

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: P1433361

Luminaire Tested: EHBR1-60-UNV-A1-L930-UPL40

Issue Date: 3/20/2026

**Test Information**

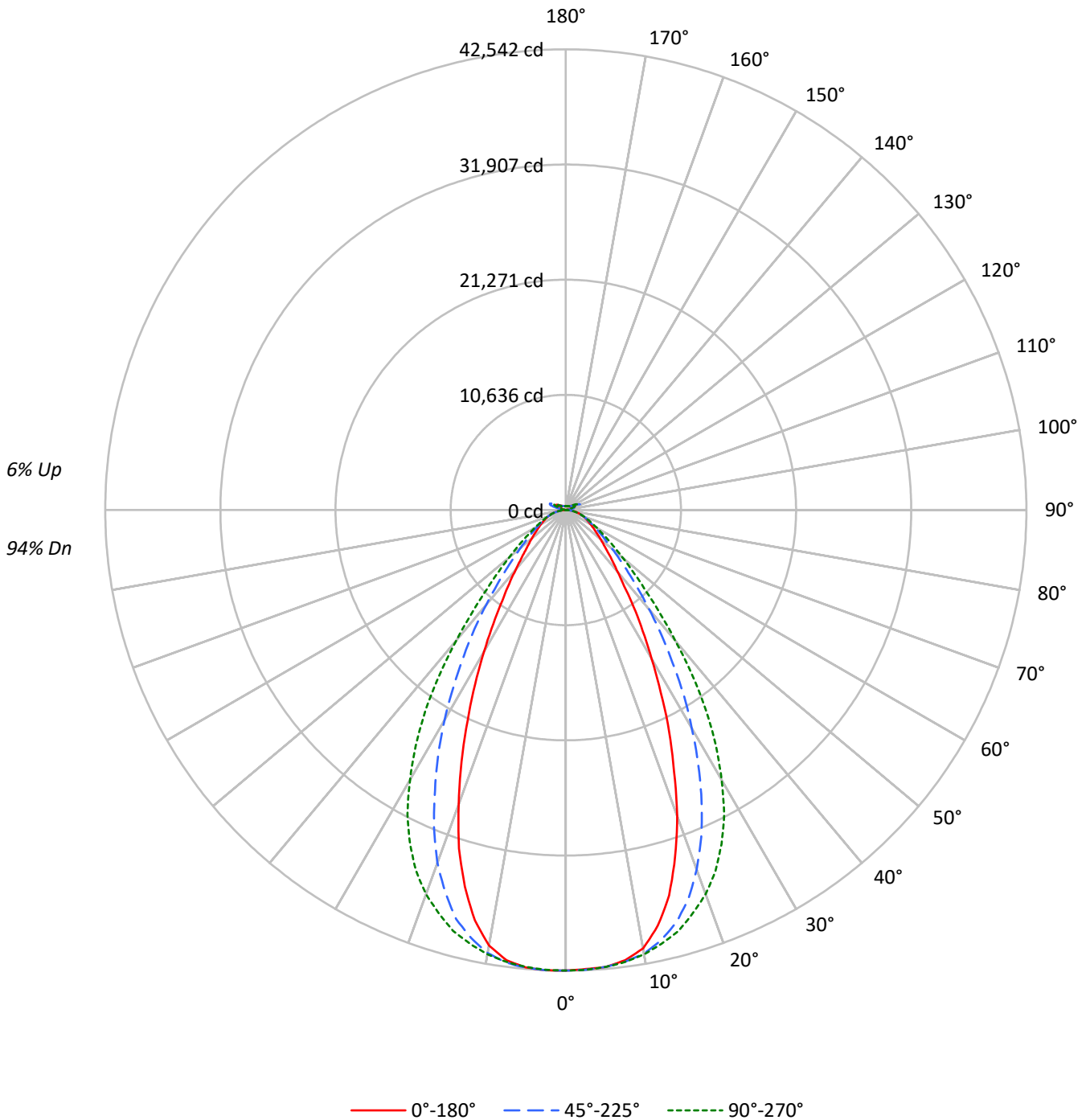
Test Method: LM-79-2019  
Report Number: P1433361  
REPORT IS A COMBINATION OF REPORTS P1431898 AND P1431635  
Test Lab: INNOVATION CENTER  
Issue Date: 3/20/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: EHBR1-60-UNV-A1-L930-UPL40  
Description: Elevate Round Highbay at, 60000 lumens, 3000K 90CRI LEDs with A lens  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 56285.3 lumens  
Efficiency: N/A  
Efficacy: 155.9 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): 361  
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: P1433361  
CATALOG NUMBER: EHBR1-60-UNV-A1-L930-UPL40

