

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: P1059494

Luminaire Tested: S123RDRP-H1165D830-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059494  
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-H1165D830-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: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

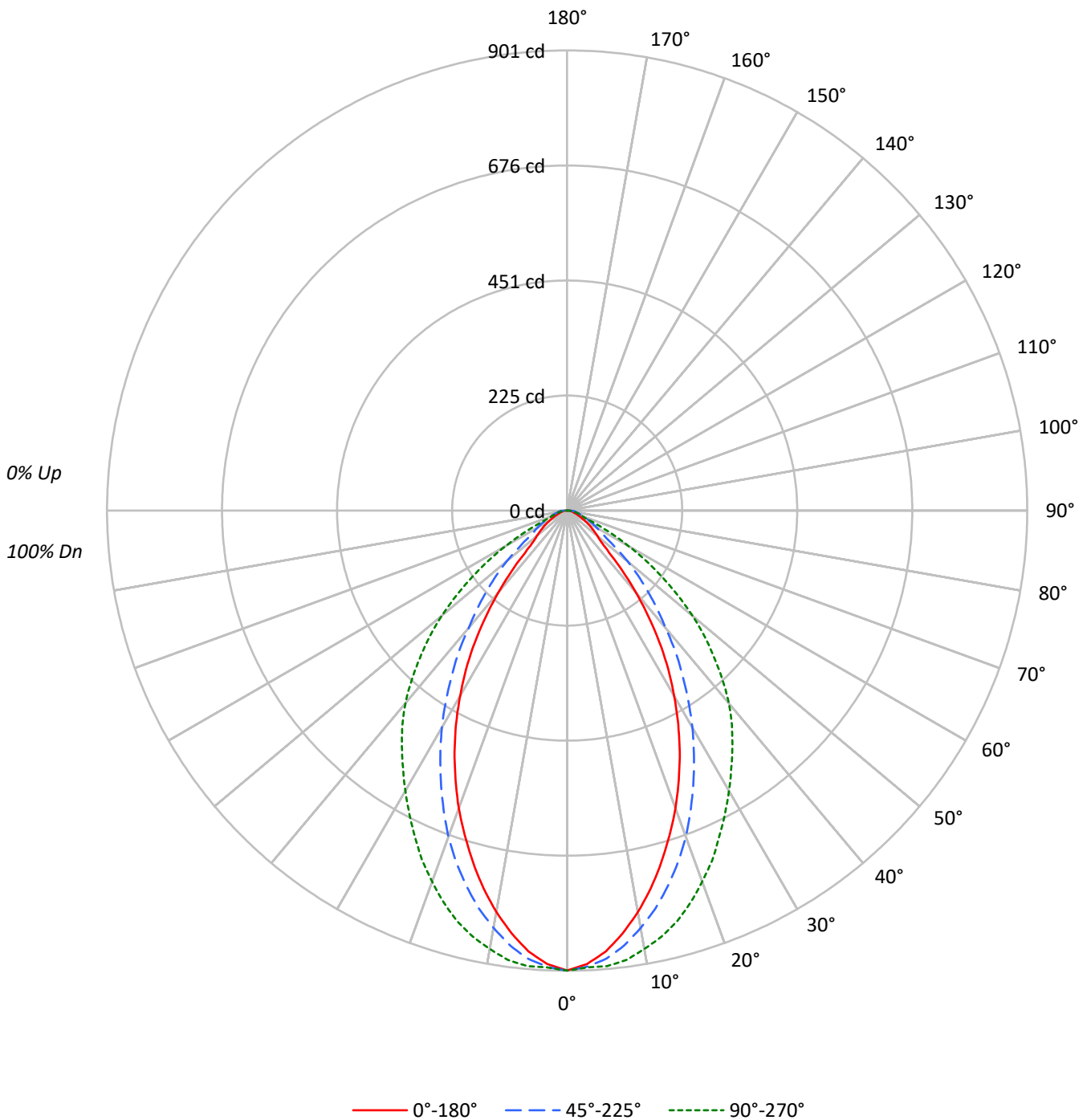
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1206.1 lumens  
Efficiency: N/A  
Efficacy: 33.0 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): 36.5  
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  | 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 |    |    |    |    | 100 |   |  |   |
| 1   | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 89  |    |    |    |    | 89  |   |  |   |
| 2   | 104 | 98  | 92  | 88  | 102 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 84  | 81  | 79  |    |    |    |    | 79  |   |  |   |
| 3   | 97  | 89  | 82  | 77  | 95  | 87  | 81  | 77  | 84  | 79  | 75  | 82  | 78  | 74  | 79  | 76  | 73  | 71  |    |    |    |    | 71  |   |  |   |
| 4   | 91  | 81  | 74  | 69  | 88  | 80  | 73  | 68  | 77  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 66  | 64  |    |    |    |    | 64  |   |  |   |
| 5   | 85  | 74  | 67  | 61  | 83  | 73  | 66  | 61  | 71  | 65  | 61  | 69  | 64  | 60  | 68  | 63  | 59  | 58  |    |    |    |    | 58  |   |  |   |
| 6   | 79  | 68  | 61  | 56  | 78  | 67  | 60  | 55  | 66  | 60  | 55  | 64  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    |    | 52  |   |  |   |
| 7   | 74  | 63  | 56  | 51  | 73  | 62  | 55  | 50  | 61  | 55  | 50  | 60  | 54  | 50  | 58  | 53  | 49  | 48  |    |    |    |    | 48  |   |  |   |
| 8   | 70  | 58  | 51  | 46  | 69  | 58  | 51  | 46  | 57  | 50  | 46  | 56  | 50  | 46  | 54  | 49  | 45  | 44  |    |    |    |    | 44  |   |  |   |
| 9   | 66  | 54  | 47  | 43  | 65  | 54  | 47  | 43  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 40  |    |    |    |    | 40  |   |  |   |
| 10  | 62  | 51  | 44  | 39  | 61  | 50  | 44  | 39  | 50  | 43  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 37  |    |    |    |    | 37  |   |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10575 | 10575 | 10575 |
| 5°  | 10213 | 10382 | 10553 |
| 10° | 9515  | 9892  | 10393 |
| 15° | 8663  | 9254  | 10117 |
| 20° | 7754  | 8494  | 9659  |
| 25° | 6762  | 7579  | 9130  |
| 30° | 5687  | 6649  | 8592  |
| 35° | 4523  | 5635  | 8085  |
| 40° | 3224  | 4594  | 7557  |
| 45° | 1921  | 3690  | 6769  |
| 50° | 1418  | 2810  | 5860  |
| 55° | 1183  | 1910  | 4655  |
| 60° | 958   | 1573  | 3274  |
| 65° | 767   | 1350  | 1753  |
| 70° | 632   | 1174  | 1085  |
| 75° | 594   | 1134  | 1012  |
