

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: P1059238

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059238
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
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-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

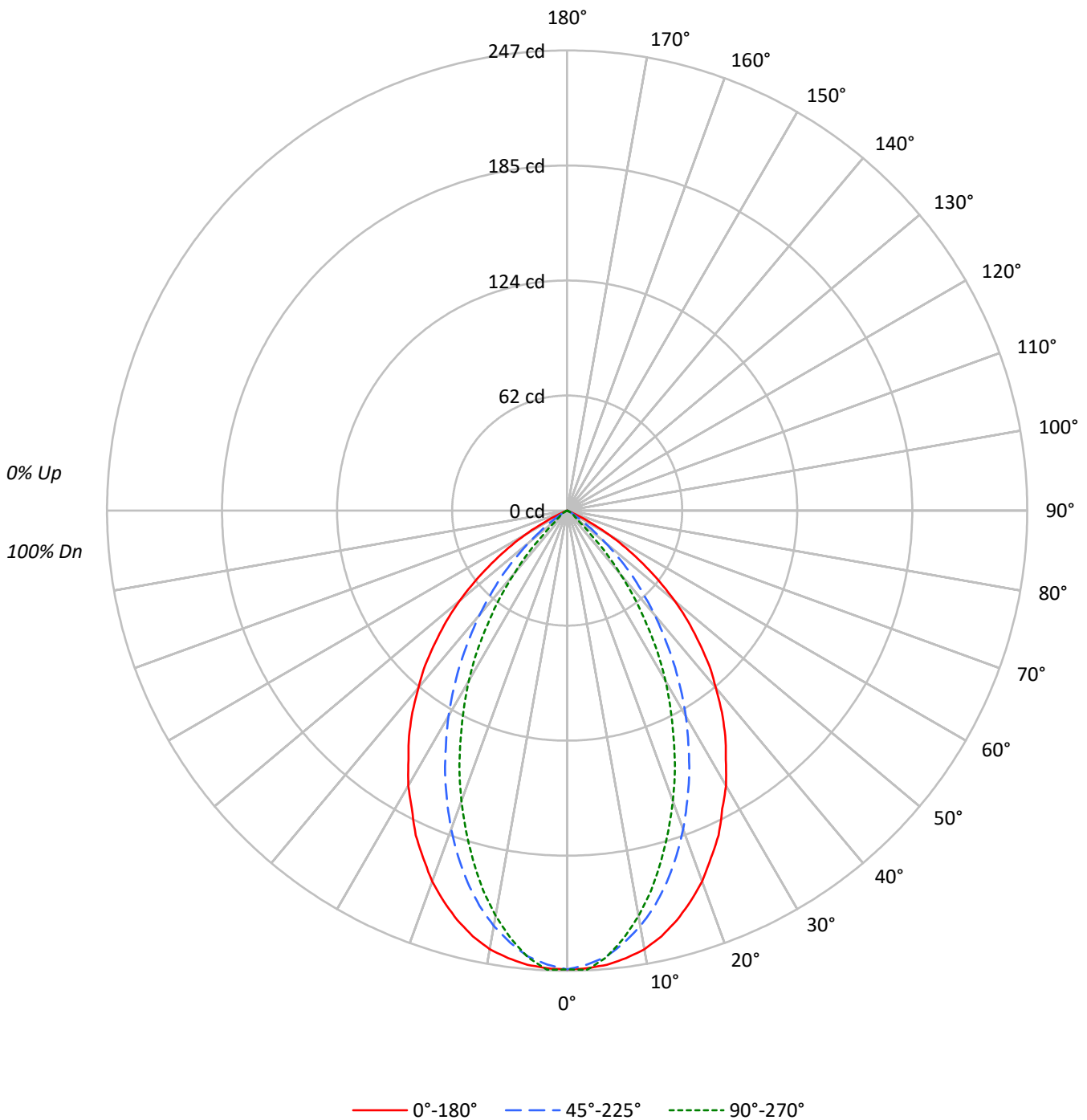
Lumens per Lamp: N/A
Luminaire Lumens: 281.0 lumens
Efficiency: N/A
Efficacy: 22.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.93
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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 | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 100 | 100 | 98 | 97 | 96 | 95 | 94 | 92 |
| 2 | 106 | 101 | 96 | 92 | 104 | 99 | 95 | 91 | 96 | 92 | 89 | 93 | 90 | 87 | 90 | 87 | 85 | 84 |
| 3 | 100 | 92 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | 86 | 82 | 79 | 83 | 80 | 78 | 76 |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | 80 | 75 | 72 | 78 | 74 | 71 | 69 |
| 5 | 88 | 79 | 72 | 67 | 86 | 78 | 71 | 67 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 65 | 63 |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 66 | 61 | 70 | 65 | 60 | 69 | 64 | 60 | 67 | 63 | 60 | 58 |
| 7 | 78 | 68 | 61 | 56 | 77 | 67 | 60 | 56 | 66 | 60 | 56 | 64 | 59 | 55 | 63 | 58 | 55 | 53 |
| 8 | 74 | 63 | 56 | 52 | 72 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 49 |
| 9 | 70 | 59 | 52 | 48 | 68 | 58 | 52 | 48 | 57 | 52 | 47 | 56 | 51 | 47 | 55 | 51 | 47 | 46 |
| 10 | 66 | 55 | 49 | 44 | 65 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2892 | 2892 | 2892 |
| 5° | 2884 | 2832 | 2837 |
| 10° | 2851 | 2699 | 2634 |
| 15° | 2767 | 2512 | 2367 |
| 20° | 2647 | 2274 | 2072 |
| 25° | 2492 | 2010 | 1752 |
| 30° | 2312 | 1726 | 1430 |
| 35° | 2120 | 1426 | 1064 |
| 40° | 1902 | 1119 | 681 |
| 45° | 1659 | 817 | 284 |
| 50° | 1376 | 486 | 108 |
| 55° | 1015 | 203 | 82 |
| 60° | 615 | 75 | 47 |
| 65° | 164 | 44 | 22 |
| 70° | 0 | 14 | 14 |
| 75° | 0 | 0 | 18 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1659 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 22.7 | 8.1 |
| 10°-20° | 58.5 | 20.8 |
| 20°-30° | 72.9 | 25.9 |
| 30°-40° | 65.2 | 23.2 |
| 40°-50° | 41.1 | 14.6 |
| 50°-60° | 17.2 | 6.1 |
| 60°-70° | 3.2 | 1.2 |
| 70°-80° | 0.1 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 154.1 | 54.8 |
| 0°-40° | 219.3 | 78.0 |
| 0°-60° | 277.7 | 98.8 |
| 0°-90° | 281.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 281.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 246 | 246 | 246 | 246 | 246 | |
| 5° | 245 | 244 | 240 | 241 | 241 | 23 |
| 15° | 228 | 222 | 207 | 198 | 195 | 64 |
| 25° | 192 | 177 | 155 | 142 | 135 | 88 |
| 35° | 148 | 126 | 100 | 82 | 74 | 92 |
| 45° | 100 | 78 | 49 | 26 | 17 | 77 |
| 55° | 50 | 34 | 10 | 4 | 4 | 44 |
| 65° | 6 | 4 | 2 | 1 | 1 | 8 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



