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:

Luminaire Tested: EHBR1-30-UNV-TA-L950-UPL36

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: | |
| | REPORT IS A COMBINATION OF REPORTS P1431737 AND P1431635 |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | METALUX |
| Catalog Number: | EHBR1-30-UNV-TA-L950-UPL36 |
| Description: | Elevate Round Highbay at, 30000 lumens, 5000K 90CRI LEDs with TA lens |
| Light Source: | - |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 31689.3 lumens |
| Efficiency: | N/A |
| Efficacy: | 168.4 lumens/watt |
| Spacing Criteria (0/90/45): | 1.07 / 0.8 / 0.93 |
| Luminous Opening: | Vertical Cylinder (Dia: 1.71' x H: 0.1') |
| CIE Type: | Semi-Direct |

| | |
|---|---|
| Input Watts (W): | 188.2 |
| 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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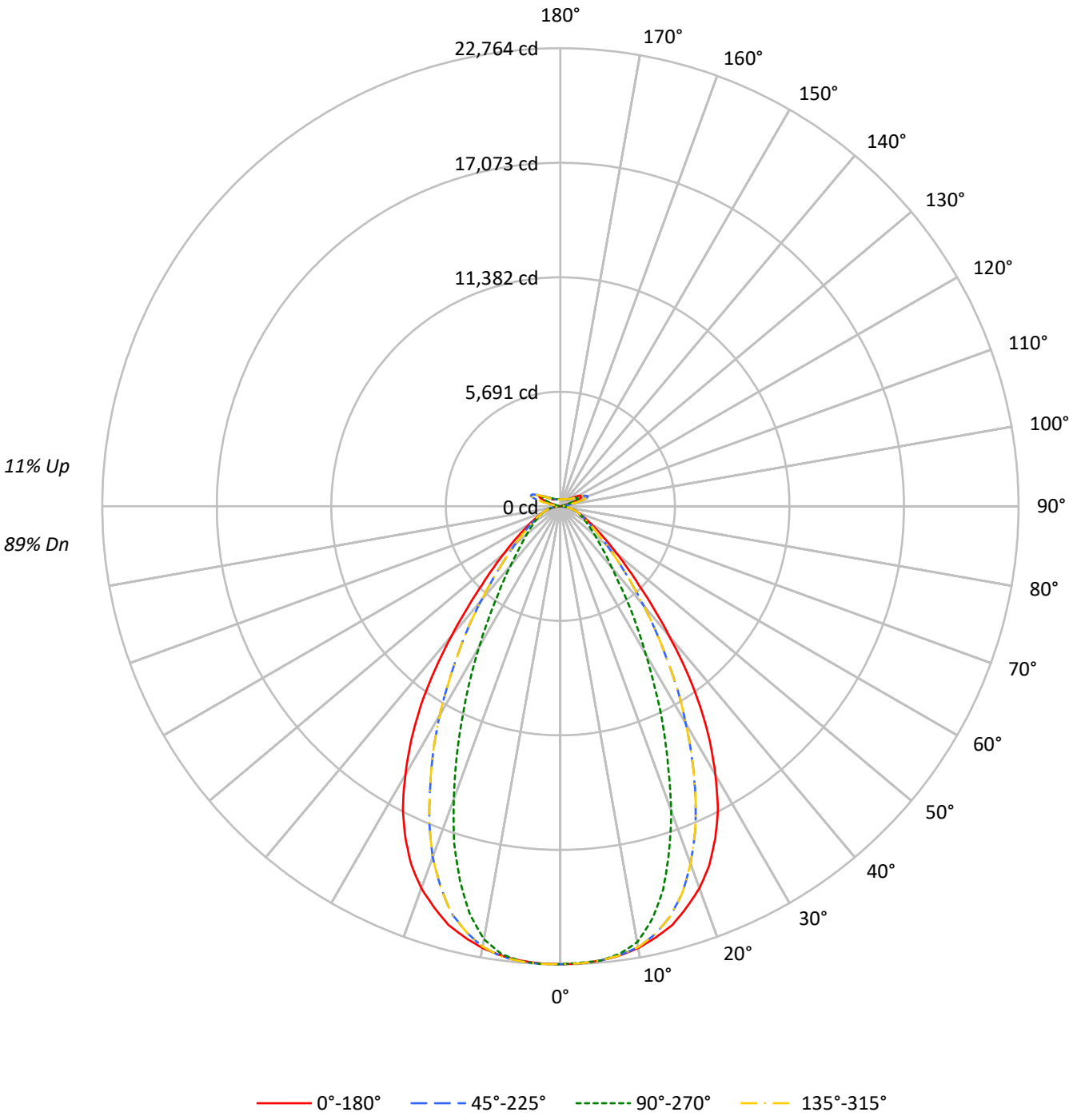
## Luminous Intensity Polar Plot



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TEST NUMBER:
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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 | 113 | 113 | 113 | 113 | 105 | 105 | 105 | 98 | 98 | 98 | 92 | 92 | 92 | 89 |
| 1 | 109 | 105 | 102 | 99 | 105 | 102 | 99 | 97 | 96 | 94 | 92 | 90 | 89 | 87 | 85 | 84 | 83 | 80 |
| 2 | 102 | 95 | 90 | 86 | 98 | 93 | 88 | 84 | 88 | 84 | 81 | 83 | 80 | 77 | 79 | 76 | 74 | 72 |
| 3 | 95 | 87 | 81 | 76 | 92 | 84 | 79 | 74 | 80 | 75 | 72 | 76 | 72 | 69 | 73 | 69 | 67 | 64 |
| 4 | 89 | 79 | 72 | 67 | 86 | 77 | 71 | 66 | 74 | 68 | 64 | 70 | 66 | 62 | 67 | 63 | 60 | 58 |
| 5 | 83 | 73 | 66 | 60 | 80 | 71 | 65 | 60 | 68 | 62 | 58 | 65 | 60 | 57 | 62 | 58 | 55 | 53 |
| 6 | 78 | 67 | 60 | 55 | 76 | 66 | 59 | 54 | 63 | 57 | 53 | 61 | 56 | 52 | 58 | 54 | 51 | 49 |
| 7 | 73 | 62 | 55 | 50 | 71 | 61 | 54 | 50 | 59 | 53 | 49 | 56 | 51 | 48 | 54 | 50 | 47 | 45 |
| 8 | 69 | 58 | 51 | 46 | 67 | 57 | 50 | 46 | 55 | 49 | 45 | 53 | 48 | 44 | 51 | 46 | 43 | 41 |
| 9 | 65 | 54 | 47 | 43 | 63 | 53 | 47 | 42 | 51 | 45 | 41 | 49 | 44 | 41 | 48 | 43 | 40 | 38 |
| 10 | 62 | 51 | 44 | 39 | 60 | 50 | 43 | 39 | 48 | 42 | 39 | 47 | 42 | 38 | 45 | 41 | 37 | 36 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|---|---|---|---|---|
| 0° | 106857 | 106857 | 106857 | 106857 |
| 5° | 106140 | 106151 | 106140 | 106262 |
| 10° | 104900 | 103527 | 104900 | 102850 |
| 15° | 102614 | 93986 | 102614 | 91827 |
| 20° | 98269 | 78320 | 98269 | 75271 |
| 25° | 91163 | 60570 | 91163 | 57431 |
| 30° | 80079 | 44150 | 80079 | 41905 |
| 35° | 65813 | 31825 | 65813 | 29748 |
| 40° | 48501 | 22896 | 48501 | 22190 |
| 45° | 33875 | 18042 | 33875 | 17417 |
| 50° | 24517 | 14969 | 24517 | 14742 |
| 55° | 18568 | 13073 | 18568 | 12896 |
| 60° | 14795 | 11790 | 14795 | 11874 |
| 65° | 12433 | 11027 | 12433 | 11132 |
| 70° | 11053 | 10472 | 11053 | 10575 |
| 75° | 9769 | 9769 | 9769 | 9865 |
| 80° | 8008 | 8824 | 8008 | 8824 |
| 85° | 5130 | 6116 | 5130 | 6296 |

## MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
Vertical Angle: 45°
Luminance: 35492 cd/sqm

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**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 2148.8 | 6.8 |
| 10°-20° | 5775.2 | 18.2 |
| 20°-30° | 7022.6 | 22.2 |
| 30°-40° | 5720.5 | 18.1 |
| 40°-50° | 3434.6 | 10.8 |
| 50°-60° | 1976.6 | 6.2 |
| 60°-70° | 1237.0 | 3.9 |
| 70°-80° | 728.6 | 2.3 |
| 80°-90° | 219.1 | 0.7 |
| 90°-100° | 90.2 | 0.3 |
| 100°-110° | 596.4 | 1.9 |
| 110°-120° | 1103.3 | 3.5 |
| 120°-130° | 654.7 | 2.1 |
| 130°-140° | 395.4 | 1.2 |
| 140°-150° | 273.5 | 0.9 |
| 150°-160° | 177.9 | 0.6 |
| 160°-170° | 101.3 | 0.3 |
| 170°-180° | 33.5 | 0.1 |
| 0°-30° | 14946.7 | 47.2 |
| 0°-40° | 20667.2 | 65.2 |
| 0°-60° | 26078.3 | 82.3 |
| 0°-90° | 28263.1 | 89.2 |
| 90°-120° | 1789.9 | 5.6 |
| 90°-150° | 3113.5 | 9.8 |
| 90°-180° | 3426.0 | 10.8 |
| 0°-180° | 31689.3 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 90° | 180° | 270° | 360° | Flux |
|---|---|---|---|---|---|---|
| 0° | 22754 | 22754 | 22754 | 22754 | 22754 | |
| 5° | 22662 | 22665 | 22662 | 22689 | 22662 | 2152 |
| 15° | 21528 | 19718 | 21528 | 19265 | 21528 | 6036 |
| 25° | 18205 | 12096 | 18205 | 11469 | 18205 | 8299 |
| 35° | 12079 | 5841 | 12079 | 5460 | 12079 | 7458 |
| 45° | 5481 | 2919 | 5481 | 2818 | 5481 | 4366 |
| 55° | 2509 | 1767 | 2509 | 1743 | 2509 | 2307 |
| 65° | 1298 | 1151 | 1298 | 1162 | 1298 | 1312 |
| 75° | 688 | 688 | 688 | 695 | 688 | 727 |
| 85° | 176 | 210 | 176 | 216 | 176 | 193 |
| 90° | 25 | 26 | 25 | 25 | 25 | 19 |
| 95° | 48 | 43 | 48 | 42 | 48 | 51 |
| 105° | 274 | 208 | 274 | 136 | 274 | 369 |
| 115° | 1174 | 955 | 1174 | 1001 | 1174 | 1070 |
| 125° | 751 | 689 | 751 | 784 | 751 | 691 |
| 135° | 473 | 504 | 473 | 546 | 473 | 375 |
| 145° | 428 | 417 | 428 | 448 | 428 | 268 |
| 155° | 379 | 368 | 379 | 397 | 379 | 177 |
| 165° | 354 | 349 | 354 | 364 | 354 | 101 |
| 175° | 351 | 349 | 351 | 356 | 351 | 33 |
| 180° | 351 | 351 | 351 | 351 | 351 | |

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TEST NUMBER:
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 22754.5 | 22754.5 | 22754.5 | 22754.5 | 22754.5 | 22754.5 | 22754.5 | 22754.5 | 22754.5 | 22754.5 | *22754.5* |
| 2.5° | *22743.5* | *22738.3* | *22733.5* | *22724.9* | *22704.5* | *22724.9* | *22733.5* | *22738.3* | *22743.5* | *22757.8* | *22764.0* |
| 5° | 22662.5 | 22683.0 | 22661.6 | 22666.3 | 22664.9 | 22666.3 | 22661.6 | 22683.0 | 22662.5 | 22676.8 | *22702.5* |
| 7.5° | 22521.0 | 22517.2 | 22510.0 | 22481.9 | 22434.2 | 22481.9 | 22510.0 | 22517.2 | 22521.0 | 22538.6 | *22556.7* |
| 10° | 22287.4 | 22302.6 | 22252.2 | 22075.4 | 21995.8 | 22075.4 | 22252.2 | 22302.6 | 22287.4 | 22316.0 | *22224.5* |
| 12.5° | 21940.9 | 21978.1 | 21773.7 | 21314.2 | 21034.5 | 21314.2 | 21773.7 | 21978.1 | 21940.9 | 21966.2 | *21654.5* |
| 15° | 21527.8 | 21496.8 | 21093.6 | 20128.0 | 19717.7 | 20128.0 | 21093.6 | 21496.8 | 21527.8 | 21496.8 | *20924.4* |
| 17.5° | 20884.3 | 20929.1 | 20146.6 | 18725.0 | 17967.2 | 18725.0 | 20146.6 | 20929.1 | 20884.3 | 20899.1 | *19812.5* |
| 20° | 20197.2 | 20210.9 | 18905.6 | 16904.9 | 16097.1 | 16904.9 | 18905.6 | 20210.9 | 20197.2 | 20114.2 | *18549.6* |
| 22.5° | 19322.6 | 19327.8 | 17483.5 | 15023.9 | 13982.1 | 15023.9 | 17483.5 | 19327.8 | 19322.6 | 19184.4 | *17011.6* |
| 25° | 18205.1 | 18246.0 | 15883.1 | 13117.5 | 12095.7 | 13117.5 | 15883.1 | 18246.0 | 18205.1 | 18047.8 | *15303.1* |
| 27.5° | 16950.2 | 16978.3 | 14174.6 | 11207.8 | 10145.6 | 11207.8 | 14174.6 | 16978.3 | 16950.2 | 16778.6 | *13669.9* |
| 30° | 15403.2 | 15583.3 | 12458.9 | 9463.5 | 8492.3 | 9463.5 | 12458.9 | 15583.3 | 15403.2 | 15383.6 | *11986.0* |
| 32.5° | 13805.7 | 14124.5 | 10841.4 | 7908.4 | 7075.9 | 7908.4 | 10841.4 | 14124.5 | 13805.7 | 13896.7 | *10308.1* |
| 35° | 12079.0 | 12437.4 | 9162.8 | 6574.5 | 5841.0 | 6574.5 | 9162.8 | 12437.4 | 12079.0 | 12196.8 | *8768.1* |
| 37.5° | 10248.5 | 10796.5 | 7740.2 | 5445.9 | 4740.6 | 5445.9 | 7740.2 | 10796.5 | 10248.5 | 10470.6 | *7413.8* |
| 40° | 8406.4 | 8996.0 | 6391.0 | 4528.0 | 3968.5 | 4528.0 | 6391.0 | 8996.0 | 8406.4 | 8768.1 | *6121.3* |
| 42.5° | 6824.7 | 7276.9 | 5274.9 | 3784.6 | 3419.5 | 3784.6 | 5274.9 | 7276.9 | 6824.7 | 7081.1 | *5045.1* |
| 45° | 5480.8 | 5742.4 | 4364.5 | 3210.3 | 2919.1 | 3210.3 | 4364.5 | 5742.4 | 5480.8 | 5718.5 | *4175.3* |
| 47.5° | 4474.6 | 4637.1 | 3593.0 | 2774.1 | 2549.8 | 2774.1 | 3593.0 | 4637.1 | 4474.6 | 4550.0 | *3487.2* |
| 50° | 3653.9 | 3742.7 | 3020.5 | 2404.4 | 2230.9 | 2404.4 | 3020.5 | 3742.7 | 3653.9 | 3700.2 | *2920.9* |
| 52.5° | 3032.1 | 3075.8 | 2533.5 | 2110.3 | 1983.1 | 2110.3 | 2533.5 | 3075.8 | 3032.1 | 3039.1 | *2489.2* |
| 55° | 2509.3 | 2519.7 | 2162.7 | 1855.3 | 1766.7 | 1855.3 | 2162.7 | 2519.7 | 2509.3 | 2511.1 | *2126.6* |
| 57.5° | 2101.3 | 2116.5 | 1858.7 | 1650.8 | 1577.4 | 1650.8 | 1858.7 | 2116.5 | 2101.3 | 2104.6 | *1841.5* |
| 60° | 1778.6 | 1788.6 | 1606.1 | 1466.4 | 1417.4 | 1466.4 | 1606.1 | 1788.6 | 1778.6 | 1774.3 | *1596.0* |
| 62.5° | 1514.1 | 1533.1 | 1403.5 | 1306.8 | 1275.3 | 1306.8 | 1403.5 | 1533.1 | 1514.1 | 1518.4 | *1403.1* |
| 65° | 1297.7 | 1310.1 | 1230.1 | 1161.9 | 1151.0 | 1161.9 | 1230.1 | 1310.1 | 1297.7 | 1308.2 | *1233.9* |
| 67.5° | 1120.0 | 1134.3 | 1080.4 | 1040.4 | 1029.5 | 1040.4 | 1080.4 | 1134.3 | 1120.0 | 1128.6 | *1081.4* |
| 70° | 969.8 | 969.8 | 940.8 | 918.3 | 918.9 | 918.3 | 940.8 | 969.8 | 969.8 | 971.3 | *946.0* |
| 72.5° | 822.5 | 827.8 | 808.3 | 801.6 | 804.4 | 801.6 | 808.3 | 827.8 | 822.5 | 840.7 | *814.0* |
| 75° | 688.2 | 693.9 | 683.9 | 680.1 | 688.2 | 680.1 | 683.9 | 693.9 | 688.2 | 697.8 | *685.8* |
| 77.5° | 549.5 | 560.0 | 558.6 | 563.3 | 578.6 | 563.3 | 558.6 | 560.0 | 549.5 | 563.8 | *566.7* |
| 80° | 421.3 | 430.4 | 430.8 | 442.7 | 464.2 | 442.7 | 430.8 | 430.4 | 421.3 | 430.4 | *437.5* |
| 82.5° | 296.5 | 302.1 | 306.0 | 326.0 | 344.6 | 326.0 | 306.0 | 302.1 | 296.5 | 301.7 | *311.3* |
| 85° | 176.3 | 171.6 | 178.2 | 190.7 | 210.2 | 190.7 | 178.2 | 171.6 | 176.3 | 176.3 | *181.1* |
| 87.5° | 56.2 | 54.8 | 54.4 | 66.2 | 75.8 | 66.2 | 54.4 | 54.8 | 56.2 | 58.2 | *60.5* |
| 90° | 24.7 | 43.7 | 68.4 | 40.0 | 25.6 | 40.0 | 68.4 | 43.7 | 24.7 | 41.8 | *72.2* |
| 92.5° | 32.3 | 57.0 | 110.2 | 60.9 | 36.6 | 60.9 | 110.2 | 57.0 | 32.3 | 57.0 | *102.7* |
| 95° | 47.5 | 76.0 | 154.0 | 70.3 | 42.7 | 70.3 | 154.0 | 76.0 | 47.5 | 70.3 | *131.1* |
| 97.5° | 74.1 | 93.1 | 176.7 | 78.0 | 54.2 | 78.0 | 176.7 | 93.1 | 74.1 | 87.4 | *148.2* |
| 100° | 98.9 | 114.0 | 275.6 | 91.2 | 71.3 | 91.2 | 275.6 | 114.0 | 98.9 | 98.9 | *271.8* |
| 102.5° | 150.1 | 214.7 | 585.3 | 193.8 | 120.7 | 193.8 | 585.3 | 214.7 | 150.1 | 193.8 | *631.0* |
| 105° | 273.6 | 450.4 | 1043.3 | 408.6 | 208.0 | 408.6 | 1043.3 | 450.4 | 273.6 | 444.7 | *1111.8* |
| 107.5° | 518.8 | 798.2 | 1375.9 | 731.7 | 360.1 | 731.7 | 1375.9 | 798.2 | 518.8 | 830.4 | *1432.9* |
| 110° | 830.4 | 1096.5 | 1442.4 | 971.1 | 671.7 | 971.1 | 1442.4 | 1096.5 | 830.4 | 1161.1 | *1564.1* |

