

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: P1059232

Luminaire Tested: S123RDRP-S340D940-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059232
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S340D940-X4F0-XX-UDD-SVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

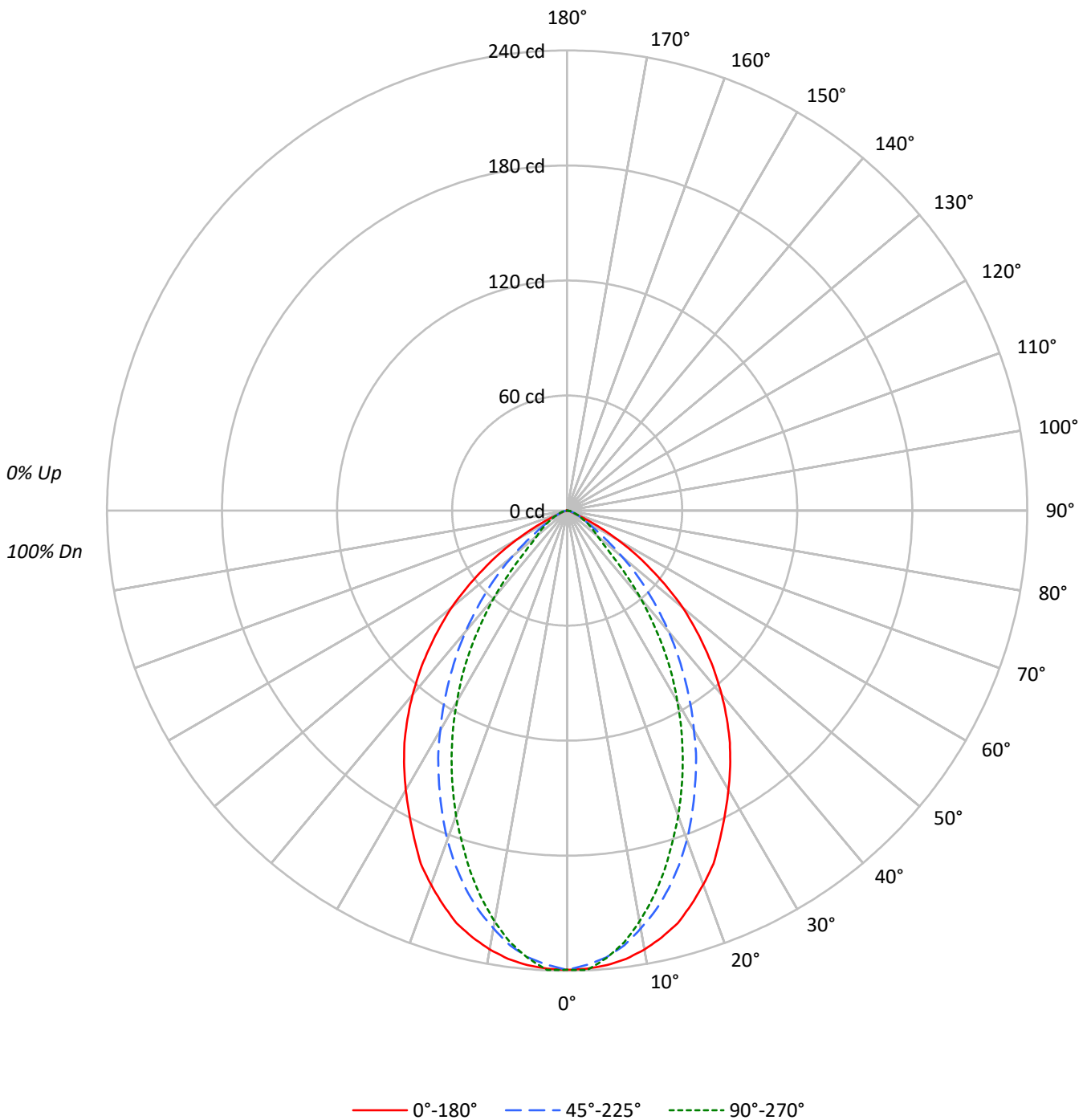
Lumens per Lamp: N/A
Luminaire Lumens: 309.1 lumens
Efficiency: N/A
Efficacy: 24.7 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): 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 | 109 | 106 | 103 | 110 | 107 | 104 | 102 | 103 | 100 | 98 | 99 | 97 | 95 | 95 | 94 | 93 | 91 |
| 2 | 105 | 99 | 94 | 90 | 103 | 97 | 93 | 89 | 94 | 90 | 87 | 91 | 88 | 85 | 88 | 86 | 83 | 82 |
| 3 | 98 | 90 | 84 | 80 | 96 | 89 | 83 | 79 | 86 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 73 |
| 4 | 92 | 83 | 76 | 71 | 90 | 82 | 75 | 70 | 79 | 74 | 70 | 77 | 73 | 69 | 75 | 71 | 68 | 66 |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 68 | 63 | 73 | 67 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 60 |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 62 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 65 | 60 | 56 | 55 |
| 7 | 76 | 65 | 58 | 53 | 74 | 64 | 57 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 |
| 8 | 71 | 60 | 53 | 48 | 70 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 48 | 46 |
| 9 | 67 | 56 | 49 | 45 | 66 | 56 | 49 | 44 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 42 |
| 10 | 64 | 52 | 46 | 41 | 63 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 49 | 44 | 41 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2812 | 2812 | 2812 |
| 5° | 2805 | 2757 | 2762 |
| 10° | 2771 | 2639 | 2595 |
| 15° | 2709 | 2482 | 2371 |
| 20° | 2594 | 2283 | 2117 |
| 25° | 2445 | 2046 | 1849 |
| 30° | 2282 | 1794 | 1558 |
| 35° | 2120 | 1531 | 1254 |
| 40° | 1921 | 1262 | 909 |
| 45° | 1692 | 978 | 548 |
| 50° | 1436 | 683 | 373 |
| 55° | 1093 | 409 | 311 |
| 60° | 714 | 261 | 244 |
| 65° | 297 | 194 | 194 |
| 70° | 103 | 141 | 151 |
| 75° | 86 | 100 | 118 |
| 80° | 47 | 74 | 101 |
