

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: EHBR1-54-UNV-A1-L840-UPL12

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: REPORT IS A COMBINATION OF REPORTS P1431860 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-54-UNV-A1-L840-UPL12
Description: Elevate Round Highbay at, 54000 lumens, 4000K 80CRI LEDs with A lens
Light Source: -
Ballast/Driver: -

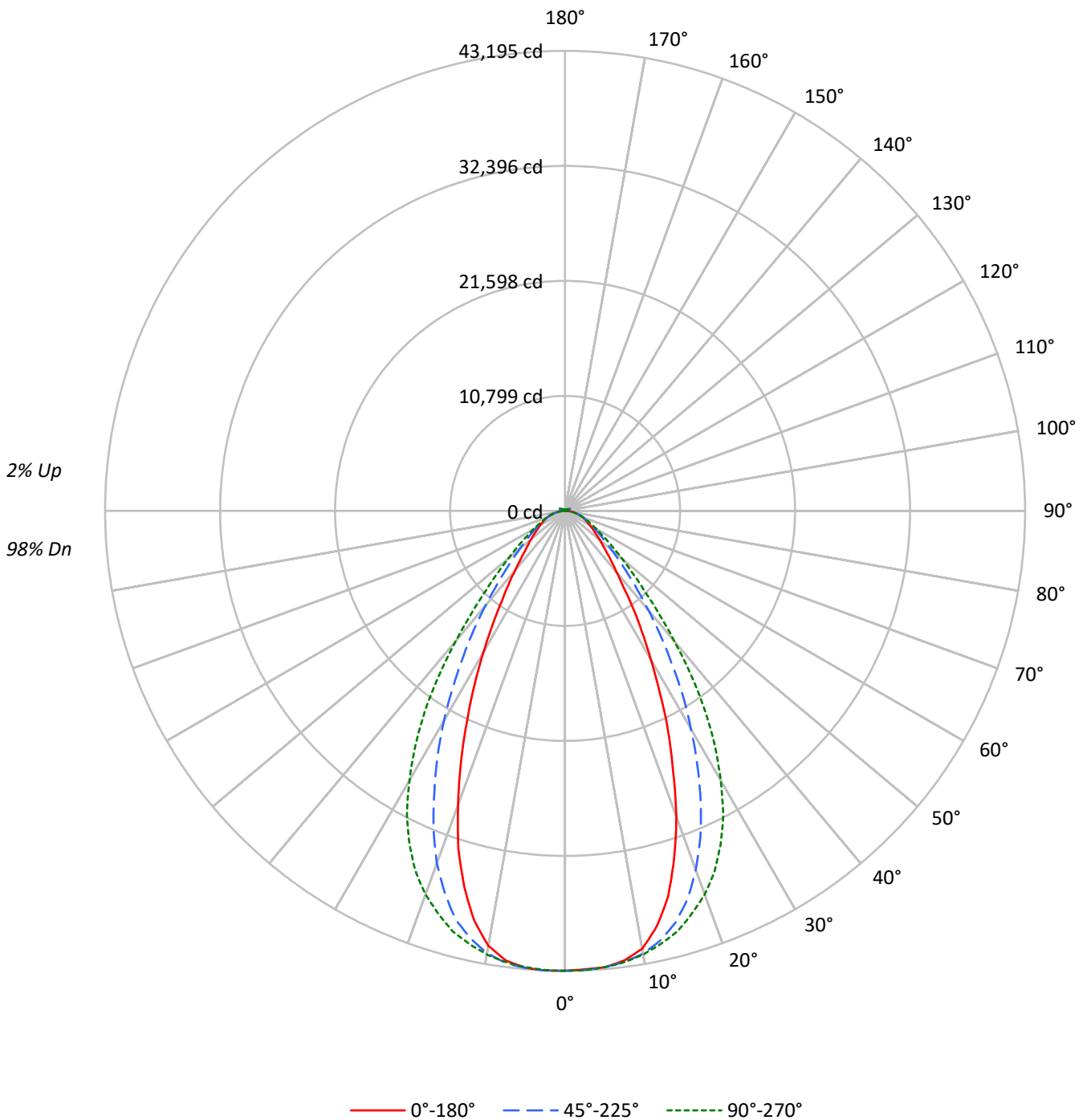
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 54848.0 lumens
Efficiency: N/A
Efficacy: 180.8 lumens/watt
Spacing Criteria (0/90/45): 0.8 / 1.07 / 0.95
Luminous Opening: Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type: Direct

Input Watts (W): 303.4
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

TEST NUMBER:
CATALOG NUMBER: EHBR1-54-UNV-A1-L840-UPL12

Luminous Intensity Polar Plot





TEST NUMBER:

