

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: P976812

Luminaire Tested: 24SR-LD2-C-48-UNV-L835-CD1-PG-U

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P976812  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24SR-LD2-C-48-UNV-L835-CD1-PG-U  
Description: METALUX SKYRIDGE 2x4 4800LM PACKAGE 80CRI 3500K TROFFER with Primary Green SKYTRII  
Light Source: 3500K CCT, 80+ CRI LEDS  
Ballast/Driver: -

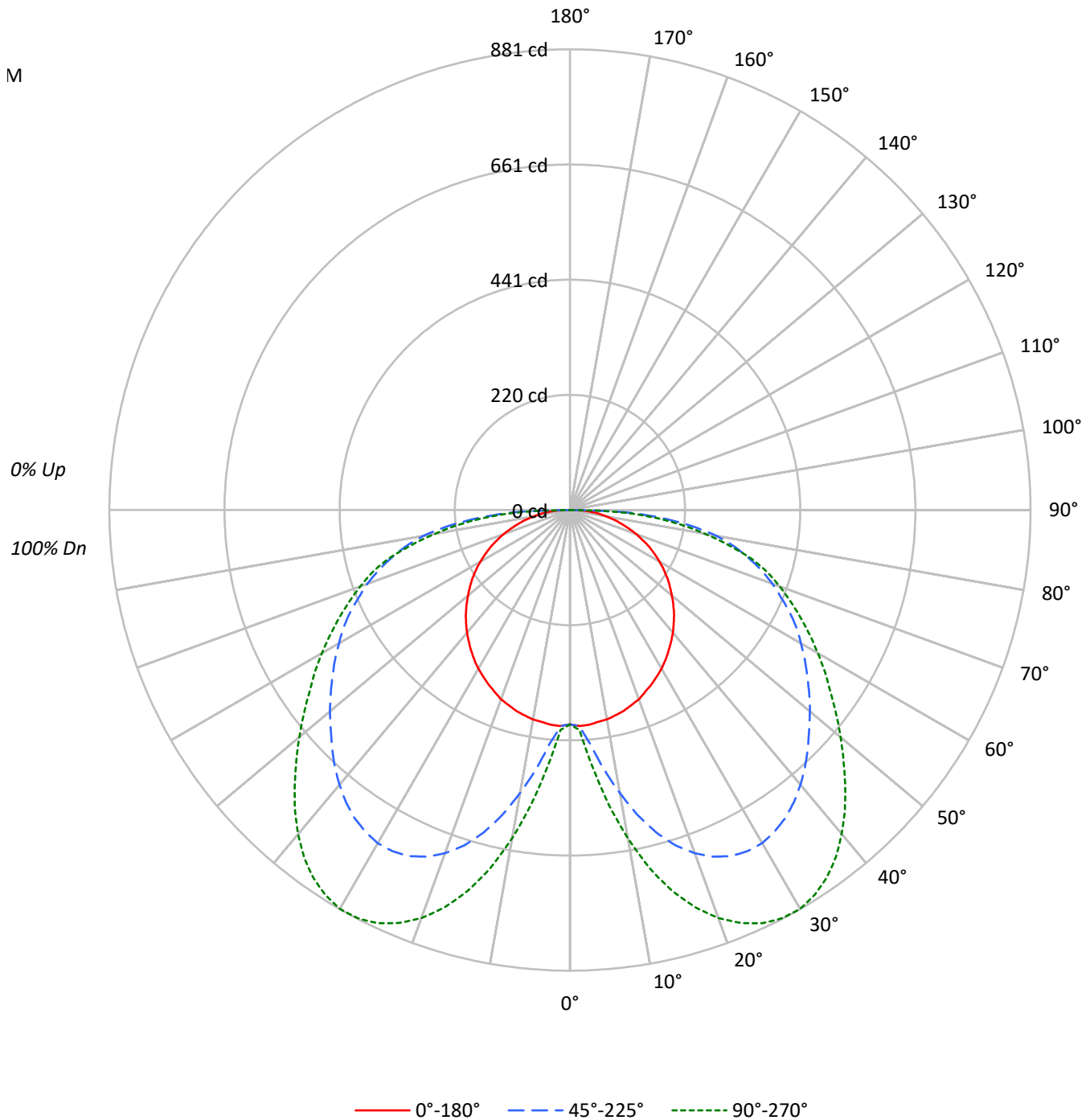
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2733.0 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 2.25 / 2.05  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 34.8  
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: P976812  
CATALOG NUMBER: 24SR-LD2-C-48-UNV-L835-CD1-PG-U

