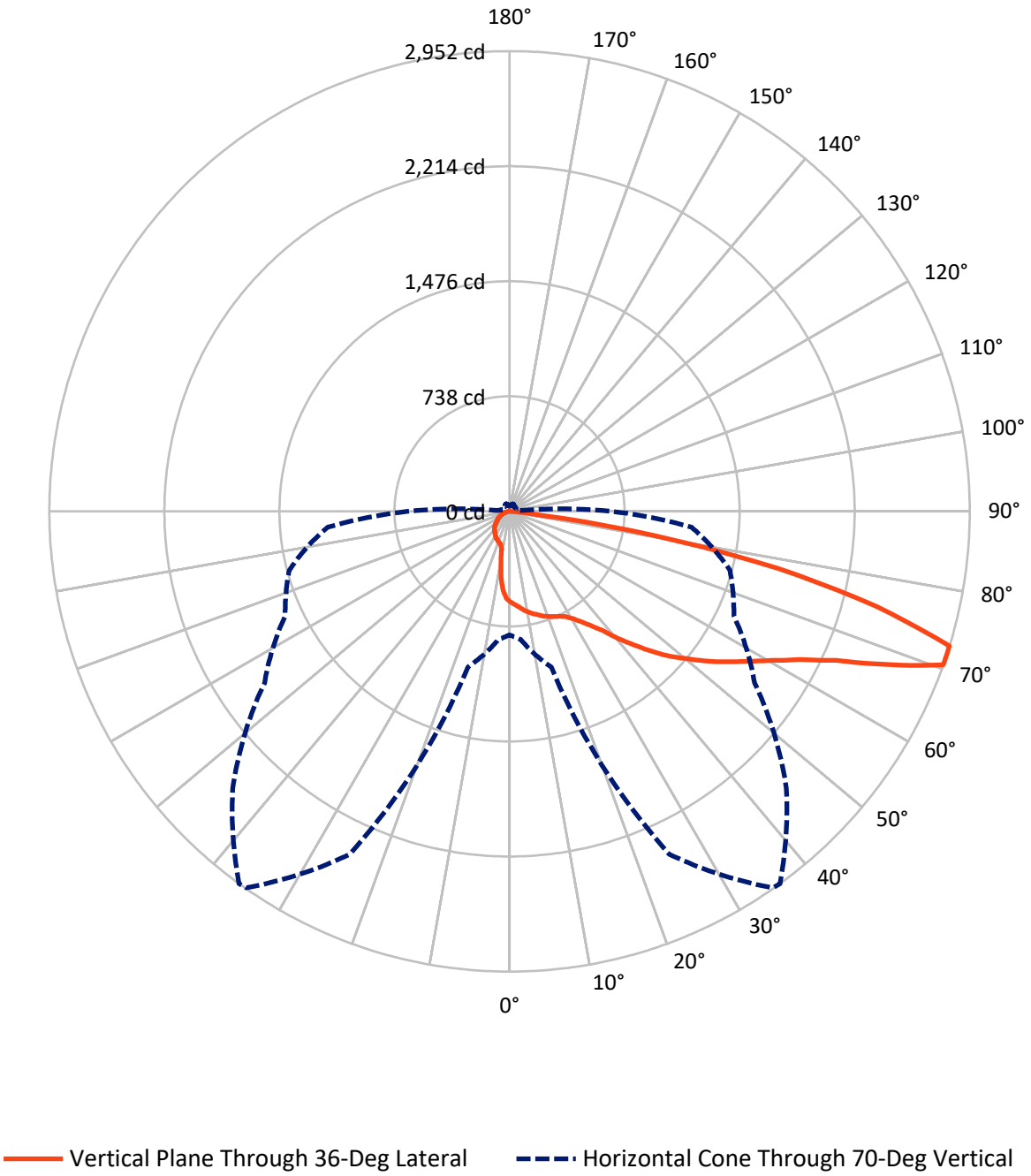

Based on 20 foot mounting height. Maximum calculated value = 1.8 fc
Type IV - Short - N/A

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Scaled Data Report

REPORT NUMBER: P1358793
CATALOG NUMBER: GSS-SB1C-727-U-SL4-HSS

## Luminous Intensity Polar Plot



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Scaled Data Report

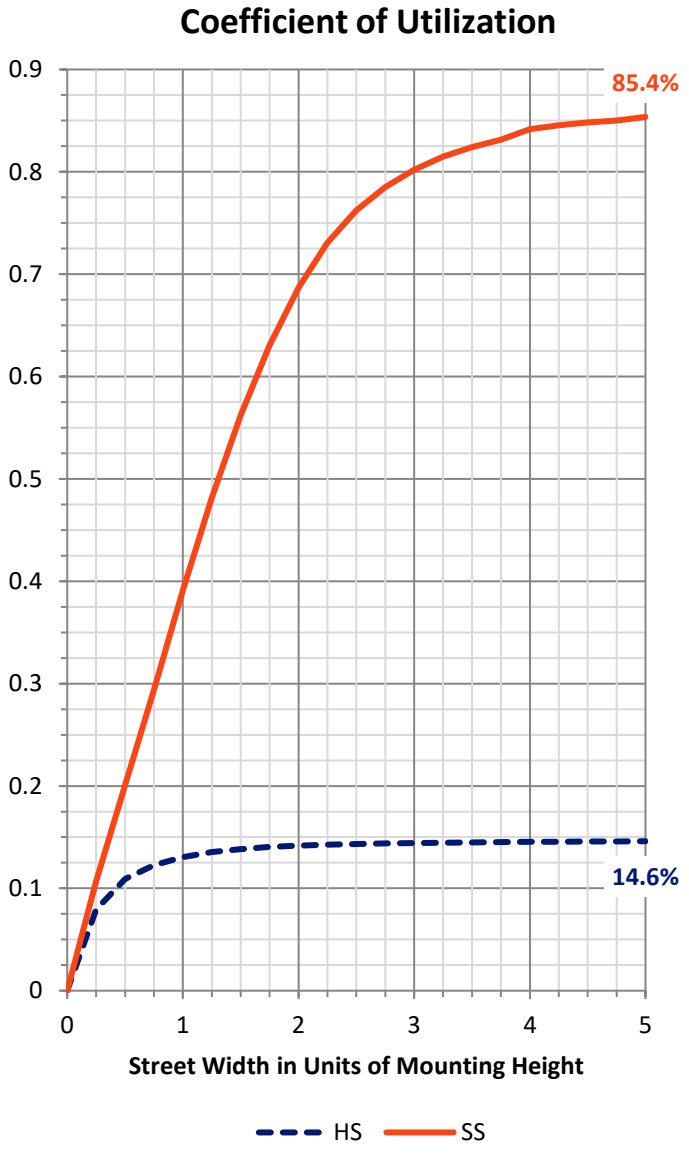
REPORT NUMBER: P1358793
CATALOG NUMBER: GSS-SB1C-727-U-SL4-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 590.5 | 0.0 | 590.5 |
| | % Fixture | 14.8 | 0.0 | 14.8 |
| **Street Side** | Lumens | 3409.6 | 0.0 | 3409.6 |
| | % Fixture | 85.2 | 0.0 | 85.2 |
| **Total** | Lumens | 4000.1 | 0.0 | 4000.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 52.9 | 1.3 |
| 10°-20° | 146.6 | 3.7 |
| 20°-30° | 247.1 | 6.2 |
| 30°-40° | 394.6 | 9.9 |
| 40°-50° | 644.9 | 16.1 |
| 50°-60° | 870.1 | 21.8 |
| 60°-70° | 966.4 | 24.2 |
| 70°-80° | 639.8 | 16.0 |
| 80°-90° | 37.8 | 0.9 |
| 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° | 4000.1 | 100.0 |
| 0°-180° | 4000.1 | 100.0 |



