

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: P1060288

Luminaire Tested: S124RDR-S1020D940-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060288  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-S1020D940-X4F0-XX-UDD-WVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

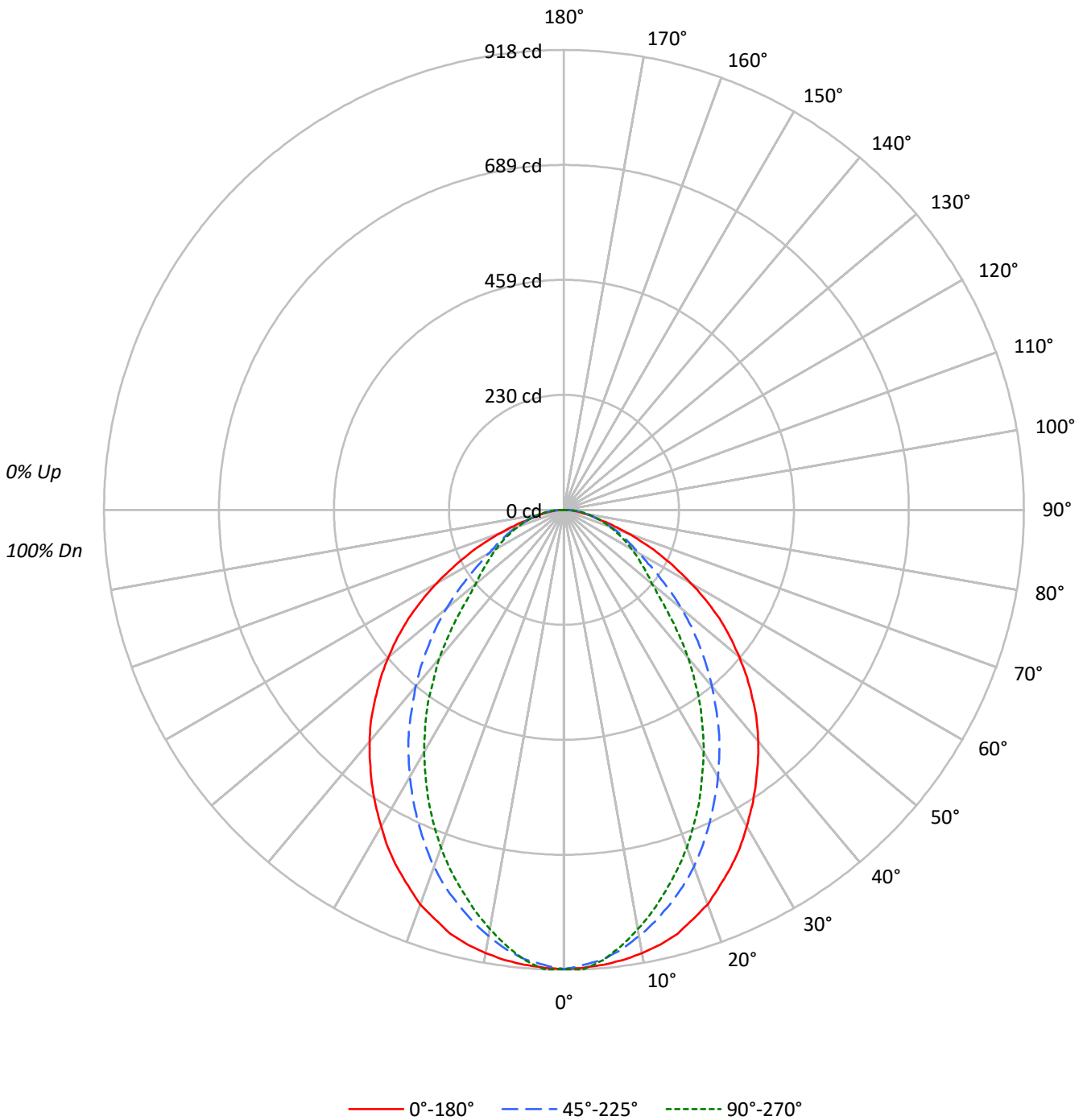
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1767.8 lumens  
Efficiency: N/A  
Efficacy: 50.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12  
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

