

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: P1059082

Luminaire Tested: S123RDRP-S1000D950-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059082  
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-S1000D950-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

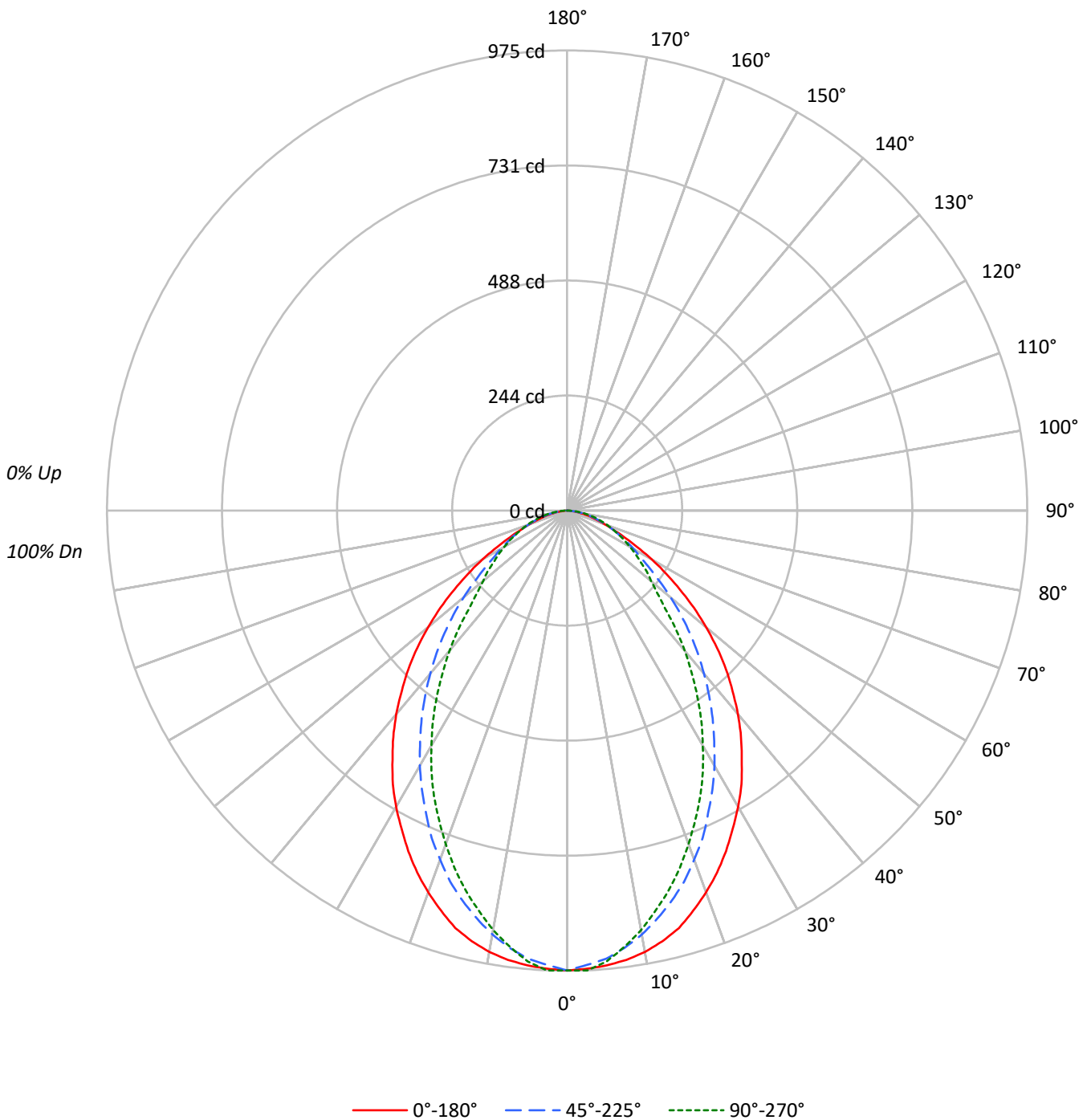
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1703.8 lumens  
Efficiency: N/A  
Efficacy: 48.7 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): 35  
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   | 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°  | 11439 | 11439 | 11439 |
| 5°  | 11399 | 11234 | 11303 |
| 10° | 11323 | 10875 | 10763 |
| 15° | 11131 | 10405 | 10120 |
| 20° | 10754 | 9832  | 9393  |
| 25° | 10316 | 9163  | 8647  |
| 30° | 9828  | 8462  | 7795  |
| 35° | 9247  | 7704  | 6898  |
| 40° | 8633  | 6910  | 5941  |
| 45° | 7913  | 6104  | 4881  |
| 50° | 7015  | 5241  | 4235  |
| 55° | 5968  | 4387  | 3884  |
| 60° | 4866  | 3821  | 3603  |
| 65° | 3709  | 3384  | 3351  |
| 70° | 2894  | 3014  | 3135  |
| 75° | 2337  | 2709  | 2922  |
| 80° | 1745  | 2218  | 2691  |
| 85° | 943   | 1415  | 2371  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7913 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.4   | 5.3       |
| 10°-20°   | 243.3  | 14.3      |
| 20°-30°   | 330.7  | 19.4      |
| 30°-40°   | 342.9  | 20.1      |
| 40°-50°   | 289.2  | 17.0      |
| 50°-60°   | 205.3  | 12.0      |
| 60°-70°   | 125.5  | 7.4       |
| 70°-80°   | 62.4   | 3.7       |
| 80°-90°   | 14.2   | 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°    | 664.5  | 39.0      |
| 0°-40°    | 1007.3 | 59.1      |
| 0°-60°    | 1501.8 | 88.1      |
| 0°-90°    | 1703.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1703.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 974 | 974   | 974 | 974   | 974 |      |
| 5°  | 967 | 967   | 953 | 959   | 959 | 92   |
| 15° | 916 | 898   | 856 | 841   | 832 | 257  |
| 25° | 796 | 761   | 707 | 681   | 667 | 366  |
| 35° | 645 | 596   | 537 | 500   | 481 | 403  |
| 45° | 476 | 426   | 368 | 317   | 294 | 366  |
| 55° | 292 | 261   | 214 | 196   | 190 | 262  |
