

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: P976736

Luminaire Tested: 24SR-LD2-C-45-UNV-L950-CD1-BR-U

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P976736  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24SR-LD2-C-45-UNV-L950-CD1-BR-U  
Description: METALUX SKYRIDGE 2x4 4500LM PACKAGE 90CRI 5000K TROFFER with Belladonna Rose SKYT  
Light Source: 5000K CCT, 90+ CRI LEDS  
Ballast/Driver: -

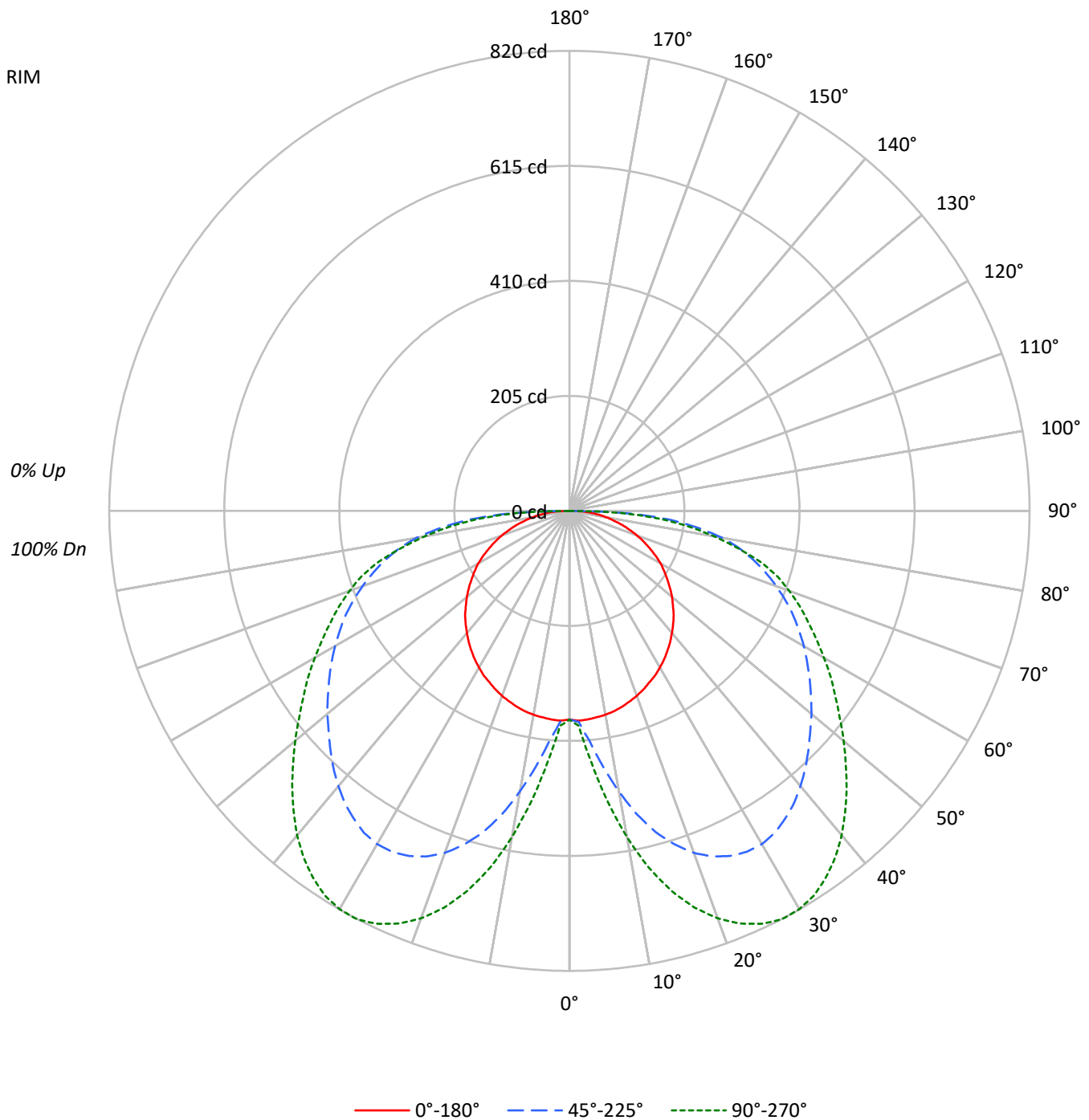
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2581.0 lumens  
Efficiency: N/A  
Efficacy: 80.9 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 2.29 / 2.08  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: 28.75 FT

