

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: P1055152

Luminaire Tested: S122R3DRP-S1005D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055152  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DRP-S1005D850-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

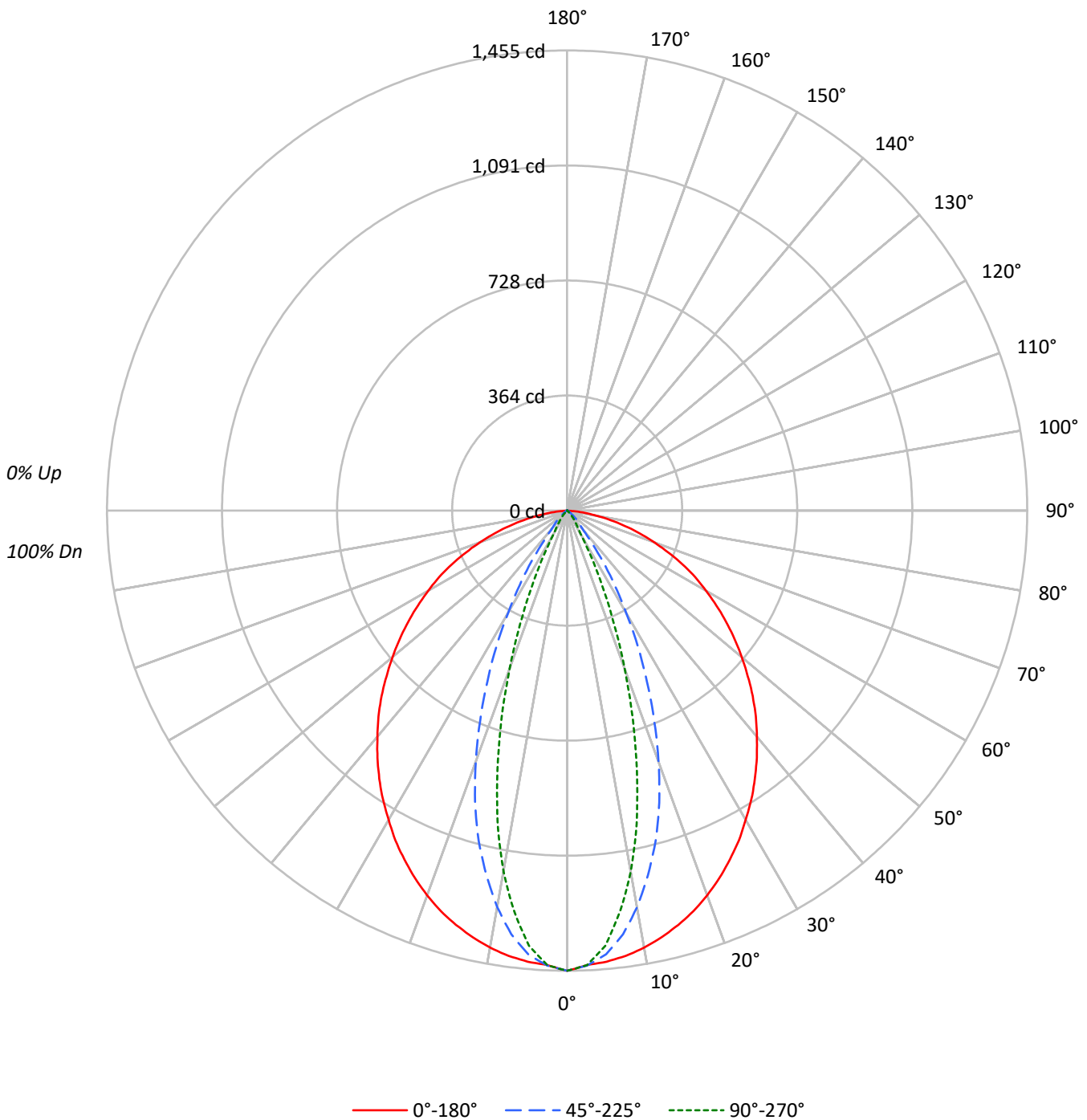
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1323.9 lumens  
Efficiency: N/A  
Efficacy: 31.6 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.9  
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  | 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   | 112 | 109 | 106 | 103 | 110 | 106 | 104 | 101 | 102 | 100 | 98  | 99  | 97  | 95  | 95  | 94  | 92  | 91  |    |    |    |    | 91  |   |  |   |
| 2   | 105 | 99  | 94  | 90  | 103 | 97  | 93  | 89  | 94  | 90  | 87  | 91  | 88  | 85  | 88  | 86  | 83  | 81  |    |    |    |    | 81  |   |  |   |
| 3   | 98  | 91  | 85  | 80  | 96  | 89  | 84  | 79  | 86  | 82  | 78  | 84  | 80  | 77  | 82  | 78  | 75  | 74  |    |    |    |    | 74  |   |  |   |
| 4   | 92  | 83  | 77  | 72  | 90  | 82  | 76  | 71  | 80  | 75  | 70  | 78  | 73  | 70  | 76  | 72  | 69  | 67  |    |    |    |    | 67  |   |  |   |
| 5   | 87  | 77  | 70  | 65  | 85  | 76  | 70  | 65  | 74  | 69  | 64  | 72  | 68  | 64  | 71  | 66  | 63  | 61  |    |    |    |    | 61  |   |  |   |
| 6   | 82  | 72  | 65  | 60  | 80  | 71  | 64  | 59  | 69  | 63  | 59  | 68  | 62  | 59  | 66  | 62  | 58  | 56  |    |    |    |    | 56  |   |  |   |
| 7   | 77  | 67  | 60  | 55  | 76  | 66  | 59  | 55  | 65  | 59  | 55  | 63  | 58  | 54  | 62  | 57  | 54  | 52  |    |    |    |    | 52  |   |  |   |
| 8   | 73  | 62  | 56  | 51  | 72  | 62  | 55  | 51  | 61  | 55  | 51  | 60  | 54  | 50  | 59  | 54  | 50  | 49  |    |    |    |    | 49  |   |  |   |
| 9   | 70  | 59  | 52  | 48  | 68  | 58  | 52  | 47  | 57  | 51  | 47  | 56  | 51  | 47  | 55  | 50  | 47  | 45  |    |    |    |    | 45  |   |  |   |
| 10  | 66  | 55  | 49  | 45  | 65  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 44  | 52  | 47  | 44  | 43  |    |    |    |    | 43  |   |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 27568 | 27568 | 27568 |
| 5°  | 27228 | 26783 | 26274 |
| 10° | 26997 | 24486 | 22299 |
| 15° | 26605 | 21193 | 16698 |
| 20° | 26101 | 17029 | 10690 |
| 25° | 25453 | 12482 | 5490  |
| 30° | 24699 | 8160  | 1794  |
| 35° | 23945 | 4526  | 1045  |
| 40° | 23082 | 1820  | 579   |
| 45° | 22228 | 1211  | 225   |
| 50° | 21248 | 690   | 97    |
| 55° | 20274 | 330   | 56    |
| 60° | 19204 | 125   | 0     |
| 65° | 18071 | 76    | 0     |
| 70° | 16214 | 94    | 0     |
| 75° | 13959 | 124   | 0     |
