

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: P1432591

Luminaire Tested: EHBR1-18-UNV-ASM-L835-UPL30

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1432591
REPORT IS A COMBINATION OF REPORTS P1431680 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-18-UNV-ASM-L835-UPL30
Description: Elevate Round Highbay at, 18000 lumens, 3500K 80CRI LEDs with ASM lens
Light Source: -
Ballast/Driver: -

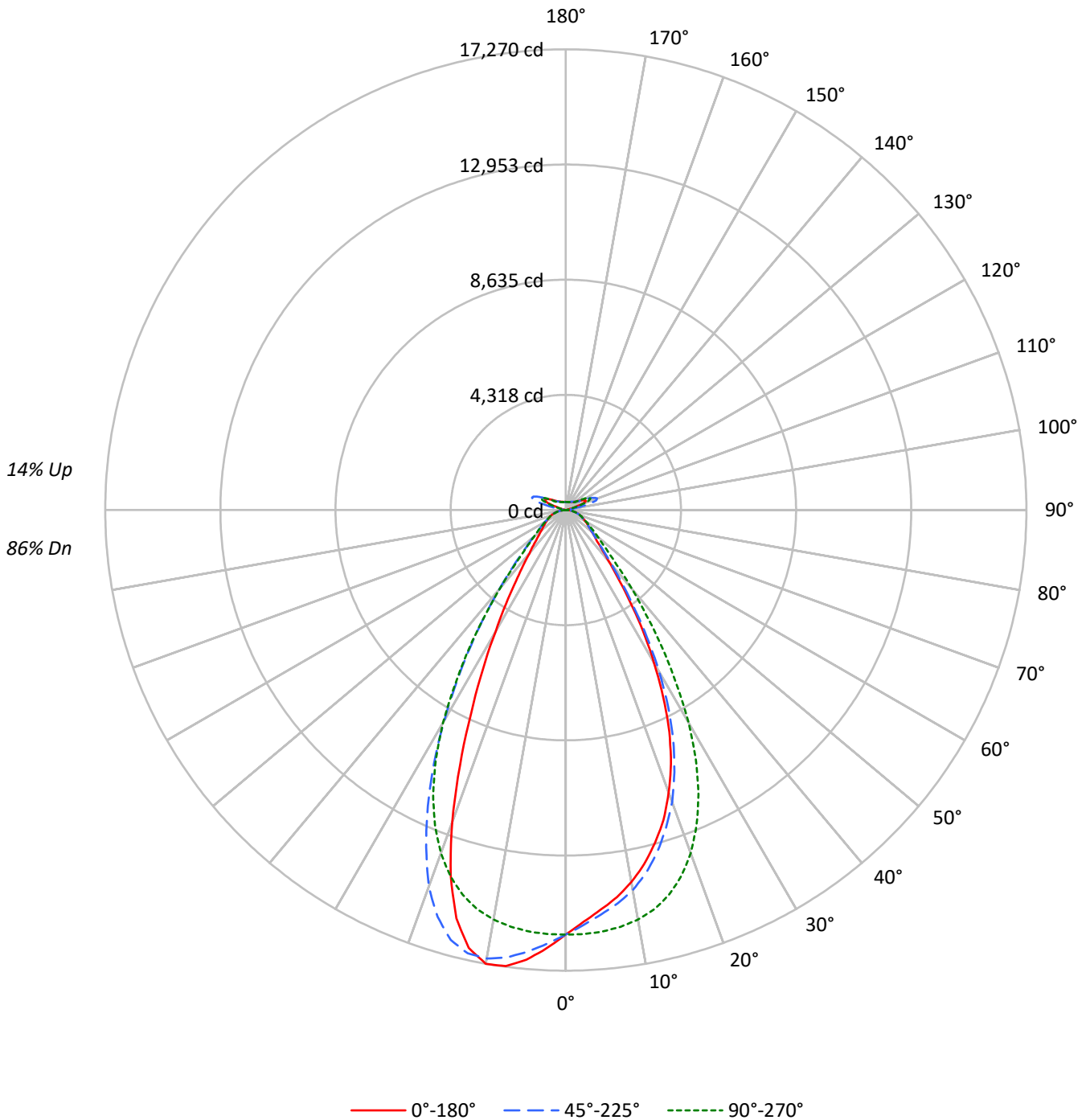
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20753.7 lumens
Efficiency: N/A
Efficacy: 177.8 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: Semi-Direct