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**CANDELA DISTRIBUTION (continued):**

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 112.5° | 1081.3 | 1210.5 | 1381.6 | 1043.3 | 907.5 | 1043.3 | 1381.6 | 1210.5 | 1081.3 | 1294.2 | *1527.9* |
| 115° | 1174.5 | 1182.0 | 1233.4 | 1003.4 | 954.9 | 1003.4 | 1233.4 | 1182.0 | 1174.5 | 1275.2 | *1364.5* |
| 117.5° | 1134.5 | 1062.3 | 1047.1 | 916.0 | 923.1 | 916.0 | 1047.1 | 1062.3 | 1134.5 | 1166.9 | *1178.2* |
| 120° | 1024.3 | 927.4 | 874.2 | 815.3 | 854.2 | 815.3 | 874.2 | 927.4 | 1024.3 | 1011.1 | *992.0* |
| 122.5° | 885.6 | 788.6 | 748.8 | 722.7 | 769.1 | 722.7 | 748.8 | 788.6 | 885.6 | 857.1 | *838.1* |
| 125° | 750.6 | 669.0 | 659.5 | 642.8 | 689.3 | 642.8 | 659.5 | 669.0 | 750.6 | 722.2 | *730.2* |
| 127.5° | 636.6 | 585.3 | 596.8 | 587.7 | 619.1 | 587.7 | 596.8 | 585.3 | 636.6 | 623.3 | *652.3* |
| 130° | 555.4 | 530.2 | 557.3 | 544.5 | 571.5 | 544.5 | 557.3 | 530.2 | 555.4 | 559.1 | *597.7* |
| 132.5° | 504.5 | 496.9 | 529.7 | 514.5 | 532.2 | 514.5 | 529.7 | 496.9 | 504.5 | 520.2 | *556.4* |
| 135° | 473.3 | 474.6 | 505.5 | 488.4 | 504.1 | 488.4 | 505.5 | 474.6 | 473.3 | 496.1 | *528.4* |
| 137.5° | 454.7 | 460.4 | 483.2 | 466.1 | 479.4 | 466.1 | 483.2 | 460.4 | 454.7 | 477.5 | *502.2* |
| 140° | 443.7 | 447.6 | 464.6 | 445.7 | 457.6 | 445.7 | 464.6 | 447.6 | 443.7 | 466.6 | *477.9* |
| 142.5° | 432.9 | 436.7 | 448.0 | 425.7 | 433.3 | 425.7 | 448.0 | 436.7 | 432.9 | 454.2 | *459.9* |
| 145° | 427.6 | 429.5 | 435.2 | 410.9 | 416.7 | 410.9 | 435.2 | 429.5 | 427.6 | 443.3 | *439.5* |
| 147.5° | 418.6 | 418.6 | 420.4 | 398.6 | 403.0 | 398.6 | 420.4 | 418.6 | 418.6 | 430.0 | *424.7* |
| 150° | 407.6 | 405.7 | 407.6 | 385.9 | 390.1 | 385.9 | 407.6 | 405.7 | 407.6 | 415.2 | *408.1* |
| 152.5° | 392.5 | 390.5 | 392.9 | 373.0 | 377.3 | 373.0 | 392.9 | 390.5 | 392.5 | 400.0 | *393.5* |
| 155° | 379.1 | 379.1 | 380.1 | 363.9 | 368.2 | 363.9 | 380.1 | 379.1 | 379.1 | 383.4 | *380.6* |
| 157.5° | 370.6 | 370.6 | 371.6 | 359.2 | 362.0 | 359.2 | 371.6 | 370.6 | 370.6 | 373.0 | *372.0* |
| 160° | 362.1 | 363.9 | 364.9 | 354.5 | 357.3 | 354.5 | 364.9 | 363.9 | 362.1 | 366.3 | *365.3* |
| 162.5° | 358.7 | 359.2 | 361.5 | 349.7 | 352.6 | 349.7 | 361.5 | 359.2 | 358.7 | 359.2 | *358.3* |
| 165° | 354.0 | 355.9 | 356.8 | 348.3 | 349.3 | 348.3 | 356.8 | 355.9 | 354.0 | 355.9 | *353.5* |
| 167.5° | 352.5 | 354.5 | 355.5 | 347.3 | 349.7 | 347.3 | 355.5 | 354.5 | 352.5 | 350.6 | *352.1* |
| 170° | 348.7 | 351.1 | 354.0 | 347.8 | 348.2 | 347.8 | 354.0 | 351.1 | 348.7 | 349.2 | *348.8* |
| 172.5° | 349.7 | 352.1 | 354.9 | 348.7 | 349.2 | 348.7 | 354.9 | 352.1 | 349.7 | 350.2 | *347.8* |
| 175° | 350.6 | 351.1 | 352.5 | 347.9 | 348.8 | 347.9 | 352.5 | 351.1 | 350.6 | 349.3 | *348.7* |
| 177.5° | 349.3 | 351.6 | 353.0 | 350.2 | 351.1 | 350.2 | 353.0 | 351.6 | 349.3 | 349.7 | *351.1* |
| 180° | 351.1 | 351.1 | 351.1 | 351.1 | 351.1 | 351.1 | 351.1 | 351.1 | 351.1 | 351.1 | *351.1* |

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TEST NUMBER:
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**CANDELA DISTRIBUTION (continued):**

