

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: P1058213

Luminaire Tested: S122RDR-H1005D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058213
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: S122RDR-H1005D840-X4F0-XX-UDD-BVL-S
Description: DEFINE 2 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

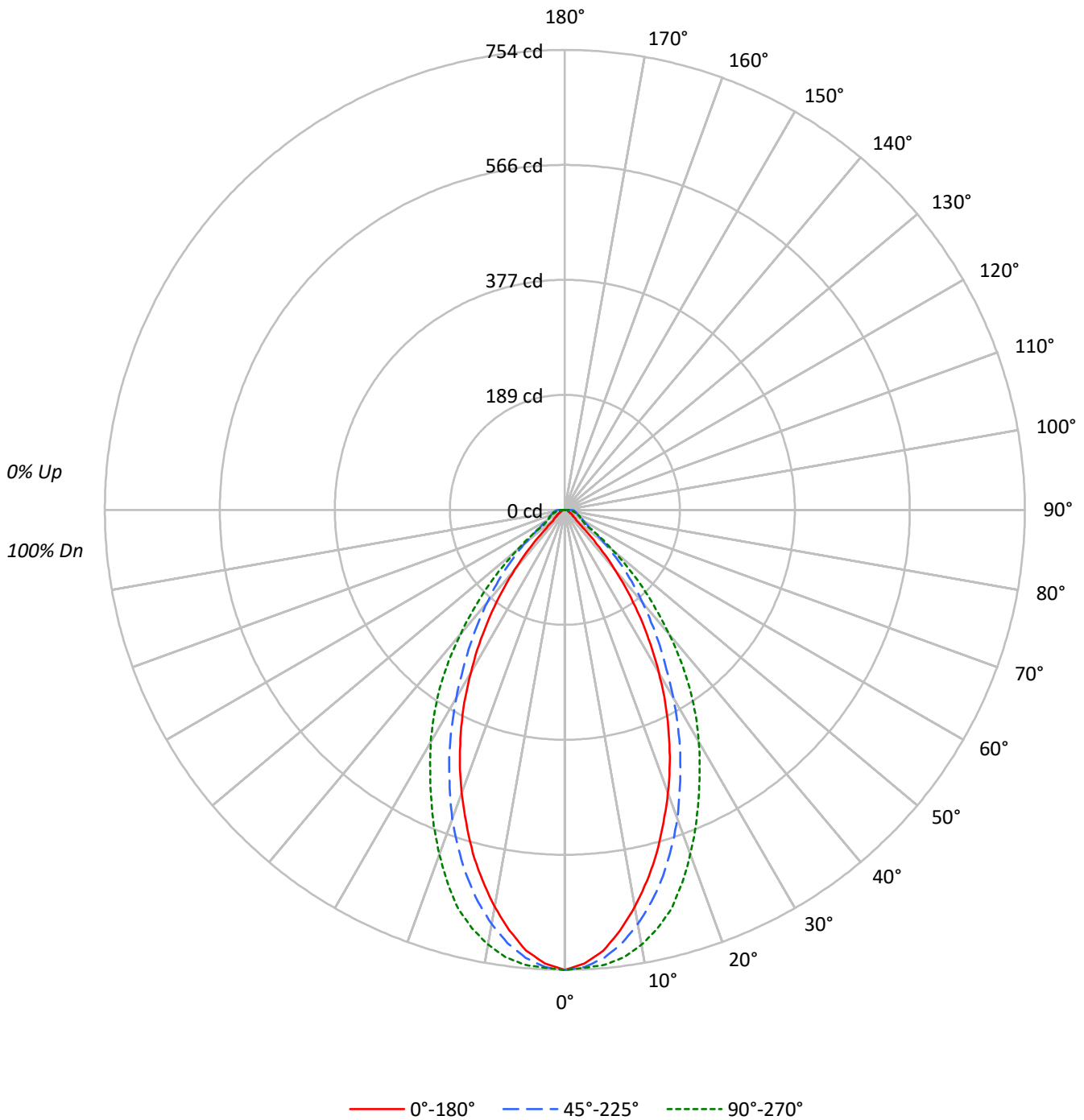
Lumens per Lamp: N/A
Luminaire Lumens: 813.2 lumens
Efficiency: N/A
Efficacy: 22.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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 | 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° | 13921 | 13921 | 13921 |
| 5° | 13438 | 13653 | 13868 |
| 10° | 12376 | 12917 | 13568 |
| 15° | 11126 | 11873 | 12922 |
| 20° | 9706 | 10586 | 11806 |
| 25° | 8209 | 9121 | 10565 |
| 30° | 6558 | 7575 | 9362 |
| 35° | 4850 | 6089 | 8042 |
| 40° | 3064 | 4769 | 6405 |
| 45° | 1206 | 3583 | 4715 |
| 50° | 623 | 2406 | 2905 |
| 55° | 512 | 1580 | 1303 |
| 60° | 373 | 1281 | 1174 |
| 65° | 314 | 1201 | 1201 |
| 70° | 313 | 1246 | 1171 |
| 75° | 414 | 1440 | 1233 |
| 80° | 616 | 1838 | 1381 |
| 85° | 910 | 3070 | 1842 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 6134 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 69.0 | 8.5 |
| 10°-20° | 174.3 | 21.4 |
| 20°-30° | 207.1 | 25.5 |
| 30°-40° | 172.3 | 21.2 |
| 40°-50° | 96.2 | 11.8 |
| 50°-60° | 38.9 | 4.8 |
| 60°-70° | 24.9 | 3.1 |
| 70°-80° | 18.6 | 2.3 |
| 80°-90° | 11.9 | 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° | 450.4 | 55.4 |
| 0°-40° | 622.7 | 76.6 |
| 0°-60° | 757.8 | 93.2 |
| 0°-90° | 813.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 813.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 754 | 754 | 754 | 754 | 754 | |
| 5° | 726 | 738 | 737 | 743 | 749 | 67 |
| 15° | 582 | 600 | 622 | 653 | 676 | 162 |
