

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060241

Luminaire Tested: S124RDR-S1020D840-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060241
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-77)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-S1020D840-X4F0-XX-UDD-SVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

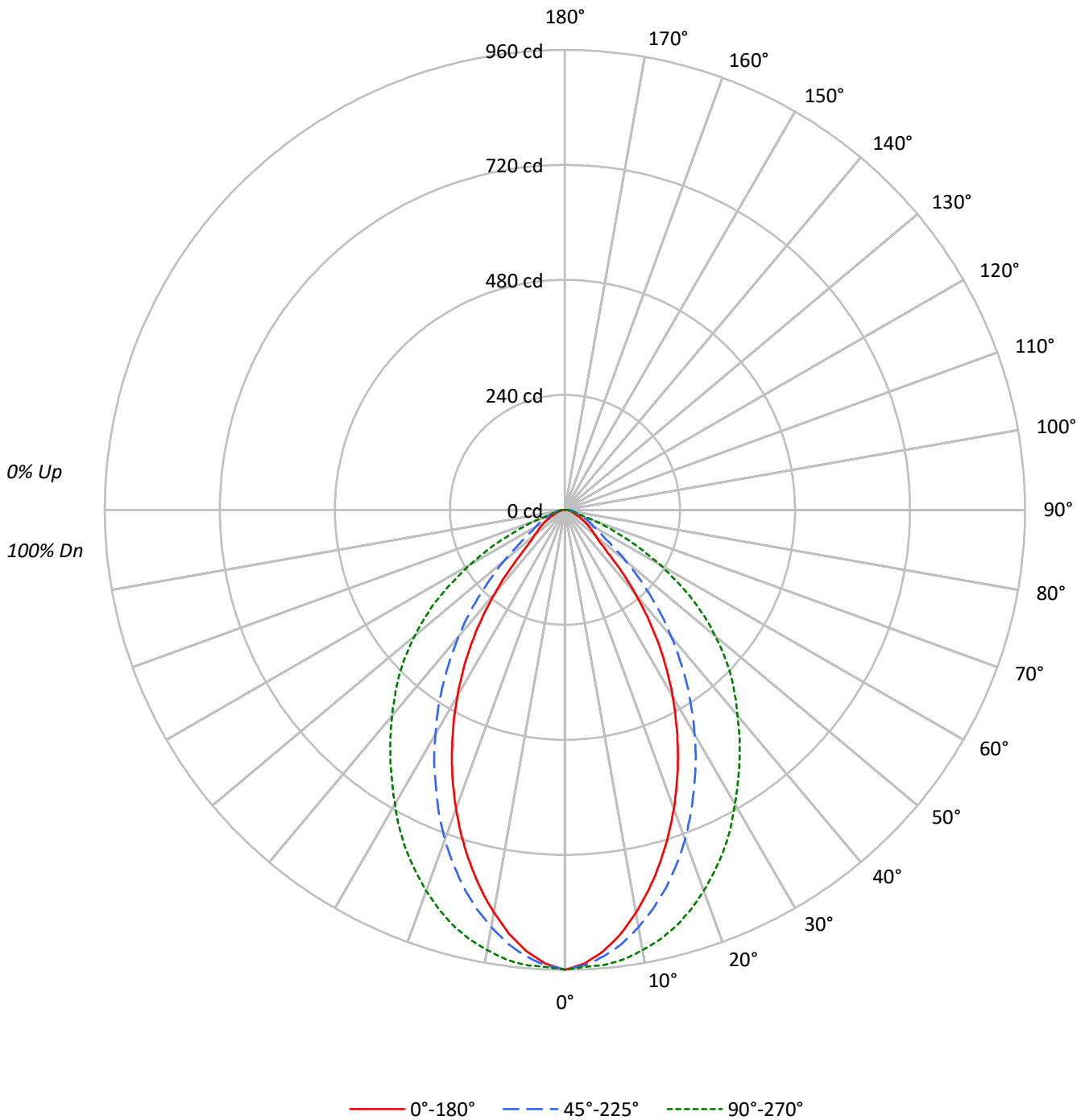
Lumens per Lamp: N/A
Luminaire Lumens: 1349.7 lumens
Efficiency: N/A
Efficacy: 38.6 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): 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 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | | 89 |
| 2 | 104 | 97 | 92 | 88 | 101 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 83 | 81 | 79 | | | | 79 |
| 3 | 97 | 88 | 82 | 77 | 94 | 87 | 81 | 76 | 84 | 79 | 75 | 81 | 77 | 73 | 79 | 75 | 72 | 70 | | | | 70 |
| 4 | 90 | 80 | 73 | 68 | 88 | 79 | 72 | 67 | 77 | 71 | 67 | 75 | 70 | 66 | 73 | 68 | 65 | 63 | | | | 63 |
| 5 | 84 | 73 | 66 | 61 | 82 | 72 | 65 | 60 | 70 | 64 | 60 | 69 | 63 | 59 | 67 | 62 | 59 | 57 | | | | 57 |
| 6 | 79 | 68 | 60 | 55 | 77 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 58 | 54 | 62 | 57 | 53 | 51 | | | | 51 |
| 7 | 74 | 62 | 55 | 50 | 72 | 62 | 54 | 49 | 60 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 49 | 47 | | | | 47 |
| 8 | 69 | 58 | 50 | 45 | 68 | 57 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 45 | 54 | 48 | 45 | 43 | | | | 43 |
| 9 | 65 | 54 | 46 | 42 | 64 | 53 | 46 | 42 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | 39 |
| 10 | 62 | 50 | 43 | 39 | 61 | 50 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | 36 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8265 | 8265 | 8265 |
| 5° | 7991 | 8086 | 8244 |
| 10° | 7464 | 7731 | 8158 |
| 15° | 6815 | 7272 | 8013 |
| 20° | 6087 | 6714 | 7755 |
| 25° | 5303 | 6056 | 7449 |
| 30° | 4469 | 5379 | 7055 |
| 35° | 3569 | 4660 | 6675 |
| 40° | 2567 | 3871 | 6301 |
| 45° | 1547 | 3048 | 5964 |
| 50° | 1112 | 2209 | 5481 |
| 55° | 935 | 1485 | 4858 |
| 60° | 758 | 1178 | 3911 |
| 65° | 597 | 1070 | 2812 |
| 70° | 524 | 891 | 1506 |
| 75° | 489 | 812 | 732 |
| 80° | 486 | 848 | 664 |
| 85° | 721 | 1205 | 840 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5964 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 88.1 | 6.5 |
| 10°-20° | 230.9 | 17.1 |
| 20°-30° | 299.6 | 22.2 |
| 30°-40° | 287.9 | 21.3 |
| 40°-50° | 213.6 | 15.8 |
| 50°-60° | 130.9 | 9.7 |
| 60°-70° | 63.6 | 4.7 |
