

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: P1058029

Luminaire Tested: S122RDRP-S485D950-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1058029  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-S485D950-X4F0-XX-UDD-WVL-B  
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

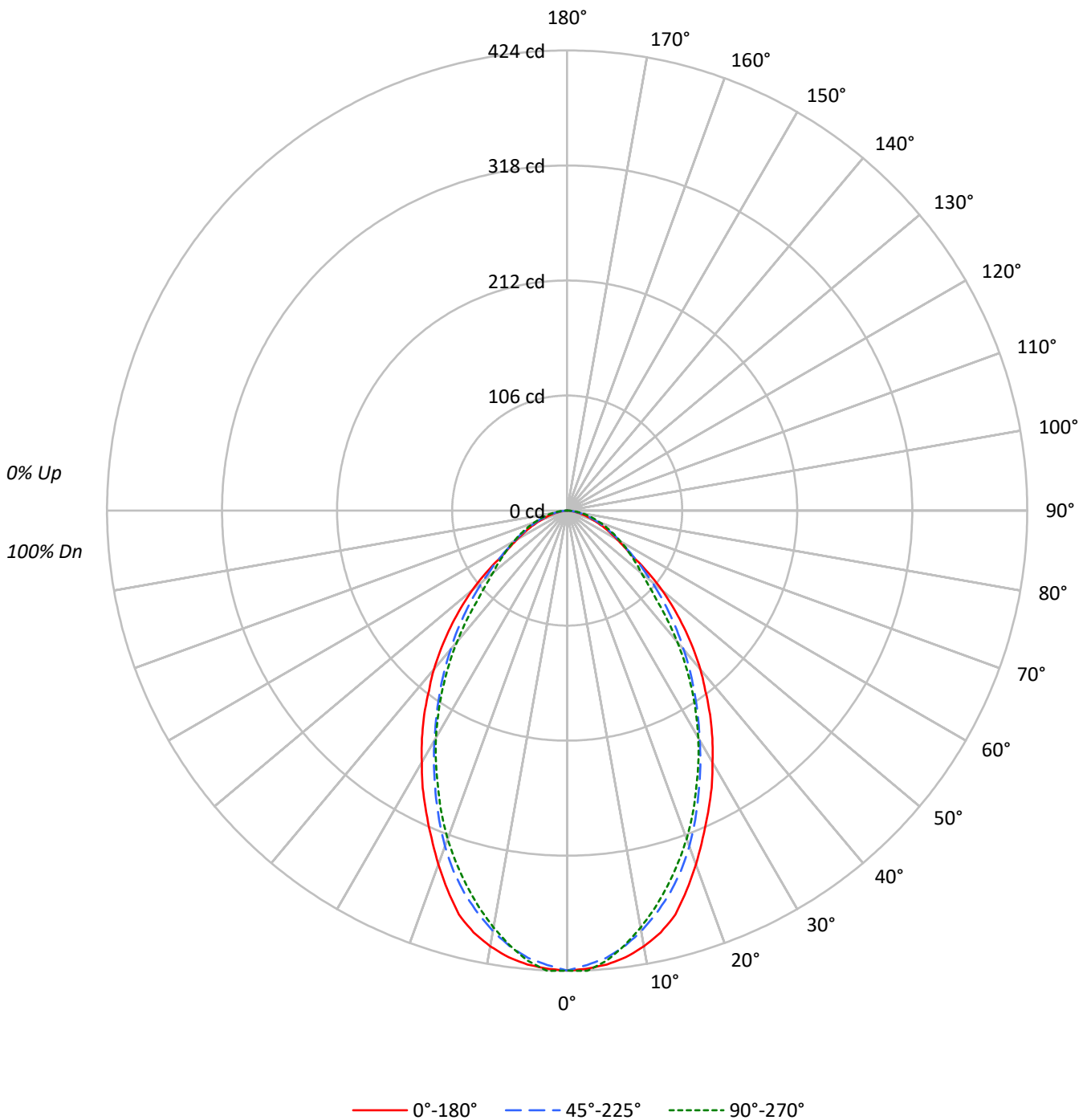
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 643.7 lumens  
Efficiency: N/A  
Efficacy: 32.8 lumens/watt  
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.6  
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   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |
| 2   | 103 | 96  | 91  | 86  | 100 | 94  | 89  | 85  | 91  | 87  | 83  | 88  | 84  | 81  | 85  | 82  | 79  | 77  |
| 3   | 95  | 87  | 80  | 74  | 93  | 85  | 79  | 74  | 82  | 77  | 73  | 80  | 75  | 71  | 77  | 73  | 70  | 68  |
| 4   | 89  | 79  | 71  | 65  | 87  | 77  | 70  | 65  | 75  | 69  | 64  | 73  | 68  | 63  | 71  | 66  | 63  | 61  |
| 5   | 83  | 72  | 64  | 58  | 81  | 71  | 63  | 58  | 69  | 62  | 57  | 67  | 61  | 57  | 65  | 60  | 56  | 54  |
| 6   | 77  | 66  | 58  | 52  | 75  | 65  | 57  | 52  | 63  | 56  | 52  | 61  | 56  | 51  | 60  | 55  | 51  | 49  |
| 7   | 72  | 60  | 53  | 47  | 71  | 60  | 52  | 47  | 58  | 52  | 47  | 57  | 51  | 47  | 56  | 50  | 46  | 44  |
| 8   | 68  | 56  | 48  | 43  | 66  | 55  | 48  | 43  | 54  | 47  | 43  | 53  | 47  | 43  | 52  | 46  | 42  | 41  |
| 9   | 64  | 52  | 45  | 40  | 63  | 51  | 44  | 39  | 50  | 44  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 37  |
| 10  | 60  | 48  | 41  | 36  | 59  | 48  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 45  | 40  | 36  | 34  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7820 | 7820 | 7820 |
| 5°  | 7776 | 7663 | 7713 |
| 10° | 7637 | 7373 | 7309 |
| 15° | 7362 | 6975 | 6833 |
| 20° | 6812 | 6466 | 6321 |
| 25° | 6253 | 5839 | 5729 |
| 30° | 5708 | 5205 | 5148 |
| 35° | 5170 | 4607 | 4501 |
| 40° | 4601 | 4015 | 3803 |
| 45° | 3961 | 3452 | 3048 |
| 50° | 3275 | 2905 | 2558 |
| 55° | 2368 | 2410 | 2300 |
| 60° | 1967 | 2067 | 2093 |
| 65° | 1681 | 1799 | 1917 |
| 70° | 1381 | 1602 | 1748 |
| 75° | 1155 | 1347 | 1590 |
| 80° | 861  | 1073 | 1435 |
| 85° | 275  | 572  | 1291 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3961 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 39.2   | 6.1       |
| 10°-20°   | 103.2  | 16.0      |
| 20°-30°   | 133.5  | 20.7      |
| 30°-40°   | 131.0  | 20.3      |
| 40°-50°   | 103.1  | 16.0      |
| 50°-60°   | 67.6   | 10.5      |
