

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060232

Luminaire Tested: S124RDR-S1020D835-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060232  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-77)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-S1020D835-X4F0-XX-UDD-SVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

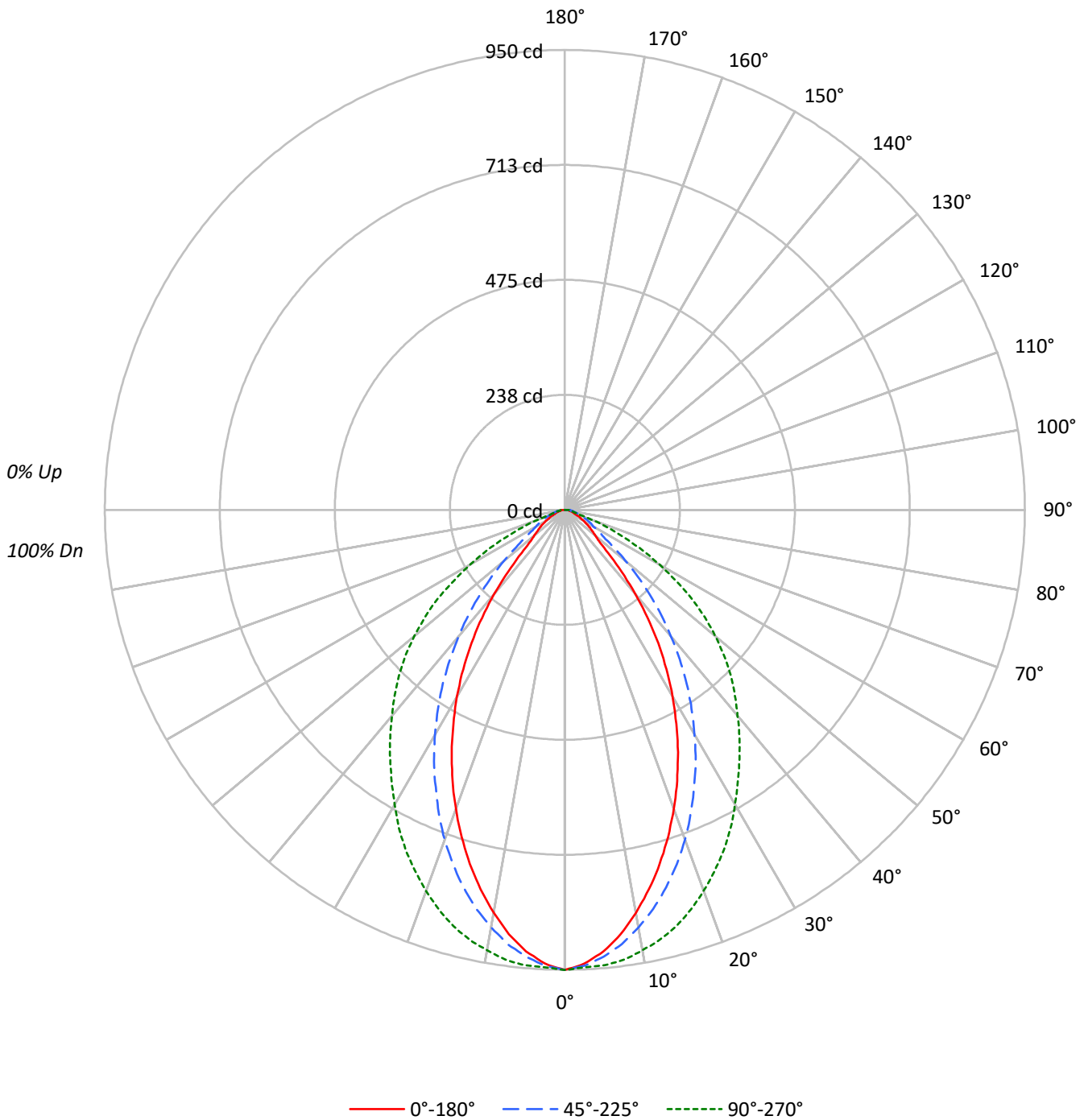
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1336.5 lumens  
Efficiency: N/A  
Efficacy: 38.2 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
Luminous Opening: Rectangular (W 0.31' 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  | 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 | 97  | 92  | 88  | 101 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 83  | 81  | 79  |    |    |    | 79  |
| 3   | 97  | 88  | 82  | 77  | 94  | 87  | 81  | 76  | 84  | 79  | 75  | 81  | 77  | 73  | 79  | 75  | 72  | 70  |    |    |    | 70  |
| 4   | 90  | 80  | 73  | 68  | 88  | 79  | 72  | 67  | 77  | 71  | 67  | 75  | 70  | 66  | 73  | 68  | 65  | 63  |    |    |    | 63  |
| 5   | 84  | 73  | 66  | 61  | 82  | 72  | 65  | 60  | 70  | 64  | 60  | 69  | 63  | 59  | 67  | 62  | 59  | 57  |    |    |    | 57  |
| 6   | 79  | 68  | 60  | 55  | 77  | 67  | 60  | 54  | 65  | 59  | 54  | 63  | 58  | 54  | 62  | 57  | 53  | 51  |    |    |    | 51  |
| 7   | 74  | 62  | 55  | 50  | 72  | 62  | 54  | 49  | 60  | 54  | 49  | 59  | 53  | 49  | 58  | 52  | 49  | 47  |    |    |    | 47  |
| 8   | 69  | 58  | 50  | 45  | 68  | 57  | 50  | 45  | 56  | 49  | 45  | 55  | 49  | 45  | 54  | 48  | 45  | 43  |    |    |    | 43  |
| 9   | 65  | 54  | 46  | 42  | 64  | 53  | 46  | 42  | 52  | 46  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 39  |    |    |    | 39  |
