

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: P1060978

Luminaire Tested: S124RDRP-H795D850-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060978  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H795D850-X4F0-XX-UDD-SVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

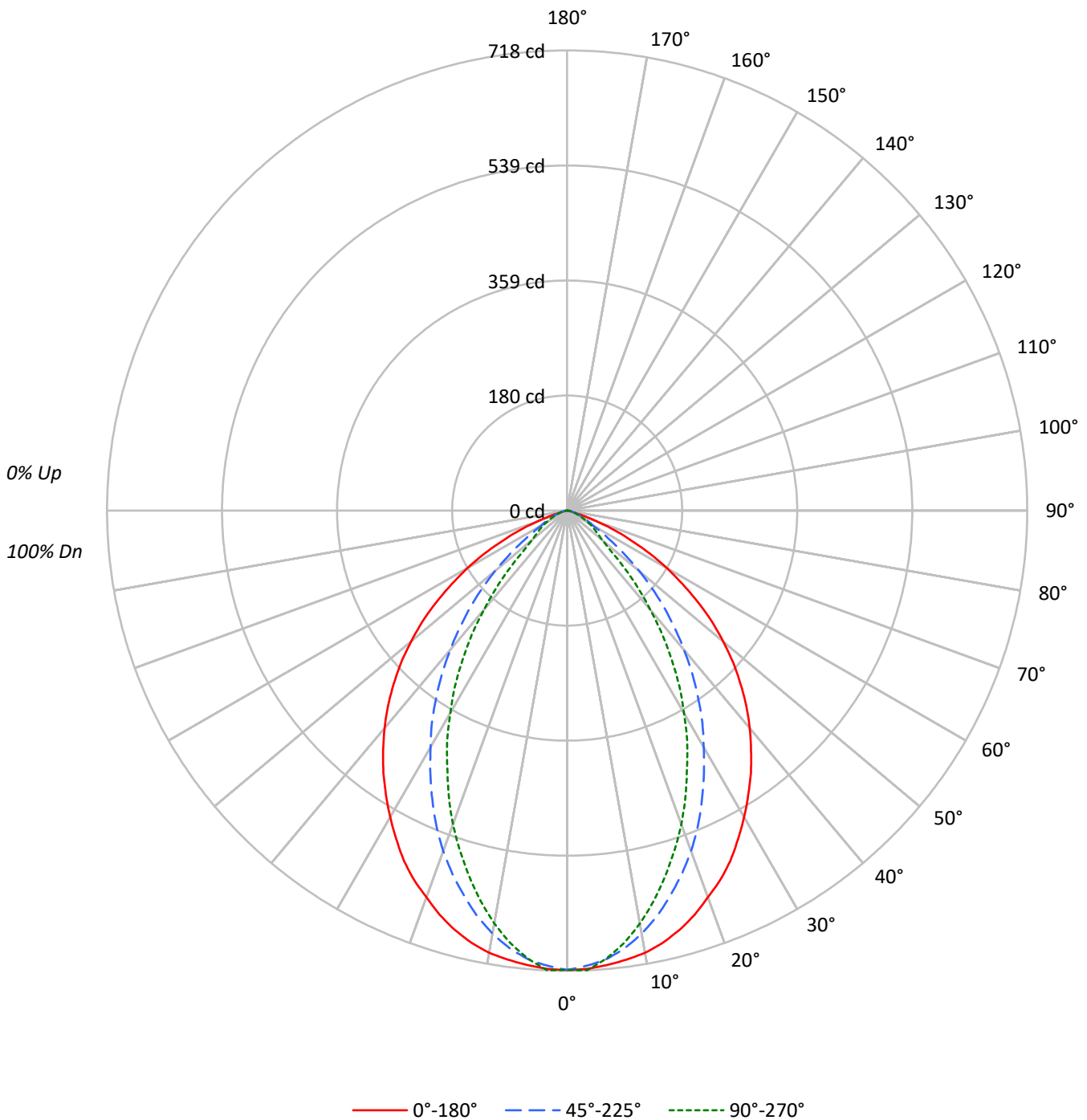
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1056.9 lumens  
Efficiency: N/A  
Efficacy: 45.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.5  
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  | 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 | 97  | 98  | 96  | 94  | 95  | 93  | 92  | 90  |
| 2   | 104 | 98  | 93  | 88  | 102 | 96  | 91  | 87  | 93  | 89  | 85  | 90  | 86  | 83  | 87  | 84  | 82  | 80  |
| 3   | 97  | 89  | 82  | 77  | 95  | 87  | 81  | 76  | 84  | 79  | 75  | 82  | 78  | 74  | 79  | 76  | 73  | 71  |
| 4   | 90  | 81  | 74  | 68  | 88  | 79  | 73  | 68  | 77  | 71  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 63  |
| 5   | 84  | 74  | 66  | 61  | 82  | 73  | 66  | 60  | 71  | 65  | 60  | 69  | 63  | 59  | 67  | 62  | 59  | 57  |
| 6   | 79  | 68  | 60  | 55  | 77  | 67  | 60  | 54  | 65  | 59  | 54  | 63  | 58  | 54  | 62  | 57  | 53  | 51  |
| 7   | 74  | 62  | 55  | 50  | 72  | 62  | 54  | 49  | 60  | 54  | 49  | 59  | 53  | 49  | 58  | 52  | 48  | 47  |
| 8   | 69  | 58  | 50  | 45  | 68  | 57  | 50  | 45  | 56  | 49  | 45  | 55  | 49  | 45  | 54  | 48  | 44  | 43  |
| 9   | 65  | 53  | 46  | 41  | 64  | 53  | 46  | 41  | 52  | 46  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 39  |
| 10  | 62  | 50  | 43  | 38  | 60  | 49  | 43  | 38  | 48  | 42  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6172 | 6172 | 6172 |
| 5°  | 6153 | 6074 | 6066 |
| 10° | 6127 | 5862 | 5720 |
| 15° | 6040 | 5544 | 5265 |
| 20° | 5884 | 5181 | 4774 |
| 25° | 5727 | 4730 | 4201 |
| 30° | 5492 | 4237 | 3624 |
| 35° | 5254 | 3747 | 2993 |
| 40° | 4982 | 3189 | 2270 |
| 45° | 4661 | 2606 | 1525 |
| 50° | 4260 | 1975 | 947  |
| 55° | 3744 | 1303 | 803  |
| 60° | 3095 | 799  | 661  |
| 65° | 2243 | 617  | 536  |
| 70° | 1221 | 458  | 408  |
| 75° | 269  | 336  | 369  |
| 80° | 198  | 248  | 302  |
| 85° | 198  | 198  | 296  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4661 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 66.4   | 6.3       |
| 10°-20°   | 176.4  | 16.7      |
| 20°-30°   | 233.7  | 22.1      |
| 30°-40°   | 231.9  | 21.9      |
| 40°-50°   | 178.5  | 16.9      |
| 50°-60°   | 106.4  | 10.1      |
