

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: P976709

Luminaire Tested: 24SR-LD2-C-53-UNV-L930-CD1-BR-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P976709
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24SR-LD2-C-53-UNV-L930-CD1-BR-U
Description: METALUX SKYRIDGE 2x4 5300LM PACKAGE 90CRI 3000K TROFFER with Belladonna Rose SKYT
Light Source: 3000K CCT, 90+ CRI LEDS
Ballast/Driver: -

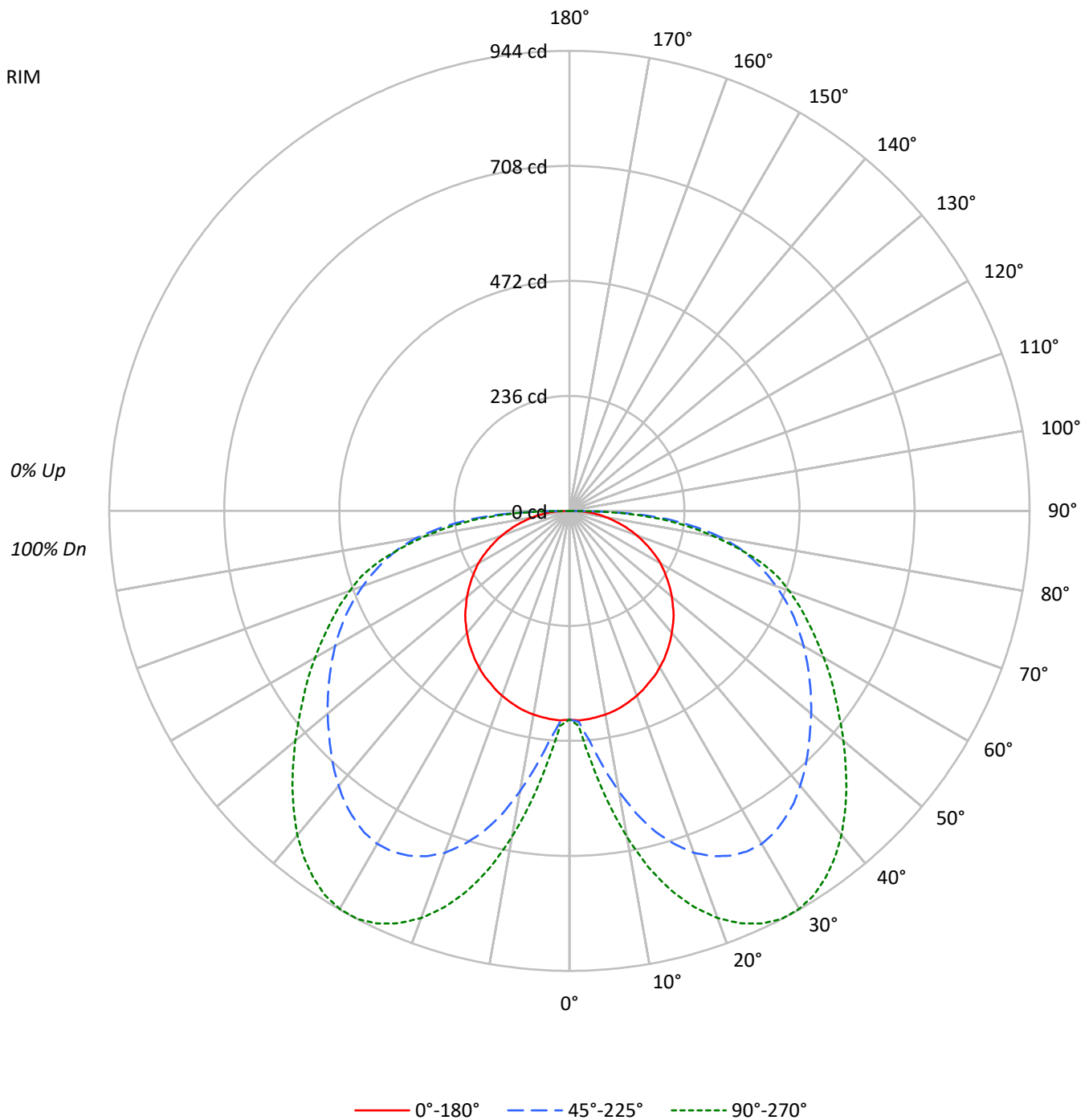
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2969.0 lumens
Efficiency: N/A
Efficacy: 77.3 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): 38.4
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: P976709
CATALOG NUMBER: 24SR-LD2-C-53-UNV-L930-CD1-BR-U

