

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: P1060446

Luminaire Tested: S124RDRP-S350D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060446
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-S350D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

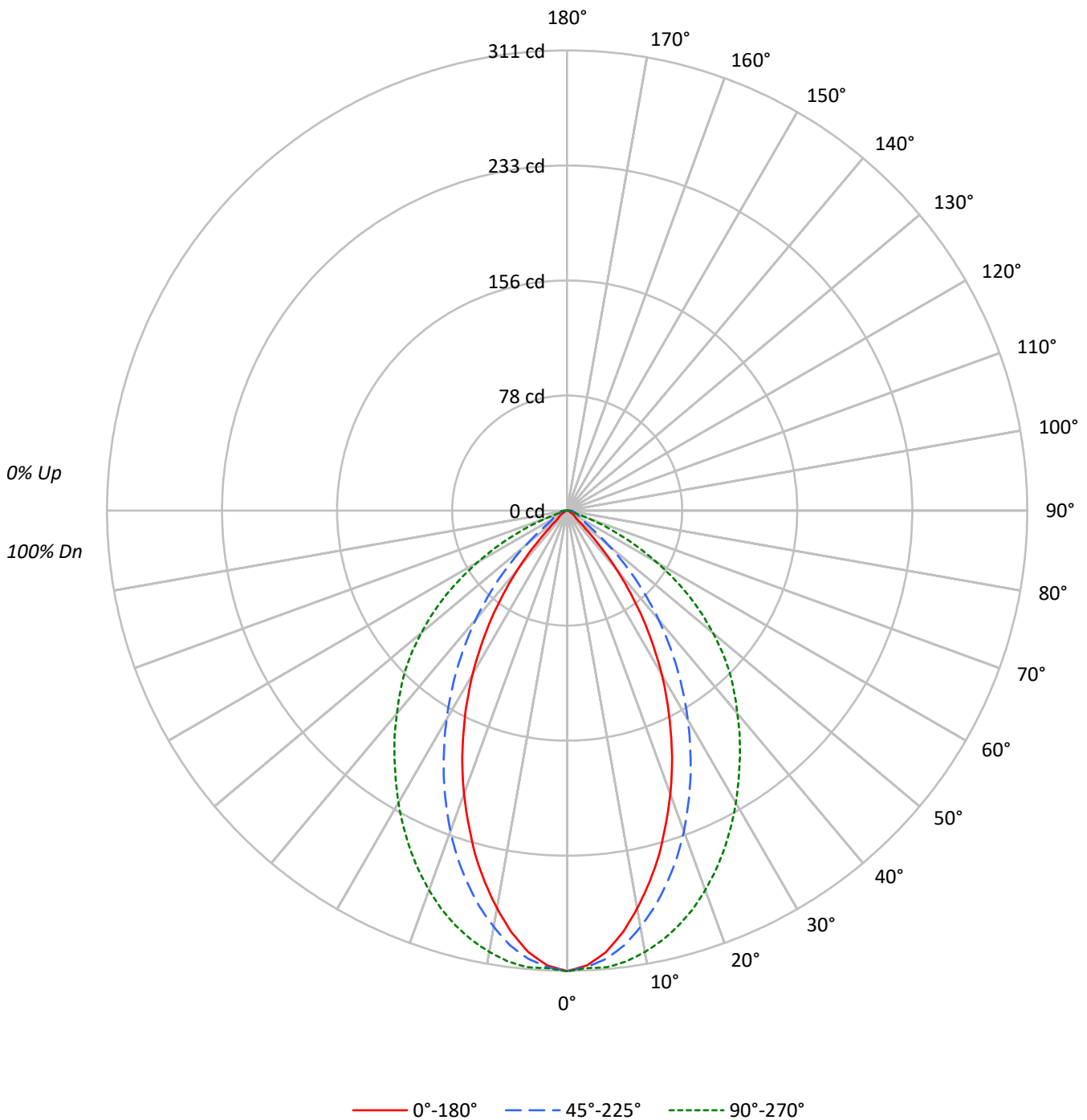
Lumens per Lamp: N/A
Luminaire Lumens: 392.3 lumens
Efficiency: N/A
Efficacy: 31.4 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | 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° | 2681 | 2681 | 2681 |
| 5° | 2590 | 2628 | 2678 |
| 10° | 2386 | 2498 | 2649 |
| 15° | 2143 | 2322 | 2590 |
| 20° | 1868 | 2113 | 2501 |
| 25° | 1576 | 1875 | 2391 |
| 30° | 1272 | 1621 | 2267 |
| 35° | 941 | 1356 | 2139 |
| 40° | 583 | 1080 | 2012 |
| 45° | 231 | 788 | 1895 |
| 50° | 103 | 494 | 1723 |
| 55° | 83 | 258 | 1509 |
| 60° | 57 | 195 | 1202 |
| 65° | 37 | 194 | 827 |
| 70° | 38 | 174 | 385 |
| 75° | 50 | 170 | 170 |
| 80° | 74 | 198 | 198 |
| 85° | 148 | 395 | 287 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1895 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 28.6 | 7.3 |
| 10°-20° | 73.7 | 18.8 |
| 20°-30° | 93.0 | 23.7 |
| 30°-40° | 85.4 | 21.8 |
| 40°-50° | 58.1 | 14.8 |
| 50°-60° | 31.7 | 8.1 |
| 60°-70° | 13.7 | 3.5 |
| 70°-80° | 5.0 | 1.3 |
| 80°-90° | 3.2 | 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° | 195.3 | 49.8 |
| 0°-40° | 280.6 | 71.5 |
| 0°-60° | 370.4 | 94.4 |
| 0°-90° | 392.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 392.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 311 | 311 | 311 | 311 | 311 | |
| 5° | 300 | 304 | 304 | 307 | 310 | 28 |
| 15° | 240 | 249 | 260 | 279 | 290 | 67 |
| 25° | 166 | 178 | 197 | 229 | 252 | 76 |
| 35° | 90 | 103 | 129 | 170 | 204 | 55 |
