

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: P976824

Luminaire Tested: 24SR-LD2-C-45-UNV-L840-CD1-PG-U

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P976824  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24SR-LD2-C-45-UNV-L840-CD1-PG-U  
Description: METALUX SKYRIDGE 2x4 4500LM PACKAGE 80CRI 4000K TROFFER with Primary Green SKYTRII  
Light Source: 4000K CCT, 80+ CRI LEDS  
Ballast/Driver: -

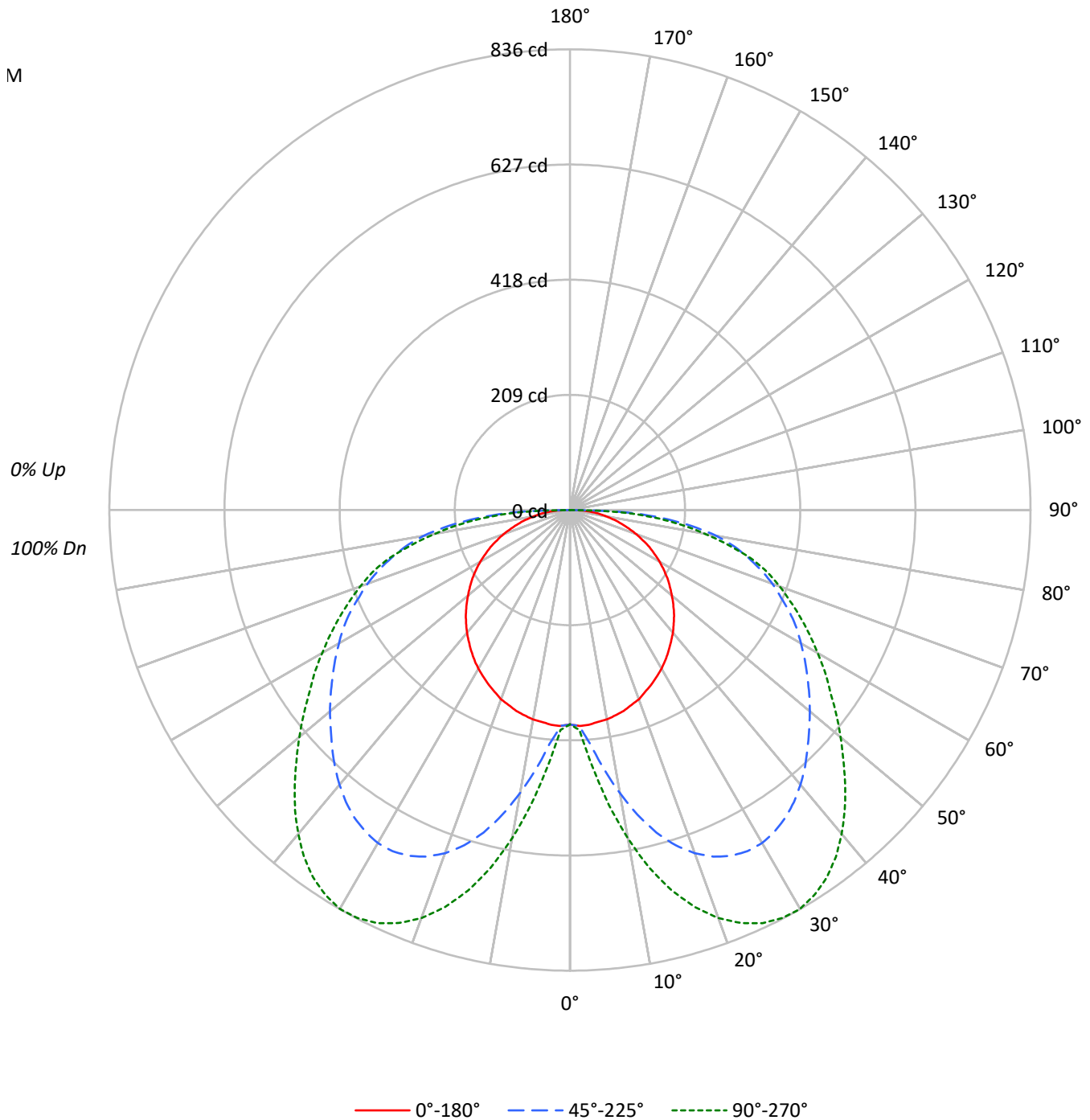
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2593.0 lumens  
Efficiency: N/A  
Efficacy: 81.3 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 2.25 / 2.05  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