Luminous Intensity Polar Plot





TEST NUMBER: P976709

CATALOG NUMBER: 24SR-LD2-C-53-UNV-L930-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 | 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 | 94 | 90 | 103 | 97 | 93 | 88 | 93 | 89 | 85 | 89 | 86 | 83 | 85 | 83 | 80 | 78 | 78 | 78 | 78 |
| 2 | 95 | 85 | 77 | 70 | 92 | 83 | 75 | 69 | 79 | 73 | 67 | 76 | 70 | 66 | 73 | 68 | 64 | 62 | 62 | 62 | 62 |
| 3 | 85 | 73 | 64 | 56 | 83 | 71 | 63 | 56 | 68 | 61 | 55 | 65 | 59 | 54 | 63 | 57 | 53 | 50 | 50 | 50 | 50 |
| 4 | 77 | 64 | 54 | 46 | 75 | 62 | 53 | 46 | 60 | 52 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 41 | 41 | 41 | 41 |
| 5 | 71 | 56 | 46 | 39 | 68 | 55 | 46 | 39 | 53 | 45 | 38 | 51 | 44 | 38 | 49 | 42 | 37 | 35 | 35 | 35 | 35 |
| 6 | 65 | 50 | 40 | 33 | 63 | 49 | 40 | 33 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 37 | 32 | 30 | 30 | 30 | 30 |
| 7 | 60 | 45 | 36 | 29 | 58 | 44 | 35 | 29 | 43 | 35 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 26 | 26 | 26 | 26 |
| 8 | 56 | 41 | 32 | 25 | 54 | 40 | 31 | 25 | 39 | 31 | 25 | 38 | 30 | 25 | 36 | 30 | 25 | 23 | 23 | 23 | 23 |
| 9 | 52 | 37 | 29 | 23 | 50 | 37 | 28 | 22 | 36 | 28 | 22 | 34 | 27 | 22 | 33 | 27 | 22 | 20 | 20 | 20 | 20 |
| 10 | 48 | 34 | 26 | 20 | 47 | 34 | 26 | 20 | 33 | 25 | 20 | 32 | 25 | 20 | 31 | 24 | 20 | 18 | 18 | 18 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|------|------|
| 0° | 576 | 576 | 576 |
| 5° | 580 | 639 | 700 |
| 10° | 580 | 798 | 928 |
| 15° | 579 | 950 | 1123 |
| 20° | 578 | 1069 | 1273 |
| 25° | 576 | 1159 | 1387 |
| 30° | 576 | 1226 | 1465 |
| 35° | 575 | 1266 | 1506 |
| 40° | 574 | 1294 | 1525 |
| 45° | 576 | 1318 | 1529 |
| 50° | 574 | 1356 | 1536 |
| 55° | 575 | 1410 | 1562 |
| 60° | 581 | 1493 | 1621 |
| 65° | 578 | 1611 | 1720 |
| 70° | 581 | 1775 | 1886 |
| 75° | 583 | 2035 | 2111 |
| 80° | 605 | 2466 | 2334 |
| 85° | 696 | 3180 | 2879 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 3874 cd/sqm



TEST NUMBER: P976709
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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 48.1 | 1.6 |
| 10°-20° | 183.6 | 6.2 |
| 20°-30° | 335.6 | 11.3 |
| 30°-40° | 446.3 | 15.0 |
| 40°-50° | 491.4 | 16.6 |
| 50°-60° | 487.0 | 16.4 |
| 60°-70° | 445.8 | 15.0 |
| 70°-80° | 359.0 | 12.1 |
| 80°-90° | 172.2 | 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° | 567.2 | 19.1 |
| 0°-40° | 1013.5 | 34.1 |
| 0°-60° | 1991.9 | 67.1 |
| 0°-90° | 2969.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2969.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 428 | 428 | 428 | 428 | 428 | |
| 5° | 429 | 433 | 473 | 505 | 518 | 41 |
| 15° | 416 | 523 | 682 | 773 | 806 | 117 |
| 25° | 388 | 581 | 780 | 893 | 934 | 179 |
| 35° | 350 | 571 | 771 | 879 | 917 | 219 |
| 45° | 302 | 515 | 693 | 776 | 804 | 233 |
| 55° | 245 | 454 | 601 | 651 | 666 | 219 |
| 65° | 182 | 393 | 506 | 528 | 540 | 180 |
| 75° | 112 | 306 | 391 | 402 | 406 | 118 |
| 85° | 45 | 167 | 206 | 189 | 186 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P976709