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|---|---|---|---|---|---|---|
| 0° | 22754.5 | 22754.5 | 22754.5 | 22754.5 | 22754.5 | 22754.5 |
| 2.5° | *22754.0* | *22762.5* | *22754.0* | *22764.0* | *22757.8* | *22743.5* |
| 5° | 22692.5 | 22688.7 | 22692.5 | 22702.5 | 22676.8 | 22662.5 |
| 7.5° | 22454.3 | 22438.9 | 22454.3 | 22556.7 | 22538.6 | 22521.0 |
| 10° | 21956.6 | 21851.8 | 21956.6 | 22224.5 | 22316.0 | 22287.4 |
| 12.5° | 21089.3 | 20764.3 | 21089.3 | 21654.5 | 21966.2 | 21940.9 |
| 15° | 19823.0 | 19264.9 | 19823.0 | 20924.4 | 21496.8 | 21527.8 |
| 17.5° | 18184.5 | 17545.9 | 18184.5 | 19812.5 | 20899.1 | 20884.3 |
| 20° | 16402.6 | 15470.4 | 16402.6 | 18549.6 | 20114.2 | 20197.2 |
| 22.5° | 14456.6 | 13453.0 | 14456.6 | 17011.6 | 19184.4 | 19322.6 |
| 25° | 12515.5 | 11469.0 | 12515.5 | 15303.1 | 18047.8 | 18205.1 |
| 27.5° | 10701.2 | 9705.2 | 10701.2 | 13669.9 | 16778.6 | 16950.2 |
| 30° | 9021.2 | 8060.4 | 9021.2 | 11986.0 | 15383.6 | 15403.2 |
| 32.5° | 7616.3 | 6664.1 | 7616.3 | 10308.1 | 13896.7 | 13805.7 |
| 35° | 6249.4 | 5459.8 | 6249.4 | 8768.1 | 12196.8 | 12079.0 |
| 37.5° | 5219.1 | 4586.2 | 5219.1 | 7413.8 | 10470.6 | 10248.5 |
| 40° | 4353.1 | 3846.1 | 4353.1 | 6121.3 | 8768.1 | 8406.4 |
| 42.5° | 3639.2 | 3259.8 | 3639.2 | 5045.1 | 7081.1 | 6824.7 |
| 45° | 3103.1 | 2818.0 | 3103.1 | 4175.3 | 5718.5 | 5480.8 |
| 47.5° | 2707.9 | 2476.4 | 2707.9 | 3487.2 | 4550.0 | 4474.6 |
| 50° | 2356.2 | 2197.1 | 2356.2 | 2920.9 | 3700.2 | 3653.9 |
| 52.5° | 2072.7 | 1957.4 | 2072.7 | 2489.2 | 3039.1 | 3032.1 |
| 55° | 1836.8 | 1742.8 | 1836.8 | 2126.6 | 2511.1 | 2509.3 |
| 57.5° | 1631.3 | 1570.9 | 1631.3 | 1841.5 | 2104.6 | 2101.3 |
| 60° | 1448.3 | 1427.4 | 1448.3 | 1596.0 | 1774.3 | 1778.6 |
| 62.5° | 1308.2 | 1277.3 | 1308.2 | 1403.1 | 1518.4 | 1514.1 |
| 65° | 1169.1 | 1161.9 | 1169.1 | 1233.9 | 1308.2 | 1297.7 |
| 67.5° | 1043.2 | 1037.1 | 1043.2 | 1081.4 | 1128.6 | 1120.0 |
| 70° | 923.2 | 927.9 | 923.2 | 946.0 | 971.3 | 969.8 |
| 72.5° | 806.8 | 807.8 | 806.8 | 814.0 | 840.7 | 822.5 |
| 75° | 694.9 | 694.9 | 694.9 | 685.8 | 697.8 | 688.2 |
| 77.5° | 572.9 | 587.1 | 572.9 | 566.7 | 563.8 | 549.5 |
| 80° | 450.3 | 464.2 | 450.3 | 437.5 | 430.4 | 421.3 |
| 82.5° | 326.5 | 348.9 | 326.5 | 311.3 | 301.7 | 296.5 |
| 85° | 202.5 | 216.4 | 202.5 | 181.1 | 176.3 | 176.3 |
| 87.5° | 76.3 | 83.4 | 76.3 | 60.5 | 58.2 | 56.2 |
| 90° | 38.0 | 25.2 | 38.0 | 72.2 | 41.8 | 24.7 |
| 92.5° | 51.3 | 34.7 | 51.3 | 102.7 | 57.0 | 32.3 |
| 95° | 57.0 | 42.3 | 57.0 | 131.1 | 70.3 | 47.5 |
| 97.5° | 60.9 | 51.8 | 60.9 | 148.2 | 87.4 | 74.1 |
| 100° | 70.3 | 59.8 | 70.3 | 271.8 | 98.9 | 98.9 |
| 102.5° | 142.5 | 73.1 | 142.5 | 631.0 | 193.8 | 150.1 |
| 105° | 372.5 | 135.8 | 372.5 | 1111.8 | 444.7 | 273.6 |
| 107.5° | 737.3 | 320.2 | 737.3 | 1432.9 | 830.4 | 518.8 |
| 110° | 1011.1 | 650.8 | 1011.1 | 1564.1 | 1161.1 | 830.4 |

TEST NUMBER:
CATALOG NUMBER: EHBR1-30-UNV-TA-L950-UPL36

**CANDELA DISTRIBUTION (continued):**

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|---|---|---|---|---|---|---|
| 112.5° | 1121.3 | 901.7 | 1121.3 | 1527.9 | 1294.2 | 1081.3 |
| 115° | 1117.4 | 1000.6 | 1117.4 | 1364.5 | 1275.2 | 1174.5 |
| 117.5° | 1049.1 | 1006.2 | 1049.1 | 1178.2 | 1166.9 | 1134.5 |
| 120° | 948.8 | 949.3 | 948.8 | 992.0 | 1011.1 | 1024.3 |
| 122.5° | 846.1 | 871.8 | 846.1 | 838.1 | 857.1 | 885.6 |
| 125° | 758.7 | 784.4 | 758.7 | 730.2 | 722.2 | 750.6 |
| 127.5° | 685.0 | 706.4 | 685.0 | 652.3 | 623.3 | 636.6 |
| 130° | 624.3 | 638.0 | 624.3 | 597.7 | 559.1 | 555.4 |
| 132.5° | 579.7 | 587.3 | 579.7 | 556.4 | 520.2 | 504.5 |
| 135° | 543.5 | 545.9 | 543.5 | 528.4 | 496.1 | 473.3 |
| 137.5° | 513.6 | 510.3 | 513.6 | 502.2 | 477.5 | 454.7 |
| 140° | 491.8 | 488.0 | 491.8 | 477.9 | 466.6 | 443.7 |
| 142.5° | 469.4 | 466.0 | 469.4 | 459.9 | 454.2 | 432.9 |
| 145° | 453.2 | 447.6 | 453.2 | 439.5 | 443.3 | 427.6 |
| 147.5° | 436.6 | 431.5 | 436.6 | 424.7 | 430.0 | 418.6 |
| 150° | 422.4 | 421.0 | 422.4 | 408.1 | 415.2 | 407.6 |
| 152.5° | 409.1 | 408.2 | 409.1 | 393.5 | 400.0 | 392.5 |
| 155° | 396.7 | 397.2 | 396.7 | 380.6 | 383.4 | 379.1 |
| 157.5° | 386.2 | 386.7 | 386.2 | 372.0 | 373.0 | 370.6 |
| 160° | 377.7 | 378.2 | 377.7 | 365.3 | 366.3 | 362.1 |
| 162.5° | 371.1 | 371.6 | 371.1 | 358.3 | 359.2 | 358.7 |
| 165° | 362.1 | 364.4 | 362.1 | 353.5 | 355.9 | 354.0 |
| 167.5° | 358.7 | 361.1 | 358.7 | 352.1 | 350.6 | 352.5 |
| 170° | 355.4 | 357.8 | 355.4 | 348.8 | 349.2 | 348.7 |
| 172.5° | 352.5 | 356.8 | 352.5 | 347.8 | 350.2 | 349.7 |
| 175° | 351.7 | 356.4 | 351.7 | 348.7 | 349.3 | 350.6 |
| 177.5° | 354.0 | 360.7 | 354.0 | 351.1 | 349.7 | 349.3 |
| 180° | 351.1 | 351.1 | 351.1 | 351.1 | 351.1 | 351.1 |

