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: METALUX

Report Number: P1432657

Luminaire Tested: EHBR1-30-UNV-TASM-L835-UPL40

Issue Date: 3/20/2026

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | P1432657 |
| | REPORT IS A COMBINATION OF REPORTS P1431746 AND P1431635 |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | METALUX |
| Catalog Number: | EHBR1-30-UNV-TASM-L835-UPL40 |
| Description: | Elevate Round Highbay at, 30000 lumens, 3500K 80CRI LEDs with TASM lens |
| Light Source: | - |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 33321.1 lumens |
| Efficiency: | N/A |
| Efficacy: | 175.0 lumens/watt |
| Spacing Criteria (0/90/45): | 0.99 / 0.84 / 0.9 |
| Luminous Opening: | Vertical Cylinder (Dia: 1.71' x H: 0.1') |
| CIE Type: | Semi-Direct |

| | |
|---|---|
| Input Watts (W): | 190.4 |
| 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: | 24 FT |

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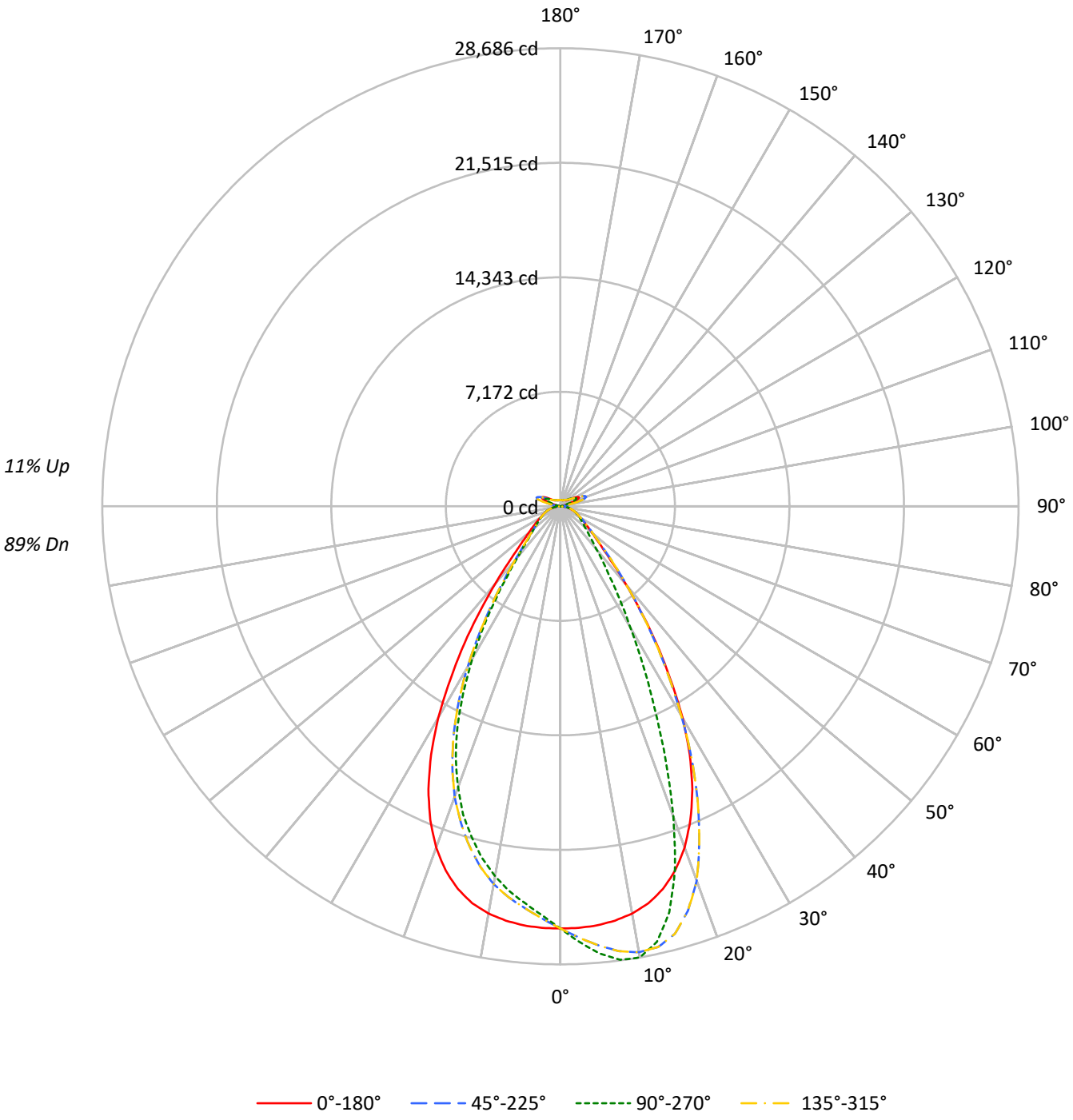
## Luminous Intensity Polar Plot



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## COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| RF | 20 | | | | 20 | | | | 20 | | | 20 | | | 20 | | | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 | 98 | 98 | 98 | 92 | 92 | 92 | 89 |
| 1 | 109 | 106 | 102 | 100 | 105 | 102 | 99 | 97 | 96 | 94 | 92 | 90 | 89 | 87 | 85 | 84 | 83 | 80 |
| 2 | 102 | 96 | 91 | 87 | 99 | 93 | 89 | 85 | 88 | 84 | 81 | 83 | 80 | 78 | 79 | 77 | 75 | 72 |
| 3 | 96 | 88 | 82 | 77 | 92 | 85 | 80 | 76 | 81 | 77 | 73 | 77 | 73 | 70 | 73 | 70 | 68 | 66 |
| 4 | 90 | 81 | 74 | 69 | 87 | 79 | 73 | 68 | 75 | 70 | 66 | 72 | 67 | 64 | 68 | 65 | 62 | 60 |
| 5 | 84 | 74 | 68 | 62 | 82 | 73 | 66 | 62 | 70 | 64 | 60 | 67 | 62 | 58 | 64 | 60 | 57 | 55 |
| 6 | 79 | 69 | 62 | 57 | 77 | 68 | 61 | 56 | 65 | 59 | 55 | 62 | 57 | 54 | 60 | 56 | 53 | 51 |
| 7 | 75 | 64 | 57 | 52 | 73 | 63 | 56 | 52 | 61 | 55 | 51 | 58 | 53 | 50 | 56 | 52 | 49 | 47 |
| 8 | 71 | 60 | 53 | 48 | 69 | 59 | 52 | 48 | 57 | 51 | 47 | 55 | 50 | 46 | 53 | 49 | 45 | 44 |
| 9 | 67 | 56 | 49 | 45 | 65 | 55 | 49 | 45 | 53 | 48 | 44 | 52 | 47 | 43 | 50 | 46 | 42 | 41 |
| 10 | 63 | 53 | 46 | 42 | 62 | 52 | 46 | 42 | 50 | 45 | 41 | 49 | 44 | 40 | 47 | 43 | 40 | 38 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|---|---|---|---|---|
| 0° | 124146 | 124146 | 124146 | 124146 |
| 5° | 123391 | 131636 | 123391 | 116988 |
| 10° | 121874 | 135015 | 121874 | 110719 |
| 15° | 118276 | 125471 | 118276 | 102275 |
| 20° | 110617 | 100611 | 110617 | 91098 |
| 25° | 97906 | 69709 | 97906 | 76344 |
| 30° | 79496 | 45350 | 79496 | 57121 |
| 35° | 57017 | 29370 | 57017 | 38026 |
| 40° | 36863 | 20243 | 36863 | 23981 |
| 45° | 23389 | 15681 | 23389 | 17087 |
| 50° | 17369 | 13325 | 17369 | 14232 |
| 55° | 14181 | 12139 | 14181 | 12564 |
| 60° | 12280 | 11563 | 12280 | 11632 |
| 65° | 11194 | 11151 | 11194 | 11104 |
| 70° | 10609 | 10927 | 10609 | 10785 |
| 75° | 9923 | 10569 | 9923 | 10252 |
| 80° | 8717 | 9980 | 8717 | 9330 |
| 85° | 5639 | 7125 | 5639 | 6794 |

## MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
Vertical Angle: 45°
Luminance: 32884 cd/sqm

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**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 2513.7 | 7.5 |
| 10°-20° | 6838.6 | 20.5 |
| 20°-30° | 8020.3 | 24.1 |
| 30°-40° | 5577.6 | 16.7 |
| 40°-50° | 2771.8 | 8.3 |
| 50°-60° | 1657.8 | 5.0 |
| 60°-70° | 1166.9 | 3.5 |
| 70°-80° | 751.7 | 2.3 |
| 80°-90° | 245.4 | 0.7 |
| 90°-100° | 100.4 | 0.3 |
| 100°-110° | 657.3 | 2.0 |
| 110°-120° | 1214.7 | 3.6 |
| 120°-130° | 721.7 | 2.2 |
| 130°-140° | 436.0 | 1.3 |
| 140°-150° | 301.3 | 0.9 |
| 150°-160° | 196.3 | 0.6 |
| 160°-170° | 112.4 | 0.3 |
| 170°-180° | 37.3 | 0.1 |
| 0°-30° | 17372.6 | 52.1 |
| 0°-40° | 22950.2 | 68.9 |
| 0°-60° | 27379.8 | 82.2 |
| 0°-90° | 29543.8 | 88.7 |
| 90°-120° | 1972.4 | 5.9 |
| 90°-150° | 3431.4 | 10.3 |
| 90°-180° | 3777.0 | 11.3 |
| 0°-180° | 33321.1 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 90° | 180° | 270° | 360° | Flux |
|---|---|---|---|---|---|---|
| 0° | 26436 | 26436 | 26436 | 26436 | 26436 | |
| 5° | 26346 | 28106 | 26346 | 24979 | 26346 | 2500 |
| 15° | 24814 | 26323 | 24814 | 21457 | 24814 | 6935 |
| 25° | 19552 | 13921 | 19552 | 15246 | 19552 | 8852 |
| 35° | 10465 | 5390 | 10465 | 6979 | 10465 | 6533 |
| 45° | 3784 | 2537 | 3784 | 2765 | 3784 | 3097 |
| 55° | 1916 | 1640 | 1916 | 1698 | 1916 | 1752 |
| 65° | 1168 | 1164 | 1168 | 1159 | 1168 | 1173 |
| 75° | 699 | 744 | 699 | 722 | 699 | 734 |
| 85° | 194 | 245 | 194 | 234 | 194 | 216 |
| 90° | 28 | 31 | 28 | 28 | 28 | 22 |
| 95° | 53 | 50 | 53 | 46 | 53 | 57 |
| 105° | 302 | 153 | 302 | 229 | 302 | 407 |
| 115° | 1293 | 1104 | 1293 | 1050 | 1293 | 1178 |
| 125° | 827 | 866 | 827 | 758 | 827 | 762 |
| 135° | 522 | 603 | 522 | 554 | 522 | 414 |
| 145° | 472 | 493 | 472 | 459 | 472 | 296 |
| 155° | 420 | 437 | 420 | 406 | 420 | 196 |
| 165° | 394 | 405 | 394 | 386 | 394 | 112 |
| 175° | 391 | 398 | 391 | 385 | 391 | 37 |
| 180° | 390 | 390 | 390 | 390 | 390 | |

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TEST NUMBER: P1432657
CATALOG NUMBER: EHBR1-30-UNV-TASM-L835-UPL40

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 26436.1 | 26436.1 | 26436.1 | 26436.1 | *26436.1* | 26436.1 | 26436.1 | 26436.1 | 26436.1 | 26436.1 | 26436.1 |
| 2.5° | 26420.8 | 26762.3 | 27039.0 | 27221.4 | *27311.6* | 27221.4 | 27039.0 | 26762.3 | 26420.8 | 26081.2 | 25847.7 |
| 5° | 26346.0 | 27030.1 | 27609.6 | 27988.7 | *28106.3* | 27988.7 | 27609.6 | 27030.1 | 26346.0 | 25699.5 | 25270.7 |
| 7.5° | 26167.0 | 27232.8 | 28093.9 | 28536.5 | *28644.6* | 28536.5 | 28093.9 | 27232.8 | 26167.0 | 25251.9 | 24710.1 |
| 10° | *25893.9* | *27360.7* | *28355.6* | *28672.9* | *28685.8* | *28672.9* | *28355.6* | *27360.7* | *25893.9* | *24661.0* | *24022.0* |
| 12.5° | 25458.1 | 27315.1 | 28267.8 | 28163.8 | *27927.3* | 28163.8 | 28267.8 | 27315.1 | 25458.1 | 23939.2 | 23133.2 |
| 15° | 24813.7 | 27044.9 | 27712.2 | 26864.9 | *26323.2* | 26864.9 | 27712.2 | 27044.9 | 24813.7 | 22964.7 | 22029.8 |
| 17.5° | 23905.5 | 26539.3 | 26552.2 | 24876.2 | *23854.0* | 24876.2 | 26552.2 | 26539.3 | 23905.5 | 21773.0 | 20743.4 |
| 20° | 22735.1 | 25728.2 | 24955.0 | 21889.5 | *20678.4* | 21889.5 | 24955.0 | 25728.2 | 22735.1 | 20364.1 | 19353.9 |
| 22.5° | 21267.8 | 24634.7 | 22730.7 | 18884.9 | *17232.6* | 18884.9 | 22730.7 | 24634.7 | 21267.8 | 18725.8 | 17674.3 |
| 25° | 19551.7 | 23294.8 | 20337.8 | 15611.2 | *13920.8* | 15611.2 | 20337.8 | 23294.8 | 19551.7 | 16773.7 | 15822.9 |
| 27.5° | 17533.0 | 21596.5 | 17789.8 | 12756.8 | *11197.3* | 12756.8 | 17789.8 | 21596.5 | 17533.0 | 14758.0 | 13786.9 |
| 30° | 15291.0 | 19419.3 | 15138.2 | 10159.3 | *8723.1* | 10159.3 | 15138.2 | 19419.3 | 15291.0 | 12493.5 | 11624.1 |
| 32.5° | 12780.6 | 17285.2 | 12591.8 | 8140.2 | *6923.7* | 8140.2 | 12591.8 | 17285.2 | 12780.6 | 10332.7 | 9424.1 |
| 35° | 10464.6 | 14615.3 | 10295.6 | 6396.3 | *5390.4* | 6396.3 | 10295.6 | 14615.3 | 10464.6 | 8292.9 | 7400.5 |
| 37.5° | 8212.6 | 12092.6 | 8207.1 | 5150.5 | *4372.2* | 5150.5 | 8207.1 | 12092.6 | 8212.6 | 6447.3 | 5723.0 |
| 40° | 6389.3 | 9455.4 | 6430.4 | 4111.5 | *3508.7* | 4111.5 | 6430.4 | 9455.4 | 6389.3 | 4905.7 | 4442.1 |
| 42.5° | 4841.2 | 7230.1 | 5054.3 | 3374.4 | *2980.3* | 3374.4 | 5054.3 | 7230.1 | 4841.2 | 3865.1 | 3518.1 |
| 45° | 3784.3 | 5320.5 | 3946.9 | 2846.9 | *2537.1* | 2846.9 | 3946.9 | 5320.5 | 3784.3 | 3112.6 | 2879.7 |
| 47.5° | 3081.8 | 4112.0 | 3198.9 | 2441.9 | *2224.8* | 2441.9 | 3198.9 | 4112.0 | 3081.8 | 2632.8 | 2458.3 |
| 50° | 2588.6 | 3155.2 | 2656.0 | 2131.6 | *1985.9* | 2131.6 | 2656.0 | 3155.2 | 2588.6 | 2254.6 | 2138.0 |
| 52.5° | 2223.8 | 2573.3 | 2261.9 | 1899.6 | *1801.4* | 1899.6 | 2261.9 | 2573.3 | 2223.8 | 1972.5 | 1900.0 |
| 55° | 1916.4 | 2163.3 | 1967.1 | 1708.2 | *1640.4* | 1708.2 | 1967.1 | 2163.3 | 1916.4 | 1755.4 | 1701.8 |
| 57.5° | 1682.9 | 1835.2 | 1708.2 | 1545.1 | *1500.0* | 1545.1 | 1708.2 | 1835.2 | 1682.9 | 1562.0 | 1533.3 |
| 60° | 1476.3 | 1589.3 | 1507.5 | 1402.9 | *1390.0* | 1402.9 | 1507.5 | 1589.3 | 1476.3 | 1405.4 | 1386.5 |
| 62.5° | 1317.2 | 1388.5 | 1333.0 | 1275.0 | *1263.6* | 1275.0 | 1333.0 | 1388.5 | 1317.2 | 1262.6 | 1266.1 |
| 65° | 1168.4 | 1234.8 | 1191.2 | 1160.0 | *1163.9* | 1160.0 | 1191.2 | 1234.8 | 1168.4 | 1143.1 | 1148.6 |
| 67.5° | 1053.4 | 1088.1 | 1069.3 | 1051.5 | *1055.9* | 1051.5 | 1069.3 | 1088.1 | 1053.4 | 1028.6 | 1037.0 |
| 70° | 930.9 | 968.2 | 948.8 | 951.3 | *958.8* | 951.3 | 948.8 | 968.2 | 930.9 | 923.6 | 930.0 |
| 72.5° | 814.0 | 842.7 | 836.3 | 842.2 | *850.1* | 842.2 | 836.3 | 842.7 | 814.0 | 813.0 | 813.5 |
| 75° | 699.0 | 720.8 | 723.8 | 732.1 | *744.5* | 732.1 | 723.8 | 720.8 | 699.0 | 691.5 | 700.4 |
| 77.5° | 573.6 | 598.3 | 607.7 | 619.2 | *637.5* | 619.2 | 607.7 | 598.3 | 573.6 | 578.5 | 583.0 |
| 80° | 458.6 | 469.9 | 490.8 | 499.2 | *525.0* | 499.2 | 490.8 | 469.9 | 458.6 | 450.1 | 456.5 |
| 82.5° | 335.6 | 346.0 | 363.8 | 379.7 | *394.6* | 379.7 | 363.8 | 346.0 | 335.6 | 331.6 | 332.1 |
| 85° | 193.8 | 209.7 | 221.6 | 240.4 | *244.9* | 240.4 | 221.6 | 209.7 | 193.8 | 198.3 | 193.8 |
| 87.5° | 67.9 | 72.8 | 83.3 | 90.8 | *91.2* | 90.8 | 83.3 | 72.8 | 67.9 | 69.4 | 62.9 |
| 90° | 27.6 | 46.9 | 80.9 | 44.8 | *31.1* | 44.8 | 80.9 | 46.9 | 27.6 | 48.6 | 75.7 |
| 92.5° | 36.0 | 63.6 | 114.3 | 59.4 | *41.6* | 59.4 | 114.3 | 63.6 | 36.0 | 63.1 | 121.7 |
| 95° | 53.2 | 78.3 | 145.7 | 65.6 | *49.9* | 65.6 | 145.7 | 78.3 | 53.2 | 84.1 | 169.7 |
| 97.5° | 82.4 | 97.1 | 164.5 | 69.9 | *60.4* | 69.9 | 164.5 | 97.1 | 82.4 | 102.9 | 194.8 |
| 100° | 109.7 | 109.7 | 300.2 | 80.3 | *68.8* | 80.3 | 300.2 | 109.7 | 109.7 | 126.4 | 303.5 |
| 102.5° | 166.0 | 214.6 | 695.7 | 160.2 | *83.4* | 160.2 | 695.7 | 214.6 | 166.0 | 237.1 | 644.1 |
| 105° | 301.9 | 490.4 | 1224.4 | 413.0 | *152.8* | 413.0 | 1224.4 | 490.4 | 301.9 | 496.2 | 1147.7 |
| 107.5° | 571.5 | 914.6 | 1577.4 | 814.3 | *355.5* | 814.3 | 1577.4 | 914.6 | 571.5 | 878.6 | 1513.8 |
| 110° | 914.1 | 1278.2 | 1721.6 | 1115.2 | *719.1* | 1115.2 | 1721.6 | 1278.2 | 914.1 | 1206.6 | 1586.9 |

