

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060491

Luminaire Tested: S124RDRP-S575D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060491
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S575D850-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

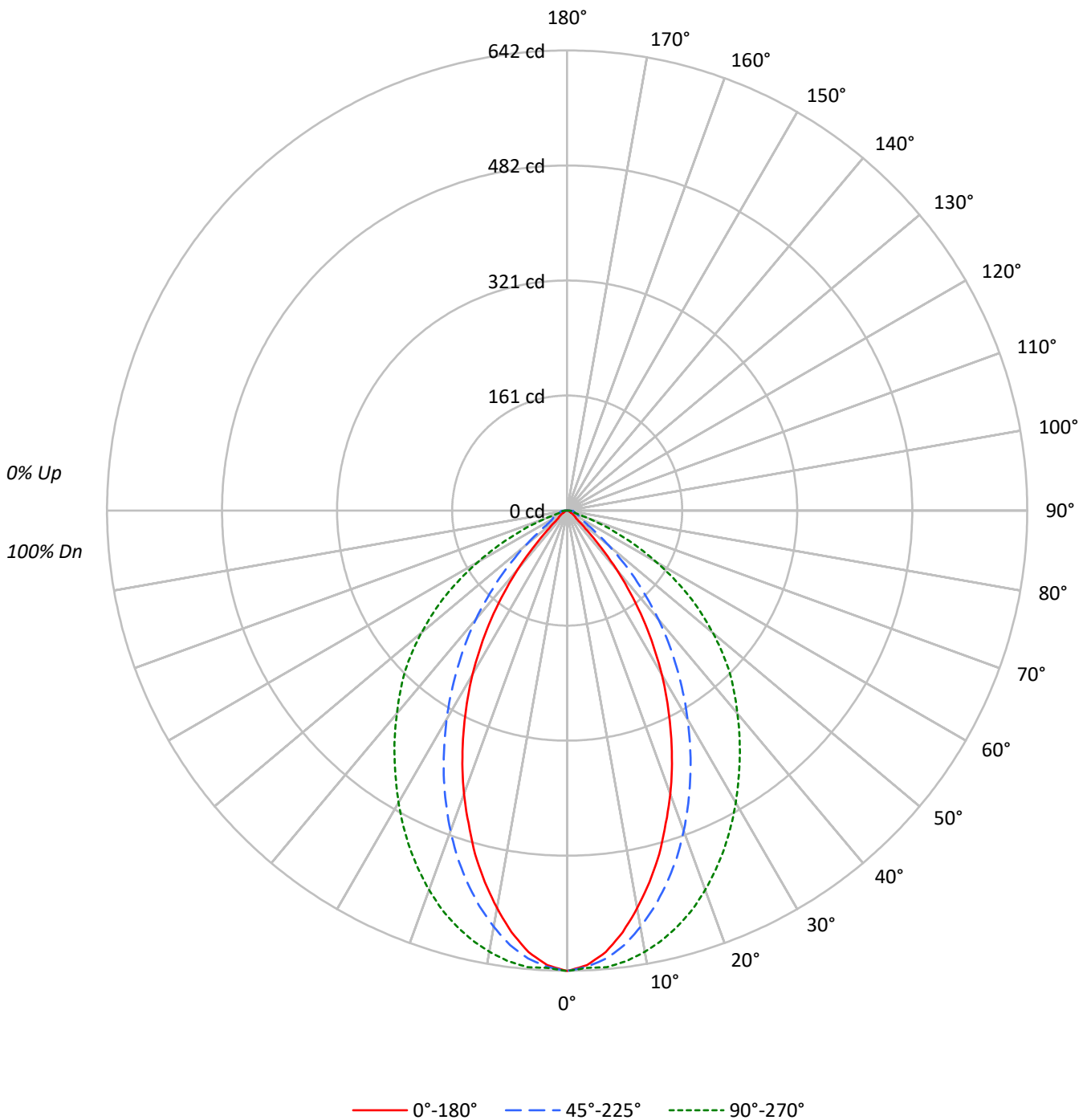
Lumens per Lamp: N/A
Luminaire Lumens: 809.5 lumens
Efficiency: N/A
Efficacy: 41.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
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: 24 FT

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Luminous Intensity Polar Plot





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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 98 | 93 | 89 | 102 | 97 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 75 | 81 | 77 | 74 | 72 |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 75 | 70 | 79 | 73 | 69 | 76 | 72 | 68 | 74 | 70 | 67 | 65 |
| 5 | 86 | 75 | 68 | 63 | 84 | 74 | 68 | 63 | 72 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 56 | 66 | 60 | 56 | 64 | 59 | 56 | 54 |
| 7 | 75 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 55 | 51 | 60 | 55 | 51 | 49 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 45 |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 |
| 10 | 63 | 52 | 45 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 44 | 41 | 49 | 44 | 40 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5531 | 5531 | 5531 |
| 5° | 5344 | 5422 | 5526 |
| 10° | 4925 | 5155 | 5465 |
| 15° | 4423 | 4792 | 5344 |
| 20° | 3855 | 4359 | 5161 |
| 25° | 3252 | 3868 | 4935 |
| 30° | 2624 | 3343 | 4677 |
| 35° | 1942 | 2797 | 4414 |
| 40° | 1204 | 2229 | 4152 |
| 45° | 477 | 1625 | 3912 |
| 50° | 212 | 1019 | 3555 |
| 55° | 170 | 531 | 3112 |
| 60° | 117 | 403 | 2480 |
| 65° | 77 | 399 | 1705 |
| 70° | 76 | 360 | 798 |
| 75° | 100 | 353 | 353 |
| 80° | 149 | 412 | 412 |
| 85° | 296 | 820 | 593 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3912 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 58.9 | 7.3 |
| 10°-20° | 152.1 | 18.8 |
| 20°-30° | 191.9 | 23.7 |
| 30°-40° | 176.1 | 21.8 |
| 40°-50° | 119.9 | 14.8 |
| 50°-60° | 65.3 | 8.1 |
| 60°-70° | 28.3 | 3.5 |
| 70°-80° | 10.3 | 1.3 |
| 80°-90° | 6.6 | 0.8 |
| 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° | 402.9 | 49.8 |
| 0°-40° | 579.0 | 71.5 |
| 0°-60° | 764.3 | 94.4 |
| 0°-90° | 809.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 809.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 642 | 642 | 642 | 642 | 642 | |
| 5° | 618 | 626 | 627 | 634 | 639 | 57 |
| 15° | 496 | 513 | 538 | 576 | 599 | 138 |
| 25° | 342 | 366 | 407 | 472 | 519 | 156 |
| 35° | 185 | 212 | 266 | 351 | 420 | 114 |
| 45° | 39 | 66 | 133 | 237 | 321 | 36 |
| 55° | 11 | 12 | 35 | 130 | 207 | 10 |
| 65° | 4 | 5 | 20 | 41 | 84 | 4 |
| 75° | 3 | 10 | 11 | 11 | 11 | 3 |
| 85° | 3 | 7 | 8 | 8 | 6 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 642.3 | 642.3 | 642.3 | 642.3 | 642.3 |
| 2.5° | 634.8 | 642.3 | 637.1 | 638.6 | 638.6 |
| 5° | 618.2 | 626.5 | 627.3 | 634.0 | 639.3 |
| 7.5° | 593.3 | 605.4 | 611.4 | 625.0 | 634.0 |
| 10° | 563.2 | 577.5 | 589.6 | 612.9 | 625.0 |
| 12.5° | 530.8 | 547.3 | 565.4 | 596.3 | 613.7 |
| 15° | 496.1 | 513.4 | 537.5 | 576.0 | 599.4 |
| 17.5° | 457.6 | 478.7 | 508.1 | 554.1 | 582.8 |
| 20° | 420.7 | 441.8 | 475.7 | 527.7 | 563.2 |
| 22.5° | 382.2 | 404.1 | 441.8 | 499.8 | 542.1 |
