

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: P1433003

Luminaire Tested: EHBR1-42-UNV-TASM-L850-UPL12

Issue Date: 3/20/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1433003  
REPORT IS A COMBINATION OF REPORTS P1431804 AND P1431635  
Test Lab: INNOVATION CENTER  
Issue Date: 3/20/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: EHBR1-42-UNV-TASM-L850-UPL12  
Description: Elevate Round Highbay at, 42000 lumens, 5000K 80CRI LEDs with TASM lens  
Light Source: -  
Ballast/Driver: -

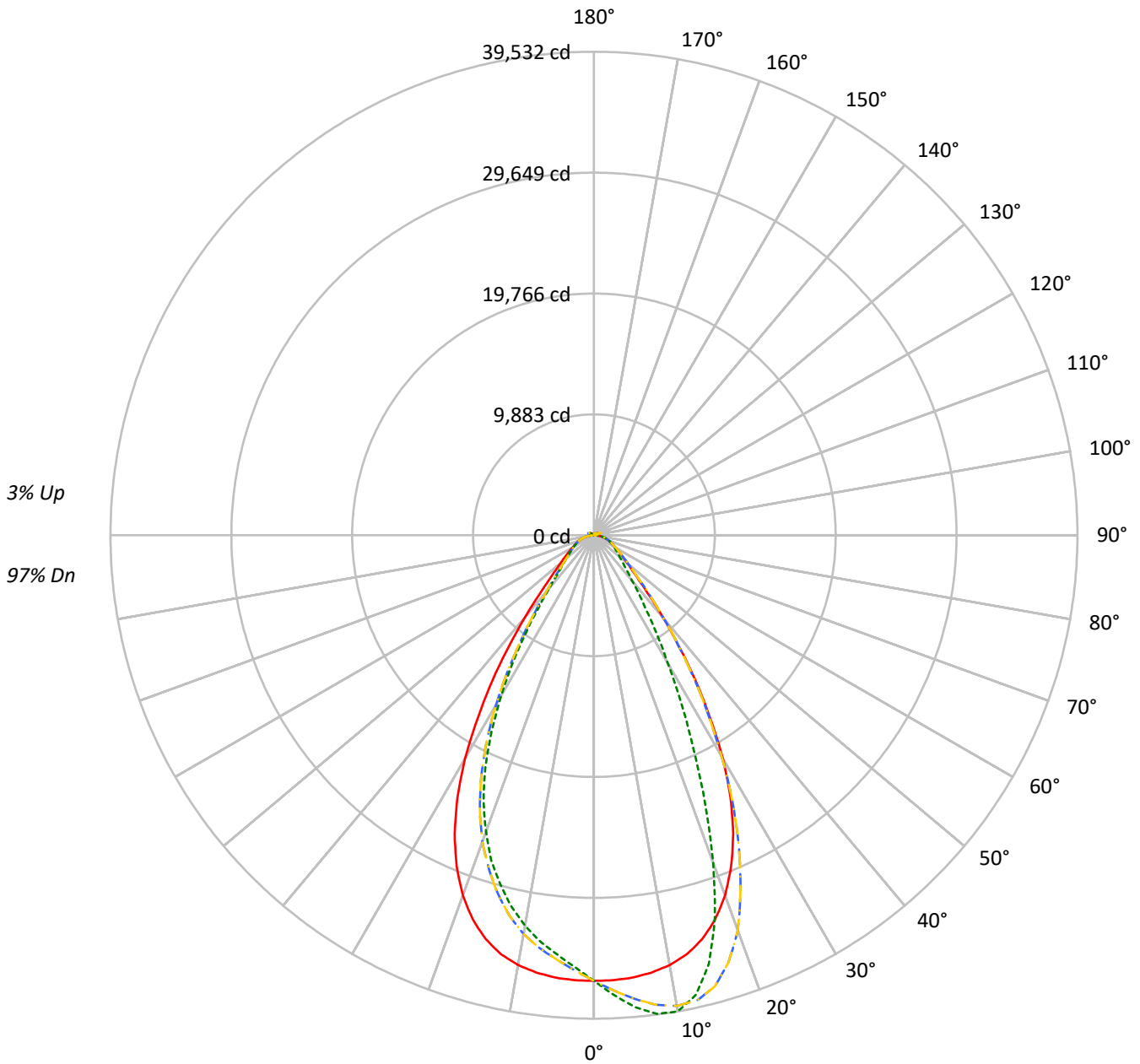
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 41923.7 lumens  
Efficiency: N/A  
Efficacy: 180.9 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): 231.8  
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: P1433003  
CATALOG NUMBER: EHBR1-42-UNV-TASM-L850-UPL12

### Luminous Intensity Polar Plot



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



TEST NUMBER: P1433003  
 CATALOG NUMBER: EHBR1-42-UNV-TASM-L850-UPL12

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |    |    | 20 |    |    |    |    |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |    |    | 10 |    |    | 0  |    |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 0  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |
| 0   | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 104 | 104 | 104 | 99 | 99 | 99 | 99 | 99 | 99 | 97 |
| 1   | 111 | 108 | 105 | 102 | 108 | 105 | 103 | 100 | 101 | 98  | 96  | 96  | 95  | 93  | 92 | 91 | 90 | 92 | 91 | 90 | 88 |
| 2   | 104 | 98  | 93  | 89  | 102 | 96  | 92  | 88  | 92  | 89  | 86  | 89  | 86  | 83  | 86 | 83 | 81 | 86 | 83 | 81 | 79 |
| 3   | 98  | 90  | 84  | 79  | 95  | 88  | 83  | 78  | 85  | 81  | 77  | 82  | 78  | 75  | 80 | 76 | 74 | 80 | 76 | 74 | 72 |
| 4   | 92  | 83  | 76  | 71  | 90  | 82  | 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  | 69 | 65 | 62 | 69 | 65 | 62 | 60 |
| 6   | 82  | 71  | 64  | 60  | 80  | 70  | 64  | 59  | 68  | 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 | 51 |
| 8   | 73  | 62  | 55  | 51  | 71  | 61  | 55  | 51  | 60  | 54  | 50  | 59  | 54  | 50  | 58 | 53 | 49 | 58 | 53 | 49 | 48 |
| 9   | 69  | 58  | 52  | 47  | 68  | 58  | 51  | 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°  | 171086 | 171086 | 171086 | 171086 |
| 5°  | 170045 | 181406 | 170045 | 161220 |
| 10° | 167954 | 186063 | 167954 | 152582 |
| 15° | 162995 | 172910 | 162995 | 140944 |
| 20° | 152441 | 138650 | 152441 | 125542 |
| 25° | 134923 | 96065  | 134923 | 105209 |
| 30° | 109552 | 62497  | 109552 | 78718  |
| 35° | 78574  | 40474  | 78574  | 52404  |
| 40° | 50800  | 27897  | 50800  | 33049  |
| 45° | 32233  | 21609  | 32233  | 23548  |
| 50° | 23937  | 18363  | 23937  | 19614  |
| 55° | 19543  | 16728  | 19543  | 17313  |
| 60° | 16923  | 15935  | 16923  | 16031  |
| 65° | 15427  | 15367  | 15427  | 15302  |
| 70° | 14622  | 15057  | 14622  | 14862  |
| 75° | 13673  | 14566  | 13673  | 14130  |
| 80° | 12012  | 13753  | 12012  | 12856  |
| 85° | 7771   | 9820   | 7771   | 9363   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 45318 cd/sqm



