

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: P976713

Luminaire Tested: 24SR-LD2-C-29-UNV-L935-CD1-BR-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P976713
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24SR-LD2-C-29-UNV-L935-CD1-BR-U
Description: METALUX SKYRIDGE 2x4 2900LM PACKAGE 90CRI 3500K TROFFER with Belladonna Rose SKYT
Light Source: 3500K CCT, 90+ CRI LEDS
Ballast/Driver: -

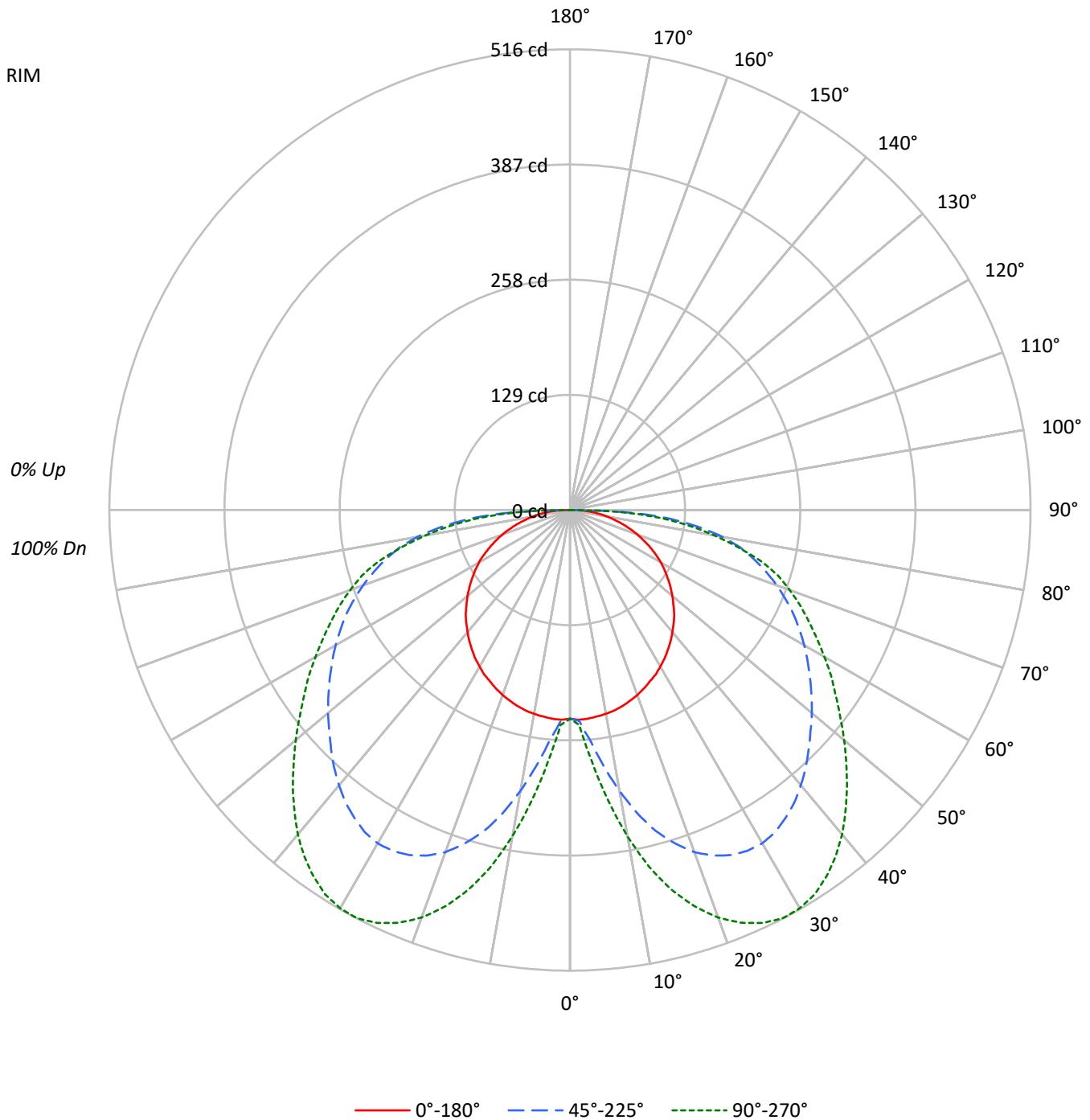
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1622.0 lumens
Efficiency: N/A
Efficacy: 81.9 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 2.29 / 2.08
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19.8
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: P976713
CATALOG NUMBER: 24SR-LD2-C-29-UNV-L935-CD1-BR-U

