

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: P976796

Luminaire Tested: 24SR-LD2-C-48-UNV-L950-CD1-MR-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P976796
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24SR-LD2-C-48-UNV-L950-CD1-MR-U
Description: METALUX SKYRIDGE 2x4 4800LM PACKAGE 90CRI 5000K TROFFER with Medium Red SKYTRIM
Light Source: 5000K CCT, 90+ CRI LEDS
Ballast/Driver: -

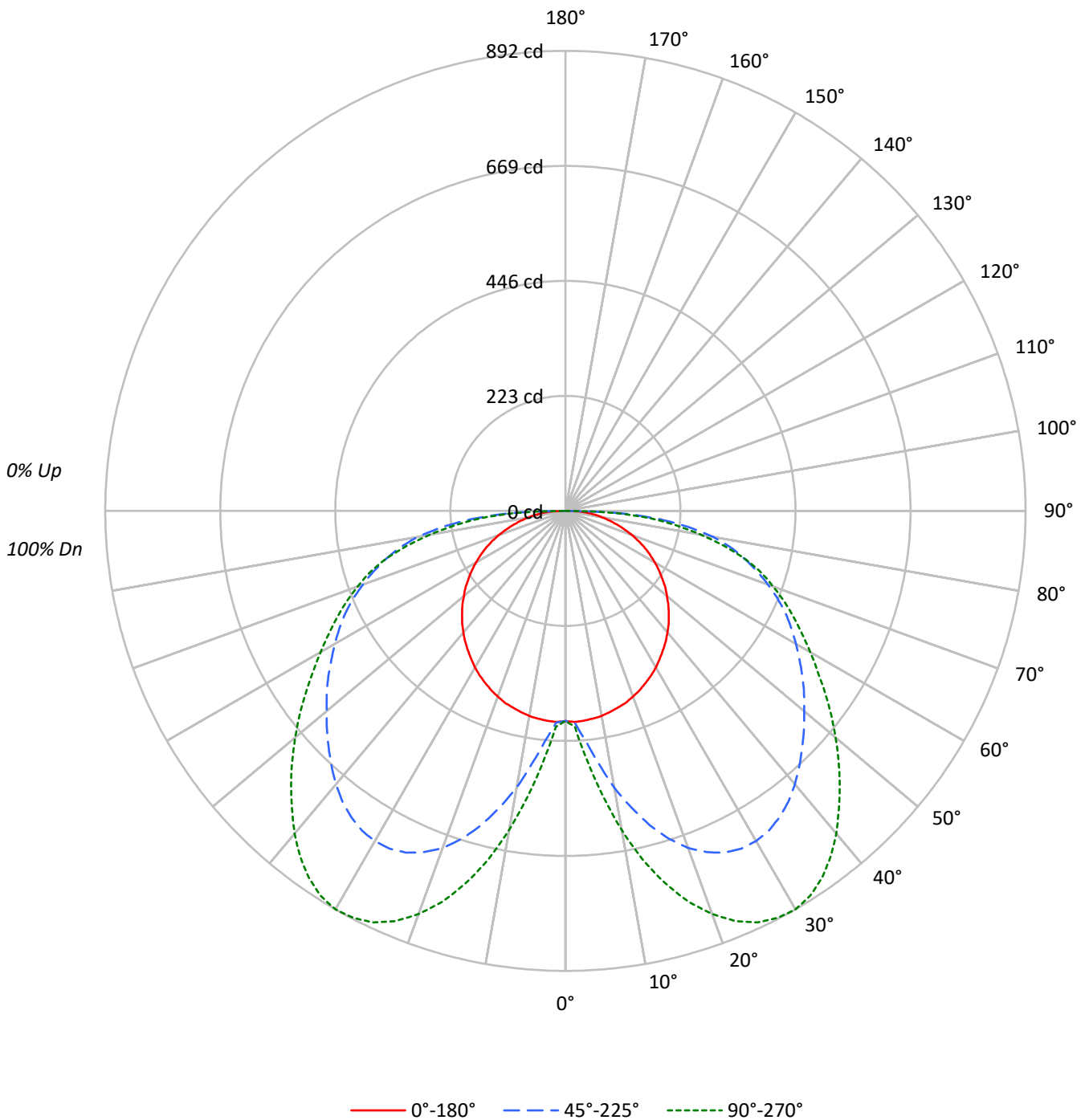
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2755.0 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 2.27 / 2.06
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_{in}): 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: P976796
CATALOG NUMBER: 24SR-LD2-C-48-UNV-L950-CD1-MR-U

Luminous Intensity Polar Plot





TEST NUMBER: P976796

CATALOG NUMBER: 24SR-LD2-C-48-UNV-L950-CD1-MR-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 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 | 102 | 102 | 102 | 100 |
| 1 | 106 | 100 | 95 | 90 | 103 | 98 | 93 | 88 | 93 | 89 | 85 | 89 | 86 | 83 | 86 | 83 | 80 | 86 | 83 | 80 | 78 |
| 2 | 95 | 85 | 77 | 70 | 92 | 83 | 76 | 69 | 79 | 73 | 68 | 76 | 71 | 66 | 73 | 68 | 64 | 73 | 68 | 64 | 62 |
| 3 | 85 | 73 | 64 | 56 | 83 | 72 | 63 | 56 | 69 | 61 | 55 | 66 | 59 | 54 | 63 | 58 | 53 | 63 | 58 | 53 | 50 |
| 4 | 78 | 64 | 54 | 47 | 75 | 63 | 53 | 46 | 60 | 52 | 46 | 58 | 51 | 45 | 55 | 49 | 44 | 55 | 49 | 44 | 42 |
| 5 | 71 | 57 | 47 | 39 | 69 | 55 | 46 | 39 | 53 | 45 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 49 | 43 | 38 | 35 |
| 6 | 65 | 50 | 41 | 34 | 63 | 49 | 40 | 33 | 48 | 39 | 33 | 46 | 38 | 33 | 44 | 38 | 32 | 44 | 38 | 32 | 30 |
| 7 | 60 | 45 | 36 | 29 | 58 | 45 | 35 | 29 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 33 | 28 | 40 | 33 | 28 | 26 |
| 8 | 56 | 41 | 32 | 26 | 54 | 40 | 32 | 26 | 39 | 31 | 25 | 38 | 30 | 25 | 36 | 30 | 25 | 36 | 30 | 25 | 23 |
| 9 | 52 | 38 | 29 | 23 | 50 | 37 | 28 | 23 | 36 | 28 | 23 | 35 | 27 | 22 | 33 | 27 | 22 | 33 | 27 | 22 | 20 |
| 10 | 48 | 34 | 26 | 20 | 47 | 34 | 26 | 20 | 33 | 25 | 20 | 32 | 25 | 20 | 31 | 25 | 20 | 31 | 25 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|------|------|
| 0° | 548 | 548 | 548 |
| 5° | 551 | 603 | 656 |
| 10° | 552 | 744 | 858 |
| 15° | 550 | 878 | 1041 |
| 20° | 548 | 996 | 1191 |
| 25° | 546 | 1086 | 1307 |
| 30° | 545 | 1149 | 1386 |
| 35° | 542 | 1190 | 1425 |
| 40° | 540 | 1215 | 1435 |
| 45° | 539 | 1235 | 1431 |
| 50° | 538 | 1264 | 1431 |
| 55° | 537 | 1316 | 1441 |
| 60° | 538 | 1389 | 1476 |
| 65° | 542 | 1500 | 1554 |
| 70° | 542 | 1643 | 1684 |
| 75° | 542 | 1870 | 1877 |
| 80° | 565 | 2251 | 2070 |
| 85° | 661 | 2822 | 2553 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 87.5°
 Luminance: 3464 cd/sqm