CATALOG NUMBER: 24SR-LD2-C-53-UNV-L930-CD1-BR-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 |
| 2.5° | 430.4 | 430.4 | 429.3 | 429.3 | 429.3 | 429.3 | 429.3 | 429.3 | 430.4 | 432.9 | 434.2 |
| 5° | 429.3 | 429.3 | 429.3 | 429.3 | 430.4 | 435.3 | 441.4 | 451.3 | 460.9 | 473.2 | 484.1 |
| 7.5° | 426.8 | 426.8 | 426.8 | 430.4 | 441.4 | 458.5 | 474.4 | 492.6 | 511.0 | 529.2 | 543.9 |
| 10° | 424.4 | 424.4 | 426.8 | 440.3 | 462.2 | 487.8 | 512.1 | 536.6 | 559.7 | 584.1 | 604.8 |
| 12.5° | 420.7 | 420.7 | 428.0 | 452.4 | 484.1 | 515.9 | 547.5 | 576.7 | 606.1 | 636.6 | 659.7 |
| 15° | 415.8 | 415.8 | 431.7 | 464.5 | 503.6 | 542.6 | 579.2 | 614.6 | 648.8 | 681.7 | 707.3 |
| 17.5° | 409.8 | 412.2 | 435.3 | 476.8 | 520.6 | 565.9 | 606.1 | 646.3 | 682.9 | 717.0 | 747.5 |
| 20° | 403.7 | 407.3 | 439.0 | 486.5 | 535.4 | 585.3 | 629.2 | 670.7 | 709.8 | 746.4 | 778.0 |
| 22.5° | 396.3 | 401.2 | 441.4 | 493.9 | 546.4 | 598.7 | 645.1 | 688.9 | 730.4 | 767.0 | 800.0 |
| 25° | 387.8 | 395.2 | 442.7 | 497.5 | 554.9 | 607.3 | 654.8 | 699.9 | 742.6 | 780.5 | 813.4 |
| 27.5° | 380.4 | 390.2 | 441.4 | 500.0 | 558.5 | 612.2 | 660.9 | 706.0 | 750.0 | 787.9 | 822.0 |
| 30° | 370.7 | 382.9 | 439.0 | 498.8 | 557.2 | 612.2 | 659.7 | 706.0 | 750.0 | 789.0 | 822.0 |
| 32.5° | 361.0 | 375.6 | 432.9 | 493.9 | 553.6 | 606.1 | 654.8 | 701.2 | 743.9 | 782.9 | 814.6 |
| 35° | 350.0 | 367.1 | 425.7 | 486.5 | 545.1 | 597.6 | 645.1 | 690.3 | 734.0 | 770.6 | 802.5 |
| 37.5° | 339.1 | 357.3 | 415.8 | 476.8 | 534.1 | 585.3 | 631.7 | 676.8 | 718.3 | 756.0 | 785.4 |
| 40° | 326.8 | 347.6 | 406.1 | 465.9 | 520.6 | 570.7 | 617.1 | 660.9 | 701.2 | 736.5 | 764.6 |
| 42.5° | 314.6 | 336.6 | 395.2 | 453.7 | 507.4 | 554.9 | 601.2 | 642.7 | 681.7 | 715.8 | 741.4 |
| 45° | 302.5 | 324.5 | 381.7 | 440.3 | 491.4 | 539.0 | 583.0 | 624.3 | 660.9 | 692.7 | 717.0 |
| 47.5° | 287.7 | 312.2 | 369.6 | 425.7 | 475.5 | 523.1 | 565.9 | 604.8 | 641.4 | 669.4 | 692.7 |
| 50° | 274.4 | 300.0 | 356.1 | 410.9 | 459.8 | 507.4 | 548.7 | 586.6 | 620.7 | 647.6 | 668.3 |
| 52.5° | 259.8 | 286.6 | 342.7 | 397.6 | 446.3 | 491.4 | 532.9 | 568.2 | 598.7 | 624.3 | 643.8 |
| 55° | 245.1 | 273.1 | 330.5 | 382.9 | 431.7 | 476.8 | 515.9 | 550.0 | 579.2 | 601.2 | 619.6 |
| 57.5° | 230.5 | 259.8 | 317.1 | 370.7 | 418.3 | 462.2 | 500.0 | 530.5 | 558.5 | 578.1 | 593.8 |
| 60° | 215.9 | 246.4 | 302.5 | 356.1 | 404.8 | 446.3 | 482.9 | 512.1 | 536.6 | 554.9 | 568.2 |
| 62.5° | 198.8 | 231.8 | 289.0 | 341.5 | 389.1 | 429.3 | 464.5 | 491.4 | 514.6 | 530.5 | 541.5 |
| 65° | 181.7 | 217.0 | 274.4 | 326.8 | 373.2 | 412.2 | 445.2 | 470.8 | 491.4 | 506.0 | 513.4 |
| 67.5° | 164.7 | 202.4 | 259.8 | 312.2 | 356.1 | 392.7 | 424.4 | 448.8 | 467.0 | 479.3 | 485.4 |
| 70° | 147.6 | 185.4 | 242.6 | 293.9 | 336.6 | 370.7 | 401.2 | 424.4 | 440.3 | 451.3 | 456.0 |
| 72.5° | 129.3 | 168.3 | 224.4 | 274.4 | 314.6 | 348.7 | 376.8 | 398.8 | 413.4 | 421.9 | 425.7 |
| 75° | 112.2 | 149.9 | 204.9 | 252.4 | 290.2 | 322.0 | 348.7 | 370.7 | 385.3 | 391.4 | 395.2 |
| 77.5° | 93.8 | 131.7 | 184.2 | 228.0 | 263.4 | 292.6 | 318.2 | 339.1 | 352.5 | 358.6 | 362.2 |
| 80° | 78.1 | 112.2 | 159.8 | 200.0 | 232.9 | 261.0 | 284.1 | 306.1 | 317.1 | 318.2 | 314.6 |
| 82.5° | 61.0 | 92.7 | 134.2 | 169.4 | 197.5 | 224.4 | 246.4 | 261.0 | 265.9 | 265.9 | 262.1 |
| 85° | 45.1 | 69.6 | 104.8 | 132.9 | 157.3 | 176.8 | 190.3 | 202.4 | 204.9 | 206.0 | 201.3 |
| 87.5° | 25.6 | 39.0 | 62.2 | 80.5 | 95.1 | 108.6 | 118.3 | 124.3 | 124.3 | 125.6 | 123.2 |
| 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: P976709

