

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: P1433932

Luminaire Tested: EHBR1-54-UNV-TASM-L940-UPL15

Issue Date: 3/20/2026

**Test Information**

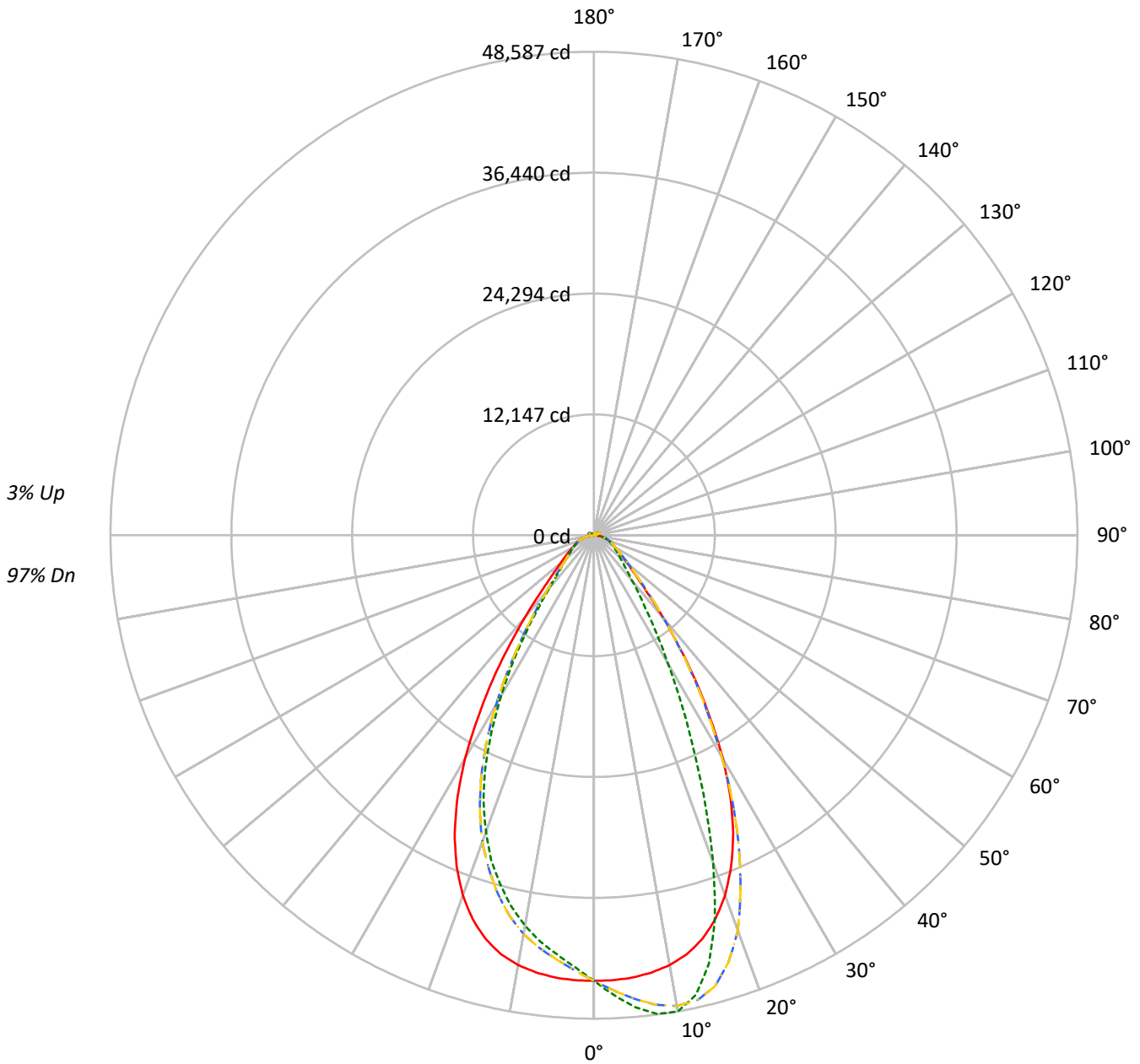
Test Method: LM-79-2019  
Report Number: P1433932  
REPORT IS A COMBINATION OF REPORTS P1431869 AND P1431635  
Test Lab: INNOVATION CENTER  
Issue Date: 3/20/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: EHBR1-54-UNV-TASM-L940-UPL15  
Description: Elevate Round Highbay at, 54000 lumens, 4000K 90CRI LEDs with TASM lens  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 51453.8 lumens  
Efficiency: N/A  
Efficacy: 168.5 lumens/watt  
Spacing Criteria (0/90/45): 0.99 / 0.84 / 0.9  
Luminous Opening: Vertical Cylinder (Dia: 1.71' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 305.3  
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: P1433932  
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### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - · - · 90°-270°    - · - · 135°-315°



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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 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 104 | 104 | 104 | 100 | 100 | 100 | 100 | 100 | 100 | 97 |
| 1   | 111 | 108 | 105 | 102 | 108 | 105 | 103 | 100 | 101 | 98  | 96  | 96  | 95  | 93  | 93  | 91  | 90  | 93  | 91  | 90  | 88 |
| 2   | 104 | 98  | 93  | 89  | 102 | 96  | 92  | 88  | 93  | 89  | 86  | 89  | 86  | 83  | 86  | 83  | 81  | 86  | 83  | 81  | 79 |
| 3   | 98  | 90  | 84  | 79  | 95  | 88  | 83  | 79  | 85  | 81  | 77  | 82  | 79  | 75  | 80  | 77  | 74  | 80  | 77  | 74  | 72 |
| 4   | 92  | 83  | 76  | 71  | 90  | 82  | 76  | 71  | 79  | 74  | 70  | 77  | 72  | 69  | 74  | 71  | 67  | 74  | 71  | 67  | 66 |
| 5   | 87  | 77  | 70  | 65  | 85  | 76  | 69  | 65  | 73  | 68  | 64  | 71  | 67  | 63  | 70  | 65  | 62  | 70  | 65  | 62  | 60 |
| 6   | 82  | 71  | 65  | 60  | 80  | 70  | 64  | 59  | 69  | 63  | 59  | 67  | 62  | 58  | 65  | 61  | 57  | 65  | 61  | 57  | 56 |
| 7   | 77  | 67  | 60  | 55  | 75  | 66  | 59  | 55  | 64  | 58  | 54  | 63  | 57  | 54  | 61  | 57  | 53  | 61  | 57  | 53  | 52 |
| 8   | 73  | 62  | 56  | 51  | 72  | 62  | 55  | 51  | 60  | 54  | 50  | 59  | 54  | 50  | 58  | 53  | 50  | 58  | 53  | 50  | 48 |
| 9   | 69  | 58  | 52  | 47  | 68  | 58  | 52  | 47  | 57  | 51  | 47  | 55  | 50  | 47  | 54  | 50  | 46  | 54  | 50  | 46  | 45 |
| 10  | 66  | 55  | 49  | 44  | 64  | 54  | 48  | 44  | 53  | 48  | 44  | 52  | 47  | 44  | 51  | 47  | 43  | 51  | 47  | 43  | 42 |