TEST NUMBER: P1433003  
 CATALOG NUMBER: EHBR1-42-UNV-TASM-L850-UPL12

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 3464.1  | 8.3       |
| 10°-20°   | 9424.2  | 22.5      |
| 20°-30°   | 11052.7 | 26.4      |
| 30°-40°   | 7686.5  | 18.3      |
| 40°-50°   | 3819.8  | 9.1       |
| 50°-60°   | 2284.6  | 5.4       |
| 60°-70°   | 1608.0  | 3.8       |
| 70°-80°   | 1035.8  | 2.5       |
| 80°-90°   | 331.1   | 0.8       |
| 90°-100°  | 33.2    | 0.1       |
| 100°-110° | 209.3   | 0.5       |
| 110°-120° | 385.3   | 0.9       |
| 120°-130° | 230.2   | 0.5       |
| 130°-140° | 140.8   | 0.3       |
| 140°-150° | 98.8    | 0.2       |
| 150°-160° | 66.1    | 0.2       |
| 160°-170° | 39.5    | 0.1       |
| 170°-180° | 13.5    | 0.0       |
| 0°-30°    | 23941.0 | 57.1      |
| 0°-40°    | 31627.5 | 75.4      |
| 0°-60°    | 37732.0 | 90.0      |
| 0°-90°    | 40707.0 | 97.1      |
| 90°-120°  | 627.8   | 1.5       |
| 90°-150°  | 1097.6  | 2.6       |
| 90°-180°  | 1217.0  | 2.9       |
| 0°-180°   | 41923.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°    | 90°   | 180°  | 270°  | 360°  | Flux  |
|------|-------|-------|-------|-------|-------|-------|
| 0°   | 36432 | 36432 | 36432 | 36432 | 36432 |       |
| 5°   | 36307 | 38733 | 36307 | 34423 | 36307 | 3446  |
| 15°  | 34196 | 36276 | 34196 | 29569 | 34196 | 9556  |
| 25°  | 26944 | 19184 | 26944 | 21010 | 26944 | 12198 |
| 35°  | 14421 | 7428  | 14421 | 9618  | 14421 | 9003  |
| 45°  | 5215  | 3496  | 5215  | 3810  | 5215  | 4268  |
| 55°  | 2641  | 2261  | 2641  | 2340  | 2641  | 2415  |
| 65°  | 1610  | 1604  | 1610  | 1597  | 1610  | 1617  |
| 75°  | 963   | 1026  | 963   | 995   | 963   | 1011  |
| 85°  | 267   | 338   | 267   | 322   | 267   | 297   |
| 90°  | 9     | 14    | 9     | 9     | 9     | 17    |
| 95°  | 18    | 20    | 18    | 15    | 18    | 19    |
| 105° | 96    | 53    | 96    | 73    | 96    | 130   |
| 115° | 410   | 353   | 410   | 333   | 410   | 373   |
| 125° | 263   | 279   | 263   | 241   | 263   | 243   |
| 135° | 169   | 196   | 169   | 177   | 169   | 134   |
| 145° | 155   | 163   | 155   | 151   | 155   | 97    |
| 155° | 141   | 148   | 141   | 138   | 141   | 66    |
| 165° | 138   | 145   | 138   | 136   | 138   | 39    |
| 175° | 142   | 148   | 142   | 139   | 142   | 13    |
| 180° | 143   | 143   | 143   | 143   | 143   |       |



