

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P1058368

Luminaire Tested: S122RDR-H485D835-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058368  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H485D835-X4F0-XX-UDD-SVL-B  
Description: DEFINE 2 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: -

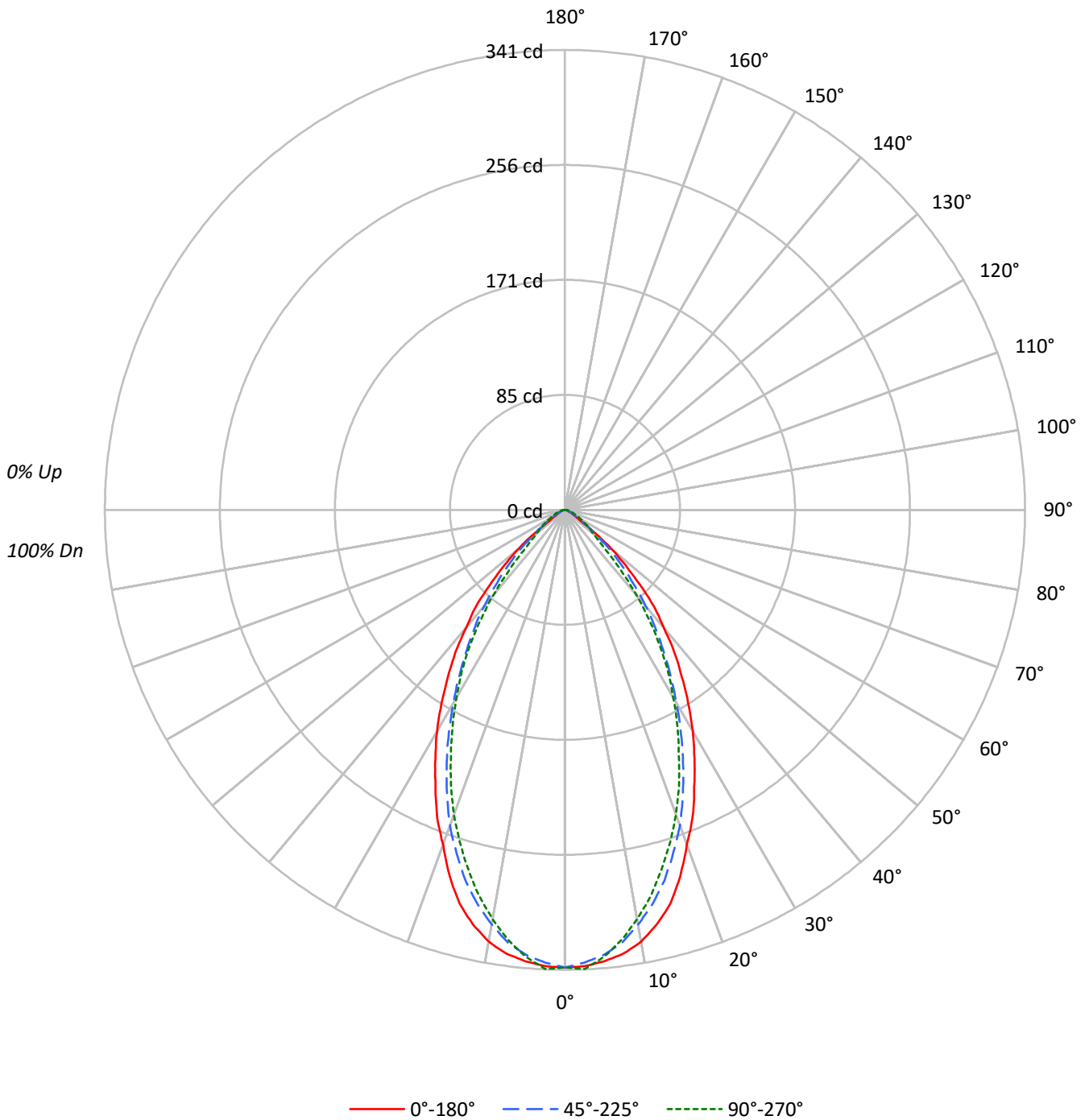
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 365.0 lumens  
Efficiency: N/A  
Efficacy: 21.0 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.85 / 0.91  
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.4  
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   | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 99  | 100 | 98  | 96  | 96  | 95  | 94  | 92  |    |    |    | 92  |
| 2   | 106 | 101 | 96  | 92  | 104 | 99  | 95  | 91  | 96  | 92  | 89  | 93  | 90  | 87  | 90  | 87  | 85  | 84  |    |    |    | 84  |
| 3   | 100 | 93  | 87  | 82  | 98  | 91  | 86  | 82  | 88  | 84  | 80  | 86  | 82  | 79  | 84  | 80  | 78  | 76  |    |    |    | 76  |
| 4   | 94  | 85  | 79  | 74  | 92  | 84  | 78  | 74  | 82  | 77  | 73  | 80  | 76  | 72  | 78  | 74  | 71  | 70  |    |    |    | 70  |
| 5   | 88  | 79  | 72  | 68  | 87  | 78  | 72  | 67  | 76  | 71  | 67  | 74  | 70  | 66  | 73  | 69  | 65  | 64  |    |    |    | 64  |
| 6   | 83  | 73  | 67  | 62  | 82  | 72  | 66  | 62  | 71  | 65  | 61  | 69  | 64  | 61  | 68  | 64  | 60  | 59  |    |    |    | 59  |
| 7   | 79  | 68  | 62  | 57  | 77  | 68  | 61  | 57  | 66  | 60  | 56  | 65  | 60  | 56  | 64  | 59  | 56  | 54  |    |    |    | 54  |
| 8   | 74  | 64  | 57  | 53  | 73  | 63  | 57  | 52  | 62  | 56  | 52  | 61  | 56  | 52  | 60  | 55  | 52  | 50  |    |    |    | 50  |
| 9   | 70  | 60  | 53  | 49  | 69  | 59  | 53  | 49  | 58  | 52  | 48  | 57  | 52  | 48  | 56  | 52  | 48  | 47  |    |    |    | 47  |
| 10  | 67  | 56  | 50  | 45  | 66  | 56  | 49  | 45  | 55  | 49  | 45  | 54  | 49  | 45  | 53  | 48  | 45  | 44  |    |    |    | 44  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6261 | 6261 | 6261 |
| 5°  | 6222 | 6135 | 6161 |
| 10° | 6091 | 5850 | 5775 |
| 15° | 5771 | 5435 | 5278 |
| 20° | 5188 | 4895 | 4721 |
| 25° | 4620 | 4221 | 4068 |
| 30° | 4040 | 3522 | 3420 |
| 35° | 3401 | 2854 | 2762 |
| 40° | 2741 | 2252 | 1990 |
| 45° | 2051 | 1626 | 1185 |
| 50° | 1283 | 1051 | 778  |
| 55° | 434  | 566  | 631  |
| 60° | 251  | 351  | 498  |
| 65° | 179  | 236  | 384  |
| 70° | 146  | 183  | 291  |
| 75° | 100  | 143  | 242  |
| 80° | 74   | 149  | 213  |
| 85° | 0    | 0    | 148  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2051 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 31.3   | 8.6       |