TEST NUMBER: P976736  
CATALOG NUMBER: 24SR-LD2-C-45-UNV-L950-CD1-BR-U

### Luminous Intensity Polar Plot





TEST NUMBER: P976736

CATALOG NUMBER: 24SR-LD2-C-45-UNV-L950-CD1-BR-U

**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 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 106 | 100 | 94  | 90  | 103 | 97  | 93  | 88  | 93  | 89  | 85  | 89  | 86  | 83  | 85  | 83  | 80  | 78  |    |    |
| 2   | 95  | 85  | 77  | 70  | 92  | 83  | 75  | 69  | 79  | 73  | 67  | 76  | 70  | 66  | 73  | 68  | 64  | 62  |    |    |
| 3   | 85  | 73  | 64  | 56  | 83  | 71  | 63  | 56  | 68  | 61  | 55  | 65  | 59  | 54  | 63  | 57  | 53  | 50  |    |    |
| 4   | 77  | 64  | 54  | 46  | 75  | 62  | 53  | 46  | 60  | 52  | 45  | 57  | 50  | 45  | 55  | 49  | 44  | 41  |    |    |
| 5   | 71  | 56  | 46  | 39  | 68  | 55  | 46  | 39  | 53  | 45  | 38  | 51  | 44  | 38  | 49  | 42  | 37  | 35  |    |    |
| 6   | 65  | 50  | 40  | 33  | 63  | 49  | 40  | 33  | 47  | 39  | 33  | 46  | 38  | 33  | 44  | 37  | 32  | 30  |    |    |
| 7   | 60  | 45  | 36  | 29  | 58  | 44  | 35  | 29  | 43  | 35  | 29  | 41  | 34  | 28  | 40  | 33  | 28  | 26  |    |    |
| 8   | 56  | 41  | 32  | 25  | 54  | 40  | 31  | 25  | 39  | 31  | 25  | 38  | 30  | 25  | 36  | 30  | 25  | 23  |    |    |
| 9   | 52  | 37  | 29  | 23  | 50  | 37  | 28  | 22  | 36  | 28  | 22  | 34  | 27  | 22  | 33  | 27  | 22  | 20  |    |    |
| 10  | 48  | 34  | 26  | 20  | 47  | 34  | 26  | 20  | 33  | 25  | 20  | 32  | 25  | 20  | 31  | 24  | 20  | 18  |    |    |

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

|     | 0°  | 45°  | 90°  |
|-----|-----|------|------|
| 0°  | 501 | 501  | 501  |
| 5°  | 504 | 556  | 609  |
| 10° | 504 | 694  | 807  |
| 15° | 504 | 825  | 976  |
| 20° | 502 | 929  | 1107 |
| 25° | 500 | 1007 | 1206 |
| 30° | 501 | 1066 | 1273 |
| 35° | 500 | 1100 | 1310 |
| 40° | 499 | 1125 | 1326 |
| 45° | 500 | 1146 | 1329 |
| 50° | 499 | 1178 | 1336 |
| 55° | 500 | 1226 | 1358 |
| 60° | 505 | 1298 | 1410 |
| 65° | 503 | 1401 | 1495 |
| 70° | 505 | 1543 | 1639 |
| 75° | 507 | 1769 | 1836 |
| 80° | 526 | 2143 | 2029 |
| 85° | 605 | 2765 | 2502 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 87.5°  
 Luminance: 3368 cd/sqm



