

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: P1433714

Luminaire Tested: EHBR1-12-UNV-ASM-L940

Issue Date: 3/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433714
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2601-654-4)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-12-UNV-ASM-L940
Description: Elevate Round Highbay at, 12000 lumens, 4000K 90CRI LEDs with ASM lens
Light Source: -
Ballast/Driver: -

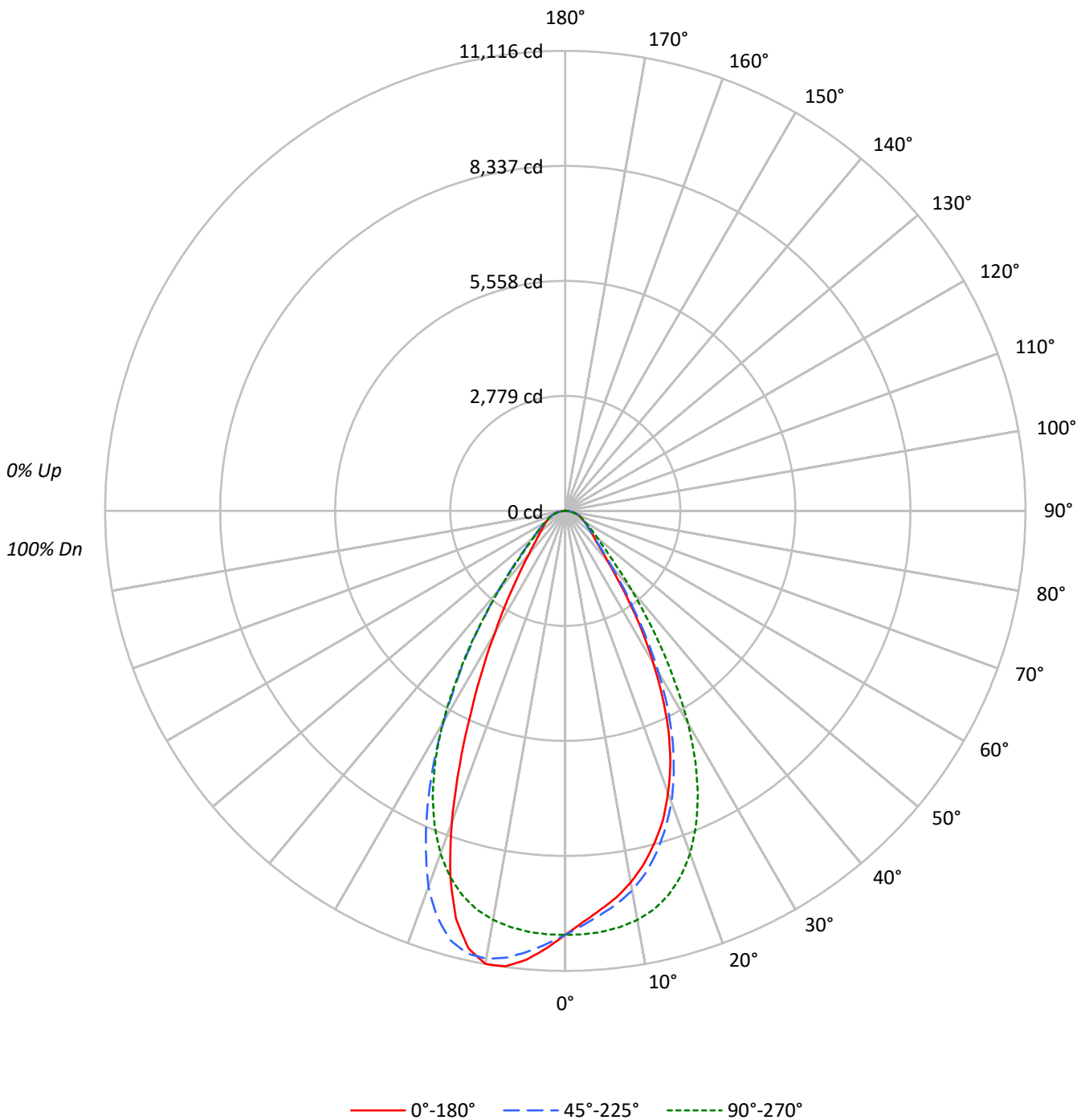
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11454.5 lumens
Efficiency: N/A
Efficacy: 177.0 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 0.99 / 0.92
Luminous Opening: Circular (Dia: 1.71' x H: 0')
CIE Type: Direct