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

|     | 0°     | 90°    | 180°   | 270°   |
|-----|--------|--------|--------|--------|
| 0°  | 210277 | 210277 | 210277 | 210277 |
| 5°  | 208998 | 222961 | 208998 | 198152 |
| 10° | 206428 | 228686 | 206428 | 187534 |
| 15° | 200334 | 212520 | 200334 | 173231 |
| 20° | 187362 | 170412 | 187362 | 154300 |
| 25° | 165830 | 118071 | 165830 | 129310 |
| 30° | 134648 | 76814  | 134648 | 96749  |
| 35° | 96574  | 49746  | 96574  | 64409  |
| 40° | 62438  | 34288  | 62438  | 40620  |
| 45° | 39617  | 26560  | 39617  | 28941  |
| 50° | 29420  | 22569  | 29420  | 24107  |
| 55° | 24020  | 20559  | 24020  | 21280  |
| 60° | 20799  | 19585  | 20799  | 19703  |
| 65° | 18960  | 18888  | 18960  | 18808  |
| 70° | 17970  | 18507  | 17970  | 18268  |
| 75° | 16806  | 17904  | 16806  | 17366  |
| 80° | 14762  | 16903  | 14762  | 15800  |
| 85° | 9552   | 12069  | 9552   | 11507  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 55699 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 4257.6  | 8.3       |
| 10°-20°   | 11583.1 | 22.5      |
| 20°-30°   | 13584.6 | 26.4      |
| 30°-40°   | 9447.2  | 18.4      |
| 40°-50°   | 4694.8  | 9.1       |
| 50°-60°   | 2808.0  | 5.5       |
| 60°-70°   | 1976.4  | 3.8       |
| 70°-80°   | 1273.1  | 2.5       |
| 80°-90°   | 406.8   | 0.8       |
| 90°-100°  | 38.8    | 0.1       |
| 100°-110° | 244.4   | 0.5       |
| 110°-120° | 449.9   | 0.9       |
| 120°-130° | 268.8   | 0.5       |
| 130°-140° | 164.5   | 0.3       |
| 140°-150° | 115.6   | 0.2       |
| 150°-160° | 77.5    | 0.2       |
| 160°-170° | 46.4    | 0.1       |
| 170°-180° | 15.9    | 0.0       |
| 0°-30°    | 29425.3 | 57.2      |
| 0°-40°    | 38872.6 | 75.5      |
| 0°-60°    | 46375.4 | 90.1      |
| 0°-90°    | 50031.8 | 97.2      |
| 90°-120°  | 733.2   | 1.4       |
| 90°-150°  | 1282.2  | 2.5       |
| 90°-180°  | 1422.0  | 2.8       |
| 0°-180°   | 51453.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°    | 90°   | 180°  | 270°  | 360°  | Flux  |
|------|-------|-------|-------|-------|-------|-------|
| 0°   | 44777 | 44777 | 44777 | 44777 | 44777 |       |
| 5°   | 44624 | 47606 | 44624 | 42309 | 44624 | 4235  |
| 15°  | 42029 | 44586 | 42029 | 36343 | 42029 | 11746 |
| 25°  | 33116 | 23579 | 33116 | 25823 | 33116 | 14993 |
| 35°  | 17725 | 9130  | 17725 | 11821 | 17725 | 11065 |
| 45°  | 6410  | 4297  | 6410  | 4683  | 6410  | 5245  |
| 55°  | 3246  | 2778  | 3246  | 2876  | 3246  | 2968  |
| 65°  | 1979  | 1972  | 1979  | 1963  | 1979  | 1988  |
| 75°  | 1184  | 1261  | 1184  | 1223  | 1184  | 1243  |
| 85°  | 328   | 415   | 328   | 396   | 328   | 365   |
| 90°  | 11    | 17    | 11    | 11    | 11    | 21    |
| 95°  | 21    | 24    | 21    | 18    | 21    | 22    |
| 105° | 112   | 62    | 112   | 86    | 112   | 151   |
| 115° | 478   | 413   | 478   | 388   | 478   | 436   |
| 125° | 308   | 326   | 308   | 281   | 308   | 283   |
| 135° | 198   | 230   | 198   | 207   | 198   | 157   |
| 145° | 182   | 190   | 182   | 176   | 182   | 114   |
| 155° | 165   | 173   | 165   | 162   | 165   | 77    |
| 165° | 163   | 171   | 163   | 160   | 163   | 46    |
| 175° | 167   | 175   | 167   | 164   | 167   | 16    |
| 180° | 168   | 168   | 168   | 168   | 168   |       |