### Luminous Intensity Polar Plot





TEST NUMBER: P976812

CATALOG NUMBER: 24SR-LD2-C-48-UNV-L835-CD1-PG-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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
| 1   | 106 | 100 | 95  | 90  | 103 | 98  | 93  | 88  | 93  | 89  | 86  | 89  | 86  | 83  | 86  | 83  | 80  | 78  | 78  | 78  | 78  |
| 2   | 95  | 85  | 77  | 70  | 92  | 83  | 76  | 69  | 80  | 73  | 68  | 76  | 71  | 66  | 73  | 69  | 65  | 62  | 62  | 62  | 62  |
| 3   | 86  | 73  | 64  | 57  | 83  | 72  | 63  | 56  | 69  | 61  | 55  | 66  | 59  | 54  | 63  | 58  | 53  | 51  | 51  | 51  | 51  |
| 4   | 78  | 64  | 54  | 47  | 75  | 63  | 54  | 46  | 60  | 52  | 46  | 58  | 51  | 45  | 55  | 49  | 44  | 42  | 42  | 42  | 42  |
| 5   | 71  | 57  | 47  | 39  | 69  | 56  | 46  | 39  | 53  | 45  | 39  | 51  | 44  | 38  | 49  | 43  | 38  | 35  | 35  | 35  | 35  |
| 6   | 65  | 51  | 41  | 34  | 63  | 50  | 40  | 34  | 48  | 39  | 33  | 46  | 39  | 33  | 44  | 38  | 33  | 30  | 30  | 30  | 30  |
| 7   | 60  | 46  | 36  | 29  | 58  | 45  | 36  | 29  | 43  | 35  | 29  | 42  | 34  | 29  | 40  | 33  | 28  | 26  | 26  | 26  | 26  |
| 8   | 56  | 41  | 32  | 26  | 54  | 41  | 32  | 26  | 39  | 31  | 25  | 38  | 31  | 25  | 37  | 30  | 25  | 23  | 23  | 23  | 23  |
| 9   | 52  | 38  | 29  | 23  | 50  | 37  | 29  | 23  | 36  | 28  | 23  | 35  | 28  | 23  | 34  | 27  | 22  | 20  | 20  | 20  | 20  |
| 10  | 49  | 34  | 26  | 20  | 47  | 34  | 26  | 20  | 33  | 25  | 20  | 32  | 25  | 20  | 31  | 25  | 20  | 18  | 18  | 18  | 18  |

