

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: P1059196

Luminaire Tested: S123RDRP-S340D850-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059196  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S340D850-X4F0-XX-UDD-SVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

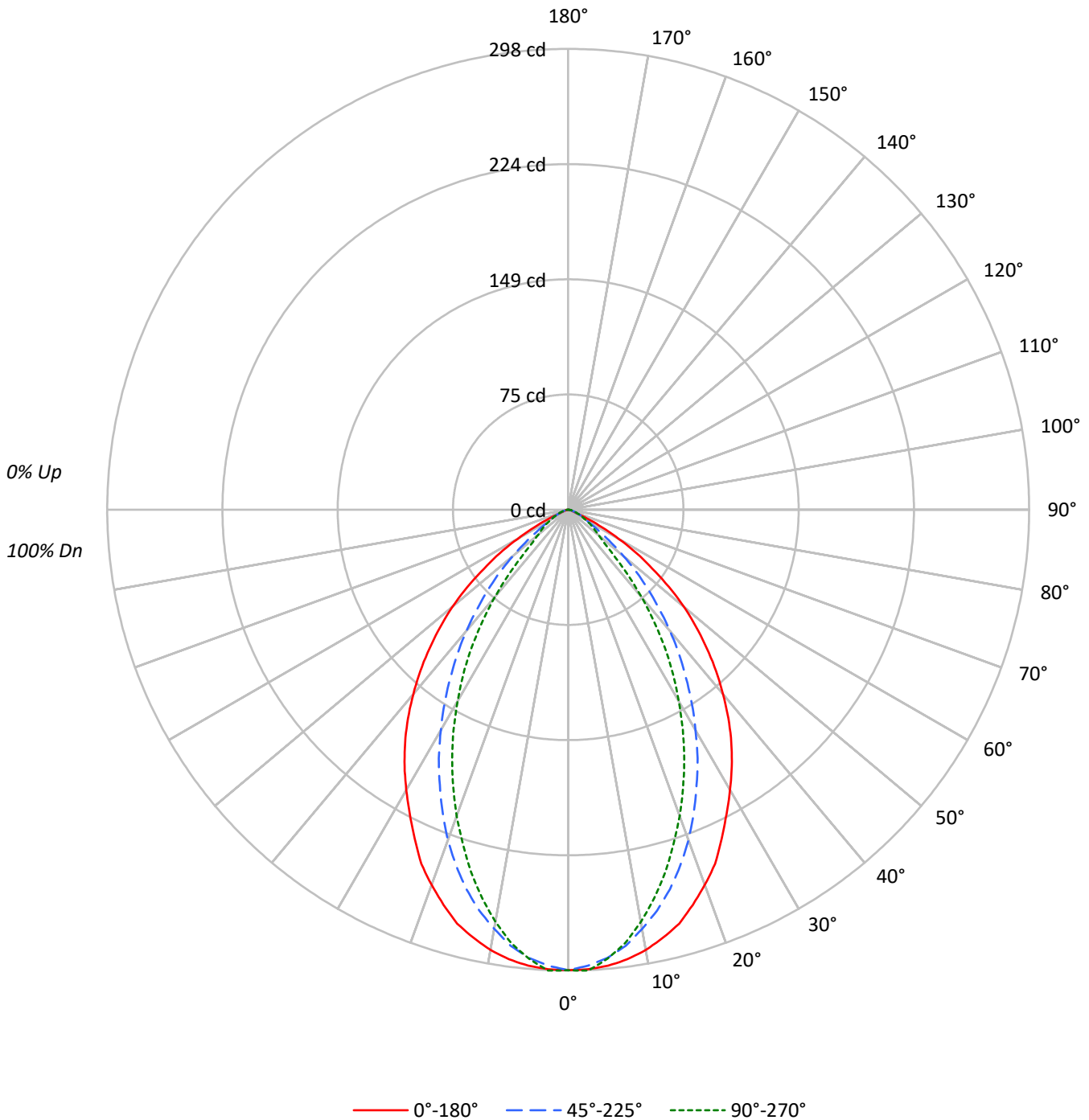
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 384.5 lumens  
Efficiency: N/A  
Efficacy: 30.8 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.5  
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: P1059196