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

Scaled Data Report

TEST NUMBER: CATALOG
CATALOG NUMBER: EHBR1-30-UNV-TA-L950-UPL36

**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 | 18.64 | 19.74 | 19.19 | 20.26 | 20.84 | 16.91 | 18.00 | 17.45 | 18.53 | 19.11 |
| | 3H | 19.80 | 20.77 | 20.36 | 21.31 | 21.93 | 18.50 | 19.48 | 19.06 | 20.02 | 20.64 |
| | 4H | 20.25 | 21.16 | 20.83 | 21.71 | 22.35 | 19.15 | 20.06 | 19.73 | 20.62 | 21.26 |
| | 6H | 20.56 | 21.40 | 21.15 | 21.97 | 22.62 | 19.66 | 20.50 | 20.26 | 21.07 | 21.72 |
| | 8H | 20.64 | 21.44 | 21.25 | 22.03 | 22.68 | 19.83 | 20.62 | 20.44 | 21.21 | 21.87 |
| | 12H | 20.68 | 21.43 | 21.29 | 22.02 | 22.70 | 19.92 | 20.67 | 20.53 | 21.26 | 21.94 |
| 4H | 2H | 18.89 | 19.80 | 19.47 | 20.36 | 20.99 | 17.45 | 18.36 | 18.03 | 18.92 | 19.55 |
| | 3H | 20.28 | 21.03 | 20.87 | 21.63 | 22.29 | 19.25 | 20.00 | 19.84 | 20.60 | 21.25 |
| | 4H | 20.86 | 21.54 | 21.47 | 22.15 | 22.84 | 20.01 | 20.69 | 20.62 | 21.30 | 21.99 |
| | 6H | 21.30 | 21.88 | 21.94 | 22.52 | 23.22 | 20.64 | 21.22 | 21.27 | 21.86 | 22.56 |
| | 8H | 21.42 | 21.97 | 22.06 | 22.60 | 23.31 | 20.85 | 21.39 | 21.49 | 22.02 | 22.74 |
| | 12H | 21.48 | 21.96 | 22.14 | 22.62 | 23.34 | 20.97 | 21.45 | 21.63 | 22.11 | 22.83 |
| 8H | 4H | 21.02 | 21.56 | 21.66 | 22.19 | 22.91 | 20.25 | 20.80 | 20.89 | 21.43 | 22.14 |
| | 6H | 21.56 | 22.01 | 22.23 | 22.68 | 23.40 | 20.99 | 21.44 | 21.66 | 22.11 | 22.83 |
| | 8H | 21.74 | 22.14 | 22.43 | 22.83 | 23.56 | 21.27 | 21.67 | 21.96 | 22.35 | 23.08 |
| | 12H | 21.85 | 22.20 | 22.54 | 22.87 | 23.67 | 21.46 | 21.80 | 22.14 | 22.47 | 23.27 |
| 12H | 4H | 21.01 | 21.49 | 21.67 | 22.15 | 22.87 | 20.25 | 20.73 | 20.91 | 21.39 | 22.11 |
| | 6H | 21.58 | 21.98 | 22.27 | 22.66 | 23.39 | 21.02 | 21.42 | 21.71 | 22.10 | 22.83 |
| | 8H | 21.80 | 22.15 | 22.48 | 22.81 | 23.62 | 21.34 | 21.69 | 22.02 | 22.36 | 23.16 |

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: SP1-2506-472-8

Test Date: 08/04/2025

Luminaire Tested: EHBR-60-L950-N

Data in this report applies to families of products including EHBR-60-L950-N

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

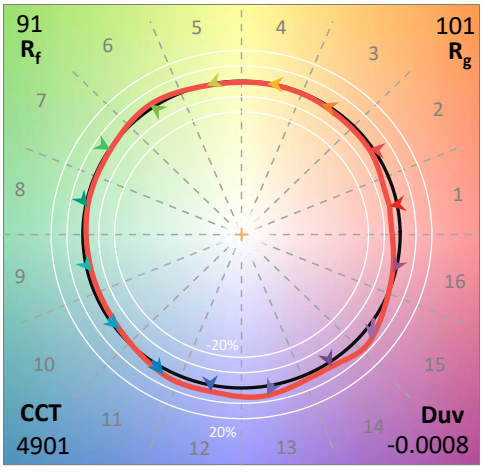
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2506-472-8 |
| 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-L950-N** |
| Description: | Elevate Round Highbay at, 60000 lumens, 5000K 90CRI LEDs with N lens |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4901 |
| CIE u': | 0.2131 |
| CIE v': | 0.4853 |
| Duv: | -0.0008 |
| CIE x: | 0.3477 |
| CIE y: | 0.3520 |
| CIE z: | 0.3003 |
| Peak Wavelength (nm): | 630 |
| Dominant Wavelength (nm): | 574 |
| Purity: | 9.953987 |
| Rf: | 90.7 |
| Rg: | 100.5 |

| | | | | | |
|---|---|---|---|---|---|
| CRI (Ra): | 94.3 | | | | |
| R1: | 95.8 | R9: | 72.3 | | |
| R2: | 96.5 | R10: | 89.1 | | |
| R3: | 94.4 | R11: | 94.9 | | |
| R4: | 95.3 | R12: | 68.4 | | |
| R5: | 94.1 | R13: | 96.4 | | |
| R6: | 92.5 | R14: | 96.4 | | |
| R7: | 95.5 | R15: | 93.9 | | |
| R8: | 90.1 | | | | |




## Test Conditions

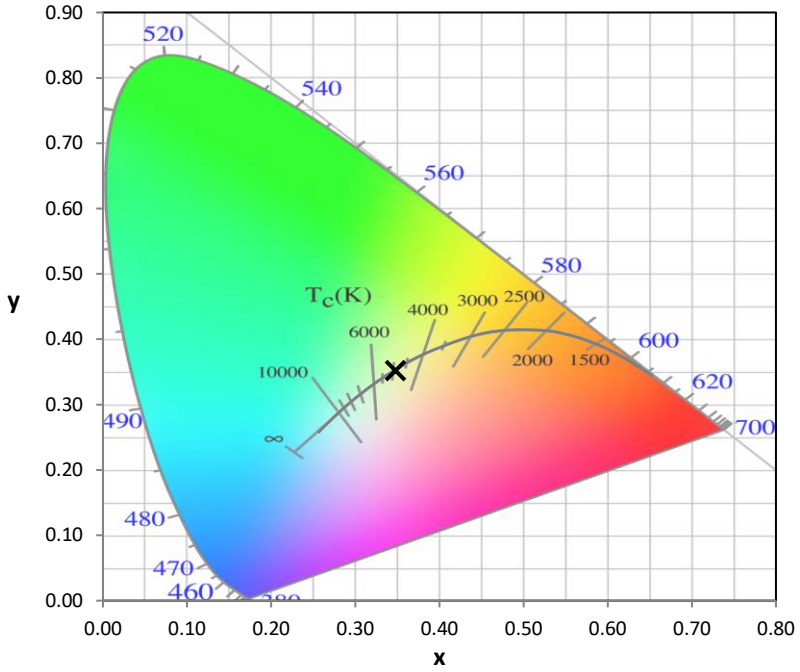
| | |
|---|---|
| Stabilization Time: | 35M |
| Operation Time: | 1H 35M |
| Sphere Temperature (°C): | 25.0 |

REPORT NUMBER: SP1-2506-472-8

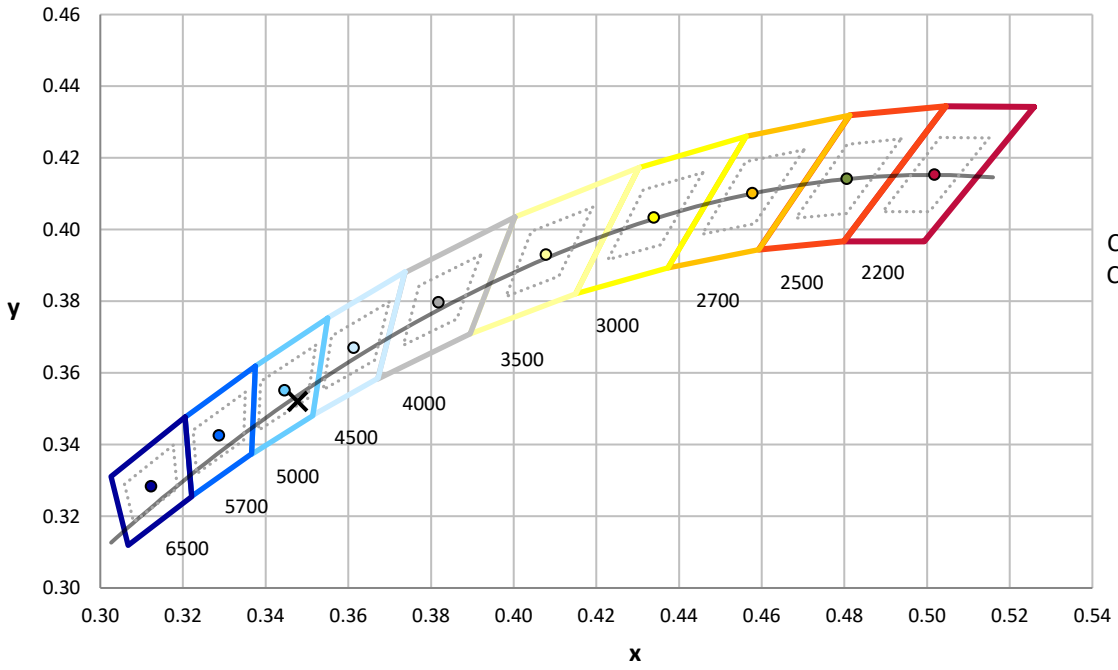
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | XITRON INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | CHROMA 61603 IN0063 | 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: SP1-2506-472-8