TEST NUMBER: P976824  
CATALOG NUMBER: 24SR-LD2-C-45-UNV-L840-CD1-PG-U

### Luminous Intensity Polar Plot





TEST NUMBER: P976824

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

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

|     | 0°  | 45°  | 90°  |
|-----|-----|------|------|
| 0°  | 523 | 523  | 523  |
| 5°  | 528 | 576  | 631  |
| 10° | 527 | 712  | 826  |
| 15° | 525 | 844  | 996  |
| 20° | 523 | 949  | 1128 |
| 25° | 519 | 1028 | 1228 |
| 30° | 516 | 1084 | 1298 |
| 35° | 513 | 1120 | 1336 |
| 40° | 511 | 1143 | 1348 |
| 45° | 508 | 1161 | 1344 |
| 50° | 506 | 1190 | 1342 |
| 55° | 506 | 1233 | 1354 |
| 60° | 506 | 1303 | 1397 |
| 65° | 507 | 1402 | 1470 |
| 70° | 505 | 1539 | 1593 |
| 75° | 505 | 1744 | 1772 |
| 80° | 521 | 2095 | 1929 |
| 85° | 610 | 2606 | 2342 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 87.5°  
 Luminance: 3230 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 43.3   | 1.7       |
| 10°-20°   | 163.7  | 6.3       |
| 20°-30°   | 297.8  | 11.5      |
| 30°-40°   | 395.1  | 15.2      |
| 40°-50°   | 432.8  | 16.7      |
| 50°-60°   | 425.4  | 16.4      |
| 60°-70°   | 385.9  | 14.9      |
| 70°-80°   | 305.8  | 11.8      |
| 80°-90°   | 143.3  | 5.5       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 504.8  | 19.5      |
| 0°-40°    | 899.8  | 34.7      |
| 0°-60°    | 1758.0 | 67.8      |
| 0°-90°    | 2593.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2593.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 389 | 389   | 389 | 389   | 389 |      |
| 5°  | 391 | 394   | 426 | 456   | 467 | 37   |
| 15° | 377 | 469   | 606 | 688   | 715 | 106  |
| 25° | 350 | 517   | 692 | 791   | 827 | 161  |
| 35° | 312 | 505   | 682 | 779   | 813 | 195  |
| 45° | 267 | 454   | 610 | 684   | 706 | 206  |
| 55° | 216 | 399   | 526 | 567   | 577 | 193  |