Luminous Intensity Polar Plot





TEST NUMBER: P976713

CATALOG NUMBER: 24SR-LD2-C-29-UNV-L935-CD1-BR-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1 | 106 | 100 | 94 | 90 | 103 | 97 | 93 | 88 | 93 | 89 | 85 | 89 | 86 | 83 | 85 | 83 | 80 | 85 | 83 | 80 | 78 |
| 2 | 95 | 85 | 77 | 70 | 92 | 83 | 75 | 69 | 79 | 73 | 67 | 76 | 70 | 66 | 73 | 68 | 64 | 73 | 68 | 64 | 62 |
| 3 | 85 | 73 | 64 | 56 | 83 | 71 | 63 | 56 | 68 | 61 | 55 | 65 | 59 | 54 | 63 | 57 | 53 | 63 | 57 | 53 | 50 |
| 4 | 77 | 64 | 54 | 46 | 75 | 62 | 53 | 46 | 60 | 52 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 55 | 49 | 44 | 41 |
| 5 | 71 | 56 | 46 | 39 | 68 | 55 | 46 | 39 | 53 | 45 | 38 | 51 | 44 | 38 | 49 | 42 | 37 | 49 | 42 | 37 | 35 |
| 6 | 65 | 50 | 40 | 33 | 63 | 49 | 40 | 33 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 37 | 32 | 44 | 37 | 32 | 30 |
| 7 | 60 | 45 | 36 | 29 | 58 | 44 | 35 | 29 | 43 | 35 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 40 | 33 | 28 | 26 |
| 8 | 56 | 41 | 32 | 25 | 54 | 40 | 31 | 25 | 39 | 31 | 25 | 38 | 30 | 25 | 36 | 30 | 25 | 36 | 30 | 25 | 23 |
| 9 | 52 | 37 | 29 | 23 | 50 | 37 | 28 | 22 | 36 | 28 | 22 | 34 | 27 | 22 | 33 | 27 | 22 | 33 | 27 | 22 | 20 |
| 10 | 48 | 34 | 26 | 20 | 47 | 34 | 26 | 20 | 33 | 25 | 20 | 32 | 25 | 20 | 31 | 24 | 20 | 31 | 24 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|------|------|
| 0° | 315 | 315 | 315 |
| 5° | 317 | 349 | 382 |
| 10° | 317 | 436 | 507 |
| 15° | 316 | 519 | 613 |
| 20° | 316 | 584 | 695 |
| 25° | 314 | 633 | 758 |
| 30° | 315 | 670 | 800 |
| 35° | 314 | 692 | 823 |
| 40° | 314 | 707 | 833 |
| 45° | 314 | 720 | 835 |
| 50° | 314 | 741 | 839 |
| 55° | 314 | 770 | 853 |
| 60° | 317 | 816 | 886 |
| 65° | 316 | 880 | 940 |
| 70° | 317 | 970 | 1030 |
| 75° | 319 | 1111 | 1154 |
| 80° | 331 | 1347 | 1275 |
| 85° | 380 | 1738 | 1573 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 2116 cd/sqm



