

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: P1059294

Luminaire Tested: S123RDRP-S560D930-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059294
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S560D930-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

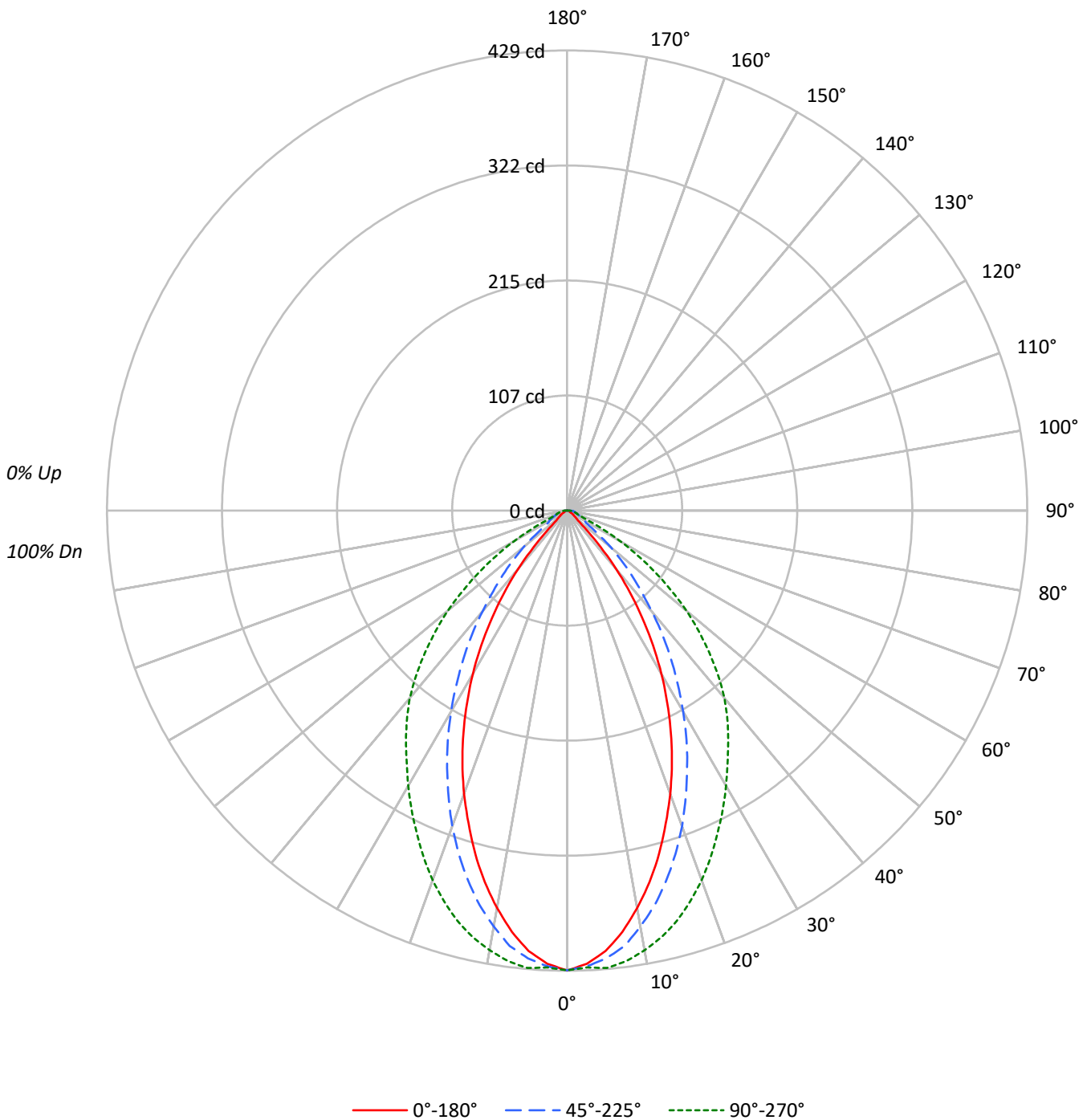
Lumens per Lamp: N/A
Luminaire Lumens: 514.5 lumens
Efficiency: N/A
Efficacy: 26.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
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 | 90 | 102 | 97 | 92 | 88 | 94 | 90 | 87 | 91 | 87 | 85 | 88 | 85 | 83 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 89 | 83 | 79 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 78 | 75 | 73 |
| 4 | 92 | 83 | 76 | 71 | 90 | 81 | 75 | 70 | 79 | 74 | 70 | 77 | 72 | 69 | 75 | 71 | 68 | 66 |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 69 | 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 | 65 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 61 | 56 | 52 | 50 |
| 8 | 72 | 61 | 54 | 49 | 70 | 60 | 53 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 57 | 52 | 48 | 47 |
| 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 | 42 | 40 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5033 | 5033 | 5033 |
| 5° | 4859 | 4939 | 5045 |
| 10° | 4486 | 4694 | 4963 |
| 15° | 4026 | 4341 | 4813 |
| 20° | 3511 | 3913 | 4581 |
| 25° | 2963 | 3430 | 4298 |
| 30° | 2382 | 2933 | 4016 |
| 35° | 1743 | 2414 | 3754 |
| 40° | 1088 | 1882 | 3496 |
| 45° | 412 | 1403 | 3114 |
| 50° | 195 | 966 | 2654 |
| 55° | 149 | 530 | 2051 |
| 60° | 106 | 449 | 1348 |
| 65° | 78 | 392 | 564 |
| 70° | 79 | 367 | 367 |
| 75° | 104 | 381 | 381 |
| 80° | 156 | 460 | 419 |
| 85° | 310 | 754 | 606 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3114 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 39.3 | 7.6 |
| 10°-20° | 100.9 | 19.6 |
| 20°-30° | 124.9 | 24.3 |
| 30°-40° | 112.0 | 21.8 |
| 40°-50° | 73.4 | 14.3 |
| 50°-60° | 36.7 | 7.1 |