TEST NUMBER: P976796

CATALOG NUMBER: 24SR-LD2-C-48-UNV-L950-CD1-MR-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.2 | 1.6 |
| 10°-20° | 171.2 | 6.2 |
| 20°-30° | 314.9 | 11.4 |
| 30°-40° | 419.8 | 15.2 |
| 40°-50° | 459.9 | 16.7 |
| 50°-60° | 452.2 | 16.4 |
| 60°-70° | 410.4 | 14.9 |
| 70°-80° | 326.7 | 11.9 |
| 80°-90° | 154.9 | 5.6 |
| 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° | 531.2 | 19.3 |
| 0°-40° | 951.0 | 34.5 |
| 0°-60° | 1863.1 | 67.6 |
| 0°-90° | 2755.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2755.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 407 | 407 | 407 | 407 | 407 | |
| 5° | 408 | 412 | 447 | 476 | 486 | 39 |
| 15° | 394 | 489 | 631 | 718 | 747 | 111 |
| 25° | 368 | 542 | 731 | 840 | 880 | 170 |
| 35° | 330 | 533 | 724 | 831 | 868 | 207 |
| 45° | 283 | 480 | 649 | 728 | 752 | 219 |
| 55° | 229 | 424 | 561 | 603 | 614 | 205 |
| 65° | 170 | 367 | 471 | 481 | 488 | 168 |
| 75° | 104 | 286 | 360 | 358 | 361 | 110 |
| 85° | 43 | 154 | 183 | 165 | 165 | 44 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P976796
 CATALOG NUMBER: 24SR-LD2-C-48-UNV-L950-CD1-MR-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 |
| 2.5° | 409.6 | 409.6 | 408.3 | 408.3 | 408.3 | 407.3 | 407.3 | 408.3 | 409.6 | 410.7 | 411.9 |
| 5° | 408.3 | 408.3 | 408.3 | 408.3 | 409.6 | 414.3 | 420.0 | 428.1 | 435.0 | 446.7 | 452.4 |
| 7.5° | 406.2 | 406.2 | 407.3 | 410.7 | 420.0 | 432.6 | 447.7 | 465.0 | 479.0 | 494.0 | 507.9 |
| 10° | 403.8 | 403.8 | 406.2 | 417.7 | 436.2 | 458.2 | 480.1 | 502.1 | 521.7 | 544.9 | 562.2 |
| 12.5° | 399.2 | 399.2 | 406.2 | 426.9 | 454.8 | 482.5 | 510.2 | 539.2 | 564.5 | 588.8 | 613.1 |
| 15° | 394.5 | 394.5 | 408.3 | 437.3 | 472.0 | 505.5 | 537.9 | 571.6 | 601.6 | 630.6 | 656.0 |
| 17.5° | 390.0 | 391.1 | 411.9 | 448.8 | 487.1 | 526.4 | 564.5 | 600.5 | 634.0 | 666.4 | 695.4 |
| 20° | 383.0 | 385.3 | 414.3 | 456.9 | 499.8 | 543.8 | 584.3 | 623.6 | 660.6 | 695.4 | 725.4 |
| 22.5° | 376.0 | 380.6 | 415.4 | 462.9 | 510.2 | 557.7 | 600.5 | 641.0 | 680.3 | 716.2 | 747.4 |
| 25° | 367.9 | 373.8 | 416.4 | 466.3 | 517.2 | 565.8 | 610.8 | 653.6 | 694.1 | 731.2 | 762.5 |
| 27.5° | 359.8 | 367.9 | 414.3 | 466.3 | 519.5 | 570.3 | 615.5 | 659.5 | 702.2 | 738.2 | 771.7 |
| 30° | 350.6 | 361.0 | 410.7 | 465.0 | 519.5 | 569.2 | 615.5 | 660.6 | 702.2 | 739.3 | 771.7 |
| 32.5° | 340.1 | 354.0 | 404.9 | 460.5 | 514.9 | 565.8 | 612.0 | 656.0 | 697.7 | 734.6 | 765.9 |
| 35° | 329.7 | 344.8 | 398.1 | 453.5 | 507.9 | 557.7 | 602.7 | 646.8 | 687.3 | 724.3 | 755.5 |
| 37.5° | 319.3 | 336.7 | 390.0 | 445.4 | 497.4 | 546.0 | 591.2 | 635.3 | 674.5 | 710.3 | 739.3 |
| 40° | 307.7 | 326.3 | 379.5 | 433.9 | 485.9 | 532.2 | 577.3 | 618.9 | 657.2 | 691.9 | 719.7 |
| 42.5° | 296.2 | 315.8 | 367.9 | 422.4 | 472.0 | 518.3 | 562.2 | 602.7 | 639.8 | 671.1 | 696.5 |
| 45° | 283.4 | 304.3 | 356.3 | 408.3 | 456.9 | 503.3 | 546.0 | 584.3 | 620.1 | 649.1 | 672.2 |
| 47.5° | 270.7 | 292.8 | 343.6 | 395.7 | 443.1 | 488.2 | 529.8 | 566.9 | 599.3 | 627.0 | 649.1 |
| 50° | 256.8 | 280.0 | 330.9 | 381.9 | 429.2 | 473.1 | 513.6 | 548.4 | 579.7 | 604.0 | 624.8 |
| 52.5° | 244.2 | 268.5 | 318.2 | 369.1 | 415.4 | 459.3 | 498.7 | 531.1 | 560.0 | 583.1 | 600.5 |
| 55° | 229.1 | 255.7 | 306.6 | 356.3 | 402.6 | 445.4 | 482.5 | 513.6 | 540.3 | 561.1 | 576.2 |
| 57.5° | 215.2 | 243.0 | 293.9 | 343.6 | 388.7 | 431.5 | 466.3 | 496.3 | 519.5 | 537.9 | 551.9 |
| 60° | 200.1 | 230.2 | 281.1 | 330.9 | 376.0 | 417.7 | 451.2 | 479.0 | 501.0 | 516.0 | 527.6 |
| 62.5° | 185.2 | 216.3 | 269.6 | 318.2 | 362.1 | 401.5 | 433.9 | 459.3 | 479.0 | 494.0 | 501.0 |
| 65° | 170.1 | 202.5 | 255.7 | 305.4 | 348.2 | 385.3 | 416.4 | 440.7 | 458.2 | 471.0 | 475.5 |
| 67.5° | 153.9 | 188.6 | 241.9 | 289.2 | 332.0 | 367.9 | 396.8 | 420.0 | 435.0 | 445.4 | 447.7 |
| 70° | 137.7 | 172.4 | 225.7 | 273.0 | 313.5 | 347.1 | 376.0 | 395.7 | 410.7 | 417.7 | 420.0 |
| 72.5° | 120.4 | 156.2 | 209.5 | 254.5 | 292.8 | 326.3 | 351.7 | 372.5 | 385.3 | 390.0 | 390.0 |
| 75° | 104.2 | 138.8 | 190.9 | 233.8 | 270.7 | 302.0 | 326.3 | 344.8 | 356.3 | 359.8 | 358.7 |
| 77.5° | 88.0 | 122.6 | 171.2 | 211.8 | 245.3 | 274.3 | 297.3 | 314.7 | 325.2 | 328.6 | 327.4 |
| 80° | 72.9 | 105.3 | 148.1 | 186.3 | 216.3 | 243.0 | 263.8 | 282.4 | 291.5 | 290.5 | 283.4 |
| 82.5° | 57.8 | 85.7 | 123.8 | 157.3 | 183.9 | 208.2 | 229.1 | 240.6 | 244.2 | 240.6 | 233.8 |
| 85° | 42.8 | 64.8 | 96.1 | 122.6 | 144.7 | 164.3 | 177.1 | 185.2 | 186.3 | 182.8 | 177.1 |
| 87.5° | 25.4 | 38.2 | 56.7 | 72.9 | 89.1 | 98.3 | 105.3 | 111.0 | 112.3 | 108.7 | 106.4 |
| 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: P976796