| 60°-70°   | 41.1   | 6.4       |
| 70°-80°   | 20.6   | 3.2       |
| 80°-90°   | 4.4    | 0.7       |
| 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°    | 275.9  | 42.9      |
| 0°-40°    | 406.8  | 63.2      |
| 0°-60°    | 577.5  | 89.7      |
| 0°-90°    | 643.7  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 643.7  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 424 | 424   | 424 | 424   | 424 |      |
| 5°  | 420 | 420   | 414 | 416   | 416 | 40   |
| 15° | 385 | 380   | 365 | 360   | 358 | 107  |
| 25° | 307 | 297   | 287 | 286   | 281 | 141  |
| 35° | 230 | 217   | 204 | 204   | 200 | 143  |
| 45° | 152 | 142   | 132 | 123   | 117 | 117  |
| 55° | 74  | 78    | 75  | 72    | 72  | 70   |
| 65° | 38  | 39    | 41  | 43    | 44  | 38   |
| 75° | 16  | 17    | 19  | 22    | 22  | 17   |
| 85° | 1   | 2     | 3   | 5     | 6   | 3    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 423.8 | 423.8 | 423.8 | 423.8 | 423.8 |
| 2.5°  | 422.5 | 423.2 | 419.1 | 423.2 | 424.5 |
| 5°    | 419.8 | 419.8 | 413.7 | 416.4 | 416.4 |
| 7.5°  | 415.1 | 414.4 | 404.9 | 404.9 | 404.3 |
| 10°   | 407.6 | 404.9 | 393.5 | 391.4 | 390.1 |
| 12.5° | 398.2 | 393.5 | 380.0 | 376.6 | 374.6 |
| 15°   | 385.4 | 380.0 | 365.1 | 360.4 | 357.7 |
| 17.5° | 366.5 | 361.1 | 348.2 | 342.8 | 340.1 |
| 20°   | 346.9 | 338.8 | 329.3 | 324.6 | 321.9 |
| 22.5° | 326.6 | 317.2 | 308.4 | 305.0 | 302.3 |
| 25°   | 307.1 | 297.0 | 286.8 | 285.5 | 281.4 |
| 27.5° | 288.2 | 276.0 | 265.9 | 265.2 | 261.9 |
| 30°   | 267.9 | 255.1 | 244.3 | 245.0 | 241.6 |
| 32.5° | 249.0 | 236.9 | 224.1 | 224.7 | 220.7 |
| 35°   | 229.5 | 216.6 | 204.5 | 203.8 | 199.8 |
| 37.5° | 209.2 | 197.1 | 185.6 | 182.9 | 178.8 |
| 40°   | 191.0 | 178.8 | 166.7 | 162.0 | 157.9 |
| 42.5° | 171.4 | 160.6 | 149.8 | 142.4 | 137.0 |
| 45°   | 151.8 | 142.4 | 132.3 | 122.8 | 116.8 |
| 47.5° | 133.0 | 125.5 | 116.8 | 105.3 | 101.2 |
| 50°   | 114.1 | 108.7 | 101.2 | 91.1  | 89.1  |
| 52.5° | 94.5  | 92.5  | 87.7  | 81.0  | 80.3  |
| 55°   | 73.6  | 77.6  | 74.9  | 72.2  | 71.5  |
| 57.5° | 62.1  | 62.8  | 64.8  | 64.1  | 64.1  |
| 60°   | 53.3  | 53.3  | 56.0  | 56.7  | 56.7  |
| 62.5° | 45.2  | 45.9  | 48.6  | 49.9  | 49.9  |
| 65°   | 38.5  | 39.1  | 41.2  | 43.2  | 43.9  |
| 67.5° | 31.7  | 33.1  | 35.1  | 37.1  | 37.8  |
| 70°   | 25.6  | 27.0  | 29.7  | 31.7  | 32.4  |
| 72.5° | 20.9  | 21.6  | 24.3  | 26.3  | 27.0  |
| 75°   | 16.2  | 16.9  | 18.9  | 21.6  | 22.3  |
| 77.5° | 11.5  | 12.8  | 14.8  | 16.9  | 18.2  |
| 80°   | 8.1   | 8.8   | 10.1  | 12.8  | 13.5  |
| 82.5° | 4.7   | 5.4   | 6.7   | 8.8   | 9.4   |
| 85°   | 1.3   | 2.0   | 2.7   | 4.7   | 6.1   |
| 87.5° | 0.0   | 0.0   | 0.0   | 1.3   | 2.7   |
| 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 | 13.27            | 14.67 | 13.64 | 14.98 | 15.30 | 13.45          | 14.84 | 13.81 | 15.16 | 15.47 |
|                 | 3H   | 14.40            | 15.65 | 14.78 | 15.98 | 16.34 | 14.91          | 16.15 | 15.29 | 16.48 | 16.84 |
|                 | 4H   | 14.75            | 15.92 | 15.16 | 16.27 | 16.65 | 15.45          | 16.61 | 15.85 | 16.96 | 17.34 |
|                 | 6H   | 14.94            | 16.01 | 15.35 | 16.38 | 16.77 | 15.86          | 16.93 | 16.28 | 17.30 | 17.69 |
|                 | 8H   | 14.97            | 15.98 | 15.39 | 16.37 | 16.78 | 15.99          | 17.00 | 16.42 | 17.40 | 17.80 |
|                 | 12H  | 14.95            | 15.92 | 15.38 | 16.30 | 16.73 | 16.07          | 17.04 | 16.50 | 17.43 | 17.86 |
| 4H              | 2H   | 13.73            | 14.89 | 14.13 | 15.24 | 15.62 | 13.87          | 15.04 | 14.28 | 15.39 | 15.77 |
|                 | 3H   | 15.07            | 16.03 | 15.48 | 16.43 | 16.83 | 15.55          | 16.50 | 15.96 | 16.91 | 17.31 |
|                 | 4H   | 15.51            | 16.37 | 15.95 | 16.79 | 17.23 | 16.21          | 17.07 | 16.65 | 17.49 | 17.93 |
|                 | 6H   | 15.78            | 16.53 | 16.25 | 16.97 | 17.44 | 16.75          | 17.49 | 17.21 | 17.93 | 18.40 |
|                 | 8H   | 15.83            | 16.52 | 16.30 | 16.97 | 17.44 | 16.91          | 17.61 | 17.38 | 18.05 | 18.52 |
|                 | 12H  | 15.82            | 16.44 | 16.31 | 16.92 | 17.39 | 17.03          | 17.65 | 17.52 | 18.13 | 18.60 |
| 8H              | 4H   | 15.73            | 16.42 | 16.19 | 16.87 | 17.33 | 16.36          | 17.05 | 16.83 | 17.50 | 17.97 |
|                 | 6H   | 16.07            | 16.64 | 16.57 | 17.14 | 17.62 | 16.99          | 17.56 | 17.49 | 18.05 | 18.53 |
|                 | 8H   | 16.15            | 16.66 | 16.67 | 17.17 | 17.66 | 17.22          | 17.73 | 17.74 | 18.25 | 18.74 |
|                 | 12H  | 16.17            | 16.62 | 16.68 | 17.11 | 17.68 | 17.41          | 17.86 | 17.92 | 18.35 | 18.92 |
| 12H             | 4H   | 15.74            | 16.35 | 16.22 | 16.83 | 17.31 | 16.35          | 16.96 | 16.83 | 17.44 | 17.92 |
|                 | 6H   | 16.10            | 16.61 | 16.62 | 17.12 | 17.61 | 16.98          | 17.50 | 17.50 | 18.01 | 18.50 |
|                 | 8H   | 16.21            | 16.66 | 16.73 | 17.16 | 17.73 | 17.26          | 17.71 | 17.77 | 18.20 | 18.77 |