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

|     | 0°  | 45°  | 90°  |
|-----|-----|------|------|
| 0°  | 552 | 552  | 552  |
| 5°  | 557 | 607  | 665  |
| 10° | 556 | 751  | 871  |
| 15° | 554 | 890  | 1050 |
| 20° | 552 | 1000 | 1189 |
| 25° | 547 | 1084 | 1294 |
| 30° | 544 | 1143 | 1368 |
| 35° | 540 | 1180 | 1408 |
| 40° | 538 | 1205 | 1420 |
| 45° | 536 | 1224 | 1417 |
| 50° | 533 | 1254 | 1415 |
| 55° | 534 | 1300 | 1427 |
| 60° | 534 | 1373 | 1473 |
| 65° | 534 | 1478 | 1549 |
| 70° | 532 | 1622 | 1679 |
| 75° | 533 | 1838 | 1867 |
| 80° | 549 | 2208 | 2033 |
| 85° | 644 | 2748 | 2468 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 87.5°  
 Luminance: 3405 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 45.6   | 1.7       |
| 10°-20°   | 172.5  | 6.3       |
| 20°-30°   | 313.9  | 11.5      |
| 30°-40°   | 416.4  | 15.2      |
| 40°-50°   | 456.2  | 16.7      |
| 50°-60°   | 448.4  | 16.4      |
| 60°-70°   | 406.7  | 14.9      |
| 70°-80°   | 322.3  | 11.8      |
| 80°-90°   | 151.1  | 5.5       |
| 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°    | 532.0  | 19.5      |
| 0°-40°    | 948.4  | 34.7      |
| 0°-60°    | 1852.9 | 67.8      |
| 0°-90°    | 2733.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2733.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 410 | 410   | 410 | 410   | 410 |      |
| 5°  | 412 | 415   | 449 | 481   | 492 | 39   |
| 15° | 398 | 494   | 639 | 725   | 754 | 112  |
| 25° | 368 | 545   | 730 | 834   | 872 | 170  |
| 35° | 329 | 532   | 719 | 821   | 857 | 206  |
| 45° | 282 | 479   | 643 | 721   | 745 | 217  |
| 55° | 228 | 420   | 554 | 598   | 608 | 203  |
| 65° | 168 | 363   | 464 | 478   | 487 | 165  |
| 75° | 102 | 280   | 354 | 354   | 359 | 108  |
| 85° | 42  | 151   | 178 | 160   | 160 | 43   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 |
| 2.5°  | 413.4 | 412.3 | 412.3 | 412.3 | 411.1 | 411.1 | 411.1 | 412.3 | 412.3 | 413.4 | 415.6 |
| 5°    | 412.3 | 411.1 | 411.1 | 411.1 | 413.4 | 416.7 | 423.5 | 431.4 | 440.5 | 449.4 | 459.6 |
| 7.5°  | 408.8 | 408.8 | 408.8 | 412.3 | 422.5 | 435.9 | 452.8 | 469.7 | 484.3 | 500.1 | 514.8 |
| 10°   | 406.7 | 406.7 | 408.8 | 420.2 | 440.5 | 462.9 | 485.5 | 507.9 | 528.3 | 549.6 | 569.9 |
| 12.5° | 402.1 | 402.1 | 408.8 | 430.3 | 458.4 | 487.8 | 515.8 | 544.0 | 571.2 | 596.9 | 619.5 |
| 15°   | 397.6 | 397.6 | 412.3 | 442.6 | 476.4 | 511.4 | 545.2 | 577.8 | 609.4 | 638.6 | 664.5 |
| 17.5° | 390.9 | 392.0 | 414.6 | 451.7 | 492.2 | 531.6 | 568.9 | 606.0 | 639.8 | 672.4 | 699.5 |
| 20°   | 385.2 | 387.4 | 416.7 | 459.6 | 504.6 | 548.6 | 590.3 | 628.6 | 664.5 | 698.3 | 727.6 |
| 22.5° | 376.2 | 380.8 | 417.9 | 465.2 | 513.7 | 561.0 | 603.7 | 644.4 | 682.6 | 717.6 | 746.8 |
| 25°   | 368.3 | 373.9 | 416.7 | 467.5 | 520.4 | 568.9 | 612.7 | 654.4 | 693.8 | 729.9 | 760.3 |
| 27.5° | 359.2 | 368.3 | 415.6 | 468.5 | 522.7 | 572.2 | 617.2 | 660.1 | 699.5 | 735.5 | 767.1 |
| 30°   | 350.3 | 361.5 | 412.3 | 467.5 | 521.6 | 571.2 | 616.2 | 660.1 | 699.5 | 735.5 | 765.9 |
| 32.5° | 340.1 | 352.6 | 405.5 | 461.9 | 517.0 | 565.4 | 610.6 | 653.3 | 693.8 | 728.8 | 759.1 |
| 35°   | 328.9 | 343.5 | 397.6 | 454.0 | 507.9 | 556.5 | 600.4 | 643.2 | 682.6 | 718.6 | 747.9 |
| 37.5° | 317.7 | 334.5 | 388.7 | 444.9 | 497.9 | 545.2 | 588.0 | 630.7 | 669.1 | 703.9 | 732.1 |
| 40°   | 306.3 | 324.4 | 378.5 | 433.7 | 485.5 | 531.6 | 574.5 | 616.2 | 652.3 | 685.9 | 711.8 |
| 42.5° | 293.9 | 314.2 | 367.3 | 421.2 | 470.8 | 515.8 | 558.7 | 599.2 | 634.2 | 665.7 | 690.5 |
| 45°   | 281.6 | 301.9 | 354.9 | 407.8 | 457.3 | 500.1 | 541.7 | 581.2 | 613.9 | 643.2 | 666.8 |
| 47.5° | 268.1 | 290.6 | 343.5 | 394.3 | 441.6 | 485.5 | 526.0 | 562.1 | 594.8 | 620.6 | 643.2 |
| 50°   | 254.5 | 278.2 | 330.0 | 380.8 | 426.9 | 469.7 | 509.2 | 544.0 | 574.5 | 599.2 | 618.4 |
| 52.5° | 241.0 | 265.9 | 317.7 | 367.3 | 413.4 | 455.0 | 493.4 | 526.0 | 554.2 | 576.8 | 595.9 |
| 55°   | 227.5 | 253.4 | 305.3 | 353.6 | 399.9 | 440.5 | 477.6 | 507.9 | 535.1 | 554.2 | 569.9 |
| 57.5° | 212.8 | 241.0 | 292.9 | 341.4 | 386.4 | 426.9 | 461.9 | 491.1 | 515.8 | 532.8 | 546.3 |
| 60°   | 198.3 | 227.5 | 279.4 | 328.9 | 372.9 | 412.3 | 446.1 | 474.1 | 495.7 | 510.2 | 522.7 |
| 62.5° | 182.5 | 214.0 | 266.9 | 315.4 | 359.2 | 397.6 | 429.1 | 454.0 | 475.4 | 488.8 | 495.7 |
| 65°   | 167.8 | 200.5 | 253.4 | 301.9 | 344.7 | 380.8 | 411.1 | 434.7 | 452.8 | 464.1 | 469.7 |
| 67.5° | 151.0 | 185.8 | 238.7 | 287.2 | 327.7 | 362.7 | 390.9 | 413.4 | 429.1 | 437.0 | 441.6 |
| 70°   | 135.2 | 171.3 | 223.0 | 270.3 | 308.6 | 342.4 | 369.4 | 390.9 | 404.4 | 412.3 | 413.4 |
| 72.5° | 118.2 | 155.4 | 207.2 | 252.4 | 289.5 | 321.0 | 347.0 | 366.1 | 377.3 | 384.1 | 385.2 |
| 75°   | 102.5 | 138.5 | 188.1 | 230.9 | 265.9 | 295.1 | 319.8 | 337.9 | 349.2 | 353.6 | 353.6 |
| 77.5° | 86.7  | 120.5 | 167.8 | 208.4 | 241.0 | 268.1 | 290.6 | 308.6 | 317.7 | 322.1 | 322.1 |
| 80°   | 70.9  | 103.7 | 146.4 | 183.6 | 212.8 | 237.7 | 260.3 | 276.0 | 285.0 | 285.0 | 278.2 |
| 82.5° | 56.4  | 84.4  | 121.7 | 155.4 | 180.2 | 202.8 | 224.2 | 234.3 | 236.6 | 234.3 | 228.6 |
| 85°   | 41.7  | 64.3  | 94.6  | 120.5 | 143.1 | 158.9 | 172.3 | 179.2 | 180.2 | 178.0 | 173.4 |
| 87.5° | 23.6  | 37.1  | 54.1  | 70.9  | 85.6  | 93.5  | 104.7 | 107.0 | 107.0 | 110.4 | 104.7 |
| 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: P976812

