

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: P976586

Luminaire Tested: 22SR-LD2-C-20-UNV-L850-CD1-PL-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P976586
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 22SR-LD2-C-20-UNV-L850-CD1-PL-U
Description: METALUX SKYRIDGE 2x2 2000LM PACKAGE 80CRI 5000K TROFFER with Pearl SKYTRIM
Light Source: 5000K CCT, 80+ CRI LEDS
Ballast/Driver: -

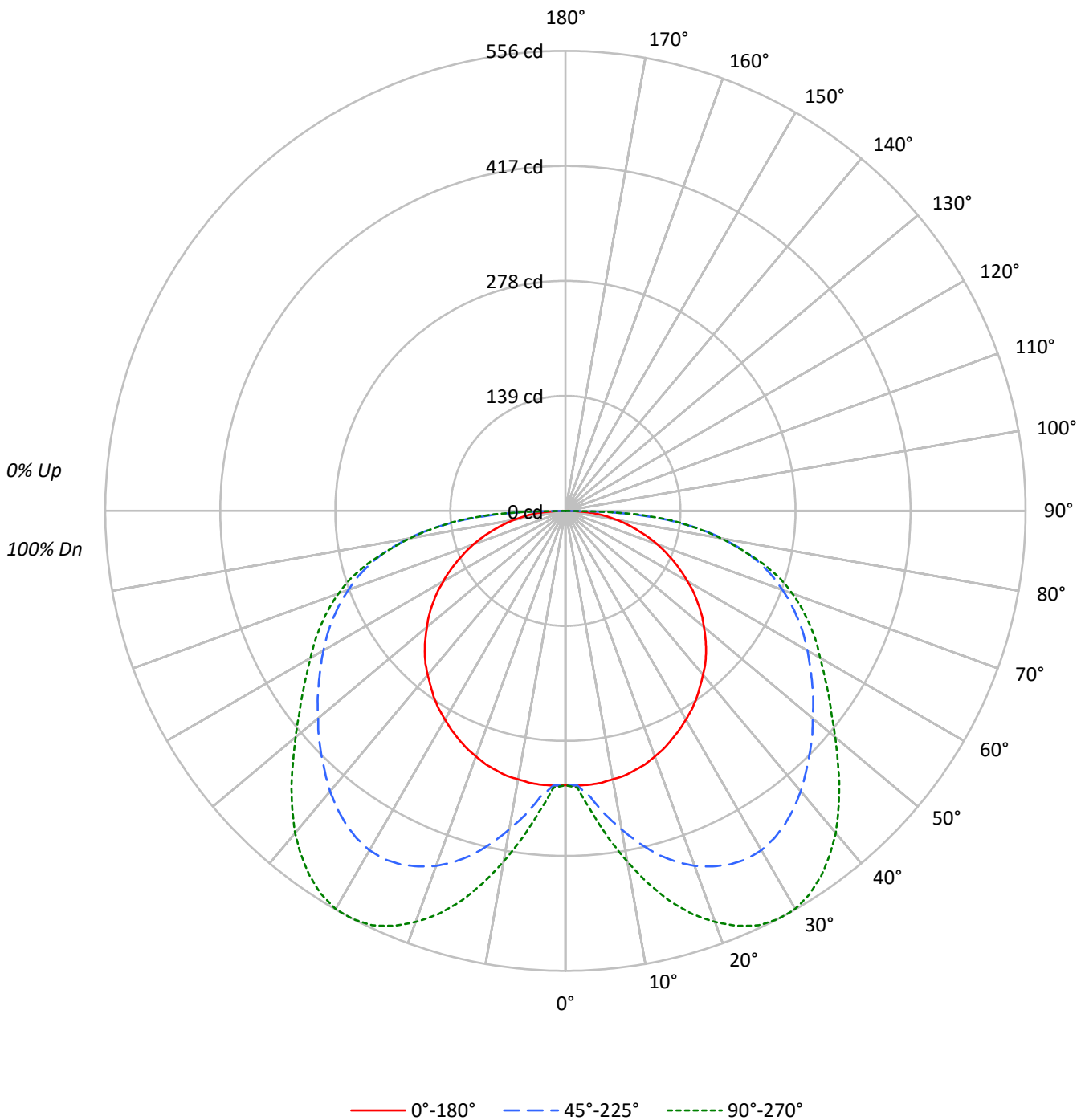
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1839.0 lumens
Efficiency: N/A
Efficacy: 133.3 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 2 / 1.87
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 13.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