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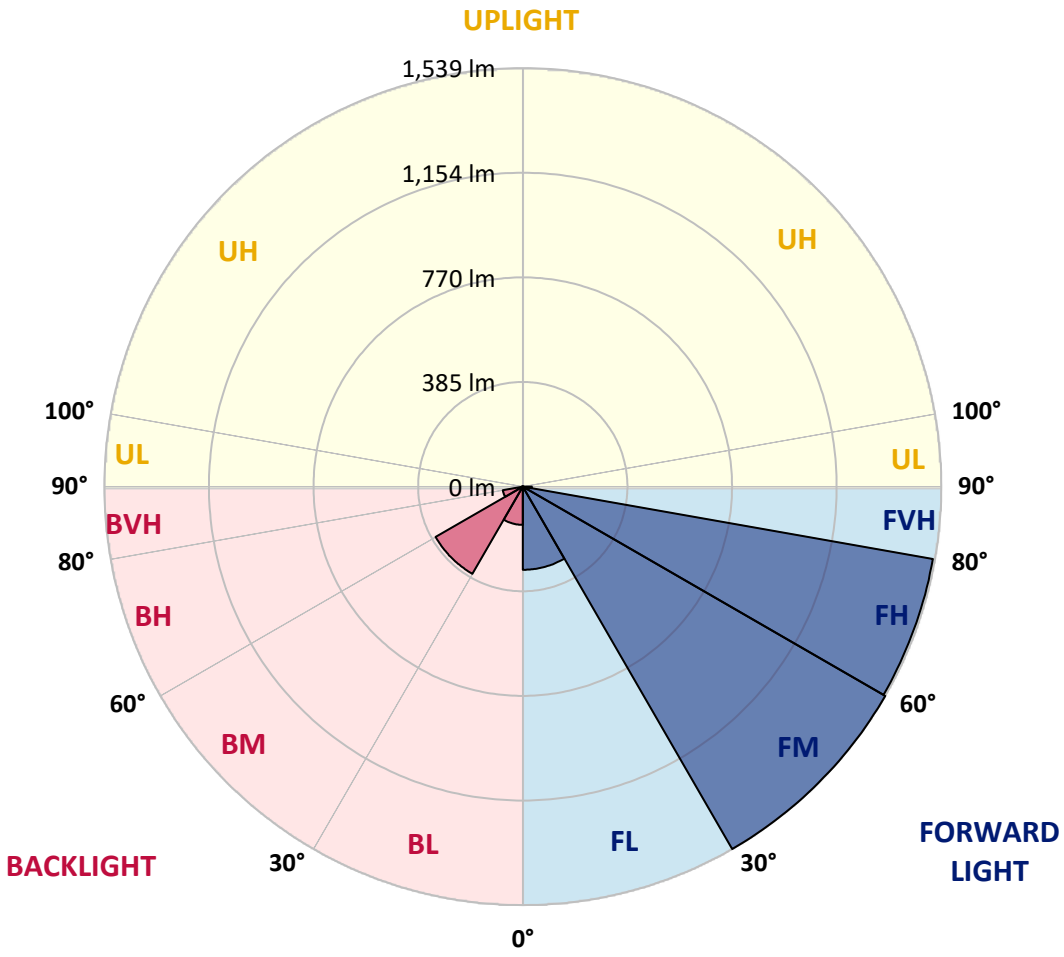
Scaled Data Report

REPORT NUMBER: P1358793
CATALOG NUMBER: GSS-SB1C-727-U-SL4-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 305.9 | 7.6 | | | |
| FM | (30°-60°) | 1539.2 | 38.5 | | | |
| FH | (60°-80°) | 1531.5 | 38.3 | | | G1/1800 |
| FVH | (80°-90°) | 33.0 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 140.6 | 3.5 | B1/500 | | |
| BM | (30°-60°) | 370.4 | 9.3 | B1/1000 | | |
| BH | (60°-80°) | 74.7 | 1.9 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 4.8 | 0.1 | | | 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 IV Short



