

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1061858

Luminaire Tested: S125RDR-H1090D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1061858
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-87)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDR-H1090D840-X4F0-XX-UDD-BVL-S
Description: DEFINE 5 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

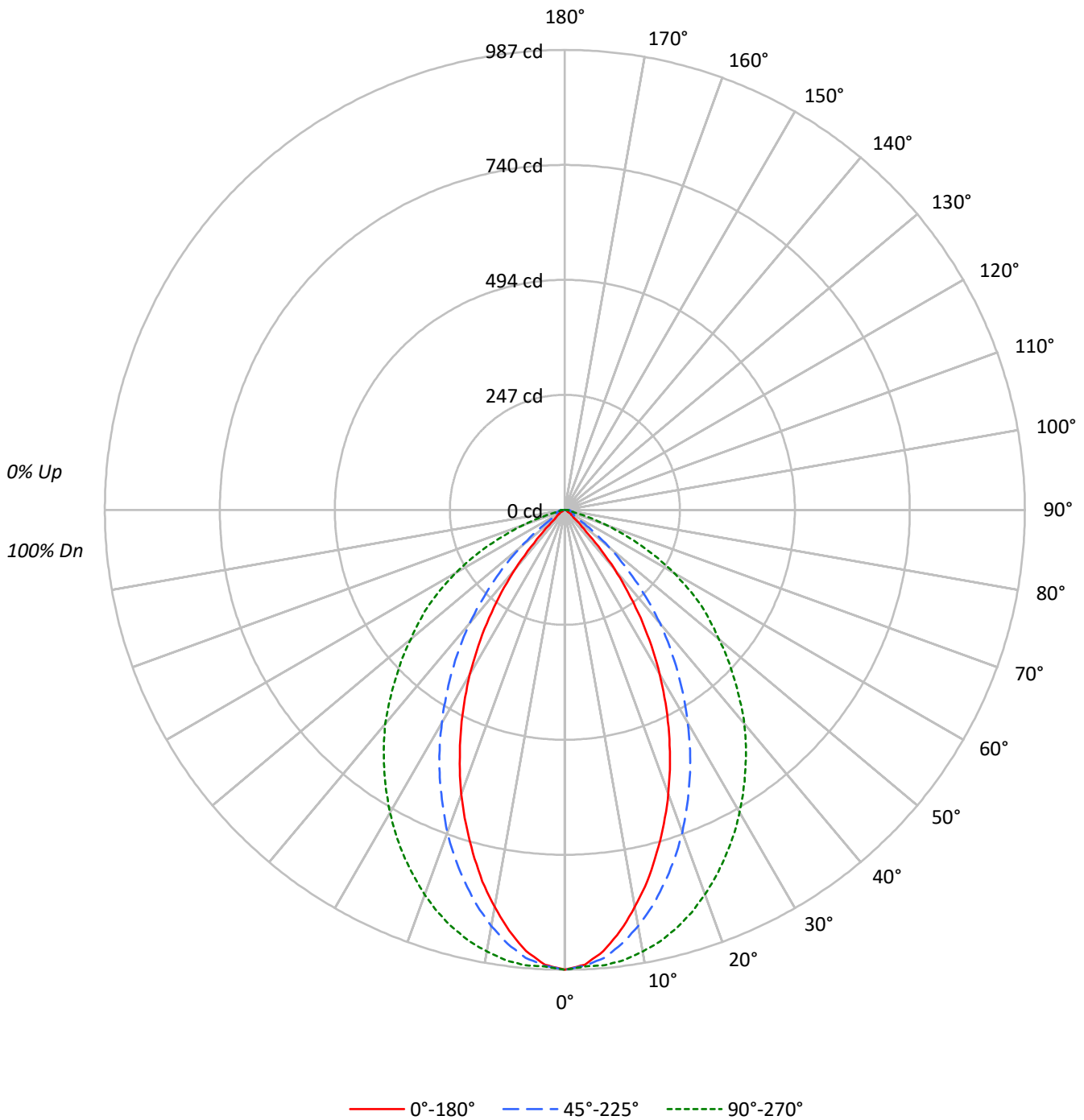
Lumens per Lamp: N/A
Luminaire Lumens: 1269.4 lumens
Efficiency: N/A
Efficacy: 40.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.14 / 0.98
Luminous Opening: Rectangular (W 0.39' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | | 90 |
| 2 | 105 | 98 | 93 | 89 | 102 | 97 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | 81 | | | | 81 |
| 3 | 98 | 90 | 83 | 78 | 95 | 88 | 82 | 78 | 85 | 80 | 76 | 83 | 79 | 75 | 80 | 77 | 74 | 72 | | | | 72 |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 74 | 69 | 78 | 73 | 68 | 76 | 71 | 68 | 74 | 70 | 67 | 65 | | | | 65 |
| 5 | 85 | 75 | 68 | 63 | 84 | 74 | 67 | 62 | 72 | 66 | 62 | 70 | 65 | 61 | 69 | 64 | 61 | 59 | | | | 59 |
| 6 | 80 | 69 | 62 | 57 | 78 | 68 | 62 | 57 | 67 | 61 | 56 | 65 | 60 | 56 | 64 | 59 | 55 | 54 | | | | 54 |
| 7 | 75 | 64 | 57 | 52 | 74 | 63 | 56 | 52 | 62 | 56 | 51 | 61 | 55 | 51 | 59 | 54 | 51 | 49 | | | | 49 |
| 8 | 71 | 60 | 52 | 47 | 69 | 59 | 52 | 47 | 58 | 52 | 47 | 57 | 51 | 47 | 55 | 50 | 47 | 45 | | | | 45 |
| 9 | 67 | 55 | 48 | 44 | 66 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 52 | 47 | 43 | 42 | | | | 42 |
| 10 | 63 | 52 | 45 | 41 | 62 | 51 | 45 | 40 | 50 | 44 | 40 | 50 | 44 | 40 | 49 | 44 | 40 | 39 | | | | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 6795 | 6795 | 6795 |
| 5° | 6569 | 6670 | 6779 |
| 10° | 6050 | 6339 | 6730 |
| 15° | 5432 | 5900 | 6619 |
| 20° | 4755 | 5396 | 6438 |
| 25° | 4017 | 4820 | 6214 |
| 30° | 3237 | 4194 | 5962 |
| 35° | 2380 | 3534 | 5680 |
| 40° | 1486 | 2851 | 5386 |
| 45° | 556 | 2083 | 5006 |
| 50° | 260 | 1301 | 4622 |
| 55° | 190 | 540 | 4275 |
| 60° | 134 | 285 | 3699 |
| 65° | 80 | 337 | 2931 |
| 70° | 72 | 391 | 1860 |
| 75° | 96 | 388 | 583 |
| 80° | 143 | 484 | 432 |