TEST NUMBER: P976586
CATALOG NUMBER: 22SR-LD2-C-20-UNV-L850-CD1-PL-U

Luminous Intensity Polar Plot





TEST NUMBER: P976586

CATALOG NUMBER: 22SR-LD2-C-20-UNV-L850-CD1-PL-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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | |
| 1 | 106 | 100 | 95 | 90 | 103 | 98 | 93 | 88 | 93 | 89 | 85 | 89 | 86 | 83 | 85 | 83 | 80 | 78 | | |
| 2 | 95 | 85 | 77 | 70 | 92 | 83 | 76 | 69 | 79 | 73 | 68 | 76 | 71 | 66 | 73 | 68 | 64 | 62 | | |
| 3 | 85 | 73 | 64 | 56 | 83 | 72 | 63 | 56 | 69 | 61 | 55 | 66 | 59 | 54 | 63 | 57 | 53 | 50 | | |
| 4 | 78 | 64 | 54 | 47 | 75 | 63 | 53 | 46 | 60 | 52 | 46 | 58 | 51 | 45 | 55 | 49 | 44 | 42 | | |
| 5 | 71 | 57 | 47 | 39 | 69 | 55 | 46 | 39 | 53 | 45 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 35 | | |
| 6 | 65 | 51 | 41 | 34 | 63 | 50 | 40 | 34 | 48 | 39 | 33 | 46 | 39 | 33 | 44 | 38 | 33 | 30 | | |
| 7 | 60 | 46 | 36 | 29 | 58 | 45 | 36 | 29 | 43 | 35 | 29 | 42 | 34 | 29 | 40 | 34 | 28 | 26 | | |
| 8 | 56 | 41 | 32 | 26 | 54 | 41 | 32 | 26 | 39 | 31 | 26 | 38 | 31 | 25 | 37 | 30 | 25 | 23 | | |
| 9 | 52 | 38 | 29 | 23 | 51 | 37 | 29 | 23 | 36 | 28 | 23 | 35 | 28 | 23 | 34 | 27 | 22 | 20 | | |
| 10 | 49 | 35 | 26 | 21 | 47 | 34 | 26 | 21 | 33 | 26 | 20 | 32 | 25 | 20 | 31 | 25 | 20 | 18 | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 892 | 892 | 892 |
| 5° | 897 | 937 | 987 |
| 10° | 900 | 1068 | 1176 |
| 15° | 904 | 1197 | 1361 |
| 20° | 905 | 1308 | 1514 |
| 25° | 904 | 1400 | 1641 |
| 30° | 905 | 1472 | 1726 |
| 35° | 908 | 1519 | 1769 |
| 40° | 909 | 1554 | 1785 |
| 45° | 914 | 1587 | 1781 |
| 50° | 914 | 1633 | 1781 |
| 55° | 919 | 1708 | 1821 |
| 60° | 917 | 1818 | 1913 |
| 65° | 918 | 1976 | 2074 |
| 70° | 929 | 2197 | 2297 |
| 75° | 941 | 2528 | 2572 |
| 80° | 986 | 2991 | 2957 |
| 85° | 1093 | 3819 | 3906 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 85°
 Vertical Angle: 87.5°
 Luminance: 5102 cd/sqm