| 65° | 159 | 344   | 440 | 453   | 462 | 157  |
| 75° | 97  | 266   | 336 | 336   | 341 | 103  |
| 85° | 40  | 143   | 169 | 152   | 152 | 41   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 |
| 2.5°  | 392.2 | 391.2 | 391.2 | 391.2 | 390.0 | 390.0 | 390.0 | 391.2 | 391.2 | 392.2 | 394.3 |
| 5°    | 391.2 | 390.0 | 390.0 | 390.0 | 392.2 | 395.3 | 401.8 | 409.3 | 417.9 | 426.4 | 436.0 |
| 7.5°  | 387.9 | 387.9 | 387.9 | 391.2 | 400.8 | 413.6 | 429.6 | 445.7 | 459.5 | 474.4 | 488.4 |
| 10°   | 385.9 | 385.9 | 387.9 | 398.7 | 417.9 | 439.2 | 460.6 | 481.9 | 501.2 | 521.5 | 540.7 |
| 12.5° | 381.5 | 381.5 | 387.9 | 408.3 | 434.9 | 462.8 | 489.4 | 516.2 | 541.9 | 566.3 | 587.8 |
| 15°   | 377.2 | 377.2 | 391.2 | 419.9 | 452.0 | 485.2 | 517.3 | 548.2 | 578.1 | 605.9 | 630.5 |
| 17.5° | 370.9 | 371.9 | 393.3 | 428.6 | 467.0 | 504.4 | 539.7 | 575.0 | 607.0 | 638.0 | 663.7 |
| 20°   | 365.4 | 367.6 | 395.3 | 436.0 | 478.8 | 520.5 | 560.0 | 596.4 | 630.5 | 662.6 | 690.3 |
| 22.5° | 357.0 | 361.3 | 396.5 | 441.4 | 487.4 | 532.3 | 572.8 | 611.4 | 647.6 | 680.8 | 708.6 |
| 25°   | 349.5 | 354.8 | 395.3 | 443.5 | 493.7 | 539.7 | 581.3 | 620.9 | 658.2 | 692.5 | 721.4 |
| 27.5° | 340.8 | 349.5 | 394.3 | 444.5 | 495.9 | 542.9 | 585.6 | 626.3 | 663.7 | 697.8 | 727.9 |
| 30°   | 332.4 | 343.0 | 391.2 | 443.5 | 494.9 | 541.9 | 584.6 | 626.3 | 663.7 | 697.8 | 726.7 |
| 32.5° | 322.7 | 334.5 | 384.7 | 438.2 | 490.6 | 536.4 | 579.3 | 619.8 | 658.2 | 691.5 | 720.2 |
| 35°   | 312.1 | 325.9 | 377.2 | 430.7 | 481.9 | 527.9 | 569.7 | 610.2 | 647.6 | 681.8 | 709.6 |
| 37.5° | 301.4 | 317.4 | 368.7 | 422.1 | 472.4 | 517.3 | 557.9 | 598.4 | 634.8 | 667.9 | 694.6 |
| 40°   | 290.7 | 307.8 | 359.1 | 411.5 | 460.6 | 504.4 | 545.1 | 584.6 | 618.8 | 650.8 | 675.4 |
| 42.5° | 278.9 | 298.1 | 348.5 | 399.7 | 446.7 | 489.4 | 530.1 | 568.5 | 601.7 | 631.6 | 655.1 |