TEST NUMBER: P976736  
 CATALOG NUMBER: 24SR-LD2-C-45-UNV-L950-CD1-BR-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 41.8   | 1.6       |
| 10°-20°   | 159.6  | 6.2       |
| 20°-30°   | 291.7  | 11.3      |
| 30°-40°   | 388.0  | 15.0      |
| 40°-50°   | 427.2  | 16.6      |
| 50°-60°   | 423.4  | 16.4      |
| 60°-70°   | 387.6  | 15.0      |
| 70°-80°   | 312.1  | 12.1      |
| 80°-90°   | 149.7  | 5.8       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 493.1  | 19.1      |
| 0°-40°    | 881.1  | 34.1      |
| 0°-60°    | 1731.6 | 67.1      |
| 0°-90°    | 2581.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2581.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 372 | 372   | 372 | 372   | 372 |      |
| 5°  | 373 | 376   | 411 | 439   | 451 | 35   |
| 15° | 362 | 455   | 593 | 672   | 701 | 102  |
| 25° | 337 | 505   | 678 | 776   | 812 | 156  |
| 35° | 304 | 497   | 670 | 764   | 797 | 191  |
| 45° | 263 | 448   | 602 | 675   | 699 | 202  |
| 55° | 213 | 395   | 523 | 566   | 579 | 191  |
| 65° | 158 | 341   | 440 | 459   | 470 | 156  |
| 75° | 98  | 266   | 340 | 350   | 353 | 103  |
| 85° | 39  | 145   | 179 | 164   | 162 | 40   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P976736  
 CATALOG NUMBER: 24SR-LD2-C-45-UNV-L950-CD1-BR-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 |
| 2.5°  | 374.2 | 374.2 | 373.2 | 373.2 | 373.2 | 373.2 | 373.2 | 373.2 | 374.2 | 376.3 | 377.5 |
| 5°    | 373.2 | 373.2 | 373.2 | 373.2 | 374.2 | 378.5 | 383.7 | 392.3 | 400.7 | 411.4 | 420.8 |
| 7.5°  | 371.0 | 371.0 | 371.0 | 374.2 | 383.7 | 398.6 | 412.4 | 428.2 | 444.2 | 460.0 | 472.9 |
| 10°   | 368.9 | 368.9 | 371.0 | 382.7 | 401.8 | 424.1 | 445.2 | 466.4 | 486.5 | 507.8 | 525.8 |
| 12.5° | 365.8 | 365.8 | 372.0 | 393.3 | 420.8 | 448.5 | 476.0 | 501.4 | 526.9 | 553.4 | 573.5 |
| 15°   | 361.5 | 361.5 | 375.3 | 403.8 | 437.8 | 471.7 | 503.5 | 534.3 | 564.0 | 592.6 | 614.9 |
| 17.5° | 356.2 | 358.3 | 378.5 | 414.5 | 452.6 | 492.0 | 526.9 | 561.8 | 593.6 | 623.3 | 649.8 |
| 20°   | 350.9 | 354.1 | 381.6 | 422.9 | 465.4 | 508.8 | 547.0 | 583.1 | 617.0 | 648.8 | 676.3 |
| 22.5° | 344.5 | 348.8 | 383.7 | 429.4 | 475.0 | 520.5 | 560.8 | 598.9 | 635.0 | 666.8 | 695.4 |
| 25°   | 337.1 | 343.5 | 384.9 | 432.5 | 482.4 | 527.9 | 569.2 | 608.5 | 645.5 | 678.5 | 707.1 |
| 27.5° | 330.7 | 339.2 | 383.7 | 434.6 | 485.5 | 532.2 | 574.5 | 613.7 | 652.0 | 684.9 | 714.6 |
| 30°   | 322.3 | 332.8 | 381.6 | 433.6 | 484.4 | 532.2 | 573.5 | 613.7 | 652.0 | 685.9 | 714.6 |
| 32.5° | 313.9 | 326.5 | 376.3 | 429.4 | 481.3 | 526.9 | 569.2 | 609.6 | 646.7 | 680.6 | 708.1 |
| 35°   | 304.3 | 319.1 | 370.0 | 422.9 | 473.8 | 519.5 | 560.8 | 600.0 | 638.1 | 669.9 | 697.6 |
| 37.5° | 294.7 | 310.6 | 361.5 | 414.5 | 464.3 | 508.8 | 549.1 | 588.4 | 624.4 | 657.2 | 682.8 |
| 40°   | 284.1 | 302.2 | 353.1 | 405.0 | 452.6 | 496.1 | 536.4 | 574.5 | 609.6 | 640.3 | 664.6 |
| 42.5° | 273.5 | 292.6 | 343.5 | 394.4 | 441.1 | 482.4 | 522.6 | 558.7 | 592.6 | 622.3 | 644.5 |
| 45°   | 262.9 | 282.1 | 331.8 | 382.7 | 427.2 | 468.6 | 506.8 | 542.7 | 574.5 | 602.2 | 623.3 |
| 47.5° | 250.1 | 271.4 | 321.3 | 370.0 | 413.4 | 454.7 | 492.0 | 525.8 | 557.6 | 581.9 | 602.2 |
| 50°   | 238.6 | 260.8 | 309.6 | 357.2 | 399.7 | 441.1 | 477.0 | 509.9 | 539.6 | 563.0 | 580.9 |
| 52.5° | 225.9 | 249.1 | 297.9 | 345.7 | 388.0 | 427.2 | 463.3 | 494.0 | 520.5 | 542.7 | 559.7 |
| 55°   | 213.0 | 237.4 | 287.3 | 332.8 | 375.3 | 414.5 | 448.5 | 478.1 | 503.5 | 522.6 | 538.6 |
| 57.5° | 200.3 | 225.9 | 275.6 | 322.3 | 363.6 | 401.8 | 434.6 | 461.2 | 485.5 | 502.5 | 516.2 |
| 60°   | 187.7 | 214.2 | 262.9 | 309.6 | 351.9 | 388.0 | 419.8 | 445.2 | 466.4 | 482.4 | 494.0 |
| 62.5° | 172.8 | 201.5 | 251.3 | 296.9 | 338.2 | 373.2 | 403.8 | 427.2 | 447.3 | 461.2 | 470.7 |
| 65°   | 158.0 | 188.7 | 238.6 | 284.1 | 324.4 | 358.3 | 387.0 | 409.3 | 427.2 | 439.9 | 446.3 |
| 67.5° | 143.2 | 176.0 | 225.9 | 271.4 | 309.6 | 341.4 | 368.9 | 390.1 | 406.0 | 416.7 | 421.9 |
| 70°   | 128.3 | 161.1 | 210.9 | 255.5 | 292.6 | 322.3 | 348.8 | 368.9 | 382.7 | 392.3 | 396.4 |
| 72.5° | 112.4 | 146.3 | 195.1 | 238.6 | 273.5 | 303.2 | 327.5 | 346.7 | 359.3 | 366.8 | 370.0 |
| 75°   | 97.5  | 130.3 | 178.1 | 219.5 | 252.3 | 279.9 | 303.2 | 322.3 | 335.0 | 340.2 | 343.5 |
| 77.5° | 81.6  | 114.5 | 160.1 | 198.2 | 229.0 | 254.4 | 276.6 | 294.7 | 306.4 | 311.7 | 314.9 |
| 80°   | 67.9  | 97.5  | 138.9 | 173.8 | 202.5 | 226.9 | 247.0 | 266.1 | 275.6 | 276.6 | 273.5 |
| 82.5° | 53.0  | 80.6  | 116.6 | 147.3 | 171.7 | 195.1 | 214.2 | 226.9 | 231.1 | 231.1 | 227.9 |
| 85°   | 39.2  | 60.5  | 91.1  | 115.5 | 136.8 | 153.7 | 165.4 | 176.0 | 178.1 | 179.1 | 175.0 |
| 87.5° | 22.2  | 33.9  | 54.0  | 70.0  | 82.7  | 94.4  | 102.8 | 108.1 | 108.1 | 109.2 | 107.1 |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