TEST NUMBER: P976586
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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 34.4 | 1.9 |
| 10°-20° | 118.8 | 6.5 |
| 20°-30° | 208.6 | 11.3 |
| 30°-40° | 274.6 | 14.9 |
| 40°-50° | 302.0 | 16.4 |
| 50°-60° | 299.3 | 16.3 |
| 60°-70° | 275.4 | 15.0 |
| 70°-80° | 220.8 | 12.0 |
| 80°-90° | 105.0 | 5.7 |
| 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° | 361.8 | 19.7 |
| 0°-40° | 636.4 | 34.6 |
| 0°-60° | 1237.7 | 67.3 |
| 0°-90° | 1839.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1839.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 332 | 332 | 332 | 332 | 332 | |
| 5° | 332 | 333 | 347 | 361 | 365 | 32 |
| 15° | 324 | 366 | 430 | 472 | 488 | 92 |
| 25° | 305 | 381 | 472 | 531 | 553 | 141 |
| 35° | 276 | 368 | 462 | 520 | 539 | 173 |
| 45° | 240 | 334 | 417 | 457 | 468 | 185 |
| 55° | 196 | 291 | 364 | 385 | 388 | 175 |
| 65° | 144 | 242 | 310 | 320 | 326 | 143 |
| 75° | 90 | 182 | 243 | 247 | 247 | 96 |
| 85° | 35 | 86 | 124 | 124 | 126 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P976586