CATALOG NUMBER: 24SR-LD2-C-53-UNV-L930-CD1-BR-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 | 428.0 |
| 2.5° | 434.2 | 436.5 | 436.5 | 439.0 | 440.3 | 440.3 | 441.4 | 441.4 |
| 5° | 489.0 | 498.8 | 502.4 | 508.5 | 512.1 | 517.0 | 519.5 | 518.3 |
| 7.5° | 554.9 | 569.5 | 576.7 | 585.3 | 595.1 | 597.6 | 601.2 | 601.2 |
| 10° | 620.7 | 637.8 | 648.8 | 658.6 | 669.4 | 674.3 | 679.3 | 679.3 |
| 12.5° | 680.4 | 697.5 | 712.2 | 724.4 | 735.4 | 742.6 | 747.5 | 748.8 |
| 15° | 729.3 | 751.3 | 765.9 | 779.3 | 791.5 | 798.7 | 804.9 | 806.1 |
| 17.5° | 769.5 | 790.1 | 809.7 | 824.4 | 835.3 | 846.2 | 850.0 | 852.5 |
| 20° | 801.1 | 823.1 | 844.0 | 858.5 | 870.7 | 881.7 | 886.6 | 889.1 |
| 22.5° | 824.4 | 847.6 | 868.2 | 884.1 | 896.3 | 907.3 | 913.3 | 915.8 |
| 25° | 839.0 | 863.3 | 885.3 | 901.2 | 914.6 | 925.6 | 931.7 | 934.2 |
| 27.5° | 848.7 | 873.1 | 893.8 | 909.7 | 923.2 | 934.2 | 940.2 | 943.8 |
| 30° | 848.7 | 873.1 | 893.8 | 909.7 | 923.2 | 934.2 | 940.2 | 942.7 |
| 32.5° | 841.5 | 865.8 | 886.6 | 901.2 | 914.6 | 925.6 | 931.7 | 934.2 |
| 35° | 828.0 | 852.5 | 872.0 | 886.6 | 900.0 | 909.7 | 915.8 | 917.1 |
| 37.5° | 809.7 | 833.0 | 851.2 | 865.8 | 878.1 | 887.7 | 893.8 | 895.1 |
| 40° | 789.0 | 811.0 | 828.0 | 841.5 | 852.5 | 861.0 | 867.1 | 868.2 |
| 42.5° | 764.6 | 785.4 | 800.0 | 813.4 | 823.1 | 831.6 | 837.7 | 836.6 |
| 45° | 739.0 | 758.5 | 770.6 | 781.6 | 792.6 | 798.7 | 803.6 | 803.6 |
| 47.5° | 713.4 | 729.3 | 740.3 | 750.0 | 758.5 | 764.6 | 768.3 | 768.3 |
| 50° | 686.6 | 699.9 | 709.8 | 718.3 | 725.5 | 730.4 | 734.0 | 734.0 |
| 52.5° | 659.7 | 671.9 | 679.3 | 686.6 | 692.7 | 696.3 | 699.9 | 698.8 |
| 55° | 632.8 | 642.7 | 647.6 | 654.8 | 659.7 | 664.7 | 667.1 | 665.8 |
| 57.5° | 606.1 | 612.2 | 617.1 | 623.2 | 628.1 | 632.8 | 634.2 | 635.3 |
| 60° | 576.7 | 583.0 | 586.6 | 592.7 | 597.6 | 601.2 | 603.6 | 602.5 |
| 62.5° | 548.7 | 552.5 | 556.1 | 561.0 | 564.6 | 569.5 | 570.7 | 570.7 |
| 65° | 518.3 | 522.0 | 525.6 | 530.5 | 534.1 | 539.0 | 541.5 | 540.2 |
| 67.5° | 489.0 | 492.6 | 496.4 | 500.0 | 504.9 | 509.8 | 511.0 | 511.0 |
| 70° | 458.5 | 462.2 | 464.5 | 469.5 | 473.2 | 478.0 | 479.3 | 479.3 |
| 72.5° | 429.3 | 431.7 | 434.2 | 439.0 | 441.4 | 445.2 | 447.5 | 447.5 |
| 75° | 396.3 | 398.8 | 401.2 | 403.7 | 404.8 | 406.1 | 407.3 | 406.1 |
| 77.5° | 359.7 | 357.3 | 354.8 | 354.8 | 352.5 | 353.7 | 354.8 | 353.7 |
| 80° | 309.7 | 307.2 | 304.9 | 303.6 | 301.2 | 301.2 | 302.5 | 301.2 |
| 82.5° | 257.4 | 252.4 | 250.0 | 248.8 | 246.4 | 246.4 | 246.4 | 246.4 |
| 85° | 193.9 | 191.4 | 190.3 | 187.8 | 185.4 | 184.2 | 185.4 | 186.5 |
| 87.5° | 120.7 | 118.3 | 115.8 | 113.3 | 112.2 | 111.1 | 113.3 | 109.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976709