### Luminous Intensity Polar Plot





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**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 | 114 | 114 | 114 | 114 | 108 | 108 | 108 | 102 | 102 | 102 | 96 | 96 | 96 | 96 | 96 | 96 | 94 |
| 1   | 110 | 107 | 103 | 100 | 107 | 104 | 101 | 98  | 99  | 96  | 94  | 94  | 92  | 90  | 89 | 88 | 87 | 87 | 87 | 87 | 84 |
| 2   | 103 | 97  | 91  | 87  | 100 | 94  | 90  | 86  | 90  | 86  | 83  | 86  | 83  | 80  | 82 | 80 | 78 | 78 | 78 | 78 | 75 |
| 3   | 96  | 88  | 82  | 77  | 93  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 75  | 72  | 76 | 73 | 70 | 70 | 70 | 70 | 68 |
| 4   | 90  | 81  | 74  | 69  | 87  | 79  | 73  | 68  | 76  | 70  | 66  | 73  | 68  | 65  | 70 | 67 | 63 | 63 | 63 | 63 | 61 |
| 5   | 84  | 74  | 67  | 62  | 82  | 73  | 66  | 61  | 70  | 64  | 60  | 68  | 63  | 59  | 65 | 61 | 58 | 58 | 58 | 58 | 56 |
| 6   | 79  | 68  | 61  | 56  | 77  | 67  | 61  | 56  | 65  | 59  | 55  | 63  | 58  | 54  | 61 | 56 | 53 | 53 | 53 | 53 | 51 |
| 7   | 74  | 63  | 56  | 51  | 73  | 62  | 56  | 51  | 60  | 55  | 50  | 59  | 53  | 50  | 57 | 52 | 49 | 49 | 49 | 49 | 47 |
| 8   | 70  | 59  | 52  | 47  | 68  | 58  | 52  | 47  | 56  | 51  | 46  | 55  | 50  | 46  | 53 | 49 | 45 | 45 | 45 | 45 | 44 |
| 9   | 66  | 55  | 48  | 44  | 65  | 54  | 48  | 43  | 53  | 47  | 43  | 51  | 46  | 42  | 50 | 45 | 42 | 42 | 42 | 42 | 40 |
| 10  | 63  | 52  | 45  | 41  | 61  | 51  | 45  | 40  | 50  | 44  | 40  | 48  | 43  | 40  | 47 | 43 | 39 | 39 | 39 | 39 | 38 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°     | 45°    | 90°    | 135°   | 180°   |
|-----|--------|--------|--------|--------|--------|
| 0°  | 199698 | 199698 | 199698 | 199698 | 199698 |
| 5°  | 198378 | 198348 | 198357 | 198707 | 198586 |
| 10° | 193474 | 195730 | 196040 | 195487 | 192208 |
| 15° | 175643 | 187899 | 191767 | 186392 | 171610 |
| 20° | 146367 | 171904 | 183648 | 168667 | 140668 |
| 25° | 113194 | 148638 | 170366 | 143209 | 107329 |
| 30° | 82509  | 121047 | 149654 | 116454 | 78314  |
| 35° | 59475  | 93299  | 122993 | 89281  | 55593  |
| 40° | 42789  | 68909  | 90640  | 66001  | 41469  |
| 45° | 33717  | 50413  | 63305  | 48227  | 32550  |
| 50° | 27974  | 37876  | 45819  | 36628  | 27550  |
| 55° | 24432  | 29908  | 34700  | 29407  | 24102  |
| 60° | 22034  | 24968  | 27650  | 24812  | 22189  |
| 65° | 20607  | 22024  | 23235  | 22092  | 20803  |
| 70° | 19569  | 20037  | 20657  | 20148  | 19763  |
| 75° | 18257  | 18144  | 18257  | 18193  | 18435  |