CATALOG NUMBER: 22SR-LD2-C-20-UNV-L850-CD1-PL-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 |
| 2.5° | 332.2 | 333.0 | 332.2 | 332.2 | 332.2 | 332.2 | 332.2 | 332.2 | 332.2 | 332.2 | 333.0 |
| 5° | 332.2 | 332.2 | 332.2 | 332.2 | 332.2 | 334.3 | 336.5 | 339.3 | 343.5 | 347.0 | 351.3 |
| 7.5° | 331.5 | 331.5 | 331.5 | 332.2 | 336.5 | 342.1 | 349.2 | 356.2 | 364.0 | 370.4 | 376.1 |
| 10° | 329.3 | 329.3 | 330.1 | 335.0 | 342.8 | 353.4 | 363.4 | 373.2 | 381.7 | 390.9 | 400.1 |
| 12.5° | 328.0 | 328.0 | 330.1 | 339.3 | 351.3 | 364.7 | 376.7 | 388.8 | 400.8 | 411.3 | 422.0 |
| 15° | 324.4 | 324.4 | 329.3 | 342.8 | 359.1 | 373.9 | 388.8 | 402.8 | 417.0 | 429.7 | 441.8 |
| 17.5° | 320.9 | 320.9 | 328.6 | 346.3 | 364.0 | 380.9 | 398.0 | 414.9 | 430.4 | 444.6 | 458.0 |
| 20° | 315.9 | 316.6 | 328.0 | 347.7 | 366.9 | 386.6 | 405.7 | 423.4 | 441.1 | 456.6 | 471.5 |
| 22.5° | 311.0 | 311.7 | 326.6 | 348.5 | 368.9 | 390.1 | 410.7 | 430.4 | 448.8 | 465.1 | 481.3 |
| 25° | 304.6 | 306.8 | 323.8 | 347.0 | 369.7 | 391.6 | 413.5 | 434.0 | 453.8 | 471.5 | 487.7 |
| 27.5° | 298.2 | 301.1 | 320.1 | 344.2 | 368.2 | 390.9 | 413.5 | 435.4 | 455.1 | 474.3 | 490.5 |
| 30° | 291.2 | 294.7 | 315.9 | 340.7 | 365.4 | 388.8 | 412.0 | 434.0 | 454.5 | 473.6 | 489.8 |
| 32.5° | 284.2 | 287.7 | 310.3 | 335.8 | 360.5 | 384.5 | 407.8 | 430.4 | 450.3 | 469.3 | 486.3 |
| 35° | 276.4 | 281.3 | 304.6 | 330.1 | 355.5 | 379.6 | 402.8 | 424.8 | 444.6 | 462.3 | 478.5 |
| 37.5° | 267.2 | 273.5 | 296.9 | 323.0 | 348.5 | 372.5 | 395.1 | 417.0 | 436.1 | 453.1 | 468.6 |
| 40° | 258.7 | 265.8 | 289.8 | 315.3 | 340.7 | 364.7 | 386.6 | 407.8 | 426.2 | 442.4 | 457.3 |
| 42.5° | 250.3 | 258.0 | 281.3 | 306.8 | 331.5 | 355.5 | 377.4 | 397.3 | 414.9 | 429.7 | 443.9 |
| 45° | 240.3 | 248.8 | 272.1 | 297.6 | 322.3 | 345.7 | 366.9 | 385.9 | 403.6 | 417.0 | 429.7 |
| 47.5° | 229.7 | 239.6 | 263.0 | 288.4 | 312.4 | 335.0 | 356.2 | 373.9 | 390.1 | 404.3 | 415.7 |
| 50° | 218.4 | 229.7 | 253.1 | 278.5 | 301.8 | 324.4 | 345.0 | 362.6 | 377.4 | 390.1 | 400.8 |
| 52.5° | 207.8 | 219.2 | 242.4 | 267.2 | 291.2 | 313.8 | 333.6 | 350.5 | 364.7 | 377.4 | 386.6 |
| 55° | 195.8 | 207.8 | 231.9 | 255.8 | 279.9 | 301.8 | 321.6 | 338.5 | 352.0 | 364.0 | 372.5 |
| 57.5° | 183.8 | 196.5 | 219.8 | 244.6 | 267.8 | 290.5 | 310.3 | 326.6 | 340.0 | 350.5 | 358.4 |
| 60° | 170.4 | 184.5 | 207.8 | 232.6 | 256.6 | 278.5 | 298.2 | 314.6 | 327.3 | 337.8 | 344.2 |
| 62.5° | 157.6 | 171.8 | 196.5 | 220.5 | 243.9 | 266.5 | 286.2 | 301.8 | 314.6 | 324.4 | 330.1 |
| 65° | 144.2 | 159.0 | 183.1 | 207.8 | 231.1 | 253.8 | 272.8 | 289.1 | 301.1 | 310.3 | 315.9 |
| 67.5° | 131.5 | 146.3 | 169.6 | 193.7 | 217.0 | 240.3 | 258.7 | 274.2 | 286.2 | 295.4 | 300.4 |
| 70° | 118.1 | 132.8 | 156.2 | 178.8 | 202.8 | 224.7 | 243.9 | 259.4 | 270.7 | 279.2 | 284.2 |
| 72.5° | 104.6 | 120.1 | 141.4 | 164.7 | 187.3 | 209.9 | 227.6 | 243.1 | 254.5 | 262.3 | 266.5 |
| 75° | 90.5 | 106.1 | 127.3 | 147.7 | 171.1 | 193.0 | 210.7 | 225.5 | 236.1 | 243.1 | 246.6 |
| 77.5° | 77.0 | 91.2 | 111.6 | 132.2 | 152.7 | 173.9 | 190.8 | 205.7 | 214.2 | 220.5 | 224.1 |
| 80° | 63.6 | 76.3 | 94.7 | 113.8 | 132.2 | 152.0 | 167.6 | 180.9 | 189.4 | 193.0 | 195.1 |
| 82.5° | 50.1 | 61.5 | 75.7 | 92.6 | 108.9 | 125.1 | 139.2 | 150.5 | 156.9 | 161.9 | 163.2 |
| 85° | 35.4 | 42.4 | 53.8 | 65.7 | 79.2 | 92.6 | 105.3 | 113.8 | 120.1 | 123.7 | 124.4 |
| 87.5° | 18.4 | 21.2 | 26.9 | 33.9 | 43.8 | 53.0 | 60.1 | 65.7 | 70.7 | 74.2 | 77.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976586