CATALOG NUMBER: 24SR-LD2-C-48-UNV-L950-CD1-MR-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 | 407.3 |
| 2.5° | 413.0 | 414.3 | 415.4 | 417.7 | 416.4 | 417.7 | 417.7 | 418.8 |
| 5° | 460.5 | 467.4 | 472.0 | 479.0 | 479.0 | 482.5 | 483.6 | 485.9 |
| 7.5° | 518.3 | 527.6 | 537.9 | 548.4 | 549.6 | 555.4 | 557.7 | 557.7 |
| 10° | 577.3 | 590.1 | 602.7 | 614.4 | 617.8 | 624.8 | 628.2 | 628.2 |
| 12.5° | 630.6 | 644.4 | 661.7 | 674.5 | 679.2 | 687.3 | 691.9 | 693.0 |
| 15° | 676.8 | 694.1 | 711.6 | 725.4 | 733.5 | 741.6 | 746.3 | 747.4 |
| 17.5° | 716.2 | 737.0 | 755.5 | 769.3 | 778.7 | 787.9 | 793.6 | 794.9 |
| 20° | 747.4 | 770.6 | 789.1 | 804.1 | 814.5 | 826.0 | 830.7 | 831.8 |
| 22.5° | 771.7 | 793.6 | 814.5 | 830.7 | 842.2 | 853.9 | 859.7 | 860.8 |
| 25° | 787.9 | 811.1 | 831.8 | 849.2 | 862.0 | 872.3 | 878.2 | 880.4 |
| 27.5° | 797.2 | 821.5 | 842.2 | 858.4 | 871.2 | 882.7 | 888.5 | 889.7 |
| 30° | 798.3 | 822.6 | 843.5 | 859.7 | 872.3 | 884.0 | 889.7 | 892.1 |
| 32.5° | 792.5 | 816.8 | 836.5 | 852.7 | 865.4 | 875.9 | 881.6 | 884.0 |
| 35° | 781.0 | 804.1 | 823.7 | 838.8 | 850.3 | 859.7 | 866.5 | 867.8 |
| 37.5° | 764.8 | 786.8 | 804.1 | 817.9 | 829.6 | 838.8 | 844.6 | 844.6 |
| 40° | 742.7 | 763.6 | 778.7 | 791.3 | 803.0 | 809.8 | 816.8 | 816.8 |
| 42.5° | 718.4 | 738.2 | 752.1 | 763.6 | 771.7 | 779.8 | 784.5 | 784.5 |
| 45° | 693.0 | 709.2 | 723.1 | 732.4 | 740.5 | 746.3 | 752.1 | 752.1 |
| 47.5° | 667.6 | 681.5 | 691.9 | 701.1 | 708.1 | 713.9 | 718.4 | 718.4 |
| 50° | 641.0 | 653.6 | 661.7 | 669.8 | 675.7 | 680.3 | 683.8 | 683.8 |
| 52.5° | 614.4 | 624.8 | 630.6 | 637.4 | 642.1 | 646.8 | 649.1 | 649.1 |
| 55° | 588.8 | 595.9 | 600.5 | 606.3 | 609.7 | 612.0 | 614.4 | 614.4 |
| 57.5° | 561.1 | 565.8 | 570.3 | 573.9 | 576.2 | 578.4 | 580.7 | 579.7 |
| 60° | 533.4 | 536.8 | 540.3 | 542.6 | 544.9 | 547.3 | 548.4 | 548.4 |
| 62.5° | 505.5 | 506.8 | 507.9 | 512.5 | 514.9 | 516.0 | 517.2 | 517.2 |
| 65° | 477.8 | 477.8 | 479.0 | 482.5 | 484.8 | 487.1 | 488.2 | 488.2 |
| 67.5° | 447.7 | 448.8 | 450.1 | 453.5 | 454.8 | 456.9 | 459.3 | 459.3 |
| 70° | 417.7 | 418.8 | 418.8 | 422.4 | 423.5 | 425.8 | 428.1 | 428.1 |
| 72.5° | 388.7 | 388.7 | 388.7 | 391.1 | 393.4 | 395.7 | 398.1 | 398.1 |
| 75° | 356.3 | 356.3 | 356.3 | 358.7 | 358.7 | 359.8 | 362.1 | 361.0 |
| 77.5° | 321.6 | 318.2 | 314.7 | 313.5 | 313.5 | 314.7 | 315.8 | 315.8 |
| 80° | 276.6 | 271.9 | 269.6 | 267.2 | 266.2 | 267.2 | 268.5 | 267.2 |
| 82.5° | 229.1 | 223.3 | 219.9 | 218.7 | 218.7 | 218.7 | 219.9 | 217.6 |
| 85° | 173.5 | 167.7 | 165.4 | 165.4 | 164.3 | 164.3 | 164.3 | 165.4 |
| 87.5° | 104.2 | 100.6 | 97.2 | 98.3 | 97.2 | 96.1 | 97.2 | 99.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976796

