

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: P1056023

Luminaire Tested: S124R3DRP-S350D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056023  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DRP-S350D930-X4F0-XX-UDD-F-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

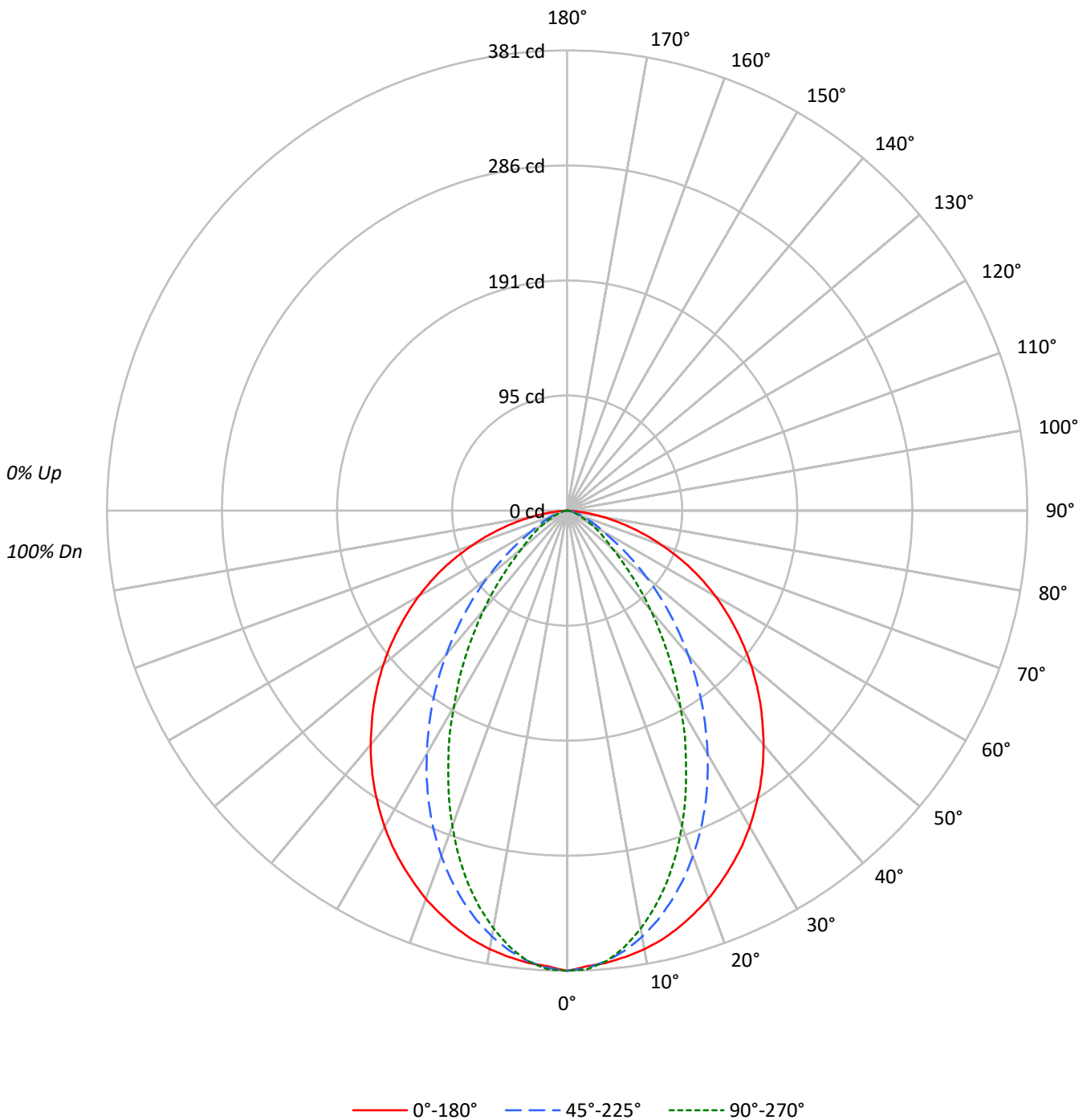
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 616.2 lumens  
Efficiency: N/A  
Efficacy: 48.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.87 / 1.03  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.6  
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