TEST NUMBER: P976713
 CATALOG NUMBER: 24SR-LD2-C-29-UNV-L935-CD1-BR-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 26.3 | 1.6 |
| 10°-20° | 100.3 | 6.2 |
| 20°-30° | 183.3 | 11.3 |
| 30°-40° | 243.8 | 15.0 |
| 40°-50° | 268.5 | 16.6 |
| 50°-60° | 266.1 | 16.4 |
| 60°-70° | 243.6 | 15.0 |
| 70°-80° | 196.1 | 12.1 |
| 80°-90° | 94.1 | 5.8 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 309.9 | 19.1 |
| 0°-40° | 553.7 | 34.1 |
| 0°-60° | 1088.2 | 67.1 |
| 0°-90° | 1622.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1622.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 234 | 234 | 234 | 234 | 234 | |
| 5° | 234 | 236 | 258 | 276 | 283 | 22 |
| 15° | 227 | 286 | 372 | 422 | 440 | 64 |
| 25° | 212 | 317 | 426 | 488 | 510 | 98 |
| 35° | 191 | 312 | 421 | 480 | 501 | 120 |
| 45° | 165 | 282 | 378 | 424 | 439 | 127 |
| 55° | 134 | 248 | 328 | 356 | 364 | 120 |
| 65° | 99 | 215 | 276 | 288 | 295 | 98 |
| 75° | 61 | 167 | 214 | 220 | 222 | 65 |
| 85° | 25 | 91 | 113 | 103 | 102 | 25 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P976713