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CATALOG NUMBER: S123RDRP-S340D950-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 246.3 | 246.3 | 246.3 | 246.3 | 246.3 |
| 2.5° | 245.9 | 246.3 | 243.9 | 246.3 | 246.7 |
| 5° | 244.7 | 244.3 | 240.3 | 241.1 | 240.7 |
| 7.5° | 242.3 | 241.1 | 234.0 | 232.4 | 231.6 |
| 10° | 239.1 | 235.9 | 226.4 | 222.5 | 220.9 |
| 12.5° | 234.0 | 229.6 | 217.3 | 211.0 | 208.6 |
| 15° | 227.6 | 222.1 | 206.6 | 197.9 | 194.7 |
| 17.5° | 220.1 | 212.2 | 194.7 | 185.2 | 180.4 |
| 20° | 211.8 | 200.7 | 182.0 | 170.5 | 165.8 |
| 22.5° | 201.8 | 189.6 | 168.5 | 156.2 | 151.1 |
| 25° | 192.3 | 176.9 | 155.1 | 141.6 | 135.2 |
| 27.5° | 180.4 | 164.2 | 140.8 | 126.9 | 120.2 |
| 30° | 170.5 | 151.9 | 127.3 | 111.8 | 105.5 |
| 32.5° | 158.6 | 139.2 | 113.4 | 96.4 | 90.4 |
| 35° | 147.9 | 126.5 | 99.5 | 81.7 | 74.2 |
| 37.5° | 136.4 | 114.2 | 85.7 | 67.0 | 59.9 |
| 40° | 124.1 | 101.9 | 73.0 | 52.3 | 44.4 |
| 42.5° | 113.0 | 89.6 | 60.3 | 38.9 | 30.9 |
| 45° | 99.9 | 77.7 | 49.2 | 26.2 | 17.1 |
| 47.5° | 88.0 | 66.6 | 37.3 | 14.7 | 9.1 |
| 50° | 75.3 | 55.1 | 26.6 | 7.5 | 5.9 |
| 52.5° | 62.3 | 44.0 | 17.4 | 5.2 | 4.8 |
| 55° | 49.6 | 34.1 | 9.9 | 4.0 | 4.0 |
| 57.5° | 37.3 | 24.6 | 5.2 | 3.2 | 2.8 |
| 60° | 26.2 | 16.3 | 3.2 | 2.4 | 2.0 |
| 62.5° | 15.1 | 9.5 | 2.4 | 1.6 | 1.6 |
| 65° | 5.9 | 4.4 | 1.6 | 0.8 | 0.8 |
| 67.5° | 0.4 | 1.2 | 0.8 | 0.4 | 0.4 |
| 70° | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 |
| 72.5° | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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 | 8.88 | 10.06 | 9.25 | 10.37 | 10.69 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 8.72 | 9.76 | 9.11 | 10.09 | 10.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 8.64 | 9.59 | 9.04 | 9.94 | 10.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 8.55 | 9.42 | 8.96 | 9.79 | 10.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 8.50 | 9.32 | 8.93 | 9.71 | 10.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 8.45 | 9.23 | 8.88 | 9.61 | 10.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 8.64 | 9.60 | 9.05 | 9.95 | 10.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 8.48 | 9.25 | 8.89 | 9.65 | 10.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 8.37 | 9.06 | 8.81 | 9.48 | 9.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 8.28 | 8.86 | 8.74 | 9.31 | 9.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 8.21 | 8.76 | 8.69 | 9.21 | 9.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 8.15 | 8.63 | 8.64 | 9.12 | 9.59 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 8.21 | 8.76 | 8.69 | 9.21 | 9.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 8.10 | 8.54 | 8.60 | 9.04 | 9.52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 8.02 | 8.42 | 8.55 | 8.94 | 9.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 7.97 | 8.32 | 8.49 | 8.82 | 9.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 8.16 | 8.63 | 8.64 | 9.12 | 9.59 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 8.02 | 8.42 | 8.55 | 8.94 | 9.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 7.97 | 8.32 | 8.49 | 8.82 | 9.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |