

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: P1060247

Luminaire Tested: S124RDRP-S1020D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060247
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-78)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1020D850-X4F0-XX-UDD-BVL-S
Description: DEFINE 4 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

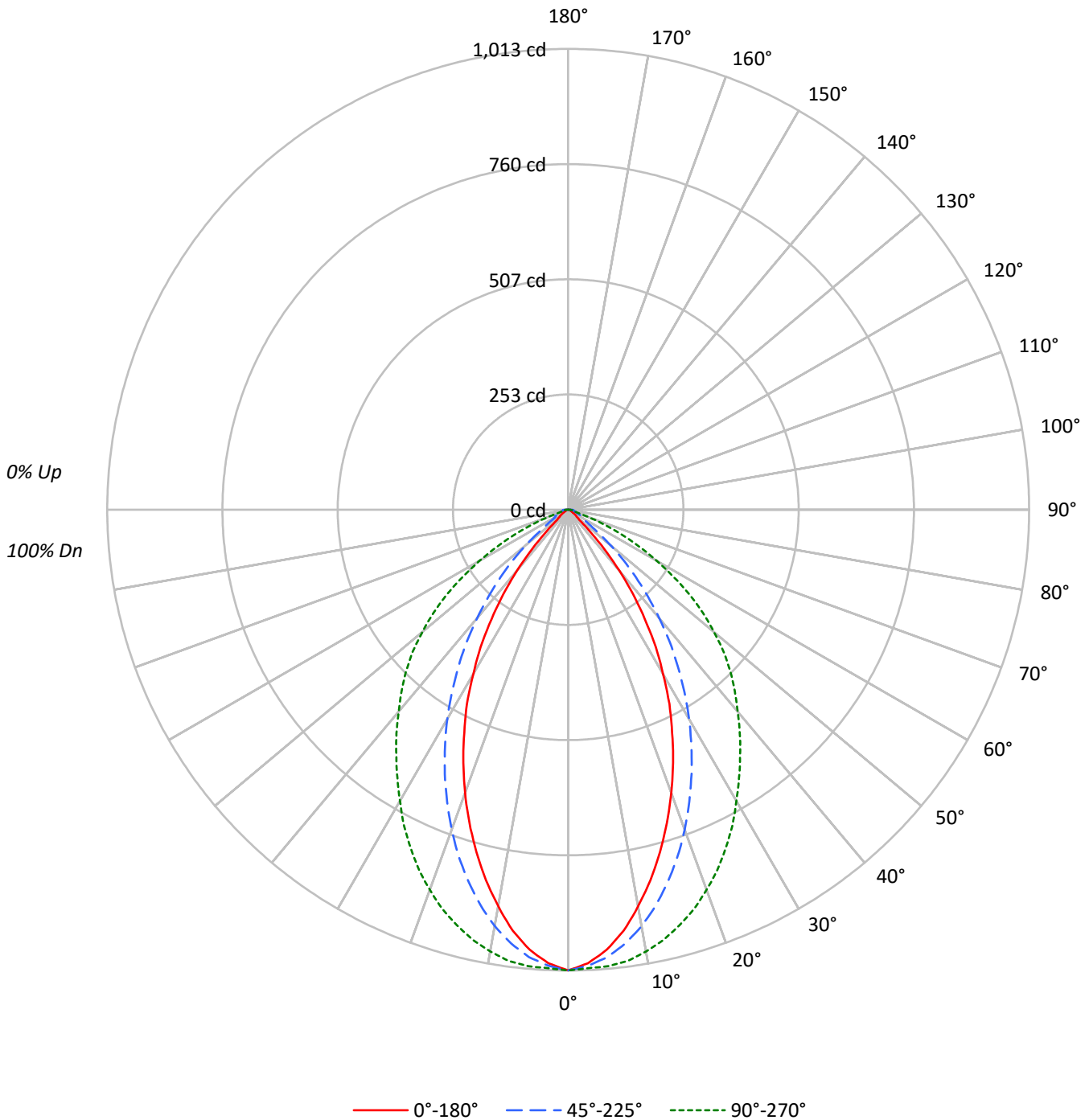
Lumens per Lamp: N/A
Luminaire Lumens: 1271.0 lumens
Efficiency: N/A
Efficacy: 36.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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 | 103 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 99 | 94 | 89 | 102 | 97 | 92 | 88 | 93 | 90 | 86 | 90 | 87 | 84 | 87 | 85 | 83 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 77 | 74 | 73 |
| 4 | 92 | 82 | 75 | 70 | 90 | 81 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 75 | 71 | 67 | 65 |
| 5 | 86 | 76 | 68 | 63 | 84 | 75 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 60 | 56 | 64 | 59 | 56 | 54 |
| 7 | 76 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 50 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 46 |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 |
| 10 | 64 | 52 | 46 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 49 | 44 | 41 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8720 | 8720 | 8720 |
| 5° | 8394 | 8533 | 8707 |
| 10° | 7741 | 8128 | 8621 |
| 15° | 6947 | 7546 | 8430 |
| 20° | 6072 | 6859 | 8149 |
| 25° | 5136 | 6092 | 7786 |
| 30° | 4148 | 5282 | 7349 |
| 35° | 3087 | 4413 | 6923 |
| 40° | 1960 | 3498 | 6513 |
| 45° | 784 | 2565 | 6141 |
| 50° | 342 | 1636 | 5606 |
| 55° | 261 | 845 | 4893 |
| 60° | 184 | 577 | 3880 |
| 65° | 137 | 575 | 2651 |
| 70° | 136 | 506 | 1216 |
| 75° | 180 | 536 | 492 |
| 80° | 268 | 600 | 531 |
| 85° | 534 | 1057 | 790 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6141 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 92.7 | 7.3 |
| 10°-20° | 239.1 | 18.8 |
| 20°-30° | 302.0 | 23.8 |
| 30°-40° | 277.4 | 21.8 |