| 80° | 622   | 1244  | 981   |
| 85° | 889   | 1765  | 1240  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6769 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 82.7   | 6.9       |
| 10°-20°   | 214.9  | 17.8      |
| 20°-30°   | 274.1  | 22.7      |
| 30°-40°   | 257.9  | 21.4      |
| 40°-50°   | 185.3  | 15.4      |
| 50°-60°   | 106.2  | 8.8       |
| 60°-70°   | 48.6   | 4.0       |
| 70°-80°   | 24.4   | 2.0       |
| 80°-90°   | 11.9   | 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°    | 571.7  | 47.4      |
| 0°-40°    | 829.6  | 68.8      |
| 0°-60°    | 1121.2 | 93.0      |
| 0°-90°    | 1206.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1206.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 901 | 901   | 901 | 901   | 901 |      |
| 5°  | 866 | 884   | 881 | 887   | 895 | 81   |
| 15° | 713 | 738   | 761 | 802   | 832 | 199  |
| 25° | 522 | 546   | 585 | 648   | 705 | 238  |
| 35° | 316 | 338   | 393 | 482   | 564 | 195  |
| 45° | 116 | 141   | 222 | 327   | 408 | 97   |
| 55° | 58  | 59    | 93  | 172   | 227 | 52   |
| 65° | 28  | 38    | 49  | 54    | 63  | 28   |
| 75° | 13  | 26    | 25  | 22    | 22  | 14   |
| 85° | 7   | 13    | 13  | 12    | 9   | 7    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 900.6 | 900.6 | 900.6 | 900.6 | 900.6 |
| 2.5°  | 888.7 | 901.9 | 894.0 | 894.0 | 895.3 |
| 5°    | 866.4 | 883.5 | 880.8 | 887.4 | 895.3 |
| 7.5°  | 834.8 | 853.2 | 858.5 | 874.3 | 887.4 |
| 10°   | 798.0 | 819.0 | 829.6 | 854.5 | 871.6 |
| 12.5° | 757.3 | 780.9 | 798.0 | 829.6 | 854.5 |
| 15°   | 712.6 | 737.5 | 761.2 | 802.0 | 832.2 |
| 17.5° | 666.5 | 691.5 | 721.8 | 769.1 | 804.6 |
| 20°   | 620.5 | 645.5 | 679.7 | 729.6 | 773.0 |
| 22.5° | 570.6 | 595.6 | 632.4 | 688.9 | 741.5 |
| 25°   | 521.9 | 545.6 | 585.0 | 648.1 | 704.7 |
| 27.5° | 470.7 | 494.3 | 537.7 | 606.1 | 669.2 |
| 30°   | 419.4 | 443.0 | 490.4 | 564.0 | 633.7 |
| 32.5° | 368.1 | 390.5 | 441.7 | 523.2 | 598.2 |
| 35°   | 315.5 | 337.9 | 393.1 | 482.5 | 564.0 |
| 37.5° | 261.6 | 284.0 | 348.4 | 445.7 | 529.8 |
| 40°   | 210.3 | 235.3 | 299.7 | 408.9 | 493.0 |
| 42.5° | 160.4 | 186.7 | 260.3 | 369.4 | 450.9 |
| 45°   | 115.7 | 140.7 | 222.2 | 327.4 | 407.6 |
| 47.5° | 88.1  | 101.2 | 188.0 | 285.3 | 365.5 |
| 50°   | 77.6  | 78.9  | 153.8 | 247.2 | 320.8 |
| 52.5° | 67.0  | 68.4  | 119.6 | 210.3 | 273.5 |
| 55°   | 57.8  | 59.2  | 93.3  | 172.2 | 227.4 |
| 57.5° | 48.6  | 51.3  | 76.3  | 136.7 | 182.7 |
| 60°   | 40.8  | 46.0  | 67.0  | 103.9 | 139.4 |
| 62.5° | 32.9  | 42.1  | 57.8  | 76.3  | 99.9  |
| 65°   | 27.6  | 38.1  | 48.6  | 53.9  | 63.1  |
| 67.5° | 22.3  | 35.5  | 40.8  | 38.1  | 38.1  |
| 70°   | 18.4  | 31.6  | 34.2  | 31.6  | 31.6  |
| 72.5° | 15.8  | 30.2  | 28.9  | 26.3  | 26.3  |