Input Watts (W): 116.7
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: P1432591
CATALOG NUMBER: EHBR1-18-UNV-ASM-L835-UPL30

Luminous Intensity Polar Plot





TEST NUMBER: P1432591
 CATALOG NUMBER: EHBR1-18-UNV-ASM-L835-UPL30

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 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 111 | 103 | 103 | 103 | 96 | 96 | 96 | 89 | 89 | 89 | 89 | 89 | 89 | 86 |
| 1 | 108 | 105 | 102 | 99 | 104 | 101 | 98 | 96 | 94 | 92 | 90 | 88 | 87 | 85 | 83 | 81 | 80 | 80 | 80 | 80 | 77 |
| 2 | 101 | 95 | 90 | 86 | 98 | 92 | 88 | 84 | 87 | 83 | 80 | 81 | 79 | 76 | 77 | 74 | 72 | 72 | 72 | 72 | 70 |
| 3 | 95 | 87 | 81 | 76 | 91 | 84 | 79 | 74 | 80 | 75 | 71 | 75 | 72 | 69 | 71 | 68 | 66 | 66 | 66 | 66 | 63 |
| 4 | 89 | 80 | 73 | 68 | 86 | 78 | 72 | 67 | 74 | 69 | 65 | 70 | 66 | 62 | 66 | 63 | 60 | 60 | 60 | 60 | 58 |
| 5 | 83 | 74 | 67 | 62 | 81 | 72 | 65 | 61 | 68 | 63 | 59 | 65 | 60 | 57 | 62 | 58 | 55 | 55 | 55 | 55 | 53 |
| 6 | 78 | 68 | 61 | 56 | 76 | 67 | 60 | 55 | 63 | 58 | 54 | 61 | 56 | 52 | 58 | 54 | 51 | 51 | 51 | 51 | 49 |
| 7 | 74 | 63 | 56 | 52 | 72 | 62 | 56 | 51 | 59 | 54 | 50 | 57 | 52 | 48 | 54 | 50 | 47 | 47 | 47 | 47 | 45 |
| 8 | 70 | 59 | 52 | 48 | 68 | 58 | 51 | 47 | 55 | 50 | 46 | 53 | 49 | 45 | 51 | 47 | 44 | 44 | 44 | 44 | 42 |
| 9 | 66 | 55 | 49 | 44 | 64 | 54 | 48 | 44 | 52 | 47 | 43 | 50 | 45 | 42 | 48 | 44 | 41 | 41 | 41 | 41 | 39 |
| 10 | 63 | 52 | 45 | 41 | 61 | 51 | 45 | 41 | 49 | 44 | 40 | 47 | 43 | 39 | 46 | 42 | 38 | 38 | 38 | 38 | 37 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° | 135° | 180° |
|-----|-------|-------|-------|-------|-------|
| 0° | 74742 | 74742 | 74742 | 74742 | 74742 |
| 5° | 70432 | 71255 | 74287 | 77849 | 79250 |
| 10° | 66657 | 68069 | 73373 | 80349 | 81284 |
| 15° | 61574 | 63218 | 71207 | 79525 | 75539 |
| 20° | 54845 | 56692 | 66596 | 73099 | 60571 |
| 25° | 45962 | 47701 | 58943 | 61313 | 41968 |
| 30° | 34389 | 36383 | 47859 | 47381 | 27303 |
| 35° | 22894 | 24275 | 34326 | 33772 | 17682 |
| 40° | 14438 | 15430 | 22193 | 22336 | 12187 |
| 45° | 10287 | 10715 | 14081 | 14686 | 9440 |
| 50° | 8568 | 8637 | 10457 | 10730 | 8022 |
| 55° | 7564 | 7582 | 8538 | 8763 | 7308 |
| 60° | 7003 | 6943 | 7393 | 7550 | 6962 |
| 65° | 6685 | 6625 | 6739 | 6871 | 6713 |
| 70° | 6493 | 6381 | 6388 | 6511 | 6578 |
| 75° | 6172 | 5986 | 5974 | 6185 | 6364 |
| 80° | 5617 | 5226 | 5248 | 5617 | 6007 |
| 85° | 4091 | 3395 | 3395 | 3881 | 4289 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 19797 cd/sqm