CATALOG NUMBER: EHBR1-54-UNV-A1-L840-UPL12

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 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 100 | 100 | 100 | 98 |
| 1 | 111 | 108 | 104 | 102 | 108 | 105 | 102 | 100 | 101 | 98 | 96 | 96 | 95 | 93 | 93 | 91 | 90 | 93 | 91 | 90 | 88 |
| 2 | 104 | 98 | 93 | 88 | 101 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 85 | 83 | 85 | 83 | 80 | 85 | 83 | 80 | 79 |
| 3 | 97 | 89 | 83 | 78 | 95 | 87 | 82 | 77 | 84 | 79 | 76 | 81 | 77 | 74 | 79 | 75 | 73 | 79 | 75 | 73 | 71 |
| 4 | 91 | 82 | 75 | 70 | 89 | 80 | 74 | 69 | 78 | 72 | 68 | 75 | 71 | 67 | 73 | 69 | 66 | 73 | 69 | 66 | 64 |
| 5 | 85 | 75 | 68 | 63 | 83 | 74 | 67 | 62 | 72 | 66 | 62 | 70 | 65 | 61 | 68 | 64 | 60 | 68 | 64 | 60 | 58 |
| 6 | 80 | 69 | 62 | 57 | 78 | 68 | 62 | 57 | 67 | 61 | 56 | 65 | 60 | 56 | 63 | 59 | 55 | 63 | 59 | 55 | 53 |
| 7 | 75 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 55 | 51 | 59 | 54 | 51 | 59 | 54 | 51 | 49 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 55 | 51 | 47 | 55 | 51 | 47 | 45 |
| 9 | 67 | 56 | 49 | 45 | 66 | 56 | 49 | 45 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 52 | 47 | 44 | 42 |
| 10 | 64 | 53 | 46 | 42 | 63 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 49 | 44 | 41 | 49 | 44 | 41 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° | 135° | 180° |
|-----|--------|--------|--------|--------|--------|
| 0° | 202761 | 202761 | 202761 | 202761 | 202761 |
| 5° | 201421 | 201391 | 201400 | 201756 | 201633 |
| 10° | 196442 | 198732 | 199047 | 198486 | 195157 |
| 15° | 178338 | 190782 | 194709 | 189252 | 174243 |
| 20° | 148613 | 174541 | 186465 | 171255 | 142827 |
| 25° | 114930 | 150918 | 172980 | 145407 | 108976 |
| 30° | 83775 | 122904 | 151950 | 118241 | 79515 |
| 35° | 60388 | 94730 | 124880 | 90650 | 56446 |
| 40° | 43445 | 69966 | 92030 | 67013 | 42105 |
| 45° | 34234 | 51186 | 64276 | 48967 | 33049 |
| 50° | 28403 | 38458 | 46522 | 37190 | 27973 |
| 55° | 24806 | 30367 | 35232 | 29859 | 24472 |
| 60° | 22371 | 25350 | 28074 | 25193 | 22529 |
| 65° | 20923 | 22361 | 23592 | 22431 | 21122 |
| 70° | 19870 | 20344 | 20973 | 20458 | 20066 |
| 75° | 18537 | 18422 | 18537 | 18473 | 18717 |
| 80° | 16743 | 15540 | 15196 | 15781 | 16743 |
| 85° | 11603 | 9840 | 9735 | 9997 | 11947 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 67345 cd/sqm



TEST NUMBER:

CATALOG NUMBER: EHBR1-54-UNV-A1-L840-UPL12

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 4077.4 | 7.4 |
| 10°-20° | 10958.5 | 20.0 |
| 20°-30° | 13325.4 | 24.3 |
| 30°-40° | 10854.6 | 19.8 |
| 40°-50° | 6517.1 | 11.9 |
| 50°-60° | 3750.6 | 6.8 |
| 60°-70° | 2347.3 | 4.3 |
| 70°-80° | 1382.4 | 2.5 |
| 80°-90° | 406.4 | 0.7 |
| 90°-100° | 32.0 | 0.1 |
| 100°-110° | 211.0 | 0.4 |
| 110°-120° | 390.1 | 0.7 |
| 120°-130° | 231.9 | 0.4 |
| 130°-140° | 142.0 | 0.3 |
| 140°-150° | 100.7 | 0.2 |
| 150°-160° | 67.3 | 0.1 |
| 160°-170° | 39.8 | 0.1 |
| 170°-180° | 13.5 | 0.0 |
| 0°-30° | 28361.3 | 51.7 |
| 0°-40° | 39215.9 | 71.5 |
| 0°-60° | 49483.6 | 90.2 |
| 0°-90° | 53619.7 | 97.8 |
| 90°-120° | 633.1 | 1.2 |
| 90°-150° | 1107.6 | 2.0 |
| 90°-180° | 1228.0 | 2.2 |
| 0°-180° | 54848.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|-------|-------|-------|-------|-------|-------|
| 0° | 43177 | 43177 | 43177 | 43177 | 43177 | |
| 5° | 43006 | 43000 | 43002 | 43078 | 43052 | 4064 |
| 15° | 37414 | 40025 | 40849 | 39704 | 36555 | 10293 |
| 25° | 22952 | 30138 | 34544 | 29038 | 21762 | 10457 |
| 35° | 11083 | 17386 | 22920 | 16638 | 10360 | 7012 |
| 45° | 5539 | 8282 | 10400 | 7923 | 5347 | 4369 |
| 55° | 3352 | 4104 | 4761 | 4035 | 3307 | 3030 |
| 65° | 2184 | 2334 | 2462 | 2341 | 2205 | 2171 |
| 75° | 1306 | 1298 | 1306 | 1301 | 1318 | 1383 |
| 85° | 399 | 338 | 335 | 344 | 411 | 426 |
| 90° | 10 | 24 | 9 | 26 | 10 | 24 |
| 95° | 17 | 54 | 17 | 46 | 16 | 16 |
| 105° | 75 | 369 | 97 | 393 | 50 | 100 |
| 115° | 339 | 436 | 415 | 482 | 355 | 313 |
| 125° | 246 | 233 | 265 | 259 | 279 | 224 |
| 135° | 182 | 182 | 170 | 190 | 197 | 142 |
| 145° | 154 | 160 | 157 | 162 | 166 | 98 |
| 155° | 141 | 143 | 141 | 144 | 152 | 66 |
| 165° | 140 | 140 | 138 | 140 | 146 | 40 |
| 175° | 145 | 144 | 140 | 142 | 148 | 14 |
| 180° | 144 | 144 | 144 | 144 | 144 | |