| 45° | 19 | 32 | 65 | 115 | 156 | 18 |
| 55° | 6 | 6 | 17 | 63 | 100 | 5 |
| 65° | 2 | 3 | 10 | 20 | 41 | 2 |
| 75° | 2 | 5 | 5 | 5 | 5 | 2 |
| 85° | 2 | 3 | 4 | 4 | 3 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 311.3 | 311.3 | 311.3 | 311.3 | 311.3 |
| 2.5° | 307.6 | 311.3 | 308.7 | 309.5 | 309.5 |
| 5° | 299.6 | 303.6 | 304.0 | 307.3 | 309.8 |
| 7.5° | 287.5 | 293.4 | 296.3 | 302.9 | 307.3 |
| 10° | 272.9 | 279.9 | 285.7 | 297.0 | 302.9 |
| 12.5° | 257.2 | 265.3 | 274.0 | 289.0 | 297.4 |
| 15° | 240.4 | 248.8 | 260.5 | 279.1 | 290.5 |
| 17.5° | 221.8 | 232.0 | 246.3 | 268.5 | 282.4 |
| 20° | 203.9 | 214.1 | 230.6 | 255.8 | 272.9 |
| 22.5° | 185.2 | 195.8 | 214.1 | 242.2 | 262.7 |
| 25° | 165.9 | 177.6 | 197.3 | 228.7 | 251.7 |
| 27.5° | 146.9 | 159.3 | 180.1 | 214.5 | 240.1 |
| 30° | 127.9 | 140.3 | 163.0 | 199.9 | 228.0 |
| 32.5° | 108.5 | 121.3 | 145.8 | 184.5 | 215.6 |
| 35° | 89.5 | 102.7 | 129.0 | 169.9 | 203.5 |
| 37.5° | 70.2 | 84.0 | 112.2 | 155.6 | 191.5 |
| 40° | 51.9 | 65.8 | 96.1 | 141.4 | 179.0 |
| 42.5° | 34.7 | 48.6 | 79.7 | 127.5 | 167.3 |
| 45° | 19.0 | 31.8 | 64.7 | 114.7 | 155.6 |
| 47.5° | 10.2 | 17.5 | 50.1 | 102.3 | 142.5 |
| 50° | 7.7 | 9.5 | 36.9 | 89.2 | 128.6 |
| 52.5° | 6.6 | 7.3 | 25.6 | 75.3 | 114.7 |
| 55° | 5.5 | 5.8 | 17.2 | 63.2 | 100.5 |
| 57.5° | 4.4 | 4.7 | 12.8 | 51.2 | 85.1 |
| 60° | 3.3 | 4.0 | 11.3 | 39.5 | 69.8 |
| 62.5° | 2.6 | 3.3 | 10.6 | 28.9 | 55.2 |
| 65° | 1.8 | 2.6 | 9.5 | 19.7 | 40.6 |
| 67.5° | 1.8 | 2.9 | 8.0 | 12.8 | 27.4 |
| 70° | 1.5 | 4.0 | 6.9 | 8.4 | 15.3 |
| 72.5° | 1.5 | 4.4 | 5.8 | 5.8 | 5.8 |
| 75° | 1.5 | 4.7 | 5.1 | 5.1 | 5.1 |
| 77.5° | 1.5 | 4.4 | 4.7 | 4.4 | 4.4 |
| 80° | 1.5 | 4.0 | 4.0 | 4.0 | 4.0 |
| 82.5° | 1.5 | 3.7 | 4.0 | 4.0 | 3.3 |