TEST NUMBER: P1056023

CATALOG NUMBER: S124R3DRP-S350D930-X4F0-XX-UDD-F-S

### Luminous Intensity Polar Plot





TEST NUMBER: P1056023

CATALOG NUMBER: S124R3DRP-S350D930-X4F0-XX-UDD-F-S

**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  | 94  | 92  | 90  | 89  |
| 2   | 103 | 96  | 91  | 86  | 101 | 94  | 89  | 85  | 91  | 87  | 83  | 88  | 84  | 81  | 85  | 82  | 79  | 78  |
| 3   | 95  | 87  | 80  | 74  | 93  | 85  | 79  | 74  | 82  | 77  | 73  | 80  | 75  | 71  | 77  | 73  | 70  | 68  |
| 4   | 89  | 78  | 71  | 65  | 86  | 77  | 70  | 65  | 75  | 69  | 64  | 73  | 67  | 63  | 71  | 66  | 62  | 60  |
| 5   | 82  | 71  | 64  | 58  | 80  | 70  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 56  | 65  | 60  | 56  | 54  |
| 6   | 77  | 65  | 57  | 52  | 75  | 64  | 57  | 52  | 63  | 56  | 51  | 61  | 55  | 51  | 60  | 54  | 50  | 48  |
| 7   | 72  | 60  | 52  | 47  | 70  | 59  | 52  | 47  | 58  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 44  |
| 8   | 67  | 55  | 48  | 42  | 66  | 55  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 40  |
| 9   | 63  | 51  | 44  | 39  | 62  | 51  | 44  | 39  | 50  | 43  | 39  | 49  | 43  | 38  | 48  | 42  | 38  | 37  |
| 10  | 60  | 48  | 41  | 36  | 59  | 47  | 40  | 36  | 46  | 40  | 36  | 45  | 40  | 35  | 45  | 39  | 35  | 34  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3369 | 3369 | 3369 |
| 5°  | 3335 | 3323 | 3323 |
| 10° | 3310 | 3215 | 3154 |
| 15° | 3270 | 3060 | 2917 |
| 20° | 3219 | 2865 | 2615 |
| 25° | 3154 | 2635 | 2271 |
| 30° | 3086 | 2373 | 1913 |
| 35° | 3007 | 2095 | 1574 |
| 40° | 2920 | 1798 | 1241 |
| 45° | 2831 | 1495 | 928  |
| 50° | 2733 | 1176 | 678  |
| 55° | 2625 | 869  | 541  |
| 60° | 2509 | 603  | 414  |
| 65° | 2360 | 469  | 303  |
| 70° | 2138 | 331  | 238  |
| 75° | 1865 | 229  | 181  |
| 80° | 1502 | 178  | 163  |
| 85° | 832  | 142  | 142  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2831 cd/sqm