| 85° | 54 | 54 | 94 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1692 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 22.1 | 7.2 |
| 10°-20° | 57.9 | 18.7 |
| 20°-30° | 74.2 | 24.0 |
| 30°-40° | 69.6 | 22.5 |
| 40°-50° | 48.6 | 15.7 |
| 50°-60° | 25.1 | 8.1 |
| 60°-70° | 8.6 | 2.8 |
| 70°-80° | 2.5 | 0.8 |
| 80°-90° | 0.5 | 0.2 |
| 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° | 154.2 | 49.9 |
| 0°-40° | 223.9 | 72.4 |
| 0°-60° | 297.6 | 96.3 |
| 0°-90° | 309.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 309.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 240 | 240 | 240 | 240 | 240 | |
| 5° | 238 | 238 | 234 | 235 | 234 | 23 |
| 15° | 223 | 217 | 204 | 198 | 195 | 62 |
| 25° | 189 | 177 | 158 | 147 | 143 | 87 |
| 35° | 148 | 130 | 107 | 93 | 88 | 92 |
| 45° | 102 | 83 | 59 | 41 | 33 | 78 |
| 55° | 53 | 40 | 20 | 16 | 15 | 48 |
| 65° | 11 | 9 | 7 | 7 | 7 | 13 |
| 75° | 2 | 2 | 2 | 3 | 3 | 2 |
| 85° | 0 | 0 | 0 | 0 | 1 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 239.5 | 239.5 | 239.5 | 239.5 | 239.5 |
| 2.5° | 239.1 | 239.5 | 237.2 | 239.5 | 239.8 |
| 5° | 238.0 | 237.6 | 233.9 | 235.0 | 234.3 |
| 7.5° | 235.8 | 234.6 | 228.7 | 227.2 | 227.2 |
| 10° | 232.4 | 230.2 | 221.3 | 218.7 | 217.6 |
| 12.5° | 228.0 | 225.0 | 213.5 | 208.7 | 206.8 |
| 15° | 222.8 | 217.2 | 204.2 | 197.6 | 195.0 |
| 17.5° | 215.4 | 208.0 | 193.9 | 186.1 | 182.0 |
| 20° | 207.6 | 198.3 | 182.7 | 173.5 | 169.4 |
| 22.5° | 199.4 | 188.3 | 170.5 | 160.5 | 156.1 |
| 25° | 188.7 | 176.8 | 157.9 | 147.2 | 142.7 |
| 27.5° | 178.3 | 165.7 | 145.7 | 133.4 | 129.0 |
| 30° | 168.3 | 153.5 | 132.3 | 120.5 | 114.9 |
| 32.5° | 158.3 | 141.6 | 119.7 | 106.8 | 101.6 |
| 35° | 147.9 | 129.7 | 106.8 | 93.0 | 87.5 |
| 37.5° | 136.8 | 118.2 | 94.5 | 79.7 | 73.0 |
| 40° | 125.3 | 106.0 | 82.3 | 65.6 | 59.3 |
| 42.5° | 113.8 | 94.9 | 70.1 | 53.0 | 45.6 |
| 45° | 101.9 | 83.4 | 58.9 | 40.8 | 33.0 |
| 47.5° | 90.1 | 71.9 | 48.2 | 29.7 | 24.8 |
| 50° | 78.6 | 61.2 | 37.4 | 21.9 | 20.4 |
| 52.5° | 66.0 | 50.8 | 28.2 | 18.2 | 17.8 |
| 55° | 53.4 | 40.0 | 20.0 | 15.6 | 15.2 |
| 57.5° | 42.3 | 31.1 | 14.5 | 13.0 | 12.6 |