CATALOG NUMBER: 24SR-LD2-C-29-UNV-L935-CD1-BR-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 |
| 2.5° | 235.1 | 235.1 | 234.5 | 234.5 | 234.5 | 234.5 | 234.5 | 234.5 | 235.1 | 236.5 | 237.2 |
| 5° | 234.5 | 234.5 | 234.5 | 234.5 | 235.1 | 237.8 | 241.1 | 246.5 | 251.8 | 258.5 | 264.4 |
| 7.5° | 233.2 | 233.2 | 233.2 | 235.1 | 241.1 | 250.5 | 259.2 | 269.1 | 279.1 | 289.1 | 297.2 |
| 10° | 231.8 | 231.8 | 233.2 | 240.5 | 252.5 | 266.5 | 279.8 | 293.1 | 305.8 | 319.1 | 330.4 |
| 12.5° | 229.9 | 229.9 | 233.8 | 247.2 | 264.4 | 281.8 | 299.1 | 315.1 | 331.1 | 347.8 | 360.4 |
| 15° | 227.2 | 227.2 | 235.9 | 253.8 | 275.1 | 296.4 | 316.4 | 335.8 | 354.4 | 372.4 | 386.4 |
| 17.5° | 223.9 | 225.2 | 237.8 | 260.5 | 284.4 | 309.2 | 331.1 | 353.1 | 373.1 | 391.7 | 408.4 |
| 20° | 220.5 | 222.5 | 239.8 | 265.8 | 292.5 | 319.7 | 343.8 | 366.4 | 387.8 | 407.7 | 425.0 |
| 22.5° | 216.5 | 219.2 | 241.1 | 269.8 | 298.5 | 327.1 | 352.4 | 376.4 | 399.0 | 419.0 | 437.0 |
| 25° | 211.8 | 215.9 | 241.9 | 271.8 | 303.2 | 331.7 | 357.7 | 382.4 | 405.7 | 426.4 | 444.4 |
| 27.5° | 207.8 | 213.2 | 241.1 | 273.1 | 305.1 | 334.4 | 361.1 | 385.7 | 409.7 | 430.4 | 449.1 |
| 30° | 202.5 | 209.2 | 239.8 | 272.5 | 304.4 | 334.4 | 360.4 | 385.7 | 409.7 | 431.0 | 449.1 |
| 32.5° | 197.2 | 205.2 | 236.5 | 269.8 | 302.4 | 331.1 | 357.7 | 383.1 | 406.4 | 427.7 | 445.0 |
| 35° | 191.2 | 200.6 | 232.5 | 265.8 | 297.8 | 326.5 | 352.4 | 377.1 | 401.0 | 421.0 | 438.4 |
| 37.5° | 185.2 | 195.2 | 227.2 | 260.5 | 291.8 | 319.7 | 345.1 | 369.7 | 392.4 | 413.0 | 429.1 |
| 40° | 178.5 | 189.9 | 221.9 | 254.5 | 284.4 | 311.8 | 337.1 | 361.1 | 383.1 | 402.4 | 417.7 |
| 42.5° | 171.9 | 183.9 | 215.9 | 247.9 | 277.2 | 303.2 | 328.4 | 351.1 | 372.4 | 391.1 | 405.1 |
| 45° | 165.2 | 177.3 | 208.5 | 240.5 | 268.5 | 294.5 | 318.5 | 341.1 | 361.1 | 378.4 | 391.7 |
| 47.5° | 157.2 | 170.5 | 201.9 | 232.5 | 259.8 | 285.8 | 309.2 | 330.4 | 350.4 | 365.7 | 378.4 |
| 50° | 149.9 | 163.9 | 194.6 | 224.5 | 251.2 | 277.2 | 299.8 | 320.5 | 339.1 | 353.8 | 365.1 |
| 52.5° | 141.9 | 156.6 | 187.2 | 217.2 | 243.8 | 268.5 | 291.2 | 310.4 | 327.1 | 341.1 | 351.7 |
| 55° | 133.9 | 149.2 | 180.6 | 209.2 | 235.9 | 260.5 | 281.8 | 300.5 | 316.4 | 328.4 | 338.5 |
| 57.5° | 125.9 | 141.9 | 173.2 | 202.5 | 228.5 | 252.5 | 273.1 | 289.8 | 305.1 | 315.8 | 324.4 |
| 60° | 117.9 | 134.6 | 165.2 | 194.6 | 221.2 | 243.8 | 263.8 | 279.8 | 293.1 | 303.2 | 310.4 |
| 62.5° | 108.6 | 126.6 | 157.9 | 186.6 | 212.6 | 234.5 | 253.8 | 268.5 | 281.1 | 289.8 | 295.8 |
| 65° | 99.3 | 118.6 | 149.9 | 178.5 | 203.9 | 225.2 | 243.2 | 257.2 | 268.5 | 276.5 | 280.5 |
| 67.5° | 90.0 | 110.6 | 141.9 | 170.5 | 194.6 | 214.5 | 231.8 | 245.2 | 255.1 | 261.8 | 265.2 |
| 70° | 80.7 | 101.3 | 132.5 | 160.6 | 183.9 | 202.5 | 219.2 | 231.8 | 240.5 | 246.5 | 249.1 |
| 72.5° | 70.6 | 91.9 | 122.6 | 149.9 | 171.9 | 190.5 | 205.8 | 217.8 | 225.8 | 230.5 | 232.5 |
| 75° | 61.3 | 81.9 | 111.9 | 137.9 | 158.5 | 175.9 | 190.5 | 202.5 | 210.5 | 213.8 | 215.9 |
| 77.5° | 51.3 | 72.0 | 100.6 | 124.6 | 143.9 | 159.9 | 173.8 | 185.2 | 192.6 | 195.9 | 197.9 |
| 80° | 42.7 | 61.3 | 87.3 | 109.2 | 127.3 | 142.6 | 155.2 | 167.2 | 173.2 | 173.8 | 171.9 |
| 82.5° | 33.3 | 50.6 | 73.3 | 92.6 | 107.9 | 122.6 | 134.6 | 142.6 | 145.3 | 145.3 | 143.2 |
| 85° | 24.6 | 38.0 | 57.3 | 72.6 | 85.9 | 96.6 | 104.0 | 110.6 | 111.9 | 112.6 | 110.0 |
| 87.5° | 14.0 | 21.3 | 34.0 | 44.0 | 52.0 | 59.3 | 64.6 | 67.9 | 67.9 | 68.6 | 67.3 |
| 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: P976713