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TEST NUMBER: P1432657
CATALOG NUMBER: EHBR1-30-UNV-TASM-L835-UPL40

**CANDELA DISTRIBUTION (continued):**

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 112.5° | 1189.9 | 1424.4 | 1682.0 | 1236.4 | *994.9* | 1236.4 | 1682.0 | 1424.4 | 1189.9 | 1332.0 | 1520.1 |
| 115° | 1292.8 | 1403.6 | 1502.3 | 1232.1 | *1103.5* | 1232.1 | 1502.3 | 1403.6 | 1292.8 | 1300.7 | 1357.1 |
| 117.5° | 1248.9 | 1284.5 | 1297.5 | 1157.0 | *1109.8* | 1157.0 | 1297.5 | 1284.5 | 1248.9 | 1169.6 | 1152.3 |
| 120° | 1127.8 | 1113.1 | 1093.3 | 1046.2 | *1047.2* | 1046.2 | 1093.3 | 1113.1 | 1127.8 | 1021.2 | 962.1 |
| 122.5° | 975.7 | 944.3 | 924.0 | 933.8 | *961.5* | 933.8 | 924.0 | 944.3 | 975.7 | 869.2 | 824.7 |
| 125° | 827.4 | 795.9 | 805.4 | 837.7 | *865.9* | 837.7 | 805.4 | 795.9 | 827.4 | 738.0 | 727.0 |
| 127.5° | 702.6 | 687.9 | 719.7 | 756.2 | *780.1* | 756.2 | 719.7 | 687.9 | 702.6 | 646.1 | 658.0 |
| 130° | 613.1 | 616.8 | 659.1 | 689.9 | *705.0* | 689.9 | 659.1 | 616.8 | 613.1 | 586.0 | 614.8 |
| 132.5° | 557.2 | 573.5 | 613.6 | 640.2 | *649.0* | 640.2 | 613.6 | 573.5 | 557.2 | 549.3 | 584.3 |
| 135° | 522.2 | 546.3 | 582.8 | 600.0 | *603.1* | 600.0 | 582.8 | 546.3 | 522.2 | 524.8 | 557.2 |
| 137.5° | 501.8 | 525.9 | 553.5 | 567.1 | *563.3* | 567.1 | 553.5 | 525.9 | 501.8 | 508.5 | 533.1 |
| 140° | 489.7 | 513.8 | 526.4 | 542.0 | *538.8* | 542.0 | 526.4 | 513.8 | 489.7 | 493.9 | 512.7 |
| 142.5° | 477.7 | 499.7 | 506.0 | 517.3 | *513.7* | 517.3 | 506.0 | 499.7 | 477.7 | 481.8 | 494.4 |
| 145° | 471.9 | 488.2 | 483.5 | 498.5 | *493.3* | 498.5 | 483.5 | 488.2 | 471.9 | 473.5 | 480.2 |
| 147.5° | 461.5 | 473.5 | 467.2 | 480.2 | *475.1* | 480.2 | 467.2 | 473.5 | 461.5 | 461.5 | 464.0 |
| 150° | 449.4 | 457.7 | 448.9 | 464.0 | *463.0* | 464.0 | 448.9 | 457.7 | 449.4 | 447.3 | 449.9 |
| 152.5° | 433.3 | 441.6 | 433.3 | 450.4 | *448.9* | 450.4 | 433.3 | 441.6 | 433.3 | 431.1 | 433.8 |
| 155° | 419.6 | 423.8 | 419.6 | 436.8 | *437.2* | 436.8 | 419.6 | 423.8 | 419.6 | 419.1 | 420.1 |
| 157.5° | 410.1 | 412.7 | 410.6 | 425.7 | *426.2* | 425.7 | 410.6 | 412.7 | 410.1 | 410.1 | 410.6 |
| 160° | 401.7 | 405.8 | 404.3 | 417.3 | *417.8* | 417.3 | 404.3 | 405.8 | 401.7 | 403.2 | 403.7 |
| 162.5° | 398.5 | 398.5 | 397.4 | 410.4 | *411.4* | 410.4 | 397.4 | 398.5 | 398.5 | 398.5 | 400.6 |
| 165° | 393.7 | 395.7 | 392.5 | 401.8 | *405.0* | 401.8 | 392.5 | 395.7 | 393.7 | 395.3 | 395.3 |
| 167.5° | 392.5 | 390.5 | 391.5 | 399.2 | *402.3* | 399.2 | 391.5 | 390.5 | 392.5 | 394.2 | 394.2 |
| 170° | 388.9 | 389.3 | 388.4 | 396.0 | *399.1* | 396.0 | 388.4 | 389.3 | 388.9 | 391.0 | 392.5 |
| 172.5° | 390.4 | 390.4 | 387.7 | 393.3 | *398.6* | 393.3 | 387.7 | 390.4 | 390.4 | 392.1 | 394.1 |
| 175° | 391.4 | 389.8 | 388.7 | 392.3 | *397.5* | 392.3 | 388.7 | 389.8 | 391.4 | 390.9 | 390.9 |
| 177.5° | 389.3 | 390.3 | 391.3 | 394.9 | *402.1* | 394.9 | 391.3 | 390.3 | 389.3 | 390.9 | 390.9 |
| 180° | 390.3 | 390.3 | 390.3 | 390.3 | *390.3* | 390.3 | 390.3 | 390.3 | 390.3 | 390.3 | 390.3 |

