

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: P1057900

Luminaire Tested: S122RDRP-S290D850-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1057900
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-20)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S290D850-X4F0-XX-UDD-SVL-B
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

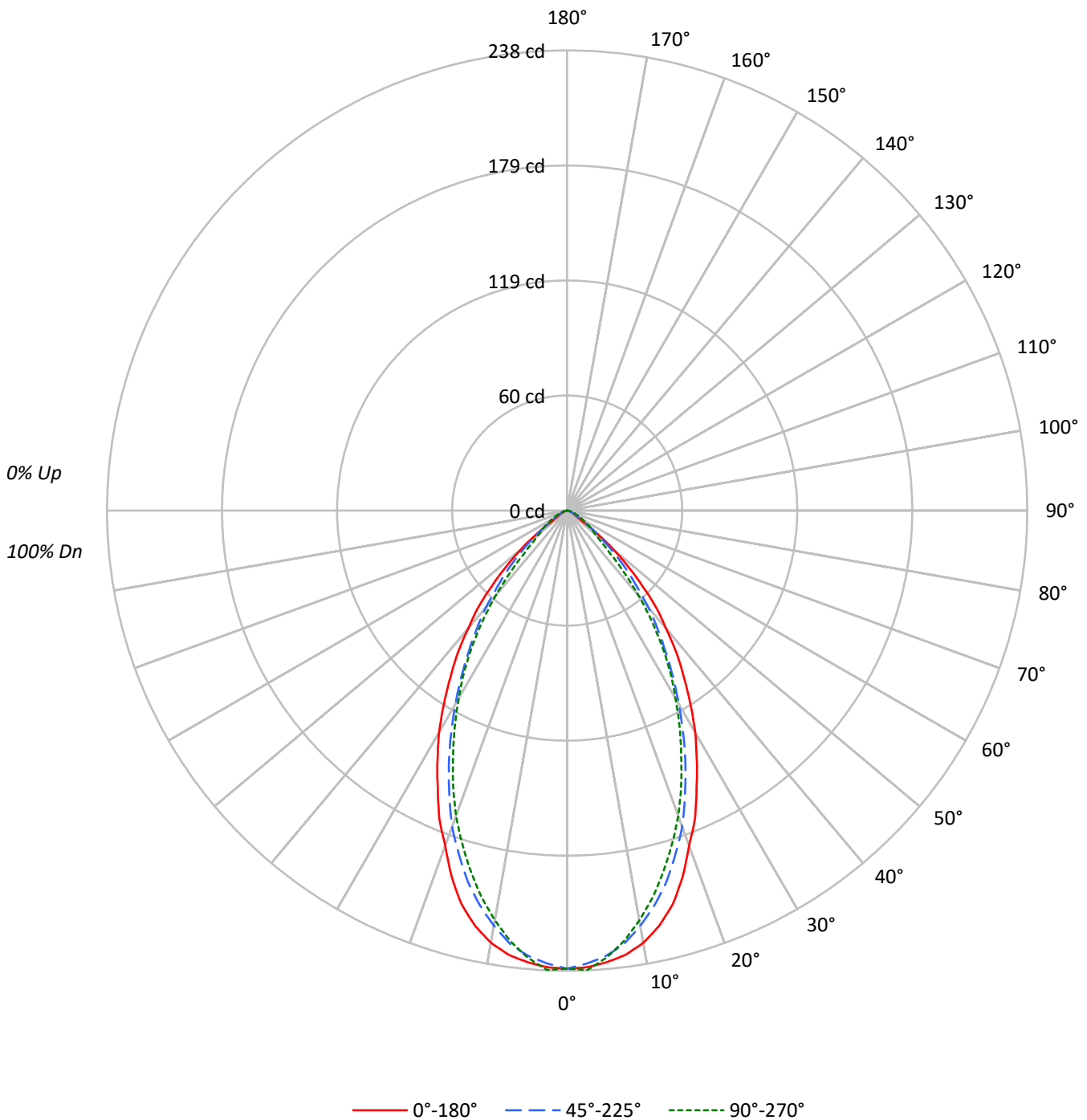
Lumens per Lamp: N/A
Luminaire Lumens: 254.8 lumens
Efficiency: N/A
Efficacy: 20.4 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 0.85 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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 | 99 | 100 | 98 | 96 | 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 | 93 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | 86 | 82 | 79 | 84 | 80 | 78 | 76 |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 70 |
| 5 | 88 | 79 | 72 | 68 | 87 | 78 | 72 | 67 | 76 | 71 | 67 | 74 | 70 | 66 | 73 | 69 | 65 | 64 |
| 6 | 83 | 73 | 67 | 62 | 82 | 72 | 66 | 62 | 71 | 65 | 61 | 69 | 64 | 61 | 68 | 64 | 60 | 59 |
| 7 | 79 | 68 | 62 | 57 | 77 | 68 | 61 | 57 | 66 | 60 | 56 | 65 | 60 | 56 | 64 | 59 | 56 | 54 |
| 8 | 74 | 64 | 57 | 53 | 73 | 63 | 57 | 52 | 62 | 56 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 |
| 9 | 70 | 60 | 53 | 49 | 69 | 59 | 53 | 49 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 52 | 48 | 47 |
| 10 | 67 | 56 | 50 | 45 | 66 | 56 | 49 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 53 | 48 | 45 | 44 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4371 | 4371 | 4371 |
| 5° | 4344 | 4283 | 4301 |
| 10° | 4253 | 4085 | 4030 |
| 15° | 4029 | 3794 | 3685 |
| 20° | 3621 | 3417 | 3297 |
| 25° | 3225 | 2946 | 2840 |
| 30° | 2821 | 2459 | 2389 |
| 35° | 2374 | 1991 | 1928 |
| 40° | 1913 | 1573 | 1390 |
| 45° | 1430 | 1135 | 827 |
| 50° | 896 | 732 | 543 |
| 55° | 306 | 396 | 441 |
| 60° | 173 | 244 | 351 |
| 65° | 122 | 166 | 266 |
| 70° | 103 | 129 | 205 |
| 75° | 64 | 100 | 171 |
| 80° | 53 | 96 | 149 |
