

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: P976337

Luminaire Tested: 22SR-LD2-29-C-UNV-L840-CD1-U

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P976337  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 22SR-LD2-29-C-UNV-L840-CD1-U  
Description: METALUX SKYRIDGE 2x2 2900LM PACKAGE 80CRI 4000K CURVED REFLECTOR TROFFER  
Light Source: 4000K CCT, 80+ CRI LEDS  
Ballast/Driver: -

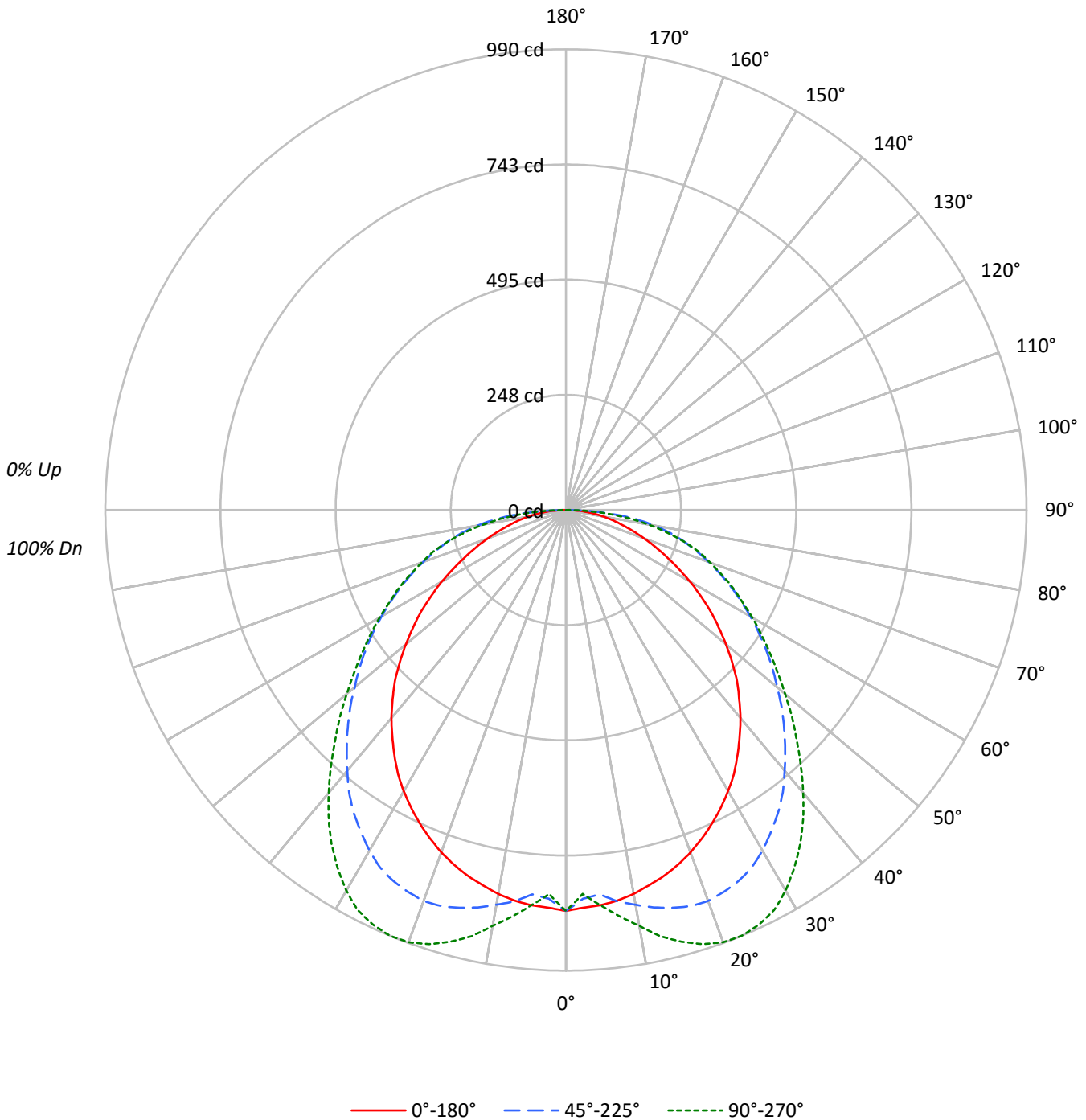
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2832.0 lumens  
Efficiency: N/A  
Efficacy: 139.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.51 / 1.48  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 20.3  
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: P976337  
CATALOG NUMBER: 22SR-LD2-29-C-UNV-L840-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P976337