TEST NUMBER: P1056023

CATALOG NUMBER: S124R3DRP-S350D930-X4F0-XX-UDD-F-S

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 35.4   | 5.7       |
| 10°-20°   | 94.5   | 15.3      |
| 20°-30°   | 126.0  | 20.4      |
| 30°-40°   | 126.8  | 20.6      |
| 40°-50°   | 104.0  | 16.9      |
| 50°-60°   | 71.1   | 11.5      |
| 60°-70°   | 39.7   | 6.4       |
| 70°-80°   | 15.8   | 2.6       |
| 80°-90°   | 3.0    | 0.5       |
| 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°    | 255.8  | 41.5      |
| 0°-40°    | 382.6  | 62.1      |
| 0°-60°    | 557.8  | 90.5      |
| 0°-90°    | 616.2  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 616.2  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 381 | 381   | 381 | 381   | 381 |      |
| 5°  | 376 | 380   | 374 | 373   | 374 | 36   |
| 15° | 357 | 353   | 334 | 323   | 319 | 101  |
| 25° | 323 | 307   | 270 | 243   | 233 | 149  |
| 35° | 279 | 249   | 194 | 157   | 146 | 174  |
| 45° | 226 | 185   | 120 | 84    | 74  | 175  |
| 55° | 170 | 120   | 56  | 38    | 35  | 152  |
| 65° | 113 | 57    | 22  | 16    | 14  | 111  |
| 75° | 55  | 15    | 7   | 6     | 5   | 59   |
| 85° | 8   | 1     | 1   | 1     | 1   | 12   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P1056023

CATALOG NUMBER: S124R3DRP-S350D930-X4F0-XX-UDD-F-S

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 381.1 | 381.1 | 381.1 | 381.1 | 381.1 |
| 2.5°  | 377.6 | 382.2 | 379.0 | 379.4 | 380.1 |
| 5°    | 375.8 | 380.1 | 374.4 | 372.6 | 374.4 |
| 7.5°  | 372.6 | 375.8 | 367.3 | 363.7 | 364.4 |
| 10°   | 368.7 | 369.8 | 358.1 | 352.0 | 351.3 |
| 12.5° | 363.7 | 362.3 | 347.1 | 338.2 | 336.1 |
| 15°   | 357.3 | 353.4 | 334.3 | 322.6 | 318.7 |
| 17.5° | 349.9 | 343.2 | 320.1 | 304.8 | 299.2 |
| 20°   | 342.1 | 332.2 | 304.5 | 285.0 | 277.9 |
| 22.5° | 332.9 | 320.4 | 287.8 | 264.0 | 255.9 |
| 25°   | 323.3 | 307.3 | 270.1 | 242.7 | 232.8 |
| 27.5° | 313.3 | 293.8 | 251.6 | 221.1 | 211.1 |
| 30°   | 302.3 | 279.3 | 232.4 | 199.4 | 187.4 |
| 32.5° | 290.6 | 264.4 | 213.3 | 178.1 | 166.8 |
| 35°   | 278.6 | 249.1 | 194.1 | 157.2 | 145.8 |
| 37.5° | 266.1 | 233.5 | 174.9 | 137.3 | 126.0 |
| 40°   | 253.0 | 217.5 | 155.8 | 118.5 | 107.5 |
| 42.5° | 239.5 | 201.2 | 137.3 | 100.8 | 90.5  |
| 45°   | 226.4 | 184.9 | 119.6 | 84.1  | 74.2  |
| 47.5° | 212.6 | 168.6 | 102.2 | 68.5  | 60.0  |
| 50°   | 198.7 | 152.2 | 85.5  | 55.0  | 49.3  |
| 52.5° | 184.5 | 135.9 | 70.3  | 45.1  | 41.2  |
| 55°   | 170.3 | 119.6 | 56.4  | 37.6  | 35.1  |
| 57.5° | 156.1 | 103.3 | 43.6  | 31.9  | 29.1  |
| 60°   | 141.9 | 87.3  | 34.1  | 25.9  | 23.4  |
| 62.5° | 127.4 | 71.3  | 28.0  | 20.6  | 18.5  |
| 65°   | 112.8 | 56.8  | 22.4  | 16.0  | 14.5  |
| 67.5° | 98.3  | 43.3  | 17.0  | 12.4  | 11.4  |
| 70°   | 82.7  | 30.9  | 12.8  | 9.6   | 9.2   |
| 72.5° | 69.2  | 20.9  | 9.2   | 7.5   | 7.1   |
| 75°   | 54.6  | 14.9  | 6.7   | 5.7   | 5.3   |
| 77.5° | 42.2  | 9.6   | 5.0   | 4.6   | 4.3   |
| 80°   | 29.5  | 5.3   | 3.5   | 3.2   | 3.2   |
| 82.5° | 18.1  | 2.8   | 2.5   | 2.1   | 2.1   |
| 85°   | 8.2   | 1.4   | 1.4   | 1.4   | 1.4   |
| 87.5° | 1.4   | 0.7   | 0.7   | 0.7   | 0.7   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