TEST NUMBER: P1433932  
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**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 22.5°   | 45°     | 67.5°   | 90°     | 112.5°  | 135°    | 157.5°  | 180°    | 202.5°  | 225°    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°     | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 |
| 2.5°   | 44751.1 | 45329.5 | 45798.0 | 46107.1 | 46259.9 | 46107.1 | 45798.0 | 45329.5 | 44751.1 | 44175.9 | 43780.4 |
| 5°     | 44624.3 | 45782.9 | 46764.5 | 47406.8 | 47605.8 | 47406.8 | 46764.5 | 45782.9 | 44624.3 | 43529.4 | 42803.1 |
| 7.5°   | 44321.1 | 46126.4 | 47584.8 | 48334.6 | 48517.7 | 48334.6 | 47584.8 | 46126.4 | 44321.1 | 42771.2 | 41853.5 |
| 10°    | 43858.5 | 46343.0 | 48028.1 | 48565.5 | 48587.4 | 48565.5 | 48028.1 | 46343.0 | 43858.5 | 41770.3 | 40688.1 |
| 12.5°  | 43120.5 | 46265.7 | 47879.5 | 47703.3 | 47302.7 | 47703.3 | 47879.5 | 46265.7 | 43120.5 | 40547.8 | 39182.5 |
| 15°    | 42029.0 | 45808.1 | 46938.3 | 45503.4 | 44585.6 | 45503.4 | 46938.3 | 45808.1 | 42029.0 | 38897.1 | 37313.5 |
| 17.5°  | 40490.7 | 44951.7 | 44973.5 | 42134.7 | 40403.4 | 42134.7 | 44973.5 | 44951.7 | 40490.7 | 36878.6 | 35134.7 |
| 20°    | 38508.4 | 43578.0 | 42268.2 | 37075.9 | 35024.7 | 37075.9 | 42268.2 | 43578.0 | 38508.4 | 34492.3 | 32781.2 |
| 22.5°  | 36023.0 | 41725.8 | 38500.7 | 31986.9 | 29188.4 | 31986.9 | 38500.7 | 41725.8 | 36023.0 | 31717.3 | 29936.5 |
| 25°    | 33116.2 | 39456.3 | 34447.8 | 26441.9 | 23578.7 | 26441.9 | 34447.8 | 39456.3 | 33116.2 | 28410.8 | 26800.4 |
| 27.5°  | 29697.1 | 36579.7 | 30132.1 | 21607.3 | 18965.7 | 21607.3 | 30132.1 | 36579.7 | 29697.1 | 24996.9 | 23352.0 |
| 30°    | 25899.5 | 32891.9 | 25640.9 | 17207.5 | 14775.2 | 17207.5 | 25640.9 | 32891.9 | 25899.5 | 21161.4 | 19688.7 |
| 32.5°  | 21647.5 | 29277.3 | 21327.6 | 13787.7 | 11727.2 | 13787.7 | 21327.6 | 29277.3 | 21647.5 | 17501.4 | 15962.4 |
| 35°    | 17724.8 | 24755.0 | 17438.5 | 10833.8 | 9130.2  | 10833.8 | 17438.5 | 24755.0 | 17724.8 | 14046.3 | 12534.9 |
| 37.5°  | 13910.3 | 20482.1 | 13901.1 | 8723.8  | 7405.7  | 8723.8  | 13901.1 | 20482.1 | 13910.3 | 10920.4 | 9693.6  |
| 40°    | 10822.1 | 16015.3 | 10891.8 | 6964.0  | 5943.0  | 6964.0  | 10891.8 | 16015.3 | 10822.1 | 8309.1  | 7524.0  |
| 42.5°  | 8199.9  | 12246.1 | 8561.0  | 5715.5  | 5047.9  | 5715.5  | 8561.0  | 12246.1 | 8199.9  | 6546.7  | 5958.9  |
| 45°    | 6409.8  | 9011.8  | 6685.2  | 4822.0  | 4297.3  | 4822.0  | 6685.2  | 9011.8  | 6409.8  | 5272.1  | 4877.4  |
| 47.5°  | 5220.0  | 6964.8  | 5418.2  | 4136.0  | 3768.3  | 4136.0  | 5418.2  | 6964.8  | 5220.0  | 4459.3  | 4163.8  |
| 50°    | 4384.6  | 5344.3  | 4498.8  | 3610.4  | 3363.6  | 3610.4  | 4498.8  | 5344.3  | 4384.6  | 3818.6  | 3621.4  |
| 52.5°  | 3766.6  | 4358.5  | 3831.3  | 3217.5  | 3051.2  | 3217.5  | 3831.3  | 4358.5  | 3766.6  | 3340.9  | 3218.4  |
| 55°    | 3246.0  | 3664.2  | 3331.7  | 2893.4  | 2778.4  | 2893.4  | 3331.7  | 3664.2  | 3246.0  | 2973.2  | 2882.5  |
| 57.5°  | 2850.6  | 3108.3  | 2893.4  | 2617.2  | 2540.8  | 2617.2  | 2893.4  | 3108.3  | 2850.6  | 2645.7  | 2597.0  |
| 60°    | 2500.4  | 2691.9  | 2553.4  | 2376.2  | 2354.4  | 2376.2  | 2553.4  | 2691.9  | 2500.4  | 2380.4  | 2348.5  |
| 62.5°  | 2230.9  | 2351.8  | 2257.8  | 2159.6  | 2140.3  | 2159.6  | 2257.8  | 2351.8  | 2230.9  | 2138.6  | 2144.5  |
| 65°    | 1979.0  | 2091.5  | 2017.7  | 1964.7  | 1971.5  | 1964.7  | 2017.7  | 2091.5  | 1979.0  | 1936.2  | 1945.5  |
| 67.5°  | 1784.2  | 1843.0  | 1811.1  | 1780.8  | 1788.4  | 1780.8  | 1811.1  | 1843.0  | 1784.2  | 1742.3  | 1756.5  |
| 70°    | 1576.8  | 1639.8  | 1607.1  | 1611.3  | 1623.9  | 1611.3  | 1607.1  | 1639.8  | 1576.8  | 1564.2  | 1575.1  |
| 72.5°  | 1378.6  | 1427.4  | 1416.5  | 1426.5  | 1440.0  | 1426.5  | 1416.5  | 1427.4  | 1378.6  | 1377.0  | 1377.8  |
| 75°    | 1183.9  | 1220.8  | 1225.9  | 1240.1  | 1261.2  | 1240.1  | 1225.9  | 1220.8  | 1183.9  | 1171.3  | 1186.5  |
| 77.5°  | 971.4   | 1013.4  | 1029.4  | 1048.8  | 1079.8  | 1048.8  | 1029.4  | 1013.4  | 971.4   | 979.8   | 987.5   |
| 80°    | 776.6   | 796.0   | 831.2   | 845.6   | 889.2   | 845.6   | 831.2   | 796.0   | 776.6   | 762.4   | 773.3   |
| 82.5°  | 568.4   | 586.1   | 616.3   | 643.2   | 668.4   | 643.2   | 616.3   | 586.1   | 568.4   | 561.7   | 562.5   |
