

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: P1060960

Luminaire Tested: S124RDRP-H795D835-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060960  
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-H795D835-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: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

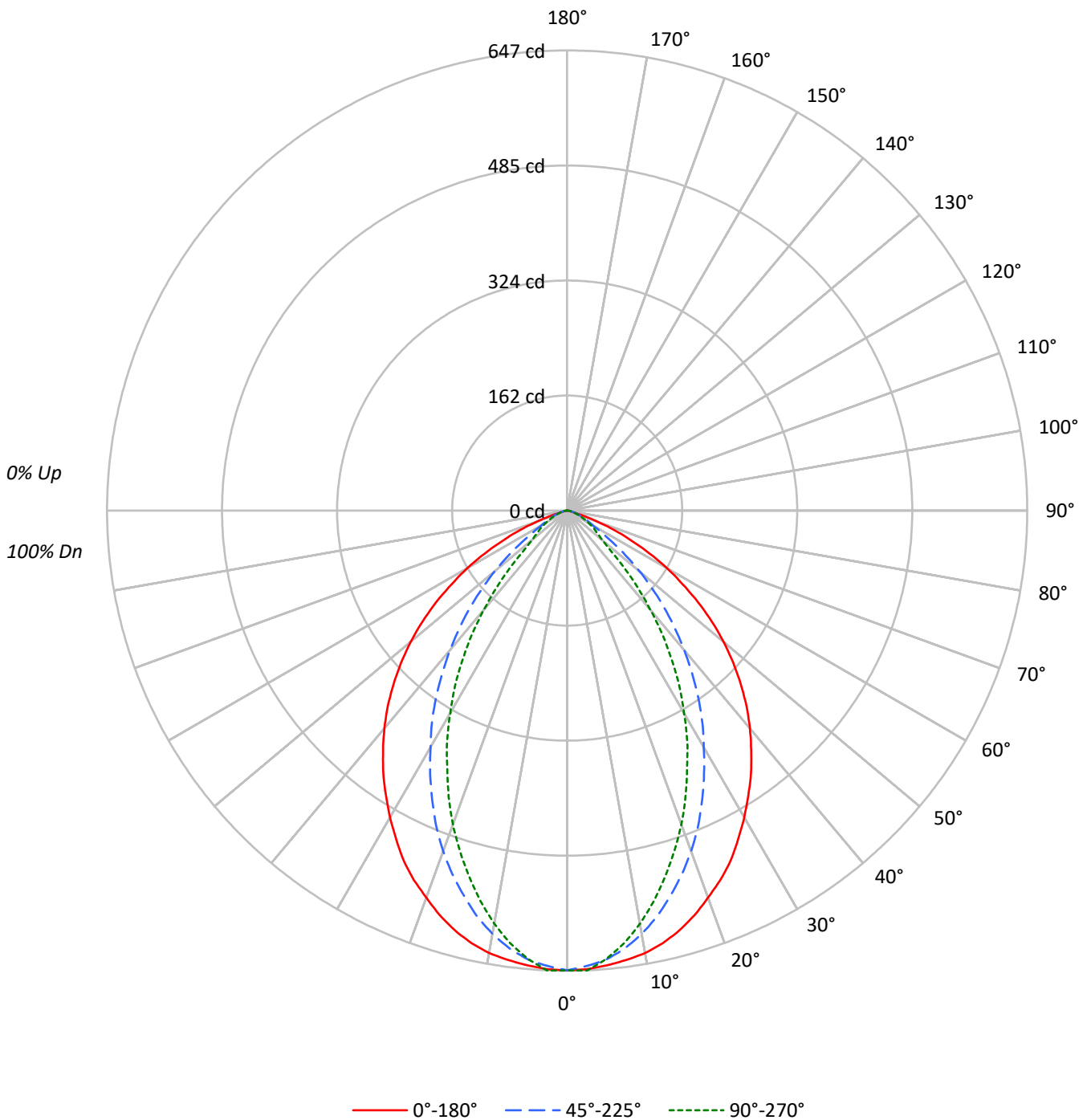
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 953.0 lumens  
Efficiency: N/A  
Efficacy: 40.6 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°  | 5566 | 5566 | 5566 |
| 5°  | 5548 | 5477 | 5469 |
| 10° | 5524 | 5286 | 5158 |
| 15° | 5446 | 4999 | 4748 |
| 20° | 5306 | 4672 | 4305 |
| 25° | 5164 | 4264 | 3789 |
| 30° | 4952 | 3820 | 3268 |
| 35° | 4738 | 3379 | 2698 |
| 40° | 4493 | 2875 | 2047 |
| 45° | 4201 | 2350 | 1375 |
| 50° | 3842 | 1780 | 853  |
| 55° | 3376 | 1176 | 725  |
| 60° | 2792 | 722  | 596  |
| 65° | 2021 | 556  | 483  |
| 70° | 1100 | 413  | 368  |
| 75° | 243  | 303  | 333  |
| 80° | 179  | 228  | 273  |
| 85° | 178  | 178  | 267  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4201 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 59.9   | 6.3       |
| 10°-20°   | 159.1  | 16.7      |
| 20°-30°   | 210.7  | 22.1      |
| 30°-40°   | 209.1  | 21.9      |
| 40°-50°   | 160.9  | 16.9      |
| 50°-60°   | 95.9   | 10.1      |
| 60°-70°   | 43.6   | 4.6       |
| 70°-80°   | 11.3   | 1.2       |
| 80°-90°   | 2.5    | 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°    | 429.7  | 45.1      |
| 0°-40°    | 638.8  | 67.0      |
| 0°-60°    | 895.6  | 94.0      |
| 0°-90°    | 953.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 953.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 646 | 646   | 646 | 646   | 646 |      |
| 5°  | 642 | 643   | 634 | 634   | 633 | 61   |
| 15° | 611 | 595   | 561 | 542   | 533 | 172  |
| 25° | 544 | 504   | 449 | 412   | 399 | 249  |
| 35° | 451 | 394   | 321 | 272   | 257 | 281  |
| 45° | 345 | 278   | 193 | 135   | 113 | 266  |
| 55° | 225 | 160   | 78  | 49    | 48  | 200  |
| 65° | 99  | 59    | 27  | 24    | 24  | 100  |
