

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: P1059239

Luminaire Tested: S123RDRP-S340D950-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059239
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S340D950-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

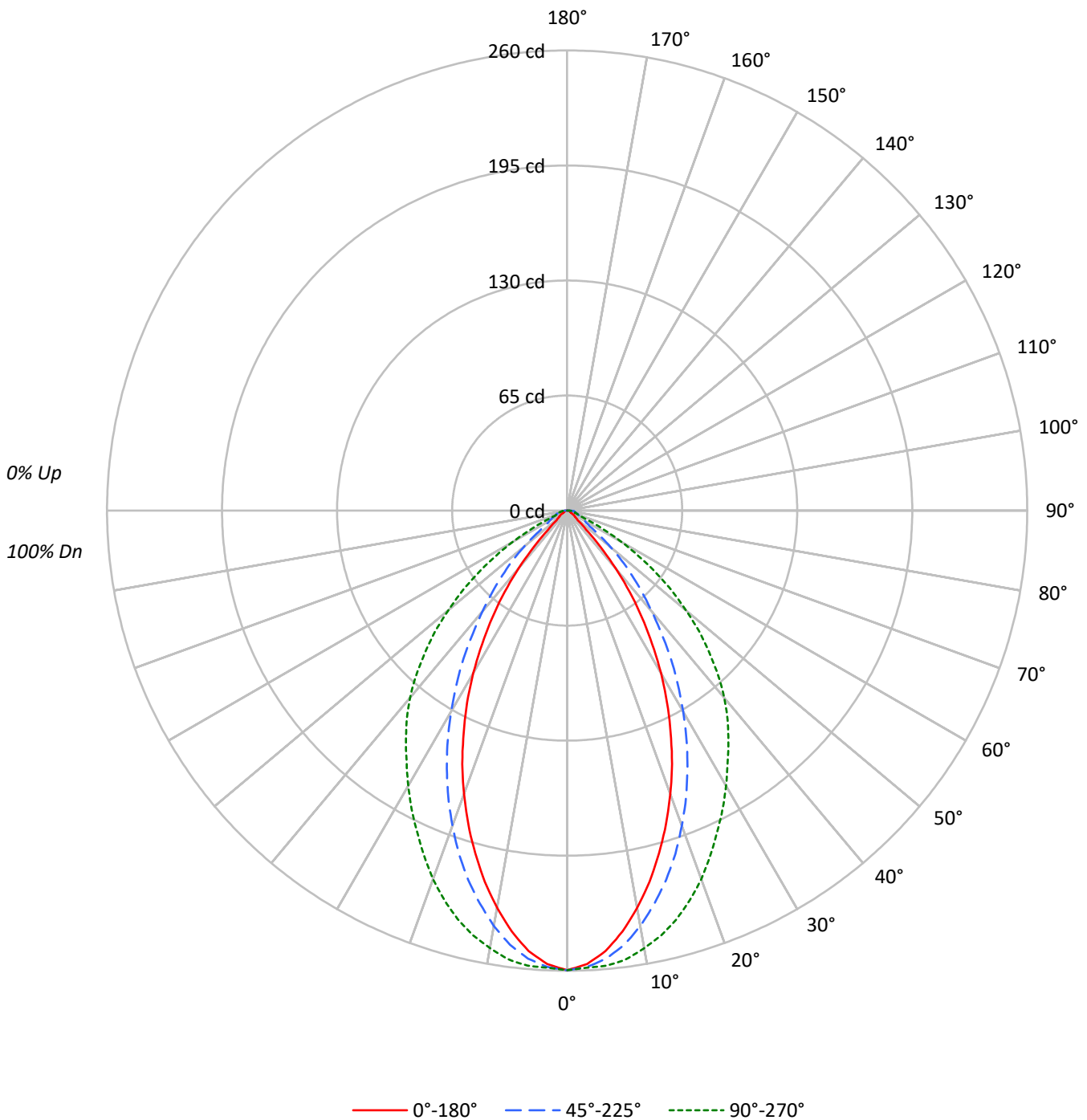
Lumens per Lamp: N/A
Luminaire Lumens: 312.0 lumens
Efficiency: N/A
Efficacy: 25.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (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 | 99 | 94 | 89 | 102 | 97 | 92 | 88 | 94 | 90 | 86 | 90 | 87 | 85 | 88 | 85 | 83 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 89 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 78 | 75 | 73 |
| 4 | 92 | 83 | 76 | 71 | 90 | 81 | 75 | 70 | 79 | 74 | 69 | 77 | 72 | 69 | 75 | 71 | 68 | 66 |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 68 | 64 | 73 | 67 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 60 |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 65 | 60 | 57 | 55 |
| 7 | 76 | 65 | 58 | 53 | 75 | 64 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 61 | 56 | 52 | 50 |
| 8 | 72 | 61 | 54 | 49 | 70 | 60 | 53 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 46 |
| 9 | 68 | 57 | 50 | 45 | 67 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 53 | 48 | 45 | 43 |
| 10 | 64 | 53 | 46 | 42 | 63 | 53 | 46 | 42 | 52 | 46 | 42 | 51 | 45 | 42 | 50 | 45 | 41 | 40 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3050 | 3050 | 3050 |
| 5° | 2944 | 2995 | 3042 |
| 10° | 2717 | 2841 | 2993 |
| 15° | 2437 | 2626 | 2905 |
| 20° | 2128 | 2367 | 2769 |
| 25° | 1791 | 2083 | 2598 |
| 30° | 1437 | 1776 | 2434 |
| 35° | 1054 | 1464 | 2276 |
| 40° | 651 | 1139 | 2118 |
| 45° | 251 | 857 | 1886 |
| 50° | 124 | 588 | 1597 |
| 55° | 98 | 326 | 1253 |
| 60° | 66 | 270 | 838 |
| 65° | 56 | 242 | 375 |
| 70° | 55 | 220 | 220 |
| 75° | 73 | 236 | 218 |
| 80° | 108 | 298 | 243 |
| 85° | 162 | 485 | 323 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1886 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 23.8 | 7.6 |