| 80° | 10583 | 0     | 0     |
| 85° | 4369  | 370   | 0     |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 22228 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 130.5  | 9.9       |
| 10°-20°   | 303.1  | 22.9      |
| 20°-30°   | 307.7  | 23.2      |
| 30°-40°   | 230.9  | 17.4      |
| 40°-50°   | 161.7  | 12.2      |
| 50°-60°   | 99.0   | 7.5       |
| 60°-70°   | 58.9   | 4.5       |
| 70°-80°   | 27.2   | 2.1       |
| 80°-90°   | 4.9    | 0.4       |
| 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°    | 741.3  | 56.0      |
| 0°-40°    | 972.2  | 73.4      |
| 0°-60°    | 1232.8 | 93.1      |
| 0°-90°    | 1323.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1323.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1455 | 1455  | 1455 | 1455  | 1455 |      |
| 5°  | 1432 | 1445  | 1408 | 1382  | 1382 | 136  |
| 15° | 1356 | 1283  | 1080 | 915   | 851  | 382  |
| 25° | 1218 | 1004  | 597  | 341   | 263  | 560  |
| 35° | 1035 | 674   | 196  | 58    | 45   | 647  |
| 45° | 830  | 356   | 45   | 13    | 8    | 639  |
| 55° | 614  | 109   | 10   | 3     | 2    | 549  |
| 65° | 403  | 32    | 2    | 2     | 0    | 397  |
| 75° | 191  | 3     | 2    | 2     | 0    | 203  |
| 85° | 20   | 0     | 2    | 2     | 0    | 34   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1455.1 | 1455.1 | 1455.1 | 1455.1 | 1455.1 |
| 2.5°  | 1438.4 | 1460.1 | 1440.1 | 1436.7 | 1438.4 |
| 5°    | 1431.7 | 1445.1 | 1408.3 | 1381.5 | 1381.5 |
| 7.5°  | 1420.0 | 1420.0 | 1351.4 | 1296.2 | 1279.5 |
| 10°   | 1403.3 | 1384.9 | 1272.8 | 1184.2 | 1159.1 |
| 12.5° | 1381.5 | 1338.0 | 1180.8 | 1055.4 | 1015.2 |
| 15°   | 1356.4 | 1282.8 | 1080.5 | 914.9  | 851.3  |
| 17.5° | 1328.0 | 1221.0 | 968.4  | 762.7  | 689.1  |
| 20°   | 1294.6 | 1154.1 | 844.6  | 607.1  | 530.2  |
| 22.5° | 1257.8 | 1080.5 | 719.2  | 468.3  | 386.4  |
| 25°   | 1217.6 | 1003.5 | 597.1  | 341.2  | 262.6  |
| 27.5° | 1175.8 | 923.2  | 485.0  | 234.2  | 160.6  |
| 30°   | 1129.0 | 839.6  | 373.0  | 138.8  | 82.0   |
| 32.5° | 1083.8 | 759.3  | 279.3  | 75.3   | 60.2   |
| 35°   | 1035.3 | 674.0  | 195.7  | 58.5   | 45.2   |
| 37.5° | 985.1  | 593.8  | 120.4  | 43.5   | 33.5   |
| 40°   | 933.3  | 511.8  | 73.6   | 31.8   | 23.4   |
| 42.5° | 883.1  | 434.9  | 58.5   | 21.7   | 15.1   |
| 45°   | 829.6  | 356.3  | 45.2   | 13.4   | 8.4    |
| 47.5° | 774.4  | 284.3  | 33.5   | 8.4    | 5.0    |
| 50°   | 720.9  | 220.8  | 23.4   | 5.0    | 3.3    |
| 52.5° | 667.3  | 162.2  | 15.1   | 3.3    | 1.7    |
| 55°   | 613.8  | 108.7  | 10.0   | 3.3    | 1.7    |
| 57.5° | 560.3  | 76.9   | 6.7    | 1.7    | 1.7    |
| 60°   | 506.8  | 60.2   | 3.3    | 1.7    | 0.0    |