CATALOG NUMBER: 24SR-LD2-C-48-UNV-L950-CD1-MR-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 | 11.1 | 12.9 | 11.5 | 13.2 | 13.5 | 14.1 | 15.9 | 14.4 | 16.2 | 16.5 |
| | 3H | 13.1 | 14.7 | 13.5 | 15.1 | 15.4 | 16.6 | 18.2 | 17.0 | 18.6 | 18.9 |
| | 4H | 13.9 | 15.4 | 14.3 | 15.8 | 16.1 | 17.8 | 19.4 | 18.2 | 19.7 | 20.1 |
| | 6H | 14.5 | 15.9 | 14.9 | 16.3 | 16.7 | 18.9 | 20.3 | 19.3 | 20.7 | 21.1 |
| | 8H | 14.7 | 16.1 | 15.1 | 16.5 | 16.9 | 19.4 | 20.8 | 19.8 | 21.1 | 21.5 |
| | 12H | 14.9 | 16.2 | 15.3 | 16.6 | 17.0 | 19.8 | 21.1 | 20.2 | 21.5 | 21.9 |
| 4H | 2H | 12.9 | 14.4 | 13.3 | 14.8 | 15.1 | 14.8 | 16.4 | 15.2 | 16.7 | 17.1 |
| | 3H | 15.4 | 16.7 | 15.8 | 17.1 | 17.5 | 17.6 | 19.0 | 18.1 | 19.4 | 19.8 |
| | 4H | 16.5 | 17.7 | 16.9 | 18.1 | 18.5 | 19.0 | 20.2 | 19.5 | 20.7 | 21.1 |
| | 6H | 17.4 | 18.5 | 17.8 | 18.9 | 19.4 | 20.3 | 21.4 | 20.7 | 21.8 | 22.3 |
| | 8H | 17.7 | 18.7 | 18.2 | 19.2 | 19.6 | 20.8 | 21.9 | 21.3 | 22.3 | 22.8 |
| | 12H | 18.0 | 18.9 | 18.4 | 19.4 | 19.8 | 21.4 | 22.3 | 21.8 | 22.8 | 23.2 |
| 8H | 4H | 17.6 | 18.7 | 18.1 | 19.1 | 19.6 | 19.6 | 20.6 | 20.0 | 21.0 | 21.5 |
| | 6H | 19.0 | 19.9 | 19.5 | 20.3 | 20.8 | 21.1 | 21.9 | 21.5 | 22.4 | 22.9 |
| | 8H | 19.6 | 20.4 | 20.1 | 20.9 | 21.3 | 21.7 | 22.5 | 22.2 | 23.0 | 23.5 |
| | 12H | 20.0 | 20.7 | 20.5 | 21.2 | 21.8 | 22.4 | 23.1 | 22.9 | 23.6 | 24.1 |
| 12H | 4H | 17.9 | 18.8 | 18.3 | 19.3 | 19.7 | 19.7 | 20.6 | 20.2 | 21.1 | 21.6 |
| | 6H | 19.4 | 20.2 | 19.9 | 20.6 | 21.2 | 21.3 | 22.1 | 21.8 | 22.5 | 23.0 |
| | 8H | 20.1 | 20.8 | 20.6 | 21.3 | 21.9 | 22.0 | 22.7 | 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