| 10°-20° | 61.0 | 19.5 |
| 20°-30° | 75.7 | 24.2 |
| 30°-40° | 67.8 | 21.7 |
| 40°-50° | 44.6 | 14.3 |
| 50°-60° | 22.3 | 7.2 |
| 60°-70° | 8.8 | 2.8 |
| 70°-80° | 5.0 | 1.6 |
| 80°-90° | 3.1 | 1.0 |
| 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° | 160.4 | 51.4 |
| 0°-40° | 228.2 | 73.1 |
| 0°-60° | 295.1 | 94.6 |
| 0°-90° | 312.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 312.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 260 | 260 | 260 | 260 | 260 | |
| 5° | 250 | 254 | 254 | 256 | 258 | 23 |
| 15° | 200 | 207 | 216 | 231 | 239 | 56 |
| 25° | 138 | 147 | 161 | 184 | 200 | 63 |
| 35° | 74 | 83 | 102 | 133 | 159 | 46 |
| 45° | 15 | 25 | 52 | 87 | 114 | 14 |
| 55° | 5 | 6 | 16 | 43 | 61 | 4 |
| 65° | 2 | 6 | 9 | 11 | 14 | 2 |
| 75° | 2 | 5 | 5 | 5 | 5 | 2 |
| 85° | 1 | 4 | 4 | 4 | 2 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 259.7 | 259.7 | 259.7 | 259.7 | 259.7 |
| 2.5° | 256.5 | 260.1 | 258.1 | 258.1 | 258.5 |
| 5° | 249.8 | 253.7 | 254.1 | 255.7 | 258.1 |
| 7.5° | 239.8 | 245.0 | 247.4 | 252.1 | 255.7 |
| 10° | 227.9 | 233.5 | 238.3 | 246.6 | 251.0 |
| 12.5° | 214.8 | 220.4 | 227.5 | 239.0 | 245.8 |
| 15° | 200.5 | 206.9 | 216.0 | 230.7 | 239.0 |
| 17.5° | 185.8 | 192.2 | 203.3 | 220.0 | 230.7 |
| 20° | 170.3 | 177.5 | 189.4 | 208.5 | 221.6 |
| 22.5° | 154.9 | 162.8 | 175.5 | 196.2 | 211.2 |
| 25° | 138.2 | 146.9 | 160.8 | 183.5 | 200.5 |
| 27.5° | 122.3 | 131.4 | 146.1 | 170.7 | 190.2 |
| 30° | 106.0 | 115.2 | 131.0 | 157.6 | 179.5 |
| 32.5° | 89.3 | 99.7 | 116.3 | 145.3 | 168.8 |
| 35° | 73.5 | 83.4 | 102.1 | 133.4 | 158.8 |
| 37.5° | 58.0 | 67.9 | 87.4 | 121.9 | 148.9 |
| 40° | 42.5 | 52.8 | 74.3 | 110.8 | 138.2 |
| 42.5° | 27.8 | 38.5 | 62.7 | 99.7 | 126.3 |
| 45° | 15.1 | 25.0 | 51.6 | 87.0 | 113.6 |
| 47.5° | 8.3 | 13.5 | 41.7 | 75.0 | 101.3 |
| 50° | 6.8 | 7.5 | 32.2 | 63.9 | 87.4 |
| 52.5° | 5.6 | 6.4 | 23.0 | 53.2 | 74.7 |
| 55° | 4.8 | 5.6 | 15.9 | 42.9 | 61.2 |
| 57.5° | 4.0 | 4.8 | 12.7 | 33.0 | 48.0 |
| 60° | 2.8 | 4.8 | 11.5 | 24.2 | 35.7 |