CATALOG NUMBER: 22SR-LD2-29-C-UNV-L840-CD1-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 | 102 | 102 | 102 | 100 |
| 1   | 108 | 103 | 98  | 94  | 105 | 100 | 96  | 92  | 96  | 92  | 89  | 92  | 89  | 87  | 88  | 86  | 84  | 84  | 84  | 84  | 82  |
| 2   | 98  | 89  | 82  | 75  | 95  | 87  | 80  | 75  | 83  | 78  | 73  | 80  | 75  | 71  | 77  | 73  | 69  | 69  | 69  | 69  | 67  |
| 3   | 89  | 78  | 69  | 62  | 86  | 76  | 68  | 62  | 73  | 66  | 61  | 70  | 64  | 59  | 68  | 63  | 58  | 58  | 58  | 58  | 56  |
| 4   | 81  | 69  | 59  | 52  | 79  | 67  | 59  | 52  | 65  | 57  | 51  | 62  | 56  | 51  | 60  | 55  | 50  | 50  | 50  | 50  | 48  |
| 5   | 74  | 61  | 52  | 45  | 72  | 60  | 51  | 45  | 58  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 43  | 43  | 43  | 43  | 41  |
| 6   | 69  | 55  | 46  | 39  | 67  | 54  | 45  | 39  | 52  | 44  | 39  | 50  | 44  | 38  | 49  | 43  | 38  | 38  | 38  | 38  | 36  |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 40  | 34  | 47  | 40  | 34  | 46  | 39  | 34  | 45  | 38  | 34  | 34  | 34  | 34  | 32  |
| 8   | 59  | 45  | 37  | 31  | 58  | 45  | 36  | 31  | 43  | 36  | 30  | 42  | 35  | 30  | 41  | 35  | 30  | 30  | 30  | 30  | 28  |
| 9   | 55  | 42  | 33  | 28  | 54  | 41  | 33  | 27  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 32  | 27  | 27  | 27  | 27  | 25  |
| 10  | 52  | 38  | 30  | 25  | 51  | 38  | 30  | 25  | 37  | 30  | 25  | 36  | 29  | 25  | 35  | 29  | 24  | 24  | 24  | 24  | 23  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2318 | 2318 | 2318 |
| 5°  | 2303 | 2239 | 2303 |
| 10° | 2289 | 2353 | 2479 |
| 15° | 2268 | 2466 | 2676 |
| 20° | 2242 | 2560 | 2830 |
| 25° | 2207 | 2610 | 2917 |
| 30° | 2167 | 2626 | 2934 |
| 35° | 2111 | 2611 | 2883 |
| 40° | 2050 | 2569 | 2787 |
| 45° | 1979 | 2524 | 2671 |
| 50° | 1880 | 2480 | 2573 |
| 55° | 1781 | 2468 | 2509 |
| 60° | 1661 | 2465 | 2489 |
| 65° | 1524 | 2493 | 2521 |
| 70° | 1407 | 2569 | 2592 |
| 75° | 1320 | 2734 | 2734 |
| 80° | 1282 | 3000 | 2793 |
| 85° | 1275 | 3193 | 2736 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 85°  
 Luminance: 3328 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 81.0   | 2.9       |
| 10°-20°   | 248.6  | 8.8       |
| 20°-30°   | 397.3  | 14.0      |
| 30°-40°   | 480.5  | 17.0      |
| 40°-50°   | 487.4  | 17.2      |
| 50°-60°   | 439.0  | 15.5      |
| 60°-70°   | 355.4  | 12.5      |
| 70°-80°   | 248.0  | 8.8       |
| 80°-90°   | 94.8   | 3.3       |
| 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°    | 726.9  | 25.7      |
| 0°-40°    | 1207.4 | 42.6      |
| 0°-60°    | 2133.8 | 75.3      |
| 0°-90°    | 2832.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2832.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 861 | 861   | 861 | 861   | 861 |      |
| 5°  | 853 | 826   | 829 | 850   | 853 | 81   |
| 15° | 814 | 813   | 885 | 943   | 960 | 230  |
| 25° | 743 | 768   | 879 | 959   | 982 | 342  |
| 35° | 643 | 675   | 795 | 861   | 878 | 402  |
| 45° | 520 | 563   | 663 | 697   | 702 | 400  |
| 55° | 380 | 448   | 526 | 535   | 535 | 339  |
| 65° | 239 | 332   | 392 | 389   | 396 | 238  |
| 75° | 127 | 222   | 263 | 260   | 263 | 136  |
| 85° | 41  | 92    | 103 | 93    | 89  | 45   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P976337  
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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 25°   | 30°   | 35°   | 40°   | 45°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 |