CATALOG NUMBER: S123RDRP-S340D850-X4F0-XX-UDD-SVL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1059196

CATALOG NUMBER: S123RDRP-S340D850-X4F0-XX-UDD-SVL-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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 112 | 109 | 106 | 103 | 110 | 107 | 104 | 102 | 103 | 100 | 98  | 99  | 97  | 95  | 95  | 94  | 93  | 91  |
| 2   | 105 | 99  | 94  | 90  | 103 | 97  | 93  | 89  | 94  | 90  | 87  | 91  | 88  | 85  | 88  | 86  | 83  | 82  |
| 3   | 98  | 90  | 84  | 80  | 96  | 89  | 83  | 79  | 86  | 82  | 78  | 84  | 80  | 76  | 81  | 78  | 75  | 73  |
| 4   | 92  | 83  | 76  | 71  | 90  | 82  | 75  | 70  | 79  | 74  | 70  | 77  | 73  | 69  | 75  | 71  | 68  | 66  |
| 5   | 86  | 76  | 69  | 64  | 84  | 75  | 68  | 63  | 73  | 67  | 63  | 71  | 66  | 62  | 70  | 65  | 62  | 60  |
| 6   | 81  | 70  | 63  | 58  | 79  | 69  | 62  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 65  | 60  | 56  | 55  |
| 7   | 76  | 65  | 58  | 53  | 74  | 64  | 57  | 53  | 63  | 57  | 52  | 61  | 56  | 52  | 60  | 55  | 52  | 50  |
| 8   | 71  | 60  | 53  | 48  | 70  | 60  | 53  | 48  | 58  | 52  | 48  | 57  | 52  | 48  | 56  | 51  | 48  | 46  |
| 9   | 67  | 56  | 49  | 45  | 66  | 56  | 49  | 44  | 55  | 48  | 44  | 54  | 48  | 44  | 53  | 48  | 44  | 42  |
| 10  | 64  | 52  | 46  | 41  | 63  | 52  | 46  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 49  | 44  | 41  | 39  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3497 | 3497 | 3497 |
| 5°  | 3489 | 3429 | 3435 |
| 10° | 3447 | 3281 | 3227 |
| 15° | 3369 | 3088 | 2948 |
| 20° | 3226 | 2840 | 2633 |
| 25° | 3041 | 2545 | 2300 |
| 30° | 2838 | 2232 | 1938 |
| 35° | 2636 | 1904 | 1560 |
| 40° | 2388 | 1568 | 1131 |
| 45° | 2106 | 1217 | 681  |
| 50° | 1785 | 851  | 464  |
| 55° | 1359 | 510  | 387  |
| 60° | 888  | 324  | 303  |
| 65° | 372  | 245  | 245  |
| 70° | 127  | 175  | 189  |
| 75° | 104  | 127  | 145  |
| 80° | 61   | 95   | 122  |
| 85° | 67   | 67   | 121  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2106 cd/sqm