Input Watts (W): 64.7
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

TEST NUMBER: P1433714
CATALOG NUMBER: EHBR1-12-UNV-ASM-L940

Luminous Intensity Polar Plot





TEST NUMBER: P1433714
 CATALOG NUMBER: EHBR1-12-UNV-ASM-L940

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 112 | 108 | 105 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98 | 98 | 97 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 99 | 94 | 90 | 103 | 97 | 93 | 89 | 94 | 90 | 87 | 91 | 88 | 85 | 88 | 85 | 83 | 81 |
| 3 | 99 | 91 | 85 | 80 | 96 | 89 | 84 | 79 | 87 | 82 | 78 | 84 | 80 | 77 | 82 | 78 | 76 | 74 |
| 4 | 93 | 84 | 77 | 72 | 91 | 83 | 77 | 72 | 80 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 |
| 5 | 87 | 78 | 71 | 66 | 86 | 77 | 70 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 64 | 62 |
| 6 | 82 | 72 | 65 | 60 | 81 | 71 | 65 | 60 | 70 | 64 | 60 | 68 | 63 | 59 | 67 | 62 | 59 | 57 |
| 7 | 78 | 67 | 60 | 56 | 76 | 67 | 60 | 56 | 65 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 55 | 53 |
| 8 | 74 | 63 | 56 | 52 | 72 | 62 | 56 | 52 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 49 |
| 9 | 70 | 59 | 53 | 48 | 69 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 51 | 48 | 56 | 51 | 47 | 46 |
| 10 | 66 | 56 | 49 | 45 | 65 | 55 | 49 | 45 | 54 | 49 | 45 | 54 | 48 | 45 | 53 | 48 | 45 | 43 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° | 135° | 180° |
|-----|-------|-------|-------|-------|-------|
| 0° | 48108 | 48108 | 48108 | 48108 | 48108 |
| 5° | 45629 | 46163 | 48127 | 50435 | 51342 |
| 10° | 43469 | 44389 | 47848 | 52397 | 53007 |
| 15° | 40424 | 41503 | 46748 | 52208 | 49592 |
| 20° | 36259 | 37480 | 44028 | 48327 | 40045 |
| 25° | 30612 | 31770 | 39258 | 40836 | 27951 |
| 30° | 23087 | 24425 | 32131 | 31810 | 18330 |
| 35° | 15505 | 16441 | 23247 | 22872 | 11975 |
| 40° | 9874 | 10553 | 15178 | 15276 | 8335 |
| 45° | 7115 | 7410 | 9739 | 10158 | 6530 |
| 50° | 6005 | 6053 | 7328 | 7520 | 5622 |
| 55° | 5386 | 5399 | 6080 | 6241 | 5205 |
| 60° | 5090 | 5046 | 5372 | 5486 | 5060 |
| 65° | 4990 | 4945 | 5031 | 5129 | 5011 |
| 70° | 5035 | 4948 | 4953 | 5047 | 5101 |
| 75° | 5079 | 4924 | 4913 | 5088 | 5235 |
| 80° | 5141 | 4784 | 4806 | 5141 | 5503 |
| 85° | 4876 | 4047 | 4047 | 4628 | 5113 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 13692 cd/sqm



TEST NUMBER: P1433714
 CATALOG NUMBER: EHBR1-12-UNV-ASM-L940

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 974.1 | 8.5 |
| 10°-20° | 2650.0 | 23.1 |
| 20°-30° | 3107.9 | 27.1 |
| 30°-40° | 2161.4 | 18.9 |
| 40°-50° | 1074.1 | 9.4 |
| 50°-60° | 642.4 | 5.6 |
| 60°-70° | 452.2 | 3.9 |
| 70°-80° | 291.3 | 2.5 |
| 80°-90° | 92.5 | 0.8 |
| 90°-100° | 0.5 | 0.0 |
| 100°-110° | 0.6 | 0.0 |
| 110°-120° | 0.7 | 0.0 |
| 120°-130° | 0.8 | 0.0 |
| 130°-140° | 1.1 | 0.0 |
| 140°-150° | 1.4 | 0.0 |
| 150°-160° | 1.5 | 0.0 |
| 160°-170° | 1.5 | 0.0 |
| 170°-180° | 0.6 | 0.0 |
| 0°-30° | 6732.0 | 58.8 |
| 0°-40° | 8893.4 | 77.6 |
| 0°-60° | 10609.9 | 92.6 |
| 0°-90° | 11445.8 | 99.9 |
| 90°-120° | 1.8 | 0.0 |
| 90°-150° | 5.1 | 0.0 |
| 90°-180° | 9.0 | 0.1 |
| 0°-180° | 11454.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|-------|-------|-------|-------|-------|------|
| 0° | 10244 | 10244 | 10244 | 10244 | 10244 | |
| 5° | 9679 | 9793 | 10209 | 10699 | 10891 | 908 |
| 15° | 8315 | 8537 | 9616 | 10739 | 10200 | 2319 |
| 25° | 5908 | 6131 | 7576 | 7881 | 5394 | 2666 |
| 35° | 2704 | 2868 | 4055 | 3990 | 2089 | 1723 |
| 45° | 1071 | 1116 | 1466 | 1530 | 983 | 866 |
| 55° | 658 | 659 | 743 | 762 | 636 | 597 |
| 65° | 449 | 445 | 453 | 462 | 451 | 446 |
| 75° | 280 | 271 | 271 | 280 | 288 | 295 |
| 85° | 90 | 75 | 75 | 86 | 95 | 93 |
| 90° | 0 | 0 | 0 | 1 | 2 | 5 |
| 95° | 0 | 0 | 0 | 1 | 2 | 0 |
| 105° | 0 | 0 | 0 | 1 | 2 | 0 |
| 115° | 0 | 0 | 1 | 1 | 2 | 0 |
| 125° | 1 | 1 | 1 | 1 | 2 | 0 |
| 135° | 1 | 1 | 2 | 2 | 2 | 1 |
| 145° | 2 | 2 | 2 | 2 | 2 | 1 |
| 155° | 4 | 3 | 3 | 3 | 3 | 2 |
| 165° | 5 | 5 | 5 | 6 | 6 | 1 |
| 175° | 6 | 6 | 7 | 7 | 8 | 1 |
| 180° | 7 | 7 | 7 | 7 | 7 | |



TEST NUMBER: P1433714
 CATALOG NUMBER: EHBR1-12-UNV-ASM-L940

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 10244.2 | 10244.2 | 10244.2 | 10244.2 | 10244.2 | 10244.2 | 10244.2 | 10244.2 | 10244.2 |
| 2.5° | 9940.1 | 9946.6 | 10016.2 | 10106.7 | 10238.2 | 10370.6 | 10477.8 | 10548.5 | 10583.4 |
| 5° | 9679.4 | 9715.6 | 9792.6 | 9958.7 | 10209.3 | 10474.3 | 10698.9 | 10845.9 | 10891.4 |
| 7.5° | 9425.5 | 9446.4 | 9575.4 | 9785.3 | 10139.9 | 10552.9 | 10886.6 | 11058.1 | 11100.0 |
| 10° | 9115.7 | 9163.1 | 9308.7 | 9556.4 | 10034.0 | 10602.5 | 10988.0 | 11110.9 | 11115.9 |
| 12.5° | 8751.0 | 8813.8 | 8964.3 | 9276.6 | 9865.2 | 10584.8 | 10954.0 | 10913.7 | 10822.0 |
| 15° | 8314.7 | 8369.7 | 8536.7 | 8899.0 | 9615.5 | 10480.1 | 10738.6 | 10410.4 | 10200.4 |
| 17.5° | 7843.2 | 7893.2 | 8038.2 | 8437.2 | 9263.5 | 10284.2 | 10289.2 | 9639.6 | 9243.6 |
| 20° | 7255.4 | 7294.6 | 7499.8 | 7891.2 | 8810.0 | 9969.9 | 9670.2 | 8482.4 | 8013.0 |
| 22.5° | 6630.0 | 6666.7 | 6848.9 | 7256.4 | 8241.4 | 9546.1 | 8808.3 | 7318.1 | 6677.8 |
| 25° | 5907.8 | 5927.9 | 6131.4 | 6499.9 | 7576.4 | 9026.9 | 7881.1 | 6049.5 | 5394.4 |
| 27.5° | 5095.5 | 5129.5 | 5342.5 | 5718.8 | 6794.2 | 8368.8 | 6893.7 | 4943.4 | 4339.0 |
| 30° | 4257.6 | 4313.9 | 4504.4 | 4841.4 | 5925.4 | 7525.1 | 5866.2 | 3936.8 | 3380.3 |
| 32.5° | 3475.6 | 3516.1 | 3651.9 | 4004.0 | 4952.5 | 6698.2 | 4879.4 | 3154.4 | 2683.0 |
| 35° | 2704.5 | 2745.0 | 2867.8 | 3213.5 | 4055.1 | 5663.6 | 3989.6 | 2478.6 | 2088.8 |
| 37.5° | 2067.3 | 2139.0 | 2217.7 | 2498.4 | 3182.4 | 4686.0 | 3180.4 | 1995.9 | 1694.3 |
| 40° | 1610.7 | 1622.3 | 1721.4 | 1900.9 | 2475.9 | 3664.0 | 2491.9 | 1593.2 | 1359.6 |
| 42.5° | 1289.3 | 1320.6 | 1363.3 | 1497.8 | 1876.0 | 2801.7 | 1958.6 | 1307.6 | 1154.9 |
| 45° | 1071.3 | 1083.6 | 1115.8 | 1206.2 | 1466.4 | 2061.7 | 1529.5 | 1103.2 | 983.2 |
| 47.5° | 937.2 | 931.8 | 952.6 | 1020.2 | 1194.3 | 1593.4 | 1239.6 | 946.3 | 862.1 |
| 50° | 822.0 | 818.7 | 828.5 | 873.6 | 1003.1 | 1222.7 | 1029.3 | 826.0 | 769.5 |
| 52.5° | 732.5 | 735.3 | 736.3 | 764.3 | 861.8 | 997.1 | 876.5 | 736.1 | 698.1 |
| 55° | 657.9 | 661.6 | 659.4 | 680.2 | 742.6 | 838.3 | 762.3 | 661.9 | 635.7 |
| 57.5° | 599.7 | 597.0 | 594.1 | 605.3 | 652.2 | 711.1 | 661.9 | 598.8 | 581.3 |
| 60° | 541.9 | 539.4 | 537.3 | 544.5 | 572.0 | 615.8 | 584.1 | 543.6 | 538.7 |
| 62.5° | 492.4 | 490.8 | 490.6 | 489.3 | 510.4 | 538.0 | 516.5 | 494.1 | 489.7 |
| 65° | 449.1 | 447.4 | 445.0 | 443.0 | 452.8 | 478.5 | 461.6 | 449.5 | 451.0 |
| 67.5° | 405.9 | 405.9 | 401.8 | 398.6 | 408.2 | 421.7 | 414.3 | 407.4 | 409.2 |
| 70° | 366.7 | 366.9 | 360.4 | 357.8 | 360.7 | 375.2 | 367.6 | 368.7 | 371.5 |
| 72.5° | 324.7 | 320.0 | 315.3 | 315.0 | 315.5 | 326.5 | 324.0 | 326.4 | 329.4 |
| 75° | 279.9 | 274.5 | 271.4 | 267.9 | 270.8 | 279.3 | 280.4 | 283.7 | 288.5 |
| 77.5° | 236.6 | 228.4 | 225.9 | 224.2 | 222.3 | 231.9 | 235.5 | 239.9 | 247.1 |
| 80° | 190.1 | 181.1 | 176.9 | 174.4 | 177.7 | 182.1 | 190.1 | 193.4 | 203.5 |
| 82.5° | 140.6 | 133.9 | 128.7 | 128.5 | 130.1 | 134.1 | 141.0 | 147.1 | 152.9 |
| 85° | 90.5 | 79.7 | 75.1 | 76.9 | 75.1 | 81.2 | 85.9 | 93.2 | 94.9 |
| 87.5° | 32.7 | 25.5 | 24.4 | 26.9 | 26.3 | 28.2 | 32.2 | 35.1 | 35.3 |
| 90° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.6 | 1.1 | 1.5 |
| 92.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.6 | 1.1 | 1.5 |
| 95° | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.4 | 0.6 | 1.1 | 1.5 |
| 97.5° | 0.4 | 0.2 | 0.2 | 0.2 | 0.4 | 0.4 | 0.6 | 1.1 | 1.5 |
| 100° | 0.4 | 0.2 | 0.2 | 0.4 | 0.4 | 0.4 | 0.6 | 1.1 | 1.5 |
| 102.5° | 0.4 | 0.2 | 0.2 | 0.4 | 0.4 | 0.6 | 0.7 | 1.3 | 1.5 |
| 105° | 0.4 | 0.2 | 0.2 | 0.4 | 0.4 | 0.6 | 0.7 | 1.3 | 1.8 |
| 107.5° | 0.4 | 0.2 | 0.4 | 0.4 | 0.4 | 0.6 | 0.7 | 1.3 | 1.8 |
| 110° | 0.4 | 0.2 | 0.4 | 0.4 | 0.4 | 0.6 | 0.7 | 1.3 | 1.8 |



TEST NUMBER: P1433714
 CATALOG NUMBER: EHBR1-12-UNV-ASM-L940

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|-----|-------|-----|-------|-----|--------|------|--------|------|
| 112.5° | 0.4 | 0.2 | 0.4 | 0.4 | 0.4 | 0.6 | 0.7 | 1.3 | 1.8 |
| 115° | 0.4 | 0.2 | 0.4 | 0.4 | 0.6 | 0.6 | 0.7 | 1.3 | 1.8 |
| 117.5° | 0.4 | 0.2 | 0.4 | 0.6 | 0.6 | 0.6 | 0.7 | 1.3 | 1.8 |
| 120° | 0.4 | 0.2 | 0.4 | 0.6 | 0.6 | 0.6 | 0.9 | 1.3 | 1.8 |
| 122.5° | 0.4 | 0.4 | 0.6 | 0.7 | 0.7 | 0.7 | 0.9 | 1.5 | 1.8 |
| 125° | 0.6 | 0.4 | 0.7 | 0.9 | 0.7 | 0.7 | 1.1 | 1.5 | 2.0 |
| 127.5° | 0.6 | 0.4 | 0.7 | 0.9 | 0.9 | 0.9 | 1.1 | 1.5 | 2.0 |
| 130° | 0.6 | 0.6 | 0.9 | 1.1 | 1.1 | 0.9 | 1.1 | 1.8 | 2.0 |
| 132.5° | 0.7 | 0.7 | 1.3 | 1.5 | 1.3 | 1.1 | 1.3 | 2.0 | 2.1 |
| 135° | 0.7 | 0.9 | 1.3 | 1.8 | 1.5 | 1.1 | 1.5 | 1.8 | 2.1 |
| 137.5° | 0.9 | 1.1 | 1.8 | 2.0 | 1.8 | 1.3 | 1.5 | 2.0 | 2.1 |
| 140° | 1.3 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 1.5 | 2.0 | 2.3 |
| 142.5° | 1.8 | 1.8 | 2.1 | 2.1 | 2.1 | 1.8 | 1.8 | 2.1 | 2.3 |
| 145° | 2.1 | 2.1 | 2.3 | 2.1 | 2.3 | 2.1 | 2.0 | 2.1 | 2.5 |
| 147.5° | 2.5 | 2.5 | 2.5 | 2.3 | 2.3 | 2.1 | 2.1 | 2.3 | 2.7 |
| 150° | 2.9 | 2.9 | 2.7 | 2.5 | 2.5 | 2.5 | 2.3 | 2.5 | 2.9 |
| 152.5° | 3.3 | 3.1 | 2.9 | 2.7 | 2.7 | 2.7 | 2.7 | 2.9 | 3.1 |
| 155° | 3.6 | 3.4 | 3.3 | 2.9 | 3.1 | 3.1 | 3.1 | 3.3 | 3.4 |
| 157.5° | 4.2 | 3.8 | 3.6 | 3.4 | 3.4 | 3.6 | 3.6 | 3.8 | 4.0 |
| 160° | 4.6 | 4.4 | 4.2 | 4.0 | 4.2 | 4.2 | 4.4 | 4.6 | 4.8 |
| 162.5° | 5.0 | 4.8 | 4.6 | 4.6 | 4.6 | 4.6 | 5.0 | 5.2 | 5.6 |
| 165° | 5.4 | 5.2 | 5.0 | 5.0 | 5.2 | 5.2 | 5.6 | 6.0 | 6.3 |
| 167.5° | 5.4 | 5.4 | 5.4 | 5.4 | 5.6 | 5.6 | 6.0 | 6.5 | 6.9 |
| 170° | 5.8 | 5.6 | 5.6 | 5.8 | 5.8 | 6.0 | 6.3 | 6.9 | 7.3 |
| 172.5° | 6.1 | 6.0 | 6.1 | 6.1 | 6.3 | 6.3 | 6.9 | 7.5 | 7.9 |
| 175° | 6.5 | 6.3 | 6.5 | 6.5 | 6.7 | 6.9 | 7.3 | 7.9 | 8.3 |
| 177.5° | 6.7 | 6.5 | 6.5 | 6.5 | 6.7 | 7.1 | 7.5 | 8.1 | 8.5 |
| 180° | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |



TEST NUMBER: P1433714
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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 | 14.43 | 15.64 | 14.80 | 15.95 | 16.27 | 15.19 | 16.40 | 15.56 | 16.71 | 17.03 |
| | 3H | 16.35 | 17.42 | 16.73 | 17.75 | 18.12 | 16.85 | 17.92 | 17.23 | 18.25 | 18.62 |
| | 4H | 17.16 | 18.16 | 17.56 | 18.51 | 18.90 | 17.56 | 18.56 | 17.97 | 18.92 | 19.30 |
| | 6H | 17.83 | 18.74 | 18.24 | 19.12 | 19.52 | 18.15 | 19.07 | 18.57 | 19.44 | 19.84 |
| | 8H | 18.07 | 18.94 | 18.50 | 19.33 | 19.74 | 18.36 | 19.23 | 18.79 | 19.62 | 20.03 |
| | 12H | 18.23 | 19.06 | 18.66 | 19.44 | 19.87 | 18.49 | 19.32 | 18.93 | 19.71 | 20.14 |
| 4H | 2H | 15.00 | 16.00 | 15.40 | 16.35 | 16.74 | 15.62 | 16.62 | 16.02 | 16.97 | 17.36 |
| | 3H | 17.16 | 17.98 | 17.57 | 18.39 | 18.79 | 17.54 | 18.36 | 17.96 | 18.77 | 19.18 |
| | 4H | 18.11 | 18.85 | 18.54 | 19.27 | 19.71 | 18.41 | 19.15 | 18.85 | 19.57 | 20.02 |
| | 6H | 18.92 | 19.55 | 19.38 | 20.00 | 20.47 | 19.16 | 19.79 | 19.62 | 20.24 | 20.71 |
| | 8H | 19.21 | 19.80 | 19.68 | 20.25 | 20.73 | 19.42 | 20.02 | 19.90 | 20.47 | 20.94 |
| | 12H | 19.42 | 19.94 | 19.90 | 20.43 | 20.90 | 19.61 | 20.13 | 20.10 | 20.62 | 21.09 |
| 8H | 4H | 18.42 | 19.02 | 18.90 | 19.47 | 19.94 | 18.71 | 19.31 | 19.18 | 19.76 | 20.23 |
| | 6H | 19.38 | 19.86 | 19.89 | 20.36 | 20.85 | 19.61 | 20.10 | 20.12 | 20.60 | 21.08 |
| | 8H | 19.77 | 20.20 | 20.29 | 20.72 | 21.21 | 19.98 | 20.41 | 20.51 | 20.93 | 21.42 |
| | 12H | 20.06 | 20.44 | 20.58 | 20.94 | 21.51 | 20.25 | 20.63 | 20.77 | 21.13 | 21.71 |
| 12H | 4H | 18.45 | 18.97 | 18.94 | 19.46 | 19.94 | 18.74 | 19.27 | 19.23 | 19.75 | 20.23 |
| | 6H | 19.44 | 19.88 | 19.97 | 20.39 | 20.89 | 19.68 | 20.12 | 20.21 | 20.64 | 21.13 |
| | 8H | 19.89 | 20.27 | 20.41 | 20.77 | 21.34 | 20.12 | 20.49 | 20.63 | 20.99 | 21.57 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-7

Test Date: 08/04/2025

Luminaire Tested: EHBR-60-L940-N

Data in this report applies to families of products including EHBR-60-L940-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-7
 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-L940-N**
 Description: Elevate Round Highbay at, 60000 lumens, 4000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K): 3963
 CIE u': 0.2267
 CIE v': 0.5003
 Duv: -0.0016
 CIE x: 0.3810
 CIE y: 0.3738
 CIE z: 0.2453
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 580
 Purity: 26.49712
 Rf: 90.7
 Rg: 101

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 93.4 | | |
| R1: | 95.2 | R9: | 66.4 |
| R2: | 95.1 | R10: | 86.6 |
| R3: | 93.3 | R11: | 94.4 |
| R4: | 94.5 | R12: | 75.4 |
| R5: | 94.2 | R13: | 95.0 |
| R6: | 92.9 | R14: | 95.4 |
| R7: | 94.0 | R15: | 92.8 |
| R8: | 87.7 | | |



Test Conditions

Stabilization Time: 44M
 Operation Time: 1H 44M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-7

| 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: SP1-2506-472-7

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-7

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 | 141 | NR | 620 | 276 | NR | 750 | 5 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 279 | NR | 755 | 4 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 193 | NR | 630 | 1000 | NR | 760 | 4 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 215 | NR | 635 | 628 | NR | 765 | 3 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 230 | NR | 640 | 164 | NR | 770 | 3 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 243 | NR | 645 | 161 | NR | 775 | 2 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 251 | NR | 650 | 137 | NR | 780 | 2 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 256 | NR | 655 | 111 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 262 | NR | 660 | 92 | NR | 790 | 1 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 267 | NR | 665 | 76 | NR | 795 | 1 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 271 | NR | 670 | 71 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 11 | NR | 545 | 276 | NR | 675 | 56 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 280 | NR | 680 | 47 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 285 | NR | 685 | 40 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 63 | NR | 560 | 290 | NR | 690 | 34 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 108 | NR | 565 | 294 | NR | 695 | 29 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 186 | NR | 570 | 296 | NR | 700 | 25 | NR | 830 | 0 | NR | 960 | 0 | NR |
| 445 | 323 | NR | 575 | 298 | NR | 705 | 21 | NR | 835 | 0 | NR | 965 | 0 | NR |
| 450 | 403 | NR | 580 | 299 | NR | 710 | 18 | NR | 840 | 0 | NR | 970 | 0 | NR |
| 455 | 293 | NR | 585 | 298 | NR | 715 | 15 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 214 | NR | 590 | 296 | NR | 720 | 13 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 180 | NR | 595 | 288 | NR | 725 | 11 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 132 | NR | 600 | 286 | NR | 730 | 9 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 109 | NR | 605 | 282 | NR | 735 | 8 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 110 | NR | 610 | 311 | NR | 740 | 7 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 121 | NR | 615 | 334 | NR | 745 | 6 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-7

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.76

| 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 | 141 | NR | 620 | 276 | NR | 750 | 5 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 279 | NR | 755 | 4 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 193 | NR | 630 | 1000 | NR | 760 | 4 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 215 | NR | 635 | 628 | NR | 765 | 3 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 230 | NR | 640 | 164 | NR | 770 | 3 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 243 | NR | 645 | 161 | NR | 775 | 2 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 251 | NR | 650 | 137 | NR | 780 | 2 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 256 | NR | 655 | 111 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 262 | NR | 660 | 92 | NR | 790 | 1 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 267 | NR | 665 | 76 | NR | 795 | 1 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 271 | NR | 670 | 71 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 11 | NR | 545 | 276 | NR | 675 | 56 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 280 | NR | 680 | 47 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 285 | NR | 685 | 40 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 63 | NR | 560 | 290 | NR | 690 | 34 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 108 | NR | 565 | 294 | NR | 695 | 29 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 186 | NR | 570 | 296 | NR | 700 | 25 | NR | 830 | 0 | NR | 960 | 0 | NR |
| 445 | 323 | NR | 575 | 298 | NR | 705 | 21 | NR | 835 | 0 | NR | 965 | 0 | NR |
| 450 | 403 | NR | 580 | 299 | NR | 710 | 18 | NR | 840 | 0 | NR | 970 | 0 | NR |
| 455 | 293 | NR | 585 | 298 | NR | 715 | 15 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 214 | NR | 590 | 296 | NR | 720 | 13 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 180 | NR | 595 | 288 | NR | 725 | 11 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 132 | NR | 600 | 286 | NR | 730 | 9 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 109 | NR | 605 | 282 | NR | 735 | 8 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 110 | NR | 610 | 311 | NR | 740 | 7 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 121 | NR | 615 | 334 | NR | 745 | 6 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.64

| 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 | 141 | NR | 620 | 276 | NR | 750 | 5 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 167 | NR | 625 | 279 | NR | 755 | 4 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 193 | NR | 630 | 1000 | NR | 760 | 4 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 215 | NR | 635 | 628 | NR | 765 | 3 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 230 | NR | 640 | 164 | NR | 770 | 3 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 243 | NR | 645 | 161 | NR | 775 | 2 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 251 | NR | 650 | 137 | NR | 780 | 2 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 256 | NR | 655 | 111 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 262 | NR | 660 | 92 | NR | 790 | 1 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 267 | NR | 665 | 76 | NR | 795 | 1 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 271 | NR | 670 | 71 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 11 | NR | 545 | 276 | NR | 675 | 56 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 280 | NR | 680 | 47 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 285 | NR | 685 | 40 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 63 | NR | 560 | 290 | NR | 690 | 34 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 108 | NR | 565 | 294 | NR | 695 | 29 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 186 | NR | 570 | 296 | NR | 700 | 25 | NR | 830 | 0 | NR | 960 | 0 | NR |
| 445 | 323 | NR | 575 | 298 | NR | 705 | 21 | NR | 835 | 0 | NR | 965 | 0 | NR |
| 450 | 403 | NR | 580 | 299 | NR | 710 | 18 | NR | 840 | 0 | NR | 970 | 0 | NR |
| 455 | 293 | NR | 585 | 298 | NR | 715 | 15 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 214 | NR | 590 | 296 | NR | 720 | 13 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 180 | NR | 595 | 288 | NR | 725 | 11 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 132 | NR | 600 | 286 | NR | 730 | 9 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 109 | NR | 605 | 282 | NR | 735 | 8 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 110 | NR | 610 | 311 | NR | 740 | 7 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 121 | NR | 615 | 334 | NR | 745 | 6 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 90.7$
 $R_g = 101$
 $CIE R_a = 93.4$
 $R_9 = 66.4$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 90 | CES51 = 99 | CES76 = 83 |
| CES02 = 62 | CES27 = 93 | CES52 = 97 | CES77 = 87 |
| CES03 = 31 | CES28 = 94 | CES53 = 95 | CES78 = 79 |
| CES04 = 69 | CES29 = 91 | CES54 = 96 | CES79 = 94 |
| CES05 = 49 | CES30 = 98 | CES55 = 95 | CES80 = 91 |
| CES06 = 50 | CES31 = 92 | CES56 = 95 | CES81 = 80 |
| CES07 = 42 | CES32 = 84 | CES57 = 94 | CES82 = 96 |
| CES08 = 41 | CES33 = 95 | CES58 = 95 | CES83 = 95 |
| CES09 = 29 | CES34 = 90 | CES59 = 98 | CES84 = 93 |
| CES10 = 74 | CES35 = 94 | CES60 = 93 | CES85 = 82 |
| CES11 = 57 | CES36 = 84 | CES61 = 93 | CES86 = 84 |
| CES12 = 63 | CES37 = 92 | CES62 = 90 | CES87 = 90 |
| CES13 = 43 | CES38 = 93 | CES63 = 92 | CES88 = 97 |
| CES14 = 74 | CES39 = 98 | CES64 = 91 | CES89 = 84 |
| CES15 = 71 | CES40 = 96 | CES65 = 88 | CES90 = 99 |
| CES16 = 47 | CES41 = 98 | CES66 = 88 | CES91 = 74 |
| CES17 = 49 | CES42 = 89 | CES67 = 87 | CES92 = 78 |
| CES18 = 56 | CES43 = 89 | CES68 = 87 | CES93 = 87 |
| CES19 = 71 | CES44 = 99 | CES69 = 88 | CES94 = 75 |
| CES20 = 66 | CES45 = 93 | CES70 = 84 | CES95 = 83 |
| CES21 = 85 | CES46 = 95 | CES71 = 80 | CES96 = 91 |
| CES22 = 78 | CES47 = 92 | CES72 = 93 | CES97 = 93 |
| CES23 = 91 | CES48 = 96 | CES73 = 78 | CES98 = 93 |
| CES24 = 90 | CES49 = 93 | CES74 = 92 | CES99 = 94 |
| CES25 = 71 | CES50 = 99 | CES75 = 81 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)