| 60°-70° | 14.3 | 2.8 |
| 70°-80° | 8.1 | 1.6 |
| 80°-90° | 5.0 | 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° | 265.1 | 51.5 |
| 0°-40° | 377.1 | 73.3 |
| 0°-60° | 487.2 | 94.7 |
| 0°-90° | 514.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 514.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 429 | 429 | 429 | 429 | 429 | |
| 5° | 412 | 419 | 419 | 424 | 428 | 38 |
| 15° | 331 | 345 | 357 | 381 | 396 | 92 |
| 25° | 229 | 243 | 265 | 302 | 332 | 104 |
| 35° | 122 | 138 | 168 | 219 | 262 | 76 |
| 45° | 25 | 40 | 84 | 145 | 188 | 24 |
| 55° | 7 | 9 | 26 | 71 | 100 | 7 |
| 65° | 3 | 8 | 14 | 19 | 20 | 3 |
| 75° | 2 | 8 | 8 | 8 | 8 | 2 |
| 85° | 2 | 6 | 6 | 6 | 4 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 428.6 | 428.6 | 428.6 | 428.6 | 428.6 |
| 2.5° | 422.9 | 429.1 | 425.2 | 425.8 | 426.3 |
| 5° | 412.2 | 419.0 | 419.0 | 423.5 | 428.0 |
| 7.5° | 395.9 | 403.8 | 409.4 | 417.3 | 423.5 |
| 10° | 376.2 | 385.8 | 393.7 | 407.7 | 416.2 |
| 12.5° | 354.8 | 366.6 | 376.8 | 395.4 | 407.2 |
| 15° | 331.2 | 344.7 | 357.1 | 380.7 | 395.9 |
| 17.5° | 305.8 | 319.3 | 335.7 | 363.3 | 381.8 |
| 20° | 281.0 | 294.5 | 313.1 | 344.1 | 366.6 |
| 22.5° | 255.1 | 269.2 | 288.9 | 323.3 | 349.7 |
| 25° | 228.7 | 242.7 | 264.7 | 302.4 | 331.7 |
| 27.5° | 202.2 | 216.3 | 241.0 | 282.2 | 314.3 |
| 30° | 175.7 | 189.8 | 216.3 | 260.2 | 296.2 |
| 32.5° | 149.2 | 164.4 | 192.0 | 239.9 | 278.2 |
| 35° | 121.6 | 138.0 | 168.4 | 219.1 | 261.9 |
| 37.5° | 96.3 | 111.5 | 145.9 | 201.1 | 245.5 |
| 40° | 71.0 | 87.3 | 122.8 | 183.6 | 228.1 |
| 42.5° | 46.2 | 63.6 | 101.9 | 164.4 | 208.4 |
| 45° | 24.8 | 40.0 | 84.5 | 144.7 | 187.5 |
| 47.5° | 13.5 | 22.0 | 68.1 | 123.9 | 166.1 |
| 50° | 10.7 | 12.4 | 52.9 | 105.9 | 145.3 |
| 52.5° | 9.0 | 10.1 | 37.7 | 89.0 | 122.2 |
| 55° | 7.3 | 9.0 | 25.9 | 71.0 | 100.2 |
| 57.5° | 6.2 | 7.9 | 20.3 | 55.2 | 78.3 |
| 60° | 4.5 | 6.8 | 19.1 | 40.5 | 57.4 |
| 62.5° | 3.4 | 7.3 | 16.9 | 28.2 | 37.7 |
| 65° | 2.8 | 8.4 | 14.1 | 18.6 | 20.3 |