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REPORT NUMBER: P1358793
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 | *580.2* | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 |
| 2.5° | 600.7 | 595.2 | 598.0 | 599.3 | 595.2 | *596.6* | 593.9 | 592.5 | 587.0 | 591.1 | 585.7 |
| 5° | 622.5 | 621.2 | 619.8 | 619.8 | 615.7 | *614.3* | 610.3 | 607.5 | 602.1 | 598.0 | 591.1 |
| 7.5° | 648.5 | 640.3 | 638.9 | 641.7 | 633.5 | *637.6* | 633.5 | 629.4 | 619.8 | 608.9 | 598.0 |
| 10° | 669.0 | 664.9 | 659.4 | 658.0 | 659.4 | *656.7* | 652.6 | 648.5 | 643.0 | 629.4 | 617.1 |
| 12.5° | 692.2 | 689.4 | 684.0 | 681.2 | 671.7 | *673.1* | 673.1 | 667.6 | 659.4 | 651.2 | 637.6 |
| 15° | 718.1 | 707.2 | 704.5 | 697.6 | 692.2 | *688.1* | 689.4 | 690.8 | 681.2 | 673.1 | 659.4 |
| 17.5° | 730.4 | 727.7 | 720.8 | 712.6 | 712.6 | *707.2* | 705.8 | 705.8 | 701.7 | 699.0 | 682.6 |
| 20° | 749.5 | 746.8 | 734.5 | 727.7 | 720.8 | *719.5* | 723.6 | 723.6 | 716.7 | 715.4 | 712.6 |
| 22.5° | 778.2 | 770.0 | 753.6 | 742.7 | 734.5 | *733.1* | 738.6 | 737.2 | 737.2 | 738.6 | 744.0 |
| 25° | 805.5 | 795.9 | 778.2 | 760.4 | 742.7 | *745.4* | 752.2 | 753.6 | 748.1 | 756.3 | 776.8 |
| 27.5° | 846.4 | 845.1 | 817.8 | 782.3 | 765.9 | *764.5* | 767.3 | 764.5 | 759.1 | 768.6 | 806.8 |
| 30° | 954.3 | 942.0 | 896.9 | 831.4 | 794.6 | *797.3* | 793.2 | 776.8 | 763.2 | 774.1 | 835.5 |
| 32.5° | 1059.4 | 1030.7 | 984.3 | 909.2 | 841.0 | *842.3* | 813.7 | 782.3 | 767.3 | 779.5 | 864.2 |
| 35° | 1212.3 | 1182.3 | 1112.7 | 981.6 | 912.0 | *899.7* | 841.0 | 802.7 | 775.4 | 789.1 | 896.9 |
| 37.5° | 1428.0 | 1384.3 | 1290.1 | 1124.9 | 974.8 | *969.3* | 888.8 | 820.5 | 782.3 | 787.7 | 940.6 |
| 40° | 1594.6 | 1552.3 | 1475.8 | 1276.5 | 1082.6 | *1071.7* | 963.8 | 854.6 | 783.6 | 794.6 | 981.6 |
| 42.5° | 1739.3 | 1717.4 | 1615.1 | 1410.3 | 1194.6 | *1171.4* | 1036.2 | 896.9 | 812.3 | 812.3 | 1049.9 |
| 45° | 1933.1 | 1892.2 | 1776.1 | 1535.9 | 1306.5 | *1280.6* | 1131.8 | 963.8 | 847.8 | 832.8 | 1120.8 |
| 47.5° | 2103.8 | 2069.7 | 1934.5 | 1654.6 | 1413.0 | *1391.2* | 1223.2 | 1036.2 | 892.9 | 869.6 | 1204.1 |
| 50° | 2290.8 | 2255.3 | 2099.7 | 1796.6 | 1518.1 | *1486.7* | 1324.3 | 1103.1 | 947.5 | 927.0 | 1303.8 |
| 52.5° | 2420.5 | 2390.5 | 2234.9 | 1925.0 | 1619.1 | *1597.3* | 1406.2 | 1171.4 | 1011.6 | 991.1 | 1399.3 |
| 55° | 2506.5 | 2458.8 | 2307.2 | 2036.9 | 1731.1 | *1703.8* | 1479.9 | 1247.8 | 1084.0 | 1077.2 | 1481.3 |
| 57.5° | 2547.5 | 2499.7 | 2371.4 | 2135.2 | 1841.7 | *1811.6* | 1571.4 | 1331.1 | 1178.2 | 1183.6 | 1568.6 |
| 60° | 2525.7 | 2490.2 | 2396.0 | 2228.0 | 1964.5 | *1940.0* | 1658.7 | 1426.7 | 1275.1 | 1298.3 | 1609.6 |
| 62.5° | 2364.6 | 2372.8 | 2398.7 | 2365.9 | 2121.6 | *2091.5* | 1785.7 | 1548.2 | 1407.5 | 1411.6 | 1605.5 |
| 65° | 1829.4 | 1863.5 | 2161.1 | 2525.7 | 2341.4 | *2301.8* | 1960.5 | 1701.1 | 1497.6 | 1451.2 | 1499.0 |
| 67.5° | 1163.2 | 1235.5 | 1563.2 | 2614.4 | 2648.5 | *2624.0* | 2191.2 | 1826.7 | 1519.5 | 1509.9 | 1402.1 |
| 70° | *791.8* | *824.6* | *1033.5* | *2426.0* | *2947.5* | *2951.6* | *2510.6* | *1918.1* | *1587.7* | *1463.5* | *1171.4* |
| 72.5° | 622.5 | 625.3 | 730.4 | 2185.7 | 2935.2 | *2950.2* | 2487.4 | 2013.7 | 1540.0 | 1303.8 | 892.9 |
| 75° | 417.8 | 428.7 | 498.3 | 1783.0 | 2438.3 | *2426.0* | 2031.4 | 1546.8 | 1404.8 | 1030.7 | 578.9 |
| 77.5° | 117.4 | 121.5 | 207.5 | 1135.9 | 1709.3 | *1761.1* | 1474.4 | 531.1 | 977.5 | 472.4 | 218.4 |
| 80° | 35.5 | 38.2 | 84.6 | 326.3 | 817.8 | *936.5* | 767.3 | 159.7 | 236.2 | 111.9 | 43.7 |
| 82.5° | 15.0 | 16.4 | 50.5 | 75.1 | 187.0 | *202.1* | 180.2 | 42.3 | 73.7 | 35.5 | 15.0 |
| 85° | 5.5 | 6.8 | 16.4 | 17.7 | 28.7 | *25.9* | 20.5 | 13.7 | 19.1 | 16.4 | 8.2 |
| 87.5° | 0.0 | 1.4 | 1.4 | 2.7 | 4.1 | *4.1* | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| 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: P1358793
CATALOG NUMBER: GSS-SB1C-727-U-SL4-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 | 580.2 |
| 2.5° | 581.6 | 580.2 | 574.8 | 567.9 | 563.8 | 562.5 | 558.4 | 550.2 | 552.9 | 554.3 | 547.5 |
| 5° | 587.0 | 577.5 | 566.6 | 552.9 | 537.9 | 525.6 | 509.2 | 496.9 | 488.7 | 487.4 | 486.0 |
| 7.5° | 592.5 | 584.3 | 565.2 | 535.2 | 505.1 | 473.7 | 431.4 | 401.4 | 379.5 | 368.6 | 372.7 |
| 10° | 610.3 | 596.6 | 563.8 | 517.4 | 453.3 | 385.0 | 323.6 | 288.1 | 267.6 | 258.0 | 253.9 |
| 12.5° | 628.0 | 608.9 | 563.8 | 486.0 | 376.8 | 290.8 | 241.6 | 230.7 | 230.7 | 233.5 | 232.1 |
| 15° | 651.2 | 629.4 | 567.9 | 438.2 | 299.0 | 228.0 | 219.8 | 221.2 | 225.3 | 228.0 | 228.0 |
| 17.5° | 677.1 | 660.8 | 567.9 | 378.2 | 233.5 | 211.6 | 213.0 | 217.1 | 221.2 | 222.5 | 223.9 |
| 20° | 714.0 | 690.8 | 550.2 | 308.5 | 204.8 | 204.8 | 207.5 | 210.2 | 215.7 | 218.4 | 219.8 |
| 22.5° | 748.1 | 722.2 | 517.4 | 245.7 | 196.6 | 198.0 | 203.4 | 206.1 | 211.6 | 214.3 | 213.0 |
| 25° | 790.5 | 765.9 | 481.9 | 199.3 | 188.4 | 191.1 | 195.2 | 199.3 | 207.5 | 210.2 | 210.2 |
| 27.5° | 836.9 | 815.0 | 454.6 | 195.2 | 180.2 | 184.3 | 191.1 | 196.6 | 203.4 | 206.1 | 206.1 |
| 30° | 887.4 | 865.5 | 438.2 | 210.2 | 176.1 | 174.7 | 182.9 | 187.0 | 195.2 | 202.1 | 203.4 |
| 32.5° | 940.6 | 906.5 | 432.8 | 240.3 | 178.8 | 167.9 | 174.7 | 180.2 | 191.1 | 199.3 | 199.3 |
| 35° | 1017.1 | 967.9 | 432.8 | 273.0 | 189.8 | 161.1 | 166.6 | 173.4 | 185.7 | 193.9 | 193.9 |
| 37.5° | 1111.3 | 1064.9 | 475.1 | 296.3 | 199.3 | 155.6 | 158.4 | 165.2 | 174.7 | 185.7 | 187.0 |
| 40° | 1223.2 | 1201.4 | 587.0 | 311.3 | 204.8 | 150.2 | 152.9 | 155.6 | 161.1 | 172.0 | 174.7 |
| 42.5° | 1343.4 | 1320.2 | 746.8 | 326.3 | 202.1 | 146.1 | 144.7 | 144.7 | 147.4 | 154.3 | 155.6 |
| 45° | 1459.4 | 1426.7 | 890.1 | 320.8 | 189.8 | 137.9 | 135.2 | 131.1 | 131.1 | 136.5 | 136.5 |
| 47.5° | 1561.8 | 1503.1 | 959.7 | 284.0 | 174.7 | 129.7 | 124.2 | 117.4 | 117.4 | 120.1 | 120.1 |
| 50° | 1627.3 | 1500.4 | 916.1 | 225.3 | 152.9 | 121.5 | 113.3 | 107.9 | 106.5 | 107.9 | 106.5 |
| 52.5° | 1636.9 | 1404.8 | 753.6 | 174.7 | 132.4 | 111.9 | 102.4 | 99.7 | 98.3 | 98.3 | 98.3 |
| 55° | 1572.7 | 1228.7 | 529.7 | 133.8 | 116.0 | 101.0 | 94.2 | 92.8 | 91.5 | 90.1 | 88.7 |
| 57.5° | 1462.1 | 973.4 | 323.6 | 107.9 | 105.1 | 91.5 | 87.4 | 86.0 | 83.3 | 79.2 | 77.8 |
| 60° | 1314.7 | 716.7 | 170.7 | 91.5 | 91.5 | 80.5 | 80.5 | 80.5 | 73.7 | 68.3 | 65.5 |
| 62.5° | 1150.9 | 483.3 | 95.6 | 77.8 | 76.5 | 72.4 | 73.7 | 72.4 | 65.5 | 56.0 | 54.6 |
| 65° | 967.9 | 274.4 | 64.2 | 64.2 | 65.5 | 62.8 | 65.5 | 64.2 | 54.6 | 45.1 | 42.3 |
| 67.5° | 835.5 | 143.3 | 50.5 | 54.6 | 54.6 | 51.9 | 56.0 | 57.3 | 49.1 | 39.6 | 36.9 |
| 70° | *653.9* | *72.4* | *41.0* | *45.1* | *45.1* | *41.0* | *49.1* | *53.2* | *45.1* | *34.1* | *32.8* |
| 72.5° | 461.4 | 45.1 | 34.1 | 35.5 | 34.1 | 31.4 | 42.3 | 47.8 | 39.6 | 28.7 | 27.3 |
| 75° | 281.2 | 30.0 | 25.9 | 28.7 | 24.6 | 24.6 | 36.9 | 42.3 | 34.1 | 23.2 | 21.8 |
| 77.5° | 131.1 | 21.8 | 19.1 | 20.5 | 17.7 | 19.1 | 30.0 | 32.8 | 24.6 | 19.1 | 17.7 |
| 80° | 32.8 | 15.0 | 15.0 | 13.7 | 13.7 | 15.0 | 21.8 | 20.5 | 17.7 | 16.4 | 15.0 |
| 82.5° | 13.7 | 10.9 | 9.6 | 9.6 | 9.6 | 10.9 | 13.7 | 13.7 | 15.0 | 13.7 | 13.7 |
| 85° | 6.8 | 6.8 | 6.8 | 6.8 | 8.2 | 8.2 | 10.9 | 12.3 | 12.3 | 12.3 | 10.9 |
| 87.5° | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 5.5 | 6.8 | 8.2 | 9.6 | 5.5 | 4.1 |
| 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