TEST NUMBER:

CATALOG NUMBER: EHBR1-54-UNV-A1-L840-UPL12

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 43176.6 | 43176.6 | 43176.6 | 43176.6 | 43176.6 | 43176.6 | 43176.6 | 43176.6 | 43176.6 |
| 2.5° | 43081.6 | 43120.5 | 43136.8 | 43145.8 | 43155.8 | 43182.9 | 43194.6 | 43175.7 | 43191.9 |
| 5° | 43006.5 | 43009.3 | 43000.2 | 43040.9 | 43002.0 | 43029.2 | 43078.0 | 43059.0 | 43051.8 |
| 7.5° | 42568.9 | 42659.3 | 42712.6 | 42726.2 | 42733.4 | 42766.9 | 42801.3 | 42606.8 | 42577.9 |
| 10° | 41736.9 | 41887.9 | 42223.4 | 42319.3 | 42290.3 | 42344.6 | 42171.0 | 41662.7 | 41463.8 |
| 12.5° | 39912.9 | 40443.7 | 41315.5 | 41703.4 | 41632.9 | 41680.8 | 41089.4 | 40016.9 | 39400.1 |
| 15° | 37414.3 | 38192.9 | 40025.0 | 40790.1 | 40848.9 | 40790.1 | 39704.0 | 37614.1 | 36555.2 |
| 17.5° | 34092.7 | 35530.6 | 38228.1 | 39713.0 | 39628.0 | 39656.1 | 37594.2 | 34505.1 | 33293.3 |
| 20° | 30544.2 | 32077.0 | 35873.3 | 38350.2 | 38324.0 | 38166.7 | 35197.8 | 31123.8 | 29355.0 |
| 22.5° | 26530.8 | 28507.7 | 33174.8 | 36674.5 | 36664.6 | 36402.3 | 32279.6 | 27431.5 | 25527.0 |
| 25° | 22951.5 | 24890.4 | 30138.1 | 34621.7 | 34544.0 | 34245.5 | 29037.6 | 23748.2 | 21762.4 |
| 27.5° | 19251.1 | 21266.8 | 26896.2 | 32216.3 | 32162.9 | 31837.3 | 25938.5 | 20305.5 | 18415.5 |
| 30° | 16114.0 | 17957.0 | 23640.6 | 29569.3 | 29227.5 | 29190.4 | 22743.5 | 17117.8 | 15294.7 |
| 32.5° | 13426.4 | 15006.2 | 20571.4 | 26801.2 | 26196.2 | 26368.9 | 19559.4 | 14451.9 | 12645.0 |
| 35° | 11083.3 | 12475.0 | 17386.4 | 23599.9 | 22919.9 | 23143.3 | 16637.6 | 11858.3 | 10359.8 |
| 37.5° | 8995.2 | 10333.6 | 14687.0 | 20486.4 | 19446.4 | 19867.8 | 14067.5 | 9903.2 | 8702.2 |
| 40° | 7530.2 | 8591.9 | 12126.9 | 17069.9 | 15951.2 | 16637.6 | 11615.0 | 8260.0 | 7297.8 |
| 42.5° | 6488.5 | 7181.2 | 10009.0 | 13808.0 | 12949.8 | 13436.3 | 9573.1 | 6905.4 | 6185.5 |
| 45° | 5538.9 | 6091.5 | 8281.7 | 10896.1 | 10399.6 | 10850.9 | 7922.7 | 5888.0 | 5347.2 |
| 47.5° | 4838.1 | 5264.0 | 6817.6 | 8799.0 | 8490.6 | 8633.5 | 6616.9 | 5138.3 | 4698.8 |
| 50° | 4233.1 | 4562.3 | 5731.6 | 7101.6 | 6933.4 | 7021.1 | 5542.6 | 4470.9 | 4168.9 |
| 52.5° | 3762.9 | 4004.3 | 4807.3 | 5836.5 | 5753.3 | 5766.8 | 4723.2 | 3932.9 | 3714.0 |
| 55° | 3352.3 | 3520.5 | 4103.8 | 4781.1 | 4761.2 | 4764.8 | 4035.1 | 3485.2 | 3307.1 |
| 57.5° | 2993.3 | 3132.6 | 3526.8 | 4016.1 | 3987.1 | 3993.5 | 3494.3 | 3095.5 | 2980.6 |
| 60° | 2689.4 | 2782.6 | 3047.5 | 3393.9 | 3374.9 | 3366.8 | 3028.6 | 2748.2 | 2708.4 |
| 62.5° | 2419.9 | 2479.6 | 2663.2 | 2909.2 | 2873.0 | 2881.2 | 2662.3 | 2482.3 | 2423.6 |
| 65° | 2183.9 | 2204.7 | 2334.0 | 2486.0 | 2462.5 | 2482.3 | 2341.3 | 2218.3 | 2204.7 |
| 67.5° | 1953.3 | 1974.1 | 2050.1 | 2152.3 | 2125.1 | 2141.4 | 2051.9 | 1979.5 | 1967.8 |
| 70° | 1743.5 | 1742.6 | 1785.1 | 1840.3 | 1840.3 | 1843.0 | 1795.1 | 1751.7 | 1760.7 |
| 72.5° | 1526.5 | 1521.1 | 1533.7 | 1570.8 | 1560.8 | 1595.2 | 1544.6 | 1531.0 | 1532.8 |
| 75° | 1305.8 | 1290.5 | 1297.7 | 1316.7 | 1305.8 | 1323.9 | 1301.3 | 1318.5 | 1318.5 |
| 77.5° | 1097.8 | 1068.9 | 1059.9 | 1062.6 | 1042.7 | 1069.8 | 1075.2 | 1087.0 | 1114.1 |
| 80° | 880.8 | 840.1 | 817.5 | 816.6 | 799.4 | 816.6 | 830.2 | 854.6 | 880.8 |
| 82.5° | 653.8 | 618.6 | 580.6 | 573.3 | 562.5 | 572.4 | 590.5 | 619.5 | 662.0 |
| 85° | 398.8 | 361.7 | 338.2 | 325.6 | 334.6 | 334.6 | 343.6 | 384.3 | 410.6 |
| 87.5° | 143.8 | 125.7 | 103.1 | 104.0 | 106.7 | 110.3 | 114.8 | 144.7 | 158.3 |
| 90° | 10.5 | 14.1 | 24.2 | 15.4 | 8.7 | 14.8 | 25.5 | 13.4 | 9.6 |
| 92.5° | 13.7 | 21.5 | 39.0 | 20.1 | 11.4 | 20.1 | 36.3 | 18.1 | 13.0 |
| 95° | 16.6 | 24.8 | 54.4 | 26.9 | 16.8 | 24.8 | 46.3 | 20.1 | 15.7 |
| 97.5° | 20.6 | 27.5 | 62.5 | 32.9 | 26.2 | 30.9 | 52.4 | 21.5 | 19.0 |
| 100° | 26.6 | 32.2 | 97.4 | 40.3 | 34.9 | 34.9 | 96.0 | 24.8 | 22.6 |
| 102.5° | 44.1 | 68.5 | 206.9 | 75.9 | 53.1 | 68.5 | 223.0 | 50.4 | 27.3 |
| 105° | 75.0 | 144.4 | 368.7 | 159.2 | 96.7 | 157.2 | 392.9 | 131.6 | 49.5 |
| 107.5° | 128.7 | 258.6 | 486.2 | 282.1 | 183.4 | 293.5 | 506.4 | 260.6 | 114.6 |
| 110° | 238.9 | 343.2 | 509.8 | 387.5 | 293.5 | 410.4 | 552.7 | 357.3 | 231.5 |