| 45°   | 267.2 | 286.5 | 336.7 | 386.9 | 433.9 | 474.4 | 514.0 | 551.4 | 582.5 | 610.2 | 632.6 |
| 47.5° | 254.4 | 275.7 | 325.9 | 374.1 | 418.9 | 460.6 | 499.0 | 533.3 | 564.3 | 588.8 | 610.2 |
| 50°   | 241.5 | 263.9 | 313.1 | 361.3 | 405.0 | 445.7 | 483.1 | 516.2 | 545.1 | 568.5 | 586.8 |
| 52.5° | 228.7 | 252.3 | 301.4 | 348.5 | 392.2 | 431.7 | 468.1 | 499.0 | 525.8 | 547.2 | 565.3 |
| 55°   | 215.9 | 240.5 | 289.6 | 335.5 | 379.4 | 417.9 | 453.2 | 481.9 | 507.7 | 525.8 | 540.7 |
| 57.5° | 201.9 | 228.7 | 277.9 | 323.9 | 366.6 | 405.0 | 438.2 | 466.0 | 489.4 | 505.5 | 518.3 |
| 60°   | 188.1 | 215.9 | 265.1 | 312.1 | 353.8 | 391.2 | 423.3 | 449.9 | 470.3 | 484.1 | 495.9 |
| 62.5° | 173.2 | 203.1 | 253.3 | 299.3 | 340.8 | 377.2 | 407.1 | 430.7 | 451.0 | 463.8 | 470.3 |
| 65°   | 159.2 | 190.3 | 240.5 | 286.5 | 327.0 | 361.3 | 390.0 | 412.5 | 429.6 | 440.4 | 445.7 |
| 67.5° | 143.2 | 176.3 | 226.5 | 272.5 | 310.9 | 344.2 | 370.9 | 392.2 | 407.1 | 414.6 | 418.9 |
| 70°   | 128.3 | 162.5 | 211.6 | 256.4 | 292.8 | 324.9 | 350.5 | 370.9 | 383.7 | 391.2 | 392.2 |
| 72.5° | 112.2 | 147.4 | 196.6 | 239.5 | 274.7 | 304.6 | 329.2 | 347.3 | 358.0 | 364.4 | 365.4 |
| 75°   | 97.2  | 131.4 | 178.5 | 219.0 | 252.3 | 280.0 | 303.5 | 320.6 | 331.4 | 335.5 | 335.5 |
| 77.5° | 82.3  | 114.3 | 159.2 | 197.7 | 228.7 | 254.4 | 275.7 | 292.8 | 301.4 | 305.6 | 305.6 |
| 80°   | 67.3  | 98.4  | 138.9 | 174.2 | 201.9 | 225.5 | 246.9 | 261.9 | 270.4 | 270.4 | 263.9 |
| 82.5° | 53.5  | 80.1  | 115.5 | 147.4 | 171.0 | 192.4 | 212.7 | 222.3 | 224.5 | 222.3 | 216.9 |
| 85°   | 39.5  | 61.0  | 89.7  | 114.3 | 135.8 | 150.7 | 163.5 | 170.0 | 171.0 | 168.8 | 164.5 |
| 87.5° | 22.4  | 35.2  | 51.3  | 67.3  | 81.3  | 88.7  | 99.4  | 101.5 | 101.5 | 104.7 | 99.4  |
| 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):**