TEST NUMBER: P1433003  
 CATALOG NUMBER: EHBR1-42-UNV-TASM-L850-UPL12

**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 22.5°   | 45°     | 67.5°   | 90°     | 112.5°  | 135°    | 157.5°  | 180°    | 202.5°  | 225°    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°     | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 |
| 2.5°   | 36410.3 | 36881.0 | 37262.2 | 37513.6 | 37637.9 | 37513.6 | 37262.2 | 36881.0 | 36410.3 | 35942.4 | 35620.7 |
| 5°     | 36307.2 | 37249.9 | 38048.5 | 38571.1 | 38733.1 | 38571.1 | 38048.5 | 37249.9 | 36307.2 | 35416.3 | 34825.5 |
| 7.5°   | 36060.5 | 37529.4 | 38716.0 | 39326.0 | 39474.9 | 39326.0 | 38716.0 | 37529.4 | 36060.5 | 34799.5 | 34052.8 |
| 10°    | 35684.1 | 37705.6 | 39076.7 | 39513.9 | 39531.6 | 39513.9 | 39076.7 | 37705.6 | 35684.1 | 33985.1 | 33104.6 |
| 12.5°  | 35083.6 | 37642.7 | 38955.8 | 38812.2 | 38486.4 | 38812.2 | 38955.8 | 37642.7 | 35083.6 | 32990.5 | 31879.7 |
| 15°    | 34195.5 | 37270.4 | 38190.0 | 37022.4 | 36275.7 | 37022.4 | 38190.0 | 37270.4 | 34195.5 | 31647.4 | 30359.1 |
| 17.5°  | 32944.1 | 36573.6 | 36591.4 | 34281.7 | 32873.0 | 34281.7 | 36591.4 | 36573.6 | 32944.1 | 30005.1 | 28586.3 |
| 20°    | 31331.1 | 35456.0 | 34390.2 | 30165.6 | 28496.7 | 30165.6 | 34390.2 | 35456.0 | 31331.1 | 28063.6 | 26671.4 |
| 22.5°  | 29309.0 | 33949.0 | 31325.0 | 26025.2 | 23748.2 | 26025.2 | 31325.0 | 33949.0 | 29309.0 | 25805.8 | 24356.9 |
| 25°    | 26944.0 | 32102.4 | 28027.5 | 21513.6 | 19184.1 | 21513.6 | 28027.5 | 32102.4 | 26944.0 | 23115.6 | 21805.4 |
| 27.5°  | 24162.2 | 29761.9 | 24516.0 | 17580.1 | 15431.0 | 17580.1 | 24516.0 | 29761.9 | 24162.2 | 20337.9 | 18999.6 |
| 30°    | 21072.3 | 26761.6 | 20861.9 | 14000.4 | 12021.3 | 14000.4 | 20861.9 | 26761.6 | 21072.3 | 17217.4 | 16019.1 |
| 32.5°  | 17612.8 | 23820.7 | 17352.6 | 11218.0 | 9541.5  | 11218.0 | 17352.6 | 23820.7 | 17612.8 | 14239.5 | 12987.3 |
| 35°    | 14421.2 | 20141.2 | 14188.2 | 8814.7  | 7428.5  | 8814.7  | 14188.2 | 20141.2 | 14421.2 | 11428.4 | 10198.7 |
| 37.5°  | 11317.7 | 16664.7 | 11310.2 | 7097.9  | 6025.3  | 7097.9  | 11310.2 | 16664.7 | 11317.7 | 8885.0  | 7886.9  |
| 40°    | 8805.0  | 13030.3 | 8861.8  | 5666.0  | 4835.3  | 5666.0  | 8861.8  | 13030.3 | 8805.0  | 6760.4  | 6121.7  |
| 42.5°  | 6671.6  | 9963.7  | 6965.4  | 4650.2  | 4107.1  | 4650.2  | 6965.4  | 9963.7  | 6671.6  | 5326.5  | 4848.3  |
| 45°    | 5215.1  | 7332.2  | 5439.2  | 3923.3  | 3496.3  | 3923.3  | 5439.2  | 7332.2  | 5215.1  | 4289.5  | 3968.4  |
| 47.5°  | 4247.1  | 5666.7  | 4408.4  | 3365.2  | 3066.0  | 3365.2  | 4408.4  | 5666.7  | 4247.1  | 3628.2  | 3387.8  |
| 50°    | 3567.4  | 4348.2  | 3660.3  | 2937.6  | 2736.7  | 2937.6  | 3660.3  | 4348.2  | 3567.4  | 3106.9  | 2946.4  |
| 52.5°  | 3064.6  | 3546.2  | 3117.2  | 2617.8  | 2482.6  | 2617.8  | 3117.2  | 3546.2  | 3064.6  | 2718.2  | 2618.5  |
| 55°    | 2641.0  | 2981.3  | 2710.8  | 2354.1  | 2260.6  | 2354.1  | 2710.8  | 2981.3  | 2641.0  | 2419.0  | 2345.2  |
| 57.5°  | 2319.3  | 2529.0  | 2354.1  | 2129.3  | 2067.2  | 2129.3  | 2354.1  | 2529.0  | 2319.3  | 2152.6  | 2112.9  |
| 60°    | 2034.4  | 2190.1  | 2077.5  | 1933.3  | 1915.6  | 1933.3  | 2077.5  | 2190.1  | 2034.4  | 1936.7  | 1910.8  |
| 62.5°  | 1815.1  | 1913.5  | 1837.0  | 1757.0  | 1741.3  | 1757.0  | 1837.0  | 1913.5  | 1815.1  | 1739.9  | 1744.8  |
| 65°    | 1610.2  | 1701.7  | 1641.6  | 1598.6  | 1604.0  | 1598.6  | 1641.6  | 1701.7  | 1610.2  | 1575.3  | 1582.9  |
| 67.5°  | 1451.6  | 1499.5  | 1473.5  | 1449.0  | 1455.1  | 1449.0  | 1473.5  | 1499.5  | 1451.6  | 1417.6  | 1429.1  |
| 70°    | 1283.0  | 1334.2  | 1307.5  | 1311.0  | 1321.2  | 1311.0  | 1307.5  | 1334.2  | 1283.0  | 1272.7  | 1281.6  |
| 72.5°  | 1121.7  | 1161.4  | 1152.4  | 1160.7  | 1171.6  | 1160.7  | 1152.4  | 1161.4  | 1121.7  | 1120.3  | 1121.0  |
| 75°    | 963.2   | 993.3   | 997.4   | 1009.0  | 1026.1  | 1009.0  | 997.4   | 993.3   | 963.2   | 953.0   | 965.3   |
| 77.5°  | 790.4   | 824.5   | 837.5   | 853.2   | 878.6   | 853.2   | 837.5   | 824.5   | 790.4   | 797.2   | 803.4   |
| 80°    | 631.9   | 647.6   | 676.3   | 687.9   | 723.5   | 687.9   | 676.3   | 647.6   | 631.9   | 620.3   | 629.2   |
| 82.5°  | 462.5   | 476.8   | 501.5   | 523.3   | 543.8   | 523.3   | 501.5   | 476.8   | 462.5   | 457.1   | 457.8   |
| 85°    | 267.1   | 289.0   | 305.4   | 331.3   | 337.5   | 331.3   | 305.4   | 289.0   | 267.1   | 273.3   | 267.1   |
| 87.5°  | 93.6    | 100.4   | 114.7   | 125.0   | 125.7   | 125.0   | 114.7   | 100.4   | 93.6    | 95.7    | 86.7    |
| 90°    | 9.2     | 15.9    | 27.1    | 17.3    | 14.0    | 17.3    | 27.1    | 15.9    | 9.2     | 15.8    | 24.5    |
| 92.5°  | 11.9    | 21.1    | 37.7    | 21.9    | 17.4    | 21.9    | 37.7    | 21.1    | 11.9    | 20.4    | 39.0    |
| 95°    | 17.9    | 25.7    | 47.5    | 23.9    | 20.0    | 23.9    | 47.5    | 25.7    | 17.9    | 27.1    | 54.1    |
| 97.5°  | 27.1    | 31.7    | 53.5    | 25.2    | 23.3    | 25.2    | 53.5    | 31.7    | 27.1    | 33.0    | 62.1    |
| 100°   | 35.7    | 35.7    | 96.4    | 28.5    | 25.9    | 28.5    | 96.4    | 35.7    | 35.7    | 41.0    | 96.4    |
| 102.5° | 53.5    | 69.4    | 221.8   | 54.3    | 30.5    | 54.3    | 221.8   | 69.4    | 53.5    | 75.9    | 203.9   |
| 105°   | 96.4    | 156.5   | 388.7   | 134.1   | 53.0    | 134.1   | 388.7   | 156.5   | 96.4    | 157.8   | 362.9   |
| 107.5° | 181.5   | 290.4   | 500.2   | 260.8   | 117.0   | 260.8   | 500.2   | 290.4   | 181.5   | 278.5   | 479.0   |
| 110°   | 289.7   | 405.2   | 545.7   | 355.8   | 231.8   | 355.8   | 545.7   | 405.2   | 289.7   | 382.0   | 502.2   |