CATALOG NUMBER: 24SR-LD2-C-48-UNV-L835-CD1-PG-U

**CANDELA DISTRIBUTION (continued):**

|       | 55°   | 60°   | 65°   | 70°   | 75°   | 80°   | 85°   | 90°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 | 410.0 |
| 2.5°  | 416.7 | 417.9 | 417.9 | 421.2 | 421.2 | 422.5 | 421.2 | 421.2 |
| 5°    | 466.3 | 470.8 | 477.6 | 484.3 | 486.6 | 491.1 | 489.9 | 492.2 |
| 7.5°  | 526.0 | 535.1 | 545.2 | 554.2 | 558.7 | 563.3 | 564.3 | 567.7 |
| 10°   | 585.7 | 596.9 | 609.4 | 621.8 | 628.6 | 631.9 | 636.5 | 637.5 |
| 12.5° | 637.5 | 654.4 | 666.8 | 680.3 | 689.4 | 693.8 | 698.3 | 700.6 |
| 15°   | 684.8 | 701.8 | 717.6 | 732.1 | 741.2 | 747.9 | 752.4 | 753.5 |
| 17.5° | 720.9 | 740.0 | 757.0 | 772.8 | 781.7 | 789.6 | 794.1 | 796.4 |
| 20°   | 749.1 | 770.5 | 787.3 | 803.1 | 813.2 | 822.3 | 829.0 | 830.2 |
| 22.5° | 769.3 | 790.8 | 809.9 | 825.7 | 838.1 | 847.0 | 852.6 | 854.9 |
| 25°   | 784.0 | 806.6 | 825.7 | 841.4 | 853.9 | 864.0 | 869.6 | 871.9 |
| 27.5° | 790.8 | 814.4 | 834.6 | 849.3 | 861.7 | 871.9 | 878.6 | 879.8 |
| 30°   | 791.9 | 814.4 | 834.6 | 850.4 | 862.8 | 873.0 | 878.6 | 880.8 |
| 32.5° | 784.0 | 807.6 | 827.9 | 842.5 | 854.9 | 865.1 | 870.7 | 871.9 |
| 35°   | 772.8 | 794.1 | 813.2 | 827.9 | 840.4 | 849.3 | 854.9 | 857.2 |
| 37.5° | 755.8 | 776.1 | 794.1 | 807.6 | 818.8 | 827.9 | 833.5 | 835.8 |
| 40°   | 735.5 | 754.7 | 771.5 | 784.0 | 794.1 | 802.0 | 806.6 | 808.7 |
| 42.5° | 711.8 | 729.9 | 745.6 | 755.8 | 765.9 | 772.8 | 776.1 | 778.4 |
| 45°   | 687.1 | 703.9 | 716.4 | 725.5 | 734.4 | 740.0 | 743.4 | 744.6 |
| 47.5° | 661.2 | 675.9 | 685.9 | 693.8 | 700.6 | 706.2 | 709.7 | 709.7 |
| 50°   | 635.3 | 647.7 | 655.6 | 663.5 | 669.1 | 672.4 | 674.7 | 675.9 |
| 52.5° | 609.4 | 619.5 | 625.1 | 631.9 | 636.5 | 639.8 | 642.1 | 642.1 |
| 55°   | 582.4 | 590.3 | 594.8 | 600.4 | 604.8 | 607.1 | 609.4 | 608.3 |
| 57.5° | 556.5 | 562.1 | 565.4 | 569.9 | 573.3 | 575.6 | 577.8 | 579.0 |
| 60°   | 529.5 | 533.9 | 535.1 | 539.5 | 543.0 | 545.2 | 546.3 | 547.4 |
| 62.5° | 501.3 | 504.6 | 506.9 | 509.2 | 512.5 | 514.8 | 515.8 | 517.0 |
| 65°   | 473.1 | 475.4 | 475.4 | 479.9 | 483.2 | 484.3 | 485.5 | 486.6 |
| 67.5° | 443.8 | 444.9 | 446.1 | 449.4 | 452.8 | 454.0 | 456.3 | 456.3 |
| 70°   | 414.6 | 414.6 | 415.6 | 419.0 | 422.5 | 423.5 | 425.8 | 426.9 |
| 72.5° | 384.1 | 385.2 | 385.2 | 388.7 | 392.0 | 394.3 | 395.3 | 396.5 |
| 75°   | 352.6 | 352.6 | 353.6 | 354.9 | 355.9 | 357.1 | 357.1 | 359.2 |
| 77.5° | 318.8 | 314.2 | 312.0 | 309.8 | 310.9 | 310.9 | 309.8 | 310.9 |
| 80°   | 271.5 | 265.9 | 262.4 | 261.3 | 262.4 | 261.3 | 261.3 | 262.4 |
| 82.5° | 223.0 | 216.3 | 214.0 | 212.8 | 212.8 | 212.8 | 211.8 | 214.0 |
| 85°   | 167.8 | 163.3 | 161.1 | 158.9 | 159.9 | 159.9 | 158.9 | 159.9 |
| 87.5° | 101.4 | 99.1  | 96.9  | 94.6  | 95.8  | 94.6  | 93.5  | 96.9  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