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-3

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-727-U-5WQ

Data in this report applies to families of products including GSS-SB1A-727-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

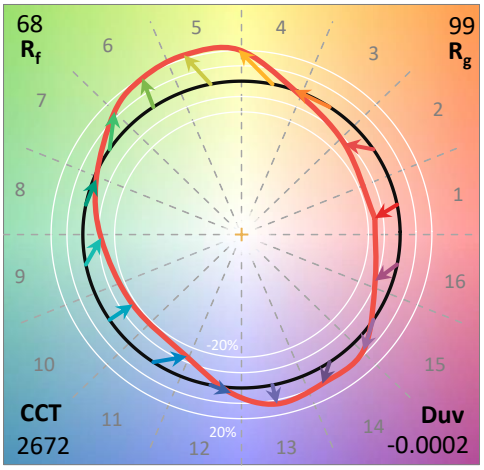
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-3 |
| 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-727-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 2700K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2672 |
| CIE u': | 0.2638 |
| CIE v': | 0.5276 |
| Duv: | -0.0002 |
| CIE x: | 0.4619 |
| CIE y: | 0.4106 |
| CIE z: | 0.1275 |
| Peak Wavelength (nm): | 601 |
| Dominant Wavelength (nm): | 584 |
| Purity: | 61.88407 |
| Rf: | 67.9 |
| Rg: | 98.6 |

| | |
|---|---|
| CRI (Ra): | 71.1 |
| R1: | 68.3 |
| R2: | 79.8 |
| R3: | 91.2 |
| R4: | 69.4 |
| R5: | 66.5 |
| R6: | 72.6 |
| R7: | 77.0 |
| R8: | 44.1 |
| R9: | -27.8 |
| R10: | 54.4 |
| R11: | 65.8 |
| R12: | 45.6 |
| R13: | 69.8 |
| R14: | 94.5 |
| R15: | 60.1 |




