

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: P1059662

Luminaire Tested: S123RDRP-H560D835-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059662
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-H560D835-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

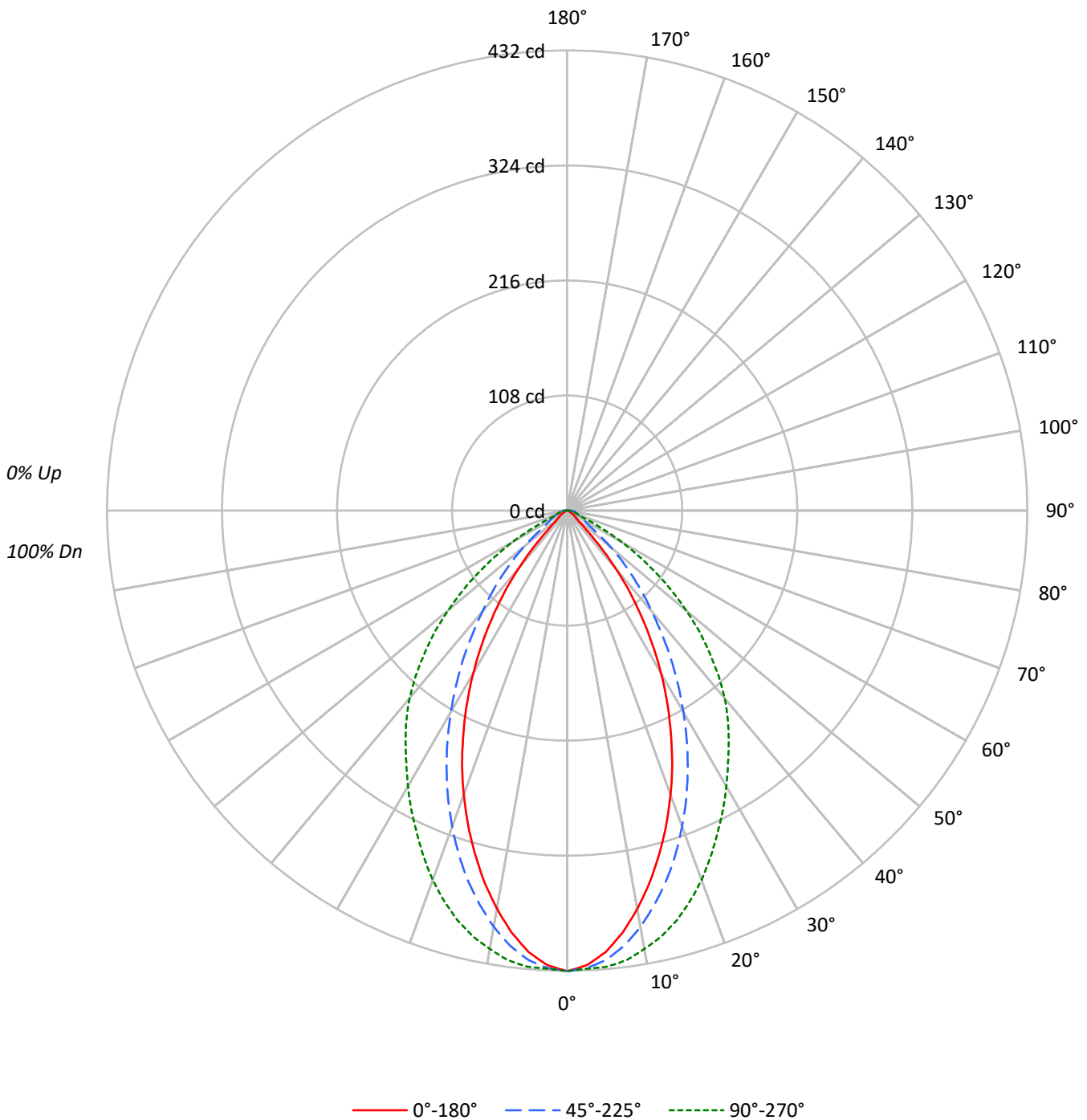
Lumens per Lamp: N/A
Luminaire Lumens: 519.5 lumens
Efficiency: N/A
Efficacy: 29.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 99 | 94 | 89 | 102 | 97 | 92 | 88 | 94 | 90 | 86 | 90 | 87 | 85 | 88 | 85 | 83 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 89 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 78 | 75 | 73 |
| 4 | 92 | 83 | 76 | 71 | 90 | 81 | 75 | 70 | 79 | 74 | 69 | 77 | 72 | 69 | 75 | 71 | 68 | 66 |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 68 | 64 | 73 | 67 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 60 |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 65 | 60 | 57 | 55 |
| 7 | 76 | 65 | 58 | 53 | 75 | 64 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 61 | 56 | 52 | 50 |
| 8 | 72 | 61 | 54 | 49 | 70 | 60 | 53 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 46 |
| 9 | 68 | 57 | 50 | 45 | 67 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 53 | 48 | 45 | 43 |
| 10 | 64 | 53 | 46 | 42 | 63 | 53 | 46 | 42 | 52 | 46 | 42 | 51 | 45 | 42 | 50 | 45 | 41 | 40 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5077 | 5077 | 5077 |
| 5° | 4902 | 4988 | 5066 |
| 10° | 4525 | 4730 | 4983 |
| 15° | 4059 | 4373 | 4840 |
| 20° | 3545 | 3941 | 4611 |
| 25° | 2981 | 3470 | 4326 |
| 30° | 2393 | 2959 | 4053 |
| 35° | 1753 | 2435 | 3792 |
| 40° | 1085 | 1895 | 3527 |
| 45° | 417 | 1428 | 3140 |
| 50° | 205 | 979 | 2658 |
| 55° | 162 | 540 | 2084 |
| 60° | 108 | 451 | 1397 |
| 65° | 92 | 403 | 625 |
| 70° | 89 | 364 | 364 |
| 75° | 118 | 390 | 358 |
| 80° | 176 | 494 | 406 |
| 85° | 269 | 808 | 539 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3140 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 39.6 | 7.6 |
| 10°-20° | 101.5 | 19.5 |
| 20°-30° | 126.0 | 24.3 |