CATALOG NUMBER: 24SR-LD2-C-53-UNV-L930-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 | 11.4 | 13.1 | 11.7 | 13.5 | 13.8 | 14.4 | 16.2 | 14.7 | 16.5 | 16.8 |
| | 3H | 13.3 | 15.0 | 13.7 | 15.3 | 15.7 | 17.0 | 18.7 | 17.4 | 19.0 | 19.3 |
| | 4H | 14.1 | 15.7 | 14.5 | 16.0 | 16.4 | 18.3 | 19.8 | 18.7 | 20.2 | 20.5 |
| | 6H | 14.7 | 16.2 | 15.1 | 16.5 | 16.9 | 19.4 | 20.8 | 19.8 | 21.2 | 21.6 |
| | 8H | 14.9 | 16.3 | 15.4 | 16.7 | 17.1 | 19.9 | 21.3 | 20.3 | 21.6 | 22.0 |
| | 12H | 15.1 | 16.5 | 15.5 | 16.8 | 17.3 | 20.3 | 21.6 | 20.7 | 22.0 | 22.4 |
| 4H | 2H | 13.1 | 14.7 | 13.5 | 15.0 | 15.4 | 15.1 | 16.7 | 15.5 | 17.0 | 17.4 |
| | 3H | 15.6 | 16.9 | 16.0 | 17.3 | 17.7 | 18.0 | 19.4 | 18.4 | 19.8 | 20.2 |
| | 4H | 16.7 | 17.9 | 17.1 | 18.3 | 18.8 | 19.5 | 20.7 | 19.9 | 21.1 | 21.5 |
| | 6H | 17.6 | 18.7 | 18.1 | 19.1 | 19.6 | 20.8 | 21.9 | 21.2 | 22.3 | 22.8 |
| | 8H | 17.9 | 19.0 | 18.4 | 19.4 | 19.9 | 21.3 | 22.4 | 21.8 | 22.8 | 23.3 |
| | 12H | 18.2 | 19.1 | 18.7 | 19.6 | 20.1 | 21.9 | 22.8 | 22.3 | 23.3 | 23.7 |
| 8H | 4H | 17.9 | 18.9 | 18.4 | 19.4 | 19.8 | 20.0 | 21.1 | 20.5 | 21.5 | 22.0 |
| | 6H | 19.2 | 20.1 | 19.7 | 20.6 | 21.1 | 21.5 | 22.4 | 22.0 | 22.9 | 23.4 |
| | 8H | 19.8 | 20.6 | 20.3 | 21.1 | 21.6 | 22.2 | 23.0 | 22.7 | 23.5 | 24.0 |
| | 12H | 20.3 | 21.0 | 20.8 | 21.5 | 22.0 | 22.9 | 23.6 | 23.4 | 24.1 | 24.7 |
| 12H | 4H | 18.1 | 19.1 | 18.6 | 19.5 | 20.0 | 20.1 | 21.1 | 20.6 | 21.5 | 22.0 |
| | 6H | 19.7 | 20.5 | 20.2 | 20.9 | 21.4 | 21.7 | 22.5 | 22.3 | 23.0 | 23.5 |
| | 8H | 20.4 | 21.1 | 20.9 | 21.6 | 22.2 | 22.5 | 23.2 | 23.0 | 23.7 | 24.3 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-5

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L930-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L930-CD1-U

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-457-5
 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-L930-CD1-U**
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K): 2935
 CIE u': 0.2530
 CIE v': 0.5224
 Duv: -0.0002
 CIE x: 0.4413
 CIE y: 0.4049
 CIE z: 0.1538
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 583
 Purity: 53.99297
 Rf: 91.8
 Rg: 99.6

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 93.5 | | |
| R1: | 94.7 | R9: | 55.1 |
| R2: | 97.2 | R10: | 92.3 |
| R3: | 98.6 | R11: | 97.0 |
| R4: | 95.2 | R12: | 86.4 |
| R5: | 94.7 | R13: | 95.3 |
| R6: | 96.8 | R14: | 98.2 |
| R7: | 90.9 | R15: | 89.3 |
| R8: | 80.4 | | |



