

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: P1059692

Luminaire Tested: S123RDRP-H560D927-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059692  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-H560D927-X4F0-XX-UDD-SVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

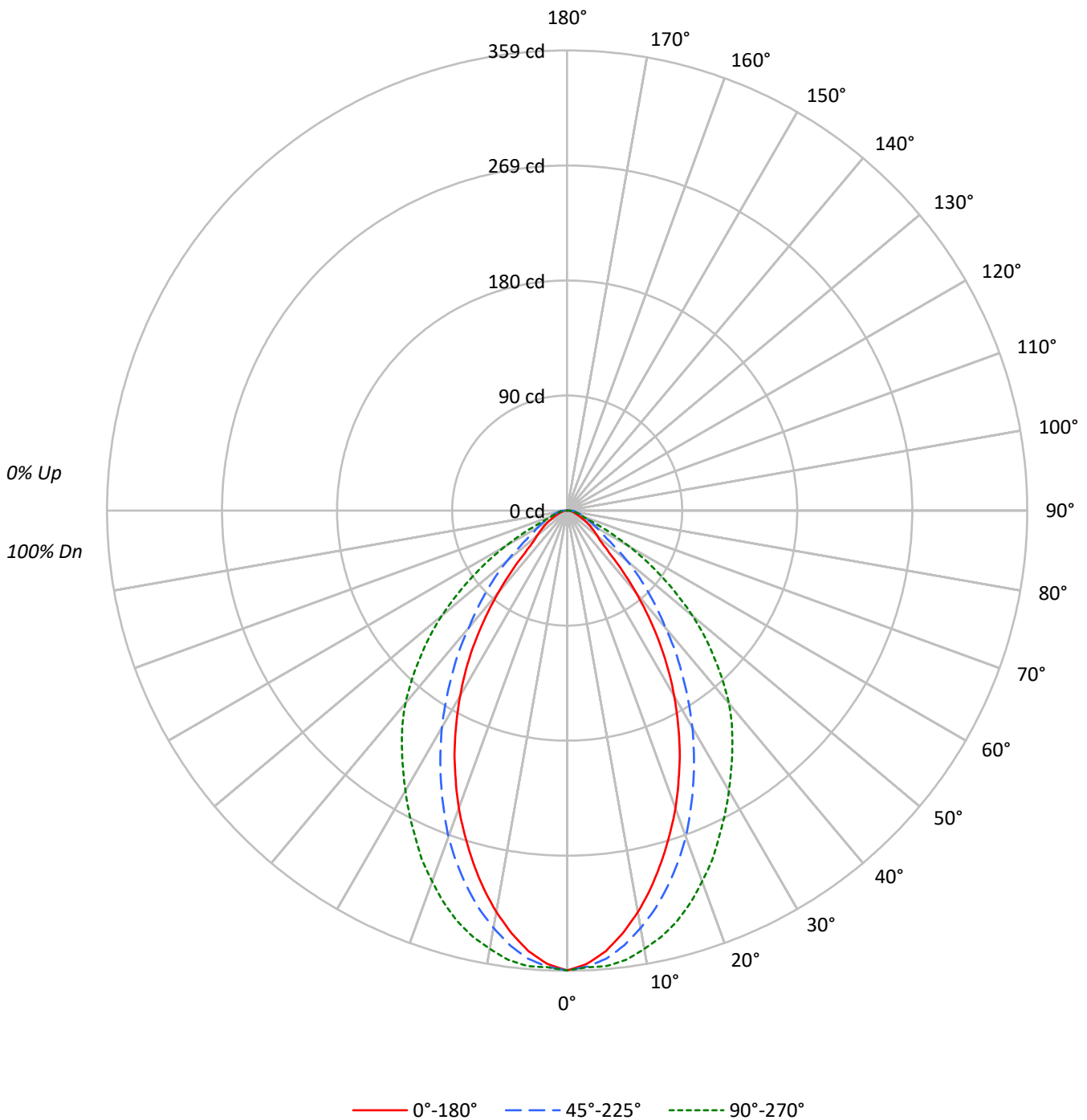
Lumens per Lamp: N/A  
Luminaire Lumens: 480.4 lumens  
Efficiency: N/A  
Efficacy: 27.6 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 17.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 89  |
| 2   | 104 | 98  | 92  | 88  | 102 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 84  | 81  | 79  |
| 3   | 97  | 89  | 82  | 77  | 95  | 87  | 81  | 77  | 84  | 79  | 75  | 82  | 78  | 74  | 79  | 76  | 73  | 71  |
| 4   | 91  | 81  | 74  | 69  | 88  | 80  | 73  | 68  | 77  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 66  | 64  |
| 5   | 85  | 74  | 67  | 61  | 83  | 73  | 66  | 61  | 71  | 65  | 61  | 69  | 64  | 60  | 68  | 63  | 59  | 58  |
| 6   | 79  | 68  | 61  | 56  | 78  | 67  | 60  | 55  | 66  | 60  | 55  | 64  | 59  | 54  | 63  | 58  | 54  | 52  |
| 7   | 74  | 63  | 56  | 51  | 73  | 62  | 55  | 50  | 61  | 55  | 50  | 60  | 54  | 50  | 58  | 53  | 49  | 48  |
| 8   | 70  | 58  | 51  | 46  | 69  | 58  | 51  | 46  | 57  | 50  | 46  | 56  | 50  | 46  | 54  | 49  | 45  | 44  |
| 9   | 66  | 54  | 47  | 43  | 65  | 54  | 47  | 43  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 40  |
| 10  | 62  | 51  | 44  | 39  | 61  | 50  | 44  | 39  | 50  | 43  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 37  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4212 | 4212 | 4212 |
| 5°  | 4068 | 4136 | 4203 |
| 10° | 3791 | 3941 | 4140 |
| 15° | 3450 | 3686 | 4030 |
| 20° | 3089 | 3384 | 3848 |
| 25° | 2694 | 3019 | 3637 |
| 30° | 2266 | 2648 | 3422 |
| 35° | 1802 | 2245 | 3221 |
| 40° | 1285 | 1830 | 3011 |
| 45° | 766  | 1470 | 2695 |
| 50° | 564  | 1120 | 2335 |
| 55° | 471  | 762  | 1855 |
| 60° | 380  | 627  | 1303 |
| 65° | 306  | 539  | 697  |
| 70° | 251  | 467  | 433  |
| 75° | 236  | 454  | 404  |
| 80° | 250  | 494  | 392  |
| 85° | 350  | 701  | 498  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2695 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 33.0   | 6.9       |
| 10°-20°   | 85.6   | 17.8      |
| 20°-30°   | 109.2  | 22.7      |
| 30°-40°   | 102.7  | 21.4      |
| 40°-50°   | 73.8   | 15.4      |
| 50°-60°   | 42.3   | 8.8       |
| 60°-70°   | 19.4   | 4.0       |
| 70°-80°   | 9.7    | 2.0       |