| 30°-40° | 112.9 | 21.7 |
| 40°-50° | 74.2 | 14.3 |
| 50°-60° | 37.2 | 7.2 |
| 60°-70° | 14.7 | 2.8 |
| 70°-80° | 8.2 | 1.6 |
| 80°-90° | 5.2 | 1.0 |
| 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° | 267.1 | 51.4 |
| 0°-40° | 380.0 | 73.2 |
| 0°-60° | 491.4 | 94.6 |
| 0°-90° | 519.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 519.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 432 | 432 | 432 | 432 | 432 | |
| 5° | 416 | 422 | 423 | 426 | 430 | 39 |
| 15° | 334 | 344 | 360 | 384 | 398 | 93 |
| 25° | 230 | 245 | 268 | 306 | 334 | 105 |
| 35° | 122 | 139 | 170 | 222 | 264 | 76 |
| 45° | 25 | 42 | 86 | 145 | 189 | 24 |
| 55° | 8 | 9 | 26 | 71 | 102 | 7 |
| 65° | 3 | 9 | 14 | 18 | 22 | 3 |
| 75° | 3 | 9 | 9 | 8 | 8 | 3 |
| 85° | 2 | 6 | 6 | 6 | 4 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: S123RDRP-H560D835-X4F0-XX-UDD-BVL-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 432.4 | 432.4 | 432.4 | 432.4 | 432.4 |
| 2.5° | 427.1 | 433.1 | 429.8 | 429.8 | 430.5 |
| 5° | 415.9 | 422.5 | 423.2 | 425.8 | 429.8 |
| 7.5° | 399.4 | 408.0 | 411.9 | 419.9 | 425.8 |
| 10° | 379.5 | 388.8 | 396.7 | 410.6 | 417.9 |
| 12.5° | 357.7 | 367.0 | 378.9 | 398.1 | 409.3 |
| 15° | 333.9 | 344.5 | 359.7 | 384.2 | 398.1 |
| 17.5° | 309.5 | 320.0 | 338.5 | 366.3 | 384.2 |
| 20° | 283.7 | 295.6 | 315.4 | 347.1 | 369.0 |
| 22.5° | 257.9 | 271.1 | 292.3 | 326.6 | 351.8 |
| 25° | 230.1 | 244.7 | 267.8 | 305.5 | 333.9 |
| 27.5° | 203.7 | 218.9 | 243.3 | 284.3 | 316.7 |
| 30° | 176.5 | 191.8 | 218.2 | 262.5 | 298.9 |
| 32.5° | 148.8 | 166.0 | 193.7 | 242.0 | 281.0 |
| 35° | 122.3 | 138.9 | 169.9 | 222.2 | 264.5 |
| 37.5° | 96.5 | 113.1 | 145.5 | 203.0 | 248.0 |
| 40° | 70.8 | 87.9 | 123.6 | 184.5 | 230.1 |
| 42.5° | 46.3 | 64.1 | 104.5 | 166.0 | 210.3 |
| 45° | 25.1 | 41.7 | 86.0 | 144.8 | 189.1 |
| 47.5° | 13.9 | 22.5 | 69.4 | 125.0 | 168.6 |
| 50° | 11.2 | 12.6 | 53.6 | 106.5 | 145.5 |
| 52.5° | 9.3 | 10.6 | 38.4 | 88.6 | 124.3 |
| 55° | 7.9 | 9.3 | 26.4 | 71.4 | 101.8 |
| 57.5° | 6.6 | 7.9 | 21.2 | 54.9 | 80.0 |
| 60° | 4.6 | 7.9 | 19.2 | 40.3 | 59.5 |