## Test Conditions

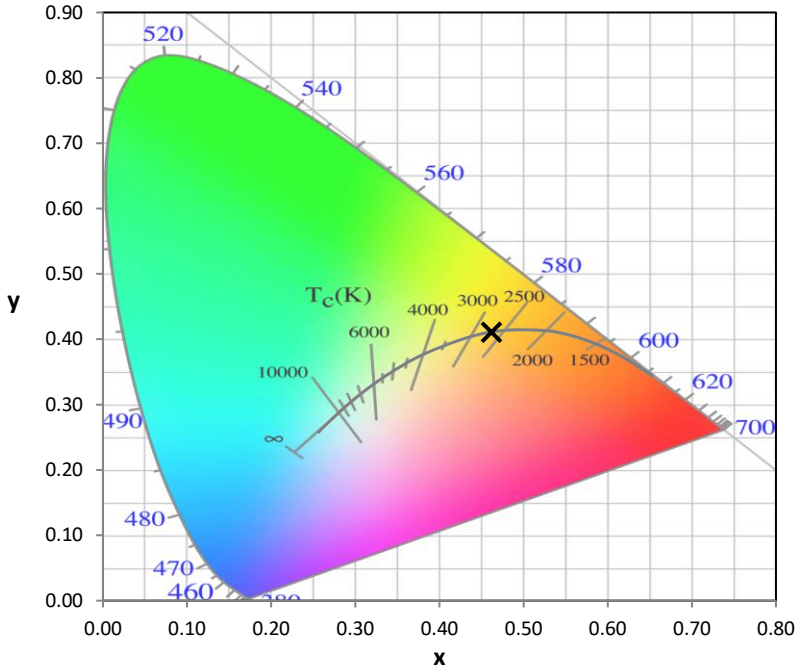
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-3

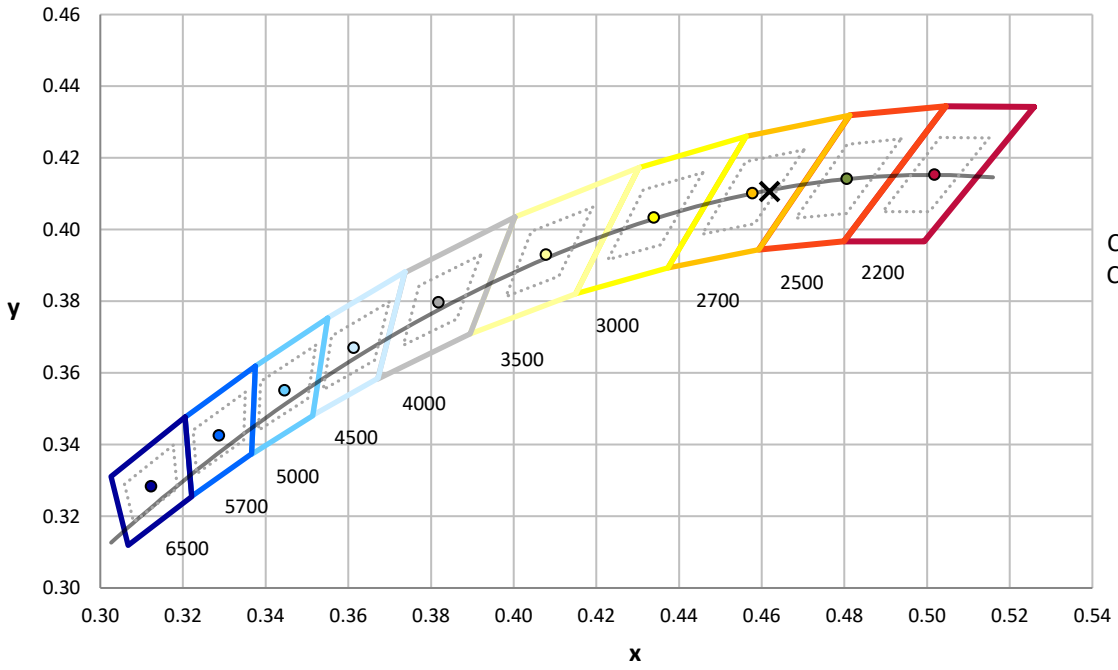
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-3

