

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: P1058304

Luminaire Tested: S122RDRP-H290D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1058304
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H290D850-X4F0-XX-UDD-BVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

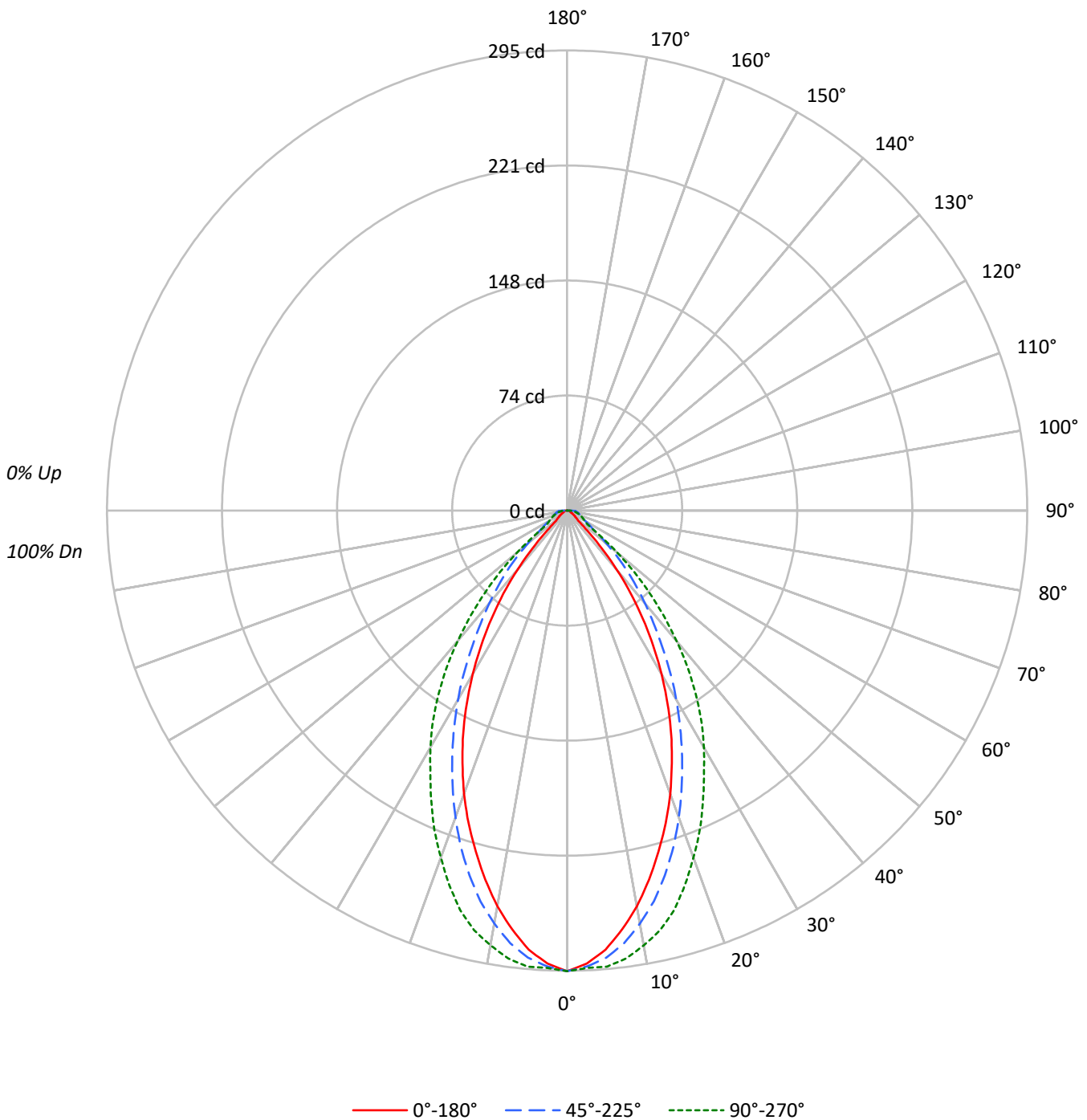
Lumens per Lamp: N/A
Luminaire Lumens: 321.4 lumens
Efficiency: N/A
Efficacy: 27.5 lumens/watt
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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 | 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 | | | | | 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 | 76 | 81 | 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 | 67 | 64 | 71 | 66 | 63 | | | | | 61 | | | | |
| 6 | 82 | 71 | 65 | 60 | 80 | 71 | 64 | 59 | 69 | 63 | 59 | 68 | 62 | 58 | 66 | 62 | 58 | | | | | 56 | | | | |
| 7 | 77 | 67 | 60 | 55 | 76 | 66 | 59 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 62 | 57 | 54 | | | | | 52 | | | | |
| 8 | 73 | 62 | 55 | 51 | 72 | 62 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 58 | 53 | 50 | | | | | 48 | | | | |
| 9 | 69 | 58 | 52 | 47 | 68 | 58 | 51 | 47 | 57 | 51 | 47 | 56 | 50 | 47 | 55 | 50 | 46 | | | | | 45 | | | | |
| 10 | 66 | 55 | 48 | 44 | 64 | 54 | 48 | 44 | 53 | 48 | 44 | 53 | 47 | 43 | 52 | 47 | 43 | | | | | 42 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5449 | 5449 | 5449 |
| 5° | 5233 | 5329 | 5435 |
| 10° | 4825 | 5037 | 5303 |
| 15° | 4323 | 4621 | 5064 |
| 20° | 3794 | 4110 | 4648 |
| 25° | 3213 | 3549 | 4194 |
| 30° | 2578 | 2981 | 3735 |
| 35° | 1906 | 2383 | 3235 |
| 40° | 1195 | 1867 | 2628 |
| 45° | 470 | 1407 | 1949 |
| 50° | 230 | 950 | 1194 |
| 55° | 183 | 624 | 531 |
| 60° | 140 | 506 | 487 |
| 65° | 105 | 476 | 476 |
| 70° | 129 | 486 | 486 |
| 75° | 135 | 542 | 506 |
| 80° | 202 | 701 | 553 |
| 85° | 402 | 1207 | 805 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 87.5°
 Luminance: 2200 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 27.0 | 8.4 |
| 10°-20° | 68.2 | 21.2 |
| 20°-30° | 81.6 | 25.4 |
| 30°-40° | 68.6 | 21.4 |
| 40°-50° | 39.1 | 12.2 |
| 50°-60° | 15.4 | 4.8 |
| 60°-70° | 9.7 | 3.0 |
| 70°-80° | 7.2 | 2.2 |
| 80°-90° | 4.6 | 1.4 |
| 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° | 176.7 | 55.0 |
| 0°-40° | 245.4 | 76.3 |
| 0°-60° | 299.9 | 93.3 |
| 0°-90° | 321.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 321.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 295 | 295 | 295 | 295 | 295 | |
| 5° | 282 | 289 | 288 | 291 | 293 | 26 |
| 15° | 226 | 234 | 242 | 256 | 265 | 63 |
| 25° | 158 | 165 | 174 | 192 | 206 | 72 |
| 35° | 85 | 92 | 106 | 128 | 144 | 52 |
| 45° | 18 | 32 | 54 | 68 | 75 | 17 |
| 55° | 6 | 12 | 19 | 20 | 16 | 5 |
| 65° | 2 | 11 | 11 | 10 | 11 | 3 |
| 75° | 2 | 8 | 8 | 7 | 7 | 2 |
| 85° | 2 | 5 | 6 | 5 | 4 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1058304

CATALOG NUMBER: S122RDRP-H290D850-X4F0-XX-UDD-BVL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 295.3 | 295.3 | 295.3 | 295.3 | 295.3 |
| 2.5° | 290.6 | 295.8 | 292.5 | 292.9 | 293.4 |
| 5° | 282.5 | 288.7 | 287.7 | 291.0 | 293.4 |
| 7.5° | 270.7 | 277.3 | 279.7 | 285.4 | 289.6 |
| 10° | 257.5 | 265.1 | 268.8 | 277.8 | 283.0 |
| 12.5° | 242.4 | 250.9 | 256.6 | 267.9 | 275.5 |
| 15° | 226.3 | 234.3 | 241.9 | 256.1 | 265.1 |
| 17.5° | 210.2 | 218.3 | 226.3 | 241.9 | 251.4 |
| 20° | 193.2 | 200.8 | 209.3 | 225.8 | 236.7 |
| 22.5° | 175.3 | 183.3 | 191.8 | 208.8 | 222.1 |
| 25° | 157.8 | 164.9 | 174.3 | 192.3 | 206.0 |
| 27.5° | 139.4 | 146.5 | 156.9 | 175.3 | 189.9 |
| 30° | 121.0 | 128.0 | 139.9 | 158.8 | 175.3 |
| 32.5° | 102.5 | 110.1 | 122.8 | 143.6 | 160.2 |
| 35° | 84.6 | 92.1 | 105.8 | 128.5 | 143.6 |
| 37.5° | 67.1 | 75.6 | 90.7 | 112.9 | 127.1 |
| 40° | 49.6 | 59.5 | 77.5 | 97.3 | 109.1 |
| 42.5° | 33.1 | 45.4 | 65.2 | 81.7 | 91.7 |
| 45° | 18.0 | 31.7 | 53.9 | 67.6 | 74.7 |
| 47.5° | 9.9 | 20.3 | 43.0 | 53.9 | 58.1 |
| 50° | 8.0 | 14.2 | 33.1 | 41.1 | 41.6 |
| 52.5° | 6.6 | 12.8 | 24.6 | 29.3 | 26.9 |
| 55° | 5.7 | 12.3 | 19.4 | 19.8 | 16.5 |
| 57.5° | 4.7 | 11.8 | 16.1 | 14.2 | 14.2 |
| 60° | 3.8 | 11.8 | 13.7 | 12.8 | 13.2 |
| 62.5° | 2.8 | 11.8 | 12.3 | 11.3 | 11.8 |
| 65° | 2.4 | 10.9 | 10.9 | 10.4 | 10.9 |
| 67.5° | 2.4 | 9.9 | 9.9 | 9.4 | 9.9 |
| 70° | 2.4 | 9.4 | 9.0 | 9.0 | 9.0 |
| 72.5° | 1.9 | 8.5 | 8.5 | 8.0 | 8.0 |
| 75° | 1.9 | 7.6 | 7.6 | 7.1 | 7.1 |
| 77.5° | 1.9 | 7.1 | 7.1 | 6.6 | 6.1 |
| 80° | 1.9 | 6.1 | 6.6 | 6.1 | 5.2 |
| 82.5° | 1.9 | 5.7 | 6.1 | 5.7 | 4.3 |
| 85° | 1.9 | 5.2 | 5.7 | 5.2 | 3.8 |
| 87.5° | 1.4 | 5.2 | 5.2 | 4.3 | 2.8 |
| 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 | 3.57 | 4.79 | 3.94 | 5.11 | 5.42 | 5.62 | 6.84 | 5.98 | 7.15 | 7.47 |
| | 3H | 5.12 | 6.21 | 5.50 | 6.54 | 6.90 | 7.58 | 8.67 | 7.96 | 9.00 | 9.36 |
| | 4H | 5.68 | 6.69 | 6.09 | 7.04 | 7.43 | 8.50 | 9.51 | 8.90 | 9.86 | 10.24 |
| | 6H | 6.24 | 7.17 | 6.66 | 7.54 | 7.94 | 9.37 | 10.30 | 9.79 | 10.67 | 11.07 |
| | 8H | 6.54 | 7.42 | 6.97 | 7.81 | 8.21 | 9.78 | 10.66 | 10.21 | 11.05 | 11.46 |
| | 12H | 6.90 | 7.74 | 7.33 | 8.12 | 8.56 | 10.23 | 11.07 | 10.66 | 11.46 | 11.89 |
| 4H | 2H | 4.77 | 5.78 | 5.17 | 6.13 | 6.52 | 6.24 | 7.25 | 6.64 | 7.60 | 7.99 |
| | 3H | 6.97 | 7.80 | 7.38 | 8.20 | 8.61 | 8.48 | 9.31 | 8.89 | 9.71 | 10.12 |
| | 4H | 8.03 | 8.78 | 8.46 | 9.20 | 9.64 | 9.55 | 10.29 | 9.98 | 10.72 | 11.16 |
| | 6H | 8.92 | 9.57 | 9.39 | 10.02 | 10.48 | 10.65 | 11.30 | 11.11 | 11.74 | 12.21 |
| | 8H | 9.31 | 9.91 | 9.78 | 10.36 | 10.83 | 11.18 | 11.78 | 11.65 | 12.23 | 12.70 |
| | 12H | 9.73 | 10.27 | 10.22 | 10.75 | 11.23 | 11.76 | 12.29 | 12.25 | 12.78 | 13.25 |
| 8H | 4H | 8.83 | 9.44 | 9.30 | 9.89 | 10.36 | 10.04 | 10.65 | 10.51 | 11.09 | 11.57 |
| | 6H | 10.21 | 10.70 | 10.71 | 11.20 | 11.68 | 11.43 | 11.92 | 11.93 | 12.42 | 12.90 |
| | 8H | 10.93 | 11.37 | 11.45 | 11.89 | 12.38 | 12.17 | 12.62 | 12.70 | 13.14 | 13.63 |
| | 12H | 11.68 | 12.08 | 12.20 | 12.57 | 13.14 | 13.01 | 13.40 | 13.53 | 13.90 | 14.47 |
| 12H | 4H | 8.99 | 9.53 | 9.48 | 10.01 | 10.49 | 10.14 | 10.67 | 10.63 | 11.16 | 11.63 |
| | 6H | 10.53 | 10.98 | 11.06 | 11.50 | 11.99 | 11.64 | 12.09 | 12.17 | 12.60 | 13.10 |
| | 8H | 11.45 | 11.85 | 11.97 | 12.34 | 12.92 | 12.53 | 12.93 | 13.05 | 13.42 | 14.00 |