| 85°    | 328.3   | 355.1   | 375.4   | 407.2   | 414.8   | 407.2   | 375.4   | 355.1   | 328.3   | 335.9   | 328.3   |
| 87.5°  | 115.1   | 123.4   | 141.1   | 153.6   | 154.5   | 153.6   | 141.1   | 123.4   | 115.1   | 117.6   | 106.7   |
| 90°    | 10.8    | 18.6    | 31.8    | 20.4    | 16.7    | 20.4    | 31.8    | 18.6    | 10.8    | 18.5    | 28.6    |
| 92.5°  | 14.0    | 24.8    | 44.1    | 25.8    | 20.6    | 25.8    | 44.1    | 24.8    | 14.0    | 23.9    | 45.5    |
| 95°    | 21.0    | 30.2    | 55.6    | 28.1    | 23.7    | 28.1    | 55.6    | 30.2    | 21.0    | 31.7    | 63.3    |
| 97.5°  | 31.7    | 37.1    | 62.6    | 29.7    | 27.5    | 29.7    | 62.6    | 37.1    | 31.7    | 38.6    | 72.5    |
| 100°   | 41.7    | 41.7    | 112.6   | 33.5    | 30.6    | 33.5    | 112.6   | 41.7    | 41.7    | 47.9    | 112.5   |
| 102.5° | 62.5    | 81.1    | 259.0   | 63.6    | 36.0    | 63.6    | 259.0   | 81.1    | 62.5    | 88.7    | 238.0   |
| 105°   | 112.5   | 182.7   | 453.9   | 156.8   | 62.2    | 156.8   | 453.9   | 182.7   | 112.5   | 184.2   | 423.6   |
| 107.5° | 211.9   | 339.0   | 584.0   | 304.6   | 137.0   | 304.6   | 584.0   | 339.0   | 211.9   | 325.1   | 559.3   |
| 110°   | 338.2   | 473.1   | 637.2   | 415.6   | 270.9   | 415.6   | 637.2   | 473.1   | 338.2   | 446.0   | 586.2   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 112.5° | 439.8 | 526.9 | 622.5 | 460.2 | 372.6 | 460.2  | 622.5 | 526.9  | 439.8 | 492.2  | 561.5 |
| 115°   | 478.4 | 519.3 | 556.3 | 458.6 | 412.6 | 458.6  | 556.3 | 519.3  | 478.4 | 480.6  | 501.5 |
| 117.5° | 462.3 | 475.3 | 480.8 | 431.0 | 415.0 | 431.0  | 480.8 | 475.3  | 462.3 | 433.0  | 426.0 |
| 120°   | 417.6 | 412.3 | 406.2 | 390.2 | 391.9 | 390.2  | 406.2 | 412.3  | 417.6 | 378.3  | 355.9 |
| 122.5° | 362.2 | 350.7 | 343.8 | 349.4 | 360.3 | 349.4  | 343.8 | 350.7  | 362.2 | 322.9  | 306.0 |
| 125°   | 307.5 | 296.0 | 300.7 | 314.0 | 325.7 | 314.0  | 300.7 | 296.0  | 307.5 | 275.3  | 270.5 |
| 127.5° | 262.2 | 256.8 | 269.2 | 284.0 | 294.1 | 284.0  | 269.2 | 256.8  | 262.2 | 241.4  | 245.2 |
| 130°   | 229.9 | 230.6 | 246.9 | 260.1 | 266.4 | 260.1  | 246.9 | 230.6  | 229.9 | 219.9  | 229.8 |
| 132.5° | 209.9 | 215.3 | 230.8 | 242.5 | 246.4 | 242.5  | 230.8 | 215.3  | 209.9 | 207.7  | 220.0 |
| 135°   | 197.7 | 205.2 | 220.1 | 227.0 | 229.5 | 227.0  | 220.1 | 205.2  | 197.7 | 199.3  | 209.9 |
| 137.5° | 190.8 | 198.4 | 209.2 | 215.6 | 214.8 | 215.6  | 209.2 | 198.4  | 190.8 | 194.0  | 202.4 |
| 140°   | 187.1 | 194.6 | 199.3 | 206.3 | 206.5 | 206.3  | 199.3 | 194.6  | 187.1 | 188.6  | 195.6 |
| 142.5° | 183.3 | 190.1 | 192.4 | 197.9 | 197.2 | 197.9  | 192.4 | 190.1  | 183.3 | 184.8  | 189.4 |
| 145°   | 181.8 | 187.1 | 184.7 | 191.0 | 190.3 | 191.0  | 184.7 | 187.1  | 181.8 | 181.8  | 184.8 |
| 147.5° | 177.9 | 181.8 | 179.4 | 184.8 | 184.3 | 184.8  | 179.4 | 181.8  | 177.9 | 177.9  | 179.5 |
| 150°   | 174.1 | 177.2 | 173.3 | 179.5 | 180.5 | 179.5  | 173.3 | 177.2  | 174.1 | 173.4  | 175.0 |
| 152.5° | 168.8 | 171.9 | 168.8 | 175.8 | 175.9 | 175.8  | 168.8 | 171.9  | 168.8 | 168.1  | 169.7 |
| 155°   | 165.1 | 166.7 | 165.1 | 172.2 | 173.0 | 172.2  | 165.1 | 166.7  | 165.1 | 164.2  | 165.9 |
| 157.5° | 162.9 | 164.5 | 163.8 | 170.0 | 170.9 | 170.0  | 163.8 | 164.5  | 162.9 | 162.9  | 163.8 |
| 160°   | 162.5 | 164.0 | 164.1 | 169.6 | 170.4 | 169.6  | 164.1 | 164.0  | 162.5 | 162.4  | 163.2 |
| 162.5° | 162.6 | 162.6 | 163.5 | 169.0 | 170.7 | 169.0  | 163.5 | 162.6  | 162.6 | 162.6  | 163.3 |
| 165°   | 162.8 | 163.6 | 163.7 | 168.4 | 170.9 | 168.4  | 163.7 | 163.6  | 162.8 | 162.8  | 162.8 |
| 167.5° | 163.7 | 162.9 | 164.6 | 169.5 | 171.9 | 169.5  | 164.6 | 162.9  | 163.7 | 163.6  | 163.6 |
| 170°   | 163.0 | 163.9 | 164.7 | 169.6 | 172.0 | 169.6  | 164.7 | 163.9  | 163.0 | 163.8  | 163.7 |
| 172.5° | 165.6 | 165.6 | 166.5 | 170.6 | 173.8 | 170.6  | 166.5 | 165.6  | 165.6 | 165.5  | 166.2 |
| 175°   | 167.2 | 167.2 | 168.2 | 171.5 | 174.8 | 171.5  | 168.2 | 167.2  | 167.2 | 166.4  | 166.4 |
| 177.5° | 166.4 | 168.1 | 169.7 | 173.2 | 177.1 | 173.2  | 169.7 | 168.1  | 166.4 | 166.4  | 166.4 |
| 180°   | 168.1 | 168.1 | 168.1 | 168.1 | 168.1 | 168.1  | 168.1 | 168.1  | 168.1 | 168.1  | 168.1 |