| 85° | 1.5 | 3.3 | 4.0 | 4.0 | 2.9 |
| 87.5° | 1.1 | 3.3 | 3.7 | 3.7 | 2.2 |
| 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 | 11.84 | 13.12 | 12.20 | 13.43 | 13.74 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.21 | 13.34 | 12.59 | 13.67 | 14.04 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.19 | 13.24 | 12.59 | 13.59 | 13.98 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 12.18 | 13.15 | 12.59 | 13.52 | 13.91 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.22 | 0.63 | 12.18 | 13.09 | 12.61 | 13.48 | 13.89 |
| | 12H | 0.00 | 0.48 | 0.04 | 0.87 | 1.30 | 12.19 | 13.07 | 12.62 | 13.45 | 13.88 |
| 4H | 2H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.65 | 12.70 | 12.05 | 13.05 | 13.44 |
| | 3H | 0.00 | 0.50 | 0.06 | 0.91 | 1.31 | 12.07 | 12.93 | 12.48 | 13.33 | 13.73 |
| | 4H | 0.93 | 1.70 | 1.37 | 2.12 | 2.56 | 12.07 | 12.83 | 12.50 | 13.25 | 13.70 |
| | 6H | 2.08 | 2.74 | 2.54 | 3.19 | 3.66 | 12.11 | 12.77 | 12.57 | 13.21 | 13.68 |
| | 8H | 2.61 | 3.22 | 3.08 | 3.67 | 4.14 | 12.13 | 12.75 | 12.60 | 13.20 | 13.67 |
| | 12H | 3.17 | 3.72 | 3.66 | 4.20 | 4.68 | 12.20 | 12.74 | 12.68 | 13.23 | 13.70 |
| 8H | 4H | 2.01 | 2.63 | 2.48 | 3.08 | 3.55 | 11.97 | 12.59 | 12.44 | 13.04 | 13.51 |
| | 6H | 3.57 | 4.08 | 4.07 | 4.57 | 5.06 | 12.05 | 12.56 | 12.56 | 13.05 | 13.54 |
| | 8H | 4.40 | 4.86 | 4.92 | 5.37 | 5.86 | 12.13 | 12.59 | 12.66 | 13.11 | 13.60 |
| | 12H | 5.25 | 5.65 | 5.77 | 6.15 | 6.72 | 12.30 | 12.71 | 12.82 | 13.20 | 13.77 |
| 12H | 4H | 2.20 | 2.75 | 2.69 | 3.23 | 3.71 | 11.94 | 12.48 | 12.42 | 12.97 | 13.44 |
| | 6H | 3.93 | 4.38 | 4.45 | 4.90 | 5.39 | 12.03 | 12.48 | 12.55 | 13.00 | 13.49 |
| | 8H | 4.96 | 5.36 | 5.47 | 5.85 | 6.43 | 12.16 | 12.56 | 12.68 | 13.06 | 13.63 |