TEST NUMBER: P976736

CATALOG NUMBER: 24SR-LD2-C-45-UNV-L950-CD1-BR-U

**CANDELA DISTRIBUTION (continued):**

|       | 55°   | 60°   | 65°   | 70°   | 75°   | 80°   | 85°   | 90°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 | 372.0 |
| 2.5°  | 377.5 | 379.4 | 379.4 | 381.6 | 382.7 | 382.7 | 383.7 | 383.7 |
| 5°    | 425.1 | 433.6 | 436.8 | 442.0 | 445.2 | 449.5 | 451.6 | 450.6 |
| 7.5°  | 482.4 | 495.1 | 501.4 | 508.8 | 517.3 | 519.5 | 522.6 | 522.6 |
| 10°   | 539.6 | 554.4 | 564.0 | 572.5 | 581.9 | 586.2 | 590.5 | 590.5 |
| 12.5° | 591.5 | 606.3 | 619.2 | 629.7 | 639.3 | 645.5 | 649.8 | 651.0 |
| 15°   | 634.0 | 653.1 | 665.8 | 677.5 | 688.0 | 694.3 | 699.7 | 700.7 |
| 17.5° | 668.9 | 686.9 | 703.9 | 716.7 | 726.1 | 735.7 | 738.9 | 741.1 |
| 20°   | 696.4 | 715.6 | 733.7 | 746.4 | 756.9 | 766.5 | 770.7 | 772.9 |
| 22.5° | 716.7 | 736.8 | 754.8 | 768.6 | 779.1 | 788.7 | 794.0 | 796.1 |
| 25°   | 729.4 | 750.5 | 769.6 | 783.4 | 795.1 | 804.7 | 809.9 | 812.1 |
| 27.5° | 737.8 | 759.0 | 777.0 | 790.8 | 802.5 | 812.1 | 817.4 | 820.5 |
| 30°   | 737.8 | 759.0 | 777.0 | 790.8 | 802.5 | 812.1 | 817.4 | 819.5 |
| 32.5° | 731.5 | 752.6 | 770.7 | 783.4 | 795.1 | 804.7 | 809.9 | 812.1 |
| 35°   | 719.8 | 741.1 | 758.0 | 770.7 | 782.4 | 790.8 | 796.1 | 797.3 |
| 37.5° | 703.9 | 724.1 | 739.9 | 752.6 | 763.3 | 771.7 | 777.0 | 778.2 |
| 40°   | 685.9 | 705.0 | 719.8 | 731.5 | 741.1 | 748.5 | 753.8 | 754.8 |
| 42.5° | 664.6 | 682.8 | 695.4 | 707.1 | 715.6 | 723.0 | 728.2 | 727.2 |
| 45°   | 642.4 | 659.4 | 669.9 | 679.5 | 689.0 | 694.3 | 698.6 | 698.6 |
| 47.5° | 620.2 | 634.0 | 643.5 | 652.0 | 659.4 | 664.6 | 667.9 | 667.9 |
| 50°   | 596.9 | 608.5 | 617.0 | 624.4 | 630.7 | 635.0 | 638.1 | 638.1 |
| 52.5° | 573.5 | 584.1 | 590.5 | 596.9 | 602.2 | 605.3 | 608.5 | 607.5 |
| 55°   | 550.1 | 558.7 | 563.0 | 569.2 | 573.5 | 577.8 | 579.9 | 578.8 |
| 57.5° | 526.9 | 532.2 | 536.4 | 541.7 | 546.0 | 550.1 | 551.3 | 552.3 |
| 60°   | 501.4 | 506.8 | 509.9 | 515.2 | 519.5 | 522.6 | 524.8 | 523.8 |
| 62.5° | 477.0 | 480.3 | 483.4 | 487.7 | 490.8 | 495.1 | 496.1 | 496.1 |
| 65°   | 450.6 | 453.7 | 456.9 | 461.2 | 464.3 | 468.6 | 470.7 | 469.6 |
| 67.5° | 425.1 | 428.2 | 431.5 | 434.6 | 438.9 | 443.2 | 444.2 | 444.2 |
| 70°   | 398.6 | 401.8 | 403.8 | 408.1 | 411.4 | 415.5 | 416.7 | 416.7 |
| 72.5° | 373.2 | 375.3 | 377.5 | 381.6 | 383.7 | 387.0 | 389.0 | 389.0 |
| 75°   | 344.5 | 346.7 | 348.8 | 350.9 | 351.9 | 353.1 | 354.1 | 353.1 |
| 77.5° | 312.7 | 310.6 | 308.4 | 308.4 | 306.4 | 307.4 | 308.4 | 307.4 |
| 80°   | 269.2 | 267.1 | 265.1 | 263.9 | 261.8 | 261.8 | 262.9 | 261.8 |
| 82.5° | 223.7 | 219.5 | 217.3 | 216.3 | 214.2 | 214.2 | 214.2 | 214.2 |
| 85°   | 168.5 | 166.4 | 165.4 | 163.3 | 161.1 | 160.1 | 161.1 | 162.1 |
| 87.5° | 105.0 | 102.8 | 100.7 | 98.5  | 97.5  | 96.5  | 98.5  | 95.4  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