TEST NUMBER: P1432591
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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1513.3 | 7.3 |
| 10°-20° | 4117.1 | 19.8 |
| 20°-30° | 4828.5 | 23.3 |
| 30°-40° | 3358.0 | 16.2 |
| 40°-50° | 1668.7 | 8.0 |
| 50°-60° | 998.1 | 4.8 |
| 60°-70° | 702.5 | 3.4 |
| 70°-80° | 452.5 | 2.2 |
| 80°-90° | 149.0 | 0.7 |
| 90°-100° | 78.7 | 0.4 |
| 100°-110° | 516.5 | 2.5 |
| 110°-120° | 954.8 | 4.6 |
| 120°-130° | 567.0 | 2.7 |
| 130°-140° | 342.3 | 1.6 |
| 140°-150° | 236.3 | 1.1 |
| 150°-160° | 153.6 | 0.7 |
| 160°-170° | 87.7 | 0.4 |
| 170°-180° | 29.0 | 0.1 |
| 0°-30° | 10459.0 | 50.4 |
| 0°-40° | 13817.0 | 66.6 |
| 0°-60° | 16483.8 | 79.4 |
| 0°-90° | 17787.8 | 85.7 |
| 90°-120° | 1550.0 | 7.5 |
| 90°-150° | 2695.6 | 13.0 |
| 90°-180° | 2966.0 | 14.3 |
| 0°-180° | 20753.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|-------|-------|-------|-------|-------|------|
| 0° | 15916 | 15916 | 15916 | 15916 | 15916 | |
| 5° | 15038 | 15214 | 15861 | 16622 | 16921 | 1411 |
| 15° | 12918 | 13263 | 14939 | 16684 | 15848 | 3602 |
| 25° | 9179 | 9526 | 11771 | 12244 | 8381 | 4141 |
| 35° | 4202 | 4455 | 6300 | 6198 | 3245 | 2677 |
| 45° | 1664 | 1734 | 2278 | 2376 | 1527 | 1345 |
| 55° | 1022 | 1025 | 1154 | 1184 | 988 | 927 |
| 65° | 698 | 692 | 703 | 717 | 701 | 693 |
| 75° | 435 | 422 | 421 | 436 | 448 | 459 |
| 85° | 141 | 117 | 117 | 133 | 147 | 145 |
| 90° | 22 | 59 | 22 | 63 | 24 | 17 |
| 95° | 36 | 133 | 42 | 114 | 39 | 35 |
| 105° | 180 | 902 | 237 | 962 | 119 | 240 |
| 115° | 825 | 1067 | 1016 | 1181 | 867 | 760 |
| 125° | 596 | 571 | 650 | 633 | 680 | 543 |
| 135° | 435 | 438 | 410 | 458 | 473 | 340 |
| 145° | 360 | 376 | 370 | 379 | 387 | 228 |
| 155° | 318 | 329 | 328 | 328 | 342 | 148 |
| 165° | 301 | 308 | 307 | 306 | 315 | 86 |
| 175° | 299 | 304 | 305 | 302 | 309 | 29 |
| 180° | 304 | 304 | 304 | 304 | 304 | |