| 10  | 62  | 50  | 43  | 39  | 61  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 36  |    |    |    | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8185 | 8185 | 8185 |
| 5°  | 7913 | 8007 | 8163 |
| 10° | 7391 | 7655 | 8079 |
| 15° | 6749 | 7201 | 7934 |
| 20° | 6028 | 6648 | 7679 |
| 25° | 5250 | 5997 | 7376 |
| 30° | 4425 | 5327 | 6986 |
| 35° | 3534 | 4615 | 6610 |
| 40° | 2542 | 3833 | 6239 |
| 45° | 1532 | 3019 | 5905 |
| 50° | 1101 | 2186 | 5427 |
| 55° | 926  | 1470 | 4810 |
| 60° | 749  | 1166 | 3873 |
| 65° | 591  | 1060 | 2783 |
| 70° | 519  | 884  | 1493 |
| 75° | 482  | 805  | 725  |
| 80° | 481  | 838  | 660  |
| 85° | 721  | 1196 | 840  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5905 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 87.3   | 6.5       |
| 10°-20°   | 228.6  | 17.1      |
| 20°-30°   | 296.6  | 22.2      |
| 30°-40°   | 285.1  | 21.3      |
| 40°-50°   | 211.6  | 15.8      |
| 50°-60°   | 129.6  | 9.7       |
| 60°-70°   | 62.9   | 4.7       |
| 70°-80°   | 24.0   | 1.8       |
| 80°-90°   | 10.8   | 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°    | 612.5  | 45.8      |
| 0°-40°    | 897.6  | 67.2      |
| 0°-60°    | 1238.8 | 92.7      |
| 0°-90°    | 1336.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1336.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 950 | 950   | 950 | 950   | 950 |      |
| 5°  | 915 | 929   | 926 | 935   | 944 | 85   |
| 15° | 757 | 779   | 808 | 856   | 890 | 211  |
| 25° | 553 | 580   | 631 | 712   | 776 | 253  |
| 35° | 336 | 366   | 439 | 543   | 629 | 208  |
| 45° | 126 | 157   | 248 | 378   | 485 | 104  |
| 55° | 62  | 64    | 98  | 221   | 320 | 55   |
| 65° | 29  | 31    | 52  | 82    | 137 | 30   |
| 75° | 14  | 23    | 24  | 22    | 22  | 15   |
| 85° | 7   | 12    | 12  | 11    | 8   | 7    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 950.5 | 950.5 | 950.5 | 950.5 | 950.5 |