CATALOG NUMBER: 22SR-LD2-C-20-UNV-L850-CD1-PL-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 | 331.5 |
| 2.5° | 333.0 | 333.0 | 334.3 | 334.3 | 335.0 | 335.0 | 334.3 | 335.0 |
| 5° | 354.2 | 356.9 | 361.2 | 361.2 | 364.0 | 365.4 | 365.4 | 365.4 |
| 7.5° | 380.3 | 384.5 | 389.5 | 392.3 | 395.8 | 398.0 | 398.6 | 398.6 |
| 10° | 405.7 | 412.0 | 417.7 | 422.0 | 426.2 | 428.4 | 430.4 | 430.4 |
| 12.5° | 429.7 | 437.5 | 444.6 | 450.3 | 455.1 | 458.0 | 460.1 | 460.8 |
| 15° | 451.6 | 461.6 | 468.6 | 475.7 | 481.3 | 484.9 | 487.0 | 488.4 |
| 17.5° | 470.0 | 480.7 | 489.2 | 496.2 | 502.6 | 506.8 | 510.4 | 511.1 |
| 20° | 484.2 | 495.5 | 505.4 | 513.1 | 520.2 | 524.5 | 528.0 | 528.8 |
| 22.5° | 494.7 | 507.5 | 518.1 | 526.6 | 533.6 | 538.6 | 541.5 | 542.8 |
| 25° | 501.9 | 514.6 | 526.6 | 535.8 | 543.5 | 548.5 | 550.7 | 552.7 |
| 27.5° | 505.4 | 518.8 | 530.8 | 540.0 | 547.8 | 552.7 | 555.5 | 556.2 |
| 30° | 505.4 | 518.1 | 530.1 | 539.3 | 546.3 | 551.3 | 554.2 | 555.5 |
| 32.5° | 500.4 | 513.1 | 524.5 | 533.6 | 540.0 | 545.0 | 547.8 | 549.2 |
| 35° | 492.7 | 504.7 | 515.9 | 523.8 | 530.8 | 534.3 | 537.8 | 538.6 |
| 37.5° | 482.0 | 493.4 | 503.9 | 511.1 | 517.4 | 520.9 | 523.8 | 524.5 |
| 40° | 469.3 | 480.0 | 489.2 | 495.5 | 501.2 | 504.7 | 506.8 | 508.2 |
| 42.5° | 455.1 | 464.4 | 472.2 | 477.8 | 482.0 | 485.5 | 487.0 | 488.4 |
| 45° | 439.6 | 447.4 | 454.5 | 459.4 | 463.0 | 465.1 | 467.2 | 468.0 |
| 47.5° | 424.1 | 431.2 | 436.9 | 441.1 | 442.4 | 444.6 | 445.3 | 446.1 |
| 50° | 408.5 | 414.2 | 419.2 | 421.2 | 423.4 | 424.8 | 424.8 | 425.5 |
| 52.5° | 393.0 | 398.6 | 400.8 | 403.6 | 405.0 | 405.7 | 405.7 | 405.7 |
| 55° | 378.1 | 382.4 | 384.5 | 385.9 | 386.6 | 388.1 | 388.1 | 388.1 |
| 57.5° | 364.0 | 366.9 | 367.6 | 368.9 | 369.7 | 371.1 | 371.1 | 371.1 |
| 60° | 348.5 | 351.3 | 352.0 | 352.7 | 353.4 | 354.8 | 355.5 | 355.5 |
| 62.5° | 334.3 | 336.5 | 335.8 | 337.2 | 337.8 | 339.3 | 340.7 | 341.4 |
| 65° | 318.8 | 320.1 | 320.1 | 320.9 | 323.0 | 323.8 | 325.1 | 325.8 |
| 67.5° | 303.2 | 303.9 | 303.9 | 305.4 | 306.8 | 308.2 | 308.9 | 309.6 |
| 70° | 285.5 | 287.0 | 286.2 | 287.7 | 289.1 | 290.5 | 291.9 | 291.9 |
| 72.5° | 267.2 | 267.8 | 268.6 | 267.8 | 269.3 | 270.7 | 271.5 | 272.1 |