| 62.5° | 4.0 | 7.9 | 16.5 | 27.8 | 39.7 |
| 65° | 3.3 | 9.3 | 14.5 | 18.5 | 22.5 |
| 67.5° | 2.6 | 9.3 | 12.6 | 11.9 | 11.9 |
| 70° | 2.6 | 9.3 | 10.6 | 9.9 | 10.6 |
| 72.5° | 2.6 | 9.9 | 9.9 | 9.3 | 9.3 |
| 75° | 2.6 | 8.6 | 8.6 | 7.9 | 7.9 |
| 77.5° | 2.6 | 7.9 | 7.9 | 7.3 | 7.3 |
| 80° | 2.6 | 7.3 | 7.3 | 6.6 | 6.0 |
| 82.5° | 2.6 | 6.6 | 6.6 | 6.0 | 5.3 |
| 85° | 2.0 | 6.0 | 6.0 | 6.0 | 4.0 |
| 87.5° | 2.0 | 5.3 | 6.0 | 5.3 | 3.3 |
| 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 | 12.19 | 13.45 | 12.56 | 13.76 | 14.08 |
| | 3H | 0.61 | 1.73 | 0.99 | 2.06 | 2.42 | 12.27 | 13.38 | 12.65 | 13.71 | 14.08 |
| | 4H | 1.77 | 2.81 | 2.18 | 3.16 | 3.54 | 12.33 | 13.37 | 12.74 | 13.72 | 14.11 |
| | 6H | 2.81 | 3.76 | 3.23 | 4.13 | 4.53 | 12.43 | 13.38 | 12.85 | 13.76 | 14.15 |
| | 8H | 3.34 | 4.24 | 3.78 | 4.64 | 5.04 | 12.50 | 13.39 | 12.93 | 13.79 | 14.19 |
| | 12H | 3.83 | 4.69 | 4.26 | 5.07 | 5.50 | 12.57 | 13.43 | 13.00 | 13.81 | 14.24 |
| 4H | 2H | 1.34 | 2.38 | 1.74 | 2.73 | 3.11 | 12.05 | 13.09 | 12.46 | 13.44 | 13.82 |
| | 3H | 3.82 | 4.66 | 4.23 | 5.07 | 5.47 | 12.23 | 13.07 | 12.64 | 13.48 | 13.88 |
| | 4H | 5.16 | 5.92 | 5.60 | 6.34 | 6.78 | 12.35 | 13.11 | 12.79 | 13.53 | 13.97 |
| | 6H | 6.29 | 6.94 | 6.75 | 7.39 | 7.86 | 12.57 | 13.22 | 13.04 | 13.67 | 14.14 |
| | 8H | 6.79 | 7.40 | 7.26 | 7.85 | 8.32 | 12.70 | 13.31 | 13.17 | 13.76 | 14.23 |
| | 12H | 7.25 | 7.79 | 7.74 | 8.28 | 8.75 | 12.86 | 13.40 | 13.35 | 13.88 | 14.36 |
| 8H | 4H | 6.08 | 6.69 | 6.55 | 7.14 | 7.61 | 12.36 | 12.97 | 12.83 | 13.41 | 13.89 |
| | 6H | 7.68 | 8.18 | 8.18 | 8.68 | 9.16 | 12.69 | 13.19 | 13.19 | 13.69 | 14.17 |
| | 8H | 8.50 | 8.95 | 9.03 | 9.47 | 9.96 | 12.92 | 13.37 | 13.44 | 13.89 | 14.38 |
| | 12H | 9.29 | 9.69 | 9.81 | 10.18 | 10.76 | 13.25 | 13.65 | 13.77 | 14.14 | 14.72 |
| 12H | 4H | 6.25 | 6.79 | 6.73 | 7.27 | 7.75 | 12.35 | 12.88 | 12.83 | 13.37 | 13.84 |
| | 6H | 8.00 | 8.45 | 8.52 | 8.96 | 9.46 | 12.72 | 13.17 | 13.24 | 13.69 | 14.18 |
| | 8H | 9.00 | 9.40 | 9.52 | 9.90 | 10.47 | 13.03 | 13.43 | 13.55 | 13.93 | 14.50 |