TEST NUMBER: P1059196

CATALOG NUMBER: S123RDRP-S340D850-X4F0-XX-UDD-SVL-B

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 27.5   | 7.2       |
| 10°-20°   | 72.0   | 18.7      |
| 20°-30°   | 92.3   | 24.0      |
| 30°-40°   | 86.6   | 22.5      |
| 40°-50°   | 60.4   | 15.7      |
| 50°-60°   | 31.3   | 8.1       |
| 60°-70°   | 10.7   | 2.8       |
| 70°-80°   | 3.0    | 0.8       |
| 80°-90°   | 0.7    | 0.2       |
| 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°    | 191.8  | 49.9      |
| 0°-40°    | 278.4  | 72.4      |
| 0°-60°    | 370.1  | 96.3      |
| 0°-90°    | 384.5  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 384.5  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 298 | 298   | 298 | 298   | 298 |      |
| 5°  | 296 | 296   | 291 | 292   | 291 | 28   |
| 15° | 277 | 270   | 254 | 246   | 242 | 78   |
| 25° | 235 | 220   | 196 | 183   | 178 | 108  |
| 35° | 184 | 161   | 133 | 116   | 109 | 115  |
| 45° | 127 | 104   | 73  | 51    | 41  | 98   |
| 55° | 66  | 50    | 25  | 19    | 19  | 60   |
| 65° | 13  | 12    | 9   | 8     | 9   | 16   |
| 75° | 2   | 2     | 3   | 3     | 3   | 2    |
| 85° | 0   | 0     | 0   | 0     | 1   | 0    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P1059196

CATALOG NUMBER: S123RDRP-S340D850-X4F0-XX-UDD-SVL-B

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 297.8 | 297.8 | 297.8 | 297.8 | 297.8 |
| 2.5°  | 297.4 | 297.8 | 295.1 | 297.8 | 298.3 |
| 5°    | 296.0 | 295.5 | 290.9 | 292.3 | 291.4 |
| 7.5°  | 293.2 | 291.8 | 284.4 | 282.6 | 282.6 |
| 10°   | 289.1 | 286.3 | 275.2 | 272.0 | 270.6 |
| 12.5° | 283.5 | 279.8 | 265.5 | 259.6 | 257.2 |
| 15°   | 277.1 | 270.2 | 254.0 | 245.7 | 242.5 |
| 17.5° | 267.9 | 258.6 | 241.1 | 231.4 | 226.4 |
| 20°   | 258.2 | 246.6 | 227.3 | 215.8 | 210.7 |
| 22.5° | 248.0 | 234.2 | 212.1 | 199.6 | 194.1 |
| 25°   | 234.7 | 219.9 | 196.4 | 183.0 | 177.5 |
| 27.5° | 221.7 | 206.1 | 181.2 | 166.0 | 160.4 |
| 30°   | 209.3 | 190.9 | 164.6 | 149.8 | 142.9 |
| 32.5° | 196.9 | 176.1 | 148.9 | 132.8 | 126.3 |
| 35°   | 183.9 | 161.4 | 132.8 | 115.7 | 108.8 |
| 37.5° | 170.1 | 147.1 | 117.6 | 99.1  | 90.8  |
| 40°   | 155.8 | 131.9 | 102.3 | 81.6  | 73.8  |
| 42.5° | 141.5 | 118.0 | 87.1  | 65.9  | 56.7  |
| 45°   | 126.8 | 103.7 | 73.3  | 50.7  | 41.0  |
| 47.5° | 112.0 | 89.4  | 59.9  | 36.9  | 30.9  |
| 50°   | 97.7  | 76.1  | 46.6  | 27.2  | 25.4  |
| 52.5° | 82.1  | 63.2  | 35.0  | 22.6  | 22.1  |
| 55°   | 66.4  | 49.8  | 24.9  | 19.4  | 18.9  |
| 57.5° | 52.6  | 38.7  | 18.0  | 16.1  | 15.7  |
| 60°   | 37.8  | 27.7  | 13.8  | 13.4  | 12.9  |
| 62.5° | 24.9  | 18.9  | 11.1  | 10.6  | 10.6  |
| 65°   | 13.4  | 11.5  | 8.8   | 8.3   | 8.8   |
| 67.5° | 5.5   | 6.5   | 6.5   | 6.9   | 6.9   |
| 70°   | 3.7   | 4.1   | 5.1   | 5.5   | 5.5   |
| 72.5° | 2.8   | 3.2   | 3.7   | 4.1   | 4.1   |
| 75°   | 2.3   | 2.3   | 2.8   | 3.2   | 3.2   |
| 77.5° | 1.4   | 1.8   | 1.8   | 2.3   | 2.8   |
| 80°   | 0.9   | 1.4   | 1.4   | 1.8   | 1.8   |
| 82.5° | 0.5   | 0.9   | 0.9   | 1.4   | 1.4   |
| 85°   | 0.5   | 0.5   | 0.5   | 0.5   | 0.9   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.5   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