| 70°-80° | 24.2 | 1.8 |
| 80°-90° | 10.9 | 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° | 618.5 | 45.8 |
| 0°-40° | 906.5 | 67.2 |
| 0°-60° | 1251.0 | 92.7 |
| 0°-90° | 1349.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1349.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 960 | 960 | 960 | 960 | 960 | |
| 5° | 924 | 938 | 935 | 944 | 954 | 86 |
| 15° | 764 | 786 | 816 | 865 | 899 | 213 |
| 25° | 558 | 586 | 637 | 719 | 784 | 255 |
| 35° | 340 | 370 | 443 | 548 | 635 | 210 |
| 45° | 127 | 159 | 250 | 382 | 490 | 105 |
| 55° | 62 | 65 | 99 | 224 | 324 | 56 |
| 65° | 29 | 32 | 52 | 83 | 138 | 30 |
| 75° | 15 | 23 | 24 | 22 | 22 | 16 |
| 85° | 7 | 12 | 12 | 11 | 8 | 7 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 959.8 | 959.8 | 959.8 | 959.8 | 959.8 |
| 2.5° | 947.6 | 958.6 | 951.3 | 953.7 | 954.9 |
| 5° | 924.4 | 937.9 | 935.4 | 944.0 | 953.7 |
| 7.5° | 892.7 | 908.5 | 913.4 | 930.5 | 946.4 |
| 10° | 853.6 | 873.1 | 884.1 | 912.2 | 933.0 |
| 12.5° | 810.8 | 831.6 | 852.4 | 890.2 | 918.3 |
| 15° | 764.4 | 786.4 | 815.7 | 864.6 | 898.8 |
| 17.5° | 715.6 | 740.0 | 775.4 | 834.1 | 874.3 |
| 20° | 664.3 | 690.0 | 732.7 | 797.4 | 846.3 |
| 22.5° | 611.8 | 638.7 | 686.3 | 758.3 | 815.7 |
| 25° | 558.1 | 586.2 | 637.4 | 719.3 | 784.0 |
| 27.5° | 503.1 | 532.4 | 591.0 | 677.7 | 748.6 |
| 30° | 449.4 | 477.5 | 541.0 | 635.0 | 709.5 |
| 32.5° | 394.4 | 423.7 | 492.1 | 591.0 | 671.6 |
| 35° | 339.5 | 370.0 | 443.3 | 548.3 | 635.0 |
| 37.5° | 283.3 | 316.3 | 393.2 | 506.8 | 598.4 |
| 40° | 228.4 | 260.1 | 344.4 | 464.0 | 560.5 |
| 42.5° | 174.6 | 208.8 | 298.0 | 421.3 | 525.1 |
| 45° | 127.0 | 158.8 | 250.3 | 382.2 | 489.7 |
| 47.5° | 95.3 | 114.8 | 206.4 | 345.6 | 450.6 |
| 50° | 83.0 | 86.7 | 164.9 | 305.3 | 409.1 |
| 52.5° | 72.0 | 74.5 | 128.2 | 261.3 | 367.6 |
| 55° | 62.3 | 64.7 | 98.9 | 223.5 | 323.6 |
| 57.5° | 52.5 | 55.0 | 79.4 | 186.8 | 273.5 |
| 60° | 44.0 | 46.4 | 68.4 | 149.0 | 227.1 |
| 62.5° | 36.6 | 37.9 | 61.1 | 113.6 | 182.0 |
| 65° | 29.3 | 31.8 | 52.5 | 83.0 | 138.0 |
| 67.5° | 24.4 | 26.9 | 42.7 | 57.4 | 96.5 |
| 70° | 20.8 | 26.9 | 35.4 | 40.3 | 59.8 |
| 72.5° | 17.1 | 24.4 | 29.3 | 28.1 | 28.1 |
| 75° | 14.7 | 23.2 | 24.4 | 22.0 | 22.0 |
| 77.5° | 12.2 | 20.8 | 19.5 | 18.3 | 17.1 |
| 80° | 9.8 | 17.1 | 17.1 | 14.7 | 13.4 |
| 82.5° | 8.5 | 13.4 | 13.4 | 13.4 | 11.0 |
| 85° | 7.3 | 12.2 | 12.2 | 11.0 | 8.5 |
| 87.5° | 4.9 | 9.8 | 11.0 | 9.8 | 6.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)