| 80° | 16490  | 15304  | 14966  | 15542  | 16490  |
| 85° | 11429  | 9692   | 9587   | 9849   | 11766  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 66327 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 4015.8  | 7.1       |
| 10°-20°   | 10792.9 | 19.2      |
| 20°-30°   | 13124.1 | 23.3      |
| 30°-40°   | 10690.6 | 19.0      |
| 40°-50°   | 6418.6  | 11.4      |
| 50°-60°   | 3694.0  | 6.6       |
| 60°-70°   | 2311.8  | 4.1       |
| 70°-80°   | 1361.5  | 2.4       |
| 80°-90°   | 404.3   | 0.7       |
| 90°-100°  | 91.2    | 0.2       |
| 100°-110° | 602.8   | 1.1       |
| 110°-120° | 1115.0  | 2.0       |
| 120°-130° | 661.9   | 1.2       |
| 130°-140° | 400.7   | 0.7       |
| 140°-150° | 278.6   | 0.5       |
| 150°-160° | 182.2   | 0.3       |
| 160°-170° | 104.6   | 0.2       |
| 170°-180° | 34.8    | 0.1       |
| 0°-30°    | 27932.8 | 49.6      |
| 0°-40°    | 38623.3 | 68.6      |
| 0°-60°    | 48735.9 | 86.6      |
| 0°-90°    | 52813.6 | 93.8      |
| 90°-120°  | 1809.0  | 3.2       |
| 90°-150°  | 3150.2  | 5.6       |
| 90°-180°  | 3472.0  | 6.2       |
| 0°-180°   | 56285.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°    | 45°   | 90°   | 135°  | 180°  | Flux  |
|------|-------|-------|-------|-------|-------|-------|
| 0°   | 42524 | 42524 | 42524 | 42524 | 42524 |       |
| 5°   | 42357 | 42350 | 42352 | 42427 | 42401 | 4003  |
| 15°  | 36849 | 39420 | 40232 | 39104 | 36003 | 10138 |
| 25°  | 22605 | 29683 | 34022 | 28599 | 21434 | 10299 |
| 35°  | 10916 | 17124 | 22574 | 16386 | 10203 | 6906  |
| 45°  | 5455  | 8157  | 10242 | 7803  | 5266  | 4303  |
| 55°  | 3302  | 4042  | 4689  | 3974  | 3257  | 2985  |
| 65°  | 2151  | 2299  | 2425  | 2306  | 2171  | 2138  |
| 75°  | 1286  | 1278  | 1286  | 1282  | 1299  | 1362  |
| 85°  | 393   | 333   | 330   | 338   | 404   | 419   |
| 90°  | 27    | 69    | 25    | 73    | 26    | 32    |
| 95°  | 44    | 156   | 48    | 132   | 43    | 42    |
| 105° | 211   | 1054  | 276   | 1123  | 138   | 282   |
| 115° | 966   | 1246  | 1187  | 1379  | 1012  | 890   |
| 125° | 698   | 666   | 758   | 738   | 794   | 636   |
| 135° | 511   | 512   | 480   | 536   | 554   | 400   |
| 145° | 425   | 443   | 435   | 448   | 456   | 269   |
| 155° | 378   | 389   | 387   | 390   | 408   | 177   |
| 165° | 362   | 368   | 365   | 365   | 378   | 103   |
| 175° | 365   | 367   | 363   | 363   | 372   | 35    |
| 180° | 366   | 366   | 366   | 366   | 366   |       |