|       | 55°   | 60°   | 65°   | 70°   | 75°   | 80°   | 85°   | 90°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 | 389.0 |
| 2.5°  | 395.3 | 396.5 | 396.5 | 399.7 | 399.7 | 400.8 | 399.7 | 399.7 |
| 5°    | 442.4 | 446.7 | 453.2 | 459.5 | 461.6 | 466.0 | 464.8 | 467.0 |
| 7.5°  | 499.0 | 507.7 | 517.3 | 525.8 | 530.1 | 534.4 | 535.4 | 538.6 |
| 10°   | 555.7 | 566.3 | 578.1 | 589.9 | 596.4 | 599.6 | 603.9 | 604.9 |
| 12.5° | 604.9 | 620.9 | 632.6 | 645.4 | 654.1 | 658.2 | 662.6 | 664.7 |
| 15°   | 649.8 | 665.9 | 680.8 | 694.6 | 703.3 | 709.6 | 713.9 | 714.9 |
| 17.5° | 684.0 | 702.1 | 718.2 | 733.2 | 741.7 | 749.1 | 753.5 | 755.6 |
| 20°   | 710.7 | 731.0 | 747.0 | 761.9 | 771.6 | 780.2 | 786.5 | 787.7 |
| 22.5° | 729.9 | 750.3 | 768.4 | 783.4 | 795.2 | 803.6 | 809.0 | 811.1 |
| 25°   | 743.8 | 765.2 | 783.4 | 798.3 | 810.1 | 819.8 | 825.1 | 827.2 |
| 27.5° | 750.3 | 772.7 | 791.9 | 805.8 | 817.6 | 827.2 | 833.6 | 834.7 |
| 30°   | 751.3 | 772.7 | 791.9 | 806.8 | 818.6 | 828.2 | 833.6 | 835.7 |
| 32.5° | 743.8 | 766.3 | 785.5 | 799.3 | 811.1 | 820.8 | 826.1 | 827.2 |
| 35°   | 733.2 | 753.5 | 771.6 | 785.5 | 797.3 | 805.8 | 811.1 | 813.3 |
| 37.5° | 717.1 | 736.3 | 753.5 | 766.3 | 776.9 | 785.5 | 790.8 | 793.0 |
| 40°   | 697.8 | 716.1 | 732.0 | 743.8 | 753.5 | 760.9 | 765.2 | 767.3 |
| 42.5° | 675.4 | 692.5 | 707.4 | 717.1 | 726.7 | 733.2 | 736.3 | 738.5 |
| 45°   | 651.9 | 667.9 | 679.7 | 688.3 | 696.8 | 702.1 | 705.3 | 706.4 |
| 47.5° | 627.3 | 641.3 | 650.8 | 658.2 | 664.7 | 670.0 | 673.3 | 673.3 |
| 50°   | 602.7 | 614.5 | 622.0 | 629.5 | 634.8 | 638.0 | 640.1 | 641.3 |
| 52.5° | 578.1 | 587.8 | 593.1 | 599.6 | 603.9 | 607.0 | 609.2 | 609.2 |
| 55°   | 552.5 | 560.0 | 564.3 | 569.7 | 573.8 | 576.0 | 578.1 | 577.1 |
| 57.5° | 527.9 | 533.3 | 536.4 | 540.7 | 543.9 | 546.1 | 548.2 | 549.4 |
| 60°   | 502.3 | 506.5 | 507.7 | 511.8 | 515.1 | 517.3 | 518.3 | 519.3 |
| 62.5° | 475.6 | 478.8 | 480.9 | 483.1 | 486.2 | 488.4 | 489.4 | 490.6 |
| 65°   | 448.8 | 451.0 | 451.0 | 455.3 | 458.5 | 459.5 | 460.6 | 461.6 |
| 67.5° | 421.1 | 422.1 | 423.3 | 426.4 | 429.6 | 430.7 | 432.9 | 432.9 |
| 70°   | 393.3 | 393.3 | 394.3 | 397.5 | 400.8 | 401.8 | 404.0 | 405.0 |
| 72.5° | 364.4 | 365.4 | 365.4 | 368.7 | 371.9 | 374.1 | 375.1 | 376.2 |
| 75°   | 334.5 | 334.5 | 335.5 | 336.7 | 337.7 | 338.8 | 338.8 | 340.8 |
| 77.5° | 302.4 | 298.1 | 296.0 | 294.0 | 295.0 | 295.0 | 294.0 | 295.0 |
| 80°   | 257.6 | 252.3 | 248.9 | 247.9 | 248.9 | 247.9 | 247.9 | 248.9 |
| 82.5° | 211.6 | 205.2 | 203.1 | 201.9 | 201.9 | 201.9 | 200.9 | 203.1 |
| 85°   | 159.2 | 154.9 | 152.9 | 150.7 | 151.7 | 151.7 | 150.7 | 151.7 |
| 87.5° | 96.2  | 94.1  | 91.9  | 89.7  | 90.9  | 89.7  | 88.7  | 91.9  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