| 25° | 342.3 | 366.4 | 407.1 | 471.9 | 519.4 |
| 27.5° | 303.1 | 328.7 | 371.7 | 442.5 | 495.3 |
| 30° | 263.9 | 289.5 | 336.2 | 412.4 | 470.4 |
| 32.5° | 223.9 | 250.3 | 300.8 | 380.7 | 444.8 |
| 35° | 184.7 | 211.8 | 266.1 | 350.6 | 419.9 |
| 37.5° | 144.8 | 173.4 | 231.5 | 321.2 | 395.0 |
| 40° | 107.1 | 135.7 | 198.3 | 291.8 | 369.4 |
| 42.5° | 71.6 | 100.3 | 164.4 | 263.1 | 345.3 |
| 45° | 39.2 | 65.6 | 133.4 | 236.7 | 321.2 |
| 47.5° | 21.1 | 36.2 | 103.3 | 211.1 | 294.0 |
| 50° | 15.8 | 19.6 | 76.1 | 184.0 | 265.4 |
| 52.5° | 13.6 | 15.1 | 52.8 | 155.3 | 236.7 |
| 55° | 11.3 | 12.1 | 35.4 | 130.4 | 207.3 |
| 57.5° | 9.0 | 9.8 | 26.4 | 105.5 | 175.7 |
| 60° | 6.8 | 8.3 | 23.4 | 81.4 | 144.0 |
| 62.5° | 5.3 | 6.8 | 21.9 | 59.6 | 113.8 |
| 65° | 3.8 | 5.3 | 19.6 | 40.7 | 83.7 |
| 67.5° | 3.8 | 6.0 | 16.6 | 26.4 | 56.5 |
| 70° | 3.0 | 8.3 | 14.3 | 17.3 | 31.7 |
| 72.5° | 3.0 | 9.0 | 12.1 | 12.1 | 12.1 |
| 75° | 3.0 | 9.8 | 10.6 | 10.6 | 10.6 |
| 77.5° | 3.0 | 9.0 | 9.8 | 9.0 | 9.0 |
| 80° | 3.0 | 8.3 | 8.3 | 8.3 | 8.3 |
| 82.5° | 3.0 | 7.5 | 8.3 | 8.3 | 6.8 |
| 85° | 3.0 | 6.8 | 8.3 | 8.3 | 6.0 |
| 87.5° | 2.3 | 6.8 | 7.5 | 7.5 | 4.5 |
| 90° | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.35 | 15.63 | 14.71 | 15.94 | 16.26 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 14.73 | 15.86 | 15.11 | 16.19 | 16.55 |
| | 4H | 0.00 | 0.67 | 0.02 | 1.02 | 1.40 | 14.70 | 15.76 | 15.11 | 16.11 | 16.49 |
| | 6H | 0.79 | 1.76 | 1.21 | 2.13 | 2.52 | 14.69 | 15.66 | 15.11 | 16.03 | 16.42 |
| | 8H | 1.38 | 2.30 | 1.81 | 2.69 | 3.09 | 14.69 | 15.61 | 15.12 | 16.00 | 16.40 |
| | 12H | 2.05 | 2.92 | 2.48 | 3.31 | 3.74 | 14.71 | 15.58 | 15.14 | 15.96 | 16.39 |
| 4H | 2H | 0.59 | 1.65 | 1.00 | 2.00 | 2.38 | 14.16 | 15.21 | 14.56 | 15.56 | 15.95 |
| | 3H | 2.18 | 3.04 | 2.59 | 3.44 | 3.84 | 14.58 | 15.44 | 14.99 | 15.84 | 16.25 |
| | 4H | 3.47 | 4.24 | 3.90 | 4.66 | 5.10 | 14.58 | 15.35 | 15.01 | 15.77 | 16.21 |
| | 6H | 4.59 | 5.26 | 5.06 | 5.70 | 6.17 | 14.62 | 15.28 | 15.08 | 15.73 | 16.19 |
| | 8H | 5.10 | 5.72 | 5.57 | 6.17 | 6.64 | 14.65 | 15.26 | 15.12 | 15.71 | 16.18 |
| | 12H | 5.65 | 6.19 | 6.14 | 6.68 | 7.15 | 14.71 | 15.26 | 15.20 | 15.74 | 16.21 |
| 8H | 4H | 4.56 | 5.18 | 5.03 | 5.62 | 6.09 | 14.49 | 15.11 | 14.96 | 15.55 | 16.03 |
| | 6H | 6.10 | 6.60 | 6.60 | 7.10 | 7.58 | 14.57 | 15.07 | 15.07 | 15.57 | 16.05 |
| | 8H | 6.90 | 7.35 | 7.42 | 7.87 | 8.36 | 14.65 | 15.11 | 15.17 | 15.62 | 16.11 |
| | 12H | 7.73 | 8.13 | 8.25 | 8.63 | 9.20 | 14.82 | 15.22 | 15.34 | 15.72 | 16.29 |
| 12H | 4H | 4.75 | 5.29 | 5.23 | 5.78 | 6.25 | 14.45 | 15.00 | 14.94 | 15.48 | 15.96 |
| | 6H | 6.45 | 6.91 | 6.98 | 7.42 | 7.92 | 14.54 | 15.00 | 15.06 | 15.51 | 16.00 |
| | 8H | 7.46 | 7.86 | 7.98 | 8.36 | 8.93 | 14.68 | 15.08 | 15.19 | 15.58 | 16.15 |