| 85° | 284 | 766 | 577 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5006 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 90.5 | 7.1 |
| 10°-20° | 234.3 | 18.5 |
| 20°-30° | 298.5 | 23.5 |
| 30°-40° | 277.8 | 21.9 |
| 40°-50° | 190.3 | 15.0 |
| 50°-60° | 104.8 | 8.3 |
| 60°-70° | 49.6 | 3.9 |
| 70°-80° | 15.6 | 1.2 |
| 80°-90° | 8.0 | 0.6 |
| 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° | 623.2 | 49.1 |
| 0°-40° | 901.0 | 71.0 |
| 0°-60° | 1196.2 | 94.2 |
| 0°-90° | 1269.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1269.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 987 | 987 | 987 | 987 | 987 | |
| 5° | 950 | 963 | 965 | 972 | 981 | 88 |
| 15° | 762 | 786 | 828 | 890 | 929 | 212 |
| 25° | 529 | 562 | 634 | 736 | 818 | 241 |
| 35° | 283 | 323 | 420 | 559 | 676 | 176 |
| 45° | 57 | 96 | 214 | 379 | 514 | 54 |
| 55° | 16 | 18 | 45 | 212 | 356 | 14 |
| 65° | 5 | 6 | 21 | 78 | 180 | 6 |
| 75° | 4 | 6 | 15 | 16 | 22 | 4 |
| 85° | 4 | 8 | 10 | 8 | 7 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: S125RDR-H1090D840-X4F0-XX-UDD-BVL-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 986.9 | 986.9 | 986.9 | 986.9 | 986.9 |
| 2.5° | 977.2 | 986.9 | 979.6 | 979.6 | 980.8 |
| 5° | 950.5 | 962.6 | 965.0 | 972.3 | 980.8 |
| 7.5° | 911.6 | 927.4 | 939.5 | 960.2 | 974.8 |
| 10° | 865.4 | 884.8 | 906.7 | 940.7 | 962.6 |
| 12.5° | 816.8 | 837.4 | 870.2 | 917.6 | 948.0 |
| 15° | 762.1 | 786.4 | 827.7 | 889.7 | 928.6 |
| 17.5° | 706.2 | 732.9 | 783.9 | 856.9 | 905.5 |
| 20° | 649.0 | 677.0 | 736.5 | 818.0 | 878.7 |
| 22.5° | 589.5 | 619.9 | 685.5 | 777.9 | 849.6 |
| 25° | 528.7 | 561.5 | 634.4 | 736.5 | 818.0 |
| 27.5° | 467.9 | 502.0 | 582.2 | 694.0 | 785.2 |
| 30° | 407.2 | 442.4 | 527.5 | 650.2 | 749.9 |
| 32.5° | 345.2 | 384.1 | 474.0 | 606.5 | 713.4 |
| 35° | 283.2 | 323.3 | 420.5 | 559.1 | 675.8 |
| 37.5° | 222.4 | 263.7 | 368.3 | 514.1 | 638.1 |
| 40° | 165.3 | 206.6 | 317.2 | 469.1 | 599.2 |
| 42.5° | 107.0 | 150.7 | 263.7 | 423.0 | 556.7 |
| 45° | 57.1 | 96.0 | 213.9 | 379.2 | 514.1 |
| 47.5° | 30.4 | 51.0 | 166.5 | 335.5 | 474.0 |
| 50° | 24.3 | 28.0 | 121.5 | 291.7 | 431.5 |
| 52.5° | 19.4 | 21.9 | 77.8 | 246.7 | 393.8 |
| 55° | 15.8 | 18.2 | 45.0 | 211.5 | 356.1 |