CATALOG NUMBER: 24SR-LD2-C-29-UNV-L935-CD1-BR-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 | 233.8 |
| 2.5° | 237.2 | 238.5 | 238.5 | 239.8 | 240.5 | 240.5 | 241.1 | 241.1 |
| 5° | 267.1 | 272.5 | 274.5 | 277.8 | 279.8 | 282.5 | 283.8 | 283.2 |
| 7.5° | 303.2 | 311.1 | 315.1 | 319.7 | 325.1 | 326.5 | 328.4 | 328.4 |
| 10° | 339.1 | 348.4 | 354.4 | 359.8 | 365.7 | 368.4 | 371.1 | 371.1 |
| 12.5° | 371.7 | 381.0 | 389.1 | 395.7 | 401.7 | 405.7 | 408.4 | 409.1 |
| 15° | 398.4 | 410.4 | 418.4 | 425.8 | 432.4 | 436.3 | 439.7 | 440.4 |
| 17.5° | 420.4 | 431.7 | 442.3 | 450.4 | 456.3 | 462.3 | 464.4 | 465.7 |
| 20° | 437.7 | 449.7 | 461.1 | 469.0 | 475.7 | 481.7 | 484.4 | 485.7 |
| 22.5° | 450.4 | 463.0 | 474.3 | 483.0 | 489.6 | 495.7 | 499.0 | 500.3 |
| 25° | 458.4 | 471.6 | 483.6 | 492.3 | 499.7 | 505.7 | 509.0 | 510.3 |
| 27.5° | 463.7 | 477.0 | 488.3 | 497.0 | 504.3 | 510.3 | 513.7 | 515.6 |
| 30° | 463.7 | 477.0 | 488.3 | 497.0 | 504.3 | 510.3 | 513.7 | 515.0 |
| 32.5° | 459.7 | 473.0 | 484.4 | 492.3 | 499.7 | 505.7 | 509.0 | 510.3 |
| 35° | 452.4 | 465.7 | 476.4 | 484.4 | 491.7 | 497.0 | 500.3 | 501.0 |
| 37.5° | 442.3 | 455.1 | 465.0 | 473.0 | 479.7 | 485.0 | 488.3 | 489.0 |
| 40° | 431.0 | 443.0 | 452.4 | 459.7 | 465.7 | 470.4 | 473.7 | 474.3 |
| 42.5° | 417.7 | 429.1 | 437.0 | 444.4 | 449.7 | 454.3 | 457.7 | 457.0 |
| 45° | 403.7 | 414.4 | 421.0 | 427.0 | 433.0 | 436.3 | 439.0 | 439.0 |
| 47.5° | 389.7 | 398.4 | 404.4 | 409.7 | 414.4 | 417.7 | 419.7 | 419.7 |
| 50° | 375.1 | 382.4 | 387.8 | 392.4 | 396.4 | 399.0 | 401.0 | 401.0 |
| 52.5° | 360.4 | 367.1 | 371.1 | 375.1 | 378.4 | 380.4 | 382.4 | 381.8 |
| 55° | 345.7 | 351.1 | 353.8 | 357.7 | 360.4 | 363.1 | 364.5 | 363.7 |
| 57.5° | 331.1 | 334.4 | 337.1 | 340.4 | 343.1 | 345.7 | 346.4 | 347.1 |
| 60° | 315.1 | 318.5 | 320.5 | 323.8 | 326.5 | 328.4 | 329.8 | 329.1 |
| 62.5° | 299.8 | 301.8 | 303.8 | 306.5 | 308.4 | 311.1 | 311.8 | 311.8 |
| 65° | 283.2 | 285.1 | 287.1 | 289.8 | 291.8 | 294.5 | 295.8 | 295.1 |
| 67.5° | 267.1 | 269.1 | 271.2 | 273.1 | 275.8 | 278.5 | 279.1 | 279.1 |
| 70° | 250.5 | 252.5 | 253.8 | 256.5 | 258.5 | 261.1 | 261.8 | 261.8 |
| 72.5° | 234.5 | 235.9 | 237.2 | 239.8 | 241.1 | 243.2 | 244.5 | 244.5 |
| 75° | 216.5 | 217.8 | 219.2 | 220.5 | 221.2 | 221.9 | 222.5 | 221.9 |
| 77.5° | 196.5 | 195.2 | 193.8 | 193.8 | 192.6 | 193.2 | 193.8 | 193.2 |
| 80° | 169.2 | 167.8 | 166.6 | 165.9 | 164.5 | 164.5 | 165.2 | 164.5 |
| 82.5° | 140.6 | 137.9 | 136.6 | 135.9 | 134.6 | 134.6 | 134.6 | 134.6 |
| 85° | 105.9 | 104.6 | 104.0 | 102.6 | 101.3 | 100.6 | 101.3 | 101.9 |
| 87.5° | 66.0 | 64.6 | 63.3 | 61.9 | 61.3 | 60.7 | 61.9 | 60.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976713
 CATALOG NUMBER: 24SR-LD2-C-29-UNV-L935-CD1-BR-U

CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|------|------|------|------|----------------|------|------|------|------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room Dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 9.3 | 11.0 | 9.6 | 11.4 | 11.7 | 12.3 | 14.1 | 12.6 | 14.4 | 14.7 |
| | 3H | 11.2 | 12.9 | 11.6 | 13.2 | 13.6 | 14.9 | 16.6 | 15.3 | 16.9 | 17.2 |
| | 4H | 12.0 | 13.6 | 12.4 | 13.9 | 14.3 | 16.2 | 17.7 | 16.6 | 18.1 | 18.4 |
| | 6H | 12.6 | 14.1 | 13.0 | 14.4 | 14.8 | 17.3 | 18.7 | 17.7 | 19.1 | 19.5 |
| | 8H | 12.8 | 14.2 | 13.3 | 14.6 | 15.0 | 17.8 | 19.2 | 18.2 | 19.5 | 19.9 |
| | 12H | 13.0 | 14.4 | 13.4 | 14.7 | 15.2 | 18.2 | 19.5 | 18.6 | 19.9 | 20.3 |
| 4H | 2H | 11.0 | 12.6 | 11.4 | 12.9 | 13.3 | 13.0 | 14.6 | 13.4 | 14.9 | 15.3 |
| | 3H | 13.5 | 14.8 | 13.9 | 15.2 | 15.6 | 15.9 | 17.3 | 16.3 | 17.7 | 18.1 |
| | 4H | 14.6 | 15.8 | 15.0 | 16.2 | 16.7 | 17.4 | 18.6 | 17.8 | 19.0 | 19.4 |
| | 6H | 15.5 | 16.6 | 16.0 | 17.0 | 17.5 | 18.7 | 19.8 | 19.1 | 20.2 | 20.7 |
| | 8H | 15.8 | 16.9 | 16.3 | 17.3 | 17.8 | 19.2 | 20.3 | 19.7 | 20.7 | 21.2 |
| | 12H | 16.1 | 17.0 | 16.6 | 17.5 | 18.0 | 19.8 | 20.7 | 20.2 | 21.2 | 21.6 |
| 8H | 4H | 15.8 | 16.8 | 16.3 | 17.3 | 17.7 | 17.9 | 19.0 | 18.4 | 19.4 | 19.9 |
| | 6H | 17.1 | 18.0 | 17.6 | 18.5 | 19.0 | 19.4 | 20.3 | 19.9 | 20.8 | 21.3 |
| | 8H | 17.7 | 18.5 | 18.2 | 19.0 | 19.5 | 20.1 | 20.9 | 20.6 | 21.4 | 21.9 |
| | 12H | 18.2 | 18.9 | 18.7 | 19.4 | 19.9 | 20.8 | 21.5 | 21.3 | 22.0 | 22.6 |
| 12H | 4H | 16.0 | 17.0 | 16.5 | 17.4 | 17.9 | 18.0 | 19.0 | 18.5 | 19.4 | 19.9 |
| | 6H | 17.6 | 18.4 | 18.1 | 18.8 | 19.3 | 19.6 | 20.4 | 20.2 | 20.9 | 21.4 |
| | 8H | 18.3 | 19.0 | 18.8 | 19.5 | 20.1 | 20.4 | 21.1 | 20.9 | 21.6 | 22.2 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-6