TEST NUMBER: P1432657
CATALOG NUMBER: EHBR1-30-UNV-TASM-L835-UPL40

**CANDELA DISTRIBUTION (continued):**

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|---|---|---|---|---|---|---|
| 0° | 26436.1 | 26436.1 | 26436.1 | 26436.1 | 26436.1 | 26436.1 |
| 2.5° | 25668.3 | 25651.4 | 25668.3 | 25847.7 | 26081.2 | 26420.8 |
| 5° | 25071.9 | 24978.8 | 25071.9 | 25270.7 | 25699.5 | 26346.0 |
| 7.5° | 24377.4 | 24323.4 | 24377.4 | 24710.1 | 25251.9 | 26167.0 |
| 10° | *23646.3* | *23523.8* | *23646.3* | *24022.0* | *24661.0* | *25893.9* |
| 12.5° | 22745.0 | 22583.0 | 22745.0 | 23133.2 | 23939.2 | 25458.1 |
| 15° | 21598.9 | 21456.7 | 21598.9 | 22029.8 | 22964.7 | 24813.7 |
| 17.5° | 20369.0 | 20240.2 | 20369.0 | 20743.4 | 21773.0 | 23905.5 |
| 20° | 18824.4 | 18723.3 | 18824.4 | 19353.9 | 20364.1 | 22735.1 |
| 22.5° | 17203.9 | 17109.3 | 17203.9 | 17674.3 | 18725.8 | 21267.8 |
| 25° | 15297.4 | 15245.8 | 15297.4 | 15822.9 | 16773.7 | 19551.7 |
| 27.5° | 13237.2 | 13149.5 | 13237.2 | 13786.9 | 14758.0 | 17533.0 |
| 30° | 11132.4 | 10987.1 | 11132.4 | 11624.1 | 12493.5 | 15291.0 |
| 32.5° | 9073.7 | 8969.0 | 9073.7 | 9424.1 | 10332.7 | 12780.6 |
| 35° | 7083.8 | 6979.2 | 7083.8 | 7400.5 | 8292.9 | 10464.6 |
| 37.5° | 5519.8 | 5335.0 | 5519.8 | 5723.0 | 6447.3 | 8212.6 |
| 40° | 4186.3 | 4156.6 | 4186.3 | 4442.1 | 4905.7 | 6389.3 |
| 42.5° | 3408.0 | 3327.3 | 3408.0 | 3518.1 | 3865.1 | 4841.2 |
| 45° | 2796.4 | 2764.6 | 2796.4 | 2879.7 | 3112.6 | 3784.3 |
| 47.5° | 2404.7 | 2418.7 | 2404.7 | 2458.3 | 2632.8 | 3081.8 |
| 50° | 2112.7 | 2121.1 | 2112.7 | 2138.0 | 2254.6 | 2588.6 |
| 52.5° | 1897.6 | 1890.2 | 1897.6 | 1900.0 | 1972.5 | 2223.8 |
| 55° | 1707.3 | 1697.9 | 1707.3 | 1701.8 | 1755.4 | 1916.4 |
| 57.5° | 1540.7 | 1547.7 | 1540.7 | 1533.3 | 1562.0 | 1682.9 |
| 60° | 1392.0 | 1398.4 | 1392.0 | 1386.5 | 1405.4 | 1476.3 |
| 62.5° | 1266.5 | 1270.5 | 1266.5 | 1266.1 | 1262.6 | 1317.2 |
| 65° | 1154.5 | 1159.0 | 1154.5 | 1148.6 | 1143.1 | 1168.4 |
| 67.5° | 1047.5 | 1047.5 | 1047.5 | 1037.0 | 1028.6 | 1053.4 |
| 70° | 946.8 | 946.3 | 946.8 | 930.0 | 923.6 | 930.9 |
| 72.5° | 825.9 | 837.7 | 825.9 | 813.5 | 813.0 | 814.0 |
| 75° | 708.4 | 722.2 | 708.4 | 700.4 | 691.5 | 699.0 |
| 77.5° | 589.4 | 610.7 | 589.4 | 583.0 | 578.5 | 573.6 |
| 80° | 467.5 | 490.8 | 467.5 | 456.5 | 450.1 | 458.6 |
| 82.5° | 345.5 | 362.9 | 345.5 | 332.1 | 331.6 | 335.6 |
| 85° | 205.7 | 233.5 | 205.7 | 193.8 | 198.3 | 193.8 |
| 87.5° | 65.9 | 84.3 | 65.9 | 62.9 | 69.4 | 67.9 |
| 90° | 44.4 | 27.6 | 44.4 | 75.7 | 48.6 | 27.6 |
| 92.5° | 67.4 | 40.1 | 67.4 | 121.7 | 63.1 | 36.0 |
| 95° | 77.8 | 46.4 | 77.8 | 169.7 | 84.1 | 53.2 |
| 97.5° | 86.1 | 59.4 | 86.1 | 194.8 | 102.9 | 82.4 |
| 100° | 100.8 | 78.3 | 100.8 | 303.5 | 126.4 | 109.7 |
| 102.5° | 213.6 | 132.7 | 213.6 | 644.1 | 237.1 | 166.0 |
| 105° | 449.8 | 228.8 | 449.8 | 1147.7 | 496.2 | 301.9 |
| 107.5° | 805.0 | 395.9 | 805.0 | 1513.8 | 878.6 | 571.5 |
| 110° | 1068.2 | 738.6 | 1068.2 | 1586.9 | 1206.6 | 914.1 |

TEST NUMBER: P1432657
CATALOG NUMBER: EHBR1-30-UNV-TASM-L835-UPL40

**CANDELA DISTRIBUTION (continued):**

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|---|---|---|---|---|---|---|
| 112.5° | 1147.7 | 997.7 | 1147.7 | 1520.1 | 1332.0 | 1189.9 |
| 115° | 1103.8 | 1049.9 | 1103.8 | 1357.1 | 1300.7 | 1292.8 |
| 117.5° | 1007.6 | 1014.4 | 1007.6 | 1152.3 | 1169.6 | 1248.9 |
| 120° | 896.9 | 939.2 | 896.9 | 962.1 | 1021.2 | 1127.8 |
| 122.5° | 795.0 | 845.2 | 795.0 | 824.7 | 869.2 | 975.7 |
| 125° | 707.2 | 757.8 | 707.2 | 727.0 | 738.0 | 827.4 |
| 127.5° | 646.6 | 680.5 | 646.6 | 658.0 | 646.1 | 702.6 |
| 130° | 599.1 | 628.4 | 599.1 | 614.8 | 586.0 | 613.1 |
| 132.5° | 566.1 | 584.9 | 566.1 | 584.3 | 549.3 | 557.2 |
| 135° | 537.4 | 553.6 | 537.4 | 557.2 | 524.8 | 522.2 |
| 137.5° | 512.9 | 527.0 | 512.9 | 533.1 | 508.5 | 501.8 |
| 140° | 490.9 | 502.9 | 490.9 | 512.7 | 493.9 | 489.7 |
| 142.5° | 468.4 | 476.7 | 468.4 | 494.4 | 481.8 | 477.7 |
| 145° | 452.6 | 458.9 | 452.6 | 480.2 | 473.5 | 471.9 |
| 147.5° | 439.0 | 443.2 | 439.0 | 464.0 | 461.5 | 461.5 |
| 150° | 425.4 | 429.6 | 425.4 | 449.9 | 447.3 | 449.4 |
| 152.5° | 411.3 | 415.9 | 411.3 | 433.8 | 431.1 | 433.3 |
| 155° | 401.8 | 406.4 | 401.8 | 420.1 | 419.1 | 419.6 |
| 157.5° | 396.4 | 399.5 | 396.4 | 410.6 | 410.1 | 410.1 |
| 160° | 391.8 | 394.3 | 391.8 | 403.7 | 403.2 | 401.7 |
| 162.5° | 386.4 | 389.0 | 386.4 | 400.6 | 398.5 | 398.5 |
| 165° | 385.4 | 385.8 | 385.4 | 395.3 | 395.3 | 393.7 |
| 167.5° | 383.7 | 385.8 | 383.7 | 394.2 | 394.2 | 392.5 |
| 170° | 384.2 | 384.7 | 384.2 | 392.5 | 391.0 | 388.9 |
| 172.5° | 385.2 | 385.8 | 385.2 | 394.1 | 392.1 | 390.4 |
| 175° | 384.2 | 384.7 | 384.2 | 390.9 | 390.9 | 391.4 |
| 177.5° | 386.7 | 387.2 | 386.7 | 390.9 | 390.9 | 389.3 |
| 180° | 390.3 | 390.3 | 390.3 | 390.3 | 390.3 | 390.3 |