## CIE 1931 Chromaticity Diagram




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

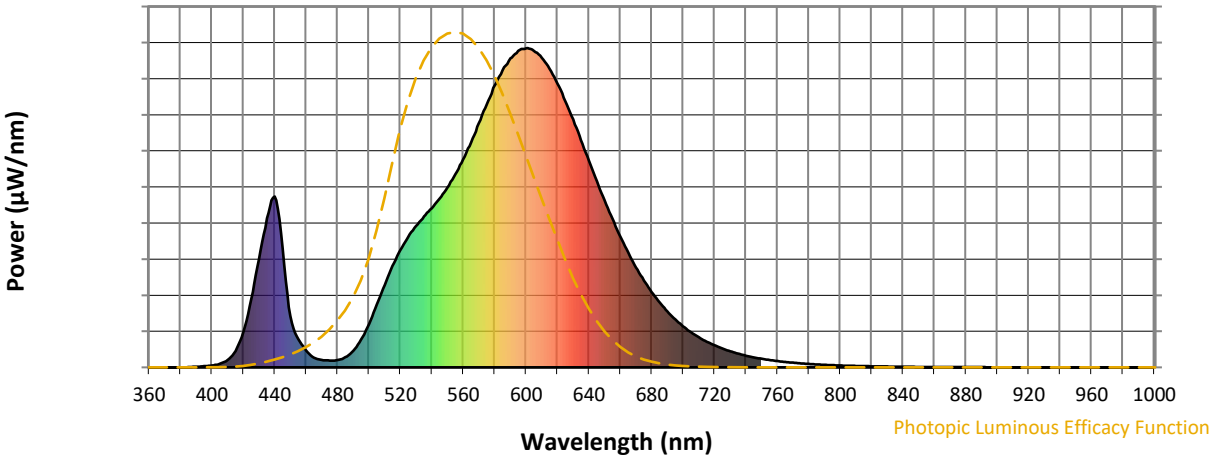



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-3

## Photopic Flux vs. Wavelength

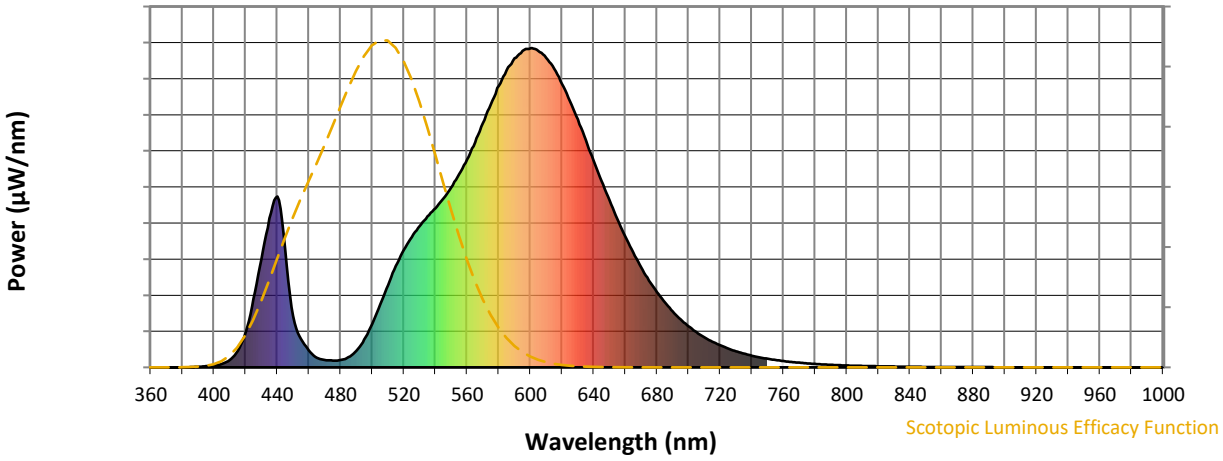



## Photopic Lumens: NR

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-3

## Scotopic Flux vs. Wavelength

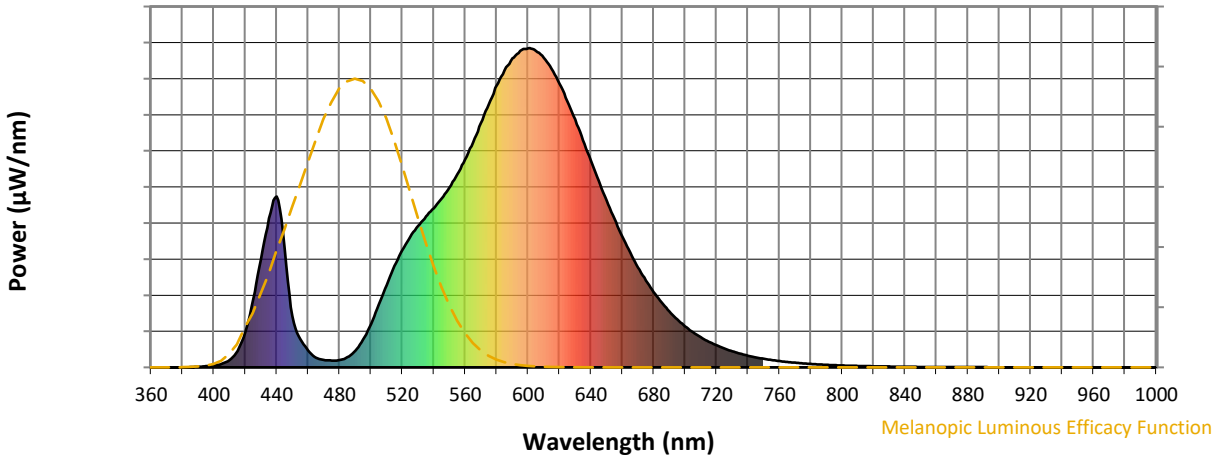



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-3

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 1.71**

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

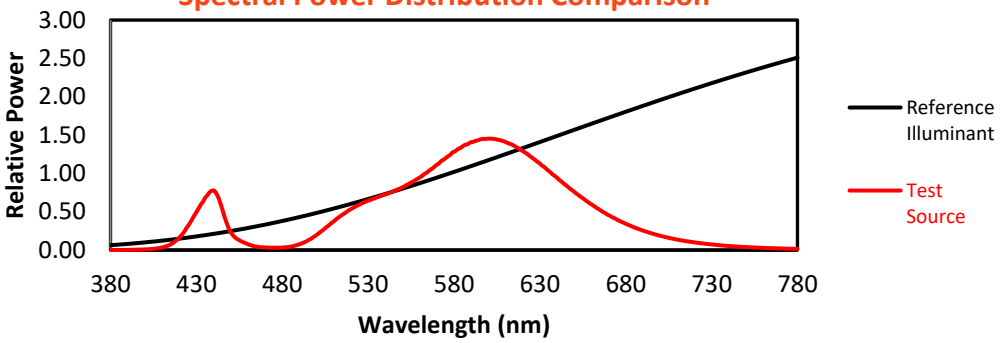
REPORT NUMBER: SP1-2407-184-3

# TM-30-18

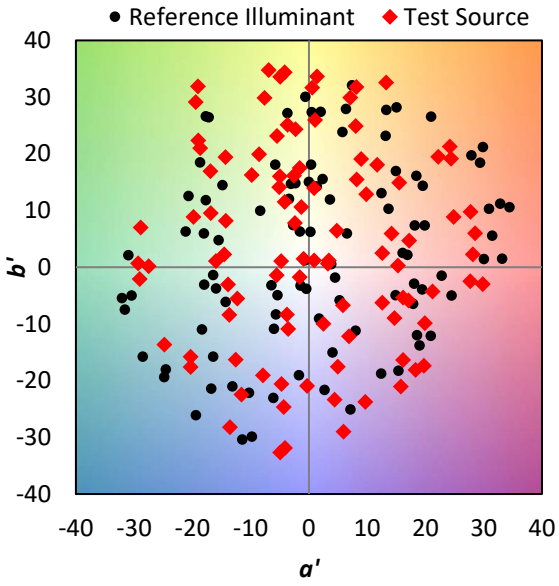
## Summary

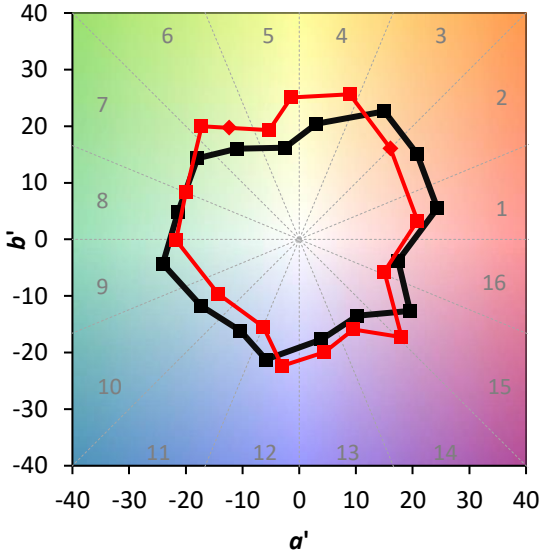
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

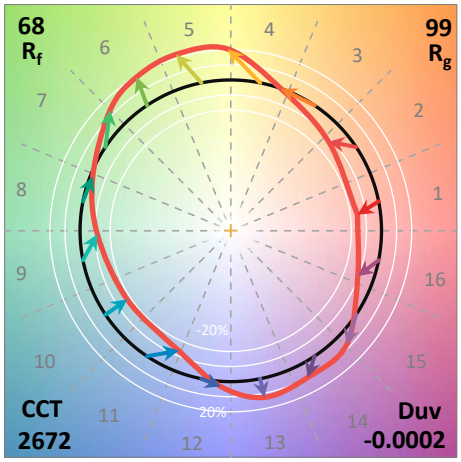
## Spectral Power Distribution Comparison