| 75°   | 13.1  | 26.3  | 25.0  | 22.3  | 22.3  |
| 77.5° | 11.8  | 22.3  | 21.0  | 19.7  | 18.4  |
| 80°   | 9.2   | 18.4  | 18.4  | 17.1  | 14.5  |
| 82.5° | 7.9   | 15.8  | 15.8  | 14.5  | 11.8  |
| 85°   | 6.6   | 13.1  | 13.1  | 11.8  | 9.2   |
| 87.5° | 5.3   | 11.8  | 11.8  | 10.5  | 6.6   |
| 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 | 8.18             | 9.50  | 8.55  | 9.81  | 10.13 | 15.40          | 16.72 | 15.77 | 17.03 | 17.35 |
|                 | 3H   | 9.58             | 10.75 | 9.96  | 11.08 | 11.44 | 15.64          | 16.81 | 16.02 | 17.14 | 17.50 |
|                 | 4H   | 10.14            | 11.23 | 10.54 | 11.58 | 11.96 | 15.74          | 16.83 | 16.15 | 17.18 | 17.57 |
|                 | 6H   | 10.60            | 11.60 | 11.01 | 11.97 | 12.36 | 15.85          | 16.85 | 16.27 | 17.22 | 17.62 |
|                 | 8H   | 10.78            | 11.73 | 11.21 | 12.12 | 12.53 | 15.90          | 16.85 | 16.33 | 17.24 | 17.64 |
|                 | 12H  | 10.98            | 11.88 | 11.41 | 12.27 | 12.70 | 15.95          | 16.86 | 16.38 | 17.24 | 17.67 |
| 4H              | 2H   | 9.25             | 10.34 | 9.65  | 10.69 | 11.08 | 15.36          | 16.45 | 15.76 | 16.80 | 17.18 |
|                 | 3H   | 10.94            | 11.83 | 11.35 | 12.24 | 12.64 | 15.73          | 16.62 | 16.14 | 17.03 | 17.43 |
|                 | 4H   | 11.77            | 12.57 | 12.21 | 12.99 | 13.44 | 15.91          | 16.71 | 16.35 | 17.13 | 17.57 |
|                 | 6H   | 12.43            | 13.12 | 12.89 | 13.57 | 14.03 | 16.14          | 16.83 | 16.60 | 17.27 | 17.74 |
|                 | 8H   | 12.69            | 13.33 | 13.16 | 13.78 | 14.25 | 16.24          | 16.88 | 16.71 | 17.33 | 17.80 |
|                 | 12H  | 12.94            | 13.51 | 13.43 | 14.00 | 14.47 | 16.35          | 16.92 | 16.84 | 17.41 | 17.88 |
| 8H              | 4H   | 12.21            | 12.86 | 12.68 | 13.30 | 13.77 | 15.96          | 16.60 | 16.43 | 17.05 | 17.52 |
|                 | 6H   | 13.16            | 13.69 | 13.66 | 14.19 | 14.67 | 16.29          | 16.82 | 16.79 | 17.32 | 17.80 |
|                 | 8H   | 13.63            | 14.10 | 14.15 | 14.62 | 15.11 | 16.48          | 16.96 | 17.00 | 17.47 | 17.97 |
|                 | 12H  | 14.10            | 14.53 | 14.62 | 15.02 | 15.59 | 16.71          | 17.14 | 17.23 | 17.63 | 18.20 |
| 12H             | 4H   | 12.27            | 12.84 | 12.76 | 13.32 | 13.80 | 15.95          | 16.52 | 16.44 | 17.01 | 17.48 |
|                 | 6H   | 13.31            | 13.79 | 13.83 | 14.30 | 14.79 | 16.32          | 16.79 | 16.84 | 17.31 | 17.80 |
|                 | 8H   | 13.90            | 14.32 | 14.42 | 14.82 | 15.39 | 16.58          | 17.00 | 17.09 | 17.50 | 18.07 |