| 25° | 403 | 419 | 448 | 483 | 519 | 184 |
| 35° | 215 | 236 | 270 | 315 | 357 | 134 |
| 45° | 46 | 78 | 137 | 160 | 181 | 43 |
| 55° | 16 | 33 | 49 | 48 | 40 | 14 |
| 65° | 7 | 29 | 28 | 26 | 28 | 7 |
| 75° | 6 | 20 | 20 | 19 | 17 | 6 |
| 85° | 4 | 13 | 14 | 13 | 9 | 5 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 754.4 | 754.4 | 754.4 | 754.4 | 754.4 |
| 2.5° | 744.3 | 755.9 | 750.1 | 750.1 | 751.5 |
| 5° | 725.5 | 738.5 | 737.1 | 742.9 | 748.7 |
| 7.5° | 695.2 | 709.6 | 716.9 | 729.9 | 740.0 |
| 10° | 660.5 | 676.4 | 689.4 | 709.6 | 724.1 |
| 12.5° | 622.9 | 638.8 | 657.6 | 683.6 | 702.4 |
| 15° | 582.4 | 599.8 | 621.5 | 653.3 | 676.4 |
| 17.5° | 537.6 | 556.4 | 581.0 | 615.7 | 640.3 |
| 20° | 494.3 | 513.1 | 539.1 | 573.8 | 601.2 |
| 22.5° | 449.5 | 465.4 | 492.8 | 527.5 | 560.8 |
| 25° | 403.2 | 419.1 | 448.0 | 482.7 | 518.9 |
| 27.5° | 357.0 | 372.9 | 401.8 | 437.9 | 478.4 |
| 30° | 307.8 | 325.2 | 355.5 | 396.0 | 439.4 |
| 32.5° | 261.6 | 278.9 | 310.7 | 355.5 | 398.9 |
| 35° | 215.3 | 235.6 | 270.3 | 315.1 | 357.0 |
| 37.5° | 170.5 | 193.7 | 232.7 | 274.6 | 312.2 |
| 40° | 127.2 | 151.8 | 198.0 | 234.1 | 265.9 |
| 42.5° | 83.8 | 112.7 | 166.2 | 196.6 | 221.1 |
| 45° | 46.2 | 78.0 | 137.3 | 160.4 | 180.7 |
| 47.5° | 26.0 | 50.6 | 108.4 | 127.2 | 138.7 |
| 50° | 21.7 | 37.6 | 83.8 | 96.8 | 101.2 |
| 52.5° | 17.3 | 34.7 | 63.6 | 70.8 | 67.9 |
| 55° | 15.9 | 33.2 | 49.1 | 47.7 | 40.5 |
| 57.5° | 13.0 | 33.2 | 39.0 | 34.7 | 34.7 |
| 60° | 10.1 | 31.8 | 34.7 | 30.4 | 31.8 |
| 62.5° | 8.7 | 30.4 | 31.8 | 28.9 | 28.9 |
| 65° | 7.2 | 28.9 | 27.5 | 26.0 | 27.5 |
| 67.5° | 5.8 | 26.0 | 26.0 | 24.6 | 24.6 |
| 70° | 5.8 | 24.6 | 23.1 | 21.7 | 21.7 |
| 72.5° | 5.8 | 21.7 | 21.7 | 20.2 | 20.2 |
| 75° | 5.8 | 20.2 | 20.2 | 18.8 | 17.3 |
| 77.5° | 5.8 | 17.3 | 18.8 | 17.3 | 15.9 |
| 80° | 5.8 | 15.9 | 17.3 | 15.9 | 13.0 |