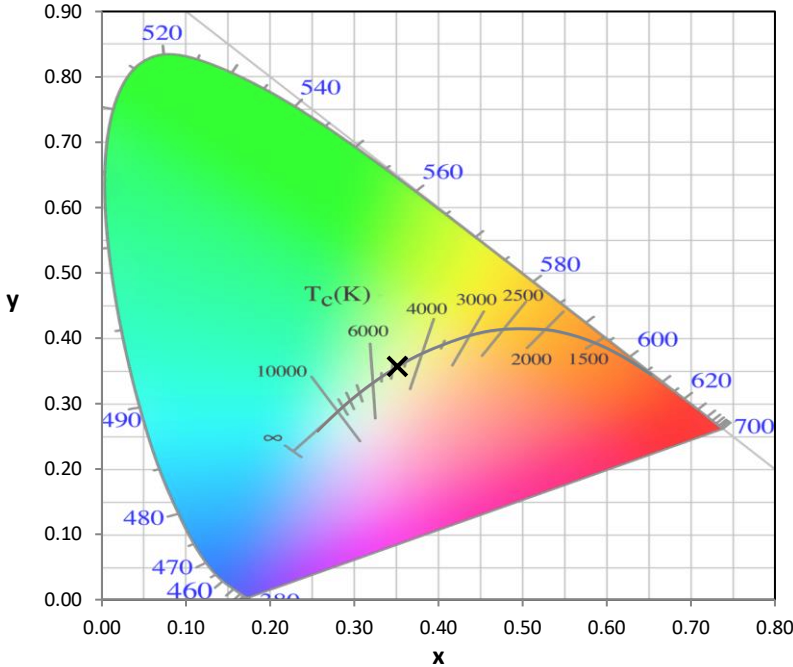
Stabilization Time: 43M
 Operation Time: 1H 43M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2506-457-8