TEST NUMBER: P1432591
 CATALOG NUMBER: EHBR1-18-UNV-ASM-L835-UPL30

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 15915.7 | 15915.7 | 15915.7 | 15915.7 | 15915.7 | 15915.7 | 15915.7 | 15915.7 | 15915.7 |
| 2.5° | 15443.2 | 15453.4 | 15561.4 | 15701.9 | 15906.3 | 16112.0 | 16278.5 | 16388.4 | 16442.7 |
| 5° | 15038.3 | 15094.3 | 15214.0 | 15472.2 | 15861.4 | 16273.2 | 16622.1 | 16850.4 | 16921.1 |
| 7.5° | 14643.7 | 14676.2 | 14876.5 | 15202.6 | 15753.6 | 16395.3 | 16913.7 | 17180.2 | 17245.2 |
| 10° | 14162.3 | 14236.0 | 14462.3 | 14846.9 | 15589.2 | 16472.3 | 17071.3 | 17262.2 | 17270.0 |
| 12.5° | 13595.8 | 13693.5 | 13927.2 | 14412.4 | 15326.8 | 16444.8 | 17018.4 | 16955.8 | 16813.3 |
| 15° | 12917.8 | 13003.4 | 13262.8 | 13825.6 | 14938.9 | 16282.1 | 16683.9 | 16173.8 | 15847.6 |
| 17.5° | 12185.4 | 12263.0 | 12488.3 | 13108.2 | 14392.1 | 15977.7 | 15985.5 | 14976.5 | 14361.0 |
| 20° | 11272.2 | 11333.1 | 11651.8 | 12260.0 | 13687.5 | 15489.5 | 15023.9 | 13178.4 | 12449.2 |
| 22.5° | 10300.5 | 10357.5 | 10640.6 | 11273.7 | 12804.1 | 14831.1 | 13684.7 | 11369.5 | 10374.7 |
| 25° | 9178.6 | 9209.6 | 9525.9 | 10098.4 | 11770.9 | 14024.4 | 12244.2 | 9398.5 | 8380.9 |
| 27.5° | 7916.5 | 7969.3 | 8300.3 | 8885.0 | 10555.6 | 13002.0 | 10710.3 | 7680.1 | 6741.2 |
| 30° | 6614.7 | 6702.2 | 6998.2 | 7521.7 | 9205.7 | 11691.2 | 9113.8 | 6116.3 | 5251.7 |
| 32.5° | 5399.7 | 5462.7 | 5673.7 | 6220.7 | 7694.5 | 10406.4 | 7580.7 | 4900.7 | 4168.4 |
| 35° | 4201.8 | 4264.8 | 4455.4 | 4992.6 | 6300.1 | 8799.0 | 6198.4 | 3850.8 | 3245.2 |
| 37.5° | 3211.9 | 3323.2 | 3445.5 | 3881.6 | 4944.3 | 7280.2 | 4941.1 | 3100.8 | 2632.3 |
| 40° | 2502.4 | 2520.4 | 2674.4 | 2953.3 | 3846.6 | 5692.5 | 3871.4 | 2475.3 | 2112.4 |
| 42.5° | 2003.1 | 2051.8 | 2118.0 | 2326.9 | 2914.6 | 4352.7 | 3042.9 | 2031.5 | 1794.3 |
| 45° | 1664.4 | 1683.5 | 1733.6 | 1874.0 | 2278.3 | 3203.1 | 2376.2 | 1714.0 | 1527.4 |
| 47.5° | 1456.1 | 1447.8 | 1480.0 | 1585.0 | 1855.4 | 2475.6 | 1925.8 | 1470.1 | 1339.4 |
