

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: P1433276

Luminaire Tested: EHBR1-48-UNV-A1-L930-UPL18

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433276
REPORT IS A COMBINATION OF REPORTS P1431830 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-48-UNV-A1-L930-UPL18
Description: Elevate Round Highbay at, 49000 lumens, 3000K 90CRI LEDs with A lens
Light Source: -
Ballast/Driver: -

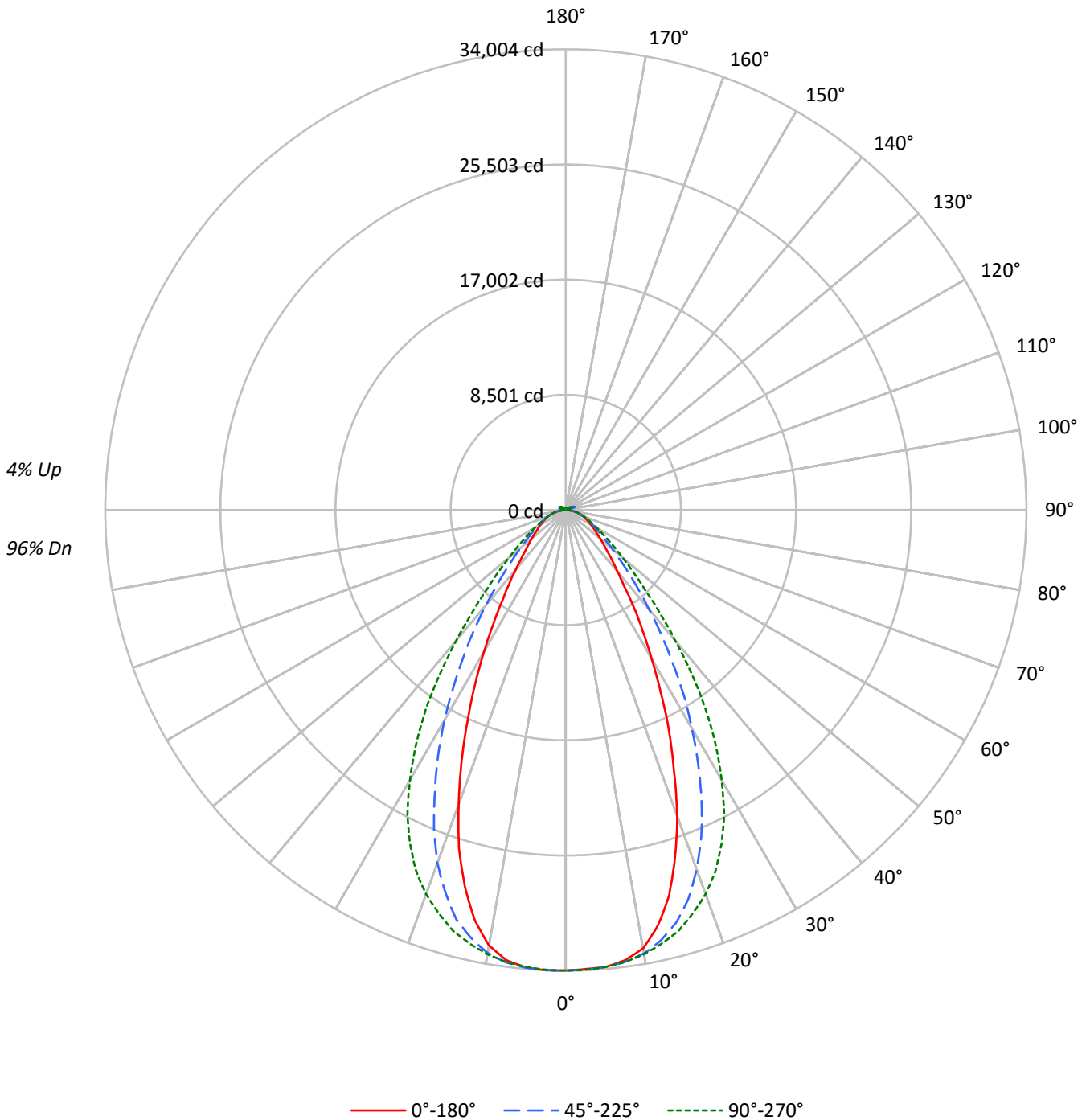
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 43869.9 lumens
Efficiency: N/A
Efficacy: 162.2 lumens/watt
Spacing Criteria (0/90/45): 0.8 / 1.07 / 0.95
Luminous Opening: Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type: Direct

Input Watts (W): 270.5
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: P1433276
CATALOG NUMBER: EHBR1-48-UNV-A1-L930-UPL18