TEST NUMBER: P1433003

CATALOG NUMBER: EHBR1-42-UNV-TASM-L850-UPL12

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 112.5° | 376.7 | 451.4 | 533.2 | 394.1 | 318.9 | 394.1  | 533.2 | 451.4  | 376.7 | 421.6  | 481.0 |
| 115°   | 409.8 | 444.8 | 476.4 | 392.7 | 353.2 | 392.7  | 476.4 | 444.8  | 409.8 | 411.7  | 429.6 |
| 117.5° | 396.0 | 407.2 | 411.8 | 369.0 | 355.2 | 369.0  | 411.8 | 407.2  | 396.0 | 370.8  | 364.9 |
| 120°   | 357.7 | 353.0 | 347.8 | 334.0 | 335.4 | 334.0  | 347.8 | 353.0  | 357.7 | 324.0  | 304.8 |
| 122.5° | 310.2 | 300.3 | 294.4 | 299.1 | 308.3 | 299.1  | 294.4 | 300.3  | 310.2 | 276.5  | 262.0 |
| 125°   | 263.4 | 253.4 | 257.5 | 268.8 | 278.7 | 268.8  | 257.5 | 253.4  | 263.4 | 235.7  | 231.7 |
| 127.5° | 224.5 | 219.8 | 230.4 | 243.0 | 251.7 | 243.0  | 230.4 | 219.8  | 224.5 | 206.7  | 209.9 |
| 130°   | 196.8 | 197.4 | 211.3 | 222.6 | 227.9 | 222.6  | 211.3 | 197.4  | 196.8 | 188.2  | 196.8 |
| 132.5° | 179.7 | 184.3 | 197.4 | 207.5 | 210.8 | 207.5  | 197.4 | 184.3  | 179.7 | 177.7  | 188.2 |
| 135°   | 169.2 | 175.6 | 188.2 | 194.2 | 196.3 | 194.2  | 188.2 | 175.6  | 169.2 | 170.4  | 179.7 |
| 137.5° | 163.2 | 169.7 | 179.0 | 184.4 | 183.7 | 184.4  | 179.0 | 169.7  | 163.2 | 165.9  | 173.1 |
| 140°   | 159.9 | 166.5 | 170.4 | 176.4 | 176.4 | 176.4  | 170.4 | 166.5  | 159.9 | 161.3  | 167.2 |
| 142.5° | 156.7 | 162.6 | 164.5 | 169.2 | 168.5 | 169.2  | 164.5 | 162.6  | 156.7 | 158.0  | 162.0 |
| 145°   | 155.3 | 159.9 | 158.0 | 163.3 | 162.6 | 163.3  | 158.0 | 159.9  | 155.3 | 155.3  | 158.0 |
| 147.5° | 152.0 | 155.3 | 153.3 | 158.0 | 157.3 | 158.0  | 153.3 | 155.3  | 152.0 | 152.0  | 153.3 |
| 150°   | 148.7 | 151.4 | 148.0 | 153.3 | 154.0 | 153.3  | 148.0 | 151.4  | 148.7 | 148.0  | 149.4 |
| 152.5° | 144.1 | 146.8 | 144.1 | 150.1 | 150.1 | 150.1  | 144.1 | 146.8  | 144.1 | 143.4  | 144.8 |
| 155°   | 140.9 | 142.2 | 140.9 | 146.9 | 147.5 | 146.9  | 140.9 | 142.2  | 140.9 | 140.2  | 141.5 |
| 157.5° | 139.0 | 140.3 | 139.7 | 145.0 | 145.7 | 145.0  | 139.7 | 140.3  | 139.0 | 139.0  | 139.7 |
| 160°   | 138.4 | 139.7 | 139.8 | 144.4 | 145.1 | 144.4  | 139.8 | 139.7  | 138.4 | 138.4  | 139.1 |
| 162.5° | 138.4 | 138.4 | 139.2 | 143.8 | 145.2 | 143.8  | 139.2 | 138.4  | 138.4 | 138.4  | 139.1 |
| 165°   | 138.5 | 139.2 | 139.3 | 143.2 | 145.3 | 143.2  | 139.3 | 139.2  | 138.5 | 138.5  | 138.5 |
| 167.5° | 139.3 | 138.6 | 140.0 | 143.9 | 146.0 | 143.9  | 140.0 | 138.6  | 139.3 | 139.2  | 139.2 |
| 170°   | 138.6 | 139.3 | 140.0 | 144.0 | 146.0 | 144.0  | 140.0 | 139.3  | 138.6 | 139.3  | 139.3 |
| 172.5° | 140.7 | 140.7 | 141.4 | 144.7 | 147.4 | 144.7  | 141.4 | 140.7  | 140.7 | 140.7  | 141.4 |
| 175°   | 141.9 | 141.9 | 142.7 | 145.4 | 148.1 | 145.4  | 142.7 | 141.9  | 141.9 | 141.3  | 141.3 |
| 177.5° | 141.3 | 142.6 | 144.0 | 146.8 | 150.1 | 146.8  | 144.0 | 142.6  | 141.3 | 141.3  | 141.3 |
| 180°   | 142.6 | 142.6 | 142.6 | 142.6 | 142.6 | 142.6  | 142.6 | 142.6  | 142.6 | 142.6  | 142.6 |