Test Date: 07/01/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L935-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L935-CD1-U

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-457-6
 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-L935-CD1-U**
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K): 3329
 CIE u': 0.2411
 CIE v': 0.5118
 Duv: -0.0021
 CIE x: 0.4128
 CIE y: 0.3894
 CIE z: 0.1979
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 582
 Purity: 40.74075
 Rf: 91.4
 Rg: 100.2

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 93.9 | | |
| R1: | 95.4 | R9: | 60.5 |
| R2: | 97.4 | R10: | 92.5 |
| R3: | 97.7 | R11: | 95.9 |
| R4: | 94.9 | R12: | 82.0 |
| R5: | 95.1 | R13: | 96.0 |
| R6: | 95.7 | R14: | 98.0 |
| R7: | 91.7 | R15: | 91.5 |
| R8: | 83.2 | | |



Test Conditions

Stabilization Time: 48M
 Operation Time: 1H 48M
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2506-457-6

| 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: SP1-2506-457-6

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3500K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-6

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 | 143 | NR | 620 | 358 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 166 | NR | 625 | 357 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 191 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 210 | NR | 635 | 705 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 223 | NR | 640 | 239 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 233 | NR | 645 | 226 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 240 | NR | 650 | 201 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 246 | NR | 655 | 170 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 251 | NR | 660 | 145 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 260 | NR | 665 | 123 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 267 | NR | 670 | 113 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 9 | NR | 545 | 276 | NR | 675 | 93 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 16 | NR | 550 | 284 | NR | 680 | 80 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 28 | NR | 555 | 294 | NR | 685 | 69 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 46 | NR | 560 | 303 | NR | 690 | 59 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 75 | NR | 565 | 313 | NR | 695 | 51 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 120 | NR | 570 | 319 | NR | 700 | 43 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 203 | NR | 575 | 327 | NR | 705 | 37 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 311 | NR | 580 | 336 | NR | 710 | 31 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 290 | NR | 585 | 344 | NR | 715 | 26 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 197 | NR | 590 | 349 | NR | 720 | 22 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 163 | NR | 595 | 350 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 135 | NR | 600 | 355 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 110 | NR | 605 | 357 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 108 | NR | 610 | 391 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 123 | NR | 615 | 421 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-6

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.57

| 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 | 143 | NR | 620 | 358 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 166 | NR | 625 | 357 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 191 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 210 | NR | 635 | 705 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 223 | NR | 640 | 239 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 233 | NR | 645 | 226 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 240 | NR | 650 | 201 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 246 | NR | 655 | 170 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 251 | NR | 660 | 145 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 260 | NR | 665 | 123 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 267 | NR | 670 | 113 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 9 | NR | 545 | 276 | NR | 675 | 93 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 16 | NR | 550 | 284 | NR | 680 | 80 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 28 | NR | 555 | 294 | NR | 685 | 69 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 46 | NR | 560 | 303 | NR | 690 | 59 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 75 | NR | 565 | 313 | NR | 695 | 51 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 120 | NR | 570 | 319 | NR | 700 | 43 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 203 | NR | 575 | 327 | NR | 705 | 37 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 311 | NR | 580 | 336 | NR | 710 | 31 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 290 | NR | 585 | 344 | NR | 715 | 26 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 197 | NR | 590 | 349 | NR | 720 | 22 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 163 | NR | 595 | 350 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 135 | NR | 600 | 355 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 110 | NR | 605 | 357 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 108 | NR | 610 | 391 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 123 | NR | 615 | 421 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.17