## CIE 1931 Chromaticity Diagram




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

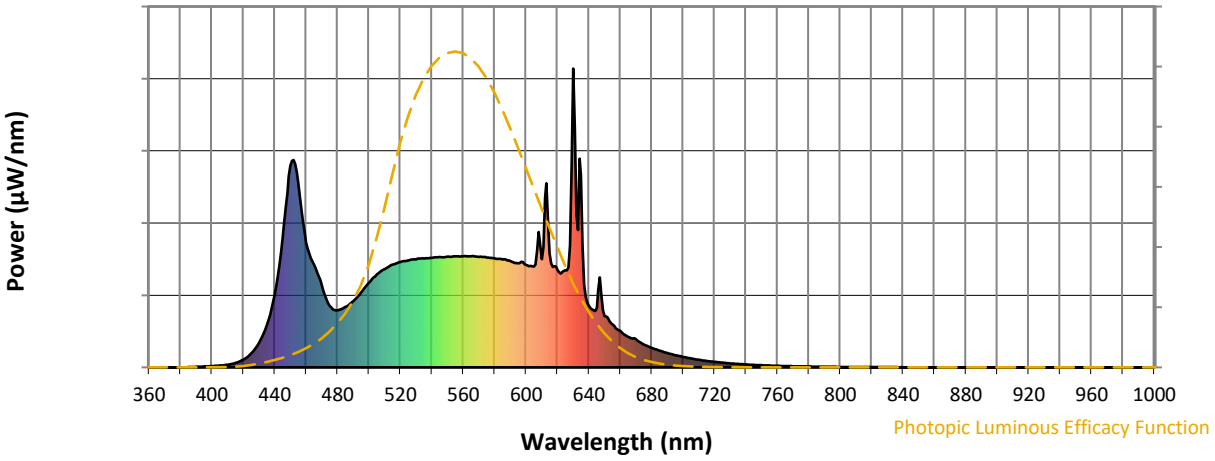



CCT = 4901K
CIE x = 0.3477
CIE y = 0.3520
Duv = -0.0008

Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-8

## Photopic Flux vs. Wavelength

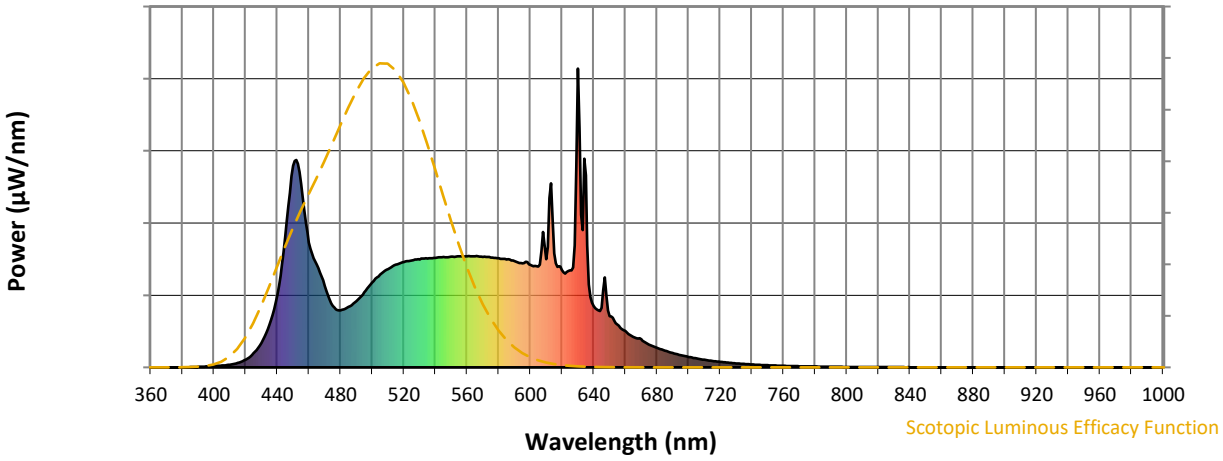



## Photopic Lumens: NR

| 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 | 221 | NR | 620 | 326 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 250 | NR | 625 | 325 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 284 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 311 | NR | 635 | 643 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 206 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 344 | NR | 645 | 199 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 353 | NR | 650 | 172 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 357 | NR | 655 | 143 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 362 | NR | 660 | 122 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 365 | NR | 665 | 102 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 367 | NR | 670 | 94 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 15 | NR | 545 | 369 | NR | 675 | 76 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 26 | NR | 550 | 370 | NR | 680 | 65 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 47 | NR | 555 | 372 | NR | 685 | 56 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 81 | NR | 560 | 372 | NR | 690 | 48 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 143 | NR | 565 | 371 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 243 | NR | 570 | 370 | NR | 700 | 35 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 434 | NR | 575 | 367 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 675 | NR | 580 | 365 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 615 | NR | 585 | 361 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 418 | NR | 590 | 356 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 344 | NR | 595 | 348 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 272 | NR | 600 | 343 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 206 | NR | 605 | 337 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 190 | NR | 610 | 362 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 202 | NR | 615 | 381 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-8

## Scotopic Flux vs. Wavelength

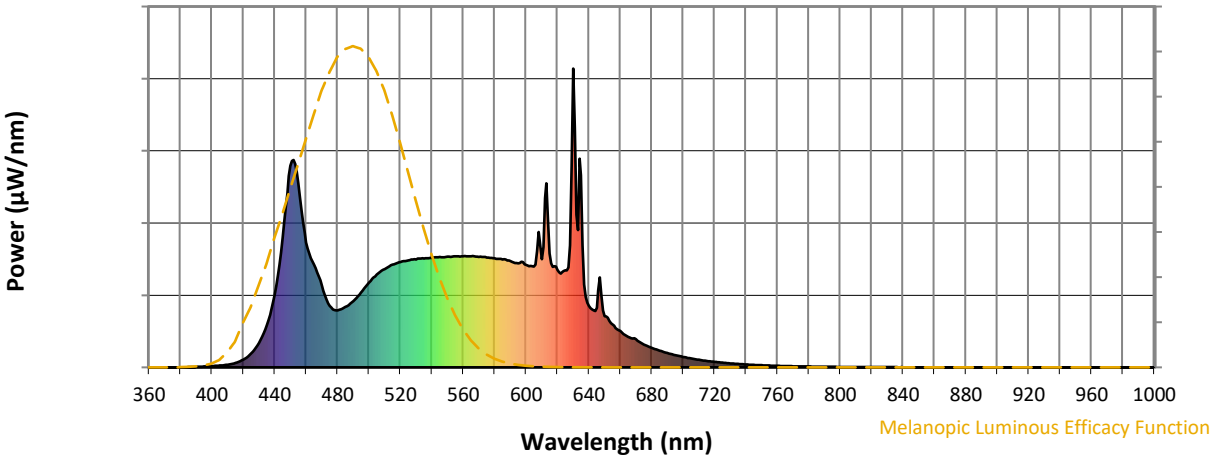



**Scotopic Lumens: NR** **S/P: 2.04**

| 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 | 221 | NR | 620 | 326 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 250 | NR | 625 | 325 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 284 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 311 | NR | 635 | 643 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 206 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 344 | NR | 645 | 199 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 353 | NR | 650 | 172 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 357 | NR | 655 | 143 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 362 | NR | 660 | 122 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 365 | NR | 665 | 102 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 367 | NR | 670 | 94 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 15 | NR | 545 | 369 | NR | 675 | 76 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 26 | NR | 550 | 370 | NR | 680 | 65 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 47 | NR | 555 | 372 | NR | 685 | 56 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 81 | NR | 560 | 372 | NR | 690 | 48 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 143 | NR | 565 | 371 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 243 | NR | 570 | 370 | NR | 700 | 35 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 434 | NR | 575 | 367 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 675 | NR | 580 | 365 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 615 | NR | 585 | 361 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 418 | NR | 590 | 356 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 344 | NR | 595 | 348 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 272 | NR | 600 | 343 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 206 | NR | 605 | 337 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 190 | NR | 610 | 362 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 202 | NR | 615 | 381 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-8

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 4.41**

| 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 | 221 | NR | 620 | 326 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 250 | NR | 625 | 325 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 284 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 311 | NR | 635 | 643 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 206 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 344 | NR | 645 | 199 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 353 | NR | 650 | 172 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 357 | NR | 655 | 143 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 362 | NR | 660 | 122 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 365 | NR | 665 | 102 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 367 | NR | 670 | 94 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 15 | NR | 545 | 369 | NR | 675 | 76 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 26 | NR | 550 | 370 | NR | 680 | 65 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 47 | NR | 555 | 372 | NR | 685 | 56 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 81 | NR | 560 | 372 | NR | 690 | 48 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 143 | NR | 565 | 371 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 243 | NR | 570 | 370 | NR | 700 | 35 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 434 | NR | 575 | 367 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 675 | NR | 580 | 365 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 615 | NR | 585 | 361 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 418 | NR | 590 | 356 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 344 | NR | 595 | 348 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 272 | NR | 600 | 343 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 206 | NR | 605 | 337 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 190 | NR | 610 | 362 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 202 | NR | 615 | 381 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