TEST NUMBER: P1433003

CATALOG NUMBER: EHBR1-42-UNV-TASM-L850-UPL12

**CANDELA DISTRIBUTION (continued):**

|        | 247.5°  | 270°    | 292.5°  | 315°    | 337.5°  | 360°    |
|--------|---------|---------|---------|---------|---------|---------|
| 0°     | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 | 36431.5 |
| 2.5°   | 35373.3 | 35350.1 | 35373.3 | 35620.7 | 35942.4 | 36410.3 |
| 5°     | 34551.5 | 34423.0 | 34551.5 | 34825.5 | 35416.3 | 36307.2 |
| 7.5°   | 33594.4 | 33519.9 | 33594.4 | 34052.8 | 34799.5 | 36060.5 |
| 10°    | 32586.7 | 32418.1 | 32586.7 | 33104.6 | 33985.1 | 35684.1 |
| 12.5°  | 31344.8 | 31121.4 | 31344.8 | 31879.7 | 32990.5 | 35083.6 |
| 15°    | 29765.4 | 29569.3 | 29765.4 | 30359.1 | 31647.4 | 34195.5 |
| 17.5°  | 28070.5 | 27892.9 | 28070.5 | 28586.3 | 30005.1 | 32944.1 |
| 20°    | 25941.8 | 25802.5 | 25941.8 | 26671.4 | 28063.6 | 31331.1 |
| 22.5°  | 23708.6 | 23578.1 | 23708.6 | 24356.9 | 25805.8 | 29309.0 |
| 25°    | 21081.2 | 21010.1 | 21081.2 | 21805.4 | 23115.6 | 26944.0 |
| 27.5°  | 18242.1 | 18121.2 | 18242.1 | 18999.6 | 20337.9 | 24162.2 |
| 30°    | 15341.5 | 15141.3 | 15341.5 | 16019.1 | 17217.4 | 21072.3 |
| 32.5°  | 12504.3 | 12360.2 | 12504.3 | 12987.3 | 14239.5 | 17612.8 |
| 35°    | 9762.2  | 9618.0  | 9762.2  | 10198.7 | 11428.4 | 14421.2 |
| 37.5°  | 7606.8  | 7352.0  | 7606.8  | 7886.9  | 8885.0  | 11317.7 |
| 40°    | 5769.1  | 5728.2  | 5769.1  | 6121.7  | 6760.4  | 8805.0  |
| 42.5°  | 4696.7  | 4585.3  | 4696.7  | 4848.3  | 5326.5  | 6671.6  |
| 45°    | 3853.7  | 3809.9  | 3853.7  | 3968.4  | 4289.5  | 5215.1  |
| 47.5°  | 3314.0  | 3333.0  | 3314.0  | 3387.8  | 3628.2  | 4247.1  |
| 50°    | 2911.5  | 2923.2  | 2911.5  | 2946.4  | 3106.9  | 3567.4  |
| 52.5°  | 2615.1  | 2604.9  | 2615.1  | 2618.5  | 2718.2  | 3064.6  |
| 55°    | 2352.8  | 2339.7  | 2352.8  | 2345.2  | 2419.0  | 2641.0  |
| 57.5°  | 2123.2  | 2132.8  | 2123.2  | 2112.9  | 2152.6  | 2319.3  |
| 60°    | 1918.2  | 1927.2  | 1918.2  | 1910.8  | 1936.7  | 2034.4  |
| 62.5°  | 1745.4  | 1750.9  | 1745.4  | 1744.8  | 1739.9  | 1815.1  |
| 65°    | 1591.0  | 1597.2  | 1591.0  | 1582.9  | 1575.3  | 1610.2  |
| 67.5°  | 1443.5  | 1443.5  | 1443.5  | 1429.1  | 1417.6  | 1451.6  |
| 70°    | 1304.8  | 1304.1  | 1304.8  | 1281.6  | 1272.7  | 1283.0  |
| 72.5°  | 1138.1  | 1154.5  | 1138.1  | 1121.0  | 1120.3  | 1121.7  |
| 75°    | 976.2   | 995.4   | 976.2   | 965.3   | 953.0   | 963.2   |
| 77.5°  | 812.3   | 841.6   | 812.3   | 803.4   | 797.2   | 790.4   |
| 80°    | 644.2   | 676.3   | 644.2   | 629.2   | 620.3   | 631.9   |
| 82.5°  | 476.1   | 500.1   | 476.1   | 457.8   | 457.1   | 462.5   |
| 85°    | 283.5   | 321.8   | 283.5   | 267.1   | 273.3   | 267.1   |
| 87.5°  | 90.9    | 116.1   | 90.9    | 86.7    | 95.7    | 93.6    |
| 90°    | 14.5    | 9.2     | 14.5    | 24.5    | 15.8    | 9.2     |
| 92.5°  | 21.8    | 13.3    | 21.8    | 39.0    | 20.4    | 11.9    |
| 95°    | 25.0    | 15.2    | 25.0    | 54.1    | 27.1    | 17.9    |
| 97.5°  | 27.7    | 19.8    | 27.7    | 62.1    | 33.0    | 27.1    |
| 100°   | 32.3    | 25.7    | 32.3    | 96.4    | 41.0    | 35.7    |
| 102.5° | 68.0    | 42.9    | 68.0    | 203.9   | 75.9    | 53.5    |
| 105°   | 142.5   | 73.3    | 142.5   | 362.9   | 157.8   | 96.4    |
| 107.5° | 254.7   | 126.0   | 254.7   | 479.0   | 278.5   | 181.5   |
| 110°   | 337.8   | 234.3   | 337.8   | 502.2   | 382.0   | 289.7   |



TEST NUMBER: P1433003

CATALOG NUMBER: EHBR1-42-UNV-TASM-L850-UPL12

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|--------|--------|-------|--------|-------|--------|-------|
| 112.5° | 362.9  | 316.1 | 362.9  | 481.0 | 421.6  | 376.7 |
| 115°   | 349.0  | 332.6 | 349.0  | 429.6 | 411.7  | 409.8 |
| 117.5° | 318.7  | 321.3 | 318.7  | 364.9 | 370.8  | 396.0 |
| 120°   | 283.7  | 297.6 | 283.7  | 304.8 | 324.0  | 357.7 |
| 122.5° | 252.1  | 267.9 | 252.1  | 262.0 | 276.5  | 310.2 |
| 125°   | 224.4  | 240.9 | 224.4  | 231.7 | 235.7  | 263.4 |
| 127.5° | 205.2  | 216.5 | 205.2  | 209.9 | 206.7  | 224.5 |
| 130°   | 190.8  | 200.0 | 190.8  | 196.8 | 188.2  | 196.8 |
| 132.5° | 180.8  | 186.8 | 180.8  | 188.2 | 177.7  | 179.7 |
| 135°   | 172.3  | 176.9 | 172.3  | 179.7 | 170.4  | 169.2 |
| 137.5° | 165.1  | 169.1 | 165.1  | 173.1 | 165.9  | 163.2 |
| 140°   | 159.2  | 162.5 | 159.2  | 167.2 | 161.3  | 159.9 |
| 142.5° | 152.6  | 155.3 | 152.6  | 162.0 | 158.0  | 156.7 |
| 145°   | 148.7  | 150.7 | 148.7  | 158.0 | 155.3  | 155.3 |
| 147.5° | 145.4  | 146.8 | 145.4  | 153.3 | 152.0  | 152.0 |
| 150°   | 142.1  | 143.5 | 142.1  | 149.4 | 148.0  | 148.7 |
| 152.5° | 138.2  | 140.3 | 138.2  | 144.8 | 143.4  | 144.1 |
| 155°   | 136.3  | 138.3 | 136.3  | 141.5 | 140.2  | 140.9 |
| 157.5° | 135.7  | 137.7 | 135.7  | 139.7 | 139.0  | 139.0 |
| 160°   | 135.8  | 137.1 | 135.8  | 139.1 | 138.4  | 138.4 |
| 162.5° | 135.2  | 136.5 | 135.2  | 139.1 | 138.4  | 138.4 |
| 165°   | 135.9  | 136.5 | 135.9  | 138.5 | 138.5  | 138.5 |
| 167.5° | 136.0  | 136.5 | 136.0  | 139.2 | 139.2  | 139.3 |
| 170°   | 136.6  | 137.3 | 136.6  | 139.3 | 139.3  | 138.6 |
| 172.5° | 138.0  | 138.7 | 138.0  | 141.4 | 140.7  | 140.7 |
| 175°   | 138.7  | 139.3 | 138.7  | 141.3 | 141.3  | 141.9 |
| 177.5° | 140.0  | 140.7 | 140.0  | 141.3 | 141.3  | 141.3 |
| 180°   | 142.6  | 142.6 | 142.6  | 142.6 | 142.6  | 142.6 |