TEST NUMBER:

CATALOG NUMBER: EHBR1-54-UNV-A1-L840-UPL12

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 112.5° | 322.2 | 368.7 | 488.3 | 427.8 | 382.1 | 457.4 | 540.0 | 396.3 | 320.1 |
| 115° | 339.0 | 354.6 | 435.9 | 417.7 | 415.1 | 450.7 | 482.2 | 394.9 | 355.1 |
| 117.5° | 328.4 | 323.7 | 370.1 | 375.4 | 401.0 | 412.4 | 416.4 | 370.7 | 357.1 |
| 120° | 303.4 | 288.1 | 308.9 | 327.7 | 362.0 | 357.3 | 350.6 | 336.0 | 336.9 |
| 122.5° | 274.0 | 256.1 | 264.6 | 278.7 | 313.0 | 302.9 | 296.2 | 299.8 | 310.3 |
| 125° | 245.8 | 227.9 | 233.1 | 236.4 | 265.3 | 255.2 | 258.8 | 268.9 | 279.4 |
| 127.5° | 221.0 | 208.4 | 210.9 | 206.9 | 225.0 | 220.3 | 231.3 | 243.6 | 251.9 |
| 130° | 204.2 | 193.9 | 197.7 | 187.4 | 197.0 | 198.4 | 212.7 | 222.1 | 227.7 |
| 132.5° | 191.0 | 184.0 | 189.4 | 177.1 | 179.8 | 186.1 | 198.8 | 207.8 | 210.5 |
| 135° | 181.8 | 175.5 | 181.6 | 169.9 | 170.2 | 178.2 | 189.6 | 195.0 | 196.6 |
| 137.5° | 173.1 | 168.4 | 174.4 | 166.4 | 164.3 | 172.4 | 181.1 | 185.2 | 184.7 |
| 140° | 166.8 | 161.9 | 168.6 | 162.6 | 161.2 | 169.3 | 173.3 | 178.9 | 177.6 |
| 142.5° | 159.0 | 156.3 | 163.5 | 159.4 | 158.1 | 166.4 | 168.4 | 171.7 | 171.3 |
| 145° | 153.8 | 151.8 | 159.7 | 157.6 | 157.0 | 163.2 | 161.9 | 167.5 | 165.5 |
| 147.5° | 151.3 | 148.9 | 155.2 | 154.5 | 154.5 | 158.5 | 157.4 | 162.4 | 161.3 |
| 150° | 147.5 | 145.2 | 151.4 | 150.7 | 151.4 | 154.1 | 152.3 | 158.9 | 159.1 |
| 152.5° | 143.7 | 141.4 | 146.9 | 145.3 | 146.0 | 148.7 | 147.9 | 154.2 | 155.3 |
| 155° | 141.2 | 139.0 | 143.2 | 141.3 | 141.3 | 143.6 | 144.1 | 151.3 | 152.2 |
| 157.5° | 141.2 | 138.7 | 141.7 | 139.9 | 139.9 | 141.4 | 142.6 | 149.1 | 150.0 |
| 160° | 141.0 | 138.5 | 140.8 | 139.0 | 138.3 | 140.5 | 141.7 | 147.5 | 148.4 |
| 162.5° | 140.8 | 138.3 | 140.3 | 138.7 | 137.8 | 138.7 | 139.9 | 146.6 | 147.5 |
| 165° | 140.3 | 138.5 | 140.1 | 138.3 | 137.6 | 138.3 | 139.7 | 144.1 | 145.7 |
| 167.5° | 141.2 | 139.7 | 140.3 | 138.5 | 137.9 | 137.2 | 139.9 | 143.7 | 145.3 |
| 170° | 141.5 | 140.6 | 140.6 | 138.1 | 136.5 | 137.4 | 139.4 | 143.3 | 144.8 |
| 172.5° | 143.3 | 142.4 | 142.4 | 139.9 | 138.3 | 139.2 | 140.6 | 143.7 | 146.0 |
| 175° | 145.3 | 143.5 | 143.7 | 141.0 | 140.1 | 140.3 | 142.4 | 144.8 | 148.0 |
| 177.5° | 146.9 | 145.1 | 144.6 | 141.9 | 140.3 | 141.2 | 143.9 | 146.4 | 150.2 |
| 180° | 143.9 | 143.9 | 143.9 | 143.9 | 143.9 | 143.9 | 143.9 | 143.9 | 143.9 |