| 75° | 245.9 | 247.4 | 247.4 | 245.9 | 246.6 | 246.6 | 247.4 | 247.4 |
| 77.5° | 221.2 | 220.5 | 218.4 | 217.0 | 217.0 | 217.7 | 217.7 | 218.4 |
| 80° | 193.0 | 191.5 | 190.1 | 188.8 | 188.8 | 189.4 | 189.4 | 190.8 |
| 82.5° | 161.9 | 160.4 | 159.0 | 158.4 | 159.0 | 159.0 | 159.7 | 160.4 |
| 85° | 125.1 | 123.0 | 125.1 | 123.7 | 125.1 | 125.1 | 125.1 | 126.5 |
| 87.5° | 77.7 | 78.5 | 80.5 | 79.9 | 79.2 | 79.9 | 82.7 | 81.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976586
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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 | 12.4 | 14.2 | 12.8 | 14.5 | 14.8 | 14.8 | 16.6 | 15.2 | 16.9 | 17.2 |
| | 3H | 14.3 | 16.0 | 14.7 | 16.3 | 16.7 | 17.5 | 19.2 | 17.9 | 19.5 | 19.9 |
| | 4H | 15.1 | 16.7 | 15.5 | 17.0 | 17.4 | 18.8 | 20.4 | 19.2 | 20.7 | 21.1 |
| | 6H | 15.8 | 17.2 | 16.2 | 17.6 | 18.0 | 20.0 | 21.4 | 20.4 | 21.8 | 22.2 |
| | 8H | 16.0 | 17.4 | 16.5 | 17.8 | 18.2 | 20.5 | 21.9 | 20.9 | 22.3 | 22.7 |
| | 12H | 16.2 | 17.6 | 16.7 | 18.0 | 18.4 | 21.0 | 22.4 | 21.5 | 22.7 | 23.2 |
| 4H | 2H | 14.0 | 15.5 | 14.4 | 15.9 | 16.3 | 15.6 | 17.2 | 16.0 | 17.5 | 17.9 |
| | 3H | 16.4 | 17.8 | 16.8 | 18.2 | 18.6 | 18.6 | 20.0 | 19.0 | 20.4 | 20.8 |
| | 4H | 17.5 | 18.7 | 17.9 | 19.1 | 19.6 | 20.1 | 21.3 | 20.5 | 21.7 | 22.2 |
| | 6H | 18.3 | 19.4 | 18.8 | 19.9 | 20.3 | 21.4 | 22.5 | 21.9 | 23.0 | 23.4 |
| | 8H | 18.7 | 19.7 | 19.1 | 20.1 | 20.6 | 22.1 | 23.1 | 22.5 | 23.5 | 24.0 |
| | 12H | 18.9 | 19.8 | 19.4 | 20.3 | 20.8 | 22.7 | 23.6 | 23.1 | 24.1 | 24.5 |
| 8H | 4H | 18.7 | 19.7 | 19.1 | 20.1 | 20.6 | 20.6 | 21.7 | 21.1 | 22.1 | 22.6 |
| | 6H | 19.9 | 20.8 | 20.4 | 21.3 | 21.7 | 22.2 | 23.1 | 22.7 | 23.6 | 24.0 |
| | 8H | 20.4 | 21.2 | 20.9 | 21.7 | 22.2 | 23.0 | 23.8 | 23.5 | 24.3 | 24.7 |
| | 12H | 20.8 | 21.5 | 21.3 | 22.0 | 22.5 | 23.7 | 24.4 | 24.2 | 24.9 | 25.5 |
| 12H | 4H | 18.9 | 19.8 | 19.4 | 20.3 | 20.8 | 20.7 | 21.7 | 21.2 | 22.1 | 22.6 |
| | 6H | 20.3 | 21.1 | 20.8 | 21.6 | 22.1 | 22.4 | 23.2 | 22.9 | 23.7 | 24.2 |
| | 8H | 21.0 | 21.7 | 21.5 | 22.2 | 22.7 | 23.3 | 24.0 | 23.8 | 24.5 | 25.0 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-8