TEST NUMBER: P976736  
 CATALOG NUMBER: 24SR-LD2-C-45-UNV-L950-CD1-BR-U

**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 | 10.9             | 12.7 | 11.2 | 13.0 | 13.3 | 13.9           | 15.7 | 14.3 | 16.0 | 16.3 |
|                 | 3H   | 12.9             | 14.5 | 13.2 | 14.8 | 15.2 | 16.5           | 18.2 | 16.9 | 18.5 | 18.9 |
|                 | 4H   | 13.6             | 15.2 | 14.0 | 15.5 | 15.9 | 17.8           | 19.3 | 18.2 | 19.7 | 20.1 |
|                 | 6H   | 14.2             | 15.7 | 14.6 | 16.1 | 16.4 | 18.9           | 20.4 | 19.3 | 20.7 | 21.1 |
|                 | 8H   | 14.5             | 15.9 | 14.9 | 16.2 | 16.6 | 19.4           | 20.8 | 19.8 | 21.2 | 21.6 |
|                 | 12H  | 14.6             | 16.0 | 15.1 | 16.4 | 16.8 | 19.8           | 21.1 | 20.2 | 21.5 | 22.0 |
| 4H              | 2H   | 12.6             | 14.2 | 13.0 | 14.5 | 14.9 | 14.7           | 16.2 | 15.0 | 16.6 | 16.9 |
|                 | 3H   | 15.1             | 16.5 | 15.5 | 16.9 | 17.3 | 17.6           | 18.9 | 18.0 | 19.3 | 19.7 |
|                 | 4H   | 16.2             | 17.4 | 16.6 | 17.9 | 18.3 | 19.0           | 20.2 | 19.4 | 20.6 | 21.1 |
|                 | 6H   | 17.1             | 18.2 | 17.6 | 18.6 | 19.1 | 20.3           | 21.4 | 20.7 | 21.8 | 22.3 |
|                 | 8H   | 17.5             | 18.5 | 17.9 | 18.9 | 19.4 | 20.9           | 21.9 | 21.3 | 22.3 | 22.8 |
|                 | 12H  | 17.7             | 18.6 | 18.2 | 19.1 | 19.6 | 21.4           | 22.3 | 21.9 | 22.8 | 23.2 |
| 8H              | 4H   | 17.4             | 18.4 | 17.9 | 18.9 | 19.3 | 19.5           | 20.6 | 20.0 | 21.0 | 21.5 |
|                 | 6H   | 18.8             | 19.6 | 19.2 | 20.1 | 20.6 | 21.1           | 21.9 | 21.5 | 22.4 | 22.9 |
|                 | 8H   | 19.3             | 20.1 | 19.8 | 20.6 | 21.1 | 21.8           | 22.6 | 22.3 | 23.0 | 23.5 |
|                 | 12H  | 19.8             | 20.5 | 20.3 | 21.0 | 21.6 | 22.4           | 23.1 | 22.9 | 23.6 | 24.2 |
| 12H             | 4H   | 17.7             | 18.6 | 18.1 | 19.1 | 19.5 | 19.6           | 20.6 | 20.1 | 21.1 | 21.5 |
|                 | 6H   | 19.2             | 20.0 | 19.7 | 20.4 | 21.0 | 21.3           | 22.1 | 21.8 | 22.5 | 23.0 |
|                 | 8H   | 19.9             | 20.6 | 20.4 | 21.1 | 21.7 | 22.0           | 22.8 | 22.5 | 23.2 | 23.8 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-8

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L950-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L950-CD1-U

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2506-457-8  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 07/02/2025  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Metalux  
 Catalog Number: **24SR-LD2-64-C-UNV-L950-CD1-U**  
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

**Spectral Parameters**

CCT (K): 4803  
 CIE u': 0.2133  
 CIE v': 0.4881  
 Duv: 0.0004  
 CIE x: 0.3510  
 CIE y: 0.3570  
 CIE z: 0.2921  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 574  
 Purity: 12.41797  
 Rf: 91.5  
 Rg: 100.9

|           |      |      |      |
|-----------|------|------|------|
| CRI (Ra): | 94.6 |      |      |
| R1:       | 95.9 | R9:  | 74.3 |
| R2:       | 96.0 | R10: | 88.6 |
| R3:       | 94.0 | R11: | 95.2 |
| R4:       | 95.8 | R12: | 71.3 |
| R5:       | 94.6 | R13: | 96.0 |
| R6:       | 92.9 | R14: | 96.1 |
| R7:       | 96.3 | R15: | 94.1 |
| R8:       | 91.2 |      |      |



**Test Conditions**

Stabilization Time: 43M  
 Operation Time: 1H 43M  
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2506-457-8

| 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: SP1-2506-457-8

CIE 1931 Chromaticity Diagram



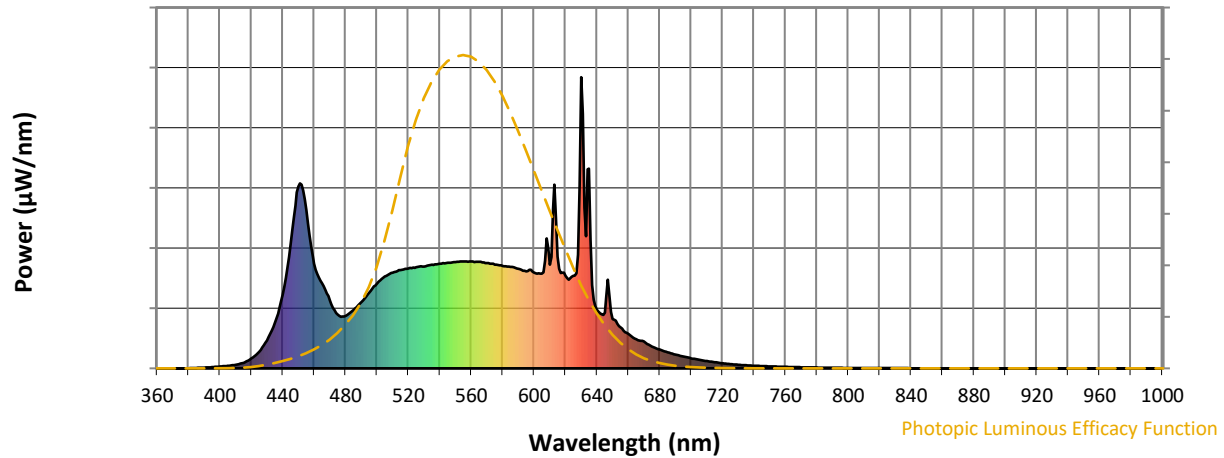
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-8