| 2.5°  | 855.4 | 856.9 | 855.4 | 854.0 | 852.6 | 851.0 | 849.6 | 846.6 | 842.1 | 839.2 | 836.2 |
| 5°    | 852.6 | 852.6 | 846.6 | 837.7 | 830.3 | 825.9 | 821.5 | 818.6 | 820.0 | 824.5 | 828.9 |
| 7.5°  | 846.6 | 843.7 | 830.3 | 818.6 | 812.6 | 812.6 | 815.6 | 825.9 | 836.2 | 843.7 | 848.0 |
| 10°   | 837.7 | 831.8 | 812.6 | 803.7 | 811.1 | 817.0 | 824.5 | 834.8 | 840.7 | 849.6 | 861.3 |
| 12.5° | 825.9 | 817.0 | 794.9 | 797.8 | 812.6 | 820.0 | 824.5 | 833.2 | 848.0 | 862.9 | 874.7 |
| 15°   | 814.0 | 799.4 | 780.0 | 793.4 | 808.1 | 812.6 | 818.6 | 836.2 | 852.6 | 867.2 | 885.0 |
| 17.5° | 799.4 | 780.0 | 766.8 | 783.0 | 796.4 | 805.2 | 815.6 | 833.2 | 852.6 | 873.2 | 892.4 |
| 20°   | 783.0 | 760.8 | 753.5 | 771.3 | 787.5 | 797.8 | 806.7 | 828.9 | 851.0 | 871.8 | 893.9 |
| 22.5° | 763.8 | 737.3 | 737.3 | 753.5 | 774.2 | 783.0 | 794.9 | 820.0 | 842.1 | 865.8 | 888.0 |
| 25°   | 743.2 | 715.1 | 718.1 | 735.7 | 756.5 | 768.3 | 780.0 | 805.2 | 831.8 | 854.0 | 879.1 |
| 27.5° | 721.1 | 691.4 | 697.3 | 715.1 | 734.3 | 749.1 | 762.4 | 788.9 | 814.0 | 840.7 | 865.8 |
| 30°   | 697.3 | 667.9 | 672.2 | 690.0 | 712.2 | 727.0 | 740.2 | 766.8 | 793.4 | 821.5 | 845.1 |
| 32.5° | 672.2 | 642.7 | 647.1 | 664.9 | 688.5 | 701.9 | 715.1 | 741.7 | 771.3 | 797.8 | 820.0 |
| 35°   | 642.7 | 616.1 | 620.6 | 638.2 | 661.9 | 675.2 | 688.5 | 718.1 | 744.6 | 769.7 | 794.9 |
| 37.5° | 613.1 | 588.0 | 591.0 | 610.1 | 635.3 | 648.7 | 661.9 | 690.0 | 716.5 | 741.7 | 765.4 |
| 40°   | 583.6 | 559.9 | 564.4 | 582.1 | 607.2 | 619.0 | 632.3 | 661.9 | 688.5 | 712.2 | 731.4 |
| 42.5° | 551.2 | 531.8 | 536.3 | 554.0 | 577.7 | 591.0 | 605.8 | 632.3 | 657.4 | 679.6 | 697.3 |
| 45°   | 520.1 | 503.7 | 506.7 | 524.5 | 548.2 | 562.9 | 576.3 | 604.2 | 627.9 | 645.7 | 663.3 |
| 47.5° | 484.6 | 471.3 | 478.6 | 496.4 | 520.1 | 533.4 | 548.2 | 574.7 | 595.5 | 614.7 | 629.3 |
| 50°   | 449.1 | 438.8 | 447.7 | 466.9 | 490.5 | 506.7 | 520.1 | 543.7 | 564.4 | 582.1 | 592.5 |
| 52.5° | 413.7 | 409.2 | 418.1 | 437.3 | 462.4 | 475.8 | 489.1 | 514.2 | 534.8 | 549.6 | 559.9 |
| 55°   | 379.7 | 376.8 | 388.6 | 409.2 | 435.9 | 447.7 | 461.0 | 484.6 | 503.7 | 517.2 | 526.0 |
| 57.5° | 342.7 | 344.3 | 357.6 | 381.1 | 406.2 | 419.6 | 431.4 | 453.5 | 472.8 | 483.1 | 492.0 |
| 60°   | 308.7 | 310.3 | 327.9 | 351.6 | 378.2 | 391.6 | 403.3 | 424.0 | 440.3 | 450.7 | 458.0 |
| 62.5° | 271.9 | 280.7 | 300.0 | 322.1 | 348.7 | 361.9 | 375.3 | 394.5 | 410.8 | 419.6 | 424.0 |
| 65°   | 239.3 | 249.8 | 271.9 | 295.5 | 322.1 | 332.4 | 345.7 | 364.9 | 378.2 | 387.1 | 391.6 |
| 67.5° | 208.3 | 221.7 | 243.8 | 268.9 | 294.1 | 307.3 | 317.6 | 335.4 | 347.3 | 354.6 | 359.0 |
| 70°   | 178.8 | 195.0 | 218.7 | 242.3 | 266.0 | 277.7 | 288.1 | 305.8 | 316.2 | 323.6 | 326.5 |
| 72.5° | 152.1 | 168.5 | 193.6 | 215.8 | 237.9 | 251.2 | 260.1 | 276.3 | 286.6 | 292.5 | 294.1 |
| 75°   | 127.0 | 144.8 | 166.9 | 189.1 | 211.2 | 221.7 | 232.0 | 245.2 | 255.5 | 261.5 | 263.0 |
| 77.5° | 104.8 | 121.2 | 143.4 | 164.0 | 183.2 | 192.0 | 202.3 | 215.8 | 224.6 | 229.0 | 230.4 |
| 80°   | 82.7  | 99.1  | 118.2 | 137.4 | 155.1 | 161.0 | 169.9 | 181.7 | 192.0 | 193.6 | 193.6 |
| 82.5° | 62.1  | 76.8  | 93.1  | 109.4 | 124.2 | 130.0 | 135.9 | 146.3 | 152.1 | 153.7 | 152.1 |
| 85°   | 41.3  | 51.6  | 63.5  | 75.4  | 87.2  | 91.6  | 97.5  | 104.8 | 104.8 | 107.8 | 103.4 |
| 87.5° | 20.7  | 25.1  | 32.5  | 37.0  | 44.3  | 47.3  | 50.2  | 51.6  | 51.6  | 51.6  | 50.2  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