TEST NUMBER: P1433003  
 CATALOG NUMBER: EHBR1-42-UNV-TASM-L850-UPL12

**CIE UGR TABLE:**

| Reflectances:   |      |                  |       |       |       |       |                |       |       |       |       |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling         |      | 0.7              | 0.7   | 0.5   | 0.5   | 0.3   | 0.7            | 0.7   | 0.5   | 0.5   | 0.3   |
| Wall            |      | 0.5              | 0.3   | 0.5   | 0.3   | 0.3   | 0.5            | 0.3   | 0.5   | 0.3   | 0.3   |
| Reference plane |      | 0.2              | 0.2   | 0.2   | 0.2   | 0.2   | 0.2            | 0.2   | 0.2   | 0.2   | 0.2   |
| Room dimensions |      | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X=2H            | Y=2H | 18.81            | 19.97 | 19.22 | 20.34 | 20.73 | 18.12          | 19.29 | 18.54 | 19.66 | 20.05 |
|                 | 3H   | 20.36            | 21.39 | 20.79 | 21.78 | 22.22 | 19.97          | 21.01 | 20.41 | 21.40 | 21.84 |
|                 | 4H   | 20.99            | 21.96 | 21.45 | 22.37 | 22.83 | 20.76          | 21.72 | 21.21 | 22.13 | 22.59 |
|                 | 6H   | 21.48            | 22.36 | 21.94 | 22.79 | 23.26 | 21.40          | 22.29 | 21.87 | 22.72 | 23.19 |
|                 | 8H   | 21.63            | 22.47 | 22.11 | 22.92 | 23.39 | 21.63          | 22.46 | 22.11 | 22.91 | 23.39 |
|                 | 12H  | 21.70            | 22.50 | 22.19 | 22.94 | 23.45 | 21.75          | 22.55 | 22.24 | 23.00 | 23.50 |
| 4H              | 2H   | 19.22            | 20.19 | 19.68 | 20.60 | 21.06 | 18.70          | 19.67 | 19.16 | 20.08 | 20.54 |
|                 | 3H   | 21.02            | 21.82 | 21.49 | 22.28 | 22.76 | 20.76          | 21.56 | 21.23 | 22.02 | 22.50 |
|                 | 4H   | 21.80            | 22.51 | 22.29 | 22.99 | 23.50 | 21.67          | 22.39 | 22.16 | 22.86 | 23.38 |
|                 | 6H   | 22.42            | 23.03 | 22.93 | 23.53 | 24.07 | 22.44          | 23.06 | 22.96 | 23.56 | 24.10 |
|                 | 8H   | 22.61            | 23.19 | 23.13 | 23.69 | 24.23 | 22.71          | 23.29 | 23.24 | 23.79 | 24.33 |
|                 | 12H  | 22.72            | 23.23 | 23.26 | 23.76 | 24.31 | 22.88          | 23.39 | 23.42 | 23.93 | 24.47 |
| 8H              | 4H   | 22.05            | 22.63 | 22.57 | 23.13 | 23.67 | 21.95          | 22.53 | 22.47 | 23.03 | 23.57 |
|                 | 6H   | 22.79            | 23.26 | 23.35 | 23.81 | 24.36 | 22.86          | 23.32 | 23.41 | 23.88 | 24.42 |
|                 | 8H   | 23.06            | 23.48 | 23.64 | 24.05 | 24.61 | 23.21          | 23.63 | 23.78 | 24.19 | 24.76 |
|                 | 12H  | 23.24            | 23.60 | 23.80 | 24.15 | 24.79 | 23.46          | 23.83 | 24.03 | 24.37 | 25.01 |
| 12H             | 4H   | 22.06            | 22.57 | 22.60 | 23.10 | 23.65 | 21.97          | 22.47 | 22.50 | 23.01 | 23.55 |
|                 | 6H   | 22.84            | 23.25 | 23.41 | 23.82 | 24.38 | 22.90          | 23.32 | 23.48 | 23.89 | 24.45 |
|                 | 8H   | 23.16            | 23.52 | 23.72 | 24.07 | 24.71 | 23.31          | 23.67 | 23.87 | 24.22 | 24.86 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-4

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L850-N

Data in this report applies to families of products including EHBR-60-L850-N

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2506-472-4  
 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-L850-N**  
 Description: Elevate Round Highbay at, 60000 lumens, 5000K 80CRI LEDs with N lens

**Spectral Parameters**

CCT (K): 4875  
 CIE u': 0.2124  
 CIE v': 0.4871  
 Duv: 0.0005  
 CIE x: 0.3488  
 CIE y: 0.3555  
 CIE z: 0.2957  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 573  
 Purity: 11.33556  
 Rf: 80  
 Rg: 102.3

|           |      |      |      |
|-----------|------|------|------|
| CRI (Ra): | 82.3 |      |      |
| R1:       | 85.0 | R9:  | 43.9 |
| R2:       | 83.1 | R10: | 57.4 |
| R3:       | 78.8 | R11: | 83.1 |
| R4:       | 84.0 | R12: | 51.0 |
| R5:       | 83.0 | R13: | 83.4 |
| R6:       | 76.3 | R14: | 87.4 |
| R7:       | 86.8 | R15: | 83.4 |
| R8:       | 81.7 |      |      |



**Test Conditions**

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

REPORT NUMBER: SP1-2506-472-4

| 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: SP1-2506-472-4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-4