**Photopic Flux vs. Wavelength**

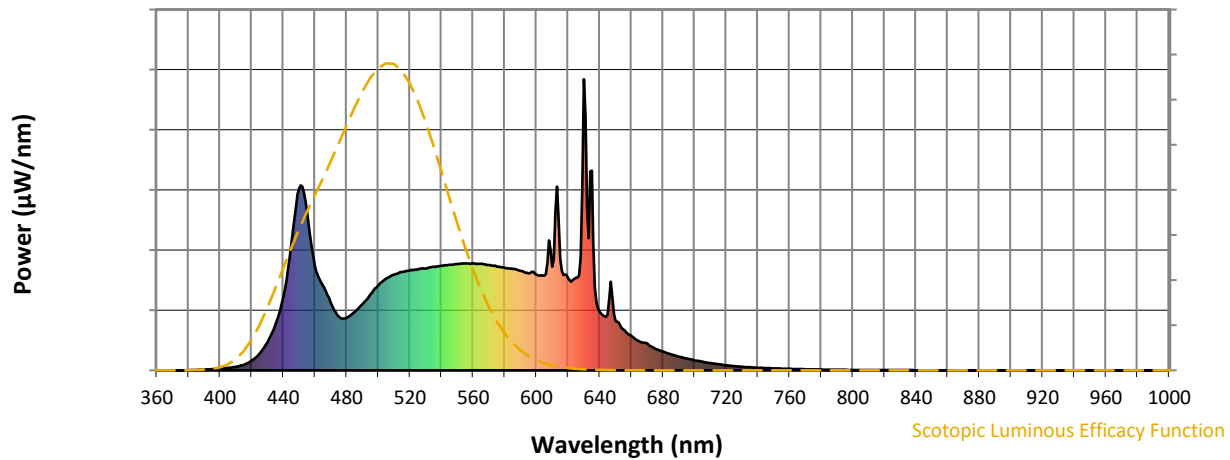


**Photopic Lumens: NR**

| $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360               | 0                           | NR                      | 490               | 227                         | NR                      | 620               | 318                         | NR                      | 750               | 7                           | NR                      | 880               | 0                           | NR                      |
| 365               | 0                           | NR                      | 495               | 259                         | NR                      | 625               | 318                         | NR                      | 755               | 6                           | NR                      | 885               | 0                           | NR                      |
| 370               | 0                           | NR                      | 500               | 292                         | NR                      | 630               | 1000                        | NR                      | 760               | 5                           | NR                      | 890               | 0                           | NR                      |
| 375               | 0                           | NR                      | 505               | 315                         | NR                      | 635               | 686                         | NR                      | 765               | 4                           | NR                      | 895               | 0                           | NR                      |
| 380               | 0                           | NR                      | 510               | 329                         | NR                      | 640               | 202                         | NR                      | 770               | 4                           | NR                      | 900               | 0                           | NR                      |
| 385               | 1                           | NR                      | 515               | 338                         | NR                      | 645               | 192                         | NR                      | 775               | 3                           | NR                      | 905               | 0                           | NR                      |
| 390               | 3                           | NR                      | 520               | 343                         | NR                      | 650               | 169                         | NR                      | 780               | 3                           | NR                      | 910               | 0                           | NR                      |
| 395               | 5                           | NR                      | 525               | 347                         | NR                      | 655               | 141                         | NR                      | 785               | 2                           | NR                      | 915               | 0                           | NR                      |
| 400               | 6                           | NR                      | 530               | 350                         | NR                      | 660               | 119                         | NR                      | 790               | 2                           | NR                      | 920               | 0                           | NR                      |
| 405               | 9                           | NR                      | 535               | 356                         | NR                      | 665               | 100                         | NR                      | 795               | 2                           | NR                      | 925               | 0                           | NR                      |
| 410               | 12                          | NR                      | 540               | 359                         | NR                      | 670               | 92                          | NR                      | 800               | 2                           | NR                      | 930               | 0                           | NR                      |
| 415               | 19                          | NR                      | 545               | 363                         | NR                      | 675               | 75                          | NR                      | 805               | 1                           | NR                      | 935               | 0                           | NR                      |
| 420               | 34                          | NR                      | 550               | 365                         | NR                      | 680               | 64                          | NR                      | 810               | 1                           | NR                      | 940               | 0                           | NR                      |
| 425               | 57                          | NR                      | 555               | 368                         | NR                      | 685               | 55                          | NR                      | 815               | 1                           | NR                      | 945               | 0                           | NR                      |
| 430               | 96                          | NR                      | 560               | 367                         | NR                      | 690               | 47                          | NR                      | 820               | 1                           | NR                      | 950               | 0                           | NR                      |
| 435               | 157                         | NR                      | 565               | 366                         | NR                      | 695               | 41                          | NR                      | 825               | 1                           | NR                      | 955               | 0                           | NR                      |
| 440               | 252                         | NR                      | 570               | 361                         | NR                      | 700               | 34                          | NR                      | 830               | 1                           | NR                      | 960               | 0                           | NR                      |
| 445               | 427                         | NR                      | 575               | 356                         | NR                      | 705               | 30                          | NR                      | 835               | 1                           | NR                      | 965               | 0                           | NR                      |
| 450               | 625                         | NR                      | 580               | 352                         | NR                      | 710               | 25                          | NR                      | 840               | 1                           | NR                      | 970               | 0                           | NR                      |
| 455               | 544                         | NR                      | 585               | 348                         | NR                      | 715               | 21                          | NR                      | 845               | 0                           | NR                      | 975               | 0                           | NR                      |
| 460               | 360                         | NR                      | 590               | 342                         | NR                      | 720               | 18                          | NR                      | 850               | 0                           | NR                      | 980               | 0                           | NR                      |
| 465               | 292                         | NR                      | 595               | 333                         | NR                      | 725               | 15                          | NR                      | 855               | 0                           | NR                      | 985               | 0                           | NR                      |
| 470               | 232                         | NR                      | 600               | 329                         | NR                      | 730               | 12                          | NR                      | 860               | 0                           | NR                      | 990               | 0                           | NR                      |
| 475               | 184                         | NR                      | 605               | 325                         | NR                      | 735               | 11                          | NR                      | 865               | 0                           | NR                      | 995               | 0                           | NR                      |
| 480               | 180                         | NR                      | 610               | 357                         | NR                      | 740               | 9                           | NR                      | 870               | 0                           | NR                      | 1000              | 0                           | NR                      |
| 485               | 201                         | NR                      | 615               | 384                         | NR                      | 745               | 8                           | NR                      | 875               | 0                           | NR                      |                   |                             |                         |