TEST NUMBER: P1056023

CATALOG NUMBER: S124R3DRP-S350D930-X4F0-XX-UDD-F-S

**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 | 14.95            | 16.35 | 15.31 | 16.67 | 16.98 | 6.03           | 7.44 | 6.39 | 7.75 | 8.06 |
|                 | 3H   | 16.53            | 17.78 | 16.91 | 18.11 | 18.48 | 6.62           | 7.87 | 7.00 | 8.20 | 8.57 |
|                 | 4H   | 17.13            | 18.29 | 17.53 | 18.64 | 19.03 | 6.78           | 7.95 | 7.18 | 8.30 | 8.68 |
|                 | 6H   | 17.56            | 18.63 | 17.97 | 19.00 | 19.40 | 6.89           | 7.96 | 7.30 | 8.33 | 8.73 |
|                 | 8H   | 17.67            | 18.69 | 18.10 | 19.08 | 19.49 | 6.91           | 7.93 | 7.34 | 8.32 | 8.72 |
|                 | 12H  | 17.71            | 18.69 | 18.15 | 19.07 | 19.50 | 6.91           | 7.89 | 7.35 | 8.27 | 8.70 |
| 4H              | 2H   | 14.80            | 15.97 | 15.20 | 16.32 | 16.70 | 6.61           | 7.78 | 7.02 | 8.13 | 8.51 |
|                 | 3H   | 16.45            | 17.41 | 16.86 | 17.81 | 18.21 | 7.33           | 8.29 | 7.74 | 8.69 | 9.09 |
|                 | 4H   | 17.05            | 17.91 | 17.49 | 18.33 | 18.77 | 7.53           | 8.39 | 7.97 | 8.81 | 9.25 |
|                 | 6H   | 17.55            | 18.29 | 18.01 | 18.73 | 19.20 | 7.70           | 8.44 | 8.16 | 8.89 | 9.35 |
|                 | 8H   | 17.69            | 18.38 | 18.15 | 18.83 | 19.29 | 7.73           | 8.43 | 8.20 | 8.87 | 9.34 |
|                 | 12H  | 17.76            | 18.37 | 18.25 | 18.86 | 19.33 | 7.76           | 8.37 | 8.24 | 8.85 | 9.32 |
| 8H              | 4H   | 16.95            | 17.64 | 17.41 | 18.08 | 18.55 | 7.81           | 8.50 | 8.27 | 8.94 | 9.41 |
|                 | 6H   | 17.43            | 17.99 | 17.93 | 18.49 | 18.97 | 8.01           | 8.58 | 8.51 | 9.07 | 9.55 |
|                 | 8H   | 17.57            | 18.08 | 18.09 | 18.59 | 19.08 | 8.07           | 8.57 | 8.58 | 9.09 | 9.58 |
|                 | 12H  | 17.66            | 18.11 | 18.18 | 18.60 | 19.17 | 8.12           | 8.57 | 8.63 | 9.06 | 9.63 |
| 12H             | 4H   | 16.91            | 17.52 | 17.39 | 18.00 | 18.47 | 7.83           | 8.45 | 8.32 | 8.93 | 9.40 |
|                 | 6H   | 17.37            | 17.88 | 17.89 | 18.39 | 18.88 | 8.04           | 8.55 | 8.56 | 9.06 | 9.55 |
|                 | 8H   | 17.54            | 17.98 | 18.05 | 18.48 | 19.05 | 8.13           | 8.58 | 8.64 | 9.07 | 9.64 |