

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: P1060403

Luminaire Tested: S124RDRP-S350D840-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060403
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-77)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S350D840-X4F0-XX-UDD-SVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

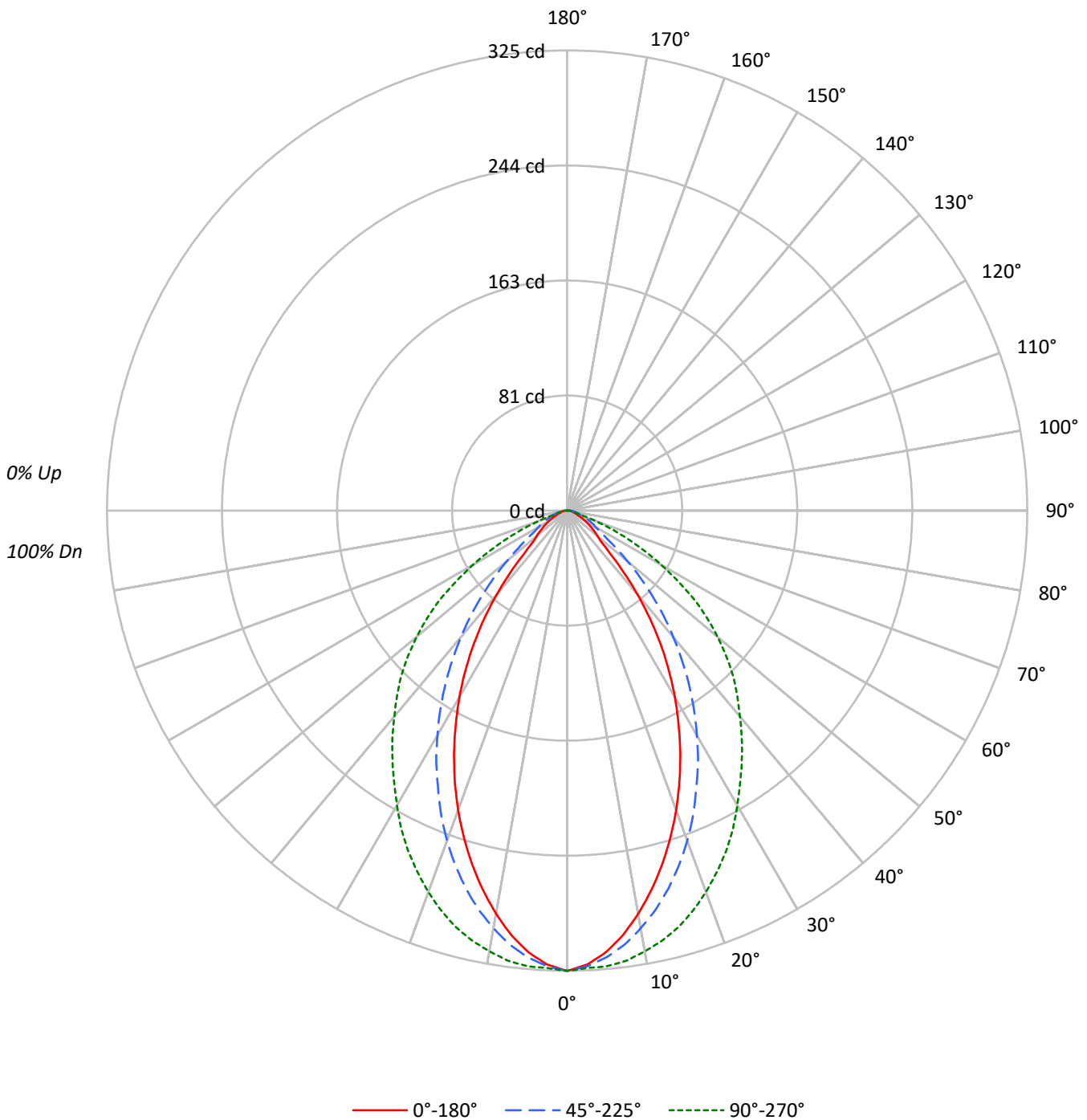
Lumens per Lamp: N/A
Luminaire Lumens: 457.1 lumens
Efficiency: N/A
Efficacy: 36.6 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 12.5
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 | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 |
| 2 | 104 | 97 | 92 | 88 | 101 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 83 | 81 | 79 |
| 3 | 97 | 88 | 82 | 77 | 94 | 87 | 81 | 76 | 84 | 79 | 75 | 81 | 77 | 73 | 79 | 75 | 72 | 70 |
| 4 | 90 | 80 | 73 | 68 | 88 | 79 | 73 | 67 | 77 | 71 | 67 | 75 | 70 | 66 | 73 | 68 | 65 | 63 |
| 5 | 84 | 73 | 66 | 61 | 82 | 72 | 65 | 60 | 70 | 64 | 60 | 69 | 63 | 59 | 67 | 62 | 59 | 57 |
| 6 | 79 | 68 | 60 | 55 | 77 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 58 | 54 | 62 | 57 | 53 | 51 |
| 7 | 74 | 62 | 55 | 50 | 72 | 62 | 54 | 49 | 60 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 49 | 47 |
| 8 | 69 | 58 | 50 | 45 | 68 | 57 | 50 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 48 | 45 | 43 |
| 9 | 65 | 54 | 47 | 42 | 64 | 53 | 46 | 42 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 |
| 10 | 62 | 50 | 43 | 39 | 61 | 50 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2799 | 2799 | 2799 |
| 5° | 2706 | 2738 | 2792 |
| 10° | 2528 | 2619 | 2763 |
| 15° | 2308 | 2463 | 2714 |
| 20° | 2062 | 2274 | 2626 |
| 25° | 1796 | 2051 | 2523 |
| 30° | 1513 | 1822 | 2389 |
| 35° | 1209 | 1578 | 2261 |
| 40° | 869 | 1311 | 2134 |
| 45° | 524 | 1033 | 2020 |
| 50° | 376 | 748 | 1857 |
| 55° | 317 | 503 | 1645 |
| 60° | 257 | 400 | 1324 |
| 65° | 202 | 363 | 952 |
| 70° | 176 | 302 | 511 |
| 75° | 166 | 276 | 246 |
| 80° | 164 | 288 | 223 |
| 85° | 247 | 405 | 287 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2020 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 29.8 | 6.5 |