Luminous Intensity Polar Plot





TEST NUMBER: P1433276
 CATALOG NUMBER: EHBR1-48-UNV-A1-L930-UPL18

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 | 96 |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 100 | 97 | 95 | 95 | 94 | 92 | 91 | 90 | 89 | 89 | 89 | 89 | 86 |
| 2 | 103 | 97 | 92 | 88 | 101 | 95 | 90 | 86 | 91 | 87 | 84 | 88 | 84 | 82 | 84 | 82 | 79 | 79 | 79 | 79 | 77 |
| 3 | 97 | 89 | 82 | 77 | 94 | 87 | 81 | 77 | 84 | 79 | 75 | 81 | 77 | 73 | 78 | 74 | 71 | 71 | 71 | 71 | 70 |
| 4 | 91 | 81 | 74 | 69 | 88 | 80 | 73 | 69 | 77 | 72 | 67 | 74 | 70 | 66 | 72 | 68 | 65 | 65 | 65 | 65 | 63 |
| 5 | 85 | 75 | 68 | 62 | 83 | 73 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | 67 | 63 | 59 | 59 | 59 | 59 | 57 |
| 6 | 80 | 69 | 62 | 57 | 78 | 68 | 61 | 56 | 66 | 60 | 56 | 64 | 59 | 55 | 62 | 58 | 54 | 54 | 54 | 54 | 52 |
| 7 | 75 | 64 | 57 | 52 | 73 | 63 | 56 | 52 | 61 | 55 | 51 | 60 | 55 | 51 | 58 | 54 | 50 | 50 | 50 | 50 | 48 |
| 8 | 71 | 60 | 53 | 48 | 69 | 59 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 46 | 46 | 46 | 46 | 45 |
| 9 | 67 | 56 | 49 | 44 | 65 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 51 | 47 | 43 | 43 | 43 | 43 | 41 |
| 10 | 63 | 52 | 46 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 49 | 44 | 40 | 48 | 44 | 40 | 40 | 40 | 40 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° | 135° | 180° |
|-----|--------|--------|--------|--------|--------|
| 0° | 159618 | 159618 | 159618 | 159618 | 159618 |
| 5° | 158563 | 158540 | 158546 | 158826 | 158730 |
| 10° | 154644 | 156446 | 156694 | 156252 | 153632 |
| 15° | 140391 | 150188 | 153279 | 148983 | 137167 |
| 20° | 116991 | 137402 | 146789 | 134816 | 112436 |
| 25° | 90476 | 118806 | 136174 | 114467 | 85788 |
| 30° | 65949 | 96753 | 119618 | 93082 | 62596 |
| 35° | 47538 | 74573 | 98308 | 71362 | 44435 |
| 40° | 34202 | 55079 | 72448 | 52754 | 33146 |
| 45° | 26949 | 40295 | 50600 | 38548 | 26017 |
| 50° | 22360 | 30275 | 36623 | 29276 | 22020 |
| 55° | 19528 | 23906 | 27735 | 23505 | 19265 |
| 60° | 17612 | 19957 | 22100 | 19833 | 17736 |
| 65° | 16471 | 17603 | 18572 | 17658 | 16628 |
| 70° | 15642 | 16016 | 16510 | 16105 | 15797 |
| 75° | 14593 | 14502 | 14593 | 14544 | 14734 |
| 80° | 13181 | 12234 | 11962 | 12424 | 13181 |
| 85° | 9133 | 7748 | 7664 | 7873 | 9404 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 53016 cd/sqm



TEST NUMBER: P1433276
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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 3209.8 | 7.3 |
| 10°-20° | 8626.8 | 19.7 |
| 20°-30° | 10490.1 | 23.9 |
| 30°-40° | 8544.9 | 19.5 |
| 40°-50° | 5130.4 | 11.7 |
| 50°-60° | 2952.6 | 6.7 |
| 60°-70° | 1847.8 | 4.2 |
| 70°-80° | 1088.3 | 2.5 |
| 80°-90° | 321.2 | 0.7 |
| 90°-100° | 43.4 | 0.1 |
| 100°-110° | 286.8 | 0.7 |
| 110°-120° | 530.4 | 1.2 |
| 120°-130° | 315.0 | 0.7 |
| 130°-140° | 191.5 | 0.4 |
| 140°-150° | 134.1 | 0.3 |
| 150°-160° | 88.4 | 0.2 |
| 160°-170° | 51.3 | 0.1 |
| 170°-180° | 17.2 | 0.0 |
| 0°-30° | 22326.6 | 50.9 |
| 0°-40° | 30871.6 | 70.4 |
| 0°-60° | 38954.5 | 88.8 |
| 0°-90° | 42211.8 | 96.2 |
| 90°-120° | 860.6 | 2.0 |
| 90°-150° | 1501.2 | 3.4 |
| 90°-180° | 1658.0 | 3.8 |
| 0°-180° | 43869.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|-------|-------|-------|-------|-------|------|
| 0° | 33990 | 33990 | 33990 | 33990 | 33990 | |
| 5° | 33856 | 33851 | 33852 | 33912 | 33891 | 3200 |
| 15° | 29453 | 31509 | 32157 | 31256 | 28777 | 8103 |
| 25° | 18068 | 23725 | 27194 | 22859 | 17132 | 8232 |
| 35° | 8725 | 13687 | 18043 | 13097 | 8156 | 5520 |
| 45° | 4360 | 6520 | 8187 | 6237 | 4210 | 3439 |
| 55° | 2639 | 3231 | 3748 | 3176 | 2603 | 2386 |
| 65° | 1719 | 1837 | 1938 | 1843 | 1736 | 1709 |
| 75° | 1028 | 1022 | 1028 | 1024 | 1038 | 1089 |
| 85° | 314 | 266 | 263 | 271 | 323 | 335 |
| 90° | 13 | 33 | 12 | 35 | 13 | 22 |
| 95° | 22 | 74 | 23 | 63 | 21 | 20 |
| 105° | 101 | 501 | 132 | 534 | 66 | 135 |
| 115° | 460 | 593 | 564 | 656 | 482 | 424 |
| 125° | 333 | 317 | 361 | 352 | 378 | 303 |
| 135° | 245 | 245 | 229 | 256 | 265 | 191 |
| 145° | 205 | 213 | 209 | 216 | 220 | 130 |
| 155° | 184 | 188 | 187 | 189 | 199 | 86 |
| 165° | 179 | 181 | 178 | 180 | 186 | 51 |
| 175° | 182 | 182 | 179 | 180 | 186 | 17 |
| 180° | 182 | 182 | 182 | 182 | 182 | |