| 85° | 0 | 0 | 106 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1430 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 21.8 | 8.6 |
| 10°-20° | 55.9 | 21.9 |
| 20°-30° | 67.3 | 26.4 |
| 30°-40° | 57.5 | 22.6 |
| 40°-50° | 33.7 | 13.2 |
| 50°-60° | 12.2 | 4.8 |
| 60°-70° | 4.3 | 1.7 |
| 70°-80° | 1.7 | 0.7 |
| 80°-90° | 0.3 | 0.1 |
| 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° | 145.0 | 56.9 |
| 0°-40° | 202.5 | 79.5 |
| 0°-60° | 248.4 | 97.5 |
| 0°-90° | 254.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 254.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 237 | 237 | 237 | 237 | 237 | |
| 5° | 234 | 235 | 231 | 232 | 232 | 22 |
| 15° | 211 | 208 | 199 | 195 | 193 | 59 |
| 25° | 158 | 152 | 145 | 142 | 140 | 73 |
| 35° | 105 | 97 | 88 | 88 | 86 | 66 |
| 45° | 55 | 49 | 44 | 36 | 32 | 42 |
| 55° | 10 | 13 | 12 | 13 | 14 | 12 |
| 65° | 3 | 3 | 4 | 5 | 6 | 3 |
| 75° | 1 | 1 | 1 | 2 | 2 | 1 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P1057900

CATALOG NUMBER: S122RDRP-S290D850-X4F0-XX-UDD-SVL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 |
| 2.5° | 236.4 | 236.9 | 234.5 | 236.9 | 237.8 |
| 5° | 234.5 | 235.0 | 231.2 | 232.2 | 232.2 |
| 7.5° | 231.7 | 231.2 | 226.0 | 225.1 | 224.6 |
| 10° | 227.0 | 225.5 | 218.0 | 216.6 | 215.1 |
| 12.5° | 219.9 | 217.0 | 209.0 | 206.6 | 204.7 |
| 15° | 210.9 | 207.6 | 198.6 | 194.8 | 192.9 |
| 17.5° | 198.6 | 194.8 | 186.3 | 182.5 | 180.6 |
| 20° | 184.4 | 180.6 | 174.0 | 169.7 | 167.9 |
| 22.5° | 172.6 | 166.4 | 159.3 | 156.5 | 154.1 |
| 25° | 158.4 | 151.8 | 144.7 | 142.3 | 139.5 |
| 27.5° | 145.2 | 137.1 | 130.0 | 128.1 | 125.8 |
| 30° | 132.4 | 123.9 | 115.4 | 115.4 | 112.1 |
| 32.5° | 118.7 | 110.6 | 101.7 | 101.2 | 99.3 |
| 35° | 105.4 | 97.4 | 88.4 | 87.5 | 85.6 |
| 37.5° | 93.1 | 85.1 | 76.6 | 73.8 | 71.4 |
| 40° | 79.4 | 72.3 | 65.3 | 60.5 | 57.7 |
| 42.5° | 68.6 | 60.5 | 53.4 | 47.8 | 44.0 |
| 45° | 54.8 | 49.2 | 43.5 | 36.4 | 31.7 |
| 47.5° | 42.6 | 38.8 | 34.0 | 26.0 | 23.6 |
| 50° | 31.2 | 29.3 | 25.5 | 19.4 | 18.9 |
| 52.5° | 19.9 | 20.8 | 18.4 | 15.1 | 16.5 |
| 55° | 9.5 | 13.2 | 12.3 | 12.8 | 13.7 |