**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    | 89                       | NR            | 620    | 280                      | NR            | 750    | 6                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 121                      | NR            | 625    | 280                      | NR            | 755    | 5                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 168                      | NR            | 630    | 1000                     | NR            | 760    | 5                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 224                      | NR            | 635    | 626                      | NR            | 765    | 4                        | NR            | 895    | 0                        | NR            |
| 380    | 1                        | NR            | 510    | 275                      | NR            | 640    | 163                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 2                        | NR            | 515    | 321                      | NR            | 645    | 160                      | NR            | 775    | 3                        | NR            | 905    | 0                        | NR            |
| 390    | 3                        | NR            | 520    | 354                      | NR            | 650    | 136                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 5                        | NR            | 525    | 375                      | NR            | 655    | 111                      | NR            | 785    | 2                        | NR            | 915    | 0                        | NR            |
| 400    | 7                        | NR            | 530    | 388                      | NR            | 660    | 93                       | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 10                       | NR            | 535    | 395                      | NR            | 665    | 76                       | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 15                       | NR            | 540    | 397                      | NR            | 670    | 72                       | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 28                       | NR            | 545    | 398                      | NR            | 675    | 57                       | NR            | 805    | 1                        | NR            | 935    | 0                        | NR            |
| 420    | 53                       | NR            | 550    | 396                      | NR            | 680    | 49                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 97                       | NR            | 555    | 395                      | NR            | 685    | 42                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 163                      | NR            | 560    | 392                      | NR            | 690    | 37                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 261                      | NR            | 565    | 388                      | NR            | 695    | 32                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 409                      | NR            | 570    | 381                      | NR            | 700    | 27                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 637                      | NR            | 575    | 374                      | NR            | 705    | 23                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 699                      | NR            | 580    | 365                      | NR            | 710    | 20                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 436                      | NR            | 585    | 354                      | NR            | 715    | 17                       | NR            | 845    | 0                        | NR            | 975    | 0                        | NR            |
| 460    | 274                      | NR            | 590    | 342                      | NR            | 720    | 15                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 205                      | NR            | 595    | 325                      | NR            | 725    | 13                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 130                      | NR            | 600    | 313                      | NR            | 730    | 11                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 90                       | NR            | 605    | 301                      | NR            | 735    | 10                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 78                       | NR            | 610    | 323                      | NR            | 740    | 8                        | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 77                       | NR            | 615    | 340                      | NR            | 745    | 7                        | NR            | 875    | 0                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2506-472-4

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.82**

| 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    | 89                       | NR            | 620    | 280                      | NR            | 750    | 6                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 121                      | NR            | 625    | 280                      | NR            | 755    | 5                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 168                      | NR            | 630    | 1000                     | NR            | 760    | 5                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 224                      | NR            | 635    | 626                      | NR            | 765    | 4                        | NR            | 895    | 0                        | NR            |
| 380    | 1                        | NR            | 510    | 275                      | NR            | 640    | 163                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 2                        | NR            | 515    | 321                      | NR            | 645    | 160                      | NR            | 775    | 3                        | NR            | 905    | 0                        | NR            |
| 390    | 3                        | NR            | 520    | 354                      | NR            | 650    | 136                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 5                        | NR            | 525    | 375                      | NR            | 655    | 111                      | NR            | 785    | 2                        | NR            | 915    | 0                        | NR            |
| 400    | 7                        | NR            | 530    | 388                      | NR            | 660    | 93                       | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 10                       | NR            | 535    | 395                      | NR            | 665    | 76                       | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 15                       | NR            | 540    | 397                      | NR            | 670    | 72                       | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 28                       | NR            | 545    | 398                      | NR            | 675    | 57                       | NR            | 805    | 1                        | NR            | 935    | 0                        | NR            |
| 420    | 53                       | NR            | 550    | 396                      | NR            | 680    | 49                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 97                       | NR            | 555    | 395                      | NR            | 685    | 42                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 163                      | NR            | 560    | 392                      | NR            | 690    | 37                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 261                      | NR            | 565    | 388                      | NR            | 695    | 32                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 409                      | NR            | 570    | 381                      | NR            | 700    | 27                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 637                      | NR            | 575    | 374                      | NR            | 705    | 23                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 699                      | NR            | 580    | 365                      | NR            | 710    | 20                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 436                      | NR            | 585    | 354                      | NR            | 715    | 17                       | NR            | 845    | 0                        | NR            | 975    | 0                        | NR            |
| 460    | 274                      | NR            | 590    | 342                      | NR            | 720    | 15                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 205                      | NR            | 595    | 325                      | NR            | 725    | 13                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 130                      | NR            | 600    | 313                      | NR            | 730    | 11                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 90                       | NR            | 605    | 301                      | NR            | 735    | 10                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 78                       | NR            | 610    | 323                      | NR            | 740    | 8                        | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 77                       | NR            | 615    | 340                      | NR            | 745    | 7                        | NR            | 875    | 0                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2506-472-4

**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 3.71**

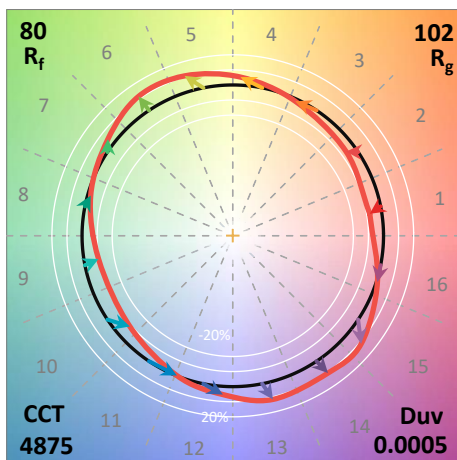
| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 89                       | NR            | 620    | 280                      | NR            | 750    | 6                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 121                      | NR            | 625    | 280                      | NR            | 755    | 5                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 168                      | NR            | 630    | 1000                     | NR            | 760    | 5                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 224                      | NR            | 635    | 626                      | NR            | 765    | 4                        | NR            | 895    | 0                        | NR            |
| 380    | 1                        | NR            | 510    | 275                      | NR            | 640    | 163                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 2                        | NR            | 515    | 321                      | NR            | 645    | 160                      | NR            | 775    | 3                        | NR            | 905    | 0                        | NR            |
| 390    | 3                        | NR            | 520    | 354                      | NR            | 650    | 136                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 5                        | NR            | 525    | 375                      | NR            | 655    | 111                      | NR            | 785    | 2                        | NR            | 915    | 0                        | NR            |
| 400    | 7                        | NR            | 530    | 388                      | NR            | 660    | 93                       | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 10                       | NR            | 535    | 395                      | NR            | 665    | 76                       | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 15                       | NR            | 540    | 397                      | NR            | 670    | 72                       | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 28                       | NR            | 545    | 398                      | NR            | 675    | 57                       | NR            | 805    | 1                        | NR            | 935    | 0                        | NR            |
| 420    | 53                       | NR            | 550    | 396                      | NR            | 680    | 49                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 97                       | NR            | 555    | 395                      | NR            | 685    | 42                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 163                      | NR            | 560    | 392                      | NR            | 690    | 37                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 261                      | NR            | 565    | 388                      | NR            | 695    | 32                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 409                      | NR            | 570    | 381                      | NR            | 700    | 27                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 637                      | NR            | 575    | 374                      | NR            | 705    | 23                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 699                      | NR            | 580    | 365                      | NR            | 710    | 20                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 436                      | NR            | 585    | 354                      | NR            | 715    | 17                       | NR            | 845    | 0                        | NR            | 975    | 0                        | NR            |
| 460    | 274                      | NR            | 590    | 342                      | NR            | 720    | 15                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 205                      | NR            | 595    | 325                      | NR            | 725    | 13                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 130                      | NR            | 600    | 313                      | NR            | 730    | 11                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 90                       | NR            | 605    | 301                      | NR            | 735    | 10                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 78                       | NR            | 610    | 323                      | NR            | 740    | 8                        | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 77                       | NR            | 615    | 340                      | NR            | 745    | 7                        | NR            | 875    | 0                        | NR            |        |                          |               |

