

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: P1059730

Luminaire Tested: S123RDRP-H560D950-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059730
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-H560D950-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

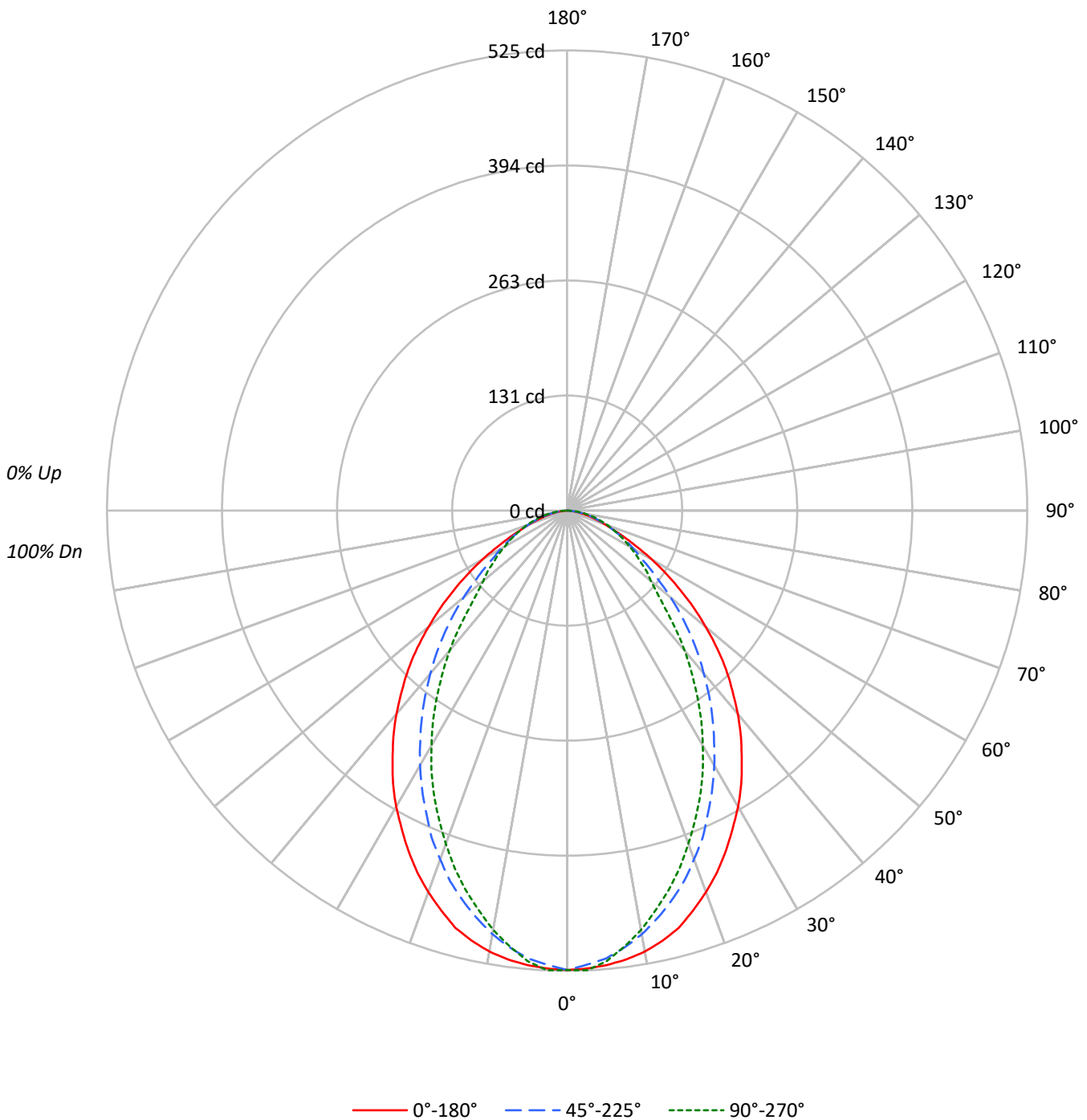
Lumens per Lamp: N/A
Luminaire Lumens: 916.8 lumens
Efficiency: N/A
Efficacy: 52.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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 | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98 | 100 | 98 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 88 |
| 2 | 102 | 95 | 89 | 84 | 100 | 93 | 88 | 83 | 90 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 78 | 76 |
| 3 | 94 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 73 | 69 | 76 | 72 | 68 | 66 |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 48 | 47 |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 6155 | 6155 | 6155 |
| 5° | 6134 | 6045 | 6082 |
| 10° | 6092 | 5852 | 5791 |
| 15° | 5990 | 5598 | 5445 |
| 20° | 5787 | 5291 | 5055 |
| 25° | 5550 | 4930 | 4653 |
| 30° | 5288 | 4553 | 4194 |
| 35° | 4976 | 4146 | 3711 |
| 40° | 4645 | 3719 | 3196 |
| 45° | 4258 | 3285 | 2625 |
| 50° | 3774 | 2821 | 2278 |
| 55° | 3212 | 2360 | 2090 |
| 60° | 2619 | 2057 | 1938 |
| 65° | 1995 | 1820 | 1803 |
| 70° | 1559 | 1624 | 1686 |
| 75° | 1257 | 1456 | 1574 |
| 80° | 940 | 1190 | 1447 |
| 85° | 512 | 768 | 1280 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4258 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 48.7 | 5.3 |
| 10°-20° | 130.9 | 14.3 |
| 20°-30° | 178.0 | 19.4 |
| 30°-40° | 184.5 | 20.1 |
| 40°-50° | 155.6 | 17.0 |
| 50°-60° | 110.5 | 12.0 |
| 60°-70° | 67.5 | 7.4 |
| 70°-80° | 33.6 | 3.7 |
| 80°-90° | 7.6 | 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° | 357.5 | 39.0 |
| 0°-40° | 542.0 | 59.1 |
| 0°-60° | 808.1 | 88.1 |
| 0°-90° | 916.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 916.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 524 | 524 | 524 | 524 | 524 | |
| 5° | 520 | 520 | 513 | 516 | 516 | 49 |
| 15° | 493 | 483 | 460 | 452 | 448 | 138 |
| 25° | 428 | 410 | 380 | 367 | 359 | 197 |
| 35° | 347 | 321 | 289 | 269 | 259 | 217 |
| 45° | 256 | 229 | 198 | 171 | 158 | 197 |
| 55° | 157 | 140 | 115 | 105 | 102 | 141 |
| 65° | 72 | 69 | 66 | 66 | 65 | 73 |
| 75° | 28 | 30 | 32 | 33 | 35 | 30 |
| 85° | 4 | 4 | 6 | 8 | 10 | 5 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 524.2 | 524.2 | 524.2 | 524.2 | 524.2 |
| 2.5° | 522.9 | 523.5 | 518.5 | 524.2 | 524.8 |
| 5° | 520.4 | 520.4 | 512.8 | 516.0 | 516.0 |
| 7.5° | 516.6 | 515.3 | 502.7 | 502.7 | 501.5 |
| 10° | 510.9 | 507.2 | 490.8 | 487.6 | 485.7 |
| 12.5° | 502.7 | 496.4 | 476.3 | 470.6 | 466.8 |
| 15° | 492.7 | 483.2 | 460.5 | 452.3 | 447.9 |
| 17.5° | 478.2 | 468.7 | 443.5 | 432.2 | 427.1 |
| 20° | 463.1 | 449.2 | 423.4 | 412.0 | 404.5 |
| 22.5° | 446.7 | 429.0 | 403.8 | 390.0 | 381.8 |
| 25° | 428.4 | 409.5 | 380.5 | 366.7 | 359.1 |
| 27.5° | 408.9 | 388.1 | 358.5 | 342.7 | 335.2 |
| 30° | 390.0 | 366.0 | 335.8 | 318.2 | 309.3 |
| 32.5° | 369.8 | 342.7 | 311.9 | 293.6 | 284.8 |
| 35° | 347.1 | 320.7 | 289.2 | 269.0 | 258.9 |
| 37.5° | 325.7 | 298.6 | 265.9 | 244.4 | 233.1 |
| 40° | 303.0 | 275.9 | 242.6 | 220.5 | 208.5 |
| 42.5° | 279.1 | 253.3 | 220.5 | 194.7 | 183.3 |
| 45° | 256.4 | 229.3 | 197.8 | 170.7 | 158.1 |
| 47.5° | 231.8 | 206.6 | 175.8 | 148.1 | 139.2 |
| 50° | 206.6 | 183.3 | 154.4 | 129.2 | 124.7 |
| 52.5° | 182.1 | 162.5 | 132.9 | 116.6 | 114.7 |
| 55° | 156.9 | 140.5 | 115.3 | 105.2 | 102.1 |
| 57.5° | 133.6 | 121.6 | 98.9 | 93.9 | 92.6 |
| 60° | 111.5 | 101.4 | 87.6 | 84.4 | 82.5 |
| 62.5° | 90.1 | 84.4 | 76.2 | 75.0 | 73.7 |
| 65° | 71.8 | 69.3 | 65.5 | 65.5 | 64.9 |
| 67.5° | 56.7 | 56.7 | 56.1 | 57.3 | 56.7 |
| 70° | 45.4 | 46.0 | 47.3 | 48.5 | 49.1 |
| 72.5° | 35.9 | 37.8 | 39.1 | 41.0 | 41.6 |
| 75° | 27.7 | 29.6 | 32.1 | 33.4 | 34.7 |