TEST NUMBER: CATALOG
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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 | 20.18 | 21.41 | 20.59 | 21.77 | 22.15 | 21.17 | 22.39 | 21.57 | 22.76 | 23.13 |
| | 3H | 21.67 | 22.76 | 22.09 | 23.14 | 23.56 | 22.43 | 23.52 | 22.85 | 23.90 | 24.32 |
| | 4H | 22.27 | 23.29 | 22.71 | 23.69 | 24.13 | 22.93 | 23.95 | 23.38 | 24.35 | 24.79 |
| | 6H | 22.74 | 23.67 | 23.19 | 24.09 | 24.54 | 23.29 | 24.23 | 23.75 | 24.64 | 25.09 |
| | 8H | 22.89 | 23.77 | 23.36 | 24.21 | 24.67 | 23.39 | 24.27 | 23.86 | 24.71 | 25.17 |
| | 12H | 22.96 | 23.81 | 23.44 | 24.24 | 24.72 | 23.43 | 24.28 | 23.90 | 24.70 | 25.19 |
| 4H | 2H | 20.71 | 21.73 | 21.15 | 22.13 | 22.57 | 21.49 | 22.51 | 21.93 | 22.90 | 23.35 |
| | 3H | 22.40 | 23.23 | 22.85 | 23.68 | 24.14 | 22.98 | 23.82 | 23.44 | 24.27 | 24.73 |
| | 4H | 23.11 | 23.86 | 23.59 | 24.33 | 24.83 | 23.60 | 24.36 | 24.08 | 24.82 | 25.32 |
| | 6H | 23.70 | 24.34 | 24.20 | 24.83 | 25.35 | 24.08 | 24.73 | 24.59 | 25.22 | 25.74 |
| | 8H | 23.88 | 24.49 | 24.39 | 24.98 | 25.50 | 24.22 | 24.82 | 24.73 | 25.31 | 25.84 |
| | 12H | 23.99 | 24.53 | 24.52 | 25.05 | 25.58 | 24.29 | 24.82 | 24.81 | 25.35 | 25.87 |
| 8H | 4H | 23.34 | 23.95 | 23.85 | 24.44 | 24.96 | 23.79 | 24.39 | 24.30 | 24.88 | 25.41 |
| | 6H | 24.03 | 24.52 | 24.57 | 25.06 | 25.60 | 24.37 | 24.86 | 24.91 | 25.40 | 25.94 |
| | 8H | 24.28 | 24.72 | 24.84 | 25.28 | 25.82 | 24.56 | 25.01 | 25.12 | 25.56 | 26.11 |
| | 12H | 24.45 | 24.84 | 25.00 | 25.37 | 26.00 | 24.69 | 25.08 | 25.24 | 25.61 | 26.23 |
| 12H | 4H | 23.34 | 23.88 | 23.87 | 24.40 | 24.93 | 23.79 | 24.32 | 24.31 | 24.84 | 25.37 |
| | 6H | 24.05 | 24.50 | 24.61 | 25.05 | 25.60 | 24.39 | 24.83 | 24.95 | 25.39 | 25.93 |
| | 8H | 24.35 | 24.74 | 24.90 | 25.27 | 25.90 | 24.63 | 25.02 | 25.18 | 25.55 | 26.17 |