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

Scaled Data Report

TEST NUMBER: P1432657
CATALOG NUMBER: EHBR1-30-UNV-TASM-L835-UPL40

**CIE UGR TABLE:**

| Reflectances: | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ceiling | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| | Wall | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| | Reference plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 17.02 | 18.06 | 17.58 | 18.60 | 19.19 | 16.34 | 17.38 | 16.90 | 17.92 | 18.51 |
| | 3H | 18.57 | 19.49 | 19.14 | 20.05 | 20.68 | 18.18 | 19.11 | 18.76 | 19.66 | 20.30 |
| | 4H | 19.20 | 20.07 | 19.79 | 20.63 | 21.28 | 18.96 | 19.83 | 19.56 | 20.40 | 21.05 |
| | 6H | 19.68 | 20.48 | 20.28 | 21.06 | 21.72 | 19.60 | 20.40 | 20.21 | 20.98 | 21.64 |
| | 8H | 19.83 | 20.58 | 20.45 | 21.18 | 21.85 | 19.82 | 20.58 | 20.44 | 21.18 | 21.85 |
| | 12H | 19.90 | 20.62 | 20.52 | 21.21 | 21.90 | 19.95 | 20.67 | 20.57 | 21.26 | 21.95 |
| 4H | 2H | 17.43 | 18.30 | 18.02 | 18.86 | 19.52 | 16.91 | 17.78 | 17.50 | 18.34 | 18.99 |
| | 3H | 19.22 | 19.94 | 19.83 | 20.55 | 21.22 | 18.96 | 19.68 | 19.57 | 20.29 | 20.96 |
| | 4H | 20.00 | 20.65 | 20.62 | 21.26 | 21.96 | 19.87 | 20.52 | 20.49 | 21.13 | 21.84 |
| | 6H | 20.61 | 21.17 | 21.26 | 21.81 | 22.53 | 20.64 | 21.20 | 21.28 | 21.84 | 22.56 |
| | 8H | 20.81 | 21.33 | 21.46 | 21.97 | 22.69 | 20.91 | 21.43 | 21.56 | 22.07 | 22.79 |
| | 12H | 20.91 | 21.37 | 21.58 | 22.04 | 22.77 | 21.07 | 21.53 | 21.74 | 22.20 | 22.93 |
| 8H | 4H | 20.24 | 20.77 | 20.89 | 21.40 | 22.13 | 20.15 | 20.67 | 20.80 | 21.31 | 22.03 |
| | 6H | 20.99 | 21.41 | 21.67 | 22.09 | 22.82 | 21.05 | 21.47 | 21.73 | 22.16 | 22.89 |
| | 8H | 21.26 | 21.63 | 21.95 | 22.33 | 23.07 | 21.40 | 21.78 | 22.10 | 22.47 | 23.22 |
| | 12H | 21.43 | 21.76 | 22.12 | 22.43 | 23.25 | 21.65 | 21.98 | 22.34 | 22.66 | 23.47 |
| 12H | 4H | 20.25 | 20.71 | 20.92 | 21.38 | 22.11 | 20.16 | 20.62 | 20.82 | 21.28 | 22.01 |
| | 6H | 21.03 | 21.41 | 21.73 | 22.10 | 22.84 | 21.10 | 21.47 | 21.79 | 22.17 | 22.91 |
| | 8H | 21.34 | 21.67 | 22.04 | 22.35 | 23.16 | 21.50 | 21.83 | 22.19 | 22.50 | 23.32 |

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

Metalux

Report Number: SP1-2506-472-3

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L835-N

Data in this report applies to families of products including EHBR-60-L835-N

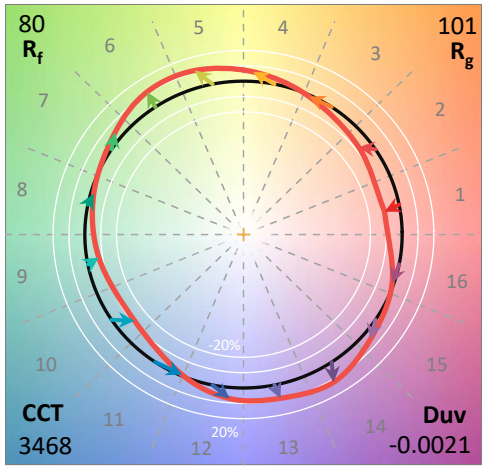
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2506-472-3 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 08/05/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | Metalux |
| Catalog Number: | **EHBR-60-L835-N** |
| Description: | Elevate Round Highbay at, 60000 lumens, 3500K 80CRI LEDs with N lens |

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 3468 | CRI (Ra): | 82.1 | | |
| CIE u': | 0.2375 | R1: | 82.9 | R9: | 27.6 |
| CIE v': | 0.5091 | R2: | 85.6 | R10: | 63.8 |
| Duv: | -0.0021 | R3: | 85.9 | R11: | 81.2 |
| CIE x: | 0.4049 | R4: | 82.8 | R12: | 57.2 |
| CIE y: | 0.3856 | R5: | 81.0 | R13: | 82.6 |
| CIE z: | 0.2095 | R6: | 79.7 | R14: | 91.0 |
| Peak Wavelength (nm): | 630 | R7: | 86.5 | R15: | 79.4 |
| Dominant Wavelength (nm): | 581 | R8: | 72.1 | | |
| Purity: | 37.24544 | | | | |
| Rf: | 80.1 | | | | |
| Rg: | 101 | | | | |




## Test Conditions

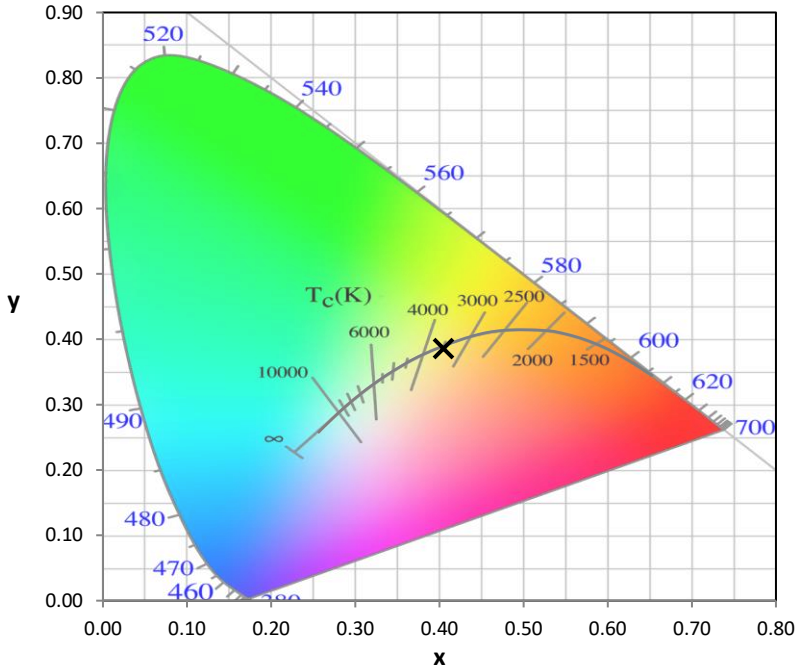
| | |
|---|---|
| Stabilization Time: | 39M |
| Operation Time: | 1H 39M |
| Sphere Temperature (°C): | 25.0 |

REPORT NUMBER: SP1-2506-472-3

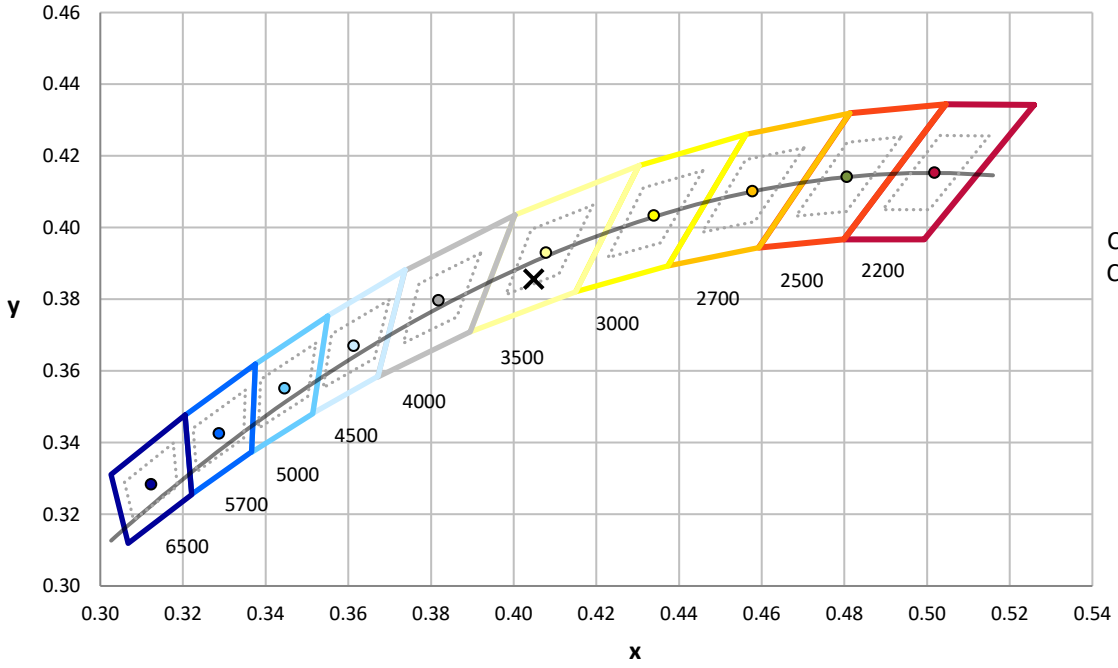
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | XITRON INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | CHROMA 61603 IN0063 | 10/22/2024 | 10/22/2025 |
| DC Power Source | AGILENT E3634A IN0208 | 10/22/2024 | 10/22/2025 |
| Sphere Thermometer | ONSET IN0085 | 10/22/2024 | 10/22/2025 |
| Room Thermometer | ONSET IN0046 | 10/22/2024 | 10/22/2025 |