TEST NUMBER: P1433361  
 CATALOG NUMBER: EHBR1-60-UNV-A1-L930-UPL40

**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 22.5°   | 45°     | 67.5°   | 90°     | 112.5°  | 135°    | 157.5°  | 180°    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°     | 42524.2 | 42524.2 | 42524.2 | 42524.2 | 42524.2 | 42524.2 | 42524.2 | 42524.2 | 42524.2 |
| 2.5°   | 42430.7 | 42469.0 | 42485.0 | 42493.9 | 42503.7 | 42530.5 | 42542.0 | 42523.3 | 42539.4 |
| 5°     | 42356.8 | 42359.4 | 42350.5 | 42390.6 | 42352.3 | 42379.1 | 42427.1 | 42408.4 | 42401.3 |
| 7.5°   | 41925.6 | 42014.8 | 42067.3 | 42080.6 | 42087.7 | 42120.7 | 42154.6 | 41963.1 | 41934.6 |
| 10°    | 41106.2 | 41255.1 | 41585.5 | 41679.9 | 41651.3 | 41704.8 | 41533.8 | 41033.3 | 40837.3 |
| 12.5°  | 39309.9 | 39832.6 | 40691.2 | 41073.4 | 41003.8 | 41051.1 | 40468.5 | 39412.3 | 38804.9 |
| 15°    | 36849.0 | 37615.8 | 39420.3 | 40173.7 | 40231.7 | 40173.7 | 39104.1 | 37045.8 | 36002.9 |
| 17.5°  | 33577.6 | 34993.7 | 37650.6 | 39113.0 | 39029.3 | 39056.9 | 37026.2 | 33983.7 | 32790.3 |
| 20°    | 30082.7 | 31592.3 | 35331.3 | 37770.8 | 37744.9 | 37590.0 | 34666.0 | 30653.6 | 28911.4 |
| 22.5°  | 26129.9 | 28077.0 | 32673.6 | 36120.4 | 36110.6 | 35852.3 | 31791.9 | 27017.0 | 25141.4 |
| 25°    | 22604.7 | 24514.3 | 29682.8 | 34098.7 | 34022.0 | 33728.1 | 28598.8 | 23389.4 | 21433.5 |
| 27.5°  | 18960.3 | 20945.4 | 26489.8 | 31729.5 | 31676.9 | 31356.3 | 25546.6 | 19998.7 | 18137.3 |
| 30°    | 15870.6 | 17685.7 | 23283.4 | 29122.5 | 28785.9 | 28749.3 | 22399.9 | 16859.1 | 15063.6 |
| 32.5°  | 13223.5 | 14779.5 | 20260.6 | 26396.3 | 25800.5 | 25970.5 | 19264.0 | 14233.6 | 12453.9 |
| 35°    | 10915.8 | 12286.6 | 17123.7 | 23243.3 | 22573.6 | 22793.6 | 16386.2 | 11679.1 | 10203.3 |
| 37.5°  | 8859.4  | 10177.4 | 14465.1 | 20176.8 | 19152.6 | 19567.7 | 13855.0 | 9753.5  | 8570.7  |
| 40°    | 7416.4  | 8462.1  | 11943.7 | 16812.0 | 15710.2 | 16386.2 | 11439.6 | 8135.2  | 7187.6  |
| 42.5°  | 6390.5  | 7072.7  | 9857.7  | 13599.3 | 12754.2 | 13233.3 | 9428.4  | 6801.0  | 6092.1  |
| 45°    | 5455.2  | 5999.4  | 8156.6  | 10731.5 | 10242.5 | 10686.9 | 7803.0  | 5799.0  | 5266.5  |
| 47.5°  | 4765.0  | 5184.5  | 6714.7  | 8666.1  | 8362.4  | 8503.1  | 6516.9  | 5060.7  | 4627.9  |
| 50°    | 4169.1  | 4493.3  | 5644.9  | 6994.3  | 6828.6  | 6915.1  | 5458.8  | 4403.4  | 4105.9  |