| 10°-20°   | 80.1   | 21.9      |
| 20°-30°   | 96.4   | 26.4      |
| 30°-40°   | 82.4   | 22.6      |
| 40°-50°   | 48.3   | 13.2      |
| 50°-60°   | 17.5   | 4.8       |
| 60°-70°   | 6.2    | 1.7       |
| 70°-80°   | 2.5    | 0.7       |
| 80°-90°   | 0.4    | 0.1       |
| 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°    | 207.8  | 56.9      |
| 0°-40°    | 290.1  | 79.5      |
| 0°-60°    | 355.8  | 97.5      |
| 0°-90°    | 365.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 365.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 339 | 339   | 339 | 339   | 339 |      |
| 5°  | 336 | 337   | 331 | 333   | 333 | 32   |
| 15° | 302 | 297   | 284 | 279   | 276 | 84   |
| 25° | 227 | 217   | 207 | 204   | 200 | 104  |
| 35° | 151 | 140   | 127 | 125   | 123 | 94   |
| 45° | 79  | 70    | 62  | 52    | 45  | 61   |
| 55° | 14  | 19    | 18  | 18    | 20  | 17   |
| 65° | 4   | 5     | 5   | 8     | 9   | 4    |
| 75° | 1   | 2     | 2   | 3     | 3   | 2    |
| 85° | 0   | 0     | 0   | 1     | 1   | 0    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 339.3 | 339.3 | 339.3 | 339.3 | 339.3 |
| 2.5°  | 338.7 | 339.3 | 335.9 | 339.3 | 340.7 |
| 5°    | 335.9 | 336.6 | 331.2 | 332.6 | 332.6 |
| 7.5°  | 331.9 | 331.2 | 323.8 | 322.4 | 321.7 |
| 10°   | 325.1 | 323.1 | 312.2 | 310.2 | 308.2 |
| 12.5° | 314.9 | 310.9 | 299.4 | 296.0 | 293.3 |
| 15°   | 302.1 | 297.3 | 284.5 | 279.1 | 276.3 |
| 17.5° | 284.5 | 279.1 | 266.9 | 261.4 | 258.7 |
| 20°   | 264.2 | 258.7 | 249.3 | 243.2 | 240.4 |
| 22.5° | 247.2 | 238.4 | 228.3 | 224.2 | 220.8 |
| 25°   | 226.9 | 217.4 | 207.3 | 203.9 | 199.8 |
| 27.5° | 207.9 | 196.4 | 186.3 | 183.6 | 180.2 |
| 30°   | 189.6 | 177.5 | 165.3 | 165.3 | 160.5 |
| 32.5° | 170.0 | 158.5 | 145.6 | 144.9 | 142.2 |
| 35°   | 151.0 | 139.5 | 126.7 | 125.3 | 122.6 |
| 37.5° | 133.4 | 121.9 | 109.7 | 105.7 | 102.3 |
| 40°   | 113.8 | 103.6 | 93.5  | 86.7  | 82.6  |
| 42.5° | 98.2  | 86.7  | 76.5  | 68.4  | 63.0  |
| 45°   | 78.6  | 70.4  | 62.3  | 52.2  | 45.4  |
| 47.5° | 61.0  | 55.5  | 48.8  | 37.3  | 33.9  |
| 50°   | 44.7  | 42.0  | 36.6  | 27.8  | 27.1  |
| 52.5° | 28.4  | 29.8  | 26.4  | 21.7  | 23.7  |
| 55°   | 13.5  | 19.0  | 17.6  | 18.3  | 19.6  |
| 57.5° | 8.8   | 9.5   | 12.9  | 14.9  | 16.3  |
| 60°   | 6.8   | 6.8   | 9.5   | 12.2  | 13.5  |
| 62.5° | 5.4   | 5.4   | 7.5   | 10.2  | 10.8  |
| 65°   | 4.1   | 4.7   | 5.4   | 7.5   | 8.8   |
| 67.5° | 3.4   | 3.4   | 4.1   | 6.1   | 6.8   |
| 70°   | 2.7   | 2.7   | 3.4   | 4.7   | 5.4   |