| 2.5°  | 938.4 | 949.2 | 942.0 | 944.4 | 945.6 |
| 5°    | 915.4 | 928.7 | 926.3 | 934.7 | 944.4 |
| 7.5°  | 883.9 | 899.7 | 904.5 | 921.4 | 937.2 |
| 10°   | 845.3 | 864.6 | 875.5 | 903.3 | 923.9 |
| 12.5° | 802.9 | 823.5 | 844.0 | 881.5 | 909.3 |
| 15°   | 757.0 | 778.7 | 807.8 | 856.1 | 890.0 |
| 17.5° | 708.6 | 732.8 | 767.9 | 825.9 | 865.8 |
| 20°   | 657.8 | 683.2 | 725.5 | 789.6 | 838.0 |
| 22.5° | 605.8 | 632.4 | 679.6 | 750.9 | 807.8 |
| 25°   | 552.6 | 580.4 | 631.2 | 712.2 | 776.3 |
| 27.5° | 498.2 | 527.2 | 585.3 | 671.1 | 741.3 |
| 30°   | 445.0 | 472.8 | 535.7 | 628.8 | 702.6 |
| 32.5° | 390.6 | 419.6 | 487.3 | 585.3 | 665.1 |
| 35°   | 336.2 | 366.4 | 439.0 | 542.9 | 628.8 |
| 37.5° | 280.5 | 313.2 | 389.4 | 501.8 | 592.5 |
| 40°   | 226.1 | 257.6 | 341.0 | 459.5 | 555.0 |
| 42.5° | 172.9 | 206.8 | 295.1 | 417.2 | 520.0 |
| 45°   | 125.8 | 157.2 | 247.9 | 378.5 | 484.9 |
| 47.5° | 94.3  | 113.7 | 204.4 | 342.2 | 446.2 |
| 50°   | 82.2  | 85.9  | 163.2 | 302.3 | 405.1 |
| 52.5° | 71.3  | 73.8  | 127.0 | 258.8 | 364.0 |
| 55°   | 61.7  | 64.1  | 97.9  | 221.3 | 320.4 |
| 57.5° | 52.0  | 54.4  | 78.6  | 185.0 | 270.9 |
| 60°   | 43.5  | 46.0  | 67.7  | 147.5 | 224.9 |
| 62.5° | 36.3  | 37.5  | 60.5  | 112.5 | 180.2 |
| 65°   | 29.0  | 31.4  | 52.0  | 82.2  | 136.6 |
| 67.5° | 24.2  | 26.6  | 42.3  | 56.8  | 95.5  |
| 70°   | 20.6  | 26.6  | 35.1  | 39.9  | 59.3  |
| 72.5° | 16.9  | 24.2  | 29.0  | 27.8  | 27.8  |
| 75°   | 14.5  | 23.0  | 24.2  | 21.8  | 21.8  |
| 77.5° | 12.1  | 20.6  | 19.3  | 18.1  | 16.9  |
| 80°   | 9.7   | 16.9  | 16.9  | 14.5  | 13.3  |
| 82.5° | 8.5   | 13.3  | 13.3  | 13.3  | 10.9  |
| 85°   | 7.3   | 12.1  | 12.1  | 10.9  | 8.5   |
| 87.5° | 4.8   | 9.7   | 10.9  | 9.7   | 6.0   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)