| 52.5°  | 3706.0  | 3943.8  | 4734.7  | 5748.3  | 5666.3  | 5679.7  | 4651.8  | 3873.4  | 3658.0  |
| 55°    | 3301.7  | 3467.3  | 4041.8  | 4708.9  | 4689.3  | 4692.8  | 3974.1  | 3432.6  | 3257.1  |
| 57.5°  | 2948.1  | 3085.2  | 3473.6  | 3955.4  | 3926.9  | 3933.1  | 3441.5  | 3048.7  | 2935.6  |
| 60°    | 2648.8  | 2740.5  | 3001.5  | 3342.6  | 3324.0  | 3315.9  | 2982.8  | 2706.7  | 2667.5  |
| 62.5°  | 2383.4  | 2442.2  | 2623.0  | 2865.2  | 2829.6  | 2837.7  | 2622.1  | 2444.8  | 2386.9  |
| 65°    | 2150.9  | 2171.4  | 2298.8  | 2448.4  | 2425.2  | 2444.8  | 2305.9  | 2184.8  | 2171.4  |
| 67.5°  | 1923.8  | 1944.3  | 2019.1  | 2119.8  | 2093.0  | 2109.1  | 2020.9  | 1949.6  | 1938.1  |
| 70°    | 1717.1  | 1716.2  | 1758.1  | 1812.5  | 1812.5  | 1815.2  | 1767.9  | 1725.2  | 1734.1  |
| 72.5°  | 1503.4  | 1498.1  | 1510.6  | 1547.0  | 1537.3  | 1571.1  | 1521.3  | 1507.9  | 1509.7  |
| 75°    | 1286.1  | 1270.9  | 1278.1  | 1296.8  | 1286.1  | 1303.9  | 1281.6  | 1298.6  | 1298.6  |
| 77.5°  | 1081.2  | 1052.8  | 1043.9  | 1046.6  | 1026.9  | 1053.7  | 1058.9  | 1070.5  | 1097.3  |
| 80°    | 867.5   | 827.4   | 805.1   | 804.3   | 787.3   | 804.3   | 817.6   | 841.7   | 867.5   |
| 82.5°  | 643.9   | 609.2   | 571.8   | 564.7   | 554.0   | 563.8   | 581.6   | 610.1   | 652.0   |
| 85°    | 392.8   | 356.3   | 333.1   | 320.6   | 329.5   | 329.5   | 338.5   | 378.6   | 404.4   |
| 87.5°  | 141.6   | 123.8   | 101.5   | 102.4   | 105.1   | 108.6   | 113.1   | 142.5   | 155.9   |
| 90°    | 26.7    | 40.4    | 69.2    | 44.2    | 25.0    | 42.2    | 73.0    | 38.4    | 25.8    |
| 92.5°  | 37.3    | 61.5    | 111.4   | 57.6    | 32.6    | 57.6    | 103.7   | 51.9    | 35.5    |
| 95°    | 44.0    | 71.0    | 155.5   | 76.8    | 48.0    | 71.0    | 132.5   | 57.6    | 43.1    |
| 97.5°  | 55.5    | 78.7    | 178.6   | 94.1    | 74.9    | 88.3    | 149.8   | 61.5    | 52.8    |
| 100°   | 72.8    | 92.1    | 278.5   | 115.2   | 99.9    | 99.9    | 274.6   | 71.0    | 61.3    |
| 102.5° | 122.8   | 195.9   | 591.4   | 217.0   | 151.7   | 195.9   | 637.5   | 144.0   | 74.8    |
| 105°   | 211.1   | 412.9   | 1054.2  | 455.1   | 276.5   | 449.3   | 1123.4  | 376.3   | 138.1   |
| 107.5° | 364.7   | 739.3   | 1390.3  | 806.5   | 524.3   | 839.2   | 1447.8  | 745.1   | 324.4   |
| 110°   | 679.7   | 981.2   | 1457.5  | 1108.0  | 839.2   | 1173.3  | 1580.3  | 1021.6  | 658.6   |