| 80°-90°   | 4.7    | 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°    | 227.8  | 47.4      |
| 0°-40°    | 330.5  | 68.8      |
| 0°-60°    | 446.6  | 93.0      |
| 0°-90°    | 480.4  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 480.4  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 359 | 359   | 359 | 359   | 359 |      |
| 5°  | 345 | 352   | 351 | 354   | 357 | 32   |
| 15° | 284 | 294   | 303 | 320   | 332 | 79   |
| 25° | 208 | 217   | 233 | 258   | 281 | 95   |
| 35° | 126 | 135   | 157 | 192   | 225 | 78   |
| 45° | 46  | 56    | 88  | 130   | 162 | 39   |
| 55° | 23  | 24    | 37  | 69    | 91  | 21   |
| 65° | 11  | 15    | 19  | 22    | 25  | 11   |
| 75° | 5   | 10    | 10  | 9     | 9   | 6    |
| 85° | 3   | 5     | 5   | 5     | 4   | 3    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 358.7 | 358.7 | 358.7 | 358.7 | 358.7 |
| 2.5°  | 354.0 | 359.3 | 356.1 | 356.1 | 356.6 |
| 5°    | 345.1 | 351.9 | 350.9 | 353.5 | 356.6 |
| 7.5°  | 332.6 | 339.9 | 342.0 | 348.3 | 353.5 |
| 10°   | 317.9 | 326.3 | 330.5 | 340.4 | 347.2 |
| 12.5° | 301.7 | 311.1 | 317.9 | 330.5 | 340.4 |
| 15°   | 283.8 | 293.8 | 303.2 | 319.5 | 331.5 |
| 17.5° | 265.5 | 275.5 | 287.5 | 306.4 | 320.5 |
| 20°   | 247.2 | 257.1 | 270.8 | 290.7 | 307.9 |
| 22.5° | 227.3 | 237.2 | 251.9 | 274.4 | 295.4 |
| 25°   | 207.9 | 217.3 | 233.0 | 258.2 | 280.7 |
| 27.5° | 187.5 | 196.9 | 214.2 | 241.4 | 266.6 |
| 30°   | 167.1 | 176.5 | 195.3 | 224.7 | 252.4 |
| 32.5° | 146.6 | 155.5 | 176.0 | 208.4 | 238.3 |
| 35°   | 125.7 | 134.6 | 156.6 | 192.2 | 224.7 |
| 37.5° | 104.2 | 113.1 | 138.8 | 177.5 | 211.1 |
| 40°   | 83.8  | 93.7  | 119.4 | 162.9 | 196.4 |
| 42.5° | 63.9  | 74.4  | 103.7 | 147.2 | 179.6 |
| 45°   | 46.1  | 56.0  | 88.5  | 130.4 | 162.3 |
| 47.5° | 35.1  | 40.3  | 74.9  | 113.6 | 145.6 |
| 50°   | 30.9  | 31.4  | 61.3  | 98.5  | 127.8 |
| 52.5° | 26.7  | 27.2  | 47.7  | 83.8  | 108.9 |
| 55°   | 23.0  | 23.6  | 37.2  | 68.6  | 90.6  |
| 57.5° | 19.4  | 20.4  | 30.4  | 54.5  | 72.8  |
| 60°   | 16.2  | 18.3  | 26.7  | 41.4  | 55.5  |
| 62.5° | 13.1  | 16.8  | 23.0  | 30.4  | 39.8  |
| 65°   | 11.0  | 15.2  | 19.4  | 21.5  | 25.1  |
| 67.5° | 8.9   | 14.1  | 16.2  | 15.2  | 15.2  |
| 70°   | 7.3   | 12.6  | 13.6  | 12.6  | 12.6  |
| 72.5° | 6.3   | 12.0  | 11.5  | 10.5  | 10.5  |
| 75°   | 5.2   | 10.5  | 10.0  | 8.9   | 8.9   |
| 77.5° | 4.7   | 8.9   | 8.4   | 7.9   | 7.3   |
| 80°   | 3.7   | 7.3   | 7.3   | 6.8   | 5.8   |
| 82.5° | 3.1   | 6.3   | 6.3   | 5.8   | 4.7   |