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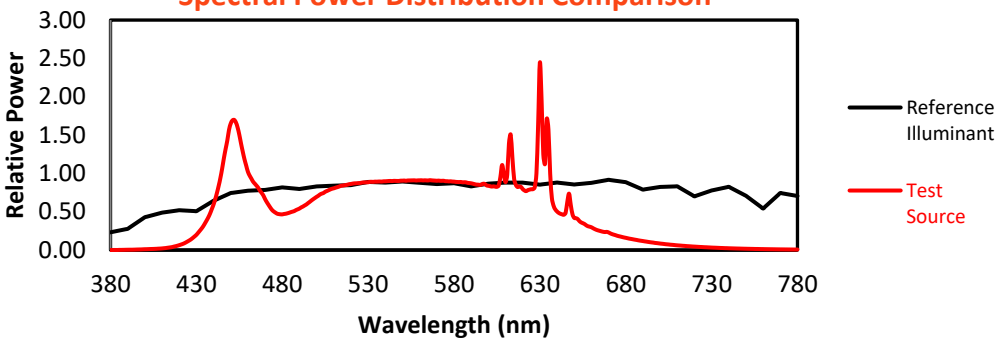
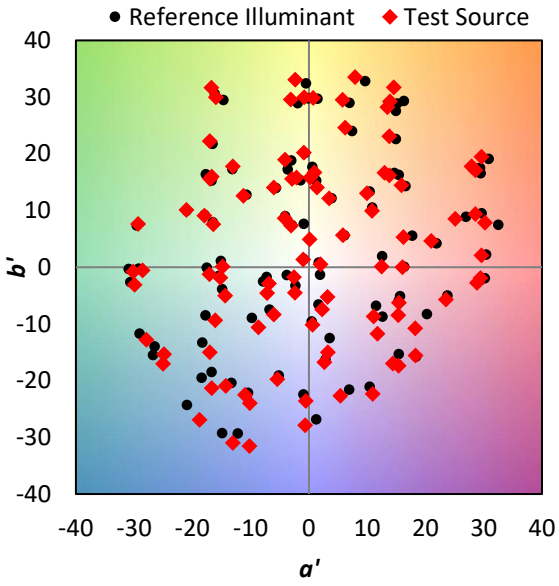
## Summary

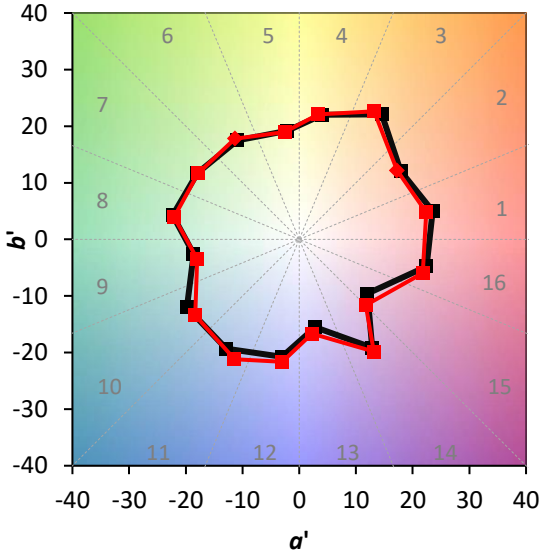
$R_f$ = 90.7
$R_g$ = 100.5
CIE $R_a$ = 94.3
$R_9$ = 72.3

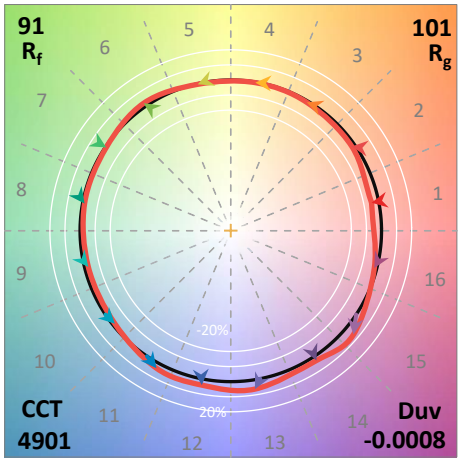
## Spectral Power Distribution Comparison

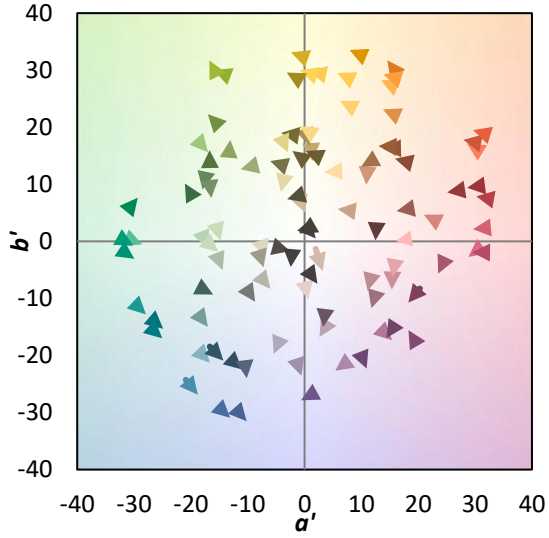



## Color Vector Graphics



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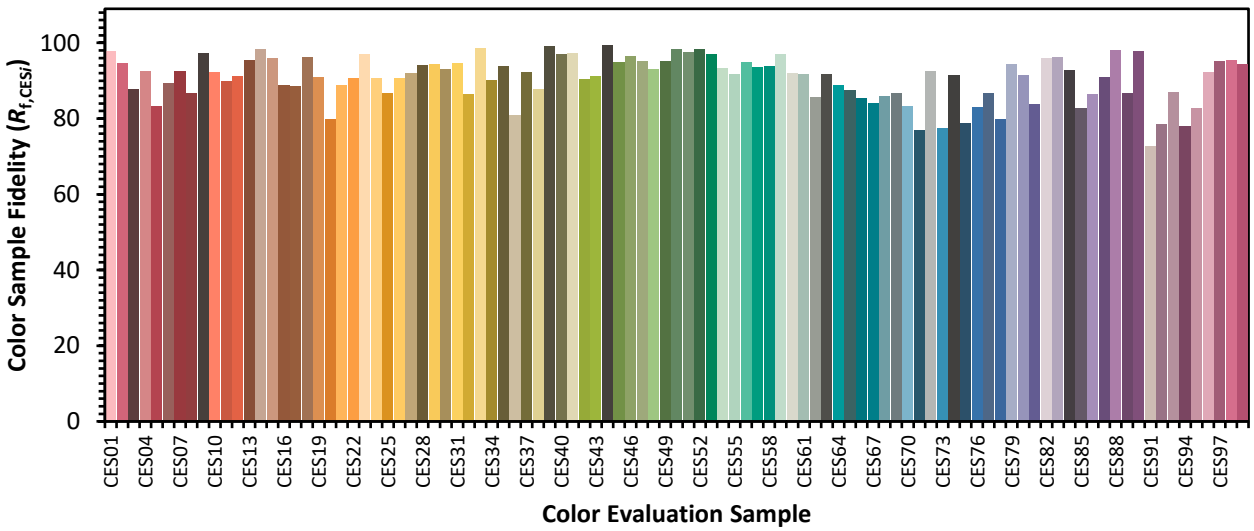
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 91 | CES51 = 98 | CES76 = 83 |
| CES02 = 61 | CES27 = 92 | CES52 = 98 | CES77 = 87 |
| CES03 = 31 | CES28 = 94 | CES53 = 97 | CES78 = 80 |
| CES04 = 69 | CES29 = 94 | CES54 = 93 | CES79 = 94 |
| CES05 = 48 | CES30 = 93 | CES55 = 92 | CES80 = 91 |
| CES06 = 50 | CES31 = 95 | CES56 = 95 | CES81 = 84 |
| CES07 = 41 | CES32 = 86 | CES57 = 94 | CES82 = 96 |
| CES08 = 40 | CES33 = 99 | CES58 = 94 | CES83 = 96 |
| CES09 = 29 | CES34 = 90 | CES59 = 97 | CES84 = 93 |
| CES10 = 73 | CES35 = 94 | CES60 = 92 | CES85 = 83 |
| CES11 = 56 | CES36 = 81 | CES61 = 92 | CES86 = 86 |
| CES12 = 62 | CES37 = 92 | CES62 = 86 | CES87 = 91 |
| CES13 = 43 | CES38 = 88 | CES63 = 92 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 89 | CES89 = 87 |
| CES15 = 71 | CES40 = 97 | CES65 = 88 | CES90 = 98 |
| CES16 = 47 | CES41 = 97 | CES66 = 85 | CES91 = 73 |
| CES17 = 48 | CES42 = 90 | CES67 = 84 | CES92 = 79 |
| CES18 = 56 | CES43 = 91 | CES68 = 86 | CES93 = 87 |
| CES19 = 70 | CES44 = 99 | CES69 = 87 | CES94 = 78 |
| CES20 = 65 | CES45 = 95 | CES70 = 83 | CES95 = 83 |
| CES21 = 85 | CES46 = 97 | CES71 = 77 | CES96 = 92 |
| CES22 = 77 | CES47 = 95 | CES72 = 92 | CES97 = 95 |
| CES23 = 91 | CES48 = 93 | CES73 = 77 | CES98 = 95 |
| CES24 = 90 | CES49 = 95 | CES74 = 92 | CES99 = 94 |
| CES25 = 70 | CES50 = 98 | CES75 = 79 | |