| 75° | 7   | 9     | 9   | 10    | 10  | 15   |
| 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°    | 646.4 | 646.4 | 646.4 | 646.4 | 646.4 |
| 2.5°  | 645.5 | 646.4 | 640.9 | 645.5 | 647.3 |
| 5°    | 641.8 | 642.7 | 633.6 | 633.6 | 632.7 |
| 7.5°  | 637.3 | 635.5 | 620.9 | 615.4 | 613.6 |
| 10°   | 631.8 | 625.5 | 604.5 | 593.6 | 589.9 |
| 12.5° | 622.7 | 612.7 | 584.5 | 569.0 | 562.6 |
| 15°   | 610.9 | 595.4 | 560.8 | 541.7 | 532.6 |
| 17.5° | 596.3 | 577.2 | 536.2 | 511.7 | 501.6 |
| 20°   | 579.0 | 553.5 | 509.8 | 478.9 | 469.8 |
| 22.5° | 562.6 | 530.8 | 480.7 | 445.2 | 435.2 |
| 25°   | 543.5 | 504.4 | 448.8 | 411.5 | 398.8 |
| 27.5° | 520.8 | 478.9 | 417.0 | 378.7 | 366.0 |
| 30°   | 498.0 | 451.6 | 384.2 | 344.1 | 328.7 |
| 32.5° | 474.3 | 423.3 | 354.1 | 308.6 | 294.1 |
| 35°   | 450.7 | 394.2 | 321.4 | 272.2 | 256.7 |
| 37.5° | 425.2 | 365.1 | 288.6 | 237.6 | 220.3 |
| 40°   | 399.7 | 336.9 | 255.8 | 203.9 | 182.1 |
| 42.5° | 373.3 | 307.7 | 224.0 | 169.3 | 147.5 |
| 45°   | 345.0 | 277.7 | 193.0 | 134.7 | 112.9 |
| 47.5° | 316.8 | 249.5 | 162.1 | 101.1 | 81.0  |
| 50°   | 286.8 | 219.4 | 132.9 | 73.7  | 63.7  |
| 52.5° | 256.7 | 190.3 | 103.8 | 57.4  | 54.6  |
| 55°   | 224.9 | 160.2 | 78.3  | 49.2  | 48.3  |
| 57.5° | 192.1 | 132.9 | 56.4  | 42.8  | 41.0  |
| 60°   | 162.1 | 107.4 | 41.9  | 36.4  | 34.6  |
| 62.5° | 131.1 | 81.0  | 34.6  | 30.0  | 28.2  |
| 65°   | 99.2  | 59.2  | 27.3  | 23.7  | 23.7  |
| 67.5° | 71.9  | 40.1  | 21.8  | 19.1  | 18.2  |
| 70°   | 43.7  | 24.6  | 16.4  | 15.5  | 14.6  |
| 72.5° | 21.8  | 14.6  | 12.7  | 11.8  | 11.8  |
| 75°   | 7.3   | 9.1   | 9.1   | 10.0  | 10.0  |
| 77.5° | 5.5   | 6.4   | 6.4   | 7.3   | 7.3   |
| 80°   | 3.6   | 4.6   | 4.6   | 5.5   | 5.5   |
| 82.5° | 2.7   | 2.7   | 3.6   | 3.6   | 4.6   |
| 85°   | 1.8   | 1.8   | 1.8   | 2.7   | 2.7   |
| 87.5° | 0.9   | 0.9   | 0.9   | 1.8   | 1.8   |
| 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 | 15.08            | 16.42 | 15.45 | 16.73 | 17.04 | 6.63           | 7.97 | 7.00 | 8.28 | 8.60  |
|                 | 3H   | 15.59            | 16.77 | 15.97 | 17.10 | 17.47 | 7.45           | 8.63 | 7.83 | 8.96 | 9.33  |