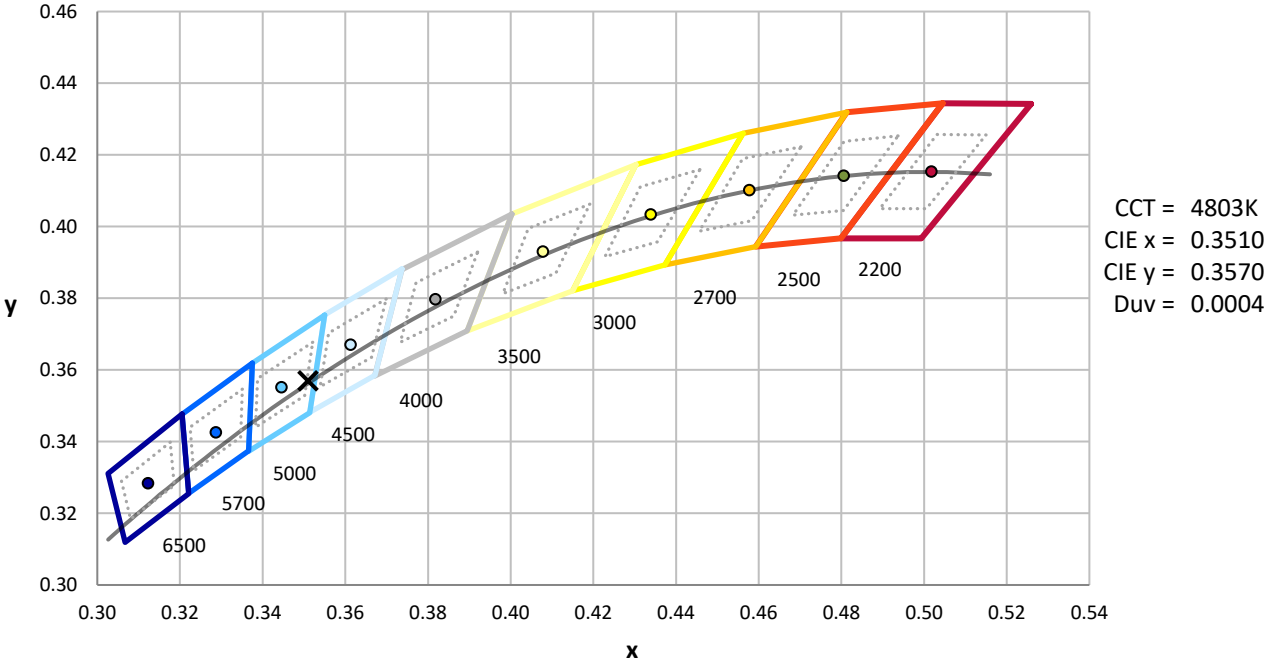
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter |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

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CIE 1931 Chromaticity Diagram



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



CCT = 4803K
 CIE x = 0.3510
 CIE y = 0.3570
 Duv = 0.0004

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-8

Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 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

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|----------------|--------------------------|----------------------|----------------|--------------------------|----------------------|----------------|--------------------------|----------------------|----------------|--------------------------|----------------------|----------------|--------------------------|----------------------|
| 360 | 0 | NR | 490 | 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 [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 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)