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**CANDELA DISTRIBUTION (continued):**

|       | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 | 861.3 |
| 2.5°  | 833.2 | 831.8 | 828.9 | 828.9 | 828.9 | 827.4 | 827.4 | 827.4 | 825.9 | 825.9 |
| 5°    | 834.8 | 839.2 | 845.1 | 849.6 | 849.6 | 849.6 | 851.0 | 851.0 | 852.6 | 852.6 |
| 7.5°  | 852.6 | 856.9 | 862.9 | 867.2 | 870.2 | 871.8 | 876.1 | 877.7 | 880.5 | 880.5 |
| 10°   | 873.2 | 880.5 | 888.0 | 892.4 | 896.9 | 899.8 | 901.2 | 907.2 | 907.2 | 907.2 |
| 12.5° | 886.4 | 898.3 | 908.6 | 919.0 | 923.4 | 926.4 | 930.7 | 933.7 | 938.2 | 938.2 |
| 15°   | 901.2 | 914.5 | 926.4 | 938.2 | 942.6 | 947.1 | 953.0 | 957.4 | 958.8 | 960.4 |
| 17.5° | 908.6 | 925.0 | 938.2 | 950.1 | 954.4 | 958.8 | 967.7 | 973.6 | 976.6 | 978.1 |
| 20°   | 911.5 | 929.3 | 945.6 | 958.8 | 964.7 | 969.3 | 978.1 | 983.9 | 988.4 | 988.4 |
| 22.5° | 910.1 | 927.9 | 945.6 | 960.4 | 966.3 | 970.7 | 979.6 | 985.5 | 988.4 | 989.9 |
| 25°   | 902.8 | 920.4 | 938.2 | 953.0 | 958.8 | 963.3 | 972.2 | 978.1 | 982.5 | 982.5 |
| 27.5° | 888.0 | 907.2 | 923.4 | 938.2 | 942.6 | 950.1 | 957.4 | 963.3 | 967.7 | 969.3 |
| 30°   | 867.2 | 886.4 | 904.2 | 916.1 | 922.0 | 926.4 | 933.7 | 941.2 | 942.6 | 944.1 |
| 32.5° | 842.1 | 861.3 | 876.1 | 888.0 | 893.9 | 898.3 | 905.6 | 911.5 | 914.5 | 913.1 |
| 35°   | 814.0 | 830.3 | 845.1 | 856.9 | 861.3 | 864.3 | 871.8 | 874.7 | 877.7 | 877.7 |
| 37.5° | 783.0 | 796.4 | 811.1 | 820.0 | 822.9 | 825.9 | 831.8 | 836.2 | 836.2 | 837.7 |
| 40°   | 746.2 | 760.8 | 771.3 | 780.0 | 783.0 | 784.6 | 790.5 | 791.9 | 793.4 | 793.4 |
| 42.5° | 712.2 | 724.0 | 731.4 | 737.3 | 740.2 | 743.2 | 746.2 | 746.2 | 746.2 | 747.6 |
| 45°   | 675.2 | 684.1 | 691.4 | 695.9 | 697.3 | 698.9 | 700.3 | 701.9 | 701.9 | 701.9 |
| 47.5° | 639.8 | 647.1 | 651.6 | 656.0 | 656.0 | 657.4 | 657.4 | 659.0 | 659.0 | 659.0 |
| 50°   | 601.4 | 607.2 | 610.1 | 613.1 | 613.1 | 613.1 | 614.7 | 614.7 | 614.7 | 614.7 |
| 52.5° | 565.8 | 570.4 | 571.8 | 573.3 | 573.3 | 574.7 | 574.7 | 573.3 | 574.7 | 573.3 |
| 55°   | 530.4 | 533.4 | 534.8 | 533.4 | 534.8 | 534.8 | 534.8 | 533.4 | 534.8 | 534.8 |
| 57.5° | 495.0 | 496.4 | 496.4 | 495.0 | 496.4 | 495.0 | 495.0 | 496.4 | 498.0 | 498.0 |
| 60°   | 459.4 | 459.4 | 458.0 | 458.0 | 458.0 | 458.0 | 458.0 | 461.0 | 461.0 | 462.4 |
| 62.5° | 425.6 | 425.6 | 424.0 | 422.6 | 422.6 | 422.6 | 424.0 | 425.6 | 427.0 | 427.0 |
| 65°   | 391.6 | 391.6 | 390.0 | 388.6 | 388.6 | 388.6 | 390.0 | 391.6 | 393.0 | 395.9 |
| 67.5° | 360.5 | 357.6 | 357.6 | 356.0 | 356.0 | 356.0 | 359.0 | 360.5 | 361.9 | 361.9 |
| 70°   | 325.1 | 325.1 | 322.1 | 323.6 | 323.6 | 323.6 | 325.1 | 326.5 | 327.9 | 329.5 |
| 72.5° | 294.1 | 292.5 | 291.1 | 292.5 | 292.5 | 292.5 | 294.1 | 297.0 | 298.4 | 300.0 |
| 75°   | 263.0 | 261.5 | 261.5 | 260.1 | 260.1 | 261.5 | 261.5 | 263.0 | 263.0 | 263.0 |