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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 | 11.1             | 12.9 | 11.5 | 13.2 | 13.5 | 14.1           | 15.8 | 14.4 | 16.2 | 16.5 |
|                 | 3H   | 13.1             | 14.7 | 13.4 | 15.0 | 15.4 | 16.6           | 18.2 | 17.0 | 18.5 | 18.9 |
|                 | 4H   | 13.8             | 15.4 | 14.2 | 15.7 | 16.1 | 17.8           | 19.3 | 18.2 | 19.7 | 20.1 |
|                 | 6H   | 14.4             | 15.9 | 14.8 | 16.3 | 16.6 | 18.9           | 20.3 | 19.3 | 20.7 | 21.1 |
|                 | 8H   | 14.7             | 16.1 | 15.1 | 16.4 | 16.8 | 19.3           | 20.7 | 19.7 | 21.1 | 21.5 |
|                 | 12H  | 14.8             | 16.2 | 15.3 | 16.6 | 17.0 | 19.7           | 21.0 | 20.1 | 21.4 | 21.9 |
| 4H              | 2H   | 12.8             | 14.4 | 13.2 | 14.7 | 15.1 | 14.8           | 16.4 | 15.2 | 16.7 | 17.1 |
|                 | 3H   | 15.3             | 16.7 | 15.7 | 17.1 | 17.5 | 17.6           | 19.0 | 18.0 | 19.3 | 19.7 |
|                 | 4H   | 16.4             | 17.6 | 16.8 | 18.0 | 18.5 | 19.0           | 20.2 | 19.4 | 20.6 | 21.1 |
|                 | 6H   | 17.3             | 18.4 | 17.8 | 18.8 | 19.3 | 20.2           | 21.3 | 20.7 | 21.8 | 22.2 |
|                 | 8H   | 17.6             | 18.7 | 18.1 | 19.1 | 19.6 | 20.8           | 21.8 | 21.2 | 22.2 | 22.7 |
|                 | 12H  | 17.9             | 18.8 | 18.4 | 19.3 | 19.8 | 21.3           | 22.2 | 21.7 | 22.7 | 23.1 |
| 8H              | 4H   | 17.6             | 18.6 | 18.0 | 19.0 | 19.5 | 19.6           | 20.6 | 20.0 | 21.0 | 21.5 |
|                 | 6H   | 18.9             | 19.8 | 19.4 | 20.3 | 20.7 | 21.0           | 21.9 | 21.5 | 22.3 | 22.8 |
|                 | 8H   | 19.5             | 20.3 | 20.0 | 20.8 | 21.3 | 21.7           | 22.4 | 22.2 | 22.9 | 23.4 |
|                 | 12H  | 20.0             | 20.7 | 20.5 | 21.1 | 21.7 | 22.3           | 23.0 | 22.8 | 23.5 | 24.0 |
| 12H             | 4H   | 17.8             | 18.7 | 18.3 | 19.2 | 19.7 | 19.7           | 20.6 | 20.1 | 21.1 | 21.5 |
|                 | 6H   | 19.3             | 20.1 | 19.8 | 20.5 | 21.1 | 21.2           | 22.0 | 21.7 | 22.4 | 23.0 |
|                 | 8H   | 20.1             | 20.7 | 20.6 | 21.2 | 21.8 | 22.0           | 22.7 | 22.5 | 23.1 | 23.7 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-6

Test Date: 07/01/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L935-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L935-CD1-U

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2506-457-6  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 07/02/2025  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Metalux  
 Catalog Number: **24SR-LD2-64-C-UNV-L935-CD1-U**  
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

### Spectral Parameters

CCT (K): 3329  
 CIE u': 0.2411  
 CIE v': 0.5118  
 Duv: -0.0021  
 CIE x: 0.4128  
 CIE y: 0.3894  
 CIE z: 0.1979  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 582  
 Purity: 40.74075  
 R<sub>f</sub>: 91.4  
 R<sub>g</sub>: 100.2

CRI (Ra): 93.9  
 R1: 95.4  
 R2: 97.4  
 R3: 97.7  
 R4: 94.9  
 R5: 95.1  
 R6: 95.7  
 R7: 91.7  
 R8: 83.2  
 R9: 60.5  
 R10: 92.5  
 R11: 95.9  
 R12: 82.0  
 R13: 96.0  
 R14: 98.0  
 R15: 91.5



### Test Conditions

Stabilization Time: 48M  
 Operation Time: 1H 48M  
 Sphere Temperature (°C): 24.0

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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



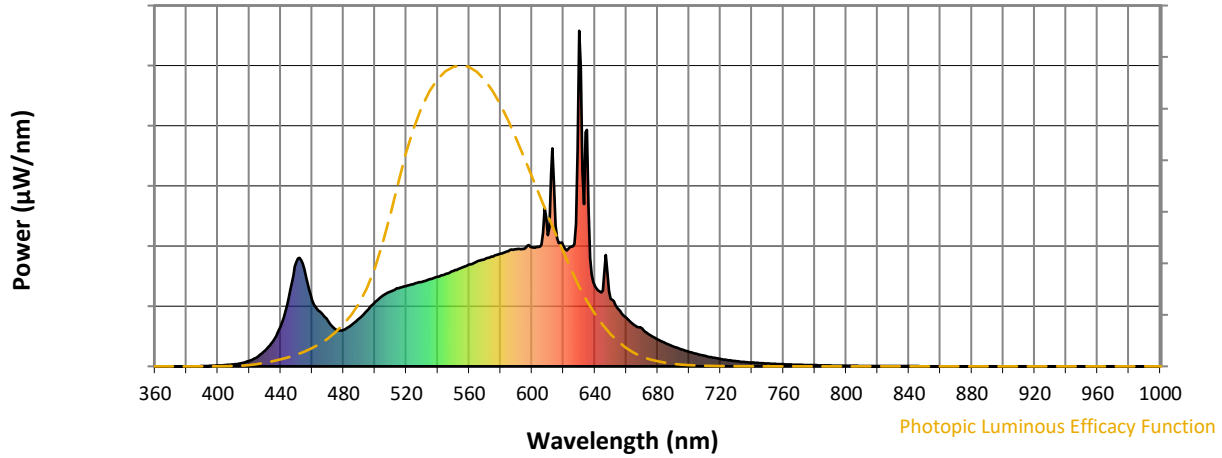
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 7-step quadrangle

