

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: P1057979

Luminaire Tested: S122RDRP-S485D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1057979
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-60)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S485D850-X4F0-XX-UDD-BVL-S
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

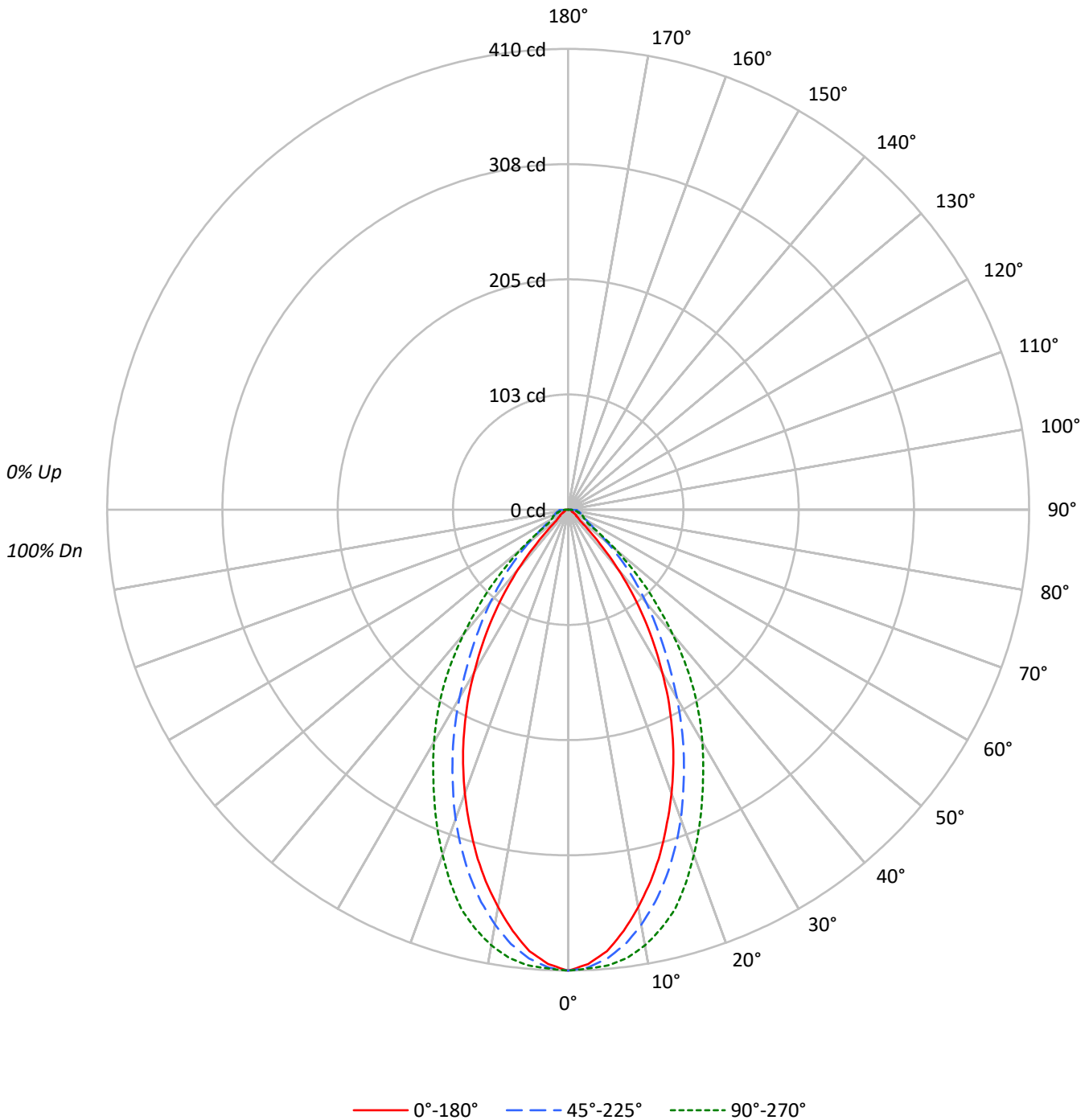
Lumens per Lamp: N/A
Luminaire Lumens: 442.1 lumens
Efficiency: N/A
Efficacy: 22.6 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
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 | 97 | 98 | 96 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 99 | 94 | 90 | 102 | 97 | 92 | 89 | 94 | 90 | 87 | 91 | 87 | 85 | 88 | 85 | 83 | 81 |
| 3 | 98 | 91 | 85 | 80 | 96 | 89 | 84 | 79 | 86 | 82 | 78 | 84 | 80 | 77 | 82 | 78 | 75 | 74 |
| 4 | 92 | 83 | 77 | 72 | 90 | 82 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 70 | 76 | 72 | 69 | 67 |
| 5 | 87 | 77 | 70 | 65 | 85 | 76 | 70 | 65 | 74 | 69 | 64 | 72 | 68 | 64 | 71 | 67 | 63 | 61 |
| 6 | 82 | 72 | 65 | 60 | 80 | 71 | 64 | 59 | 69 | 63 | 59 | 68 | 63 | 59 | 66 | 62 | 58 | 57 |
| 7 | 77 | 67 | 60 | 55 | 76 | 66 | 59 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 62 | 57 | 54 | 52 |
| 8 | 73 | 62 | 55 | 51 | 72 | 62 | 55 | 51 | 61 | 55 | 50 | 59 | 54 | 50 | 58 | 54 | 50 | 48 |
| 9 | 69 | 58 | 52 | 47 | 68 | 58 | 51 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 45 |
| 10 | 66 | 55 | 48 | 44 | 65 | 54 | 48 | 44 | 54 | 48 | 44 | 53 | 47 | 44 | 52 | 47 | 44 | 42 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7567 | 7567 | 7567 |
| 5° | 7305 | 7422 | 7539 |
| 10° | 6727 | 7023 | 7375 |
| 15° | 6048 | 6453 | 7024 |
| 20° | 5276 | 5754 | 6417 |
| 25° | 4463 | 4958 | 5742 |
| 30° | 3565 | 4119 | 5088 |
| 35° | 2638 | 3309 | 4372 |
| 40° | 1664 | 2592 | 3483 |
| 45° | 655 | 1947 | 2563 |
| 50° | 339 | 1309 | 1579 |
| 55° | 277 | 859 | 708 |
| 60° | 203 | 698 | 638 |
| 65° | 170 | 651 | 651 |
| 70° | 167 | 680 | 637 |
| 75° | 221 | 784 | 670 |
| 80° | 329 | 999 | 754 |
| 85° | 508 | 1673 | 995 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 3342 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 37.5 | 8.5 |