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 CATALOG NUMBER: EHBR1-60-UNV-A1-L930-UPL40

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   |
|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 917.8 | 1054.2 | 1396.1 | 1223.2 | 1092.6 | 1307.7 | 1543.9 | 1133.0 | 912.0  |
| 115°   | 965.7 | 1013.9 | 1246.3 | 1194.4 | 1186.7 | 1288.5 | 1378.8 | 1129.1 | 1011.8 |
| 117.5° | 934.0 | 925.5  | 1058.1 | 1073.5 | 1146.4 | 1179.1 | 1190.6 | 1060.0 | 1017.6 |
| 120°   | 864.0 | 823.8  | 883.3  | 937.1  | 1035.1 | 1021.6 | 1002.4 | 959.1  | 960.0  |
| 122.5° | 778.5 | 730.6  | 756.6  | 796.9  | 894.9  | 866.0  | 846.9  | 855.4  | 882.1  |
| 125°   | 697.8 | 649.9  | 666.3  | 675.9  | 758.5  | 729.7  | 738.3  | 767.1  | 793.8  |
| 127.5° | 626.7 | 594.2  | 602.9  | 591.4  | 643.3  | 629.9  | 659.5  | 693.0  | 715.1  |
| 130°   | 578.8 | 551.0  | 563.6  | 535.8  | 561.6  | 565.4  | 604.7  | 631.6  | 646.0  |
| 132.5° | 539.3 | 521.1  | 536.5  | 503.0  | 510.6  | 526.9  | 563.4  | 587.4  | 595.0  |
| 135°   | 511.4 | 495.1  | 512.4  | 480.9  | 479.8  | 502.9  | 535.5  | 550.8  | 553.7  |
| 137.5° | 486.5 | 473.0  | 490.3  | 467.2  | 461.5  | 484.5  | 509.5  | 521.0  | 518.0  |
| 140°   | 465.2 | 452.8  | 471.9  | 454.7  | 450.8  | 473.9  | 485.4  | 499.8  | 495.9  |
| 142.5° | 441.1 | 433.5  | 455.6  | 444.1  | 440.2  | 462.2  | 468.0  | 477.6  | 474.6  |
| 145°   | 424.7 | 418.9  | 443.0  | 437.3  | 435.3  | 451.6  | 447.8  | 462.1  | 456.4  |
| 147.5° | 412.1 | 407.3  | 428.5  | 426.7  | 426.7  | 438.2  | 433.3  | 445.7  | 440.8  |
| 150°   | 399.5 | 394.8  | 416.0  | 414.1  | 416.0  | 423.6  | 416.9  | 432.1  | 431.1  |
| 152.5° | 386.9 | 382.2  | 401.5  | 398.7  | 400.7  | 408.3  | 402.4  | 418.7  | 418.6  |
| 155°   | 378.2 | 373.5  | 389.0  | 387.2  | 387.2  | 391.9  | 389.9  | 407.0  | 407.9  |
| 157.5° | 373.2 | 369.5  | 381.1  | 379.4  | 379.4  | 382.2  | 382.0  | 397.3  | 398.2  |
| 160°   | 369.2 | 365.5  | 375.3  | 373.5  | 371.6  | 376.3  | 376.2  | 389.4  | 390.3  |
| 162.5° | 365.3 | 361.5  | 372.3  | 369.5  | 368.6  | 369.5  | 369.4  | 383.5  | 384.4  |
| 165°   | 362.3 | 360.6  | 368.3  | 366.5  | 364.7  | 366.5  | 365.4  | 374.8  | 377.7  |
| 167.5° | 363.2 | 360.4  | 367.3  | 365.5  | 363.6  | 361.7  | 364.4  | 371.9  | 374.7  |
| 170°   | 362.2 | 361.3  | 366.3  | 362.6  | 359.8  | 360.6  | 361.4  | 368.9  | 371.8  |
| 172.5° | 363.9 | 363.1  | 368.0  | 364.4  | 361.5  | 362.4  | 361.3  | 366.9  | 371.6  |
| 175°   | 364.7 | 363.0  | 366.9  | 364.2  | 363.3  | 362.3  | 363.1  | 366.8  | 372.4  |
| 177.5° | 367.5 | 365.7  | 367.8  | 365.1  | 362.3  | 363.2  | 365.9  | 369.6  | 377.1  |
| 180°   | 365.9 | 365.9  | 365.9  | 365.9  | 365.9  | 365.9  | 365.9  | 365.9  | 365.9  |