| 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 | 143 | NR | 620 | 358 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 166 | NR | 625 | 357 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 191 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 210 | NR | 635 | 705 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 223 | NR | 640 | 239 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 233 | NR | 645 | 226 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 240 | NR | 650 | 201 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 246 | NR | 655 | 170 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 251 | NR | 660 | 145 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 260 | NR | 665 | 123 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 267 | NR | 670 | 113 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 9 | NR | 545 | 276 | NR | 675 | 93 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 16 | NR | 550 | 284 | NR | 680 | 80 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 28 | NR | 555 | 294 | NR | 685 | 69 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 46 | NR | 560 | 303 | NR | 690 | 59 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 75 | NR | 565 | 313 | NR | 695 | 51 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 120 | NR | 570 | 319 | NR | 700 | 43 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 203 | NR | 575 | 327 | NR | 705 | 37 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 311 | NR | 580 | 336 | NR | 710 | 31 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 290 | NR | 585 | 344 | NR | 715 | 26 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 197 | NR | 590 | 349 | NR | 720 | 22 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 163 | NR | 595 | 350 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 135 | NR | 600 | 355 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 110 | NR | 605 | 357 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 108 | NR | 610 | 391 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 123 | NR | 615 | 421 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.4$
 $R_g = 100.2$
 $CIE R_a = 93.9$
 $R_9 = 60.5$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 93 | CES51 = 98 | CES76 = 88 |
| CES02 = 63 | CES27 = 93 | CES52 = 98 | CES77 = 87 |
| CES03 = 31 | CES28 = 96 | CES53 = 97 | CES78 = 85 |
| CES04 = 70 | CES29 = 95 | CES54 = 95 | CES79 = 91 |
| CES05 = 50 | CES30 = 96 | CES55 = 94 | CES80 = 92 |
| CES06 = 51 | CES31 = 95 | CES56 = 96 | CES81 = 75 |
| CES07 = 43 | CES32 = 87 | CES57 = 95 | CES82 = 96 |
| CES08 = 42 | CES33 = 97 | CES58 = 96 | CES83 = 94 |
| CES09 = 29 | CES34 = 94 | CES59 = 98 | CES84 = 95 |
| CES10 = 75 | CES35 = 96 | CES60 = 94 | CES85 = 80 |
| CES11 = 58 | CES36 = 84 | CES61 = 93 | CES86 = 79 |
| CES12 = 64 | CES37 = 95 | CES62 = 89 | CES87 = 91 |
| CES13 = 44 | CES38 = 91 | CES63 = 94 | CES88 = 97 |
| CES14 = 74 | CES39 = 99 | CES64 = 92 | CES89 = 83 |
| CES15 = 72 | CES40 = 97 | CES65 = 90 | CES90 = 98 |
| CES16 = 48 | CES41 = 97 | CES66 = 90 | CES91 = 77 |
| CES17 = 49 | CES42 = 93 | CES67 = 89 | CES92 = 77 |
| CES18 = 56 | CES43 = 92 | CES68 = 89 | CES93 = 86 |
| CES19 = 71 | CES44 = 99 | CES69 = 91 | CES94 = 74 |
| CES20 = 67 | CES45 = 96 | CES70 = 88 | CES95 = 84 |
| CES21 = 86 | CES46 = 96 | CES71 = 84 | CES96 = 92 |
| CES22 = 78 | CES47 = 91 | CES72 = 94 | CES97 = 95 |
| CES23 = 91 | CES48 = 94 | CES73 = 83 | CES98 = 94 |
| CES24 = 90 | CES49 = 94 | CES74 = 91 | CES99 = 92 |
| CES25 = 71 | CES50 = 98 | CES75 = 86 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)