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: SP1-2506-472-1

Test Date: 07/30/2025

Luminaire Tested: EHBR-60-L840-N

Data in this report applies to families of products including EHBR-60-L840-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-1
 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-L840-N**
 Description: Elevate Round Highbay at, 60000 lumens, 4000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K): 3898
 CIE u': 0.2263
 CIE v': 0.5052
 Duv: 0.0013
 CIE x: 0.3861
 CIE y: 0.3831
 CIE z: 0.2308
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 578
 Purity: 30.85729
 Rf: 80.7
 Rg: 102.1

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 82.1 | | |
| R1: | 84.4 | R9: | 38.5 |
| R2: | 83.5 | R10: | 58.9 |
| R3: | 80.8 | R11: | 83.6 |
| R4: | 83.9 | R12: | 54.2 |
| R5: | 82.1 | R13: | 82.8 |
| R6: | 77.3 | R14: | 88.2 |
| R7: | 86.4 | R15: | 81.2 |
| R8: | 78.3 | | |



Test Conditions

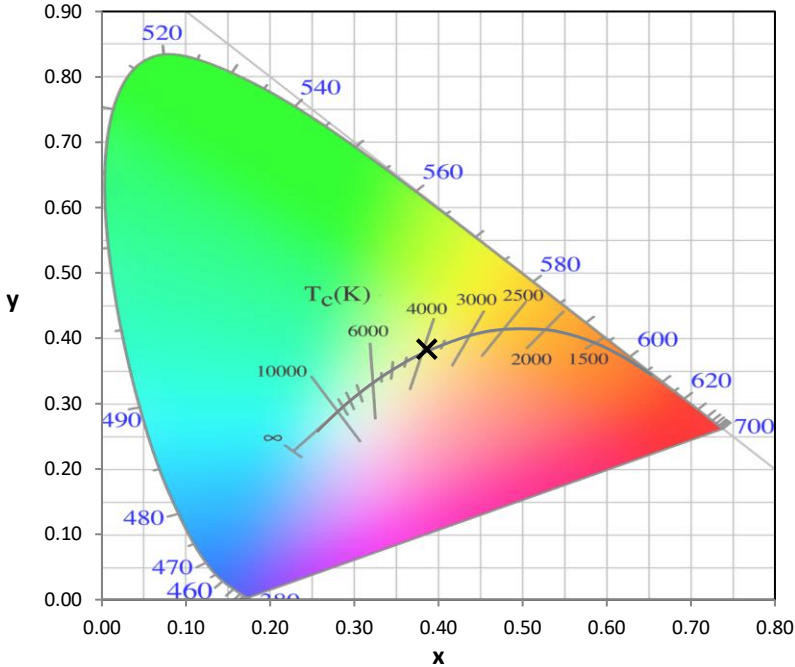
Stabilization Time: 42M
 Operation Time: 1H 42M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-1

| 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: SP1-2506-472-1

CIE 1931 Chromaticity Diagram



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



CCT = 3898K
 CIE x = 0.3861
 CIE y = 0.3831
 Duv = 0.0013

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-1

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 | 277 | NR | 750 | 6 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 278 | NR | 755 | 5 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 124 | NR | 630 | 1000 | NR | 760 | 4 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 168 | NR | 635 | 623 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 209 | NR | 640 | 162 | NR | 770 | 3 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 246 | NR | 645 | 158 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 273 | NR | 650 | 134 | NR | 780 | 2 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 292 | NR | 655 | 109 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 305 | NR | 660 | 91 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 313 | NR | 665 | 75 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 11 | NR | 540 | 319 | NR | 670 | 70 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 323 | NR | 675 | 56 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 42 | NR | 550 | 326 | NR | 680 | 47 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 76 | NR | 555 | 330 | NR | 685 | 41 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 125 | NR | 560 | 333 | NR | 690 | 35 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 193 | NR | 565 | 336 | NR | 695 | 30 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 302 | NR | 570 | 336 | NR | 700 | 26 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 432 | NR | 575 | 335 | NR | 705 | 22 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 380 | NR | 580 | 332 | NR | 710 | 19 | NR | 840 | 0 | NR | 970 | 0 | NR |
| 455 | 213 | NR | 585 | 326 | NR | 715 | 16 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 147 | NR | 590 | 319 | NR | 720 | 14 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 307 | NR | 725 | 12 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 65 | NR | 600 | 299 | NR | 730 | 10 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 50 | NR | 605 | 291 | NR | 735 | 9 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 46 | NR | 610 | 317 | NR | 740 | 8 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 47 | NR | 615 | 336 | NR | 745 | 7 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-1

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.55

| 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 | 277 | NR | 750 | 6 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 278 | NR | 755 | 5 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 124 | NR | 630 | 1000 | NR | 760 | 4 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 168 | NR | 635 | 623 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 209 | NR | 640 | 162 | NR | 770 | 3 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 246 | NR | 645 | 158 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 273 | NR | 650 | 134 | NR | 780 | 2 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 292 | NR | 655 | 109 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 305 | NR | 660 | 91 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 313 | NR | 665 | 75 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 11 | NR | 540 | 319 | NR | 670 | 70 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 323 | NR | 675 | 56 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 42 | NR | 550 | 326 | NR | 680 | 47 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 76 | NR | 555 | 330 | NR | 685 | 41 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 125 | NR | 560 | 333 | NR | 690 | 35 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 193 | NR | 565 | 336 | NR | 695 | 30 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 302 | NR | 570 | 336 | NR | 700 | 26 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 432 | NR | 575 | 335 | NR | 705 | 22 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 380 | NR | 580 | 332 | NR | 710 | 19 | NR | 840 | 0 | NR | 970 | 0 | NR |
| 455 | 213 | NR | 585 | 326 | NR | 715 | 16 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 147 | NR | 590 | 319 | NR | 720 | 14 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 307 | NR | 725 | 12 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 65 | NR | 600 | 299 | NR | 730 | 10 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 50 | NR | 605 | 291 | NR | 735 | 9 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 46 | NR | 610 | 317 | NR | 740 | 8 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 47 | NR | 615 | 336 | NR | 745 | 7 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-1