REPORT NUMBER: SP1-2506-457-8

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 2.02**

| $\lambda$ (nm) | Power $W^{\wedge}/nm$ | Lumens ( $\phi/nm$ ) | $\lambda$ (nm) | Power $W^{\wedge}/nm$ | Lumens ( $\phi/nm$ ) | $\lambda$ (nm) | Power $W^{\wedge}/nm$ | Lumens ( $\phi/nm$ ) | $\lambda$ (nm) | Power $W^{\wedge}/nm$ | Lumens ( $\phi/nm$ ) | $\lambda$ (nm) | Power $W^{\wedge}/nm$ | Lumens ( $\phi/nm$ ) |
|----------------|-----------------------|----------------------|----------------|-----------------------|----------------------|----------------|-----------------------|----------------------|----------------|-----------------------|----------------------|----------------|-----------------------|----------------------|
| 360            | 0                     | NR                   | 490            | 227                   | NR                   | 620            | 318                   | NR                   | 750            | 7                     | NR                   | 880            | 0                     | NR                   |
| 365            | 0                     | NR                   | 495            | 259                   | NR                   | 625            | 318                   | NR                   | 755            | 6                     | NR                   | 885            | 0                     | NR                   |
| 370            | 0                     | NR                   | 500            | 292                   | NR                   | 630            | 1000                  | NR                   | 760            | 5                     | NR                   | 890            | 0                     | NR                   |
| 375            | 0                     | NR                   | 505            | 315                   | NR                   | 635            | 686                   | NR                   | 765            | 4                     | NR                   | 895            | 0                     | NR                   |
| 380            | 0                     | NR                   | 510            | 329                   | NR                   | 640            | 202                   | NR                   | 770            | 4                     | NR                   | 900            | 0                     | NR                   |
| 385            | 1                     | NR                   | 515            | 338                   | NR                   | 645            | 192                   | NR                   | 775            | 3                     | NR                   | 905            | 0                     | NR                   |
| 390            | 3                     | NR                   | 520            | 343                   | NR                   | 650            | 169                   | NR                   | 780            | 3                     | NR                   | 910            | 0                     | NR                   |
| 395            | 5                     | NR                   | 525            | 347                   | NR                   | 655            | 141                   | NR                   | 785            | 2                     | NR                   | 915            | 0                     | NR                   |
| 400            | 6                     | NR                   | 530            | 350                   | NR                   | 660            | 119                   | NR                   | 790            | 2                     | NR                   | 920            | 0                     | NR                   |
| 405            | 9                     | NR                   | 535            | 356                   | NR                   | 665            | 100                   | NR                   | 795            | 2                     | NR                   | 925            | 0                     | NR                   |
| 410            | 12                    | NR                   | 540            | 359                   | NR                   | 670            | 92                    | NR                   | 800            | 2                     | NR                   | 930            | 0                     | NR                   |
| 415            | 19                    | NR                   | 545            | 363                   | NR                   | 675            | 75                    | NR                   | 805            | 1                     | NR                   | 935            | 0                     | NR                   |
| 420            | 34                    | NR                   | 550            | 365                   | NR                   | 680            | 64                    | NR                   | 810            | 1                     | NR                   | 940            | 0                     | NR                   |
| 425            | 57                    | NR                   | 555            | 368                   | NR                   | 685            | 55                    | NR                   | 815            | 1                     | NR                   | 945            | 0                     | NR                   |
| 430            | 96                    | NR                   | 560            | 367                   | NR                   | 690            | 47                    | NR                   | 820            | 1                     | NR                   | 950            | 0                     | NR                   |
| 435            | 157                   | NR                   | 565            | 366                   | NR                   | 695            | 41                    | NR                   | 825            | 1                     | NR                   | 955            | 0                     | NR                   |
| 440            | 252                   | NR                   | 570            | 361                   | NR                   | 700            | 34                    | NR                   | 830            | 1                     | NR                   | 960            | 0                     | NR                   |
| 445            | 427                   | NR                   | 575            | 356                   | NR                   | 705            | 30                    | NR                   | 835            | 1                     | NR                   | 965            | 0                     | NR                   |
| 450            | 625                   | NR                   | 580            | 352                   | NR                   | 710            | 25                    | NR                   | 840            | 1                     | NR                   | 970            | 0                     | NR                   |
| 455            | 544                   | NR                   | 585            | 348                   | NR                   | 715            | 21                    | NR                   | 845            | 0                     | NR                   | 975            | 0                     | NR                   |
| 460            | 360                   | NR                   | 590            | 342                   | NR                   | 720            | 18                    | NR                   | 850            | 0                     | NR                   | 980            | 0                     | NR                   |
| 465            | 292                   | NR                   | 595            | 333                   | NR                   | 725            | 15                    | NR                   | 855            | 0                     | NR                   | 985            | 0                     | NR                   |
| 470            | 232                   | NR                   | 600            | 329                   | NR                   | 730            | 12                    | NR                   | 860            | 0                     | NR                   | 990            | 0                     | NR                   |
| 475            | 184                   | NR                   | 605            | 325                   | NR                   | 735            | 11                    | NR                   | 865            | 0                     | NR                   | 995            | 0                     | NR                   |
| 480            | 180                   | NR                   | 610            | 357                   | NR                   | 740            | 9                     | NR                   | 870            | 0                     | NR                   | 1000           | 0                     | NR                   |
| 485            | 201                   | NR                   | 615            | 384                   | NR                   | 745            | 8                     | NR                   | 875            | 0                     | NR                   |                |                       |                      |