| 10°-20° | 78.2 | 17.1 |
| 20°-30° | 101.5 | 22.2 |
| 30°-40° | 97.5 | 21.3 |
| 40°-50° | 72.4 | 15.8 |
| 50°-60° | 44.3 | 9.7 |
| 60°-70° | 21.5 | 4.7 |
| 70°-80° | 8.2 | 1.8 |
| 80°-90° | 3.7 | 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° | 209.5 | 45.8 |
| 0°-40° | 307.0 | 67.2 |
| 0°-60° | 423.7 | 92.7 |
| 0°-90° | 457.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 457.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 325 | 325 | 325 | 325 | 325 | |
| 5° | 313 | 318 | 317 | 320 | 323 | 29 |
| 15° | 259 | 266 | 276 | 293 | 304 | 72 |
| 25° | 189 | 198 | 216 | 244 | 266 | 86 |
| 35° | 115 | 125 | 150 | 186 | 215 | 71 |
| 45° | 43 | 54 | 85 | 130 | 166 | 36 |
| 55° | 21 | 22 | 34 | 76 | 110 | 19 |
| 65° | 10 | 11 | 18 | 28 | 47 | 10 |
| 75° | 5 | 8 | 8 | 7 | 7 | 5 |
| 85° | 2 | 4 | 4 | 4 | 3 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 325.1 | 325.1 | 325.1 | 325.1 | 325.1 |
| 2.5° | 321.0 | 324.7 | 322.2 | 323.0 | 323.4 |
| 5° | 313.1 | 317.7 | 316.8 | 319.7 | 323.0 |
| 7.5° | 302.4 | 307.7 | 309.4 | 315.2 | 320.6 |
| 10° | 289.1 | 295.7 | 299.5 | 309.0 | 316.0 |
| 12.5° | 274.6 | 281.7 | 288.7 | 301.5 | 311.0 |
| 15° | 258.9 | 266.4 | 276.3 | 292.8 | 304.4 |
| 17.5° | 242.4 | 250.6 | 262.6 | 282.5 | 296.1 |
| 20° | 225.0 | 233.7 | 248.2 | 270.1 | 286.6 |
| 22.5° | 207.2 | 216.3 | 232.5 | 256.9 | 276.3 |
| 25° | 189.0 | 198.5 | 215.9 | 243.6 | 265.5 |
| 27.5° | 170.4 | 180.3 | 200.2 | 229.6 | 253.5 |
| 30° | 152.2 | 161.7 | 183.2 | 215.1 | 240.3 |
| 32.5° | 133.6 | 143.5 | 166.7 | 200.2 | 227.5 |
| 35° | 115.0 | 125.3 | 150.1 | 185.7 | 215.1 |
| 37.5° | 96.0 | 107.1 | 133.2 | 171.6 | 202.7 |
| 40° | 77.3 | 88.1 | 116.6 | 157.2 | 189.8 |
| 42.5° | 59.1 | 70.7 | 100.9 | 142.7 | 177.9 |
| 45° | 43.0 | 53.8 | 84.8 | 129.5 | 165.9 |
| 47.5° | 32.3 | 38.9 | 69.9 | 117.1 | 152.6 |
| 50° | 28.1 | 29.4 | 55.8 | 103.4 | 138.6 |
| 52.5° | 24.4 | 25.2 | 43.4 | 88.5 | 124.5 |
| 55° | 21.1 | 21.9 | 33.5 | 75.7 | 109.6 |
| 57.5° | 17.8 | 18.6 | 26.9 | 63.3 | 92.6 |
| 60° | 14.9 | 15.7 | 23.2 | 50.5 | 76.9 |