| 67.5° | 2.3 | 9.0 | 12.4 | 11.8 | 11.8 |
| 70° | 2.3 | 8.4 | 10.7 | 10.1 | 10.7 |
| 72.5° | 2.3 | 9.0 | 9.6 | 9.0 | 9.6 |
| 75° | 2.3 | 8.4 | 8.4 | 8.4 | 8.4 |
| 77.5° | 2.3 | 7.9 | 7.9 | 7.3 | 7.3 |
| 80° | 2.3 | 6.8 | 6.8 | 6.8 | 6.2 |
| 82.5° | 2.3 | 6.2 | 6.2 | 6.2 | 5.1 |
| 85° | 2.3 | 5.6 | 5.6 | 5.6 | 4.5 |
| 87.5° | 1.7 | 5.1 | 5.6 | 5.1 | 3.4 |
| 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 | 0.00 | 12.22 | 13.48 | 12.58 | 13.79 | 14.10 |
| | 3H | 0.32 | 1.43 | 0.70 | 1.76 | 2.12 | 12.30 | 13.41 | 12.68 | 13.74 | 14.11 |
| | 4H | 1.42 | 2.46 | 1.83 | 2.81 | 3.19 | 12.38 | 13.41 | 12.78 | 13.76 | 14.14 |
| | 6H | 2.43 | 3.38 | 2.85 | 3.75 | 4.15 | 12.48 | 13.43 | 12.89 | 13.80 | 14.19 |
| | 8H | 2.92 | 3.82 | 3.35 | 4.21 | 4.62 | 12.54 | 13.44 | 12.97 | 13.83 | 14.23 |
| | 12H | 3.49 | 4.35 | 3.92 | 4.73 | 5.16 | 12.62 | 13.48 | 13.05 | 13.86 | 14.29 |
| 4H | 2H | 1.23 | 2.27 | 1.64 | 2.62 | 3.00 | 12.07 | 13.11 | 12.48 | 13.46 | 13.84 |
| | 3H | 3.54 | 4.39 | 3.96 | 4.79 | 5.20 | 12.25 | 13.09 | 12.66 | 13.50 | 13.90 |
| | 4H | 4.91 | 5.66 | 5.34 | 6.08 | 6.53 | 12.40 | 13.15 | 12.83 | 13.57 | 14.02 |
| | 6H | 6.01 | 6.66 | 6.47 | 7.11 | 7.58 | 12.62 | 13.28 | 13.09 | 13.72 | 14.19 |
| | 8H | 6.47 | 7.08 | 6.94 | 7.53 | 8.00 | 12.75 | 13.36 | 13.22 | 13.81 | 14.28 |
| | 12H | 6.97 | 7.51 | 7.46 | 7.99 | 8.47 | 12.92 | 13.46 | 13.41 | 13.95 | 14.42 |
| 8H | 4H | 5.88 | 6.49 | 6.35 | 6.94 | 7.41 | 12.39 | 13.00 | 12.87 | 13.45 | 13.92 |
| | 6H | 7.42 | 7.92 | 7.92 | 8.42 | 8.90 | 12.73 | 13.23 | 13.24 | 13.73 | 14.21 |
| | 8H | 8.19 | 8.64 | 8.72 | 9.16 | 9.65 | 12.97 | 13.42 | 13.49 | 13.93 | 14.43 |
| | 12H | 9.00 | 9.40 | 9.52 | 9.89 | 10.47 | 13.30 | 13.70 | 13.82 | 14.20 | 14.77 |
| 12H | 4H | 6.06 | 6.60 | 6.55 | 7.08 | 7.56 | 12.38 | 12.92 | 12.87 | 13.40 | 13.88 |
| | 6H | 7.73 | 8.18 | 8.26 | 8.70 | 9.19 | 12.75 | 13.20 | 13.28 | 13.72 | 14.21 |
| | 8H | 8.69 | 9.09 | 9.21 | 9.58 | 10.16 | 13.07 | 13.46 | 13.58 | 13.96 | 14.53 |