| 50° | 1277.0 | 1272.0 | 1287.2 | 1357.3 | 1558.4 | 1899.6 | 1599.1 | 1283.3 | 1195.6 |
| 52.5° | 1138.0 | 1142.4 | 1144.0 | 1187.5 | 1338.8 | 1549.2 | 1361.8 | 1143.7 | 1084.5 |
| 55° | 1022.2 | 1027.8 | 1024.6 | 1056.8 | 1153.8 | 1302.4 | 1184.2 | 1028.5 | 987.6 |
| 57.5° | 931.7 | 927.5 | 923.1 | 940.4 | 1013.2 | 1104.8 | 1028.5 | 930.2 | 903.1 |
| 60° | 841.9 | 838.0 | 834.7 | 846.1 | 888.7 | 956.8 | 907.6 | 844.6 | 836.9 |
| 62.5° | 764.9 | 762.5 | 762.2 | 760.2 | 792.9 | 835.9 | 802.5 | 767.6 | 760.7 |
| 65° | 697.8 | 695.1 | 691.5 | 688.2 | 703.4 | 743.4 | 717.2 | 698.4 | 700.7 |
| 67.5° | 630.6 | 630.6 | 624.3 | 619.3 | 634.2 | 655.0 | 643.7 | 633.0 | 635.6 |
| 70° | 569.7 | 570.0 | 559.9 | 556.0 | 560.5 | 582.9 | 571.3 | 572.7 | 577.2 |
| 72.5° | 504.3 | 497.2 | 489.7 | 489.4 | 490.0 | 507.4 | 503.5 | 507.1 | 511.8 |
| 75° | 434.8 | 426.5 | 421.7 | 416.3 | 420.8 | 433.9 | 435.7 | 440.8 | 448.3 |
| 77.5° | 367.7 | 354.8 | 350.9 | 348.3 | 345.3 | 360.2 | 365.9 | 372.8 | 383.8 |
| 80° | 295.5 | 281.4 | 274.9 | 271.0 | 276.1 | 283.0 | 295.5 | 300.5 | 316.0 |
| 82.5° | 218.5 | 208.0 | 200.0 | 199.7 | 202.1 | 208.3 | 219.1 | 228.6 | 237.6 |
| 85° | 140.6 | 123.8 | 116.7 | 119.4 | 116.7 | 126.3 | 133.4 | 144.8 | 147.4 |
| 87.5° | 50.7 | 39.7 | 37.9 | 41.8 | 40.9 | 43.8 | 50.1 | 54.6 | 54.9 |
| 90° | 21.6 | 34.8 | 59.4 | 38.1 | 21.6 | 36.8 | 63.3 | 34.6 | 23.8 |
| 92.5° | 31.5 | 52.8 | 95.6 | 49.6 | 28.2 | 49.8 | 89.6 | 46.1 | 32.0 |
| 95° | 36.5 | 61.1 | 133.3 | 66.0 | 41.7 | 61.4 | 114.2 | 51.0 | 38.6 |
| 97.5° | 46.5 | 67.7 | 153.1 | 80.8 | 64.7 | 76.1 | 129.1 | 54.3 | 46.7 |
| 100° | 61.4 | 79.1 | 238.5 | 99.2 | 86.0 | 86.0 | 235.8 | 62.5 | 53.3 |
| 102.5° | 104.0 | 167.9 | 506.3 | 186.3 | 130.4 | 168.4 | 546.6 | 125.4 | 64.9 |
| 105° | 179.7 | 353.6 | 902.3 | 390.0 | 237.2 | 385.4 | 962.3 | 324.2 | 119.4 |
| 107.5° | 311.1 | 632.8 | 1190.1 | 690.6 | 449.1 | 718.8 | 1240.0 | 639.6 | 278.7 |
| 110° | 580.6 | 839.9 | 1247.6 | 948.6 | 718.6 | 1004.7 | 1353.3 | 876.2 | 564.7 |