REPORT NUMBER: SP1-2506-472-3

## CIE 1931 Chromaticity Diagram




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

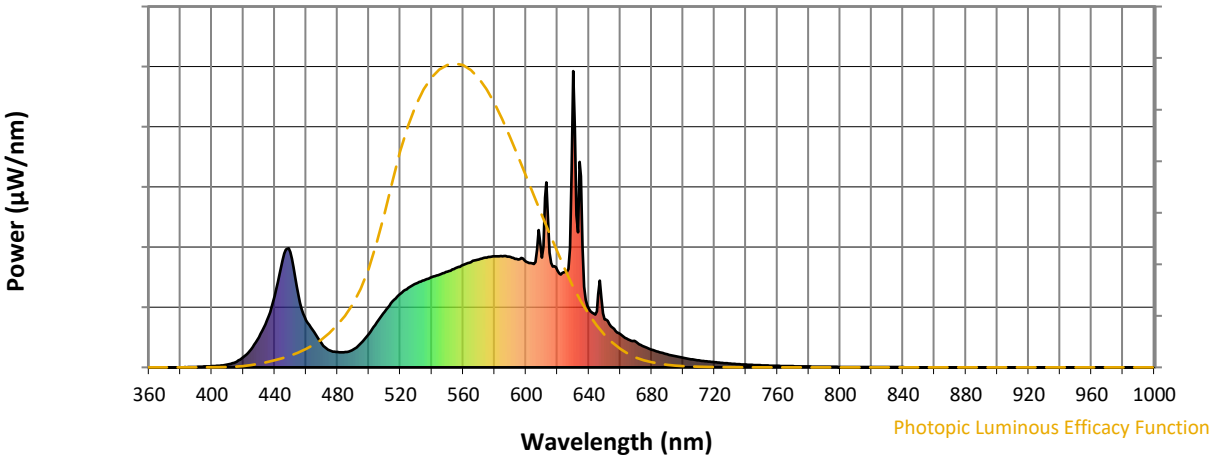



CCT = 3468K
CIE x = 0.4049
CIE y = 0.3856
Duv = -0.0021

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-3

## Photopic Flux vs. Wavelength

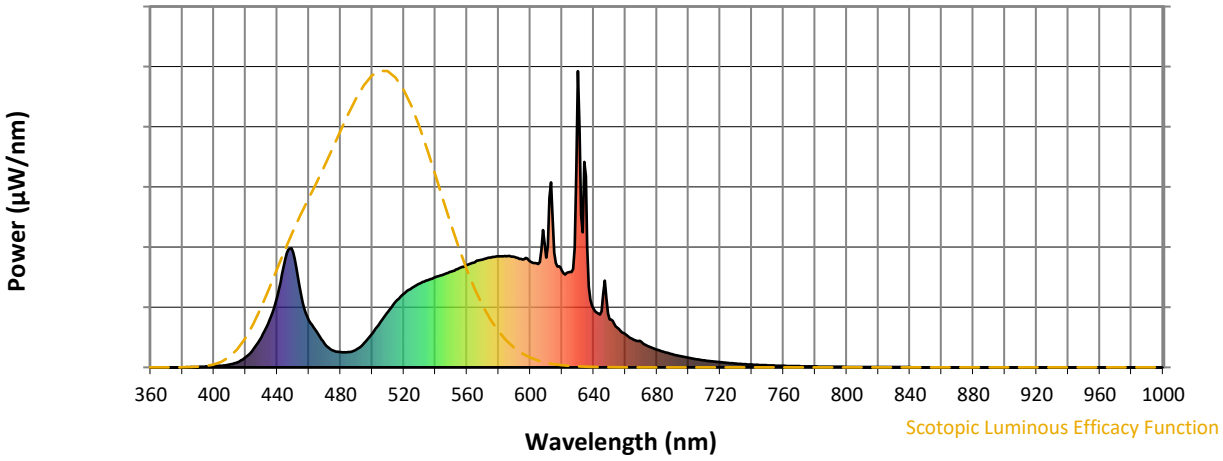



## Photopic Lumens: NR

| 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 | 60 | NR | 620 | 327 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 82 | NR | 625 | 322 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 114 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 152 | NR | 635 | 645 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 189 | NR | 640 | 197 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 222 | NR | 645 | 189 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 248 | NR | 650 | 163 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 268 | NR | 655 | 134 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 283 | NR | 660 | 113 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 294 | NR | 665 | 94 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 305 | NR | 670 | 87 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 18 | NR | 545 | 314 | NR | 675 | 70 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 323 | NR | 680 | 60 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 62 | NR | 555 | 335 | NR | 685 | 51 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 102 | NR | 560 | 346 | NR | 690 | 44 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 159 | NR | 565 | 356 | NR | 695 | 38 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 241 | NR | 570 | 364 | NR | 700 | 32 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 363 | NR | 575 | 371 | NR | 705 | 28 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 389 | NR | 580 | 375 | NR | 710 | 24 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 375 | NR | 715 | 20 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 158 | NR | 590 | 373 | NR | 720 | 17 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 120 | NR | 595 | 364 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 357 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 57 | NR | 605 | 349 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 51 | NR | 610 | 371 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 51 | NR | 615 | 387 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-3

## Scotopic Flux vs. Wavelength

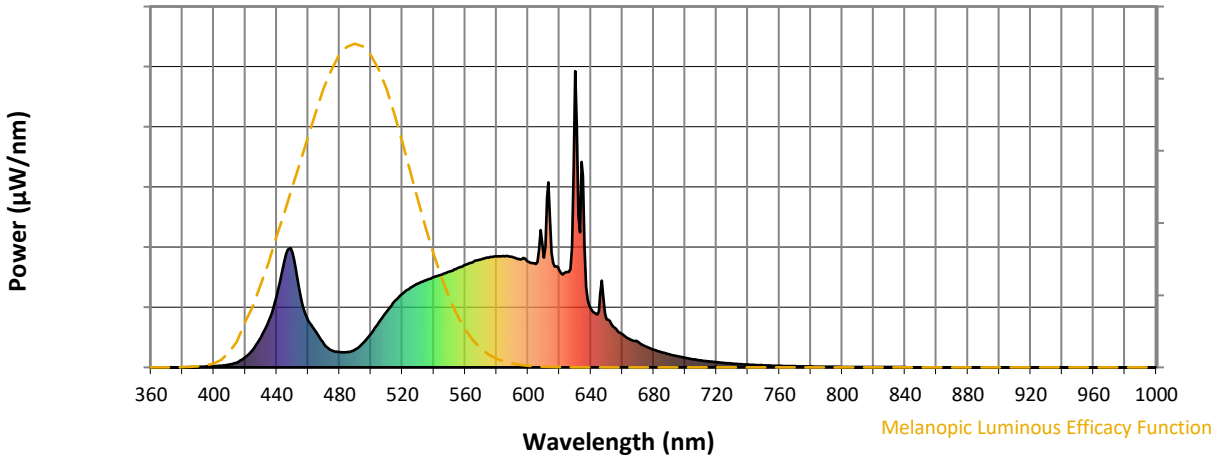



**Scotopic Lumens: NR** **S/P: 1.43**

| 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 | 60 | NR | 620 | 327 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 82 | NR | 625 | 322 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 114 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 152 | NR | 635 | 645 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 189 | NR | 640 | 197 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 222 | NR | 645 | 189 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 248 | NR | 650 | 163 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 268 | NR | 655 | 134 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 283 | NR | 660 | 113 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 294 | NR | 665 | 94 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 305 | NR | 670 | 87 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 18 | NR | 545 | 314 | NR | 675 | 70 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 323 | NR | 680 | 60 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 62 | NR | 555 | 335 | NR | 685 | 51 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 102 | NR | 560 | 346 | NR | 690 | 44 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 159 | NR | 565 | 356 | NR | 695 | 38 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 241 | NR | 570 | 364 | NR | 700 | 32 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 363 | NR | 575 | 371 | NR | 705 | 28 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 389 | NR | 580 | 375 | NR | 710 | 24 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 375 | NR | 715 | 20 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 158 | NR | 590 | 373 | NR | 720 | 17 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 120 | NR | 595 | 364 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 357 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 57 | NR | 605 | 349 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 51 | NR | 610 | 371 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 51 | NR | 615 | 387 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-3

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.75**

| 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 | 60 | NR | 620 | 327 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 82 | NR | 625 | 322 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 114 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 152 | NR | 635 | 645 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 189 | NR | 640 | 197 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 222 | NR | 645 | 189 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 248 | NR | 650 | 163 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 268 | NR | 655 | 134 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 283 | NR | 660 | 113 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 294 | NR | 665 | 94 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 305 | NR | 670 | 87 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 18 | NR | 545 | 314 | NR | 675 | 70 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 323 | NR | 680 | 60 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 62 | NR | 555 | 335 | NR | 685 | 51 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 102 | NR | 560 | 346 | NR | 690 | 44 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 159 | NR | 565 | 356 | NR | 695 | 38 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 241 | NR | 570 | 364 | NR | 700 | 32 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 363 | NR | 575 | 371 | NR | 705 | 28 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 389 | NR | 580 | 375 | NR | 710 | 24 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 375 | NR | 715 | 20 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 158 | NR | 590 | 373 | NR | 720 | 17 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 120 | NR | 595 | 364 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 357 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 57 | NR | 605 | 349 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 51 | NR | 610 | 371 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 51 | NR | 615 | 387 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