| 85°   | 2.6   | 5.2   | 5.2   | 4.7   | 3.7   |
| 87.5° | 2.1   | 4.7   | 4.7   | 4.2   | 2.6   |
| 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 | 4.98             | 6.29  | 5.34  | 6.61  | 6.92  | 12.21          | 13.53 | 12.57 | 13.84 | 14.15 |
|                 | 3H   | 6.37             | 7.54  | 6.75  | 7.87  | 8.24  | 12.44          | 13.61 | 12.82 | 13.94 | 14.31 |
|                 | 4H   | 6.93             | 8.02  | 7.34  | 8.38  | 8.76  | 12.55          | 13.64 | 12.95 | 13.99 | 14.37 |
|                 | 6H   | 7.40             | 8.40  | 7.81  | 8.77  | 9.16  | 12.66          | 13.66 | 13.07 | 14.03 | 14.42 |
|                 | 8H   | 7.58             | 8.53  | 8.01  | 8.92  | 9.33  | 12.71          | 13.66 | 13.14 | 14.05 | 14.45 |
|                 | 12H  | 7.77             | 8.68  | 8.20  | 9.06  | 9.49  | 12.76          | 13.67 | 13.19 | 14.05 | 14.48 |
| 4H              | 2H   | 6.05             | 7.14  | 6.46  | 7.49  | 7.88  | 12.17          | 13.26 | 12.57 | 13.61 | 13.99 |
|                 | 3H   | 7.74             | 8.63  | 8.15  | 9.04  | 9.44  | 12.54          | 13.43 | 12.95 | 13.83 | 14.24 |
|                 | 4H   | 8.58             | 9.37  | 9.01  | 9.79  | 10.24 | 12.72          | 13.52 | 13.16 | 13.94 | 14.38 |
|                 | 6H   | 9.23             | 9.92  | 9.70  | 10.37 | 10.84 | 12.94          | 13.64 | 13.41 | 14.08 | 14.55 |
|                 | 8H   | 9.49             | 10.13 | 9.96  | 10.58 | 11.05 | 13.05          | 13.69 | 13.51 | 14.14 | 14.61 |
|                 | 12H  | 9.74             | 10.31 | 10.23 | 10.79 | 11.27 | 13.16          | 13.73 | 13.65 | 14.22 | 14.69 |
| 8H              | 4H   | 9.01             | 9.66  | 9.48  | 10.11 | 10.58 | 12.77          | 13.41 | 13.24 | 13.86 | 14.33 |
|                 | 6H   | 9.96             | 10.49 | 10.46 | 10.99 | 11.47 | 13.10          | 13.63 | 13.60 | 14.13 | 14.61 |
|                 | 8H   | 10.43            | 10.90 | 10.95 | 11.42 | 11.91 | 13.29          | 13.77 | 13.81 | 14.28 | 14.77 |
|                 | 12H  | 10.90            | 11.32 | 11.41 | 11.82 | 12.39 | 13.52          | 13.95 | 14.04 | 14.44 | 15.01 |
| 12H             | 4H   | 9.07             | 9.64  | 9.56  | 10.13 | 10.60 | 12.76          | 13.33 | 13.25 | 13.81 | 14.29 |
|                 | 6H   | 10.11            | 10.59 | 10.63 | 11.10 | 11.59 | 13.13          | 13.60 | 13.65 | 14.12 | 14.61 |
|                 | 8H   | 10.70            | 11.12 | 11.22 | 11.62 | 12.19 | 13.39          | 13.81 | 13.90 | 14.30 | 14.88 |