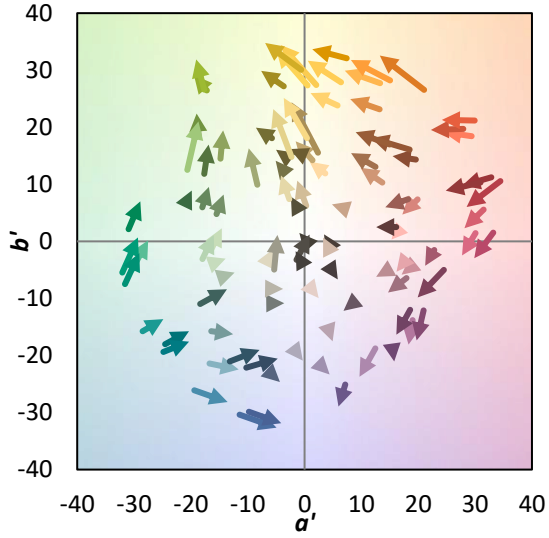



## Color Vector Graphics



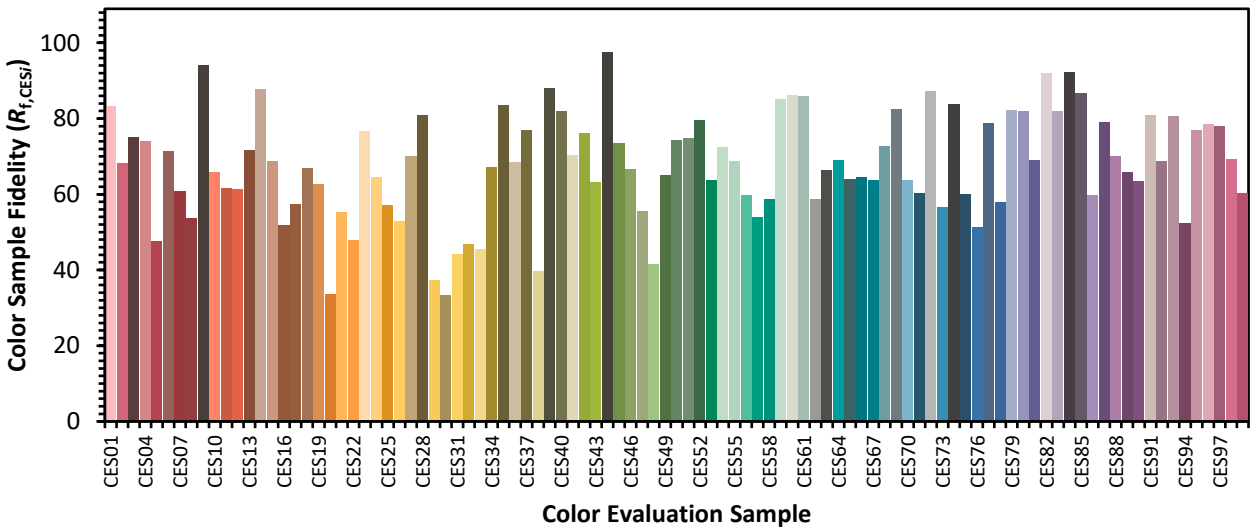



REPORT NUMBER: SP1-2407-184-3

# TM-30-18

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

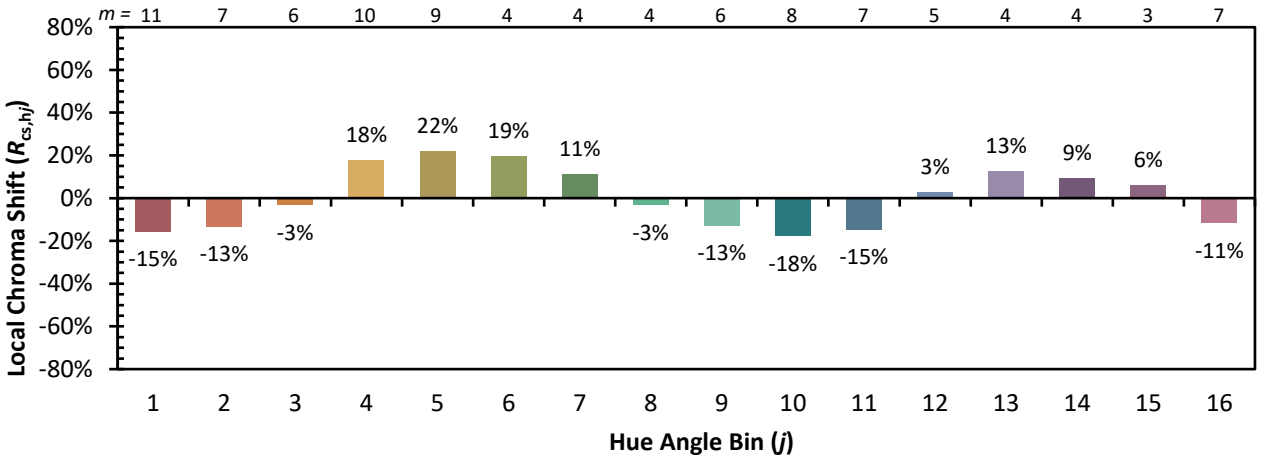
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 52 | CES31 = 44 | CES56 = 60 | CES81 = 69 |
| CES07 = 42 | CES32 = 47 | CES57 = 54 | CES82 = 92 |
| CES08 = 41 | CES33 = 45 | CES58 = 59 | CES83 = 82 |
| CES09 = 29 | CES34 = 67 | CES59 = 85 | CES84 = 92 |
| CES10 = 77 | CES35 = 84 | CES60 = 86 | CES85 = 87 |
| CES11 = 60 | CES36 = 68 | CES61 = 86 | CES86 = 60 |
| CES12 = 66 | CES37 = 77 | CES62 = 59 | CES87 = 79 |
| CES13 = 44 | CES38 = 40 | CES63 = 66 | CES88 = 70 |
| CES14 = 74 | CES39 = 88 | CES64 = 69 | CES89 = 66 |
| CES15 = 72 | CES40 = 82 | CES65 = 64 | CES90 = 64 |
| CES16 = 48 | CES41 = 70 | CES66 = 65 | CES91 = 81 |
| CES17 = 51 | CES42 = 76 | CES67 = 64 | CES92 = 69 |
| CES18 = 57 | CES43 = 63 | CES68 = 73 | CES93 = 81 |
| CES19 = 73 | CES44 = 97 | CES69 = 83 | CES94 = 53 |
| CES20 = 67 | CES45 = 74 | CES70 = 64 | CES95 = 77 |
| CES21 = 88 | CES46 = 67 | CES71 = 60 | CES96 = 79 |
| CES22 = 80 | CES47 = 55 | CES72 = 87 | CES97 = 78 |
| CES23 = 92 | CES48 = 42 | CES73 = 57 | CES98 = 69 |
| CES24 = 92 | CES49 = 65 | CES74 = 84 | CES99 = 60 |
| CES25 = 73 | CES50 = 74 | CES75 = 60 | |