| 62.5° | 456.6  | 46.8   | 3.3    | 1.7    | 1.7    |
| 65°   | 403.1  | 31.8   | 1.7    | 1.7    | 0.0    |
| 67.5° | 346.2  | 20.1   | 1.7    | 1.7    | 0.0    |
| 70°   | 292.7  | 11.7   | 1.7    | 1.7    | 0.0    |
| 72.5° | 240.8  | 6.7    | 1.7    | 1.7    | 0.0    |
| 75°   | 190.7  | 3.3    | 1.7    | 1.7    | 0.0    |
| 77.5° | 142.2  | 1.7    | 0.0    | 1.7    | 0.0    |
| 80°   | 97.0   | 0.0    | 0.0    | 1.7    | 0.0    |
| 82.5° | 56.9   | 0.0    | 0.0    | 1.7    | 0.0    |
| 85°   | 20.1   | 0.0    | 1.7    | 1.7    | 0.0    |
| 87.5° | 0.0    | 0.0    | 1.7    | 1.7    | 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 | 17.73            | 18.99 | 18.10 | 19.31 | 19.62 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 3H   | 21.48            | 22.59 | 21.86 | 22.92 | 23.29 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 4H   | 22.79            | 23.83 | 23.19 | 24.18 | 24.56 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 23.64            | 24.60 | 24.06 | 24.97 | 25.36 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 23.86            | 24.76 | 24.29 | 25.15 | 25.56 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 23.92            | 24.78 | 24.35 | 25.17 | 25.60 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H              | 2H   | 17.49            | 18.53 | 17.89 | 18.88 | 19.26 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 3H   | 21.23            | 22.08 | 21.64 | 22.49 | 22.89 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 4H   | 22.53            | 23.29 | 22.96 | 23.71 | 24.15 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 23.44            | 24.10 | 23.91 | 24.55 | 25.02 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 23.70            | 24.32 | 24.17 | 24.76 | 25.23 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 23.81            | 24.34 | 24.29 | 24.83 | 25.30 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H              | 4H   | 22.38            | 22.99 | 22.85 | 23.44 | 23.91 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 23.28            | 23.78 | 23.79 | 24.28 | 24.76 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 23.54            | 23.98 | 24.06 | 24.50 | 24.99 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 23.66            | 24.05 | 24.17 | 24.54 | 25.12 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H             | 4H   | 22.33            | 22.87 | 22.82 | 23.35 | 23.83 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 23.22            | 23.66 | 23.74 | 24.18 | 24.67 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 23.50            | 23.88 | 24.01 | 24.38 | 24.95 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |