

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: P1433283

Luminaire Tested: EHBR1-48-UNV-ASM-L930-UPL15

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433283
REPORT IS A COMBINATION OF REPORTS P1431837 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-48-UNV-ASM-L930-UPL15
Description: Elevate Round Highbay at, 49000 lumens, 3000K 90CRI LEDs with ASM lens
Light Source: -
Ballast/Driver: -

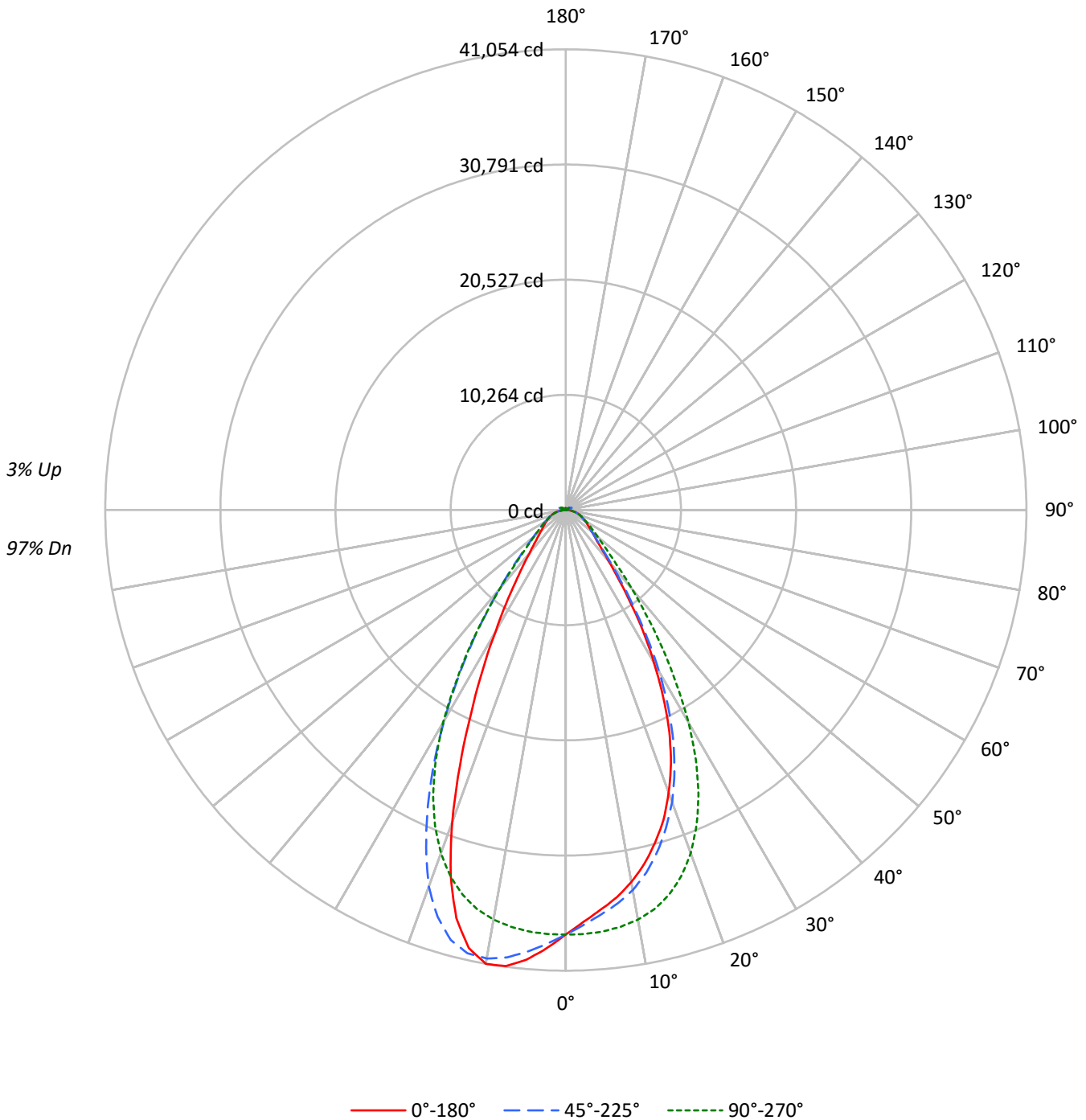
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43631.1 lumens
Efficiency: N/A
Efficacy: 162.9 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 0.99 / 0.92
Luminous Opening: Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type: Direct

Input Watts (W): 267.9
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: P1433283
CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL15

Luminous Intensity Polar Plot





TEST NUMBER: P1433283

CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL15

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 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 104 | 104 | 104 | 99 | 99 | 99 | 99 | 99 | 99 | 97 |
| 1 | 111 | 108 | 105 | 102 | 108 | 105 | 102 | 100 | 101 | 98 | 96 | 96 | 94 | 93 | 92 | 91 | 90 | 92 | 91 | 90 | 87 |
| 2 | 104 | 98 | 93 | 89 | 102 | 96 | 92 | 88 | 92 | 89 | 85 | 89 | 86 | 83 | 86 | 83 | 81 | 86 | 83 | 81 | 79 |
| 3 | 98 | 90 | 84 | 79 | 95 | 88 | 83 | 78 | 85 | 81 | 77 | 82 | 78 | 75 | 80 | 76 | 74 | 80 | 76 | 74 | 72 |
| 4 | 92 | 83 | 76 | 71 | 90 | 82 | 75 | 71 | 79 | 74 | 70 | 76 | 72 | 68 | 74 | 70 | 67 | 74 | 70 | 67 | 65 |
| 5 | 86 | 77 | 70 | 65 | 84 | 76 | 69 | 64 | 73 | 68 | 64 | 71 | 66 | 63 | 69 | 65 | 62 | 69 | 65 | 62 | 60 |
| 6 | 82 | 71 | 64 | 59 | 80 | 70 | 64 | 59 | 68 | 63 | 58 | 67 | 62 | 58 | 65 | 61 | 57 | 65 | 61 | 57 | 55 |
| 7 | 77 | 66 | 60 | 55 | 75 | 66 | 59 | 55 | 64 | 58 | 54 | 62 | 57 | 54 | 61 | 56 | 53 | 61 | 56 | 53 | 51 |
| 8 | 73 | 62 | 55 | 51 | 71 | 61 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 57 | 53 | 49 | 57 | 53 | 49 | 48 |
| 9 | 69 | 58 | 52 | 47 | 68 | 58 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 46 | 54 | 50 | 46 | 54 | 50 | 46 | 45 |
| 10 | 66 | 55 | 48 | 44 | 64 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 43 | 51 | 47 | 43 | 51 | 47 | 43 | 42 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° | 135° | 180° |
|-----|--------|--------|--------|--------|--------|
| 0° | 177676 | 177676 | 177676 | 177676 | 177676 |
| 5° | 167430 | 169387 | 176594 | 185064 | 188394 |
| 10° | 158459 | 161814 | 174424 | 191006 | 193230 |
| 15° | 146373 | 150282 | 169274 | 189047 | 179571 |
| 20° | 130377 | 134768 | 158313 | 173771 | 143991 |
| 25° | 109262 | 113397 | 140120 | 145754 | 99765 |
| 30° | 81750 | 86489 | 113772 | 112636 | 64904 |
| 35° | 54423 | 57709 | 81601 | 80283 | 42034 |
| 40° | 34322 | 36680 | 52758 | 53098 | 28972 |
| 45° | 24455 | 25472 | 33474 | 34913 | 22442 |
| 50° | 20370 | 20531 | 24859 | 25505 | 19070 |
| 55° | 17981 | 18023 | 20296 | 20831 | 17372 |
| 60° | 16648 | 16507 | 17575 | 17946 | 16548 |
| 65° | 15891 | 15749 | 16021 | 16333 | 15959 |
| 70° | 15436 | 15168 | 15184 | 15476 | 15637 |
| 75° | 14674 | 14230 | 14200 | 14704 | 15127 |
| 80° | 13352 | 12420 | 12474 | 13352 | 14281 |
| 85° | 9724 | 8071 | 8071 | 9229 | 10198 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 47063 cd/sqm