| 60°-70°   | 48.4   | 4.6       |
| 70°-80°   | 12.5   | 1.2       |
| 80°-90°   | 2.8    | 0.3       |
| 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°    | 476.5  | 45.1      |
| 0°-40°    | 708.4  | 67.0      |
| 0°-60°    | 993.3  | 94.0      |
| 0°-90°    | 1056.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1056.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 717 | 717   | 717 | 717   | 717 |      |
| 5°  | 712 | 713   | 703 | 703   | 702 | 68   |
| 15° | 678 | 660   | 622 | 601   | 591 | 191  |
| 25° | 603 | 559   | 498 | 456   | 442 | 277  |
| 35° | 500 | 437   | 356 | 302   | 285 | 312  |
| 45° | 383 | 308   | 214 | 149   | 125 | 295  |
| 55° | 249 | 178   | 87  | 54    | 54  | 222  |
| 65° | 110 | 66    | 30  | 26    | 26  | 111  |
| 75° | 8   | 10    | 10  | 11    | 11  | 17   |
| 85° | 2   | 2     | 2   | 3     | 3   | 2    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 716.8 | 716.8 | 716.8 | 716.8 | 716.8 |
| 2.5°  | 715.8 | 716.8 | 710.8 | 715.8 | 717.9 |
| 5°    | 711.8 | 712.8 | 702.7 | 702.7 | 701.7 |
| 7.5°  | 706.8 | 704.7 | 688.6 | 682.5 | 680.5 |
| 10°   | 700.7 | 693.6 | 670.4 | 658.3 | 654.2 |
| 12.5° | 690.6 | 679.5 | 648.2 | 631.0 | 624.0 |
| 15°   | 677.5 | 660.3 | 621.9 | 600.7 | 590.6 |
| 17.5° | 661.3 | 640.1 | 594.7 | 567.4 | 556.3 |
| 20°   | 642.1 | 613.9 | 565.4 | 531.1 | 521.0 |
| 22.5° | 624.0 | 588.6 | 533.1 | 493.7 | 482.6 |
| 25°   | 602.8 | 559.3 | 497.8 | 456.4 | 442.2 |
| 27.5° | 577.5 | 531.1 | 462.4 | 420.0 | 405.9 |
| 30°   | 552.3 | 500.8 | 426.1 | 381.6 | 364.5 |
| 32.5° | 526.0 | 469.5 | 392.8 | 342.3 | 326.1 |
| 35°   | 499.8 | 437.2 | 356.4 | 301.9 | 284.7 |
| 37.5° | 471.5 | 404.9 | 320.1 | 263.5 | 244.3 |
| 40°   | 443.2 | 373.6 | 283.7 | 226.2 | 201.9 |
| 42.5° | 414.0 | 341.3 | 248.4 | 187.8 | 163.6 |
| 45°   | 382.7 | 307.9 | 214.0 | 149.4 | 125.2 |
| 47.5° | 351.4 | 276.6 | 179.7 | 112.1 | 89.9  |
| 50°   | 318.0 | 243.3 | 147.4 | 81.8  | 70.7  |
| 52.5° | 284.7 | 211.0 | 115.1 | 63.6  | 60.6  |
| 55°   | 249.4 | 177.7 | 86.8  | 54.5  | 53.5  |
| 57.5° | 213.0 | 147.4 | 62.6  | 47.5  | 45.4  |
| 60°   | 179.7 | 119.1 | 46.4  | 40.4  | 38.4  |
| 62.5° | 145.4 | 89.9  | 38.4  | 33.3  | 31.3  |
| 65°   | 110.1 | 65.6  | 30.3  | 26.3  | 26.3  |
| 67.5° | 79.8  | 44.4  | 24.2  | 21.2  | 20.2  |
| 70°   | 48.5  | 27.3  | 18.2  | 17.2  | 16.2  |
| 72.5° | 24.2  | 16.2  | 14.1  | 13.1  | 13.1  |
| 75°   | 8.1   | 10.1  | 10.1  | 11.1  | 11.1  |
| 77.5° | 6.1   | 7.1   | 7.1   | 8.1   | 8.1   |
| 80°   | 4.0   | 5.0   | 5.0   | 6.1   | 6.1   |