| 72.5° | 2.0   | 2.0   | 2.7   | 4.1   | 4.1   |
| 75°   | 1.4   | 2.0   | 2.0   | 2.7   | 3.4   |
| 77.5° | 1.4   | 1.4   | 1.4   | 2.0   | 2.7   |
| 80°   | 0.7   | 0.7   | 1.4   | 1.4   | 2.0   |
| 82.5° | 0.7   | 0.7   | 0.7   | 0.7   | 1.4   |
| 85°   | 0.0   | 0.0   | 0.0   | 0.7   | 0.7   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 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 | 2.27             | 3.43 | 2.63 | 3.74 | 4.06 | 5.66           | 6.82 | 6.02 | 7.13 | 7.45 |
|                 | 3H   | 2.79             | 3.81 | 3.17 | 4.14 | 4.51 | 6.38           | 7.41 | 6.76 | 7.74 | 8.10 |
|                 | 4H   | 2.92             | 3.87 | 3.33 | 4.22 | 4.61 | 6.60           | 7.55 | 7.01 | 7.90 | 8.29 |
|                 | 6H   | 3.01             | 3.87 | 3.42 | 4.25 | 4.64 | 6.75           | 7.62 | 7.17 | 7.99 | 8.38 |
|                 | 8H   | 3.01             | 3.83 | 3.45 | 4.22 | 4.63 | 6.78           | 7.60 | 7.22 | 7.99 | 8.40 |
|                 | 12H  | 2.98             | 3.76 | 3.41 | 4.14 | 4.58 | 6.79           | 7.57 | 7.22 | 7.95 | 8.38 |
| 4H              | 2H   | 2.57             | 3.52 | 2.98 | 3.87 | 4.26 | 5.62           | 6.57 | 6.03 | 6.92 | 7.31 |
|                 | 3H   | 3.23             | 4.00 | 3.64 | 4.40 | 4.81 | 6.50           | 7.26 | 6.91 | 7.67 | 8.07 |
|                 | 4H   | 3.47             | 4.15 | 3.90 | 4.57 | 5.02 | 6.78           | 7.46 | 7.21 | 7.88 | 8.33 |
|                 | 6H   | 3.60             | 4.19 | 4.07 | 4.63 | 5.11 | 7.00           | 7.59 | 7.47 | 8.03 | 8.51 |
|                 | 8H   | 3.62             | 4.17 | 4.09 | 4.62 | 5.09 | 7.05           | 7.60 | 7.52 | 8.04 | 8.52 |
|                 | 12H  | 3.59             | 4.06 | 4.08 | 4.55 | 5.03 | 7.07           | 7.55 | 7.56 | 8.04 | 8.51 |
| 8H              | 4H   | 3.57             | 4.12 | 4.05 | 4.57 | 5.04 | 6.71           | 7.25 | 7.18 | 7.70 | 8.18 |
|                 | 6H   | 3.76             | 4.20 | 4.27 | 4.70 | 5.18 | 6.97           | 7.41 | 7.48 | 7.91 | 8.39 |
|                 | 8H   | 3.81             | 4.21 | 4.34 | 4.73 | 5.22 | 7.04           | 7.43 | 7.56 | 7.95 | 8.45 |
|                 | 12H  | 3.79             | 4.14 | 4.31 | 4.64 | 5.21 | 7.10           | 7.45 | 7.62 | 7.95 | 8.52 |
| 12H             | 4H   | 3.56             | 4.04 | 4.05 | 4.53 | 5.00 | 6.66           | 7.14 | 7.15 | 7.62 | 8.10 |
|                 | 6H   | 3.76             | 4.16 | 4.29 | 4.68 | 5.17 | 6.92           | 7.32 | 7.45 | 7.84 | 8.33 |
|                 | 8H   | 3.84             | 4.19 | 4.36 | 4.69 | 5.26 | 7.01           | 7.36 | 7.53 | 7.86 | 8.43 |