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.99

| 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 | 277 | NR | 750 | 6 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 278 | NR | 755 | 5 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 124 | NR | 630 | 1000 | NR | 760 | 4 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 168 | NR | 635 | 623 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 209 | NR | 640 | 162 | NR | 770 | 3 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 246 | NR | 645 | 158 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 273 | NR | 650 | 134 | NR | 780 | 2 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 292 | NR | 655 | 109 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 5 | NR | 530 | 305 | NR | 660 | 91 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 313 | NR | 665 | 75 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 11 | NR | 540 | 319 | NR | 670 | 70 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 323 | NR | 675 | 56 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 42 | NR | 550 | 326 | NR | 680 | 47 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 76 | NR | 555 | 330 | NR | 685 | 41 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 125 | NR | 560 | 333 | NR | 690 | 35 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 193 | NR | 565 | 336 | NR | 695 | 30 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 302 | NR | 570 | 336 | NR | 700 | 26 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 432 | NR | 575 | 335 | NR | 705 | 22 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 380 | NR | 580 | 332 | NR | 710 | 19 | NR | 840 | 0 | NR | 970 | 0 | NR |
| 455 | 213 | NR | 585 | 326 | NR | 715 | 16 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 147 | NR | 590 | 319 | NR | 720 | 14 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 307 | NR | 725 | 12 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 65 | NR | 600 | 299 | NR | 730 | 10 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 50 | NR | 605 | 291 | NR | 735 | 9 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 46 | NR | 610 | 317 | NR | 740 | 8 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 47 | NR | 615 | 336 | NR | 745 | 7 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 80.7$
 $R_g = 102.1$
 CIE $R_a = 82.1$
 $R_9 = 38.5$