TEST NUMBER: P1059196  
 CATALOG NUMBER: S123RDRP-S340D850-X4F0-XX-UDD-SVL-B

**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 | 10.68            | 11.94 | 11.05 | 12.25 | 12.57 | 4.18           | 5.44 | 4.54 | 5.75 | 6.07 |
|                 | 3H   | 10.63            | 11.74 | 11.01 | 12.07 | 12.44 | 4.95           | 6.06 | 5.33 | 6.39 | 6.75 |
|                 | 4H   | 10.58            | 11.61 | 10.98 | 11.96 | 12.35 | 5.15           | 6.18 | 5.55 | 6.53 | 6.91 |
|                 | 6H   | 10.51            | 11.45 | 10.93 | 11.83 | 12.22 | 5.29           | 6.23 | 5.71 | 6.61 | 7.00 |
|                 | 8H   | 10.47            | 11.36 | 10.90 | 11.75 | 12.16 | 5.33           | 6.22 | 5.76 | 6.61 | 7.02 |
|                 | 12H  | 10.43            | 11.28 | 10.86 | 11.66 | 12.09 | 5.35           | 6.20 | 5.78 | 6.58 | 7.01 |
| 4H              | 2H   | 10.53            | 11.56 | 10.93 | 11.91 | 12.29 | 4.44           | 5.47 | 4.84 | 5.82 | 6.21 |
|                 | 3H   | 10.51            | 11.35 | 10.93 | 11.75 | 12.16 | 5.34           | 6.18 | 5.76 | 6.58 | 6.99 |
|                 | 4H   | 10.46            | 11.20 | 10.90 | 11.62 | 12.07 | 5.61           | 6.35 | 6.05 | 6.77 | 7.22 |
|                 | 6H   | 10.40            | 11.04 | 10.87 | 11.49 | 11.96 | 5.82           | 6.46 | 6.29 | 6.91 | 7.38 |
|                 | 8H   | 10.35            | 10.95 | 10.82 | 11.39 | 11.87 | 5.89           | 6.48 | 6.36 | 6.93 | 7.40 |
|                 | 12H  | 10.31            | 10.83 | 10.79 | 11.31 | 11.79 | 5.93           | 6.45 | 6.41 | 6.93 | 7.41 |
| 8H              | 4H   | 10.35            | 10.94 | 10.82 | 11.39 | 11.86 | 5.59           | 6.19 | 6.06 | 6.64 | 7.11 |
|                 | 6H   | 10.28            | 10.77 | 10.79 | 11.27 | 11.75 | 5.86           | 6.34 | 6.36 | 6.84 | 7.32 |
|                 | 8H   | 10.23            | 10.67 | 10.76 | 11.19 | 11.68 | 5.97           | 6.40 | 6.49 | 6.92 | 7.41 |
|                 | 12H  | 10.20            | 10.58 | 10.71 | 11.08 | 11.65 | 6.04           | 6.43 | 6.56 | 6.93 | 7.50 |
| 12H             | 4H   | 10.30            | 10.82 | 10.79 | 11.31 | 11.78 | 5.56           | 6.08 | 6.04 | 6.56 | 7.04 |
|                 | 6H   | 10.23            | 10.66 | 10.75 | 11.18 | 11.67 | 5.82           | 6.26 | 6.35 | 6.77 | 7.27 |
|                 | 8H   | 10.20            | 10.58 | 10.71 | 11.08 | 11.65 | 5.96           | 6.35 | 6.48 | 6.84 | 7.42 |