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**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               | 143                         | NR                      | 620               | 358                         | NR                      | 750               | 9                           | NR                      | 880               | 0                           | NR                      |
| 365               | 0                           | NR                      | 495               | 166                         | NR                      | 625               | 357                         | NR                      | 755               | 7                           | NR                      | 885               | 0                           | NR                      |
| 370               | 0                           | NR                      | 500               | 191                         | NR                      | 630               | 1000                        | NR                      | 760               | 6                           | NR                      | 890               | 0                           | NR                      |
| 375               | 0                           | NR                      | 505               | 210                         | NR                      | 635               | 705                         | NR                      | 765               | 5                           | NR                      | 895               | 0                           | NR                      |
| 380               | 0                           | NR                      | 510               | 223                         | NR                      | 640               | 239                         | NR                      | 770               | 5                           | NR                      | 900               | 0                           | NR                      |
| 385               | 0                           | NR                      | 515               | 233                         | NR                      | 645               | 226                         | NR                      | 775               | 4                           | NR                      | 905               | 0                           | NR                      |
| 390               | 1                           | NR                      | 520               | 240                         | NR                      | 650               | 201                         | NR                      | 780               | 3                           | NR                      | 910               | 0                           | NR                      |
| 395               | 2                           | NR                      | 525               | 246                         | NR                      | 655               | 170                         | NR                      | 785               | 3                           | NR                      | 915               | 0                           | NR                      |
| 400               | 3                           | NR                      | 530               | 251                         | NR                      | 660               | 145                         | NR                      | 790               | 2                           | NR                      | 920               | 0                           | NR                      |
| 405               | 4                           | NR                      | 535               | 260                         | NR                      | 665               | 123                         | NR                      | 795               | 2                           | NR                      | 925               | 0                           | NR                      |
| 410               | 6                           | NR                      | 540               | 267                         | NR                      | 670               | 113                         | NR                      | 800               | 2                           | NR                      | 930               | 0                           | NR                      |
| 415               | 9                           | NR                      | 545               | 276                         | NR                      | 675               | 93                          | NR                      | 805               | 2                           | NR                      | 935               | 0                           | NR                      |
| 420               | 16                          | NR                      | 550               | 284                         | NR                      | 680               | 80                          | NR                      | 810               | 1                           | NR                      | 940               | 0                           | NR                      |
| 425               | 28                          | NR                      | 555               | 294                         | NR                      | 685               | 69                          | NR                      | 815               | 1                           | NR                      | 945               | 0                           | NR                      |
| 430               | 46                          | NR                      | 560               | 303                         | NR                      | 690               | 59                          | NR                      | 820               | 1                           | NR                      | 950               | 0                           | NR                      |
| 435               | 75                          | NR                      | 565               | 313                         | NR                      | 695               | 51                          | NR                      | 825               | 1                           | NR                      | 955               | 0                           | NR                      |
| 440               | 120                         | NR                      | 570               | 319                         | NR                      | 700               | 43                          | NR                      | 830               | 1                           | NR                      | 960               | 0                           | NR                      |
| 445               | 203                         | NR                      | 575               | 327                         | NR                      | 705               | 37                          | NR                      | 835               | 1                           | NR                      | 965               | 0                           | NR                      |
| 450               | 311                         | NR                      | 580               | 336                         | NR                      | 710               | 31                          | NR                      | 840               | 1                           | NR                      | 970               | 0                           | NR                      |
| 455               | 290                         | NR                      | 585               | 344                         | NR                      | 715               | 26                          | NR                      | 845               | 1                           | NR                      | 975               | 0                           | NR                      |
| 460               | 197                         | NR                      | 590               | 349                         | NR                      | 720               | 22                          | NR                      | 850               | 0                           | NR                      | 980               | 0                           | NR                      |
| 465               | 163                         | NR                      | 595               | 350                         | NR                      | 725               | 18                          | NR                      | 855               | 0                           | NR                      | 985               | 0                           | NR                      |
| 470               | 135                         | NR                      | 600               | 355                         | NR                      | 730               | 15                          | NR                      | 860               | 0                           | NR                      | 990               | 0                           | NR                      |
| 475               | 110                         | NR                      | 605               | 357                         | NR                      | 735               | 13                          | NR                      | 865               | 0                           | NR                      | 995               | 0                           | NR                      |
| 480               | 108                         | NR                      | 610               | 391                         | NR                      | 740               | 11                          | NR                      | 870               | 0                           | NR                      | 1000              | 0                           | NR                      |
| 485               | 123                         | NR                      | 615               | 421                         | NR                      | 745               | 10                          | NR                      | 875               | 0                           | NR                      |                   |                             |                         |