| 77.5° | 230.4 | 226.1 | 224.6 | 221.7 | 221.7 | 221.7 | 221.7 | 221.7 | 221.7 | 221.7 |
| 80°   | 192.0 | 186.1 | 181.7 | 181.7 | 180.2 | 180.2 | 180.2 | 180.2 | 178.8 | 180.2 |
| 82.5° | 147.7 | 144.8 | 140.4 | 138.8 | 138.8 | 138.8 | 135.9 | 135.9 | 135.9 | 138.8 |
| 85°   | 100.5 | 99.1  | 94.5  | 93.1  | 93.1  | 91.6  | 90.2  | 90.2  | 91.6  | 88.6  |
| 87.5° | 48.8  | 47.3  | 44.3  | 44.3  | 44.3  | 42.9  | 42.9  | 41.3  | 42.9  | 41.3  |
| 90°   | 0.0   | 0.0   | 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 | 14.0             | 15.6 | 14.3 | 16.0 | 16.3 | 15.5           | 17.2 | 15.8 | 17.5 | 17.8 |
|                 | 3H   | 15.7             | 17.2 | 16.1 | 17.5 | 17.9 | 17.7           | 19.2 | 18.0 | 19.5 | 19.9 |
|                 | 4H   | 16.3             | 17.8 | 16.7 | 18.1 | 18.5 | 18.7           | 20.1 | 19.1 | 20.4 | 20.8 |
|                 | 6H   | 16.9             | 18.2 | 17.3 | 18.6 | 19.0 | 19.5           | 20.8 | 19.9 | 21.2 | 21.6 |
|                 | 8H   | 17.1             | 18.3 | 17.5 | 18.7 | 19.1 | 19.8           | 21.1 | 20.2 | 21.5 | 21.9 |
|                 | 12H  | 17.2             | 18.4 | 17.6 | 18.8 | 19.2 | 20.1           | 21.3 | 20.5 | 21.7 | 22.1 |
| 4H              | 2H   | 15.1             | 16.5 | 15.5 | 16.9 | 17.3 | 16.2           | 17.6 | 16.6 | 18.0 | 18.4 |
|                 | 3H   | 17.3             | 18.5 | 17.7 | 18.9 | 19.3 | 18.6           | 19.8 | 19.0 | 20.2 | 20.6 |
|                 | 4H   | 18.2             | 19.3 | 18.6 | 19.7 | 20.1 | 19.8           | 20.9 | 20.2 | 21.3 | 21.7 |
|                 | 6H   | 18.9             | 19.9 | 19.4 | 20.3 | 20.8 | 20.8           | 21.8 | 21.2 | 22.2 | 22.7 |
|                 | 8H   | 19.2             | 20.1 | 19.6 | 20.5 | 21.0 | 21.2           | 22.1 | 21.6 | 22.5 | 23.0 |
|                 | 12H  | 19.4             | 20.2 | 19.8 | 20.7 | 21.1 | 21.5           | 22.3 | 22.0 | 22.8 | 23.3 |
| 8H              | 4H   | 18.9             | 19.8 | 19.4 | 20.3 | 20.8 | 20.2           | 21.2 | 20.7 | 21.6 | 22.1 |
|                 | 6H   | 20.0             | 20.8 | 20.5 | 21.2 | 21.7 | 21.4           | 22.2 | 21.9 | 22.7 | 23.2 |
|                 | 8H   | 20.4             | 21.1 | 20.9 | 21.6 | 22.1 | 21.9           | 22.6 | 22.4 | 23.1 | 23.6 |
|                 | 12H  | 20.8             | 21.4 | 21.3 | 21.9 | 22.4 | 22.3           | 23.0 | 22.9 | 23.5 | 24.0 |
| 12H             | 4H   | 19.1             | 19.9 | 19.5 | 20.4 | 20.8 | 20.3           | 21.2 | 20.8 | 21.6 | 22.1 |
|                 | 6H   | 20.2             | 20.9 | 20.7 | 21.4 | 21.9 | 21.6           | 22.3 | 22.1 | 22.7 | 23.3 |
|                 | 8H   | 20.8             | 21.4 | 21.3 | 21.9 | 22.5 | 22.1           | 22.8 | 22.6 | 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: SP1-2506-457-7