| 10°-20° | 94.7 | 21.4 |
| 20°-30° | 112.6 | 25.5 |
| 30°-40° | 93.7 | 21.2 |
| 40°-50° | 52.3 | 11.8 |
| 50°-60° | 21.1 | 4.8 |
| 60°-70° | 13.5 | 3.1 |
| 70°-80° | 10.1 | 2.3 |
| 80°-90° | 6.5 | 1.5 |
| 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° | 244.8 | 55.4 |
| 0°-40° | 338.5 | 76.6 |
| 0°-60° | 411.9 | 93.2 |
| 0°-90° | 442.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 442.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 410 | 410 | 410 | 410 | 410 | |
| 5° | 394 | 402 | 401 | 404 | 407 | 36 |
| 15° | 317 | 326 | 338 | 355 | 368 | 88 |
| 25° | 219 | 228 | 244 | 262 | 282 | 100 |
| 35° | 117 | 128 | 147 | 171 | 194 | 73 |
| 45° | 25 | 42 | 75 | 87 | 98 | 24 |
| 55° | 9 | 18 | 27 | 26 | 22 | 8 |
| 65° | 4 | 16 | 15 | 14 | 15 | 4 |
| 75° | 3 | 11 | 11 | 10 | 9 | 3 |
| 85° | 2 | 7 | 8 | 7 | 5 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: S122RDRP-S485D850-X4F0-XX-UDD-BVL-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 410.1 | 410.1 | 410.1 | 410.1 | 410.1 |
| 2.5° | 404.6 | 410.9 | 407.7 | 407.7 | 408.5 |
| 5° | 394.4 | 401.5 | 400.7 | 403.8 | 407.0 |
| 7.5° | 377.9 | 385.7 | 389.7 | 396.7 | 402.2 |
| 10° | 359.0 | 367.7 | 374.8 | 385.7 | 393.6 |
| 12.5° | 338.6 | 347.3 | 357.5 | 371.6 | 381.8 |
| 15° | 316.6 | 326.0 | 337.8 | 355.1 | 367.7 |
| 17.5° | 292.3 | 302.5 | 315.8 | 334.7 | 348.0 |
| 20° | 268.7 | 278.9 | 293.0 | 311.9 | 326.8 |
| 22.5° | 244.3 | 253.0 | 267.9 | 286.8 | 304.8 |
| 25° | 219.2 | 227.8 | 243.5 | 262.4 | 282.0 |
| 27.5° | 194.1 | 202.7 | 218.4 | 238.0 | 260.0 |
| 30° | 167.3 | 176.8 | 193.3 | 215.3 | 238.8 |
| 32.5° | 142.2 | 151.6 | 168.9 | 193.3 | 216.8 |
| 35° | 117.1 | 128.1 | 146.9 | 171.3 | 194.1 |
| 37.5° | 92.7 | 105.3 | 126.5 | 149.3 | 169.7 |
| 40° | 69.1 | 82.5 | 107.6 | 127.3 | 144.6 |
| 42.5° | 45.6 | 61.3 | 90.3 | 106.8 | 120.2 |
| 45° | 25.1 | 42.4 | 74.6 | 87.2 | 98.2 |
| 47.5° | 14.1 | 27.5 | 58.9 | 69.1 | 75.4 |
| 50° | 11.8 | 20.4 | 45.6 | 52.6 | 55.0 |
| 52.5° | 9.4 | 18.9 | 34.6 | 38.5 | 36.9 |
| 55° | 8.6 | 18.1 | 26.7 | 25.9 | 22.0 |
| 57.5° | 7.1 | 18.1 | 21.2 | 18.9 | 18.9 |
| 60° | 5.5 | 17.3 | 18.9 | 16.5 | 17.3 |