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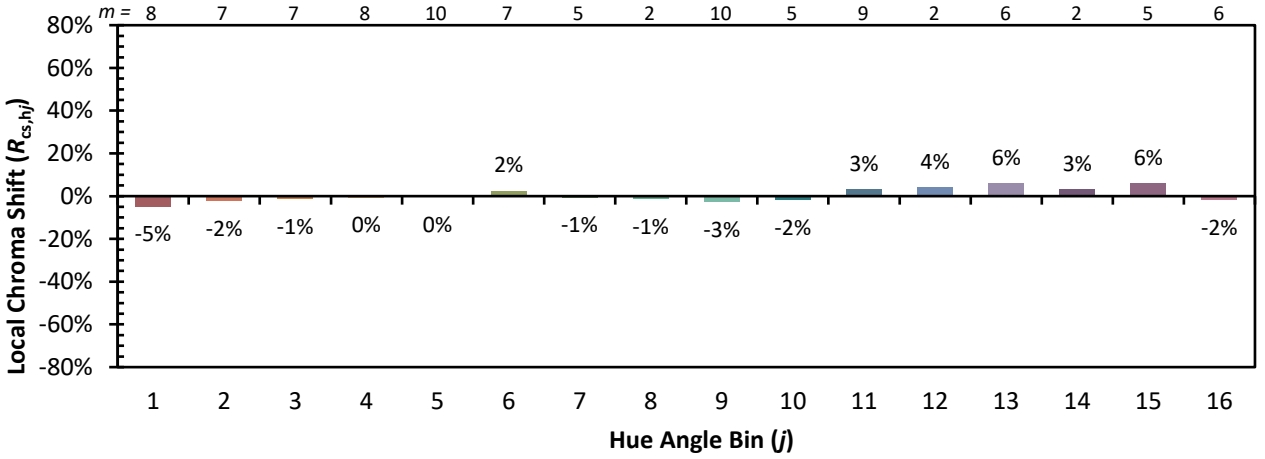
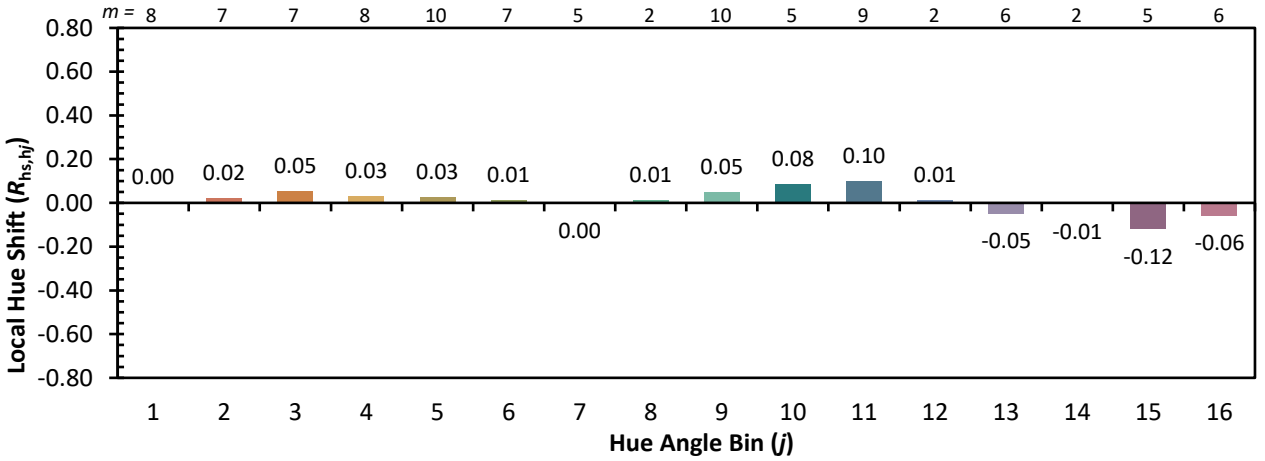
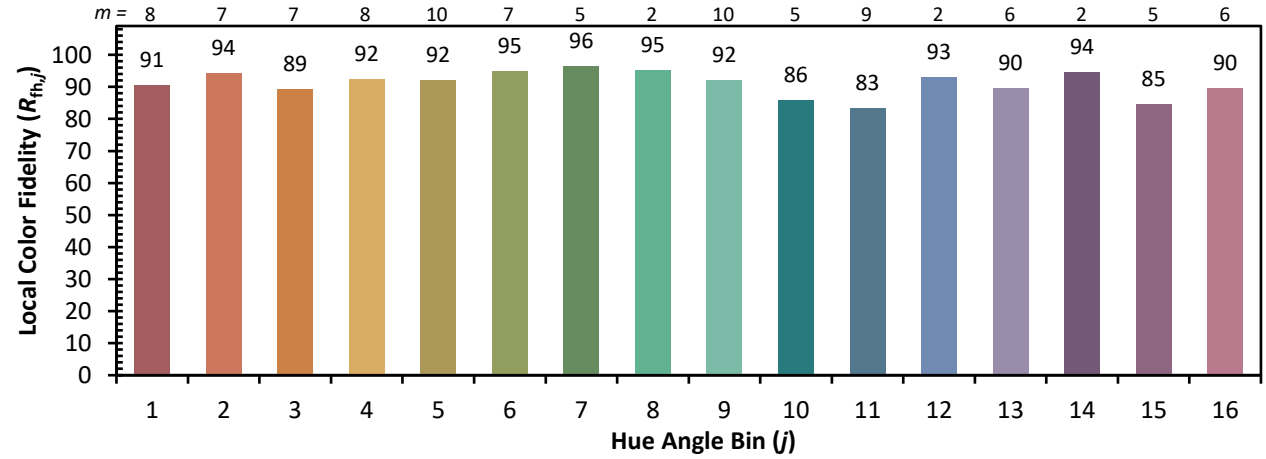
## Color Rendition by Hue-Angle Bin



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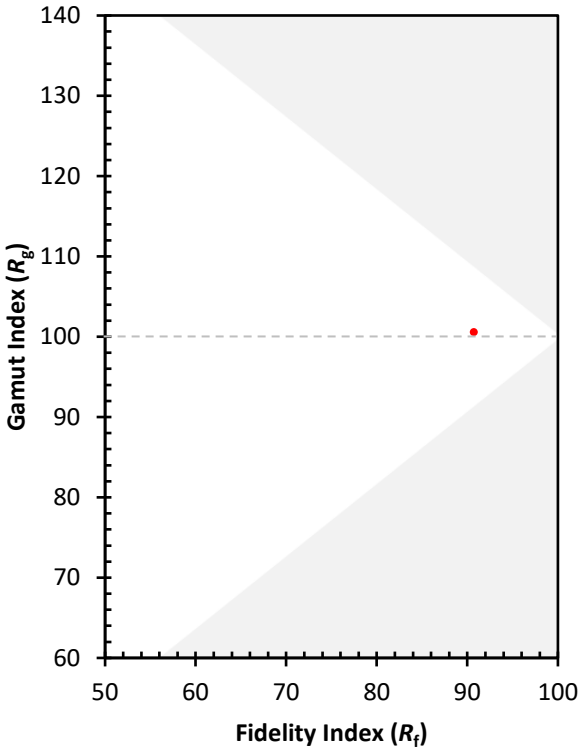
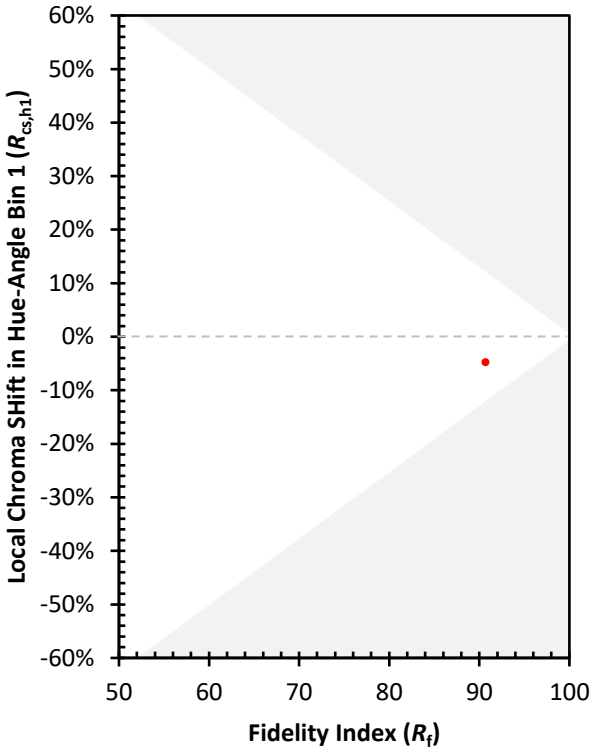
### Measure Comparisons

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