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.57**

| 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    | 143                      | NR            | 620    | 358                      | NR            | 750    | 9                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 166                      | NR            | 625    | 357                      | NR            | 755    | 7                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 191                      | NR            | 630    | 1000                     | NR            | 760    | 6                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 210                      | NR            | 635    | 705                      | NR            | 765    | 5                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 223                      | NR            | 640    | 239                      | NR            | 770    | 5                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 233                      | NR            | 645    | 226                      | NR            | 775    | 4                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 240                      | NR            | 650    | 201                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 246                      | NR            | 655    | 170                      | NR            | 785    | 3                        | NR            | 915    | 0                        | NR            |
| 400    | 3                        | NR            | 530    | 251                      | NR            | 660    | 145                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 4                        | NR            | 535    | 260                      | NR            | 665    | 123                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 6                        | NR            | 540    | 267                      | NR            | 670    | 113                      | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 9                        | NR            | 545    | 276                      | NR            | 675    | 93                       | NR            | 805    | 2                        | NR            | 935    | 0                        | NR            |
| 420    | 16                       | NR            | 550    | 284                      | NR            | 680    | 80                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 28                       | NR            | 555    | 294                      | NR            | 685    | 69                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 46                       | NR            | 560    | 303                      | NR            | 690    | 59                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 75                       | NR            | 565    | 313                      | NR            | 695    | 51                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 120                      | NR            | 570    | 319                      | NR            | 700    | 43                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 203                      | NR            | 575    | 327                      | NR            | 705    | 37                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 311                      | NR            | 580    | 336                      | NR            | 710    | 31                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 290                      | NR            | 585    | 344                      | NR            | 715    | 26                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 197                      | NR            | 590    | 349                      | NR            | 720    | 22                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 163                      | NR            | 595    | 350                      | NR            | 725    | 18                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 135                      | NR            | 600    | 355                      | NR            | 730    | 15                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 110                      | NR            | 605    | 357                      | NR            | 735    | 13                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 108                      | NR            | 610    | 391                      | NR            | 740    | 11                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 123                      | NR            | 615    | 421                      | NR            | 745    | 10                       | NR            | 875    | 0                        | NR            |        |                          |               |

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**Melanopic Flux vs. Wavelength**



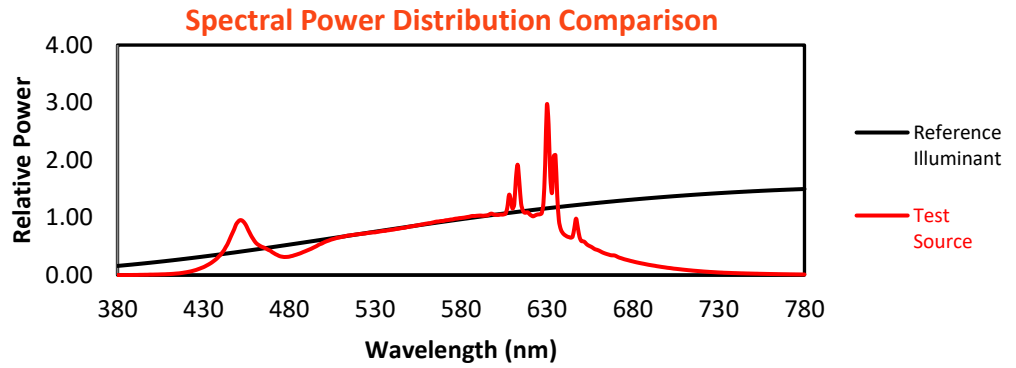
**Melanopic Lumens: NR**

**M/P: 3.17**

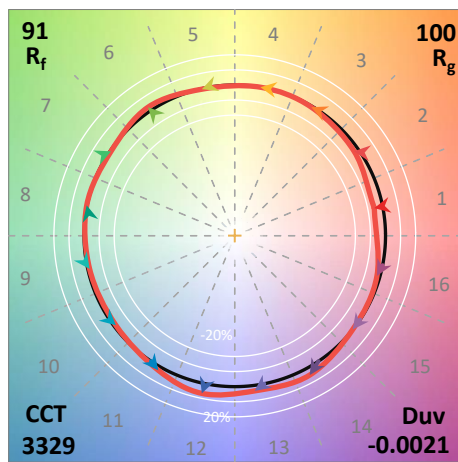
| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 143                      | NR            | 620    | 358                      | NR            | 750    | 9                        | NR            | 880    | 0                        | NR            |
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| 370    | 0                        | NR            | 500    | 191                      | NR            | 630    | 1000                     | NR            | 760    | 6                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 210                      | NR            | 635    | 705                      | NR            | 765    | 5                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 223                      | NR            | 640    | 239                      | NR            | 770    | 5                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 233                      | NR            | 645    | 226                      | NR            | 775    | 4                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 240                      | NR            | 650    | 201                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 246                      | NR            | 655    | 170                      | NR            | 785    | 3                        | NR            | 915    | 0                        | NR            |
| 400    | 3                        | NR            | 530    | 251                      | NR            | 660    | 145                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 4                        | NR            | 535    | 260                      | NR            | 665    | 123                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 6                        | NR            | 540    | 267                      | NR            | 670    | 113                      | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 9                        | NR            | 545    | 276                      | NR            | 675    | 93                       | NR            | 805    | 2                        | NR            | 935    | 0                        | NR            |
| 420    | 16                       | NR            | 550    | 284                      | NR            | 680    | 80                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 28                       | NR            | 555    | 294                      | NR            | 685    | 69                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 46                       | NR            | 560    | 303                      | NR            | 690    | 59                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 75                       | NR            | 565    | 313                      | NR            | 695    | 51                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
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| 450    | 311                      | NR            | 580    | 336                      | NR            | 710    | 31                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 290                      | NR            | 585    | 344                      | NR            | 715    | 26                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 197                      | NR            | 590    | 349                      | NR            | 720    | 22                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
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| 470    | 135                      | NR            | 600    | 355                      | NR            | 730    | 15                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 110                      | NR            | 605    | 357                      | NR            | 735    | 13                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 108                      | NR            | 610    | 391                      | NR            | 740    | 11                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 123                      | NR            | 615    | 421                      | NR            | 745    | 10                       | NR            | 875    | 0                        | NR            |        |                          |               |