TEST NUMBER: P1060288

CATALOG NUMBER: S124RDR-S1020D940-X4F0-XX-UDD-WVL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1060288

CATALOG NUMBER: S124RDR-S1020D940-X4F0-XX-UDD-WVL-B

**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   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 88  |     |    |    | 86 |     |
| 2   | 101 | 94  | 88  | 83  | 99  | 92  | 86  | 82  | 89  | 84  | 80  | 85  | 82  | 78  | 82  | 79  | 76  |     |    |    | 74 |     |
| 3   | 93  | 84  | 76  | 71  | 91  | 82  | 75  | 70  | 79  | 74  | 69  | 77  | 72  | 68  | 74  | 70  | 66  |     |    |    | 64 |     |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 67  | 61  | 72  | 65  | 60  | 69  | 64  | 59  | 67  | 62  | 58  |     |    |    | 56 |     |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 59  | 53  | 65  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 52  |     |    |    | 50 |     |
| 6   | 74  | 62  | 54  | 48  | 72  | 61  | 53  | 47  | 59  | 52  | 47  | 58  | 51  | 47  | 56  | 51  | 46  |     |    |    | 44 |     |
| 7   | 69  | 57  | 48  | 43  | 68  | 56  | 48  | 43  | 54  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  |     |    |    | 40 |     |
| 8   | 65  | 52  | 44  | 39  | 63  | 51  | 44  | 39  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  |     |    |    | 36 |     |
| 9   | 61  | 48  | 40  | 35  | 59  | 48  | 40  | 35  | 46  | 40  | 35  | 45  | 39  | 35  | 44  | 39  | 35  |     |    |    | 33 |     |
| 10  | 57  | 45  | 37  | 32  | 56  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 41  | 36  | 32  |     |    |    | 30 |     |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7895 | 7895 | 7895 |
| 5°  | 7878 | 7785 | 7794 |
| 10° | 7856 | 7555 | 7432 |
| 15° | 7809 | 7270 | 7011 |
| 20° | 7681 | 6950 | 6575 |
| 25° | 7482 | 6541 | 6080 |
| 30° | 7253 | 6117 | 5549 |
| 35° | 7021 | 5673 | 4983 |
| 40° | 6782 | 5171 | 4348 |
| 45° | 6481 | 4645 | 3634 |
| 50° | 6120 | 4099 | 3075 |
| 55° | 5693 | 3477 | 2846 |
| 60° | 5046 | 2950 | 2690 |
| 65° | 4303 | 2722 | 2547 |
| 70° | 3364 | 2523 | 2414 |
| 75° | 2292 | 2329 | 2329 |
| 80° | 1979 | 2192 | 2241 |
| 85° | 1699 | 2124 | 2342 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6481 cd/sqm



TEST NUMBER: P1060288

CATALOG NUMBER: S124RDR-S1020D940-X4F0-XX-UDD-WVL-B

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 85.3   | 4.8       |
| 10°-20°   | 231.6  | 13.1      |
| 20°-30°   | 321.6  | 18.2      |
| 30°-40°   | 344.7  | 19.5      |
| 40°-50°   | 305.4  | 17.3      |
| 50°-60°   | 230.2  | 13.0      |
| 60°-70°   | 149.0  | 8.4       |
| 70°-80°   | 76.5   | 4.3       |
| 80°-90°   | 23.5   | 1.3       |
| 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°    | 638.5  | 36.1      |
| 0°-40°    | 983.3  | 55.6      |
| 0°-60°    | 1518.8 | 85.9      |
| 0°-90°    | 1767.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1767.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 917 | 917   | 917 | 917   | 917 |      |
| 5°  | 911 | 912   | 901 | 902   | 902 | 87   |
| 15° | 876 | 856   | 816 | 795   | 786 | 246  |
| 25° | 788 | 746   | 688 | 652   | 640 | 362  |
| 35° | 668 | 608   | 540 | 491   | 474 | 418  |
| 45° | 532 | 463   | 381 | 322   | 298 | 410  |
| 55° | 379 | 316   | 232 | 195   | 190 | 337  |
| 65° | 211 | 170   | 134 | 126   | 125 | 209  |
| 75° | 69  | 72    | 70  | 70    | 70  | 82   |
| 85° | 17  | 18    | 22  | 24    | 24  | 20   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P1060288