| 57.5° | 6.1 | 6.6 | 9.0 | 10.4 | 11.3 |
| 60° | 4.7 | 4.7 | 6.6 | 8.5 | 9.5 |
| 62.5° | 3.8 | 3.8 | 5.2 | 7.1 | 7.6 |
| 65° | 2.8 | 3.3 | 3.8 | 5.2 | 6.1 |
| 67.5° | 2.4 | 2.4 | 2.8 | 4.3 | 4.7 |
| 70° | 1.9 | 1.9 | 2.4 | 3.3 | 3.8 |
| 72.5° | 1.4 | 1.4 | 1.9 | 2.8 | 2.8 |
| 75° | 0.9 | 1.4 | 1.4 | 1.9 | 2.4 |
| 77.5° | 0.9 | 0.9 | 0.9 | 1.4 | 1.9 |
| 80° | 0.5 | 0.5 | 0.9 | 0.9 | 1.4 |
| 82.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.9 |
| 85° | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 |
| 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 | 0.98 | 2.14 | 1.35 | 2.46 | 2.77 | 4.40 | 5.56 | 4.76 | 5.87 | 6.19 |
| | 3H | 1.52 | 2.54 | 1.90 | 2.87 | 3.24 | 5.13 | 6.15 | 5.51 | 6.49 | 6.85 |
| | 4H | 1.64 | 2.59 | 2.05 | 2.94 | 3.33 | 5.35 | 6.30 | 5.75 | 6.65 | 7.04 |
| | 6H | 1.71 | 2.58 | 2.13 | 2.95 | 3.35 | 5.50 | 6.36 | 5.91 | 6.74 | 7.13 |
| | 8H | 1.72 | 2.54 | 2.16 | 2.93 | 3.34 | 5.52 | 6.34 | 5.96 | 6.73 | 7.14 |
| | 12H | 1.69 | 2.47 | 2.12 | 2.85 | 3.28 | 5.53 | 6.31 | 5.96 | 6.69 | 7.12 |
| 4H | 2H | 1.30 | 2.25 | 1.70 | 2.60 | 2.99 | 4.37 | 5.32 | 4.77 | 5.67 | 6.05 |
| | 3H | 1.98 | 2.74 | 2.39 | 3.15 | 3.55 | 5.25 | 6.01 | 5.66 | 6.42 | 6.83 |
| | 4H | 2.20 | 2.89 | 2.64 | 3.31 | 3.75 | 5.53 | 6.21 | 5.97 | 6.63 | 7.08 |
| | 6H | 2.31 | 2.90 | 2.78 | 3.35 | 3.82 | 5.75 | 6.33 | 6.21 | 6.78 | 7.25 |
| | 8H | 2.34 | 2.89 | 2.81 | 3.33 | 3.81 | 5.79 | 6.33 | 6.26 | 6.78 | 7.26 |
| | 12H | 2.31 | 2.79 | 2.80 | 3.27 | 3.75 | 5.81 | 6.29 | 6.30 | 6.77 | 7.25 |
| 8H | 4H | 2.30 | 2.85 | 2.78 | 3.30 | 3.77 | 5.46 | 6.00 | 5.93 | 6.45 | 6.92 |
| | 6H | 2.46 | 2.90 | 2.97 | 3.40 | 3.89 | 5.71 | 6.15 | 6.21 | 6.65 | 7.13 |
| | 8H | 2.52 | 2.92 | 3.05 | 3.44 | 3.93 | 5.76 | 6.16 | 6.29 | 6.68 | 7.17 |
| | 12H | 2.50 | 2.85 | 3.02 | 3.35 | 3.92 | 5.83 | 6.18 | 6.35 | 6.68 | 7.25 |
| 12H | 4H | 2.29 | 2.76 | 2.77 | 3.25 | 3.73 | 5.41 | 5.89 | 5.90 | 6.37 | 6.85 |
| | 6H | 2.46 | 2.86 | 2.99 | 3.37 | 3.87 | 5.66 | 6.05 | 6.18 | 6.57 | 7.07 |
| | 8H | 2.55 | 2.90 | 3.07 | 3.39 | 3.97 | 5.74 | 6.09 | 6.26 | 6.58 | 7.16 |