| 40°-50° | 189.1 | 14.9 |
| 50°-60° | 102.6 | 8.1 |
| 60°-70° | 43.5 | 3.4 |
| 70°-80° | 15.1 | 1.2 |
| 80°-90° | 9.5 | 0.8 |
| 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° | 633.8 | 49.9 |
| 0°-40° | 911.2 | 71.7 |
| 0°-60° | 1202.9 | 94.6 |
| 0°-90° | 1271.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1271.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1013 | 1013 | 1013 | 1013 | 1013 | |
| 5° | 971 | 986 | 987 | 995 | 1007 | 90 |
| 15° | 779 | 805 | 846 | 907 | 946 | 217 |
| 25° | 541 | 575 | 641 | 740 | 820 | 247 |
| 35° | 294 | 333 | 420 | 551 | 659 | 182 |
| 45° | 64 | 103 | 211 | 373 | 504 | 59 |
| 55° | 17 | 19 | 56 | 205 | 326 | 16 |
| 65° | 7 | 8 | 28 | 64 | 130 | 7 |
| 75° | 5 | 15 | 16 | 15 | 15 | 6 |
| 85° | 5 | 11 | 11 | 11 | 8 | 5 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1012.7 | 1012.7 | 1012.7 | 1012.7 | 1012.7 |
| 2.5° | 997.9 | 1010.0 | 1003.3 | 1006.0 | 1008.7 |
| 5° | 971.1 | 985.9 | 987.2 | 995.3 | 1007.3 |
| 7.5° | 933.6 | 951.0 | 961.7 | 981.8 | 1000.6 |
| 10° | 885.3 | 906.7 | 929.5 | 961.7 | 985.9 |
| 12.5° | 834.3 | 857.1 | 890.6 | 936.2 | 968.4 |
| 15° | 779.3 | 804.8 | 846.4 | 906.7 | 945.6 |
| 17.5° | 721.6 | 749.8 | 799.4 | 870.5 | 920.1 |
| 20° | 662.6 | 693.5 | 748.5 | 828.9 | 889.3 |
| 22.5° | 602.3 | 634.4 | 694.8 | 786.0 | 857.1 |
| 25° | 540.6 | 575.4 | 641.2 | 740.4 | 819.5 |
| 27.5° | 481.5 | 513.7 | 586.2 | 694.8 | 782.0 |
| 30° | 417.2 | 453.4 | 531.2 | 647.9 | 739.1 |
| 32.5° | 358.1 | 393.0 | 474.8 | 599.6 | 698.8 |
| 35° | 293.7 | 332.6 | 419.8 | 551.3 | 658.6 |
| 37.5° | 233.4 | 270.9 | 366.2 | 505.7 | 619.7 |
| 40° | 174.4 | 213.3 | 311.2 | 460.1 | 579.4 |
| 42.5° | 116.7 | 158.3 | 258.9 | 413.1 | 541.9 |
| 45° | 64.4 | 103.3 | 210.6 | 372.9 | 504.3 |
| 47.5° | 33.5 | 56.3 | 165.0 | 332.6 | 464.1 |
| 50° | 25.5 | 30.9 | 122.1 | 288.4 | 418.5 |
| 52.5° | 21.5 | 22.8 | 83.2 | 244.1 | 372.9 |
| 55° | 17.4 | 18.8 | 56.3 | 205.2 | 325.9 |
| 57.5° | 13.4 | 14.8 | 40.2 | 167.7 | 273.6 |
| 60° | 10.7 | 12.1 | 33.5 | 128.8 | 225.3 |
| 62.5° | 8.0 | 9.4 | 32.2 | 95.2 | 177.1 |
| 65° | 6.7 | 8.0 | 28.2 | 64.4 | 130.1 |
| 67.5° | 5.4 | 8.0 | 24.1 | 41.6 | 87.2 |
| 70° | 5.4 | 10.7 | 20.1 | 26.8 | 48.3 |
| 72.5° | 5.4 | 12.1 | 17.4 | 17.4 | 17.4 |
| 75° | 5.4 | 14.8 | 16.1 | 14.8 | 14.8 |
| 77.5° | 5.4 | 13.4 | 13.4 | 13.4 | 13.4 |
| 80° | 5.4 | 12.1 | 12.1 | 12.1 | 10.7 |
| 82.5° | 5.4 | 10.7 | 12.1 | 12.1 | 9.4 |
| 85° | 5.4 | 10.7 | 10.7 | 10.7 | 8.0 |
| 87.5° | 4.0 | 10.7 | 10.7 | 10.7 | 5.4 |
| 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 | 0.15 | 15.97 | 17.24 | 16.33 | 17.56 | 17.87 |
| | 3H | 0.00 | 0.62 | 0.00 | 0.95 | 1.32 | 16.32 | 17.45 | 16.70 | 17.78 | 18.15 |
| | 4H | 0.88 | 1.93 | 1.29 | 2.28 | 2.67 | 16.29 | 17.34 | 16.69 | 17.69 | 18.07 |
| | 6H | 2.25 | 3.21 | 2.67 | 3.59 | 3.98 | 16.26 | 17.23 | 16.68 | 17.60 | 17.99 |
| | 8H | 2.93 | 3.84 | 3.37 | 4.24 | 4.64 | 16.25 | 17.16 | 16.68 | 17.56 | 17.96 |
| | 12H | 3.74 | 4.61 | 4.17 | 4.99 | 5.42 | 16.25 | 17.12 | 16.68 | 17.50 | 17.94 |
| 4H | 2H | 1.68 | 2.72 | 2.08 | 3.08 | 3.46 | 15.77 | 16.82 | 16.17 | 17.17 | 17.55 |
| | 3H | 3.09 | 3.95 | 3.50 | 4.35 | 4.75 | 16.16 | 17.02 | 16.58 | 17.42 | 17.83 |
| | 4H | 4.55 | 5.31 | 4.98 | 5.73 | 6.18 | 16.14 | 16.91 | 16.58 | 17.33 | 17.77 |
| | 6H | 5.79 | 6.45 | 6.26 | 6.90 | 7.37 | 16.16 | 16.82 | 16.63 | 17.27 | 17.74 |
| | 8H | 6.36 | 6.98 | 6.83 | 7.43 | 7.90 | 16.17 | 16.79 | 16.64 | 17.24 | 17.71 |
| | 12H | 7.04 | 7.58 | 7.53 | 8.07 | 8.54 | 16.21 | 16.75 | 16.70 | 17.24 | 17.71 |
| 8H | 4H | 5.62 | 6.23 | 6.09 | 6.68 | 7.15 | 16.05 | 16.66 | 16.52 | 17.11 | 17.58 |
| | 6H | 7.23 | 7.73 | 7.73 | 8.23 | 8.71 | 16.10 | 16.60 | 16.60 | 17.10 | 17.58 |
| | 8H | 8.06 | 8.51 | 8.59 | 9.03 | 9.52 | 16.15 | 16.61 | 16.68 | 17.12 | 17.61 |
| | 12H | 9.03 | 9.43 | 9.54 | 9.92 | 10.49 | 16.27 | 16.67 | 16.78 | 17.16 | 17.74 |
| 12H | 4H | 5.81 | 6.35 | 6.29 | 6.83 | 7.31 | 16.01 | 16.55 | 16.49 | 17.03 | 17.51 |
| | 6H | 7.58 | 8.03 | 8.10 | 8.55 | 9.04 | 16.06 | 16.52 | 16.59 | 17.03 | 17.52 |
| | 8H | 8.60 | 9.00 | 9.11 | 9.49 | 10.06 | 16.17 | 16.57 | 16.68 | 17.06 | 17.64 |