TEST NUMBER: P1433361  
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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 | 19.82            | 20.99 | 20.30 | 21.43 | 21.90 | 20.81          | 21.97 | 21.28 | 22.41 | 22.88 |
|                 | 3H   | 21.30            | 22.34 | 21.79 | 22.79 | 23.31 | 22.07          | 23.10 | 22.55 | 23.56 | 24.08 |
|                 | 4H   | 21.90            | 22.87 | 22.41 | 23.34 | 23.88 | 22.57          | 23.53 | 23.08 | 24.01 | 24.54 |
|                 | 6H   | 22.37            | 23.26 | 22.89 | 23.75 | 24.29 | 22.92          | 23.81 | 23.44 | 24.30 | 24.85 |
|                 | 8H   | 22.52            | 23.36 | 23.05 | 23.87 | 24.42 | 23.02          | 23.86 | 23.55 | 24.37 | 24.92 |
|                 | 12H  | 22.59            | 23.39 | 23.13 | 23.90 | 24.48 | 23.06          | 23.86 | 23.60 | 24.36 | 24.94 |
| 4H              | 2H   | 20.34            | 21.31 | 20.85 | 21.78 | 22.32 | 21.12          | 22.09 | 21.63 | 22.56 | 23.10 |
|                 | 3H   | 22.03            | 22.82 | 22.55 | 23.34 | 23.90 | 22.61          | 23.41 | 23.13 | 23.93 | 24.48 |
|                 | 4H   | 22.74            | 23.46 | 23.28 | 23.99 | 24.58 | 23.23          | 23.95 | 23.77 | 24.48 | 25.07 |
|                 | 6H   | 23.32            | 23.94 | 23.89 | 24.50 | 25.11 | 23.71          | 24.33 | 24.28 | 24.89 | 25.49 |
|                 | 8H   | 23.51            | 24.08 | 24.08 | 24.64 | 25.26 | 23.84          | 24.42 | 24.42 | 24.98 | 25.59 |
|                 | 12H  | 23.61            | 24.12 | 24.20 | 24.71 | 25.33 | 23.91          | 24.42 | 24.50 | 25.01 | 25.63 |
| 8H              | 4H   | 22.97            | 23.54 | 23.54 | 24.10 | 24.71 | 23.41          | 23.99 | 23.98 | 24.55 | 25.16 |
|                 | 6H   | 23.66            | 24.13 | 24.26 | 24.73 | 25.35 | 23.99          | 24.46 | 24.60 | 25.07 | 25.69 |
|                 | 8H   | 23.91            | 24.33 | 24.53 | 24.95 | 25.58 | 24.19          | 24.61 | 24.81 | 25.23 | 25.86 |
|                 | 12H  | 24.07            | 24.44 | 24.69 | 25.04 | 25.75 | 24.31          | 24.68 | 24.93 | 25.28 | 25.99 |
| 12H             | 4H   | 22.97            | 23.47 | 23.55 | 24.06 | 24.68 | 23.41          | 23.92 | 24.00 | 24.51 | 25.13 |
|                 | 6H   | 23.68            | 24.10 | 24.30 | 24.72 | 25.35 | 24.02          | 24.44 | 24.64 | 25.05 | 25.69 |
|                 | 8H   | 23.97            | 24.34 | 24.59 | 24.94 | 25.65 | 24.25          | 24.62 | 24.87 | 25.22 | 25.93 |