TEST NUMBER: P1433276
 CATALOG NUMBER: EHBR1-48-UNV-A1-L930-UPL18

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 33989.5 | 33989.5 | 33989.5 | 33989.5 | 33989.5 | 33989.5 | 33989.5 | 33989.5 | 33989.5 |
| 2.5° | 33914.7 | 33945.4 | 33958.2 | 33965.4 | 33973.1 | 33994.5 | 34003.8 | 33988.8 | 34001.6 |
| 5° | 33855.7 | 33857.8 | 33850.7 | 33882.7 | 33852.1 | 33873.5 | 33911.9 | 33897.0 | 33891.3 |
| 7.5° | 33511.1 | 33582.3 | 33624.3 | 33635.0 | 33640.7 | 33667.0 | 33694.1 | 33541.0 | 33518.3 |
| 10° | 32856.2 | 32975.0 | 33239.2 | 33314.6 | 33291.8 | 33334.6 | 33197.9 | 32797.8 | 32641.2 |
| 12.5° | 31420.3 | 31838.2 | 32524.5 | 32829.9 | 32774.3 | 32812.0 | 32346.4 | 31502.2 | 31016.7 |
| 15° | 29453.3 | 30066.3 | 31508.6 | 32110.8 | 32157.1 | 32110.8 | 31255.8 | 29610.6 | 28777.0 |
| 17.5° | 26838.6 | 27970.4 | 30094.0 | 31263.0 | 31196.0 | 31218.1 | 29594.9 | 27163.1 | 26209.2 |
| 20° | 24045.0 | 25251.7 | 28240.2 | 30190.1 | 30169.5 | 30045.6 | 27708.5 | 24501.4 | 23108.9 |
| 22.5° | 20885.6 | 22441.8 | 26115.9 | 28871.0 | 28863.1 | 28656.7 | 25411.1 | 21594.6 | 20095.4 |
| 25° | 18068.0 | 19594.2 | 23725.4 | 27255.0 | 27193.8 | 26958.9 | 22859.0 | 18695.1 | 17131.8 |
| 27.5° | 15154.9 | 16741.7 | 21173.2 | 25361.3 | 25319.3 | 25063.0 | 20419.3 | 15984.9 | 14497.1 |
| 30° | 12685.3 | 14136.2 | 18610.4 | 23277.6 | 23008.5 | 22979.3 | 17904.3 | 13475.5 | 12040.3 |
| 32.5° | 10569.5 | 11813.2 | 16194.2 | 21098.5 | 20622.2 | 20758.2 | 15397.7 | 11376.8 | 9954.5 |
| 35° | 8725.0 | 9820.6 | 13686.9 | 18578.4 | 18043.0 | 18218.8 | 13097.4 | 9335.1 | 8155.5 |
| 37.5° | 7081.3 | 8134.9 | 11561.9 | 16127.3 | 15308.6 | 15640.4 | 11074.3 | 7796.0 | 6850.5 |
| 40° | 5928.0 | 6763.8 | 9546.5 | 13437.8 | 12557.1 | 13097.4 | 9143.6 | 6502.5 | 5745.0 |
| 42.5° | 5107.8 | 5653.2 | 7879.3 | 10869.9 | 10194.4 | 10577.4 | 7536.1 | 5436.0 | 4869.4 |
| 45° | 4360.3 | 4795.3 | 6519.6 | 8577.7 | 8186.8 | 8542.0 | 6236.9 | 4635.2 | 4209.5 |
| 47.5° | 3808.6 | 4144.0 | 5367.0 | 6926.7 | 6684.0 | 6796.5 | 5209.0 | 4045.0 | 3699.0 |