|                 | 4H   | 15.56            | 16.66 | 15.96 | 17.01 | 17.39 | 7.73           | 8.83 | 8.14 | 9.18 | 9.56  |
|                 | 6H   | 15.49            | 16.50 | 15.91 | 16.87 | 17.27 | 7.91           | 8.91 | 8.32 | 9.28 | 9.68  |
|                 | 8H   | 15.46            | 16.41 | 15.89 | 16.80 | 17.21 | 7.97           | 8.93 | 8.40 | 9.32 | 9.72  |
|                 | 12H  | 15.42            | 16.33 | 15.85 | 16.71 | 17.14 | 8.02           | 8.93 | 8.45 | 9.31 | 9.74  |
| 4H              | 2H   | 14.92            | 16.02 | 15.33 | 16.37 | 16.76 | 7.08           | 8.17 | 7.48 | 8.52 | 8.91  |
|                 | 3H   | 15.48            | 16.37 | 15.89 | 16.78 | 17.18 | 8.04           | 8.93 | 8.45 | 9.34 | 9.74  |
|                 | 4H   | 15.45            | 16.24 | 15.88 | 16.66 | 17.11 | 8.40           | 9.20 | 8.84 | 9.62 | 10.06 |
|                 | 6H   | 15.40            | 16.08 | 15.86 | 16.53 | 16.99 | 8.66           | 9.34 | 9.12 | 9.79 | 10.25 |
|                 | 8H   | 15.35            | 15.99 | 15.82 | 16.44 | 16.91 | 8.75           | 9.38 | 9.21 | 9.83 | 10.30 |
|                 | 12H  | 15.31            | 15.87 | 15.80 | 16.36 | 16.83 | 8.82           | 9.38 | 9.31 | 9.87 | 10.34 |
| 8H              | 4H   | 15.34            | 15.98 | 15.81 | 16.42 | 16.90 | 8.49           | 9.13 | 8.96 | 9.58 | 10.05 |
|                 | 6H   | 15.28            | 15.80 | 15.78 | 16.29 | 16.78 | 8.81           | 9.33 | 9.31 | 9.82 | 10.30 |
|                 | 8H   | 15.23            | 15.70 | 15.75 | 16.21 | 16.70 | 8.94           | 9.40 | 9.46 | 9.92 | 10.41 |
|                 | 12H  | 15.20            | 15.61 | 15.71 | 16.11 | 16.68 | 9.07           | 9.48 | 9.58 | 9.98 | 10.55 |
| 12H             | 4H   | 15.30            | 15.86 | 15.78 | 16.34 | 16.82 | 8.46           | 9.03 | 8.95 | 9.51 | 9.99  |
|                 | 6H   | 15.22            | 15.69 | 15.74 | 16.20 | 16.70 | 8.78           | 9.25 | 9.31 | 9.77 | 10.26 |
|                 | 8H   | 15.19            | 15.61 | 15.71 | 16.10 | 16.67 | 8.95           | 9.37 | 9.47 | 9.86 | 10.43 |