| 65° | 134 | 129   | 122 | 122   | 121 | 136  |
| 75° | 52  | 55    | 60  | 62    | 64  | 56   |
| 85° | 7   | 8     | 10  | 15    | 18  | 10   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 974.2 | 974.2 | 974.2 | 974.2 | 974.2 |
| 2.5°  | 971.8 | 973.0 | 963.6 | 974.2 | 975.3 |
| 5°    | 967.1 | 967.1 | 953.1 | 958.9 | 958.9 |
| 7.5°  | 960.1 | 957.8 | 934.3 | 934.3 | 932.0 |
| 10°   | 949.6 | 942.5 | 912.1 | 906.2 | 902.7 |
| 12.5° | 934.3 | 922.6 | 885.2 | 874.6 | 867.6 |
| 15°   | 915.6 | 898.0 | 855.9 | 840.7 | 832.5 |
| 17.5° | 888.7 | 871.1 | 824.3 | 803.2 | 793.8 |
| 20°   | 860.6 | 834.8 | 786.8 | 765.7 | 751.7 |
| 22.5° | 830.1 | 797.4 | 750.5 | 724.8 | 709.5 |
| 25°   | 796.2 | 761.1 | 707.2 | 681.4 | 667.4 |
| 27.5° | 759.9 | 721.2 | 666.2 | 636.9 | 622.9 |
| 30°   | 724.8 | 680.3 | 624.1 | 591.3 | 574.9 |
| 32.5° | 687.3 | 636.9 | 579.6 | 545.6 | 529.2 |
| 35°   | 645.1 | 596.0 | 537.4 | 500.0 | 481.2 |
| 37.5° | 605.3 | 555.0 | 494.1 | 454.3 | 433.2 |
| 40°   | 563.2 | 512.8 | 450.8 | 409.8 | 387.6 |
| 42.5° | 518.7 | 470.7 | 409.8 | 361.8 | 340.7 |
| 45°   | 476.5 | 426.2 | 367.6 | 317.3 | 293.9 |
| 47.5° | 430.9 | 384.0 | 326.7 | 275.2 | 258.8 |
| 50°   | 384.0 | 340.7 | 286.9 | 240.0 | 231.8 |
| 52.5° | 338.4 | 302.1 | 247.1 | 216.6 | 213.1 |
| 55°   | 291.5 | 261.1 | 214.3 | 195.5 | 189.7 |
| 57.5° | 248.2 | 226.0 | 183.8 | 174.5 | 172.1 |
| 60°   | 207.2 | 188.5 | 162.7 | 156.9 | 153.4 |
| 62.5° | 167.4 | 156.9 | 141.7 | 139.3 | 137.0 |
| 65°   | 133.5 | 128.8 | 121.8 | 121.8 | 120.6 |
| 67.5° | 105.4 | 105.4 | 104.2 | 106.5 | 105.4 |
| 70°   | 84.3  | 85.5  | 87.8  | 90.2  | 91.3  |
| 72.5° | 66.7  | 70.3  | 72.6  | 76.1  | 77.3  |
| 75°   | 51.5  | 55.0  | 59.7  | 62.1  | 64.4  |
| 77.5° | 37.5  | 41.0  | 45.7  | 49.2  | 51.5  |
| 80°   | 25.8  | 28.1  | 32.8  | 37.5  | 39.8  |
| 82.5° | 16.4  | 17.6  | 21.1  | 25.8  | 28.1  |
| 85°   | 7.0   | 8.2   | 10.5  | 15.2  | 17.6  |
| 87.5° | 0.0   | 0.0   | 1.2   | 4.7   | 8.2   |
| 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 | 17.28            | 18.73 | 17.64 | 19.04 | 19.35 | 15.37          | 16.82 | 15.74 | 17.14 | 17.45 |
|                 | 3H   | 18.17            | 19.47 | 18.55 | 19.80 | 20.16 | 16.95          | 18.24 | 17.32 | 18.57 | 18.93 |