| 62.5° | 12.4 | 12.8 | 20.7 | 38.5 | 61.6 |
| 65° | 9.9 | 10.8 | 17.8 | 28.1 | 46.7 |
| 67.5° | 8.3 | 9.1 | 14.5 | 19.4 | 32.7 |
| 70° | 7.0 | 9.1 | 12.0 | 13.6 | 20.3 |
| 72.5° | 5.8 | 8.3 | 9.9 | 9.5 | 9.5 |
| 75° | 5.0 | 7.9 | 8.3 | 7.4 | 7.4 |
| 77.5° | 4.1 | 7.0 | 6.6 | 6.2 | 5.8 |
| 80° | 3.3 | 5.8 | 5.8 | 5.0 | 4.5 |
| 82.5° | 2.9 | 4.5 | 4.5 | 4.5 | 3.7 |
| 85° | 2.5 | 4.1 | 4.1 | 3.7 | 2.9 |
| 87.5° | 1.7 | 3.3 | 3.7 | 3.3 | 2.1 |
| 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 | 3.39 | 4.73 | 3.75 | 5.04 | 5.35 | 12.49 | 13.83 | 12.86 | 14.14 | 14.46 |
| | 3H | 4.43 | 5.62 | 4.81 | 5.95 | 6.31 | 12.99 | 14.18 | 13.37 | 14.51 | 14.87 |
| | 4H | 4.95 | 6.06 | 5.36 | 6.41 | 6.79 | 13.00 | 14.11 | 13.41 | 14.46 | 14.84 |
| | 6H | 5.40 | 6.42 | 5.81 | 6.79 | 7.18 | 13.00 | 14.02 | 13.42 | 14.39 | 14.78 |
| | 8H | 5.59 | 6.55 | 6.02 | 6.94 | 7.35 | 13.00 | 13.96 | 13.43 | 14.35 | 14.76 |
| | 12H | 5.80 | 6.72 | 6.24 | 7.11 | 7.54 | 13.00 | 13.92 | 13.43 | 14.30 | 14.73 |
| 4H | 2H | 4.48 | 5.59 | 4.89 | 5.94 | 6.32 | 12.38 | 13.49 | 12.78 | 13.84 | 14.22 |
| | 3H | 5.76 | 6.66 | 6.17 | 7.06 | 7.47 | 12.96 | 13.86 | 13.37 | 14.27 | 14.67 |
| | 4H | 6.47 | 7.28 | 6.90 | 7.70 | 8.14 | 13.00 | 13.81 | 13.44 | 14.23 | 14.67 |
| | 6H | 7.09 | 7.79 | 7.55 | 8.24 | 8.70 | 13.05 | 13.75 | 13.52 | 14.20 | 14.67 |
| | 8H | 7.34 | 7.99 | 7.80 | 8.44 | 8.91 | 13.07 | 13.72 | 13.54 | 14.17 | 14.64 |
| | 12H | 7.61 | 8.19 | 8.10 | 8.67 | 9.15 | 13.10 | 13.68 | 13.59 | 14.16 | 14.64 |
| 8H | 4H | 6.89 | 7.55 | 7.36 | 7.99 | 8.46 | 12.95 | 13.60 | 13.42 | 14.05 | 14.52 |
| | 6H | 7.76 | 8.30 | 8.27 | 8.79 | 9.28 | 13.05 | 13.58 | 13.55 | 14.08 | 14.56 |
| | 8H | 8.16 | 8.65 | 8.69 | 9.16 | 9.65 | 13.10 | 13.59 | 13.63 | 14.10 | 14.59 |
| | 12H | 8.64 | 9.07 | 9.15 | 9.56 | 10.13 | 13.20 | 13.63 | 13.72 | 14.12 | 14.69 |
| 12H | 4H | 6.94 | 7.51 | 7.42 | 8.00 | 8.47 | 12.92 | 13.50 | 13.41 | 13.98 | 14.46 |
| | 6H | 7.87 | 8.36 | 8.40 | 8.87 | 9.36 | 13.02 | 13.51 | 13.54 | 14.02 | 14.51 |
| | 8H | 8.39 | 8.81 | 8.90 | 9.31 | 9.88 | 13.13 | 13.55 | 13.64 | 14.05 | 14.62 |