| 57.5° | 12.2 | 14.6 | 25.5 | 176.2 | 312.4 |
| 60° | 9.7 | 10.9 | 20.7 | 141.0 | 268.6 |
| 62.5° | 6.1 | 8.5 | 20.7 | 109.4 | 224.9 |
| 65° | 4.9 | 6.1 | 20.7 | 77.8 | 179.9 |
| 67.5° | 4.9 | 4.9 | 20.7 | 51.0 | 134.9 |
| 70° | 3.6 | 3.6 | 19.4 | 32.8 | 92.4 |
| 72.5° | 3.6 | 3.6 | 17.0 | 21.9 | 53.5 |
| 75° | 3.6 | 6.1 | 14.6 | 15.8 | 21.9 |
| 77.5° | 3.6 | 9.7 | 13.4 | 13.4 | 12.2 |
| 80° | 3.6 | 9.7 | 12.2 | 10.9 | 10.9 |
| 82.5° | 3.6 | 9.7 | 9.7 | 9.7 | 8.5 |
| 85° | 3.6 | 8.5 | 9.7 | 8.5 | 7.3 |
| 87.5° | 3.6 | 8.5 | 8.5 | 8.5 | 4.9 |
| 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.70 | 16.99 | 16.07 | 17.30 | 17.62 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.49 | 17.63 | 16.87 | 17.96 | 18.32 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.52 | 17.57 | 16.92 | 17.92 | 18.31 |
| | 6H | 0.00 | 0.35 | 0.00 | 0.72 | 1.11 | 16.47 | 17.44 | 16.89 | 17.81 | 18.21 |
| | 8H | 0.04 | 0.96 | 0.47 | 1.35 | 1.76 | 16.45 | 17.37 | 16.88 | 17.76 | 18.16 |
| | 12H | 0.78 | 1.66 | 1.22 | 2.04 | 2.47 | 16.43 | 17.31 | 16.86 | 17.69 | 18.12 |
| 4H | 2H | 0.00 | 0.55 | 0.00 | 0.90 | 1.29 | 15.48 | 16.54 | 15.89 | 16.89 | 17.28 |
| | 3H | 0.36 | 1.22 | 0.77 | 1.63 | 2.03 | 16.31 | 17.18 | 16.73 | 17.58 | 17.98 |
| | 4H | 0.95 | 1.72 | 1.39 | 2.14 | 2.59 | 16.35 | 17.12 | 16.78 | 17.54 | 17.98 |
| | 6H | 2.44 | 3.10 | 2.90 | 3.55 | 4.02 | 16.34 | 17.00 | 16.80 | 17.45 | 17.91 |
| | 8H | 3.17 | 3.79 | 3.64 | 4.24 | 4.71 | 16.32 | 16.94 | 16.79 | 17.39 | 17.86 |
| | 12H | 3.91 | 4.45 | 4.40 | 4.94 | 5.41 | 16.32 | 16.87 | 16.81 | 17.35 | 17.82 |
| 8H | 4H | 3.00 | 3.62 | 3.47 | 4.06 | 4.54 | 16.23 | 16.85 | 16.70 | 17.30 | 17.77 |
| | 6H | 4.74 | 5.24 | 5.24 | 5.74 | 6.22 | 16.24 | 16.74 | 16.74 | 17.24 | 17.72 |
| | 8H | 5.68 | 6.13 | 6.20 | 6.65 | 7.14 | 16.24 | 16.69 | 16.76 | 17.21 | 17.70 |
| | 12H | 6.61 | 7.01 | 7.13 | 7.51 | 8.08 | 16.29 | 16.69 | 16.80 | 17.18 | 17.76 |
| 12H | 4H | 3.30 | 3.85 | 3.79 | 4.33 | 4.80 | 16.19 | 16.74 | 16.68 | 17.22 | 17.70 |
| | 6H | 5.19 | 5.65 | 5.72 | 6.16 | 6.66 | 16.19 | 16.64 | 16.71 | 17.16 | 17.65 |
| | 8H | 6.32 | 6.72 | 6.84 | 7.22 | 7.79 | 16.23 | 16.63 | 16.74 | 17.13 | 17.70 |