| 50° | 3332.4 | 3591.6 | 4512.0 | 5590.6 | 5458.1 | 5527.2 | 4363.2 | 3519.6 | 3281.8 |
| 52.5° | 2962.2 | 3152.3 | 3784.4 | 4594.5 | 4529.1 | 4539.7 | 3718.3 | 3096.0 | 2923.7 |
| 55° | 2639.0 | 2771.4 | 3230.6 | 3763.8 | 3748.1 | 3751.0 | 3176.5 | 2743.6 | 2603.4 |
| 57.5° | 2356.4 | 2466.1 | 2776.4 | 3161.5 | 3138.8 | 3143.8 | 2750.8 | 2436.8 | 2346.4 |
| 60° | 2117.2 | 2190.5 | 2399.1 | 2671.7 | 2656.8 | 2650.4 | 2384.2 | 2163.4 | 2132.1 |
| 62.5° | 1905.1 | 1952.0 | 2096.5 | 2290.1 | 2261.7 | 2268.1 | 2095.8 | 1954.2 | 1907.8 |
| 65° | 1719.2 | 1735.6 | 1837.4 | 1957.0 | 1938.5 | 1954.2 | 1843.1 | 1746.3 | 1735.6 |
| 67.5° | 1537.7 | 1554.1 | 1613.9 | 1694.3 | 1672.9 | 1685.8 | 1615.3 | 1558.3 | 1549.1 |
| 70° | 1372.5 | 1371.8 | 1405.3 | 1448.7 | 1448.7 | 1450.9 | 1413.1 | 1379.0 | 1386.1 |
| 72.5° | 1201.7 | 1197.4 | 1207.4 | 1236.5 | 1228.7 | 1255.8 | 1216.0 | 1205.3 | 1206.7 |
| 75° | 1028.0 | 1015.9 | 1021.6 | 1036.5 | 1028.0 | 1042.2 | 1024.5 | 1037.9 | 1037.9 |
| 77.5° | 864.2 | 841.5 | 834.4 | 836.5 | 820.8 | 842.2 | 846.4 | 855.7 | 877.1 |
| 80° | 693.4 | 661.3 | 643.6 | 642.9 | 629.3 | 642.9 | 653.6 | 672.7 | 693.4 |
| 82.5° | 514.7 | 486.9 | 457.1 | 451.4 | 442.8 | 450.6 | 464.9 | 487.6 | 521.1 |
| 85° | 313.9 | 284.7 | 266.3 | 256.3 | 263.4 | 263.4 | 270.6 | 302.5 | 323.2 |
| 87.5° | 113.2 | 98.9 | 81.2 | 81.9 | 84.0 | 86.9 | 90.5 | 113.9 | 124.6 |
| 90° | 13.3 | 19.2 | 32.9 | 21.0 | 11.9 | 20.1 | 34.7 | 18.3 | 12.6 |
| 92.5° | 18.1 | 29.2 | 52.9 | 27.4 | 15.5 | 27.4 | 49.3 | 24.7 | 17.1 |
| 95° | 21.5 | 33.8 | 74.0 | 36.5 | 22.8 | 33.8 | 63.0 | 27.4 | 20.8 |
| 97.5° | 27.0 | 37.4 | 84.9 | 44.7 | 35.6 | 42.0 | 71.2 | 29.2 | 25.4 |
| 100° | 35.2 | 43.8 | 132.4 | 54.8 | 47.5 | 47.5 | 130.6 | 33.8 | 29.8 |
| 102.5° | 59.0 | 93.1 | 281.3 | 103.2 | 72.2 | 93.1 | 303.3 | 68.5 | 36.1 |
| 105° | 101.0 | 196.4 | 501.4 | 216.5 | 131.5 | 213.7 | 534.3 | 179.0 | 66.3 |
| 107.5° | 174.0 | 351.6 | 661.2 | 383.6 | 249.3 | 399.1 | 688.7 | 354.4 | 154.9 |
| 110° | 323.8 | 466.7 | 693.2 | 527.0 | 399.1 | 558.0 | 751.7 | 485.9 | 313.8 |