| 77.5° | 20.2 | 22.1 | 24.6 | 26.5 | 27.7 |
| 80° | 13.9 | 15.1 | 17.6 | 20.2 | 21.4 |
| 82.5° | 8.8 | 9.5 | 11.3 | 13.9 | 15.1 |
| 85° | 3.8 | 4.4 | 5.7 | 8.2 | 9.5 |
| 87.5° | 0.0 | 0.0 | 0.6 | 2.5 | 4.4 |
| 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 | 15.12 | 16.57 | 15.49 | 16.89 | 17.20 | 13.22 | 14.67 | 13.59 | 14.98 | 15.30 |
| | 3H | 16.02 | 17.32 | 16.40 | 17.64 | 18.01 | 14.79 | 16.09 | 15.17 | 16.42 | 16.78 |
| | 4H | 16.30 | 17.52 | 16.70 | 17.86 | 18.24 | 15.39 | 16.60 | 15.79 | 16.95 | 17.33 |
| | 6H | 16.45 | 17.57 | 16.87 | 17.94 | 18.33 | 15.84 | 16.96 | 16.25 | 17.33 | 17.72 |
| | 8H | 16.48 | 17.54 | 16.90 | 17.93 | 18.33 | 15.99 | 17.05 | 16.42 | 17.44 | 17.84 |
| | 12H | 16.47 | 17.49 | 16.90 | 17.87 | 18.30 | 16.09 | 17.10 | 16.52 | 17.49 | 17.92 |
| 4H | 2H | 15.37 | 16.58 | 15.77 | 16.93 | 17.31 | 13.76 | 14.97 | 14.16 | 15.32 | 15.70 |
| | 3H | 16.48 | 17.48 | 16.89 | 17.88 | 18.28 | 15.53 | 16.54 | 15.95 | 16.94 | 17.34 |
| | 4H | 16.87 | 17.77 | 17.30 | 18.19 | 18.63 | 16.25 | 17.15 | 16.68 | 17.56 | 18.00 |
| | 6H | 17.11 | 17.89 | 17.57 | 18.34 | 18.80 | 16.82 | 17.60 | 17.28 | 18.04 | 18.50 |
| | 8H | 17.16 | 17.88 | 17.62 | 18.33 | 18.80 | 17.01 | 17.74 | 17.48 | 18.18 | 18.65 |
| | 12H | 17.16 | 17.81 | 17.65 | 18.29 | 18.76 | 17.15 | 17.80 | 17.63 | 18.28 | 18.75 |
| 8H | 4H | 17.03 | 17.76 | 17.49 | 18.20 | 18.67 | 16.46 | 17.18 | 16.92 | 17.63 | 18.10 |
| | 6H | 17.34 | 17.94 | 17.84 | 18.43 | 18.91 | 17.13 | 17.73 | 17.63 | 18.22 | 18.70 |
| | 8H | 17.42 | 17.96 | 17.94 | 18.47 | 18.96 | 17.39 | 17.93 | 17.91 | 18.44 | 18.93 |
| | 12H | 17.45 | 17.93 | 17.96 | 18.42 | 18.99 | 17.60 | 18.07 | 18.11 | 18.57 | 19.13 |
| 12H | 4H | 17.03 | 17.68 | 17.52 | 18.16 | 18.63 | 16.45 | 17.10 | 16.94 | 17.58 | 18.05 |
| | 6H | 17.36 | 17.89 | 17.87 | 18.41 | 18.89 | 17.14 | 17.68 | 17.66 | 18.19 | 18.68 |
| | 8H | 17.47 | 17.95 | 17.98 | 18.44 | 19.01 | 17.45 | 17.92 | 17.96 | 18.41 | 18.98 |