TEST NUMBER: P1433932  
 CATALOG NUMBER: EHBR1-54-UNV-TASM-L940-UPL15

**CANDELA DISTRIBUTION (continued):**

|        | 247.5°  | 270°    | 292.5°  | 315°    | 337.5°  | 360°    |
|--------|---------|---------|---------|---------|---------|---------|
| 0°     | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 | 44777.0 |
| 2.5°   | 43476.5 | 43448.0 | 43476.5 | 43780.4 | 44175.9 | 44751.1 |
| 5°     | 42466.4 | 42308.6 | 42466.4 | 42803.1 | 43529.4 | 44624.3 |
| 7.5°   | 41290.1 | 41198.5 | 41290.1 | 41853.5 | 42771.2 | 44321.1 |
| 10°    | 40051.6 | 39844.2 | 40051.6 | 40688.1 | 41770.3 | 43858.5 |
| 12.5°  | 38525.1 | 38250.6 | 38525.1 | 39182.5 | 40547.8 | 43120.5 |
| 15°    | 36583.9 | 36342.9 | 36583.9 | 37313.5 | 38897.1 | 42029.0 |
| 17.5°  | 34500.7 | 34282.4 | 34500.7 | 35134.7 | 36878.6 | 40490.7 |
| 20°    | 31884.5 | 31713.1 | 31884.5 | 32781.2 | 34492.3 | 38508.4 |
| 22.5°  | 29139.7 | 28979.3 | 29139.7 | 29936.5 | 31717.3 | 36023.0 |
| 25°    | 25910.4 | 25823.1 | 25910.4 | 26800.4 | 28410.8 | 33116.2 |
| 27.5°  | 22420.9 | 22272.2 | 22420.9 | 23352.0 | 24996.9 | 29697.1 |
| 30°    | 18855.8 | 18609.7 | 18855.8 | 19688.7 | 21161.4 | 25899.5 |
| 32.5°  | 15368.7 | 15191.6 | 15368.7 | 15962.4 | 17501.4 | 21647.5 |
| 35°    | 11998.4 | 11821.3 | 11998.4 | 12534.9 | 14046.3 | 17724.8 |
| 37.5°  | 9349.3  | 9036.2  | 9349.3  | 9693.6  | 10920.4 | 13910.3 |
| 40°    | 7090.8  | 7040.4  | 7090.8  | 7524.0  | 8309.1  | 10822.1 |
| 42.5°  | 5772.5  | 5635.6  | 5772.5  | 5958.9  | 6546.7  | 8199.9  |
| 45°    | 4736.4  | 4682.6  | 4736.4  | 4877.4  | 5272.1  | 6409.8  |
| 47.5°  | 4073.1  | 4096.6  | 4073.1  | 4163.8  | 4459.3  | 5220.0  |
| 50°    | 3578.5  | 3592.8  | 3578.5  | 3621.4  | 3818.6  | 4384.6  |
| 52.5°  | 3214.2  | 3201.5  | 3214.2  | 3218.4  | 3340.9  | 3766.6  |
| 55°    | 2891.7  | 2875.8  | 2891.7  | 2882.5  | 2973.2  | 3246.0  |
| 57.5°  | 2609.6  | 2621.4  | 2609.6  | 2597.0  | 2645.7  | 2850.6  |
| 60°    | 2357.7  | 2368.6  | 2357.7  | 2348.5  | 2380.4  | 2500.4  |
| 62.5°  | 2145.3  | 2152.0  | 2145.3  | 2144.5  | 2138.6  | 2230.9  |
| 65°    | 1955.5  | 1963.1  | 1955.5  | 1945.5  | 1936.2  | 1979.0  |
| 67.5°  | 1774.1  | 1774.1  | 1774.1  | 1756.5  | 1742.3  | 1784.2  |
| 70°    | 1603.7  | 1602.9  | 1603.7  | 1575.1  | 1564.2  | 1576.8  |
| 72.5°  | 1398.9  | 1419.0  | 1398.9  | 1377.8  | 1377.0  | 1378.6  |
| 75°    | 1199.9  | 1223.3  | 1199.9  | 1186.5  | 1171.3  | 1183.9  |
| 77.5°  | 998.4   | 1034.4  | 998.4   | 987.5   | 979.8   | 971.4   |
| 80°    | 791.8   | 831.2   | 791.8   | 773.3   | 762.4   | 776.6   |
| 82.5°  | 585.3   | 614.6   | 585.3   | 562.5   | 561.7   | 568.4   |
| 85°    | 348.4   | 395.5   | 348.4   | 328.3   | 335.9   | 328.3   |
| 87.5°  | 111.7   | 142.7   | 111.7   | 106.7   | 117.6   | 115.1   |
| 90°    | 17.0    | 10.8    | 17.0    | 28.6    | 18.5    | 10.8    |
| 92.5°  | 25.5    | 15.5    | 25.5    | 45.5    | 23.9    | 14.0    |
| 95°    | 29.3    | 17.8    | 29.3    | 63.3    | 31.7    | 21.0    |
| 97.5°  | 32.4    | 23.2    | 32.4    | 72.5    | 38.6    | 31.7    |
| 100°   | 37.8    | 30.2    | 37.8    | 112.5   | 47.9    | 41.7    |
| 102.5° | 79.4    | 50.2    | 79.4    | 238.0   | 88.7    | 62.5    |
| 105°   | 166.4   | 85.6    | 166.4   | 423.6   | 184.2   | 112.5   |
| 107.5° | 297.3   | 147.2   | 297.3   | 559.3   | 325.1   | 211.9   |
| 110°   | 394.4   | 273.5   | 394.4   | 586.2   | 446.0   | 338.2   |



TEST NUMBER: P1433932

CATALOG NUMBER: EHBR1-54-UNV-TASM-L940-UPL15

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|--------|--------|-------|--------|-------|--------|-------|
| 112.5° | 423.6  | 369.0 | 423.6  | 561.5 | 492.2  | 439.8 |
| 115°   | 407.4  | 388.3 | 407.4  | 501.5 | 480.6  | 478.4 |
| 117.5° | 372.0  | 375.2 | 372.0  | 426.0 | 433.0  | 462.3 |
| 120°   | 331.2  | 347.4 | 331.2  | 355.9 | 378.3  | 417.6 |
| 122.5° | 294.3  | 312.8 | 294.3  | 306.0 | 322.9  | 362.2 |
| 125°   | 262.0  | 281.3 | 262.0  | 270.5 | 275.3  | 307.5 |
| 127.5° | 239.6  | 252.8 | 239.6  | 245.2 | 241.4  | 262.2 |
| 130°   | 222.8  | 233.6 | 222.8  | 229.8 | 219.9  | 229.9 |
| 132.5° | 211.3  | 218.2 | 211.3  | 220.0 | 207.7  | 209.9 |
| 135°   | 201.3  | 206.6 | 201.3  | 209.9 | 199.3  | 197.7 |
| 137.5° | 192.9  | 197.5 | 192.9  | 202.4 | 194.0  | 190.8 |
| 140°   | 186.1  | 190.0 | 186.1  | 195.6 | 188.6  | 187.1 |
| 142.5° | 178.5  | 181.6 | 178.5  | 189.4 | 184.8  | 183.3 |
| 145°   | 174.0  | 176.4 | 174.0  | 184.8 | 181.8  | 181.8 |
| 147.5° | 170.3  | 171.9 | 170.3  | 179.5 | 177.9  | 177.9 |
| 150°   | 166.6  | 168.2 | 166.6  | 175.0 | 173.4  | 174.1 |
| 152.5° | 162.0  | 164.4 | 162.0  | 169.7 | 168.1  | 168.8 |
| 155°   | 159.9  | 162.3 | 159.9  | 165.9 | 164.2  | 165.1 |
| 157.5° | 159.2  | 161.6 | 159.2  | 163.8 | 162.9  | 162.9 |
| 160°   | 159.4  | 161.1 | 159.4  | 163.2 | 162.4  | 162.5 |
| 162.5° | 158.8  | 160.4 | 158.8  | 163.3 | 162.6  | 162.6 |
| 165°   | 159.7  | 160.5 | 159.7  | 162.8 | 162.8  | 162.8 |
| 167.5° | 159.8  | 160.5 | 159.8  | 163.6 | 163.6  | 163.7 |
| 170°   | 160.6  | 161.5 | 160.6  | 163.7 | 163.8  | 163.0 |
| 172.5° | 162.3  | 163.1 | 162.3  | 166.2 | 165.5  | 165.6 |
| 175°   | 163.2  | 164.1 | 163.2  | 166.4 | 166.4  | 167.2 |
| 177.5° | 164.8  | 165.6 | 164.8  | 166.4 | 166.4  | 166.4 |
| 180°   | 168.1  | 168.1 | 168.1  | 168.1 | 168.1  | 168.1 |



TEST NUMBER: P1433932  
 CATALOG NUMBER: EHBR1-54-UNV-TASM-L940-UPL15

**CIE UGR TABLE:**

| Reflectances:   |      |                  |       |       |       |       |                |       |       |       |       |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling         |      | 0.7              | 0.7   | 0.5   | 0.5   | 0.3   | 0.7            | 0.7   | 0.5   | 0.5   | 0.3   |
| Wall            |      | 0.5              | 0.3   | 0.5   | 0.3   | 0.3   | 0.5            | 0.3   | 0.5   | 0.3   | 0.3   |
| Reference plane |      | 0.2              | 0.2   | 0.2   | 0.2   | 0.2   | 0.2            | 0.2   | 0.2   | 0.2   | 0.2   |
| Room dimensions |      | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X=2H            | Y=2H | 19.53            | 20.70 | 19.95 | 21.07 | 21.46 | 18.85          | 20.02 | 19.27 | 20.39 | 20.78 |
|                 | 3H   | 21.08            | 22.12 | 21.51 | 22.51 | 22.94 | 20.70          | 21.74 | 21.13 | 22.13 | 22.56 |
|                 | 4H   | 21.72            | 22.69 | 22.18 | 23.10 | 23.55 | 21.49          | 22.45 | 21.94 | 22.86 | 23.32 |
|                 | 6H   | 22.20            | 23.09 | 22.67 | 23.52 | 23.98 | 22.13          | 23.02 | 22.60 | 23.45 | 23.91 |
|                 | 8H   | 22.36            | 23.20 | 22.84 | 23.64 | 24.12 | 22.35          | 23.19 | 22.83 | 23.64 | 24.11 |
|                 | 12H  | 22.43            | 23.23 | 22.91 | 23.67 | 24.17 | 22.48          | 23.28 | 22.96 | 23.72 | 24.22 |
| 4H              | 2H   | 19.95            | 20.92 | 20.41 | 21.33 | 21.78 | 19.43          | 20.40 | 19.89 | 20.81 | 21.26 |
|                 | 3H   | 21.75            | 22.55 | 22.22 | 23.01 | 23.48 | 21.49          | 22.29 | 21.96 | 22.75 | 23.22 |
|                 | 4H   | 22.53            | 23.24 | 23.01 | 23.72 | 24.23 | 22.40          | 23.11 | 22.89 | 23.59 | 24.10 |
|                 | 6H   | 23.14            | 23.76 | 23.66 | 24.26 | 24.79 | 23.17          | 23.79 | 23.69 | 24.29 | 24.82 |
|                 | 8H   | 23.34            | 23.92 | 23.86 | 24.42 | 24.95 | 23.44          | 24.02 | 23.96 | 24.52 | 25.06 |
|                 | 12H  | 23.45            | 23.95 | 23.98 | 24.49 | 25.03 | 23.61          | 24.12 | 24.15 | 24.65 | 25.19 |
| 8H              | 4H   | 22.78            | 23.35 | 23.30 | 23.85 | 24.39 | 22.68          | 23.26 | 23.20 | 23.76 | 24.29 |
|                 | 6H   | 23.52            | 23.99 | 24.07 | 24.54 | 25.08 | 23.59          | 24.05 | 24.14 | 24.60 | 25.15 |
|                 | 8H   | 23.79            | 24.21 | 24.36 | 24.77 | 25.33 | 23.94          | 24.36 | 24.51 | 24.92 | 25.48 |
|                 | 12H  | 23.97            | 24.33 | 24.53 | 24.87 | 25.51 | 24.19          | 24.55 | 24.75 | 25.10 | 25.74 |
| 12H             | 4H   | 22.79            | 23.30 | 23.33 | 23.83 | 24.37 | 22.69          | 23.20 | 23.23 | 23.73 | 24.28 |
|                 | 6H   | 23.56            | 23.98 | 24.13 | 24.55 | 25.10 | 23.63          | 24.05 | 24.20 | 24.61 | 25.17 |
|                 | 8H   | 23.88            | 24.25 | 24.45 | 24.79 | 25.43 | 24.04          | 24.40 | 24.60 | 24.95 | 25.58 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-6

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L935-N

Data in this report applies to families of products including EHBR-60-L935-N

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2506-472-6  
 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-L935-N**  
 Description: Elevate Round Highbay at, 60000 lumens, 3500K 90CRI LEDs with N lens