TEST NUMBER: P1433276
 CATALOG NUMBER: EHBR1-48-UNV-A1-L930-UPL18

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 112.5° | 437.1 | 501.4 | 664.0 | 581.8 | 519.7 | 622.0 | 734.3 | 538.9 | 434.3 |
| 115° | 459.9 | 482.3 | 592.8 | 568.1 | 564.4 | 612.8 | 655.8 | 537.1 | 481.8 |
| 117.5° | 445.1 | 440.2 | 503.2 | 510.5 | 545.3 | 560.8 | 566.3 | 504.2 | 484.6 |
| 120° | 411.5 | 391.8 | 420.2 | 445.7 | 492.3 | 485.9 | 476.8 | 456.4 | 457.2 |
| 122.5° | 371.2 | 347.8 | 359.8 | 379.0 | 425.6 | 411.9 | 402.8 | 407.2 | 420.4 |
| 125° | 332.8 | 309.4 | 316.9 | 321.5 | 360.7 | 347.1 | 351.5 | 365.1 | 378.5 |
| 127.5° | 299.0 | 282.9 | 286.8 | 281.3 | 305.9 | 299.6 | 313.9 | 330.3 | 341.0 |
| 130° | 276.2 | 262.6 | 268.3 | 254.9 | 267.4 | 269.2 | 288.2 | 301.0 | 308.1 |
| 132.5° | 257.7 | 248.7 | 256.0 | 239.8 | 243.5 | 251.5 | 268.9 | 280.5 | 284.2 |
| 135° | 244.7 | 236.7 | 244.9 | 229.6 | 229.4 | 240.3 | 255.8 | 263.2 | 264.8 |
| 137.5° | 232.9 | 226.4 | 234.6 | 223.7 | 220.9 | 231.9 | 243.8 | 249.3 | 248.2 |
| 140° | 223.3 | 217.1 | 226.3 | 218.0 | 216.2 | 227.2 | 232.6 | 239.7 | 237.9 |
| 142.5° | 212.1 | 208.4 | 218.7 | 213.2 | 211.4 | 222.2 | 224.9 | 229.5 | 228.4 |
| 145° | 204.6 | 201.8 | 213.1 | 210.3 | 209.4 | 217.4 | 215.6 | 222.7 | 219.9 |
| 147.5° | 199.4 | 196.9 | 206.5 | 205.5 | 205.5 | 211.0 | 209.0 | 215.2 | 213.2 |
| 150° | 193.7 | 191.2 | 200.8 | 199.9 | 200.8 | 204.4 | 201.5 | 209.3 | 209.1 |
| 152.5° | 188.1 | 185.5 | 194.2 | 192.6 | 193.5 | 197.1 | 194.9 | 202.9 | 203.4 |
| 155° | 184.2 | 181.7 | 188.5 | 187.1 | 187.1 | 189.6 | 189.2 | 197.9 | 198.6 |
| 157.5° | 182.7 | 180.4 | 185.4 | 183.9 | 183.9 | 185.5 | 186.1 | 193.9 | 194.6 |
| 160° | 181.4 | 179.0 | 183.1 | 181.7 | 180.8 | 183.3 | 183.8 | 190.7 | 191.4 |
| 162.5° | 180.1 | 177.8 | 182.0 | 180.4 | 179.7 | 180.4 | 180.9 | 188.5 | 189.2 |
| 165° | 178.9 | 177.5 | 180.7 | 179.3 | 178.3 | 179.3 | 179.6 | 184.6 | 186.2 |
| 167.5° | 179.7 | 178.0 | 180.5 | 179.0 | 178.1 | 177.2 | 179.4 | 183.6 | 185.2 |
| 170° | 179.5 | 178.8 | 180.3 | 178.0 | 176.4 | 177.1 | 178.2 | 182.4 | 184.0 |
| 172.5° | 180.9 | 180.2 | 181.7 | 179.4 | 177.8 | 178.5 | 178.8 | 182.1 | 184.6 |
| 175° | 182.1 | 180.7 | 182.1 | 179.9 | 179.2 | 178.9 | 180.2 | 182.5 | 185.8 |
| 177.5° | 183.8 | 182.3 | 182.8 | 180.6 | 178.9 | 179.7 | 181.8 | 184.2 | 188.3 |
| 180° | 181.8 | 181.8 | 181.8 | 181.8 | 181.8 | 181.8 | 181.8 | 181.8 | 181.8 |



TEST NUMBER: P1433276
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CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 19.23 | 20.43 | 19.67 | 20.83 | 21.24 | 20.21 | 21.42 | 20.65 | 21.81 | 22.22 |
| | 3H | 20.71 | 21.78 | 21.16 | 22.19 | 22.65 | 21.48 | 22.55 | 21.93 | 22.96 | 23.42 |
| | 4H | 21.31 | 22.31 | 21.78 | 22.74 | 23.22 | 21.98 | 22.97 | 22.45 | 23.40 | 23.88 |
| | 6H | 21.78 | 22.70 | 22.26 | 23.14 | 23.63 | 22.33 | 23.25 | 22.82 | 23.70 | 24.19 |
| | 8H | 21.93 | 22.80 | 22.43 | 23.26 | 23.76 | 22.43 | 23.30 | 22.93 | 23.77 | 24.26 |
| | 12H | 22.01 | 22.84 | 22.51 | 23.29 | 23.82 | 22.47 | 23.30 | 22.97 | 23.76 | 24.28 |
| 4H | 2H | 19.75 | 20.75 | 20.23 | 21.18 | 21.66 | 20.53 | 21.53 | 21.00 | 21.96 | 22.44 |
| | 3H | 21.44 | 22.26 | 21.92 | 22.74 | 23.24 | 22.03 | 22.85 | 22.51 | 23.33 | 23.82 |
| | 4H | 22.16 | 22.89 | 22.66 | 23.38 | 23.92 | 22.65 | 23.38 | 23.15 | 23.88 | 24.41 |
| | 6H | 22.74 | 23.37 | 23.27 | 23.89 | 24.45 | 23.13 | 23.76 | 23.65 | 24.28 | 24.84 |
| | 8H | 22.92 | 23.52 | 23.46 | 24.04 | 24.60 | 23.26 | 23.85 | 23.79 | 24.37 | 24.93 |
| | 12H | 23.03 | 23.56 | 23.58 | 24.11 | 24.67 | 23.33 | 23.85 | 23.88 | 24.40 | 24.97 |
| 8H | 4H | 22.38 | 22.98 | 22.92 | 23.49 | 24.05 | 22.83 | 23.42 | 23.36 | 23.94 | 24.50 |
| | 6H | 23.07 | 23.56 | 23.64 | 24.12 | 24.69 | 23.41 | 23.90 | 23.98 | 24.46 | 25.03 |
| | 8H | 23.32 | 23.76 | 23.91 | 24.34 | 24.92 | 23.61 | 24.04 | 24.19 | 24.62 | 25.20 |
| | 12H | 23.49 | 23.87 | 24.07 | 24.43 | 25.09 | 23.73 | 24.11 | 24.31 | 24.67 | 25.33 |
| 12H | 4H | 22.38 | 22.91 | 22.93 | 23.46 | 24.02 | 22.83 | 23.35 | 23.38 | 23.90 | 24.47 |
| | 6H | 23.10 | 23.53 | 23.68 | 24.11 | 24.69 | 23.43 | 23.87 | 24.02 | 24.45 | 25.03 |
| | 8H | 23.39 | 23.77 | 23.97 | 24.33 | 24.99 | 23.67 | 24.05 | 24.25 | 24.61 | 25.27 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-5