REPORT NUMBER: SP1-2506-457-8

**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: NR**

**M/P: 4.33**

| 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    | 227                      | NR            | 620    | 318                      | NR            | 750    | 7                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 259                      | NR            | 625    | 318                      | NR            | 755    | 6                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 292                      | NR            | 630    | 1000                     | NR            | 760    | 5                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 315                      | NR            | 635    | 686                      | NR            | 765    | 4                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 329                      | NR            | 640    | 202                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 1                        | NR            | 515    | 338                      | NR            | 645    | 192                      | NR            | 775    | 3                        | NR            | 905    | 0                        | NR            |
| 390    | 3                        | NR            | 520    | 343                      | NR            | 650    | 169                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 5                        | NR            | 525    | 347                      | NR            | 655    | 141                      | NR            | 785    | 2                        | NR            | 915    | 0                        | NR            |
| 400    | 6                        | NR            | 530    | 350                      | NR            | 660    | 119                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 9                        | NR            | 535    | 356                      | NR            | 665    | 100                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 12                       | NR            | 540    | 359                      | NR            | 670    | 92                       | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 19                       | NR            | 545    | 363                      | NR            | 675    | 75                       | NR            | 805    | 1                        | NR            | 935    | 0                        | NR            |
| 420    | 34                       | NR            | 550    | 365                      | NR            | 680    | 64                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 57                       | NR            | 555    | 368                      | NR            | 685    | 55                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 96                       | NR            | 560    | 367                      | NR            | 690    | 47                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 157                      | NR            | 565    | 366                      | NR            | 695    | 41                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 252                      | NR            | 570    | 361                      | NR            | 700    | 34                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 427                      | NR            | 575    | 356                      | NR            | 705    | 30                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 625                      | NR            | 580    | 352                      | NR            | 710    | 25                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 544                      | NR            | 585    | 348                      | NR            | 715    | 21                       | NR            | 845    | 0                        | NR            | 975    | 0                        | NR            |
| 460    | 360                      | NR            | 590    | 342                      | NR            | 720    | 18                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 292                      | NR            | 595    | 333                      | NR            | 725    | 15                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 232                      | NR            | 600    | 329                      | NR            | 730    | 12                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 184                      | NR            | 605    | 325                      | NR            | 735    | 11                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 180                      | NR            | 610    | 357                      | NR            | 740    | 9                        | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 201                      | NR            | 615    | 384                      | NR            | 745    | 8                        | NR            | 875    | 0                        | NR            |        |                          |               |

**Summary**

$R_f = 91.5$   
 $R_g = 100.9$   
 $CIE R_a = 94.6$   
 $R_9 = 74.3$



**Color Vector Graphics**



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 91 | CES51 = 98 | CES76 = 84 |
| CES02 = 61 | CES27 = 93 | CES52 = 98 | CES77 = 88 |
| CES03 = 31 | CES28 = 95 | CES53 = 97 | CES78 = 81 |
| CES04 = 69 | CES29 = 94 | CES54 = 95 | CES79 = 95 |
| CES05 = 48 | CES30 = 96 | CES55 = 94 | CES80 = 92 |
| CES06 = 50 | CES31 = 94 | CES56 = 96 | CES81 = 84 |
| CES07 = 41 | CES32 = 87 | CES57 = 95 | CES82 = 96 |
| CES08 = 40 | CES33 = 97 | CES58 = 95 | CES83 = 96 |
| CES09 = 29 | CES34 = 91 | CES59 = 98 | CES84 = 93 |
| CES10 = 73 | CES35 = 94 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 83 | CES61 = 93 | CES86 = 87 |
| CES12 = 62 | CES37 = 93 | CES62 = 89 | CES87 = 91 |
| CES13 = 43 | CES38 = 91 | CES63 = 93 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 87 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 99 |
| CES16 = 47 | CES41 = 98 | CES66 = 88 | CES91 = 75 |
| CES17 = 48 | CES42 = 91 | CES67 = 87 | CES92 = 80 |
| CES18 = 56 | CES43 = 91 | CES68 = 88 | CES93 = 88 |
| CES19 = 70 | CES44 = 99 | CES69 = 88 | CES94 = 79 |
| CES20 = 65 | CES45 = 95 | CES70 = 85 | CES95 = 84 |
| CES21 = 85 | CES46 = 96 | CES71 = 80 | CES96 = 92 |
| CES22 = 77 | CES47 = 94 | CES72 = 93 | CES97 = 94 |
| CES23 = 91 | CES48 = 95 | CES73 = 79 | CES98 = 95 |
| CES24 = 90 | CES49 = 95 | CES74 = 93 | CES99 = 95 |
| CES25 = 70 | CES50 = 99 | CES75 = 81 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)