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L940-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L940-CD1-U

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2506-457-7  
 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-L940-CD1-U**  
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

**Spectral Parameters**

CCT (K): 3850  
 CIE u': 0.2283  
 CIE v': 0.5037  
 Duv: -0.0006  
 CIE x: 0.3868  
 CIE y: 0.3794  
 CIE z: 0.2338  
 Peak Wavelength (nm): 630  
 Dominant Wavelength (nm): 579  
 Purity: 29.94798  
 Rf: 91.3  
 Rg: 99.8

CRI (Ra): 94.0  
 R1: 95.3  
 R2: 96.3  
 R3: 95.7  
 R4: 95.2  
 R5: 94.4  
 R6: 94.3  
 R7: 94.1  
 R8: 86.7  
 R9: 65.3  
 R10: 89.6  
 R11: 95.5  
 R12: 76.1  
 R13: 95.5  
 R14: 96.8  
 R15: 92.3



**Test Conditions**

Stabilization Time: 38M  
 Operation Time: 1H 38M  
 Sphere Temperature (°C): 24.4

REPORT NUMBER: SP1-2506-457-7

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | 76INCH SPHERE IN0058  | 6/16/2025        | 12/16/2025           |
| Power Meter                    | XITRON INXT2011004    | 1/21/2025        | 1/21/2026            |
| AC Power Source                | CHROMA 61603 IN0063   | 10/22/2024       | 10/22/2025           |
| DC Power Source                | AGILENT E3634A IN0208 | 10/22/2024       | 10/22/2025           |
| Sphere Thermometer             | ONSET IN0085          | 10/22/2024       | 10/22/2025           |
| Room Thermometer               | ONSET IN0046          | 10/22/2024       | 10/22/2025           |

REPORT NUMBER: SP1-2506-457-7

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2506-457-7

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

| 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    | 173                      | NR            | 620    | 343                      | NR            | 750    | 8                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 201                      | NR            | 625    | 342                      | NR            | 755    | 7                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 231                      | NR            | 630    | 1000                     | NR            | 760    | 6                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 253                      | NR            | 635    | 692                      | NR            | 765    | 5                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 268                      | NR            | 640    | 226                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 1                        | NR            | 515    | 277                      | NR            | 645    | 214                      | NR            | 775    | 4                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 284                      | NR            | 650    | 190                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 3                        | NR            | 525    | 290                      | NR            | 655    | 160                      | NR            | 785    | 3                        | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 296                      | NR            | 660    | 136                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 5                        | NR            | 535    | 303                      | NR            | 665    | 115                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 8                        | NR            | 540    | 310                      | NR            | 670    | 106                      | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 13                       | NR            | 545    | 316                      | NR            | 675    | 87                       | NR            | 805    | 2                        | NR            | 935    | 0                        | NR            |
| 420    | 22                       | NR            | 550    | 323                      | NR            | 680    | 75                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 37                       | NR            | 555    | 330                      | NR            | 685    | 64                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 62                       | NR            | 560    | 335                      | NR            | 690    | 55                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 102                      | NR            | 565    | 340                      | NR            | 695    | 47                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 164                      | NR            | 570    | 342                      | NR            | 700    | 40                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 281                      | NR            | 575    | 345                      | NR            | 705    | 34                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 423                      | NR            | 580    | 348                      | NR            | 710    | 29                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 384                      | NR            | 585    | 350                      | NR            | 715    | 25                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 256                      | NR            | 590    | 351                      | NR            | 720    | 21                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 208                      | NR            | 595    | 348                      | NR            | 725    | 17                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 169                      | NR            | 600    | 348                      | NR            | 730    | 14                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 135                      | NR            | 605    | 347                      | NR            | 735    | 12                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 133                      | NR            | 610    | 379                      | NR            | 740    | 11                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 149                      | NR            | 615    | 406                      | NR            | 745    | 9                        | NR            | 875    | 0                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2506-457-7

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.74**

| 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    | 173                      | NR            | 620    | 343                      | NR            | 750    | 8                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 201                      | NR            | 625    | 342                      | NR            | 755    | 7                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 231                      | NR            | 630    | 1000                     | NR            | 760    | 6                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 253                      | NR            | 635    | 692                      | NR            | 765    | 5                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 268                      | NR            | 640    | 226                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 1                        | NR            | 515    | 277                      | NR            | 645    | 214                      | NR            | 775    | 4                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 284                      | NR            | 650    | 190                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 3                        | NR            | 525    | 290                      | NR            | 655    | 160                      | NR            | 785    | 3                        | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 296                      | NR            | 660    | 136                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 5                        | NR            | 535    | 303                      | NR            | 665    | 115                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 8                        | NR            | 540    | 310                      | NR            | 670    | 106                      | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 13                       | NR            | 545    | 316                      | NR            | 675    | 87                       | NR            | 805    | 2                        | NR            | 935    | 0                        | NR            |
| 420    | 22                       | NR            | 550    | 323                      | NR            | 680    | 75                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 37                       | NR            | 555    | 330                      | NR            | 685    | 64                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 62                       | NR            | 560    | 335                      | NR            | 690    | 55                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 102                      | NR            | 565    | 340                      | NR            | 695    | 47                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 164                      | NR            | 570    | 342                      | NR            | 700    | 40                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 281                      | NR            | 575    | 345                      | NR            | 705    | 34                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 423                      | NR            | 580    | 348                      | NR            | 710    | 29                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 384                      | NR            | 585    | 350                      | NR            | 715    | 25                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 256                      | NR            | 590    | 351                      | NR            | 720    | 21                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 208                      | NR            | 595    | 348                      | NR            | 725    | 17                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 169                      | NR            | 600    | 348                      | NR            | 730    | 14                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 135                      | NR            | 605    | 347                      | NR            | 735    | 12                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 133                      | NR            | 610    | 379                      | NR            | 740    | 11                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 149                      | NR            | 615    | 406                      | NR            | 745    | 9                        | NR            | 875    | 0                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2506-457-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.6