| 82.5° | 3.0   | 3.0   | 4.0   | 4.0   | 5.0   |
| 85°   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   |
| 87.5° | 1.0   | 1.0   | 1.0   | 2.0   | 2.0   |
| 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 | 15.44            | 16.78 | 15.81 | 17.09 | 17.40 | 7.00           | 8.33 | 7.36 | 8.64  | 8.96  |
|                 | 3H   | 15.95            | 17.13 | 16.33 | 17.46 | 17.83 | 7.81           | 8.99 | 8.19 | 9.32  | 9.69  |
|                 | 4H   | 15.92            | 17.02 | 16.32 | 17.37 | 17.75 | 8.10           | 9.19 | 8.50 | 9.54  | 9.93  |
|                 | 6H   | 15.85            | 16.86 | 16.27 | 17.23 | 17.63 | 8.27           | 9.28 | 8.68 | 9.65  | 10.04 |
|                 | 8H   | 15.82            | 16.77 | 16.25 | 17.16 | 17.56 | 8.33           | 9.29 | 8.76 | 9.68  | 10.08 |
|                 | 12H  | 15.78            | 16.69 | 16.21 | 17.07 | 17.50 | 8.38           | 9.29 | 8.81 | 9.67  | 10.10 |
| 4H              | 2H   | 15.28            | 16.38 | 15.69 | 16.73 | 17.12 | 7.44           | 8.54 | 7.84 | 8.89  | 9.27  |
|                 | 3H   | 15.84            | 16.73 | 16.25 | 17.14 | 17.54 | 8.40           | 9.30 | 8.82 | 9.70  | 10.10 |
|                 | 4H   | 15.81            | 16.60 | 16.24 | 17.02 | 17.47 | 8.76           | 9.56 | 9.20 | 9.98  | 10.42 |
|                 | 6H   | 15.76            | 16.44 | 16.22 | 16.89 | 17.35 | 9.02           | 9.70 | 9.48 | 10.15 | 10.62 |
|                 | 8H   | 15.71            | 16.35 | 16.18 | 16.80 | 17.27 | 9.11           | 9.75 | 9.58 | 10.19 | 10.66 |
|                 | 12H  | 15.67            | 16.23 | 16.16 | 16.72 | 17.19 | 9.18           | 9.74 | 9.67 | 10.23 | 10.70 |
| 8H              | 4H   | 15.70            | 16.34 | 16.17 | 16.78 | 17.26 | 8.85           | 9.49 | 9.32 | 9.94  | 10.41 |
|                 | 6H   | 15.64            | 16.16 | 16.14 | 16.65 | 17.14 | 9.17           | 9.69 | 9.67 | 10.19 | 10.67 |
|                 | 8H   | 15.59            | 16.06 | 16.11 | 16.57 | 17.06 | 9.30           | 9.76 | 9.82 | 10.28 | 10.77 |
|                 | 12H  | 15.56            | 15.97 | 16.07 | 16.47 | 17.04 | 9.43           | 9.84 | 9.94 | 10.34 | 10.91 |
| 12H             | 4H   | 15.66            | 16.22 | 16.14 | 16.70 | 17.18 | 8.83           | 9.39 | 9.31 | 9.87  | 10.35 |
|                 | 6H   | 15.58            | 16.05 | 16.10 | 16.56 | 17.06 | 9.15           | 9.61 | 9.67 | 10.13 | 10.62 |
|                 | 8H   | 15.55            | 15.97 | 16.07 | 16.46 | 17.03 | 9.31           | 9.73 | 9.83 | 10.22 | 10.79 |