| 62.5° | 4.7 | 16.5 | 17.3 | 15.7 | 15.7 |
| 65° | 3.9 | 15.7 | 14.9 | 14.1 | 14.9 |
| 67.5° | 3.1 | 14.1 | 14.1 | 13.4 | 13.4 |
| 70° | 3.1 | 13.4 | 12.6 | 11.8 | 11.8 |
| 72.5° | 3.1 | 11.8 | 11.8 | 11.0 | 11.0 |
| 75° | 3.1 | 11.0 | 11.0 | 10.2 | 9.4 |
| 77.5° | 3.1 | 9.4 | 10.2 | 9.4 | 8.6 |
| 80° | 3.1 | 8.6 | 9.4 | 8.6 | 7.1 |
| 82.5° | 3.1 | 7.9 | 8.6 | 7.9 | 6.3 |
| 85° | 2.4 | 7.1 | 7.9 | 7.1 | 4.7 |
| 87.5° | 2.4 | 7.1 | 7.9 | 6.3 | 3.9 |
| 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 | 5.41 | 6.63 | 5.77 | 6.94 | 7.26 | 6.49 | 7.71 | 6.85 | 8.02 | 8.33 |
| | 3H | 6.73 | 7.81 | 7.11 | 8.15 | 8.51 | 8.52 | 9.60 | 8.90 | 9.93 | 10.30 |
| | 4H | 7.30 | 8.31 | 7.70 | 8.66 | 9.05 | 9.47 | 10.48 | 9.87 | 10.83 | 11.21 |
| | 6H | 7.86 | 8.79 | 8.27 | 9.16 | 9.55 | 10.41 | 11.34 | 10.82 | 11.71 | 12.10 |
| | 8H | 8.18 | 9.06 | 8.61 | 9.45 | 9.85 | 10.86 | 11.74 | 11.29 | 12.13 | 12.54 |
| | 12H | 8.49 | 9.33 | 8.92 | 9.71 | 10.14 | 11.28 | 12.12 | 11.71 | 12.50 | 12.94 |
| 4H | 2H | 6.37 | 7.38 | 6.77 | 7.73 | 8.11 | 7.16 | 8.17 | 7.56 | 8.52 | 8.91 |
| | 3H | 8.39 | 9.22 | 8.81 | 9.63 | 10.03 | 9.44 | 10.28 | 9.86 | 10.68 | 11.09 |
| | 4H | 9.47 | 10.22 | 9.90 | 10.64 | 11.08 | 10.59 | 11.33 | 11.02 | 11.75 | 12.20 |
| | 6H | 10.33 | 10.98 | 10.79 | 11.42 | 11.89 | 11.75 | 12.40 | 12.21 | 12.84 | 13.31 |
| | 8H | 10.74 | 11.35 | 11.21 | 11.79 | 12.26 | 12.31 | 12.92 | 12.78 | 13.37 | 13.84 |
| | 12H | 11.12 | 11.66 | 11.61 | 12.14 | 12.62 | 12.86 | 13.39 | 13.35 | 13.88 | 14.35 |
| 8H | 4H | 10.24 | 10.84 | 10.71 | 11.29 | 11.76 | 11.13 | 11.74 | 11.61 | 12.19 | 12.66 |
| | 6H | 11.57 | 12.06 | 12.07 | 12.56 | 13.04 | 12.58 | 13.08 | 13.09 | 13.58 | 14.06 |
| | 8H | 12.29 | 12.73 | 12.81 | 13.25 | 13.74 | 13.35 | 13.80 | 13.87 | 14.31 | 14.81 |
| | 12H | 12.99 | 13.38 | 13.50 | 13.88 | 14.45 | 14.14 | 14.53 | 14.66 | 15.03 | 15.60 |
| 12H | 4H | 10.39 | 10.93 | 10.88 | 11.41 | 11.89 | 11.24 | 11.78 | 11.73 | 12.26 | 12.73 |
| | 6H | 11.89 | 12.33 | 12.41 | 12.85 | 13.34 | 12.81 | 13.25 | 13.33 | 13.77 | 14.26 |
| | 8H | 12.80 | 13.19 | 13.31 | 13.68 | 14.26 | 13.72 | 14.11 | 14.24 | 14.61 | 15.18 |