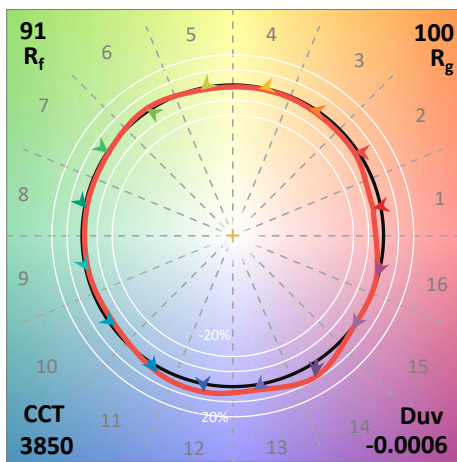
| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 173                      | NR            | 620    | 343                      | NR            | 750    | 8                        | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 201                      | NR            | 625    | 342                      | NR            | 755    | 7                        | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 231                      | NR            | 630    | 1000                     | NR            | 760    | 6                        | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 253                      | NR            | 635    | 692                      | NR            | 765    | 5                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 268                      | NR            | 640    | 226                      | NR            | 770    | 4                        | NR            | 900    | 0                        | NR            |
| 385    | 1                        | NR            | 515    | 277                      | NR            | 645    | 214                      | NR            | 775    | 4                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 284                      | NR            | 650    | 190                      | NR            | 780    | 3                        | NR            | 910    | 0                        | NR            |
| 395    | 3                        | NR            | 525    | 290                      | NR            | 655    | 160                      | NR            | 785    | 3                        | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 296                      | NR            | 660    | 136                      | NR            | 790    | 2                        | NR            | 920    | 0                        | NR            |
| 405    | 5                        | NR            | 535    | 303                      | NR            | 665    | 115                      | NR            | 795    | 2                        | NR            | 925    | 0                        | NR            |
| 410    | 8                        | NR            | 540    | 310                      | NR            | 670    | 106                      | NR            | 800    | 2                        | NR            | 930    | 0                        | NR            |
| 415    | 13                       | NR            | 545    | 316                      | NR            | 675    | 87                       | NR            | 805    | 2                        | NR            | 935    | 0                        | NR            |
| 420    | 22                       | NR            | 550    | 323                      | NR            | 680    | 75                       | NR            | 810    | 1                        | NR            | 940    | 0                        | NR            |
| 425    | 37                       | NR            | 555    | 330                      | NR            | 685    | 64                       | NR            | 815    | 1                        | NR            | 945    | 0                        | NR            |
| 430    | 62                       | NR            | 560    | 335                      | NR            | 690    | 55                       | NR            | 820    | 1                        | NR            | 950    | 0                        | NR            |
| 435    | 102                      | NR            | 565    | 340                      | NR            | 695    | 47                       | NR            | 825    | 1                        | NR            | 955    | 0                        | NR            |
| 440    | 164                      | NR            | 570    | 342                      | NR            | 700    | 40                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 281                      | NR            | 575    | 345                      | NR            | 705    | 34                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 423                      | NR            | 580    | 348                      | NR            | 710    | 29                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 384                      | NR            | 585    | 350                      | NR            | 715    | 25                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 256                      | NR            | 590    | 351                      | NR            | 720    | 21                       | NR            | 850    | 0                        | NR            | 980    | 0                        | NR            |
| 465    | 208                      | NR            | 595    | 348                      | NR            | 725    | 17                       | NR            | 855    | 0                        | NR            | 985    | 0                        | NR            |
| 470    | 169                      | NR            | 600    | 348                      | NR            | 730    | 14                       | NR            | 860    | 0                        | NR            | 990    | 0                        | NR            |
| 475    | 135                      | NR            | 605    | 347                      | NR            | 735    | 12                       | NR            | 865    | 0                        | NR            | 995    | 0                        | NR            |
| 480    | 133                      | NR            | 610    | 379                      | NR            | 740    | 11                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 149                      | NR            | 615    | 406                      | NR            | 745    | 9                        | NR            | 875    | 0                        | NR            |        |                          |               |