TEST NUMBER: P1433283
 CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL15

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 3597.5 | 8.2 |
| 10°-20° | 9787.3 | 22.4 |
| 20°-30° | 11478.5 | 26.3 |
| 30°-40° | 7982.5 | 18.3 |
| 40°-50° | 3967.0 | 9.1 |
| 50°-60° | 2372.6 | 5.4 |
| 60°-70° | 1670.0 | 3.8 |
| 70°-80° | 1075.7 | 2.5 |
| 80°-90° | 344.0 | 0.8 |
| 90°-100° | 36.9 | 0.1 |
| 100°-110° | 233.5 | 0.5 |
| 110°-120° | 430.0 | 1.0 |
| 120°-130° | 256.7 | 0.6 |
| 130°-140° | 156.9 | 0.4 |
| 140°-150° | 110.0 | 0.3 |
| 150°-160° | 73.4 | 0.2 |
| 160°-170° | 43.7 | 0.1 |
| 170°-180° | 14.9 | 0.0 |
| 0°-30° | 24863.2 | 57.0 |
| 0°-40° | 32845.8 | 75.3 |
| 0°-60° | 39185.4 | 89.8 |
| 0°-90° | 42275.1 | 96.9 |
| 90°-120° | 700.5 | 1.6 |
| 90°-150° | 1224.0 | 2.8 |
| 90°-180° | 1356.0 | 3.1 |
| 0°-180° | 43631.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|-------|-------|-------|-------|-------|------|
| 0° | 37835 | 37835 | 37835 | 37835 | 37835 | |
| 5° | 35749 | 36167 | 37706 | 39514 | 40225 | 3353 |
| 15° | 30708 | 31528 | 35513 | 39661 | 37673 | 8564 |
| 25° | 21820 | 22645 | 27982 | 29107 | 19923 | 9845 |
| 35° | 9988 | 10592 | 14977 | 14735 | 7715 | 6363 |
| 45° | 3957 | 4121 | 5416 | 5649 | 3631 | 3198 |
| 55° | 2430 | 2436 | 2743 | 2815 | 2348 | 2205 |
| 65° | 1659 | 1644 | 1672 | 1705 | 1666 | 1647 |
| 75° | 1034 | 1002 | 1000 | 1036 | 1066 | 1091 |
| 85° | 334 | 277 | 277 | 317 | 350 | 344 |
| 90° | 10 | 27 | 10 | 30 | 15 | 21 |
| 95° | 17 | 60 | 20 | 53 | 22 | 16 |
| 105° | 82 | 405 | 108 | 434 | 59 | 109 |
| 115° | 371 | 480 | 457 | 532 | 394 | 342 |
| 125° | 269 | 258 | 294 | 287 | 311 | 245 |
| 135° | 197 | 200 | 188 | 210 | 218 | 155 |
| 145° | 168 | 176 | 173 | 176 | 181 | 106 |
| 155° | 154 | 157 | 156 | 156 | 164 | 72 |
| 165° | 151 | 153 | 153 | 154 | 160 | 43 |
| 175° | 154 | 156 | 157 | 157 | 163 | 15 |
| 180° | 157 | 157 | 157 | 157 | 157 | |



TEST NUMBER: P1433283
 CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL15

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 37834.8 | 37834.8 | 37834.8 | 37834.8 | 37834.8 | 37834.8 | 37834.8 | 37834.8 | 37834.8 |
| 2.5° | 36711.8 | 36735.8 | 36992.6 | 37326.8 | 37812.9 | 38301.6 | 38697.5 | 38958.6 | 39087.7 |
| 5° | 35749.0 | 35882.4 | 36166.9 | 36780.6 | 37705.7 | 38684.7 | 39514.1 | 40056.8 | 40225.0 |
| 7.5° | 34811.1 | 34888.4 | 35364.4 | 36139.9 | 37449.5 | 38974.9 | 40207.3 | 40840.8 | 40995.5 |
| 10° | 33666.7 | 33841.9 | 34379.7 | 35294.2 | 37058.7 | 39157.9 | 40581.8 | 41035.9 | 41054.4 |
| 12.5° | 32320.2 | 32552.2 | 33107.7 | 34261.3 | 36435.1 | 39092.7 | 40456.2 | 40307.2 | 39968.9 |
| 15° | 30708.3 | 30911.9 | 31528.4 | 32866.5 | 35512.7 | 38706.0 | 39661.0 | 38448.5 | 37673.0 |
| 17.5° | 28967.3 | 29151.8 | 29687.3 | 31160.9 | 34213.0 | 37982.3 | 38000.8 | 35602.1 | 34139.2 |
| 20° | 26796.3 | 26941.0 | 27698.8 | 29144.6 | 32538.0 | 36821.7 | 35714.9 | 31327.7 | 29594.4 |
| 22.5° | 24486.3 | 24621.8 | 25295.1 | 26799.9 | 30438.0 | 35256.6 | 32531.6 | 27027.6 | 24663.0 |
| 25° | 21819.5 | 21893.3 | 22645.3 | 24006.0 | 27981.8 | 33339.0 | 29107.0 | 22342.3 | 19923.0 |
| 27.5° | 18819.2 | 18944.7 | 19731.5 | 21121.4 | 25092.9 | 30908.4 | 25460.4 | 18257.2 | 16025.3 |
| 30° | 15724.5 | 15932.3 | 16636.2 | 17880.5 | 21884.0 | 27792.4 | 21665.5 | 14539.7 | 12484.3 |
| 32.5° | 12836.2 | 12986.0 | 13487.6 | 14788.0 | 18291.3 | 24738.1 | 18021.0 | 11650.1 | 9909.0 |
| 35° | 9988.5 | 10138.2 | 10591.6 | 11868.6 | 14976.7 | 20917.0 | 14734.8 | 9154.1 | 7714.7 |
| 37.5° | 7635.2 | 7899.9 | 8190.7 | 9227.2 | 11753.6 | 17306.6 | 11745.8 | 7371.3 | 6257.4 |
| 40° | 5948.8 | 5991.4 | 6357.5 | 7020.8 | 9144.3 | 13532.2 | 9203.2 | 5884.3 | 5021.6 |
| 42.5° | 4761.9 | 4877.6 | 5035.0 | 5531.7 | 6928.6 | 10347.5 | 7233.7 | 4829.3 | 4265.3 |
| 45° | 3956.7 | 4002.1 | 4121.3 | 4454.7 | 5416.0 | 7614.6 | 5648.8 | 4074.5 | 3631.0 |
| 47.5° | 3461.5 | 3441.6 | 3518.2 | 3767.9 | 4410.7 | 5885.0 | 4578.1 | 3494.8 | 3184.0 |
| 50° | 3035.8 | 3023.7 | 3059.9 | 3226.6 | 3704.8 | 4515.7 | 3801.2 | 3050.6 | 2842.1 |
| 52.5° | 2705.1 | 2715.8 | 2719.4 | 2823.0 | 3182.6 | 3682.8 | 3237.2 | 2718.7 | 2578.2 |
| 55° | 2429.9 | 2443.4 | 2435.6 | 2512.2 | 2742.8 | 3096.1 | 2815.1 | 2444.8 | 2347.6 |
| 57.5° | 2214.9 | 2205.0 | 2194.3 | 2235.5 | 2408.7 | 2626.5 | 2444.8 | 2211.4 | 2146.8 |
| 60° | 2001.4 | 1992.1 | 1984.4 | 2011.3 | 2112.8 | 2274.5 | 2157.4 | 2007.7 | 1989.3 |
| 62.5° | 1818.4 | 1812.7 | 1812.0 | 1807.0 | 1885.0 | 1987.2 | 1907.8 | 1824.7 | 1808.4 |
| 65° | 1658.7 | 1652.4 | 1643.8 | 1636.0 | 1672.2 | 1767.3 | 1704.8 | 1660.1 | 1665.8 |
| 67.5° | 1499.1 | 1499.1 | 1484.2 | 1472.2 | 1507.6 | 1557.3 | 1530.3 | 1504.8 | 1511.2 |
| 70° | 1354.4 | 1355.1 | 1330.9 | 1321.7 | 1332.3 | 1385.5 | 1357.9 | 1361.5 | 1372.1 |
| 72.5° | 1199.0 | 1181.9 | 1164.2 | 1163.5 | 1164.9 | 1206.1 | 1196.9 | 1205.4 | 1216.8 |
| 75° | 1033.7 | 1013.8 | 1002.4 | 989.7 | 1000.3 | 1031.6 | 1035.8 | 1047.9 | 1065.6 |
| 77.5° | 874.0 | 843.6 | 834.3 | 828.0 | 820.8 | 856.3 | 869.8 | 886.1 | 912.3 |
| 80° | 702.4 | 669.0 | 653.4 | 644.2 | 656.2 | 672.5 | 702.4 | 714.4 | 751.3 |
| 82.5° | 519.4 | 494.5 | 475.3 | 474.6 | 480.3 | 495.2 | 520.8 | 543.4 | 564.7 |
| 85° | 334.2 | 294.4 | 277.4 | 283.8 | 277.4 | 300.1 | 317.2 | 344.1 | 350.5 |
| 87.5° | 120.6 | 94.4 | 90.1 | 99.4 | 97.2 | 104.3 | 119.1 | 129.8 | 130.6 |
| 90° | 10.2 | 16.2 | 27.3 | 17.6 | 10.2 | 17.6 | 30.1 | 19.0 | 15.2 |
| 92.5° | 14.7 | 24.3 | 43.4 | 22.8 | 13.3 | 23.5 | 41.9 | 24.1 | 19.0 |
| 95° | 16.9 | 28.0 | 60.4 | 30.2 | 19.9 | 28.7 | 52.9 | 26.4 | 21.9 |
| 97.5° | 22.0 | 30.9 | 69.2 | 36.8 | 30.1 | 35.3 | 59.6 | 27.9 | 25.6 |
| 100° | 28.7 | 36.1 | 107.6 | 45.6 | 39.7 | 39.7 | 107.5 | 31.5 | 28.5 |
| 102.5° | 47.9 | 75.8 | 227.6 | 84.7 | 59.6 | 77.3 | 247.4 | 60.2 | 33.7 |
| 105° | 81.7 | 159.1 | 405.1 | 176.0 | 107.5 | 174.5 | 433.8 | 149.4 | 58.7 |
| 107.5° | 140.6 | 284.3 | 534.8 | 310.8 | 202.6 | 324.0 | 558.3 | 290.8 | 130.2 |
| 110° | 261.5 | 377.1 | 560.5 | 426.4 | 323.3 | 452.3 | 609.1 | 396.9 | 258.3 |



TEST NUMBER: P1433283

CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL15

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 112.5° | 352.8 | 405.1 | 536.9 | 470.6 | 420.5 | 503.8 | 595.1 | 439.6 | 355.6 |
| 115° | 371.2 | 389.6 | 479.5 | 459.6 | 457.3 | 496.5 | 531.7 | 438.1 | 393.9 |
| 117.5° | 358.7 | 355.7 | 407.3 | 413.9 | 441.9 | 454.4 | 459.6 | 411.6 | 396.1 |
| 120° | 332.1 | 316.7 | 340.2 | 361.6 | 399.1 | 394.1 | 388.1 | 372.6 | 374.0 |
| 122.5° | 299.0 | 281.3 | 292.4 | 308.5 | 346.1 | 335.1 | 328.4 | 333.5 | 343.8 |
| 125° | 268.8 | 250.4 | 258.4 | 262.9 | 293.8 | 282.8 | 287.1 | 299.6 | 310.7 |
| 127.5° | 241.5 | 229.0 | 234.2 | 230.4 | 250.3 | 245.2 | 256.9 | 270.9 | 280.4 |
| 130° | 223.1 | 212.8 | 219.4 | 209.8 | 219.4 | 220.1 | 235.6 | 248.0 | 253.9 |
| 132.5° | 208.3 | 201.8 | 209.8 | 197.9 | 200.2 | 205.4 | 220.1 | 231.1 | 234.7 |
| 135° | 197.3 | 192.1 | 200.2 | 189.8 | 188.4 | 195.8 | 209.8 | 216.4 | 218.5 |
| 137.5° | 188.5 | 184.0 | 192.8 | 184.6 | 181.7 | 189.2 | 199.4 | 205.3 | 204.5 |
| 140° | 181.1 | 177.3 | 186.2 | 179.5 | 178.0 | 185.4 | 189.9 | 196.4 | 196.4 |
| 142.5° | 172.9 | 169.9 | 180.2 | 175.8 | 174.3 | 181.0 | 183.2 | 188.3 | 187.6 |
| 145° | 167.7 | 165.5 | 175.7 | 172.9 | 172.8 | 178.0 | 175.8 | 181.7 | 180.8 |
| 147.5° | 163.2 | 161.7 | 170.5 | 169.1 | 169.1 | 172.9 | 170.7 | 175.7 | 174.9 |
| 150° | 159.4 | 157.9 | 166.0 | 164.6 | 165.3 | 168.2 | 164.7 | 170.5 | 171.2 |
| 152.5° | 155.7 | 153.5 | 160.9 | 159.4 | 160.1 | 163.1 | 160.1 | 166.7 | 166.7 |
| 155° | 153.5 | 151.2 | 157.1 | 155.7 | 156.4 | 157.9 | 156.4 | 163.1 | 163.8 |
| 157.5° | 152.6 | 150.4 | 154.9 | 154.2 | 154.2 | 155.6 | 154.9 | 160.8 | 161.5 |
| 160° | 151.9 | 150.3 | 154.1 | 153.4 | 153.4 | 154.8 | 154.8 | 160.0 | 160.7 |
| 162.5° | 151.0 | 149.6 | 154.0 | 153.3 | 153.3 | 153.3 | 154.0 | 159.2 | 160.6 |
| 165° | 151.0 | 150.2 | 153.3 | 153.3 | 153.2 | 154.0 | 153.9 | 158.3 | 160.4 |
| 167.5° | 151.0 | 150.2 | 153.9 | 153.9 | 153.9 | 153.2 | 154.6 | 159.0 | 161.1 |
| 170° | 151.7 | 151.0 | 153.9 | 153.9 | 153.2 | 153.9 | 154.5 | 158.9 | 161.0 |
| 172.5° | 153.1 | 152.4 | 156.0 | 155.3 | 155.3 | 155.3 | 155.9 | 159.5 | 162.4 |
| 175° | 153.8 | 153.1 | 156.0 | 156.0 | 156.8 | 156.7 | 157.4 | 160.1 | 163.1 |
| 177.5° | 155.2 | 154.5 | 156.0 | 156.0 | 155.9 | 157.4 | 158.7 | 161.7 | 165.2 |
| 180° | 157.4 | 157.4 | 157.4 | 157.4 | 157.4 | 157.4 | 157.4 | 157.4 | 157.4 |



TEST NUMBER: P1433283
 CATALOG NUMBER: EHBR1-48-UNV-ASM-L930-UPL15

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 | 18.24 | 19.40 | 18.66 | 19.78 | 20.18 | 19.01 | 20.16 | 19.43 | 20.55 | 20.94 |
| | 3H | 20.06 | 21.09 | 20.50 | 21.49 | 21.93 | 20.57 | 21.60 | 21.01 | 22.00 | 22.44 |
| | 4H | 20.80 | 21.76 | 21.26 | 22.17 | 22.64 | 21.22 | 22.18 | 21.68 | 22.59 | 23.06 |
| | 6H | 21.37 | 22.25 | 21.84 | 22.69 | 23.16 | 21.71 | 22.60 | 22.19 | 23.03 | 23.51 |
| | 8H | 21.55 | 22.39 | 22.04 | 22.84 | 23.32 | 21.87 | 22.71 | 22.36 | 23.16 | 23.64 |
| | 12H | 21.65 | 22.45 | 22.14 | 22.90 | 23.40 | 21.95 | 22.75 | 22.44 | 23.20 | 23.70 |
| 4H | 2H | 18.76 | 19.72 | 19.22 | 20.14 | 20.60 | 19.39 | 20.35 | 19.85 | 20.77 | 21.23 |
| | 3H | 20.80 | 21.59 | 21.27 | 22.06 | 22.54 | 21.20 | 21.99 | 21.67 | 22.46 | 22.94 |
| | 4H | 21.67 | 22.38 | 22.16 | 22.86 | 23.38 | 21.99 | 22.70 | 22.48 | 23.18 | 23.70 |
| | 6H | 22.36 | 22.98 | 22.88 | 23.48 | 24.02 | 22.62 | 23.24 | 23.14 | 23.74 | 24.28 |
| | 8H | 22.59 | 23.16 | 23.11 | 23.67 | 24.21 | 22.83 | 23.40 | 23.35 | 23.91 | 24.45 |
| | 12H | 22.73 | 23.23 | 23.27 | 23.77 | 24.32 | 22.95 | 23.45 | 23.49 | 23.99 | 24.54 |
| 8H | 4H | 21.93 | 22.50 | 22.45 | 23.01 | 23.55 | 22.23 | 22.80 | 22.76 | 23.31 | 23.86 |
| | 6H | 22.75 | 23.21 | 23.30 | 23.77 | 24.32 | 23.00 | 23.46 | 23.55 | 24.02 | 24.57 |
| | 8H | 23.05 | 23.46 | 23.62 | 24.03 | 24.60 | 23.28 | 23.69 | 23.85 | 24.26 | 24.83 |
| | 12H | 23.25 | 23.61 | 23.82 | 24.16 | 24.81 | 23.46 | 23.83 | 24.03 | 24.38 | 25.02 |
| 12H | 4H | 21.94 | 22.44 | 22.48 | 22.98 | 23.53 | 22.24 | 22.75 | 22.78 | 23.29 | 23.84 |
| | 6H | 22.78 | 23.20 | 23.36 | 23.77 | 24.33 | 23.04 | 23.45 | 23.61 | 24.03 | 24.59 |
| | 8H | 23.13 | 23.49 | 23.70 | 24.05 | 24.69 | 23.37 | 23.73 | 23.94 | 24.28 | 24.93 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-5

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L930-N

Data in this report applies to families of products including EHBR-60-L930-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-5
 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-L930-N**
 Description: Elevate Round Highbay at, 60000 lumens, 3000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K): 2996
 CIE u': 0.2519
 CIE v': 0.5169
 Duv: -0.0033
 CIE x: 0.4325
 CIE y: 0.3945
 CIE z: 0.1730
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 584
 Purity: 48.21818
 Rf: 91.3
 Rg: 102

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 94.4 | | |
| R1: | 96.8 | R9: | 61.4 |
| R2: | 98.1 | R10: | 94.4 |
| R3: | 97.8 | R11: | 95.7 |
| R4: | 95.6 | R12: | 88.5 |
| R5: | 96.9 | R13: | 97.3 |
| R6: | 95.7 | R14: | 97.8 |
| R7: | 90.9 | R15: | 92.3 |
| R8: | 83.0 | | |



Test Conditions

Stabilization Time: 40M
 Operation Time: 1H 40M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-5

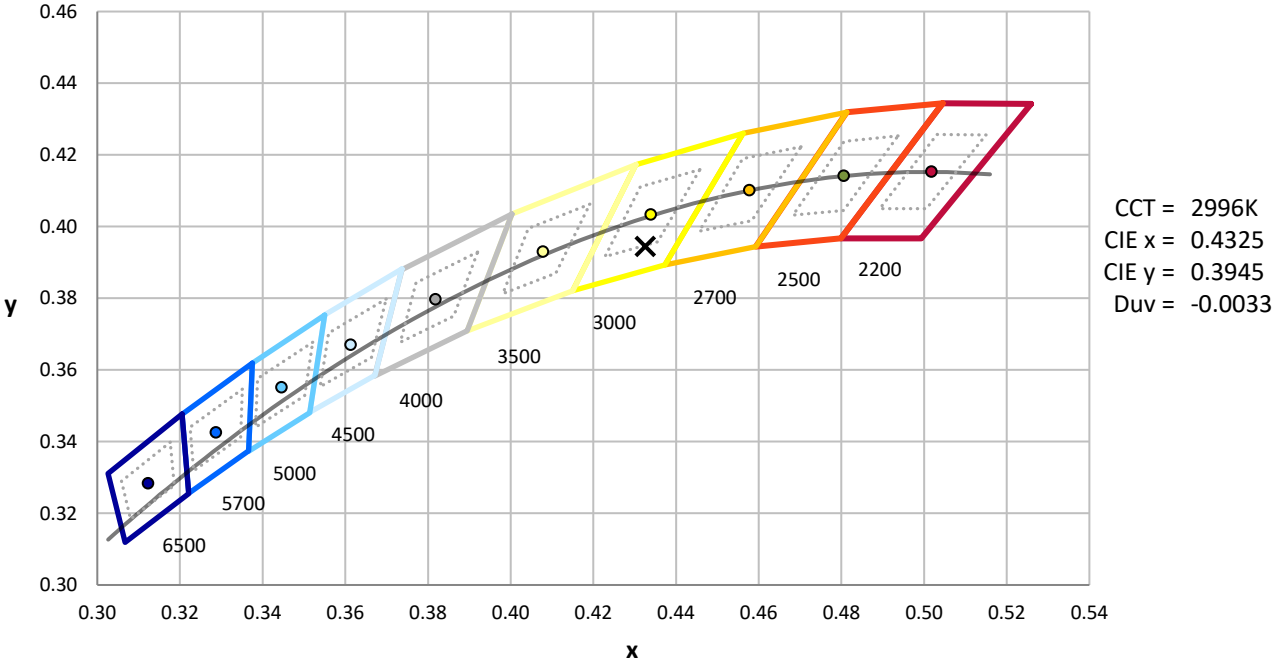
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | 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: SP1-2506-472-5

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3000K 7-step quadrangle

REPORT NUMBER: SP1-2506-472-5

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 | 101 | NR | 620 | 317 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 320 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 141 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 158 | NR | 635 | 651 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 171 | NR | 640 | 207 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 182 | NR | 645 | 201 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 189 | NR | 650 | 174 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 194 | NR | 655 | 146 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 1 | NR | 530 | 199 | NR | 660 | 124 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 3 | NR | 535 | 205 | NR | 665 | 105 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 210 | NR | 670 | 96 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 216 | NR | 675 | 79 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 13 | NR | 550 | 222 | NR | 680 | 67 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 22 | NR | 555 | 230 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 37 | NR | 560 | 240 | NR | 690 | 49 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 60 | NR | 565 | 248 | NR | 695 | 42 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 101 | NR | 570 | 258 | NR | 700 | 36 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 172 | NR | 575 | 268 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 223 | NR | 580 | 278 | NR | 710 | 26 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 167 | NR | 585 | 287 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 126 | NR | 590 | 295 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 111 | NR | 595 | 298 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 86 | NR | 600 | 303 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 74 | NR | 605 | 307 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 341 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 368 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-5

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.44

| 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 | 101 | NR | 620 | 317 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 320 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 141 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 158 | NR | 635 | 651 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 171 | NR | 640 | 207 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 182 | NR | 645 | 201 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 189 | NR | 650 | 174 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 194 | NR | 655 | 146 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 1 | NR | 530 | 199 | NR | 660 | 124 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 3 | NR | 535 | 205 | NR | 665 | 105 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 210 | NR | 670 | 96 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 216 | NR | 675 | 79 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 13 | NR | 550 | 222 | NR | 680 | 67 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 22 | NR | 555 | 230 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 37 | NR | 560 | 240 | NR | 690 | 49 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 60 | NR | 565 | 248 | NR | 695 | 42 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 101 | NR | 570 | 258 | NR | 700 | 36 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 172 | NR | 575 | 268 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 223 | NR | 580 | 278 | NR | 710 | 26 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 167 | NR | 585 | 287 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 126 | NR | 590 | 295 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 111 | NR | 595 | 298 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 86 | NR | 600 | 303 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 74 | NR | 605 | 307 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 341 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 368 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-5

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.85

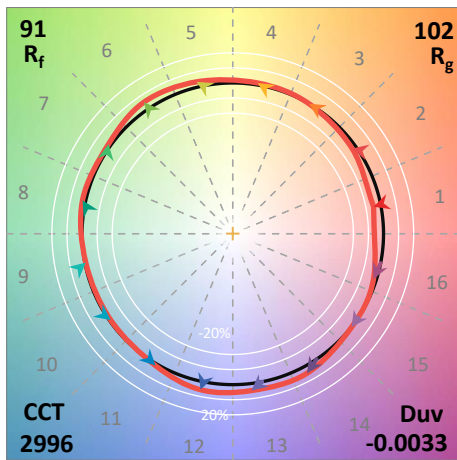
| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 101 | NR | 620 | 317 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 320 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 141 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 158 | NR | 635 | 651 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 171 | NR | 640 | 207 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 182 | NR | 645 | 201 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 189 | NR | 650 | 174 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 194 | NR | 655 | 146 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 1 | NR | 530 | 199 | NR | 660 | 124 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 3 | NR | 535 | 205 | NR | 665 | 105 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 210 | NR | 670 | 96 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 216 | NR | 675 | 79 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 13 | NR | 550 | 222 | NR | 680 | 67 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 22 | NR | 555 | 230 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 37 | NR | 560 | 240 | NR | 690 | 49 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 60 | NR | 565 | 248 | NR | 695 | 42 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 101 | NR | 570 | 258 | NR | 700 | 36 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 172 | NR | 575 | 268 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 223 | NR | 580 | 278 | NR | 710 | 26 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 167 | NR | 585 | 287 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 126 | NR | 590 | 295 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 111 | NR | 595 | 298 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 86 | NR | 600 | 303 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 74 | NR | 605 | 307 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 341 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 368 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.3$
 $R_g = 102$
 $CIE R_a = 94.4$
 $R_9 = 61.4$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 91 | CES51 = 96 | CES76 = 89 |
| CES02 = 63 | CES27 = 96 | CES52 = 95 | CES77 = 85 |
| CES03 = 32 | CES28 = 96 | CES53 = 93 | CES78 = 86 |
| CES04 = 70 | CES29 = 90 | CES54 = 98 | CES79 = 89 |
| CES05 = 51 | CES30 = 96 | CES55 = 98 | CES80 = 91 |
| CES06 = 51 | CES31 = 90 | CES56 = 95 | CES81 = 72 |
| CES07 = 44 | CES32 = 84 | CES57 = 95 | CES82 = 95 |
| CES08 = 42 | CES33 = 91 | CES58 = 95 | CES83 = 93 |
| CES09 = 29 | CES34 = 92 | CES59 = 99 | CES84 = 96 |
| CES10 = 76 | CES35 = 96 | CES60 = 96 | CES85 = 80 |
| CES11 = 59 | CES36 = 90 | CES61 = 96 | CES86 = 77 |
| CES12 = 65 | CES37 = 94 | CES62 = 95 | CES87 = 91 |
| CES13 = 44 | CES38 = 99 | CES63 = 94 | CES88 = 96 |
| CES14 = 74 | CES39 = 97 | CES64 = 96 | CES89 = 82 |
| CES15 = 72 | CES40 = 94 | CES65 = 92 | CES90 = 97 |
| CES16 = 48 | CES41 = 94 | CES66 = 95 | CES91 = 82 |
| CES17 = 50 | CES42 = 91 | CES67 = 94 | CES92 = 78 |
| CES18 = 57 | CES43 = 88 | CES68 = 93 | CES93 = 87 |
| CES19 = 72 | CES44 = 99 | CES69 = 94 | CES94 = 73 |
| CES20 = 67 | CES45 = 93 | CES70 = 90 | CES95 = 85 |
| CES21 = 86 | CES46 = 93 | CES71 = 90 | CES96 = 92 |
| CES22 = 79 | CES47 = 86 | CES72 = 96 | CES97 = 93 |
| CES23 = 92 | CES48 = 95 | CES73 = 85 | CES98 = 94 |
| CES24 = 91 | CES49 = 91 | CES74 = 90 | CES99 = 93 |
| CES25 = 72 | CES50 = 96 | CES75 = 90 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)