CATALOG NUMBER: S124RDR-S1020D940-X4F0-XX-UDD-WVL-B

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 916.8 | 916.8 | 916.8 | 916.8 | 916.8 |
| 2.5°  | 914.7 | 917.9 | 909.3 | 915.7 | 917.9 |
| 5°    | 911.4 | 912.5 | 900.6 | 901.7 | 901.7 |
| 7.5°  | 906.0 | 903.9 | 884.5 | 879.1 | 878.0 |
| 10°   | 898.5 | 892.0 | 864.0 | 853.2 | 850.0 |
| 12.5° | 888.8 | 876.9 | 841.4 | 826.3 | 819.8 |
| 15°   | 875.9 | 856.5 | 815.5 | 795.1 | 786.4 |
| 17.5° | 856.5 | 831.7 | 788.6 | 762.7 | 753.1 |
| 20°   | 838.2 | 804.8 | 758.4 | 726.1 | 717.5 |
| 22.5° | 812.3 | 776.8 | 724.0 | 689.5 | 678.7 |
| 25°   | 787.5 | 745.5 | 688.4 | 651.8 | 639.9 |
| 27.5° | 760.6 | 713.2 | 651.8 | 613.0 | 597.9 |
| 30°   | 729.4 | 678.7 | 615.2 | 574.2 | 558.1 |
| 32.5° | 699.2 | 645.3 | 577.4 | 532.2 | 515.0 |
| 35°   | 667.9 | 607.6 | 539.7 | 491.3 | 474.0 |
| 37.5° | 635.6 | 572.1 | 497.7 | 450.3 | 427.7 |
| 40°   | 603.3 | 536.5 | 460.0 | 406.2 | 386.8 |
| 42.5° | 569.9 | 499.9 | 421.2 | 365.2 | 340.4 |
| 45°   | 532.2 | 463.3 | 381.4 | 322.1 | 298.4 |
| 47.5° | 495.6 | 427.7 | 344.7 | 280.1 | 258.6 |
| 50°   | 456.8 | 390.0 | 306.0 | 243.5 | 229.5 |
| 52.5° | 418.0 | 351.2 | 268.3 | 215.5 | 209.0 |
| 55°   | 379.2 | 315.7 | 231.6 | 195.0 | 189.6 |
| 57.5° | 336.1 | 279.0 | 199.3 | 176.7 | 172.4 |
| 60°   | 293.0 | 239.2 | 171.3 | 159.4 | 156.2 |
| 62.5° | 251.0 | 204.7 | 151.9 | 142.2 | 140.1 |
| 65°   | 211.2 | 170.2 | 133.6 | 126.0 | 125.0 |
| 67.5° | 172.4 | 140.1 | 116.4 | 112.0 | 109.9 |
| 70°   | 133.6 | 112.0 | 100.2 | 98.0  | 95.9  |
| 72.5° | 99.1  | 90.5  | 85.1  | 84.0  | 83.0  |
| 75°   | 68.9  | 72.2  | 70.0  | 70.0  | 70.0  |
| 77.5° | 54.9  | 56.0  | 57.1  | 58.2  | 57.1  |
| 80°   | 39.9  | 43.1  | 44.2  | 46.3  | 45.2  |
| 82.5° | 28.0  | 30.2  | 33.4  | 34.5  | 35.6  |
| 85°   | 17.2  | 18.3  | 21.5  | 23.7  | 23.7  |
| 87.5° | 7.5   | 8.6   | 10.8  | 12.9  | 14.0  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)