Test Conditions

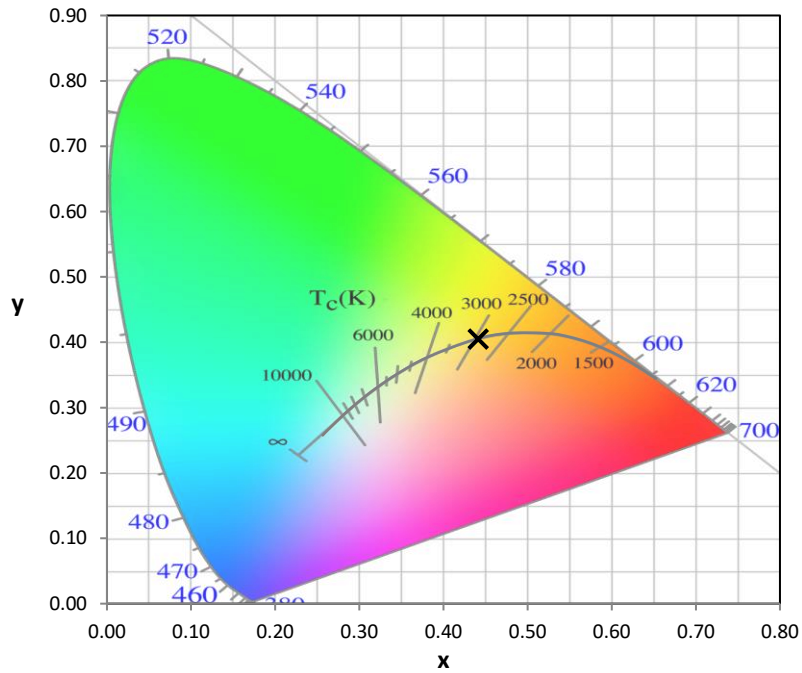
Stabilization Time: 40M
 Operation Time: 1H 40M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-457-5

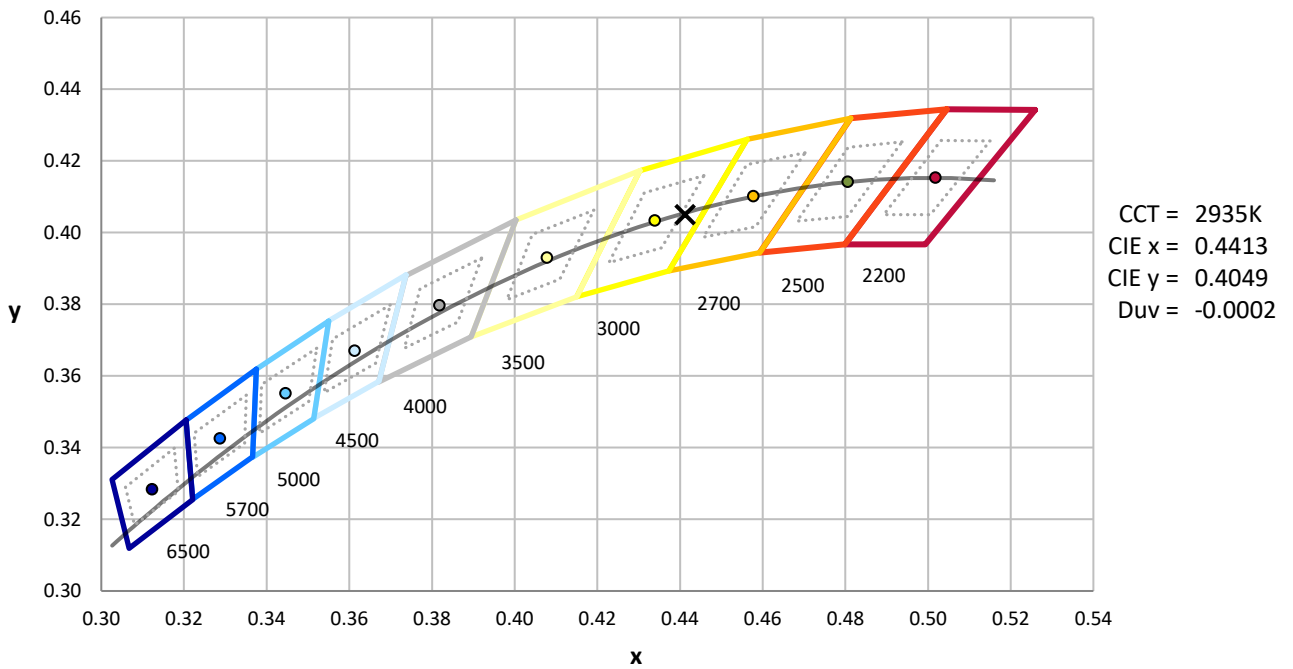
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | 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 = 2935K
 CIE x = 0.4413
 CIE y = 0.4049
 Duv = -0.0002

Point lies inside the ANSI 3000K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-5

Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 108 | NR | 620 | 338 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 129 | NR | 625 | 339 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 151 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 168 | NR | 635 | 695 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 179 | NR | 640 | 225 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 187 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 194 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 199 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 2 | NR | 530 | 205 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 2 | NR | 535 | 213 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 219 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 228 | NR | 675 | 87 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 12 | NR | 550 | 236 | NR | 680 | 74 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 20 | NR | 555 | 247 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 32 | NR | 560 | 257 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 50 | NR | 565 | 267 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 79 | NR | 570 | 277 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 133 | NR | 575 | 287 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 194 | NR | 580 | 297 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 168 | NR | 585 | 308 | NR | 715 | 24 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 117 | NR | 590 | 315 | NR | 720 | 20 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 101 | NR | 595 | 320 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 327 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 331 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 367 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 91 | NR | 615 | 398 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-5

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.4

| 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 | 108 | NR | 620 | 338 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 129 | NR | 625 | 339 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 151 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 168 | NR | 635 | 695 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 179 | NR | 640 | 225 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 187 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 194 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 199 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 2 | NR | 530 | 205 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 2 | NR | 535 | 213 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 219 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 228 | NR | 675 | 87 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 12 | NR | 550 | 236 | NR | 680 | 74 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 20 | NR | 555 | 247 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 32 | NR | 560 | 257 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 50 | NR | 565 | 267 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 79 | NR | 570 | 277 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 133 | NR | 575 | 287 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 194 | NR | 580 | 297 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 168 | NR | 585 | 308 | NR | 715 | 24 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 117 | NR | 590 | 315 | NR | 720 | 20 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 101 | NR | 595 | 320 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 327 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 331 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 367 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 91 | NR | 615 | 398 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-5

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.72

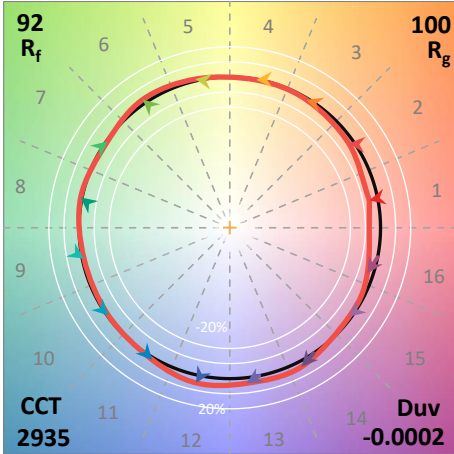
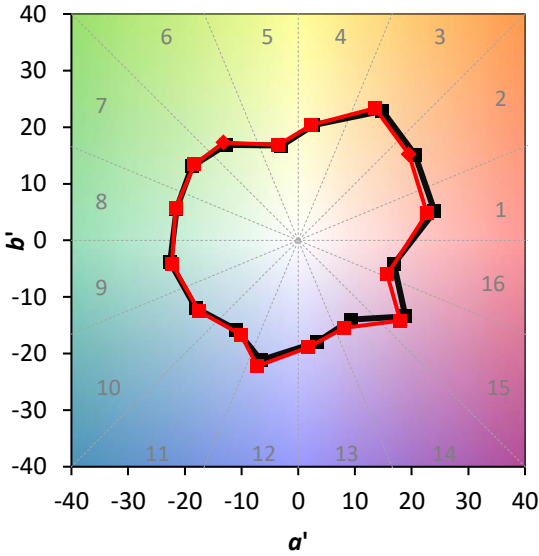
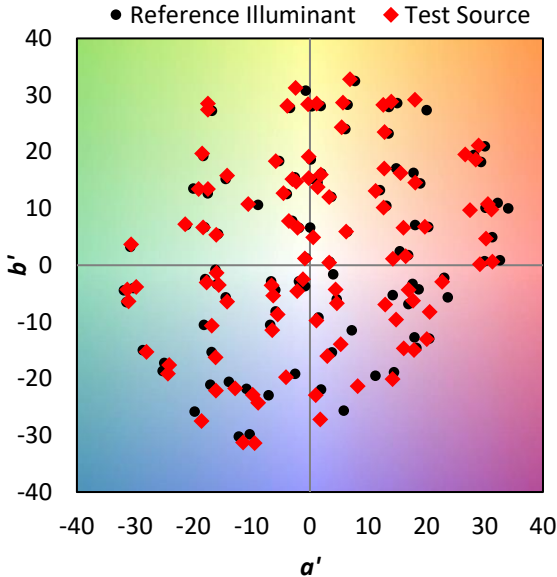
| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 108 | NR | 620 | 338 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 129 | NR | 625 | 339 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 151 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 168 | NR | 635 | 695 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 179 | NR | 640 | 225 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 187 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 194 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 1 | NR | 525 | 199 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 2 | NR | 530 | 205 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 2 | NR | 535 | 213 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 4 | NR | 540 | 219 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 7 | NR | 545 | 228 | NR | 675 | 87 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 12 | NR | 550 | 236 | NR | 680 | 74 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 20 | NR | 555 | 247 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 32 | NR | 560 | 257 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 50 | NR | 565 | 267 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 79 | NR | 570 | 277 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 133 | NR | 575 | 287 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 194 | NR | 580 | 297 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 168 | NR | 585 | 308 | NR | 715 | 24 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 117 | NR | 590 | 315 | NR | 720 | 20 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 101 | NR | 595 | 320 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 327 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 331 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 77 | NR | 610 | 367 | NR | 740 | 10 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 91 | NR | 615 | 398 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.8$
 $R_g = 99.6$
 $CIE R_a = 93.5$
 $R_9 = 55.1$