**Spectral Parameters**

CCT (K): 3406  
 CIE u': 0.2394  
 CIE v': 0.5094  
 Duv: -0.0028  
 CIE x: 0.4076  
 CIE y: 0.3856  
 CIE z: 0.2068  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 582  
 Purity: 38.0517  
 Rf: 91.3  
 Rg: 100

|           |      |      |      |
|-----------|------|------|------|
| CRI (Ra): | 94.6 |      |      |
| R1:       | 96.6 | R9:  | 63.8 |
| R2:       | 98.4 | R10: | 94.7 |
| R3:       | 98.1 | R11: | 96.6 |
| R4:       | 95.8 | R12: | 80.9 |
| R5:       | 96.2 | R13: | 97.4 |
| R6:       | 95.4 | R14: | 98.3 |
| R7:       | 91.8 | R15: | 93.1 |
| R8:       | 84.4 |      |      |



**Test Conditions**

Stabilization Time: 35M  
 Operation Time: 1H 35M  
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-6

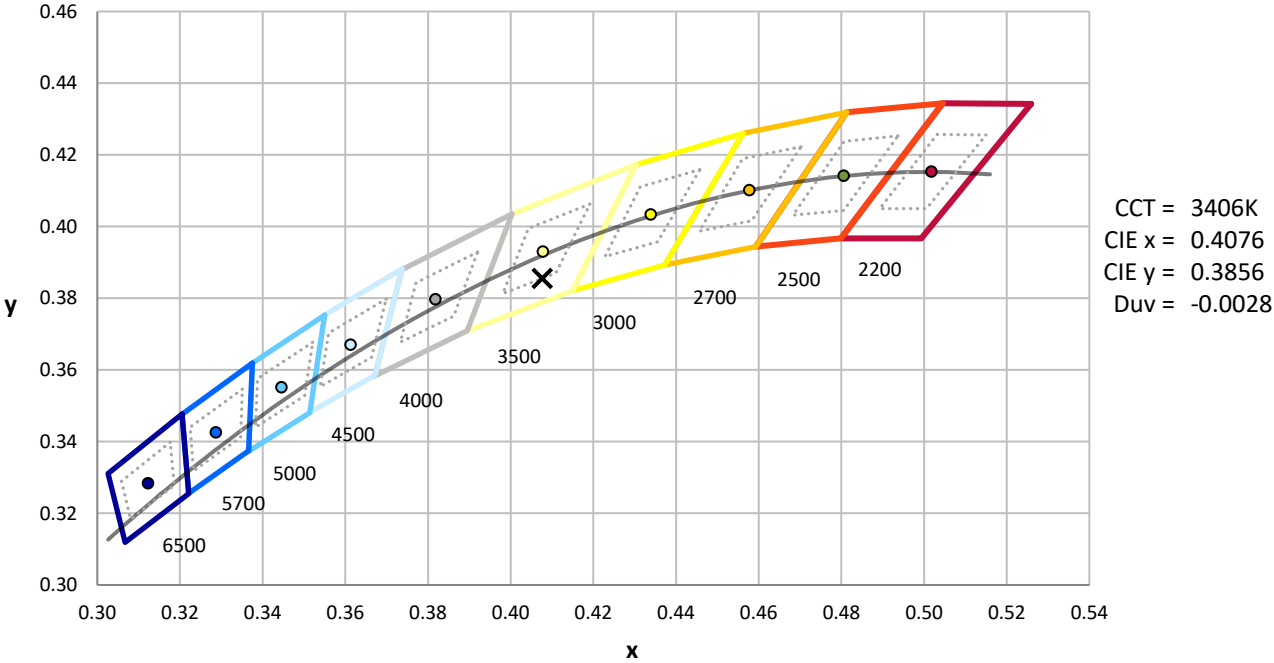
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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: SP1-2506-472-6

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: SP1-2506-472-6

**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    | 140                      | NR            | 620    | 338                      | NR            | 750    | 8                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 159                      | NR            | 625    | 339                      | NR            | 755    | 7                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 182                      | NR            | 630    | 1000                     | NR            | 760    | 5                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 202                      | NR            | 635    | 653                      | NR            | 765    | 5                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 216                      | NR            | 640    | 222                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 228                      | NR            | 645    | 214                      | NR            | 775    | 3                        | NR            | 905    | 0                        | NR            |
| 390    | 0                        | NR            | 520    | 236                      | NR            | 650    | 185                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 1                        | NR            | 525    | 242                      | NR            | 655    | 157                      | NR            | 785    | 3                        | NR            | 915    | 0                        | NR            |
| 400    | 2                        | NR            | 530    | 248                      | NR            | 660    | 133                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 3                        | NR            | 535    | 253                      | NR            | 665    | 113                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 4                        | NR            | 540    | 258                      | NR            | 670    | 103                      | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 7                        | NR            | 545    | 264                      | NR            | 675    | 85                       | NR            | 805    | 1                        | NR            | 935    | 0                        | NR            |
| 420    | 13                       | NR            | 550    | 270                      | NR            | 680    | 72                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 22                       | NR            | 555    | 278                      | NR            | 685    | 62                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 38                       | NR            | 560    | 286                      | NR            | 690    | 53                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 65                       | NR            | 565    | 295                      | NR            | 695    | 45                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 108                      | NR            | 570    | 303                      | NR            | 700    | 39                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 193                      | NR            | 575    | 311                      | NR            | 705    | 33                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 312                      | NR            | 580    | 319                      | NR            | 710    | 28                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 300                      | NR            | 585    | 326                      | NR            | 715    | 24                       | NR            | 845    | 0                        | NR            | 975    | 0                        | NR            |
| 460    | 214                      | NR            | 590    | 332                      | NR            | 720    | 20                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 184                      | NR            | 595    | 333                      | NR            | 725    | 17                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 153                      | NR            | 600    | 336                      | NR            | 730    | 15                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 122                      | NR            | 605    | 337                      | NR            | 735    | 12                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 115                      | NR            | 610    | 367                      | NR            | 740    | 10                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 125                      | NR            | 615    | 390                      | NR            | 745    | 9                        | NR            | 875    | 0                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2506-472-6