**Summary**

$R_f = 91.3$   
 $R_g = 99.8$   
 $CIE R_a = 94.0$   
 $R_9 = 65.3$



**Color Vector Graphics**

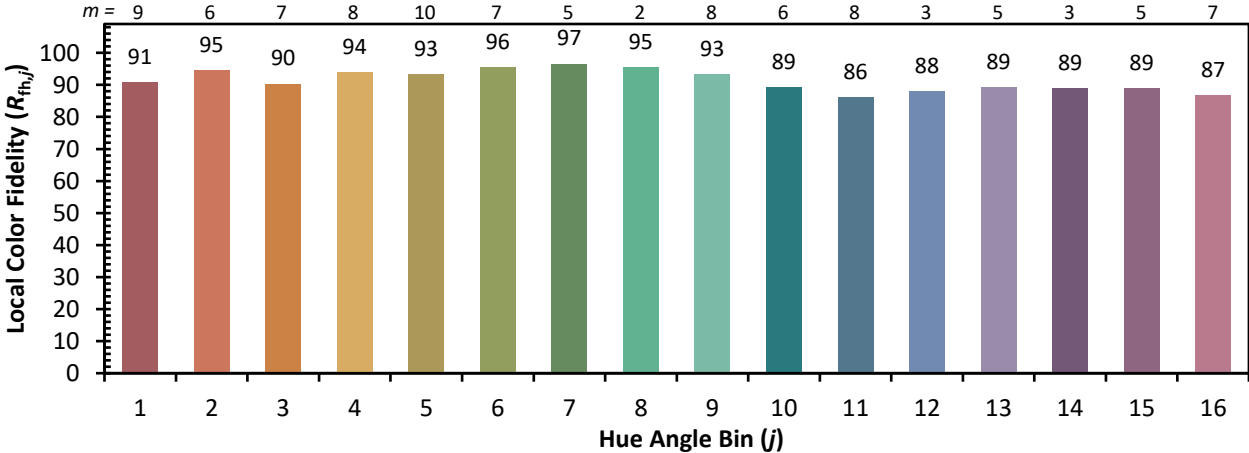


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

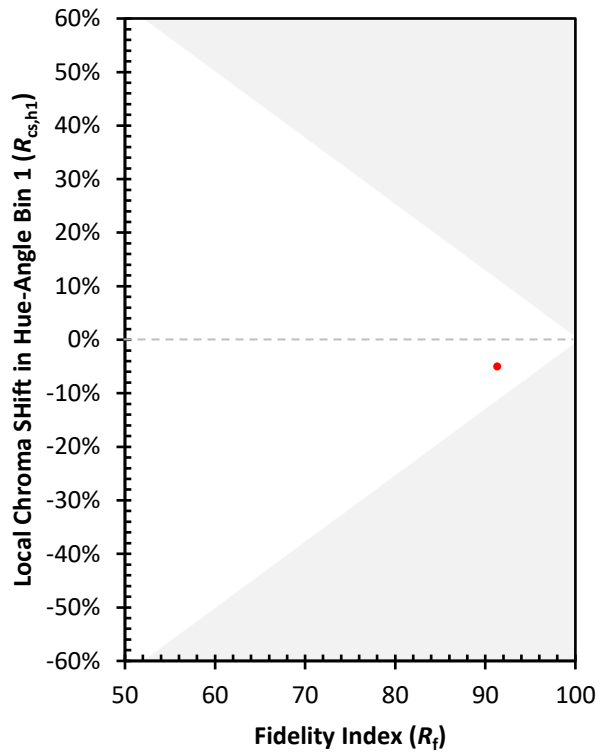
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 93 | CES51 = 98 | CES76 = 87 |
| CES02 = 62 | CES27 = 91 | CES52 = 99 | CES77 = 88 |
| CES03 = 31 | CES28 = 96 | CES53 = 97 | CES78 = 83 |
| CES04 = 69 | CES29 = 96 | CES54 = 94 | CES79 = 93 |
| CES05 = 49 | CES30 = 93 | CES55 = 92 | CES80 = 92 |
| CES06 = 50 | CES31 = 96 | CES56 = 95 | CES81 = 79 |
| CES07 = 42 | CES32 = 88 | CES57 = 94 | CES82 = 96 |
| CES08 = 41 | CES33 = 99 | CES58 = 95 | CES83 = 95 |
| CES09 = 29 | CES34 = 93 | CES59 = 97 | CES84 = 94 |
| CES10 = 74 | CES35 = 96 | CES60 = 93 | CES85 = 81 |
| CES11 = 57 | CES36 = 81 | CES61 = 92 | CES86 = 83 |
| CES12 = 63 | CES37 = 94 | CES62 = 87 | CES87 = 92 |
| CES13 = 43 | CES38 = 88 | CES63 = 93 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 85 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 97 |
| CES16 = 47 | CES41 = 97 | CES66 = 88 | CES91 = 73 |
| CES17 = 49 | CES42 = 93 | CES67 = 87 | CES92 = 77 |
| CES18 = 56 | CES43 = 93 | CES68 = 88 | CES93 = 86 |
| CES19 = 71 | CES44 = 99 | CES69 = 89 | CES94 = 76 |
| CES20 = 66 | CES45 = 96 | CES70 = 86 | CES95 = 83 |
| CES21 = 85 | CES46 = 97 | CES71 = 81 | CES96 = 92 |
| CES22 = 78 | CES47 = 93 | CES72 = 94 | CES97 = 95 |
| CES23 = 91 | CES48 = 92 | CES73 = 80 | CES98 = 95 |
| CES24 = 90 | CES49 = 96 | CES74 = 91 | CES99 = 93 |
| CES25 = 71 | CES50 = 98 | CES75 = 83 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)