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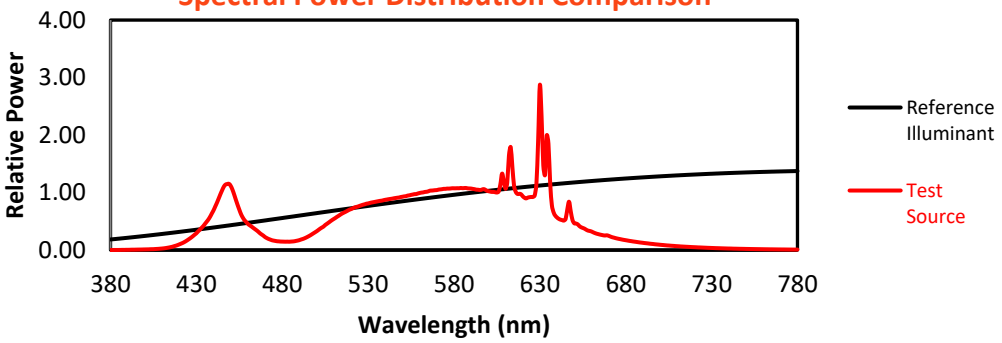
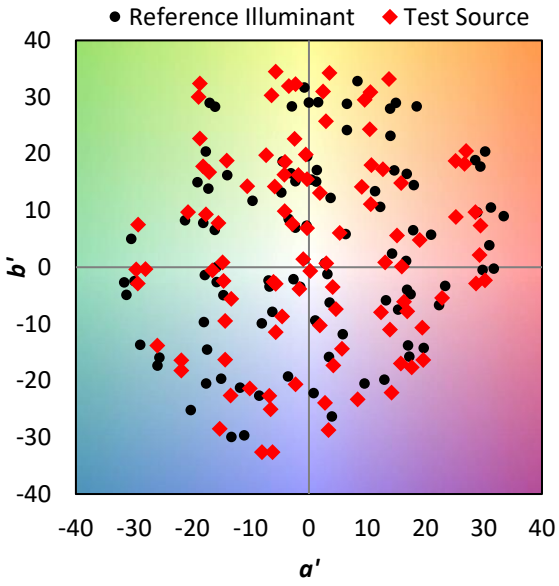
## Summary

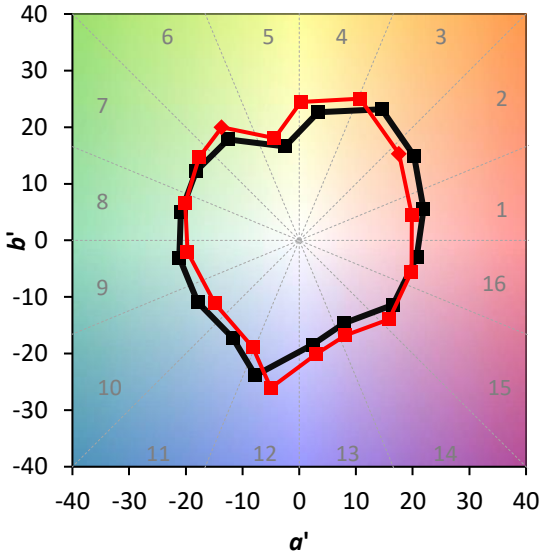
$R_f$ = 80.1
$R_g$ = 101
CIE $R_a$ = 82.1
$R_9$ = 27.6

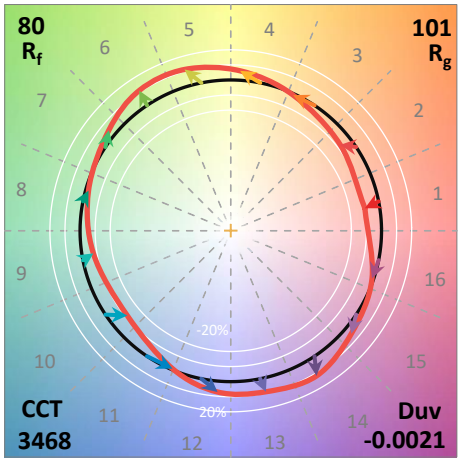
## Spectral Power Distribution Comparison

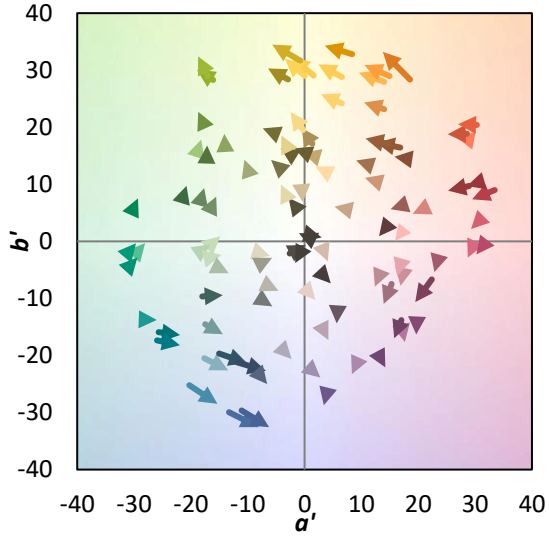



## Color Vector Graphics



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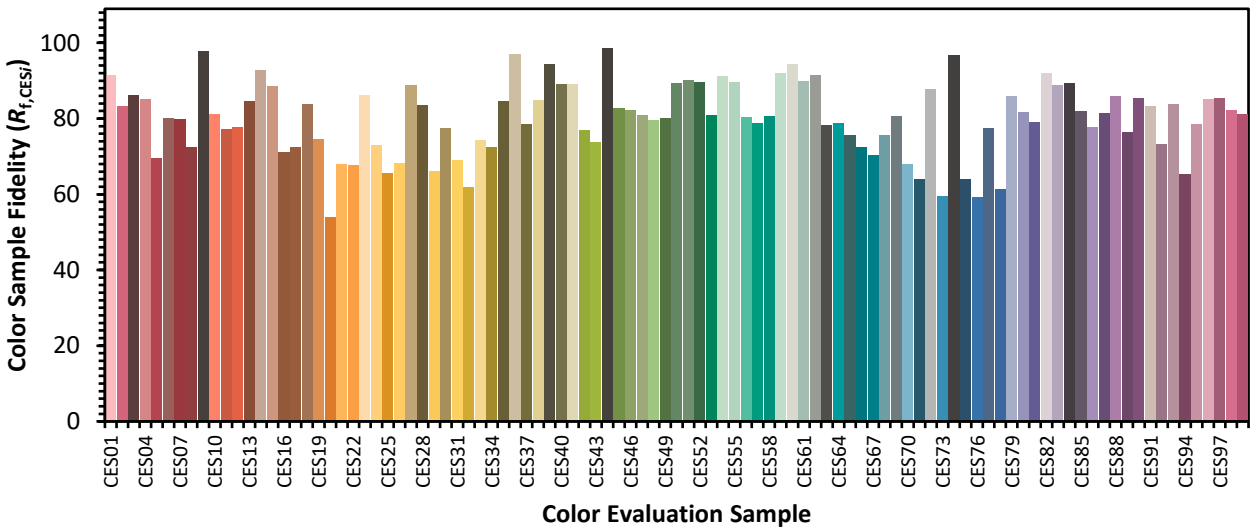
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 68 | CES51 = 90 | CES76 = 59 |
| CES02 = 62 | CES27 = 89 | CES52 = 90 | CES77 = 78 |
| CES03 = 31 | CES28 = 84 | CES53 = 81 | CES78 = 61 |
| CES04 = 70 | CES29 = 66 | CES54 = 91 | CES79 = 86 |
| CES05 = 49 | CES30 = 77 | CES55 = 90 | CES80 = 82 |
| CES06 = 51 | CES31 = 69 | CES56 = 80 | CES81 = 79 |
| CES07 = 42 | CES32 = 62 | CES57 = 79 | CES82 = 92 |
| CES08 = 41 | CES33 = 74 | CES58 = 81 | CES83 = 89 |
| CES09 = 29 | CES34 = 72 | CES59 = 92 | CES84 = 89 |
| CES10 = 75 | CES35 = 85 | CES60 = 94 | CES85 = 82 |
| CES11 = 58 | CES36 = 97 | CES61 = 90 | CES86 = 78 |
| CES12 = 64 | CES37 = 79 | CES62 = 92 | CES87 = 82 |
| CES13 = 43 | CES38 = 85 | CES63 = 78 | CES88 = 86 |
| CES14 = 74 | CES39 = 94 | CES64 = 79 | CES89 = 76 |
| CES15 = 71 | CES40 = 89 | CES65 = 76 | CES90 = 85 |
| CES16 = 47 | CES41 = 89 | CES66 = 73 | CES91 = 83 |
| CES17 = 49 | CES42 = 77 | CES67 = 70 | CES92 = 73 |
| CES18 = 56 | CES43 = 74 | CES68 = 76 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 81 | CES94 = 65 |
| CES20 = 66 | CES45 = 83 | CES70 = 68 | CES95 = 79 |
| CES21 = 86 | CES46 = 82 | CES71 = 64 | CES96 = 85 |
| CES22 = 78 | CES47 = 81 | CES72 = 88 | CES97 = 85 |
| CES23 = 92 | CES48 = 80 | CES73 = 60 | CES98 = 82 |
| CES24 = 91 | CES49 = 80 | CES74 = 97 | CES99 = 81 |
| CES25 = 72 | CES50 = 89 | CES75 = 64 | |