| 62.5° | 2.4 | 4.8 | 9.9 | 16.7 | 23.8 |
| 65° | 2.0 | 5.6 | 8.7 | 11.1 | 13.5 |
| 67.5° | 1.6 | 5.6 | 7.5 | 7.1 | 7.1 |
| 70° | 1.6 | 5.6 | 6.4 | 6.0 | 6.4 |
| 72.5° | 1.6 | 6.0 | 6.0 | 5.6 | 5.6 |
| 75° | 1.6 | 5.2 | 5.2 | 4.8 | 4.8 |
| 77.5° | 1.6 | 4.8 | 4.8 | 4.4 | 4.4 |
| 80° | 1.6 | 4.4 | 4.4 | 4.0 | 3.6 |
| 82.5° | 1.6 | 4.0 | 4.0 | 3.6 | 3.2 |
| 85° | 1.2 | 3.6 | 3.6 | 3.6 | 2.4 |
| 87.5° | 1.2 | 3.2 | 3.6 | 3.2 | 2.0 |
| 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 | 10.42 | 11.68 | 10.79 | 11.99 | 12.31 |
| | 3H | 0.00 | 0.02 | 0.00 | 0.35 | 0.71 | 10.50 | 11.61 | 10.88 | 11.94 | 12.31 |
| | 4H | 0.07 | 1.11 | 0.48 | 1.46 | 1.84 | 10.57 | 11.60 | 10.97 | 11.95 | 12.34 |
| | 6H | 1.12 | 2.07 | 1.54 | 2.45 | 2.84 | 10.67 | 11.62 | 11.08 | 11.99 | 12.38 |
| | 8H | 1.66 | 2.56 | 2.09 | 2.95 | 3.36 | 10.73 | 11.63 | 11.16 | 12.02 | 12.43 |
| | 12H | 2.14 | 3.00 | 2.58 | 3.39 | 3.82 | 10.80 | 11.66 | 11.23 | 12.04 | 12.47 |
| 4H | 2H | 0.00 | 0.63 | 0.00 | 0.98 | 1.36 | 10.28 | 11.32 | 10.69 | 11.67 | 12.05 |
| | 3H | 2.08 | 2.93 | 2.49 | 3.33 | 3.74 | 10.46 | 11.30 | 10.87 | 11.71 | 12.11 |
| | 4H | 3.43 | 4.19 | 3.87 | 4.61 | 5.06 | 10.59 | 11.35 | 11.02 | 11.77 | 12.21 |
| | 6H | 4.57 | 5.23 | 5.04 | 5.67 | 6.14 | 10.81 | 11.46 | 11.27 | 11.91 | 12.38 |
| | 8H | 5.08 | 5.69 | 5.55 | 6.14 | 6.61 | 10.93 | 11.55 | 11.40 | 11.99 | 12.47 |
| | 12H | 5.54 | 6.08 | 6.03 | 6.56 | 7.04 | 11.10 | 11.64 | 11.58 | 12.12 | 12.59 |
| 8H | 4H | 4.36 | 4.97 | 4.83 | 5.41 | 5.89 | 10.59 | 11.20 | 11.06 | 11.65 | 12.12 |
| | 6H | 5.96 | 6.46 | 6.46 | 6.96 | 7.44 | 10.93 | 11.43 | 11.43 | 11.93 | 12.41 |
| | 8H | 6.79 | 7.24 | 7.31 | 7.75 | 8.25 | 11.16 | 11.61 | 11.68 | 12.13 | 12.62 |
| | 12H | 7.57 | 7.97 | 8.08 | 8.46 | 9.04 | 11.49 | 11.89 | 12.00 | 12.38 | 12.96 |
| 12H | 4H | 4.52 | 5.06 | 5.01 | 5.55 | 6.02 | 10.58 | 11.12 | 11.07 | 11.61 | 12.08 |
| | 6H | 6.28 | 6.73 | 6.80 | 7.24 | 7.74 | 10.96 | 11.41 | 11.48 | 11.93 | 12.42 |
| | 8H | 7.29 | 7.69 | 7.80 | 8.18 | 8.75 | 11.27 | 11.67 | 11.79 | 12.17 | 12.74 |