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L930-N

Data in this report applies to families of products including EHBR-60-L930-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-5
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/05/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Metalux
 Catalog Number: **EHBR-60-L930-N**
 Description: Elevate Round Highbay at, 60000 lumens, 3000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K): 2996
 CIE u': 0.2519
 CIE v': 0.5169
 Duv: -0.0033
 CIE x: 0.4325
 CIE y: 0.3945
 CIE z: 0.1730
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 584
 Purity: 48.21818
 Rf: 91.3
 Rg: 102

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 94.4 | | |
| R1: | 96.8 | R9: | 61.4 |
| R2: | 98.1 | R10: | 94.4 |
| R3: | 97.8 | R11: | 95.7 |
| R4: | 95.6 | R12: | 88.5 |
| R5: | 96.9 | R13: | 97.3 |
| R6: | 95.7 | R14: | 97.8 |
| R7: | 90.9 | R15: | 92.3 |
| R8: | 83.0 | | |



Test Conditions

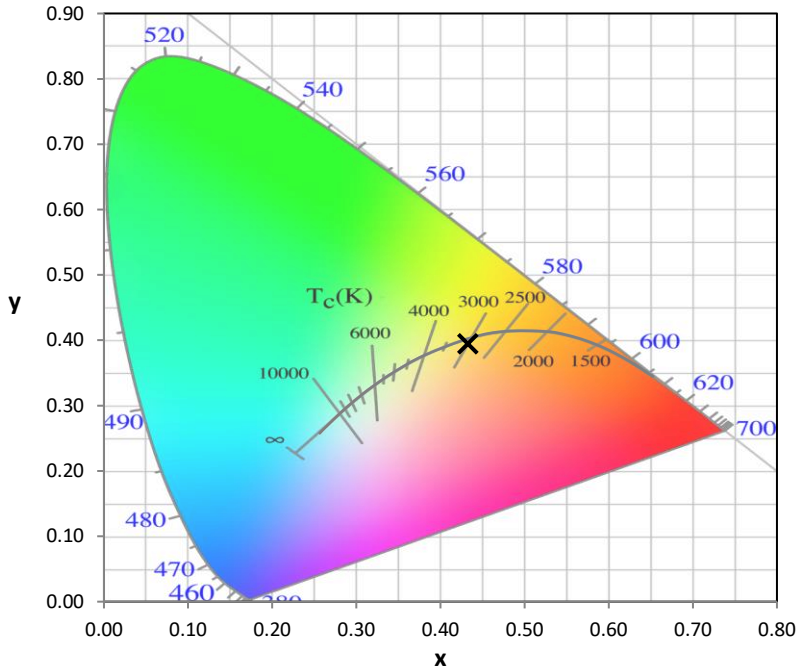
Stabilization Time: 40M
 Operation Time: 1H 40M
 Sphere Temperature (°C): 25.0