TEST NUMBER: P1432591
 CATALOG NUMBER: EHBR1-18-UNV-ASM-L835-UPL30

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|-------|-------|--------|--------|--------|--------|--------|--------|-------|
| 112.5° | 784.3 | 902.3 | 1195.1 | 1047.2 | 935.5 | 1119.7 | 1322.1 | 971.5 | 781.5 |
| 115° | 825.3 | 867.8 | 1066.9 | 1022.6 | 1016.3 | 1103.3 | 1180.8 | 968.3 | 866.9 |
| 117.5° | 797.4 | 792.3 | 905.9 | 919.3 | 981.7 | 1009.7 | 1019.8 | 909.1 | 871.9 |
| 120° | 738.2 | 705.2 | 756.4 | 802.6 | 886.4 | 875.0 | 859.1 | 822.0 | 822.6 |
| 122.5° | 664.3 | 624.9 | 648.3 | 683.0 | 766.8 | 742.1 | 726.0 | 733.6 | 755.2 |
| 125° | 595.6 | 555.9 | 571.3 | 579.8 | 650.2 | 625.5 | 632.6 | 657.9 | 680.0 |
| 127.5° | 534.9 | 508.2 | 517.0 | 507.4 | 551.9 | 540.3 | 565.2 | 593.9 | 612.6 |
| 130° | 493.8 | 470.8 | 482.8 | 460.1 | 481.5 | 484.5 | 517.6 | 541.6 | 553.4 |
| 132.5° | 459.5 | 444.8 | 458.9 | 431.2 | 437.5 | 450.2 | 481.8 | 502.5 | 509.3 |
| 135° | 434.9 | 422.0 | 437.5 | 411.8 | 409.9 | 428.9 | 457.5 | 471.0 | 473.2 |
| 137.5° | 413.9 | 402.6 | 418.4 | 398.9 | 393.7 | 412.9 | 434.5 | 445.0 | 442.0 |
| 140° | 394.8 | 385.3 | 402.2 | 387.5 | 384.2 | 403.3 | 413.2 | 425.2 | 422.6 |
| 142.5° | 374.0 | 367.4 | 387.8 | 377.9 | 374.6 | 392.2 | 397.0 | 405.8 | 402.8 |
| 145° | 359.9 | 354.9 | 376.5 | 371.3 | 369.9 | 382.8 | 379.3 | 391.1 | 386.7 |
| 147.5° | 347.3 | 344.0 | 363.7 | 361.8 | 361.8 | 371.3 | 366.4 | 376.5 | 372.2 |
| 150° | 336.4 | 333.1 | 352.5 | 350.6 | 352.2 | 358.8 | 351.9 | 363.7 | 362.7 |
| 152.5° | 325.4 | 321.8 | 339.6 | 337.7 | 339.3 | 345.9 | 339.3 | 352.8 | 351.4 |
| 155° | 317.8 | 314.2 | 328.7 | 328.1 | 328.4 | 331.7 | 328.4 | 341.8 | 342.1 |
| 157.5° | 312.1 | 309.9 | 321.1 | 320.8 | 320.8 | 322.7 | 321.1 | 333.0 | 333.3 |
| 160° | 307.9 | 305.9 | 315.4 | 315.2 | 313.8 | 317.1 | 315.7 | 325.9 | 326.2 |
| 162.5° | 303.5 | 301.6 | 312.7 | 311.1 | 311.1 | 311.1 | 310.1 | 320.2 | 320.8 |
| 165° | 300.8 | 300.5 | 308.5 | 308.5 | 307.1 | 308.8 | 306.0 | 313.1 | 315.4 |
| 167.5° | 300.8 | 299.2 | 307.4 | 307.4 | 306.0 | 304.4 | 305.0 | 310.9 | 313.1 |
| 170° | 299.7 | 299.4 | 306.0 | 304.7 | 303.0 | 303.3 | 302.4 | 308.2 | 310.4 |
| 172.5° | 300.3 | 300.0 | 306.9 | 305.3 | 304.0 | 304.0 | 301.6 | 305.7 | 309.6 |
| 175° | 299.3 | 299.1 | 304.3 | 304.3 | 304.6 | 303.2 | 302.2 | 304.7 | 308.6 |
| 177.5° | 301.3 | 301.0 | 304.3 | 304.3 | 302.9 | 303.5 | 304.1 | 306.6 | 312.1 |
| 180° | 303.5 | 303.5 | 303.5 | 303.5 | 303.5 | 303.5 | 303.5 | 303.5 | 303.5 |



TEST NUMBER: P1432591
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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 | 14.34 | 15.35 | 14.94 | 15.94 | 16.60 | 15.11 | 16.12 | 15.71 | 16.70 | 17.36 |
| | 3H | 16.15 | 17.05 | 16.77 | 17.65 | 18.35 | 16.66 | 17.56 | 17.28 | 18.16 | 18.86 |
| | 4H | 16.89 | 17.73 | 17.52 | 18.34 | 19.05 | 17.31 | 18.15 | 17.94 | 18.76 | 19.47 |
| | 6H | 17.45 | 18.23 | 18.10 | 18.85 | 19.57 | 17.80 | 18.57 | 18.45 | 19.20 | 19.92 |
| | 8H | 17.63 | 18.37 | 18.29 | 19.01 | 19.74 | 17.95 | 18.69 | 18.61 | 19.33 | 20.06 |
| | 12H | 17.73 | 18.43 | 18.39 | 19.06 | 19.82 | 18.03 | 18.73 | 18.69 | 19.36 | 20.12 |
| 4H | 2H | 14.85 | 15.69 | 15.49 | 16.30 | 17.02 | 15.48 | 16.32 | 16.12 | 16.93 | 17.65 |
| | 3H | 16.89 | 17.58 | 17.53 | 18.23 | 18.96 | 17.28 | 17.98 | 17.93 | 18.63 | 19.36 |
| | 4H | 17.75 | 18.38 | 18.41 | 19.03 | 19.80 | 18.07 | 18.70 | 18.73 | 19.35 | 20.12 |
| | 6H | 18.44 | 18.98 | 19.13 | 19.66 | 20.44 | 18.70 | 19.24 | 19.39 | 19.92 | 20.70 |
| | 8H | 18.67 | 19.17 | 19.36 | 19.85 | 20.63 | 18.90 | 19.41 | 19.59 | 20.09 | 20.87 |
| | 12H | 18.80 | 19.24 | 19.50 | 19.95 | 20.74 | 19.02 | 19.46 | 19.72 | 20.17 | 20.96 |
| 8H | 4H | 18.00 | 18.51 | 18.69 | 19.19 | 19.97 | 18.31 | 18.81 | 19.00 | 19.49 | 20.28 |
| | 6H | 18.82 | 19.23 | 19.54 | 19.96 | 20.74 | 19.07 | 19.48 | 19.79 | 20.21 | 21.00 |
| | 8H | 19.12 | 19.49 | 19.86 | 20.22 | 21.02 | 19.35 | 19.72 | 20.09 | 20.45 | 21.25 |
| | 12H | 19.32 | 19.64 | 20.05 | 20.35 | 21.23 | 19.53 | 19.85 | 20.27 | 20.57 | 21.44 |
| 12H | 4H | 18.01 | 18.45 | 18.71 | 19.16 | 19.95 | 18.31 | 18.76 | 19.02 | 19.47 | 20.26 |
| | 6H | 18.86 | 19.22 | 19.59 | 19.96 | 20.76 | 19.12 | 19.48 | 19.85 | 20.21 | 21.02 |
| | 8H | 19.20 | 19.52 | 19.93 | 20.24 | 21.11 | 19.44 | 19.76 | 20.17 | 20.48 | 21.35 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-3

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L835-N

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

Test Information

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

Spectral Parameters

CCT (K): 3468
 CIE u': 0.2375
 CIE v': 0.5091
 Duv: -0.0021
 CIE x: 0.4049
 CIE y: 0.3856
 CIE z: 0.2095
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 581
 Purity: 37.24544
 R_f: 80.1
 R_g: 101

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 82.1 | | |
| R1: | 82.9 | R9: | 27.6 |
| R2: | 85.6 | R10: | 63.8 |
| R3: | 85.9 | R11: | 81.2 |
| R4: | 82.8 | R12: | 57.2 |
| R5: | 81.0 | R13: | 82.6 |
| R6: | 79.7 | R14: | 91.0 |
| R7: | 86.5 | R15: | 79.4 |
| R8: | 72.1 | | |