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

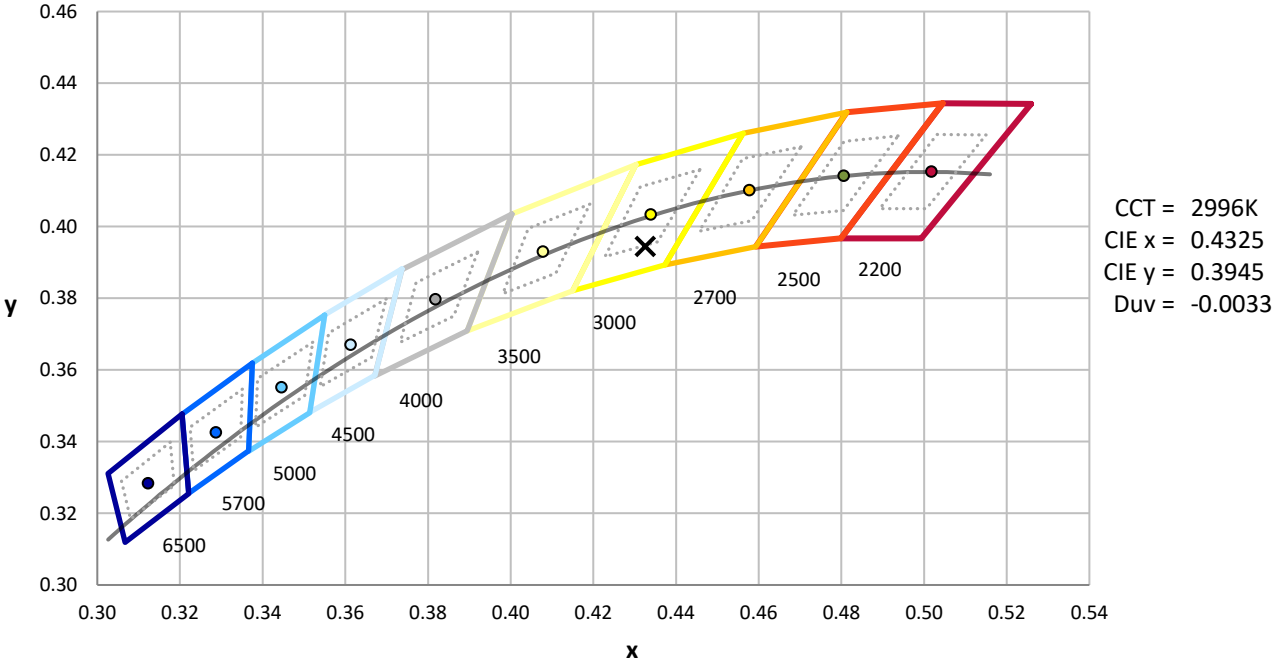
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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 <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /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**

| $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /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**

| $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /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**

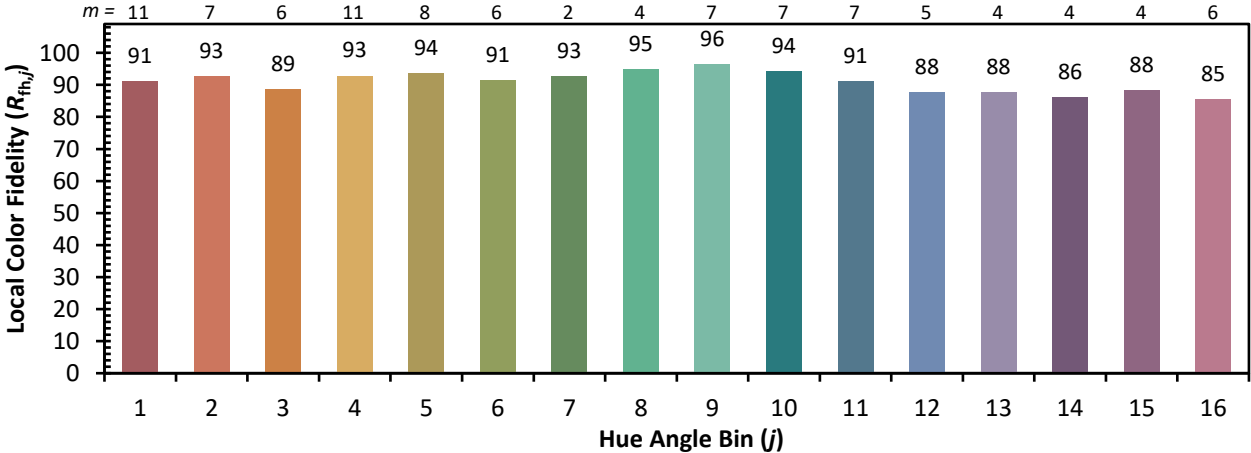


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| 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)