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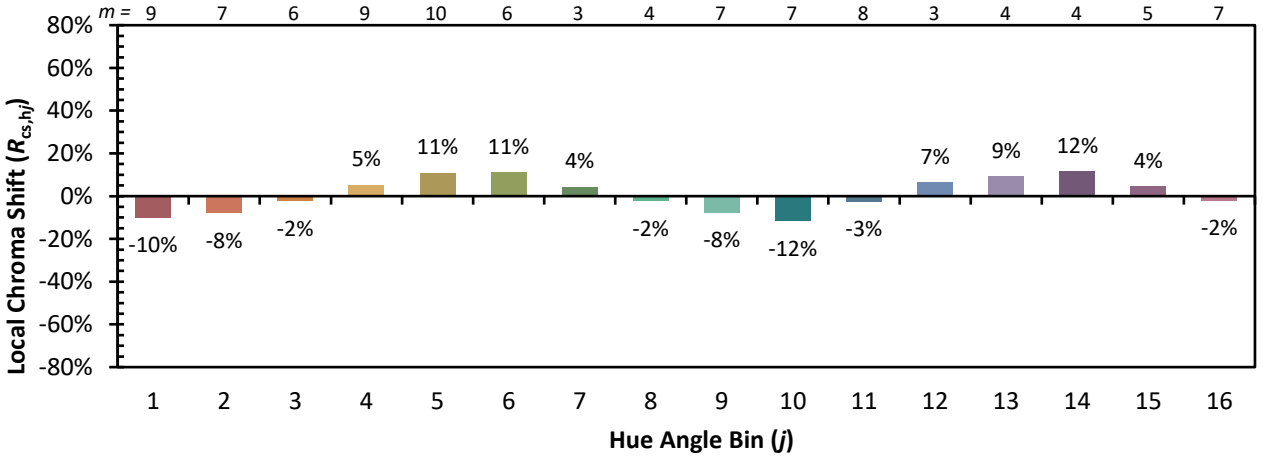
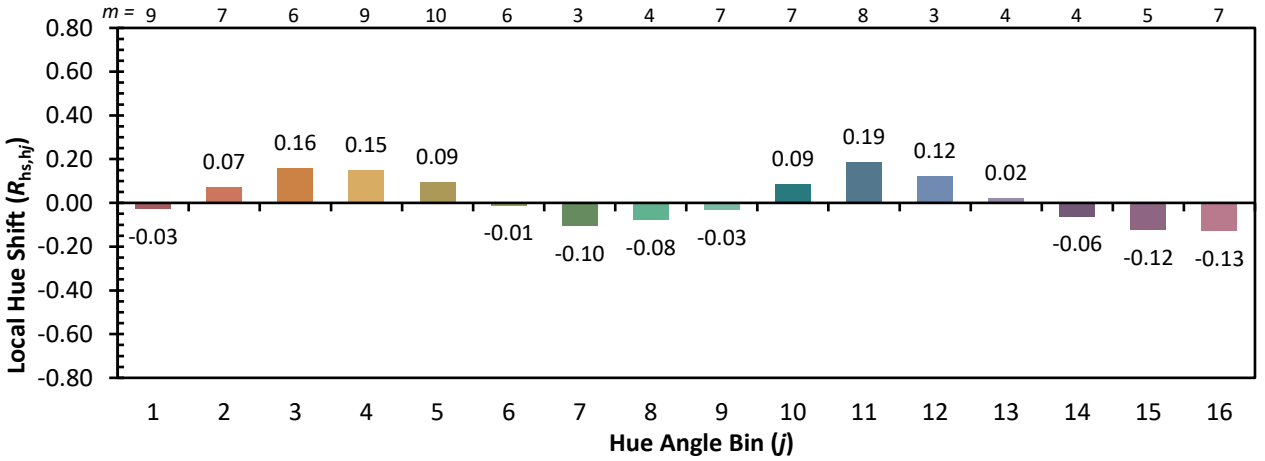
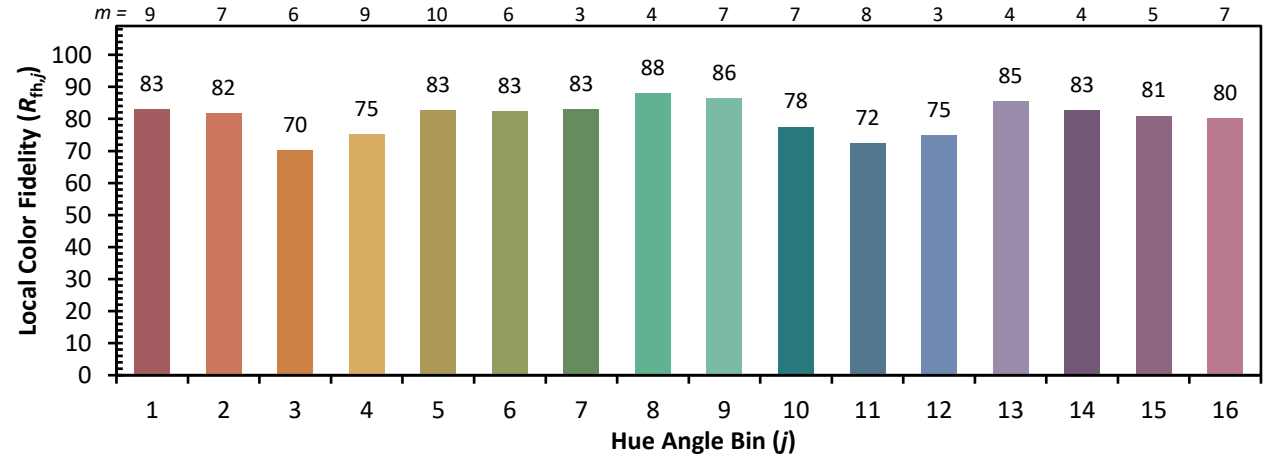
## Color Rendition by Hue-Angle Bin



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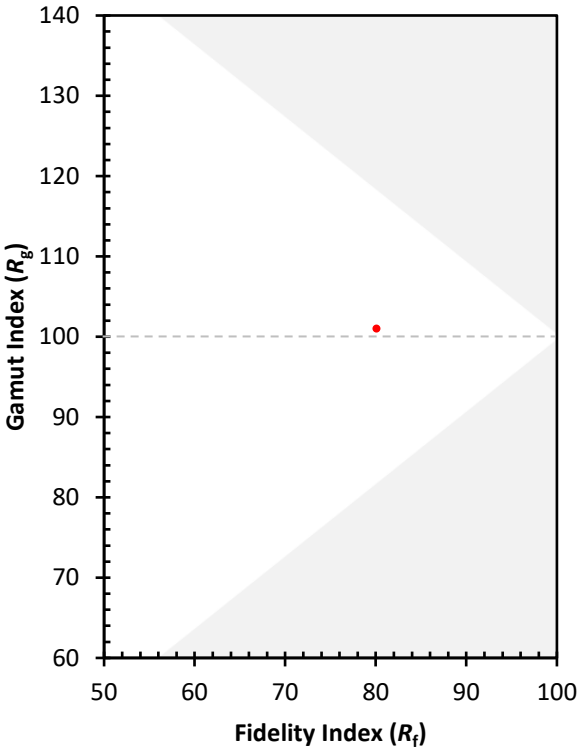
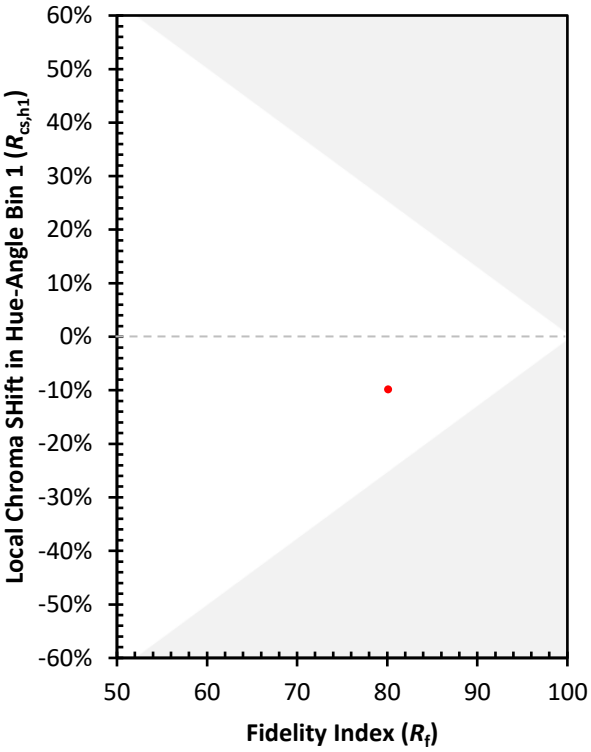
## Measure Comparisons




(END OF REPORT)