| 82.5° | 5.8 | 14.5 | 15.9 | 14.5 | 11.6 |
| 85° | 4.3 | 13.0 | 14.5 | 13.0 | 8.7 |
| 87.5° | 4.3 | 13.0 | 14.5 | 11.6 | 7.2 |
| 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 | 7.51 | 8.73 | 7.87 | 9.04 | 9.35 | 8.59 | 9.81 | 8.96 | 10.12 | 10.44 |
| | 3H | 8.84 | 9.93 | 9.23 | 10.26 | 10.63 | 10.62 | 11.71 | 11.01 | 12.04 | 12.41 |
| | 4H | 9.42 | 10.43 | 9.82 | 10.78 | 11.17 | 11.58 | 12.59 | 11.98 | 12.94 | 13.32 |
| | 6H | 9.99 | 10.92 | 10.40 | 11.29 | 11.68 | 12.52 | 13.45 | 12.94 | 13.82 | 14.22 |
| | 8H | 10.31 | 11.19 | 10.75 | 11.59 | 11.99 | 12.97 | 13.85 | 13.40 | 14.24 | 14.65 |
| | 12H | 10.62 | 11.46 | 11.05 | 11.84 | 12.27 | 13.40 | 14.24 | 13.83 | 14.62 | 15.05 |
| 4H | 2H | 8.48 | 9.49 | 8.88 | 9.84 | 10.22 | 9.27 | 10.28 | 9.68 | 10.63 | 11.02 |
| | 3H | 10.51 | 11.34 | 10.92 | 11.74 | 12.15 | 11.55 | 12.39 | 11.97 | 12.79 | 13.20 |
| | 4H | 11.58 | 12.33 | 12.02 | 12.75 | 13.20 | 12.70 | 13.45 | 13.14 | 13.87 | 14.31 |
| | 6H | 12.46 | 13.10 | 12.92 | 13.55 | 14.02 | 13.87 | 14.52 | 14.33 | 14.96 | 15.43 |
| | 8H | 12.87 | 13.48 | 13.34 | 13.92 | 14.40 | 14.43 | 15.04 | 14.90 | 15.49 | 15.96 |
| | 12H | 13.25 | 13.78 | 13.74 | 14.27 | 14.74 | 14.98 | 15.51 | 15.47 | 16.00 | 16.47 |
| 8H | 4H | 12.35 | 12.96 | 12.83 | 13.41 | 13.88 | 13.25 | 13.86 | 13.72 | 14.30 | 14.78 |
| | 6H | 13.70 | 14.19 | 14.20 | 14.69 | 15.17 | 14.70 | 15.20 | 15.21 | 15.70 | 16.18 |
| | 8H | 14.42 | 14.86 | 14.94 | 15.38 | 15.87 | 15.47 | 15.92 | 15.99 | 16.43 | 16.93 |
| | 12H | 15.11 | 15.50 | 15.62 | 16.00 | 16.57 | 16.26 | 16.65 | 16.78 | 17.15 | 17.72 |
| 12H | 4H | 12.51 | 13.05 | 13.00 | 13.53 | 14.00 | 13.36 | 13.89 | 13.84 | 14.38 | 14.85 |
| | 6H | 14.02 | 14.46 | 14.54 | 14.98 | 15.47 | 14.93 | 15.38 | 15.45 | 15.89 | 16.38 |
| | 8H | 14.92 | 15.32 | 15.44 | 15.81 | 16.39 | 15.84 | 16.23 | 16.36 | 16.73 | 17.30 |