Color Vector Graphics

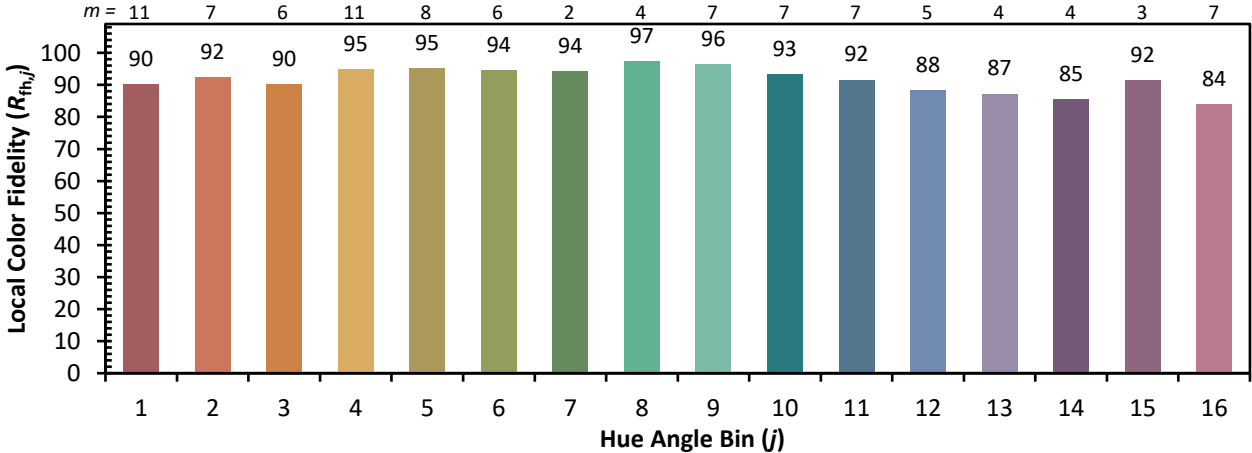


Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 94 | CES51 = 97 | CES76 = 91 |
| CES02 = 63 | CES27 = 95 | CES52 = 98 | CES77 = 84 |
| CES03 = 32 | CES28 = 97 | CES53 = 97 | CES78 = 88 |
| CES04 = 70 | CES29 = 94 | CES54 = 96 | CES79 = 88 |
| CES05 = 51 | CES30 = 98 | CES55 = 96 | CES80 = 90 |
| CES06 = 51 | CES31 = 95 | CES56 = 97 | CES81 = 70 |
| CES07 = 44 | CES32 = 87 | CES57 = 96 | CES82 = 96 |
| CES08 = 42 | CES33 = 96 | CES58 = 97 | CES83 = 93 |
| CES09 = 29 | CES34 = 95 | CES59 = 98 | CES84 = 96 |
| CES10 = 76 | CES35 = 97 | CES60 = 95 | CES85 = 79 |
| CES11 = 59 | CES36 = 88 | CES61 = 95 | CES86 = 75 |
| CES12 = 65 | CES37 = 96 | CES62 = 93 | CES87 = 92 |
| CES13 = 44 | CES38 = 95 | CES63 = 95 | CES88 = 96 |
| CES14 = 74 | CES39 = 98 | CES64 = 95 | CES89 = 82 |
| CES15 = 72 | CES40 = 96 | CES65 = 91 | CES90 = 97 |
| CES16 = 48 | CES41 = 96 | CES66 = 94 | CES91 = 82 |
| CES17 = 50 | CES42 = 95 | CES67 = 93 | CES92 = 77 |
| CES18 = 57 | CES43 = 94 | CES68 = 92 | CES93 = 86 |
| CES19 = 72 | CES44 = 99 | CES69 = 93 | CES94 = 72 |
| CES20 = 67 | CES45 = 97 | CES70 = 91 | CES95 = 85 |
| CES21 = 86 | CES46 = 95 | CES71 = 89 | CES96 = 92 |
| CES22 = 79 | CES47 = 88 | CES72 = 96 | CES97 = 95 |
| CES23 = 92 | CES48 = 94 | CES73 = 86 | CES98 = 94 |
| CES24 = 91 | CES49 = 95 | CES74 = 89 | CES99 = 91 |
| CES25 = 72 | CES50 = 98 | CES75 = 90 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)