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.62**

| 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    | 140                      | NR            | 620    | 338                      | NR            | 750    | 8                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 159                      | NR            | 625    | 339                      | NR            | 755    | 7                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 182                      | NR            | 630    | 1000                     | NR            | 760    | 5                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 202                      | NR            | 635    | 653                      | NR            | 765    | 5                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 216                      | NR            | 640    | 222                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 228                      | NR            | 645    | 214                      | NR            | 775    | 3                        | NR            | 905    | 0                        | NR            |
| 390    | 0                        | NR            | 520    | 236                      | NR            | 650    | 185                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 1                        | NR            | 525    | 242                      | NR            | 655    | 157                      | NR            | 785    | 3                        | NR            | 915    | 0                        | NR            |
| 400    | 2                        | NR            | 530    | 248                      | NR            | 660    | 133                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 3                        | NR            | 535    | 253                      | NR            | 665    | 113                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 4                        | NR            | 540    | 258                      | NR            | 670    | 103                      | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 7                        | NR            | 545    | 264                      | NR            | 675    | 85                       | NR            | 805    | 1                        | NR            | 935    | 0                        | NR            |
| 420    | 13                       | NR            | 550    | 270                      | NR            | 680    | 72                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 22                       | NR            | 555    | 278                      | NR            | 685    | 62                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 38                       | NR            | 560    | 286                      | NR            | 690    | 53                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 65                       | NR            | 565    | 295                      | NR            | 695    | 45                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 108                      | NR            | 570    | 303                      | NR            | 700    | 39                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 193                      | NR            | 575    | 311                      | NR            | 705    | 33                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 312                      | NR            | 580    | 319                      | NR            | 710    | 28                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 300                      | NR            | 585    | 326                      | NR            | 715    | 24                       | NR            | 845    | 0                        | NR            | 975    | 0                        | NR            |
| 460    | 214                      | NR            | 590    | 332                      | NR            | 720    | 20                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 184                      | NR            | 595    | 333                      | NR            | 725    | 17                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 153                      | NR            | 600    | 336                      | NR            | 730    | 15                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 122                      | NR            | 605    | 337                      | NR            | 735    | 12                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 115                      | NR            | 610    | 367                      | NR            | 740    | 10                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 125                      | NR            | 615    | 390                      | NR            | 745    | 9                        | NR            | 875    | 0                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2506-472-6

**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 3.3**

| 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    | 140                      | NR            | 620    | 338                      | NR            | 750    | 8                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 159                      | NR            | 625    | 339                      | NR            | 755    | 7                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 182                      | NR            | 630    | 1000                     | NR            | 760    | 5                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 202                      | NR            | 635    | 653                      | NR            | 765    | 5                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 216                      | NR            | 640    | 222                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 228                      | NR            | 645    | 214                      | NR            | 775    | 3                        | NR            | 905    | 0                        | NR            |
| 390    | 0                        | NR            | 520    | 236                      | NR            | 650    | 185                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 1                        | NR            | 525    | 242                      | NR            | 655    | 157                      | NR            | 785    | 3                        | NR            | 915    | 0                        | NR            |
| 400    | 2                        | NR            | 530    | 248                      | NR            | 660    | 133                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 3                        | NR            | 535    | 253                      | NR            | 665    | 113                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 4                        | NR            | 540    | 258                      | NR            | 670    | 103                      | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 7                        | NR            | 545    | 264                      | NR            | 675    | 85                       | NR            | 805    | 1                        | NR            | 935    | 0                        | NR            |
| 420    | 13                       | NR            | 550    | 270                      | NR            | 680    | 72                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 22                       | NR            | 555    | 278                      | NR            | 685    | 62                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 38                       | NR            | 560    | 286                      | NR            | 690    | 53                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 65                       | NR            | 565    | 295                      | NR            | 695    | 45                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 108                      | NR            | 570    | 303                      | NR            | 700    | 39                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 193                      | NR            | 575    | 311                      | NR            | 705    | 33                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 312                      | NR            | 580    | 319                      | NR            | 710    | 28                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 300                      | NR            | 585    | 326                      | NR            | 715    | 24                       | NR            | 845    | 0                        | NR            | 975    | 0                        | NR            |
| 460    | 214                      | NR            | 590    | 332                      | NR            | 720    | 20                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 184                      | NR            | 595    | 333                      | NR            | 725    | 17                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 153                      | NR            | 600    | 336                      | NR            | 730    | 15                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 122                      | NR            | 605    | 337                      | NR            | 735    | 12                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 115                      | NR            | 610    | 367                      | NR            | 740    | 10                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 125                      | NR            | 615    | 390                      | NR            | 745    | 9                        | NR            | 875    | 0                        | NR            |        |                          |               |

**Summary**

$R_f = 91.3$   
 $R_g = 100$   
 $CIE R_a = 94.6$   
 $R_9 = 63.8$



**Color Vector Graphics**



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 94 | CES51 = 97 | CES76 = 90 |
| CES02 = 63 | CES27 = 92 | CES52 = 98 | CES77 = 86 |
| CES03 = 31 | CES28 = 97 | CES53 = 98 | CES78 = 86 |
| CES04 = 70 | CES29 = 97 | CES54 = 93 | CES79 = 90 |
| CES05 = 50 | CES30 = 92 | CES55 = 92 | CES80 = 91 |
| CES06 = 51 | CES31 = 97 | CES56 = 96 | CES81 = 74 |
| CES07 = 43 | CES32 = 89 | CES57 = 94 | CES82 = 96 |
| CES08 = 41 | CES33 = 99 | CES58 = 95 | CES83 = 94 |
| CES09 = 29 | CES34 = 94 | CES59 = 98 | CES84 = 95 |
| CES10 = 75 | CES35 = 97 | CES60 = 92 | CES85 = 79 |
| CES11 = 58 | CES36 = 81 | CES61 = 93 | CES86 = 79 |
| CES12 = 64 | CES37 = 96 | CES62 = 86 | CES87 = 92 |
| CES13 = 44 | CES38 = 87 | CES63 = 94 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 84 |
| CES15 = 72 | CES40 = 97 | CES65 = 90 | CES90 = 96 |
| CES16 = 48 | CES41 = 96 | CES66 = 89 | CES91 = 75 |
| CES17 = 49 | CES42 = 94 | CES67 = 88 | CES92 = 76 |
| CES18 = 56 | CES43 = 93 | CES68 = 89 | CES93 = 86 |
| CES19 = 71 | CES44 = 99 | CES69 = 90 | CES94 = 74 |
| CES20 = 67 | CES45 = 97 | CES70 = 88 | CES95 = 83 |
| CES21 = 86 | CES46 = 97 | CES71 = 83 | CES96 = 92 |
| CES22 = 78 | CES47 = 91 | CES72 = 94 | CES97 = 96 |
| CES23 = 91 | CES48 = 91 | CES73 = 83 | CES98 = 95 |
| CES24 = 90 | CES49 = 96 | CES74 = 90 | CES99 = 92 |
| CES25 = 71 | CES50 = 98 | CES75 = 85 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)