**Summary**

$R_f = 91.4$   
 $R_g = 100.2$   
 $CIE R_a = 93.9$   
 $R_9 = 60.5$



**Color Vector Graphics**

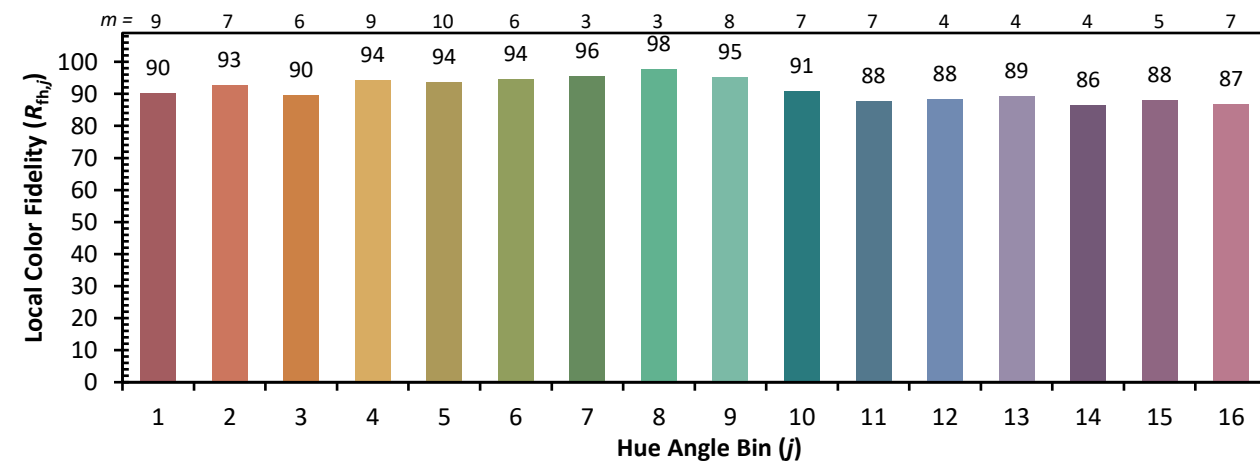


Individual Sample Fidelity Index ( $R_{f,i}$ )

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 93 | CES51 = 98 | CES76 = 88 |
| CES02 = 63 | CES27 = 93 | CES52 = 98 | CES77 = 87 |
| CES03 = 31 | CES28 = 96 | CES53 = 97 | CES78 = 85 |
| CES04 = 70 | CES29 = 95 | CES54 = 95 | CES79 = 91 |
| CES05 = 50 | CES30 = 96 | CES55 = 94 | CES80 = 92 |
| CES06 = 51 | CES31 = 95 | CES56 = 96 | CES81 = 75 |
| CES07 = 43 | CES32 = 87 | CES57 = 95 | CES82 = 96 |
| CES08 = 42 | CES33 = 97 | CES58 = 96 | CES83 = 94 |
| CES09 = 29 | CES34 = 94 | CES59 = 98 | CES84 = 95 |
| CES10 = 75 | CES35 = 96 | CES60 = 94 | CES85 = 80 |
| CES11 = 58 | CES36 = 84 | CES61 = 93 | CES86 = 79 |
| CES12 = 64 | CES37 = 95 | CES62 = 89 | CES87 = 91 |
| CES13 = 44 | CES38 = 91 | CES63 = 94 | CES88 = 97 |
| CES14 = 74 | CES39 = 99 | CES64 = 92 | CES89 = 83 |
| CES15 = 72 | CES40 = 97 | CES65 = 90 | CES90 = 98 |
| CES16 = 48 | CES41 = 97 | CES66 = 90 | CES91 = 77 |
| CES17 = 49 | CES42 = 93 | CES67 = 89 | CES92 = 77 |
| CES18 = 56 | CES43 = 92 | CES68 = 89 | CES93 = 86 |
| CES19 = 71 | CES44 = 99 | CES69 = 91 | CES94 = 74 |
| CES20 = 67 | CES45 = 96 | CES70 = 88 | CES95 = 84 |
| CES21 = 86 | CES46 = 96 | CES71 = 84 | CES96 = 92 |
| CES22 = 78 | CES47 = 91 | CES72 = 94 | CES97 = 95 |
| CES23 = 91 | CES48 = 94 | CES73 = 83 | CES98 = 94 |
| CES24 = 90 | CES49 = 94 | CES74 = 91 | CES99 = 92 |
| CES25 = 71 | CES50 = 98 | CES75 = 86 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)