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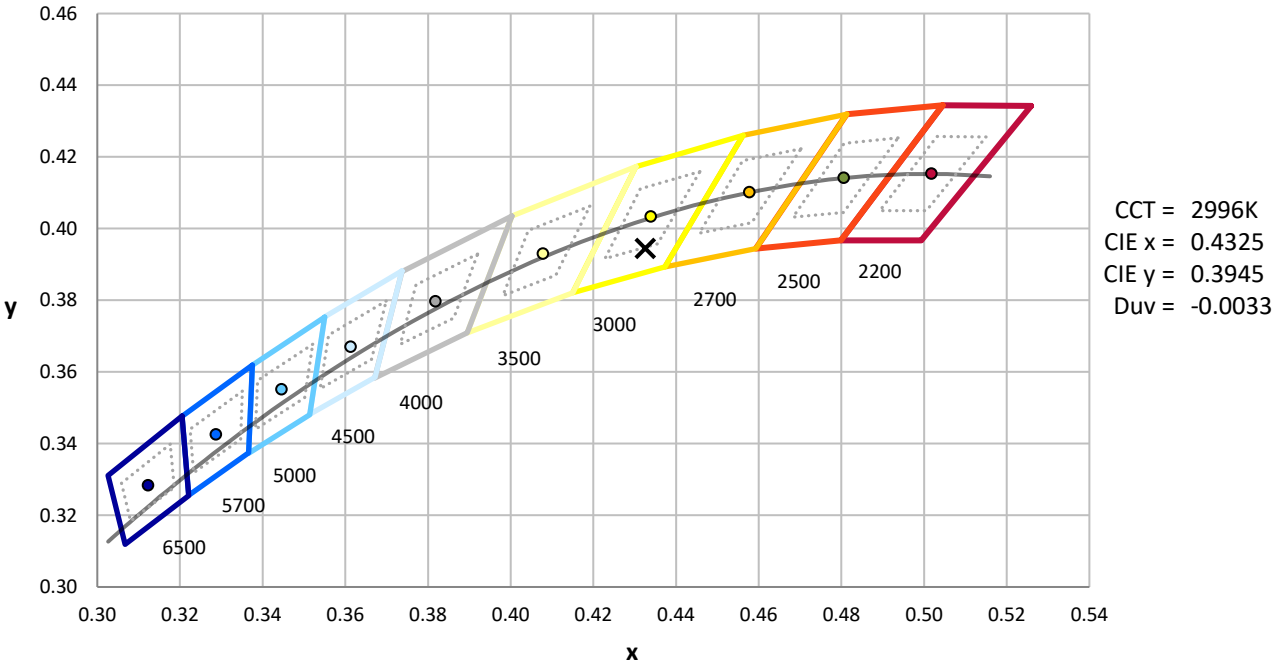
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | 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 |

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CIE 1931 Chromaticity Diagram



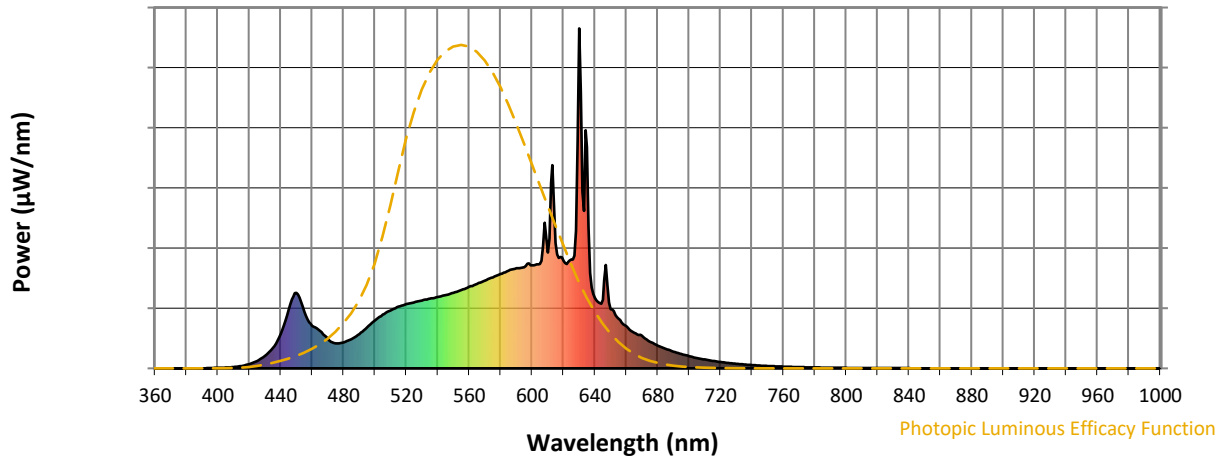
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 7-step quadrangle

REPORT NUMBER: SP1-2506-472-5

Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 101 | NR | 620 | 317 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 320 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 141 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 158 | NR | 635 | 651 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 171 | NR | 640 | 207 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 182 | NR | 645 | 201 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 189 | NR | 650 | 174 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 194 | NR | 655 | 146 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 1 | NR | 530 | 199 | NR | 660 | 124 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 3 | NR | 535 | 205 | NR | 665 | 105 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 210 | NR | 670 | 96 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 216 | NR | 675 | 79 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 13 | NR | 550 | 222 | NR | 680 | 67 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 22 | NR | 555 | 230 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 37 | NR | 560 | 240 | NR | 690 | 49 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 60 | NR | 565 | 248 | NR | 695 | 42 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 101 | NR | 570 | 258 | NR | 700 | 36 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 172 | NR | 575 | 268 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 223 | NR | 580 | 278 | NR | 710 | 26 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 167 | NR | 585 | 287 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 126 | NR | 590 | 295 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 111 | NR | 595 | 298 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 86 | NR | 600 | 303 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 74 | NR | 605 | 307 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 341 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 368 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-5