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L950-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L950-CD1-U

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-457-8
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 07/02/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Metalux
 Catalog Number: **24SR-LD2-64-C-UNV-L950-CD1-U**
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K): 4803
 CIE u': 0.2133
 CIE v': 0.4881
 Duv: 0.0004
 CIE x: 0.3510
 CIE y: 0.3570
 CIE z: 0.2921
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 574
 Purity: 12.41797
 Rf: 91.5
 Rg: 100.9

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 94.6 | | |
| R1: | 95.9 | R9: | 74.3 |
| R2: | 96.0 | R10: | 88.6 |
| R3: | 94.0 | R11: | 95.2 |
| R4: | 95.8 | R12: | 71.3 |
| R5: | 94.6 | R13: | 96.0 |
| R6: | 92.9 | R14: | 96.1 |
| R7: | 96.3 | R15: | 94.1 |
| R8: | 91.2 | | |



Test Conditions

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

REPORT NUMBER: SP1-2506-457-8

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

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CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 7-step quadrangle

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Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-8

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 2.02

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-8

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 4.33

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.5$
 $R_g = 100.9$
 $CIE R_a = 94.6$
 $R_9 = 74.3$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 91 | CES51 = 98 | CES76 = 84 |
| CES02 = 61 | CES27 = 93 | CES52 = 98 | CES77 = 88 |
| CES03 = 31 | CES28 = 95 | CES53 = 97 | CES78 = 81 |
| CES04 = 69 | CES29 = 94 | CES54 = 95 | CES79 = 95 |
| CES05 = 48 | CES30 = 96 | CES55 = 94 | CES80 = 92 |
| CES06 = 50 | CES31 = 94 | CES56 = 96 | CES81 = 84 |
| CES07 = 41 | CES32 = 87 | CES57 = 95 | CES82 = 96 |
| CES08 = 40 | CES33 = 97 | CES58 = 95 | CES83 = 96 |
| CES09 = 29 | CES34 = 91 | CES59 = 98 | CES84 = 93 |
| CES10 = 73 | CES35 = 94 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 83 | CES61 = 93 | CES86 = 87 |
| CES12 = 62 | CES37 = 93 | CES62 = 89 | CES87 = 91 |
| CES13 = 43 | CES38 = 91 | CES63 = 93 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 87 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 99 |
| CES16 = 47 | CES41 = 98 | CES66 = 88 | CES91 = 75 |
| CES17 = 48 | CES42 = 91 | CES67 = 87 | CES92 = 80 |
| CES18 = 56 | CES43 = 91 | CES68 = 88 | CES93 = 88 |
| CES19 = 70 | CES44 = 99 | CES69 = 88 | CES94 = 79 |
| CES20 = 65 | CES45 = 95 | CES70 = 85 | CES95 = 84 |
| CES21 = 85 | CES46 = 96 | CES71 = 80 | CES96 = 92 |
| CES22 = 77 | CES47 = 94 | CES72 = 93 | CES97 = 94 |
| CES23 = 91 | CES48 = 95 | CES73 = 79 | CES98 = 95 |
| CES24 = 90 | CES49 = 95 | CES74 = 93 | CES99 = 95 |
| CES25 = 70 | CES50 = 99 | CES75 = 81 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)