|                 | 4H   | 18.46            | 19.67 | 18.86 | 20.02 | 20.40 | 17.54          | 18.75 | 17.94 | 19.10 | 19.48 |
|                 | 6H   | 18.61            | 19.72 | 19.02 | 20.09 | 20.48 | 17.99          | 19.11 | 18.41 | 19.48 | 19.87 |
|                 | 8H   | 18.63            | 19.69 | 19.06 | 20.08 | 20.48 | 18.14          | 19.20 | 18.57 | 19.59 | 20.00 |
|                 | 12H  | 18.62            | 19.64 | 19.05 | 20.02 | 20.45 | 18.24          | 19.26 | 18.67 | 19.64 | 20.07 |
| 4H              | 2H   | 17.52            | 18.73 | 17.92 | 19.08 | 19.46 | 15.92          | 17.13 | 16.32 | 17.48 | 17.86 |
|                 | 3H   | 18.63            | 19.63 | 19.05 | 20.04 | 20.44 | 17.69          | 18.69 | 18.10 | 19.09 | 19.49 |
|                 | 4H   | 19.02            | 19.92 | 19.46 | 20.34 | 20.78 | 18.40          | 19.30 | 18.83 | 19.72 | 20.16 |
|                 | 6H   | 19.27            | 20.04 | 19.72 | 20.49 | 20.95 | 18.97          | 19.75 | 19.43 | 20.20 | 20.66 |
|                 | 8H   | 19.31            | 20.04 | 19.77 | 20.48 | 20.95 | 19.16          | 19.89 | 19.63 | 20.34 | 20.81 |
|                 | 12H  | 19.32            | 19.96 | 19.80 | 20.44 | 20.92 | 19.30          | 19.95 | 19.79 | 20.43 | 20.90 |
| 8H              | 4H   | 19.18            | 19.91 | 19.65 | 20.35 | 20.82 | 18.61          | 19.34 | 19.08 | 19.78 | 20.25 |
|                 | 6H   | 19.49            | 20.09 | 19.99 | 20.59 | 21.07 | 19.29          | 19.88 | 19.79 | 20.38 | 20.86 |
|                 | 8H   | 19.57            | 20.11 | 20.09 | 20.62 | 21.11 | 19.54          | 20.08 | 20.06 | 20.59 | 21.08 |
|                 | 12H  | 19.61            | 20.08 | 20.12 | 20.57 | 21.14 | 19.75          | 20.23 | 20.26 | 20.72 | 21.29 |
| 12H             | 4H   | 19.19            | 19.83 | 19.67 | 20.31 | 20.79 | 18.61          | 19.26 | 19.09 | 19.74 | 20.21 |
|                 | 6H   | 19.51            | 20.05 | 20.03 | 20.56 | 21.05 | 19.30          | 19.83 | 19.81 | 20.34 | 20.83 |
|                 | 8H   | 19.62            | 20.10 | 20.14 | 20.59 | 21.16 | 19.60          | 20.07 | 20.11 | 20.57 | 21.13 |