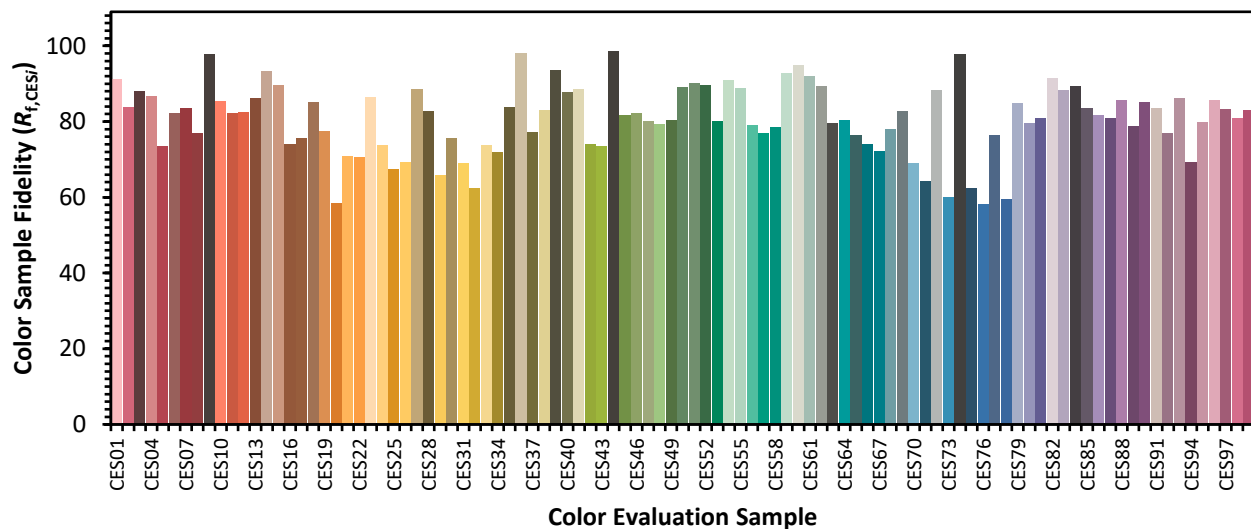


Color Vector Graphics

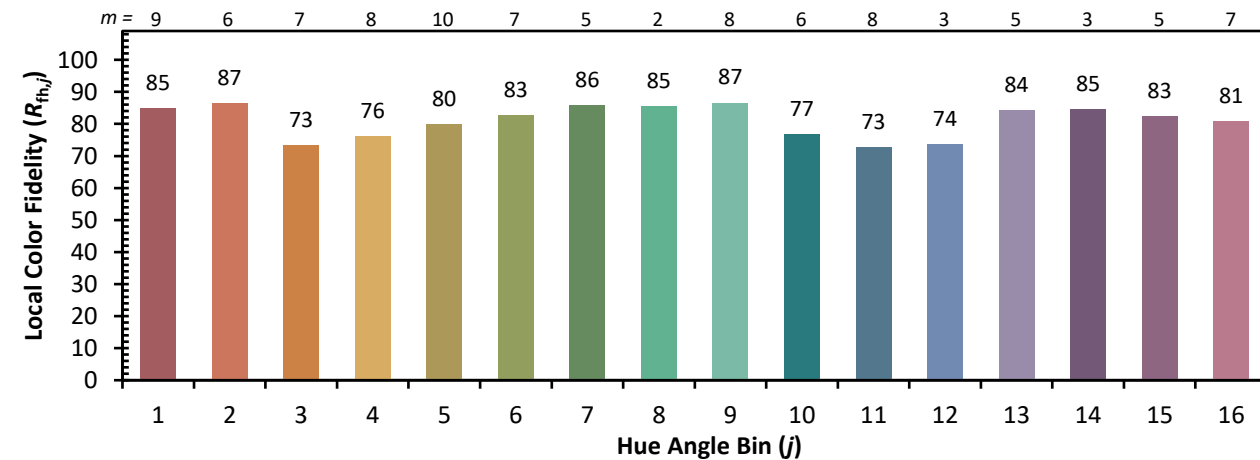
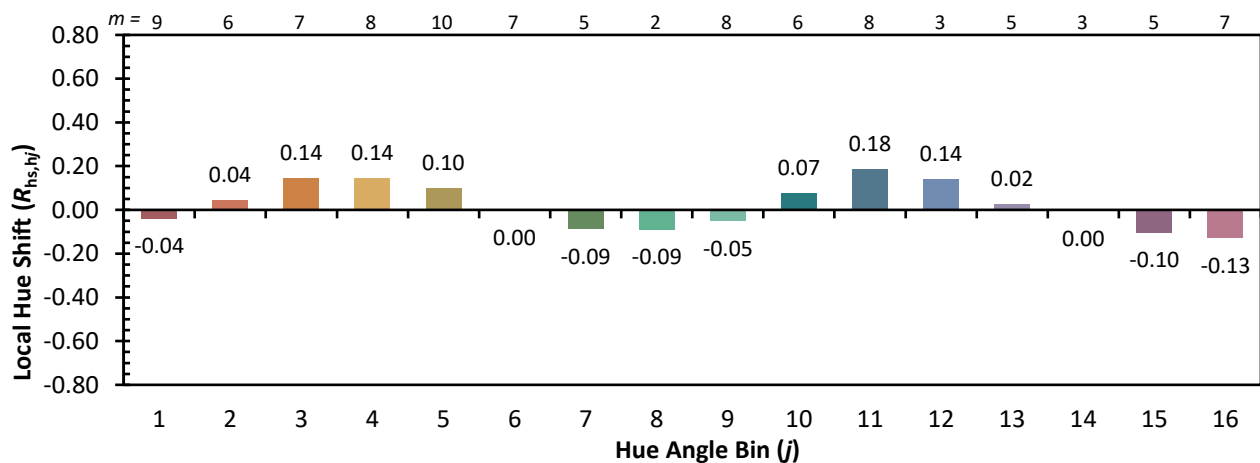


Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 69 | CES51 = 90 | CES76 = 58 |
| CES02 = 61 | CES27 = 89 | CES52 = 90 | CES77 = 76 |
| CES03 = 31 | CES28 = 83 | CES53 = 80 | CES78 = 60 |
| CES04 = 69 | CES29 = 66 | CES54 = 91 | CES79 = 85 |
| CES05 = 48 | CES30 = 76 | CES55 = 89 | CES80 = 79 |
| CES06 = 50 | CES31 = 69 | CES56 = 79 | CES81 = 81 |
| CES07 = 41 | CES32 = 62 | CES57 = 77 | CES82 = 91 |
| CES08 = 40 | CES33 = 74 | CES58 = 79 | CES83 = 88 |
| CES09 = 29 | CES34 = 72 | CES59 = 93 | CES84 = 89 |
| CES10 = 74 | CES35 = 84 | CES60 = 95 | CES85 = 84 |
| CES11 = 57 | CES36 = 98 | CES61 = 92 | CES86 = 82 |
| CES12 = 63 | CES37 = 77 | CES62 = 89 | CES87 = 81 |
| CES13 = 43 | CES38 = 83 | CES63 = 80 | CES88 = 86 |
| CES14 = 74 | CES39 = 94 | CES64 = 80 | CES89 = 79 |
| CES15 = 71 | CES40 = 88 | CES65 = 77 | CES90 = 85 |
| CES16 = 47 | CES41 = 89 | CES66 = 74 | CES91 = 83 |
| CES17 = 49 | CES42 = 74 | CES67 = 72 | CES92 = 77 |
| CES18 = 56 | CES43 = 73 | CES68 = 78 | CES93 = 86 |
| CES19 = 71 | CES44 = 98 | CES69 = 83 | CES94 = 69 |
| CES20 = 65 | CES45 = 82 | CES70 = 69 | CES95 = 80 |
| CES21 = 86 | CES46 = 82 | CES71 = 64 | CES96 = 86 |
| CES22 = 78 | CES47 = 80 | CES72 = 88 | CES97 = 83 |
| CES23 = 91 | CES48 = 79 | CES73 = 60 | CES98 = 81 |
| CES24 = 90 | CES49 = 80 | CES74 = 98 | CES99 = 83 |
| CES25 = 71 | CES50 = 89 | CES75 = 62 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)