**Summary**

$R_f = 80$   
 $R_g = 102.3$   
 $CIE R_a = 82.3$   
 $R_9 = 43.9$



**Color Vector Graphics**

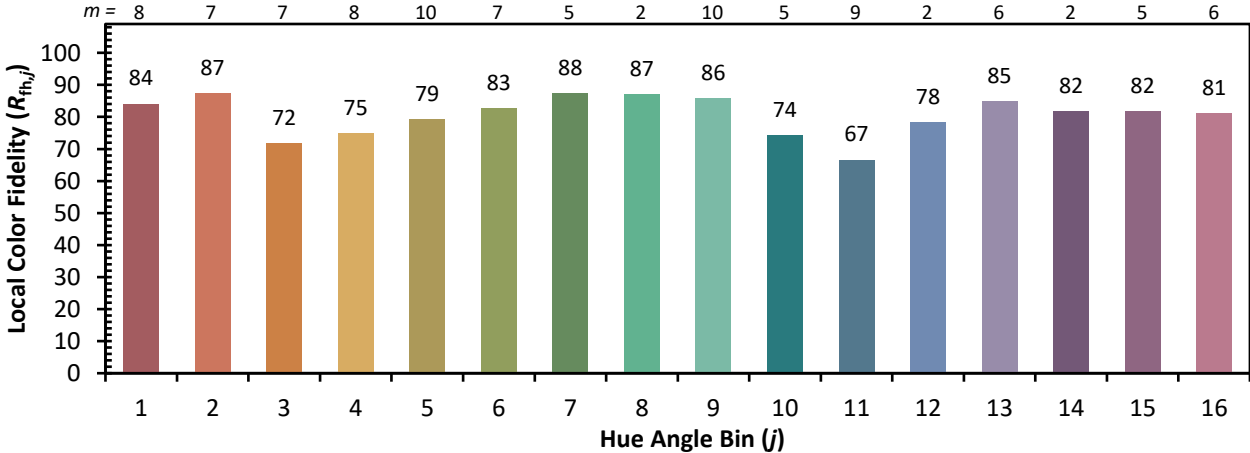


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

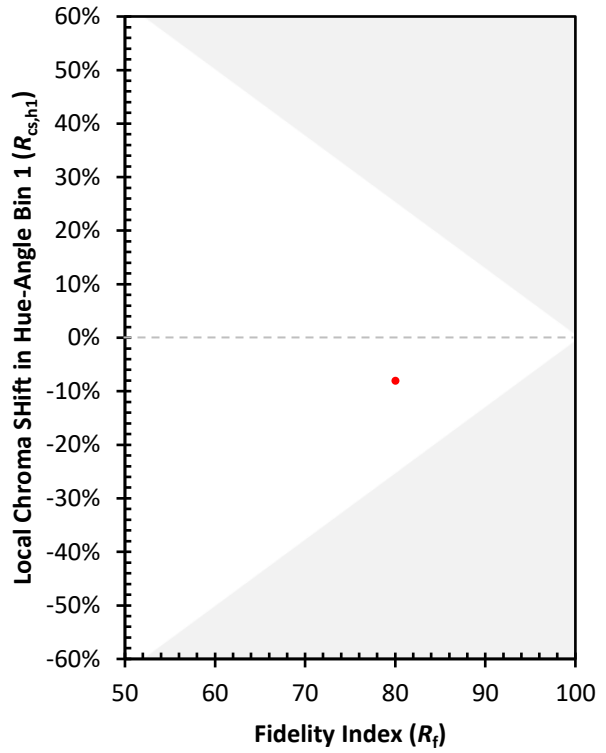
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 67 | CES51 = 92 | CES76 = 54 |
| CES02 = 60 | CES27 = 88 | CES52 = 91 | CES77 = 71 |
| CES03 = 31 | CES28 = 81 | CES53 = 82 | CES78 = 55 |
| CES04 = 69 | CES29 = 66 | CES54 = 92 | CES79 = 81 |
| CES05 = 47 | CES30 = 80 | CES55 = 90 | CES80 = 75 |
| CES06 = 50 | CES31 = 69 | CES56 = 81 | CES81 = 79 |
| CES07 = 40 | CES32 = 61 | CES57 = 80 | CES82 = 90 |
| CES08 = 39 | CES33 = 76 | CES58 = 81 | CES83 = 87 |
| CES09 = 29 | CES34 = 68 | CES59 = 93 | CES84 = 87 |
| CES10 = 73 | CES35 = 82 | CES60 = 94 | CES85 = 82 |
| CES11 = 56 | CES36 = 95 | CES61 = 91 | CES86 = 83 |
| CES12 = 62 | CES37 = 75 | CES62 = 89 | CES87 = 78 |
| CES13 = 42 | CES38 = 87 | CES63 = 80 | CES88 = 85 |
| CES14 = 74 | CES39 = 94 | CES64 = 79 | CES89 = 81 |
| CES15 = 71 | CES40 = 87 | CES65 = 75 | CES90 = 86 |
| CES16 = 46 | CES41 = 91 | CES66 = 72 | CES91 = 80 |
| CES17 = 48 | CES42 = 71 | CES67 = 69 | CES92 = 77 |
| CES18 = 56 | CES43 = 72 | CES68 = 75 | CES93 = 86 |
| CES19 = 70 | CES44 = 99 | CES69 = 80 | CES94 = 71 |
| CES20 = 65 | CES45 = 81 | CES70 = 66 | CES95 = 79 |
| CES21 = 85 | CES46 = 83 | CES71 = 59 | CES96 = 86 |
| CES22 = 77 | CES47 = 83 | CES72 = 87 | CES97 = 85 |
| CES23 = 91 | CES48 = 83 | CES73 = 56 | CES98 = 82 |
| CES24 = 90 | CES49 = 82 | CES74 = 95 | CES99 = 84 |
| CES25 = 71 | CES50 = 91 | CES75 = 58 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)