| 60° | 30.4 | 22.2 | 11.1 | 10.7 | 10.4 |
| 62.5° | 20.0 | 15.2 | 8.9 | 8.5 | 8.5 |
| 65° | 10.7 | 9.3 | 7.0 | 6.7 | 7.0 |
| 67.5° | 4.4 | 5.2 | 5.2 | 5.6 | 5.6 |
| 70° | 3.0 | 3.3 | 4.1 | 4.4 | 4.4 |
| 72.5° | 2.2 | 2.6 | 3.0 | 3.3 | 3.3 |
| 75° | 1.9 | 1.9 | 2.2 | 2.6 | 2.6 |
| 77.5° | 1.1 | 1.5 | 1.5 | 1.9 | 2.2 |
| 80° | 0.7 | 1.1 | 1.1 | 1.5 | 1.5 |
| 82.5° | 0.4 | 0.7 | 0.7 | 1.1 | 1.1 |
| 85° | 0.4 | 0.4 | 0.4 | 0.4 | 0.7 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 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 | 9.92 | 11.18 | 10.28 | 11.49 | 11.81 | 3.44 | 4.70 | 3.80 | 5.01 | 5.33 |
| | 3H | 9.87 | 10.98 | 10.25 | 11.31 | 11.68 | 4.21 | 5.32 | 4.59 | 5.65 | 6.02 |
| | 4H | 9.82 | 10.85 | 10.22 | 11.20 | 11.59 | 4.41 | 5.44 | 4.82 | 5.79 | 6.18 |
| | 6H | 9.75 | 10.69 | 10.17 | 11.06 | 11.46 | 4.56 | 5.50 | 4.97 | 5.87 | 6.27 |
| | 8H | 9.71 | 10.60 | 10.14 | 10.99 | 11.40 | 4.59 | 5.48 | 5.02 | 5.87 | 6.28 |
| | 12H | 9.66 | 10.52 | 10.10 | 10.90 | 11.33 | 4.61 | 5.46 | 5.04 | 5.84 | 6.27 |
| 4H | 2H | 9.77 | 10.79 | 10.17 | 11.15 | 11.53 | 3.69 | 4.72 | 4.09 | 5.07 | 5.46 |
| | 3H | 9.75 | 10.58 | 10.16 | 10.99 | 11.39 | 4.60 | 5.43 | 5.01 | 5.83 | 6.24 |
| | 4H | 9.70 | 10.44 | 10.14 | 10.86 | 11.31 | 4.87 | 5.61 | 5.30 | 6.03 | 6.47 |
| | 6H | 9.64 | 10.28 | 10.11 | 10.73 | 11.20 | 5.09 | 5.73 | 5.55 | 6.17 | 6.64 |
| | 8H | 9.59 | 10.18 | 10.06 | 10.63 | 11.10 | 5.15 | 5.74 | 5.62 | 6.19 | 6.66 |
| | 12H | 9.55 | 10.07 | 10.03 | 10.55 | 11.03 | 5.18 | 5.70 | 5.67 | 6.19 | 6.66 |
| 8H | 4H | 9.59 | 10.18 | 10.06 | 10.63 | 11.10 | 4.85 | 5.45 | 5.32 | 5.89 | 6.37 |
| | 6H | 9.52 | 10.01 | 10.03 | 10.51 | 10.99 | 5.13 | 5.61 | 5.63 | 6.11 | 6.59 |
| | 8H | 9.47 | 9.91 | 10.00 | 10.42 | 10.92 | 5.23 | 5.67 | 5.76 | 6.18 | 6.68 |
| | 12H | 9.44 | 9.82 | 9.95 | 10.32 | 10.89 | 5.30 | 5.69 | 5.82 | 6.18 | 6.75 |
| 12H | 4H | 9.54 | 10.06 | 10.03 | 10.55 | 11.02 | 4.81 | 5.34 | 5.30 | 5.82 | 6.30 |
| | 6H | 9.47 | 9.90 | 9.99 | 10.42 | 10.91 | 5.09 | 5.52 | 5.61 | 6.04 | 6.53 |
| | 8H | 9.43 | 9.82 | 9.95 | 10.32 | 10.89 | 5.22 | 5.61 | 5.74 | 6.10 | 6.68 |