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.44

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 101 | NR | 620 | 317 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 320 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 141 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 158 | NR | 635 | 651 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 171 | NR | 640 | 207 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 182 | NR | 645 | 201 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 189 | NR | 650 | 174 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 194 | NR | 655 | 146 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 1 | NR | 530 | 199 | NR | 660 | 124 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 3 | NR | 535 | 205 | NR | 665 | 105 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 210 | NR | 670 | 96 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 216 | NR | 675 | 79 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 13 | NR | 550 | 222 | NR | 680 | 67 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 22 | NR | 555 | 230 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 37 | NR | 560 | 240 | NR | 690 | 49 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 60 | NR | 565 | 248 | NR | 695 | 42 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 101 | NR | 570 | 258 | NR | 700 | 36 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 172 | NR | 575 | 268 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 223 | NR | 580 | 278 | NR | 710 | 26 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 167 | NR | 585 | 287 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 126 | NR | 590 | 295 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 111 | NR | 595 | 298 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 86 | NR | 600 | 303 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 74 | NR | 605 | 307 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 341 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 368 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-5

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.85

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 101 | NR | 620 | 317 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 320 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 141 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 158 | NR | 635 | 651 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 171 | NR | 640 | 207 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 182 | NR | 645 | 201 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 189 | NR | 650 | 174 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 194 | NR | 655 | 146 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 1 | NR | 530 | 199 | NR | 660 | 124 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 3 | NR | 535 | 205 | NR | 665 | 105 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 210 | NR | 670 | 96 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 216 | NR | 675 | 79 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 13 | NR | 550 | 222 | NR | 680 | 67 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 22 | NR | 555 | 230 | NR | 685 | 58 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 37 | NR | 560 | 240 | NR | 690 | 49 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 60 | NR | 565 | 248 | NR | 695 | 42 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 101 | NR | 570 | 258 | NR | 700 | 36 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 172 | NR | 575 | 268 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 223 | NR | 580 | 278 | NR | 710 | 26 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 167 | NR | 585 | 287 | NR | 715 | 22 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 126 | NR | 590 | 295 | NR | 720 | 19 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 111 | NR | 595 | 298 | NR | 725 | 16 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 86 | NR | 600 | 303 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 74 | NR | 605 | 307 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 341 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 86 | NR | 615 | 368 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.3$
 $R_g = 102$
 $CIE R_a = 94.4$
 $R_9 = 61.4$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 91 | CES51 = 96 | CES76 = 89 |
| CES02 = 63 | CES27 = 96 | CES52 = 95 | CES77 = 85 |
| CES03 = 32 | CES28 = 96 | CES53 = 93 | CES78 = 86 |
| CES04 = 70 | CES29 = 90 | CES54 = 98 | CES79 = 89 |
| CES05 = 51 | CES30 = 96 | CES55 = 98 | CES80 = 91 |
| CES06 = 51 | CES31 = 90 | CES56 = 95 | CES81 = 72 |
| CES07 = 44 | CES32 = 84 | CES57 = 95 | CES82 = 95 |
| CES08 = 42 | CES33 = 91 | CES58 = 95 | CES83 = 93 |
| CES09 = 29 | CES34 = 92 | CES59 = 99 | CES84 = 96 |
| CES10 = 76 | CES35 = 96 | CES60 = 96 | CES85 = 80 |
| CES11 = 59 | CES36 = 90 | CES61 = 96 | CES86 = 77 |
| CES12 = 65 | CES37 = 94 | CES62 = 95 | CES87 = 91 |
| CES13 = 44 | CES38 = 99 | CES63 = 94 | CES88 = 96 |
| CES14 = 74 | CES39 = 97 | CES64 = 96 | CES89 = 82 |
| CES15 = 72 | CES40 = 94 | CES65 = 92 | CES90 = 97 |
| CES16 = 48 | CES41 = 94 | CES66 = 95 | CES91 = 82 |
| CES17 = 50 | CES42 = 91 | CES67 = 94 | CES92 = 78 |
| CES18 = 57 | CES43 = 88 | CES68 = 93 | CES93 = 87 |
| CES19 = 72 | CES44 = 99 | CES69 = 94 | CES94 = 73 |
| CES20 = 67 | CES45 = 93 | CES70 = 90 | CES95 = 85 |
| CES21 = 86 | CES46 = 93 | CES71 = 90 | CES96 = 92 |
| CES22 = 79 | CES47 = 86 | CES72 = 96 | CES97 = 93 |
| CES23 = 92 | CES48 = 95 | CES73 = 85 | CES98 = 94 |
| CES24 = 91 | CES49 = 91 | CES74 = 90 | CES99 = 93 |
| CES25 = 72 | CES50 = 96 | CES75 = 90 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)