Test Conditions

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

REPORT NUMBER: SP1-2506-472-3

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

REPORT NUMBER: SP1-2506-472-3

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-3

Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 60 | NR | 620 | 327 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 82 | NR | 625 | 322 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 114 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 152 | NR | 635 | 645 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 189 | NR | 640 | 197 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 222 | NR | 645 | 189 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 248 | NR | 650 | 163 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 268 | NR | 655 | 134 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 283 | NR | 660 | 113 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 294 | NR | 665 | 94 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 305 | NR | 670 | 87 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 18 | NR | 545 | 314 | NR | 675 | 70 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 323 | NR | 680 | 60 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 62 | NR | 555 | 335 | NR | 685 | 51 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 102 | NR | 560 | 346 | NR | 690 | 44 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 159 | NR | 565 | 356 | NR | 695 | 38 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 241 | NR | 570 | 364 | NR | 700 | 32 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 363 | NR | 575 | 371 | NR | 705 | 28 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 389 | NR | 580 | 375 | NR | 710 | 24 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 375 | NR | 715 | 20 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 158 | NR | 590 | 373 | NR | 720 | 17 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 120 | NR | 595 | 364 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 357 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 57 | NR | 605 | 349 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 51 | NR | 610 | 371 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 51 | NR | 615 | 387 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-3

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.43

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 60 | NR | 620 | 327 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 82 | NR | 625 | 322 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 114 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 152 | NR | 635 | 645 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 189 | NR | 640 | 197 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 222 | NR | 645 | 189 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 248 | NR | 650 | 163 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 268 | NR | 655 | 134 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 283 | NR | 660 | 113 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 294 | NR | 665 | 94 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 305 | NR | 670 | 87 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 18 | NR | 545 | 314 | NR | 675 | 70 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 323 | NR | 680 | 60 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 62 | NR | 555 | 335 | NR | 685 | 51 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 102 | NR | 560 | 346 | NR | 690 | 44 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 159 | NR | 565 | 356 | NR | 695 | 38 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 241 | NR | 570 | 364 | NR | 700 | 32 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 363 | NR | 575 | 371 | NR | 705 | 28 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 389 | NR | 580 | 375 | NR | 710 | 24 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 375 | NR | 715 | 20 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 158 | NR | 590 | 373 | NR | 720 | 17 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 120 | NR | 595 | 364 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 357 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 57 | NR | 605 | 349 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 51 | NR | 610 | 371 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 51 | NR | 615 | 387 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-3

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.75

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 60 | NR | 620 | 327 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 82 | NR | 625 | 322 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 114 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 152 | NR | 635 | 645 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 189 | NR | 640 | 197 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 222 | NR | 645 | 189 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 248 | NR | 650 | 163 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 268 | NR | 655 | 134 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 283 | NR | 660 | 113 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 294 | NR | 665 | 94 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 9 | NR | 540 | 305 | NR | 670 | 87 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 18 | NR | 545 | 314 | NR | 675 | 70 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 323 | NR | 680 | 60 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 62 | NR | 555 | 335 | NR | 685 | 51 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 102 | NR | 560 | 346 | NR | 690 | 44 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 159 | NR | 565 | 356 | NR | 695 | 38 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 241 | NR | 570 | 364 | NR | 700 | 32 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 363 | NR | 575 | 371 | NR | 705 | 28 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 389 | NR | 580 | 375 | NR | 710 | 24 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 245 | NR | 585 | 375 | NR | 715 | 20 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 158 | NR | 590 | 373 | NR | 720 | 17 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 120 | NR | 595 | 364 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 357 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 57 | NR | 605 | 349 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 51 | NR | 610 | 371 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 51 | NR | 615 | 387 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

Summary

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



Color Vector Graphics



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

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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)