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**CIE UGR TABLE:**

| Reflectances:   |      |                  |      |      |      |      |                |      |      |      |      |
|-----------------|------|------------------|------|------|------|------|----------------|------|------|------|------|
| Ceiling         |      | 0.7              | 0.7  | 0.5  | 0.5  | 0.3  | 0.7            | 0.7  | 0.5  | 0.5  | 0.3  |
| Wall            |      | 0.5              | 0.3  | 0.5  | 0.3  | 0.3  | 0.5            | 0.3  | 0.5  | 0.3  | 0.3  |
| Reference plane |      | 0.2              | 0.2  | 0.2  | 0.2  | 0.2  | 0.2            | 0.2  | 0.2  | 0.2  | 0.2  |
| Room Dimensions |      | Viewed crosswise |      |      |      |      | Viewed endwise |      |      |      |      |
| X=2H            | Y=2H | 10.9             | 12.7 | 11.3 | 13.0 | 13.3 | 13.9           | 15.7 | 14.2 | 16.0 | 16.3 |
|                 | 3H   | 12.9             | 14.5 | 13.3 | 14.8 | 15.2 | 16.4           | 18.0 | 16.8 | 18.4 | 18.7 |
|                 | 4H   | 13.7             | 15.2 | 14.1 | 15.6 | 15.9 | 17.6           | 19.2 | 18.0 | 19.5 | 19.9 |
|                 | 6H   | 14.3             | 15.7 | 14.7 | 16.1 | 16.5 | 18.7           | 20.1 | 19.1 | 20.5 | 20.9 |
|                 | 8H   | 14.5             | 15.9 | 14.9 | 16.3 | 16.7 | 19.1           | 20.5 | 19.5 | 20.9 | 21.3 |
|                 | 12H  | 14.7             | 16.0 | 15.1 | 16.4 | 16.8 | 19.5           | 20.9 | 20.0 | 21.2 | 21.7 |
| 4H              | 2H   | 12.6             | 14.2 | 13.0 | 14.5 | 14.9 | 14.6           | 16.2 | 15.0 | 16.5 | 16.9 |
|                 | 3H   | 15.1             | 16.5 | 15.6 | 16.9 | 17.3 | 17.4           | 18.8 | 17.8 | 19.2 | 19.6 |
|                 | 4H   | 16.2             | 17.5 | 16.7 | 17.9 | 18.3 | 18.8           | 20.0 | 19.2 | 20.4 | 20.9 |
|                 | 6H   | 17.1             | 18.2 | 17.6 | 18.7 | 19.1 | 20.1           | 21.1 | 20.5 | 21.6 | 22.0 |
|                 | 8H   | 17.5             | 18.5 | 17.9 | 18.9 | 19.4 | 20.6           | 21.6 | 21.1 | 22.1 | 22.5 |
|                 | 12H  | 17.7             | 18.6 | 18.2 | 19.1 | 19.6 | 21.1           | 22.0 | 21.6 | 22.5 | 23.0 |
| 8H              | 4H   | 17.4             | 18.4 | 17.8 | 18.8 | 19.3 | 19.4           | 20.4 | 19.8 | 20.8 | 21.3 |
|                 | 6H   | 18.7             | 19.6 | 19.2 | 20.1 | 20.6 | 20.8           | 21.7 | 21.3 | 22.2 | 22.6 |
|                 | 8H   | 19.3             | 20.1 | 19.8 | 20.6 | 21.1 | 21.5           | 22.3 | 22.0 | 22.8 | 23.2 |
|                 | 12H  | 19.8             | 20.5 | 20.3 | 21.0 | 21.5 | 22.1           | 22.8 | 22.6 | 23.3 | 23.9 |
| 12H             | 4H   | 17.6             | 18.5 | 18.1 | 19.0 | 19.5 | 19.5           | 20.4 | 20.0 | 20.9 | 21.3 |
|                 | 6H   | 19.1             | 19.9 | 19.6 | 20.4 | 20.9 | 21.0           | 21.8 | 21.5 | 22.3 | 22.8 |
|                 | 8H   | 19.9             | 20.6 | 20.4 | 21.1 | 21.6 | 21.8           | 22.5 | 22.3 | 23.0 | 23.5 |

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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:  $4\pi$   
 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

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

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            |        |                          |               |

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.6

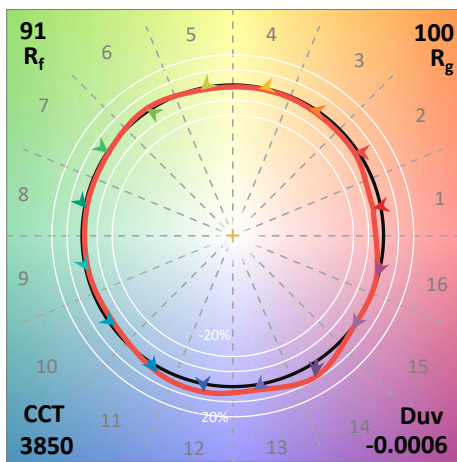
| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 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)