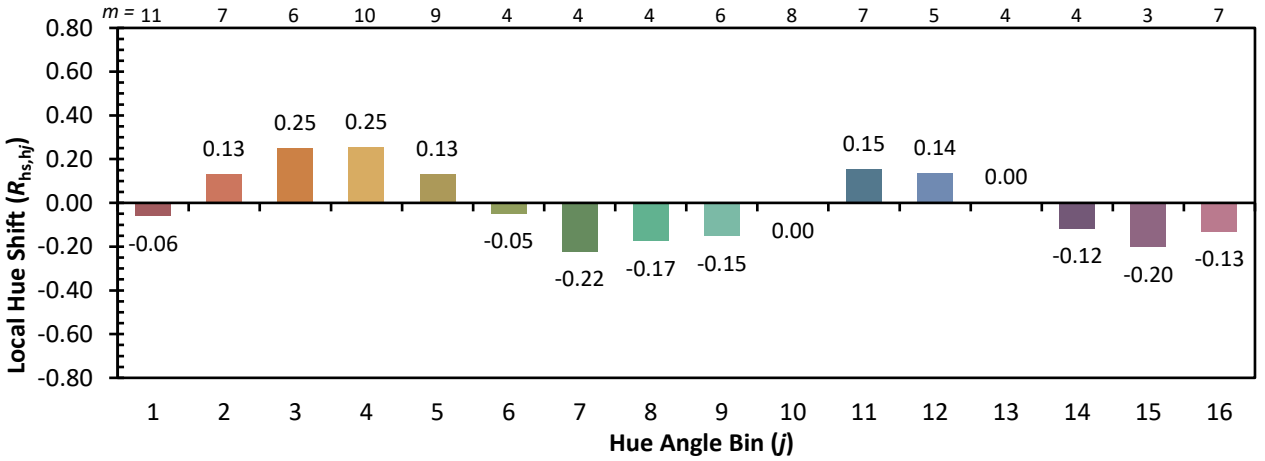


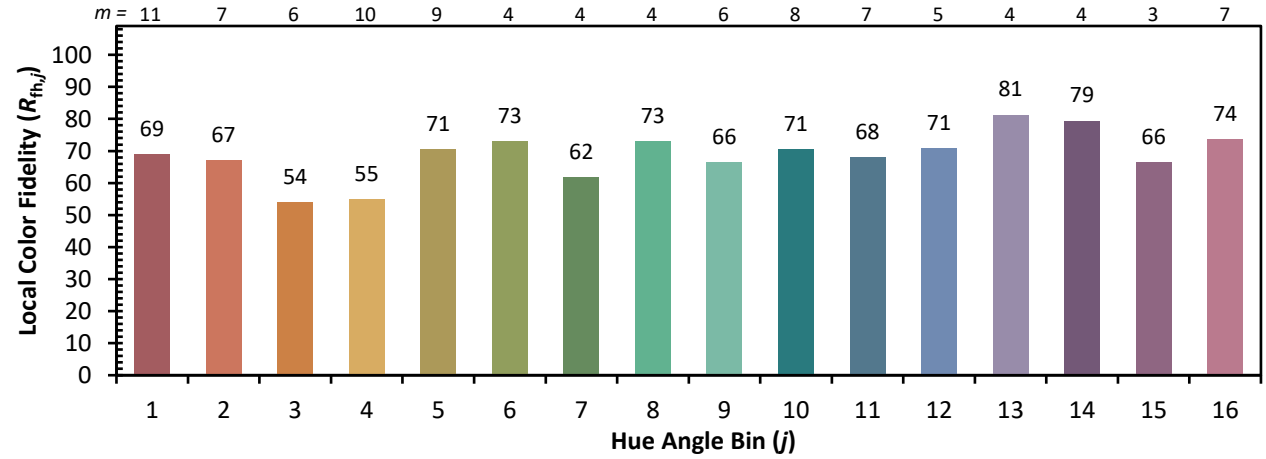
REPORT NUMBER: SP1-2407-184-3

# TM-30-18

## Color Rendition by Hue-Angle Bin



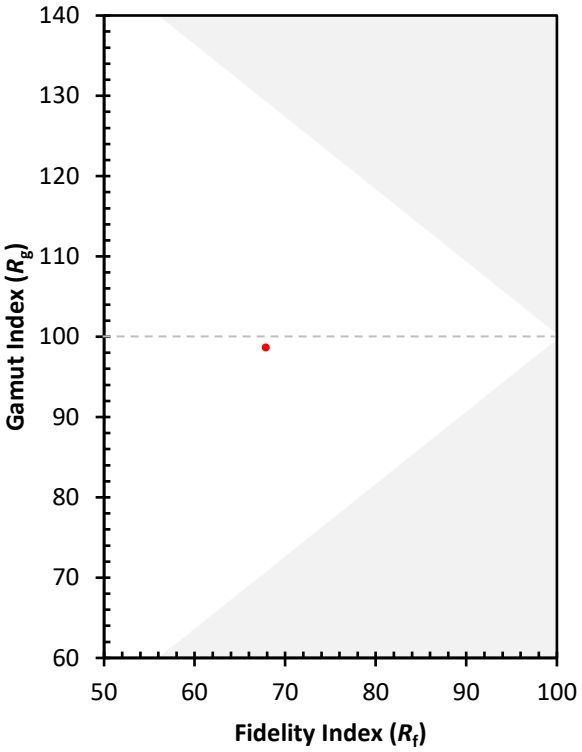



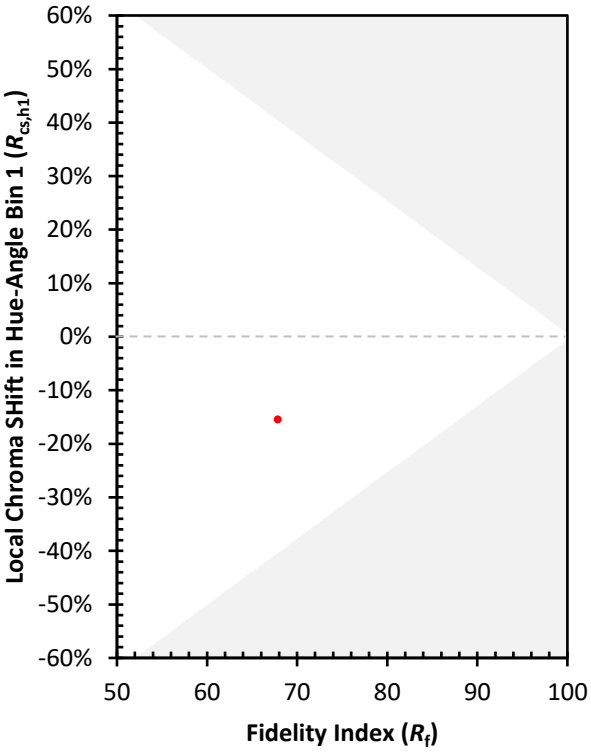



REPORT NUMBER: SP1-2407-184-3

# TM-30-18

## Measure Comparisons




(END OF REPORT)