

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: P1056575

Luminaire Tested: S125R3DR-H610D830-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056575  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125R3DR-H610D830-X4F0-XX-UDD-FLL-S  
Description: DEFINE 5, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

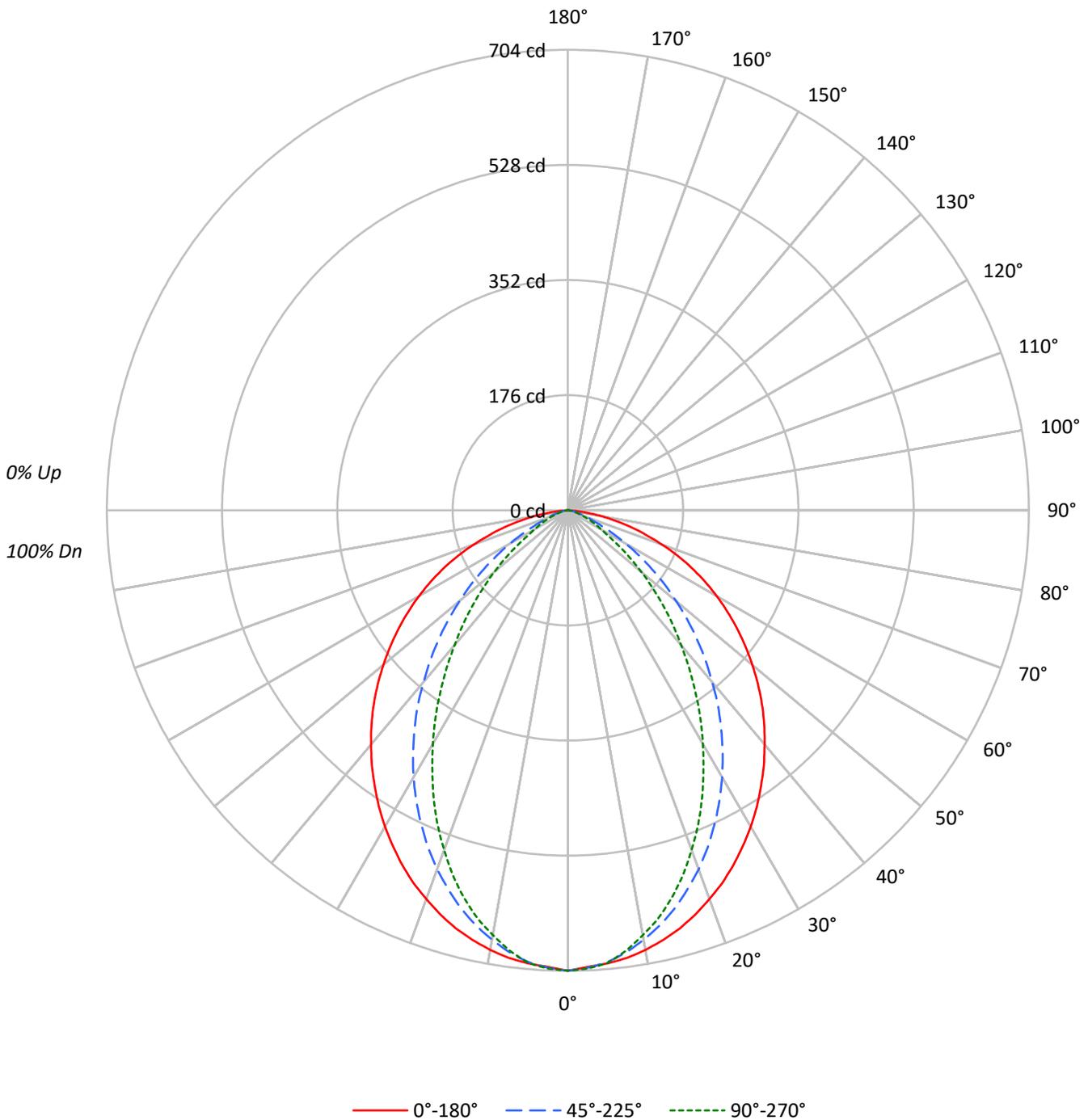
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1272.2 lumens  
Efficiency: N/A  
Efficacy: 73.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11  
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.3  
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: P1056575

CATALOG NUMBER: S125R3DR-H610D830-X4F0-XX-UDD-FLL-S

### Luminous Intensity Polar Plot



TEST NUMBER: P1056575

CATALOG NUMBER: S125R3DR-H610D830-X4F0-XX-UDD-FLL-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  | 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   | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |    |    |    | 88  |   |  |   |
| 2   | 102 | 96  | 90  | 85  | 100 | 94  | 89  | 84  | 90  | 86  | 82  | 87  | 84  | 80  | 84  | 81  | 79  | 77  |    |    |    |    | 77  |   |  |   |
| 3   | 95  | 86  | 79  | 73  | 92  | 84  | 78  | 73  | 81  | 76  | 71  | 79  | 74  | 70  | 76  | 72  | 69  | 67  |    |    |    |    | 67  |   |  |   |
| 4   | 88  | 77  | 70  | 64  | 86  | 76  | 69  | 63  | 74  | 67  | 62  | 71  | 66  | 62  | 69  | 65  | 61  | 59  |    |    |    |    | 59  |   |  |   |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 55  | 63  | 58  | 54  | 52  |    |    |    |    | 52  |   |  |   |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 55  | 50  | 61  | 54  | 49  | 60  | 54  | 49  | 58  | 53  | 49  | 47  |    |    |    |    | 47  |   |  |   |
| 7   | 71  | 58  | 50  | 45  | 69  | 58  | 50  | 45  | 56  | 49  | 44  | 55  | 49  | 44  | 54  | 48  | 44  | 42  |    |    |    |    | 42  |   |  |   |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    | 38  |   |  |   |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 41  | 37  | 47  | 41  | 37  | 46  | 41  | 36  | 35  |    |    |    |    | 35  |   |  |   |
| 10  | 58  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |    |    | 32  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4976 | 4976 | 4976 |
| 5°  | 4935 | 4921 | 4930 |
| 10° | 4899 | 4786 | 4734 |
| 15° | 4841 | 4612 | 4489 |
| 20° | 4756 | 4393 | 4158 |
| 25° | 4667 | 4133 | 3782 |
| 30° | 4559 | 3846 | 3367 |
| 35° | 4438 | 3521 | 2930 |
| 40° | 4312 | 3163 | 2478 |
| 45° | 4190 | 2788 | 2052 |
| 50° | 4043 | 2372 | 1612 |
| 55° | 3887 | 1928 | 1173 |
| 60° | 3713 | 1438 | 838  |
| 65° | 3489 | 948  | 654  |
| 70° | 3152 | 659  | 459  |
| 75° | 2742 | 426  | 355  |
| 80° | 2150 | 318  | 293  |
| 85° | 1111 | 268  | 211  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4190 cd/sqm



TEST NUMBER: P1056575

CATALOG NUMBER: S125R3DR-H610D830-X4F0-XX-UDD-FLL-S

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 65.6   | 5.2       |
| 10°-20°   | 178.2  | 14.0      |
| 20°-30°   | 246.5  | 19.4      |
| 30°-40°   | 261.1  | 20.5      |
| 40°-50°   | 227.9  | 17.9      |
| 50°-60°   | 162.1  | 12.7      |
| 60°-70°   | 90.1   | 7.1       |
| 70°-80°   | 34.7   | 2.7       |
| 80°-90°   | 6.0    | 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°    | 490.3  | 38.5      |
| 0°-40°    | 751.4  | 59.1      |
| 0°-60°    | 1141.4 | 89.7      |
| 0°-90°    | 1272.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1272.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 704 | 704   | 704 | 704   | 704 |      |
| 5°  | 695 | 701   | 693 | 692   | 695 | 66   |
| 15° | 662 | 656   | 630 | 616   | 613 | 186  |
| 25° | 598 | 578   | 530 | 497   | 485 | 275  |
| 35° | 514 | 479   | 408 | 358   | 340 | 322  |
| 45° | 419 | 369   | 279 | 223   | 205 | 323  |
| 55° | 315 | 253   | 156 | 108   | 95  | 282  |
| 65° | 209 | 137   | 57  | 42    | 39  | 206  |
| 75° | 100 | 39    | 16  | 13    | 13  | 106  |
| 85° | 14  | 4     | 3   | 3     | 3   | 20   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P1056575

CATALOG NUMBER: S125R3DR-H610D830-X4F0-XX-UDD-FLL-S

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 703.9 | 703.9 | 703.9 | 703.9 | 703.9 |
| 2.5°  | 698.6 | 705.8 | 699.9 | 700.6 | 701.3 |
| 5°    | 695.4 | 700.6 | 693.4 | 691.5 | 694.7 |
| 7.5°  | 690.2 | 694.1 | 681.7 | 677.1 | 679.1 |
| 10°   | 682.4 | 683.7 | 666.7 | 660.2 | 659.5 |
| 12.5° | 672.6 | 670.6 | 649.8 | 639.3 | 638.7 |
| 15°   | 661.5 | 655.6 | 630.2 | 616.5 | 613.3 |
| 17.5° | 647.8 | 638.7 | 607.4 | 589.8 | 584.6 |
| 20°   | 632.2 | 619.8 | 583.9 | 561.1 | 552.7 |
| 22.5° | 616.5 | 599.6 | 557.9 | 529.2 | 520.1 |
| 25°   | 598.3 | 578.1 | 529.8 | 497.3 | 484.9 |
| 27.5° | 578.7 | 554.6 | 501.2 | 463.4 | 448.4 |
| 30°   | 558.5 | 530.5 | 471.2 | 428.8 | 412.5 |
| 32.5° | 537.0 | 505.1 | 439.9 | 393.6 | 376.7 |
| 35°   | 514.2 | 479.0 | 408.0 | 358.4 | 339.5 |
| 37.5° | 491.4 | 452.3 | 376.7 | 323.9 | 304.4 |
| 40°   | 467.3 | 424.9 | 342.8 | 288.7 | 268.5 |
| 42.5° | 443.8 | 396.9 | 310.9 | 255.5 | 237.2 |
| 45°   | 419.1 | 368.9 | 278.9 | 222.9 | 205.3 |
| 47.5° | 393.6 | 339.5 | 247.0 | 192.3 | 174.7 |
| 50°   | 367.6 | 310.9 | 215.7 | 162.3 | 146.6 |
| 52.5° | 341.5 | 282.2 | 186.4 | 133.6 | 119.9 |
| 55°   | 315.4 | 252.9 | 156.4 | 108.2 | 95.2  |
| 57.5° | 289.4 | 224.2 | 128.4 | 84.7  | 73.0  |
| 60°   | 262.6 | 194.9 | 101.7 | 62.6  | 59.3  |
| 62.5° | 235.9 | 166.2 | 78.9  | 51.5  | 48.9  |
| 65°   | 208.6 | 136.9 | 56.7  | 41.7  | 39.1  |
| 67.5° | 181.2 | 110.1 | 41.1  | 31.9  | 30.0  |
| 70°   | 152.5 | 84.1  | 31.9  | 24.1  | 22.2  |
| 72.5° | 125.1 | 60.6  | 22.8  | 17.6  | 16.9  |
| 75°   | 100.4 | 39.1  | 15.6  | 13.0  | 13.0  |
| 77.5° | 75.6  | 23.5  | 11.1  | 9.8   | 9.8   |
| 80°   | 52.8  | 13.7  | 7.8   | 7.2   | 7.2   |
| 82.5° | 31.9  | 7.2   | 5.2   | 4.6   | 4.6   |
| 85°   | 13.7  | 3.9   | 3.3   | 2.6   | 2.6   |
| 87.5° | 2.6   | 1.3   | 1.3   | 1.3   | 1.3   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

TEST NUMBER: P1056575

CATALOG NUMBER: S125R3DR-H610D830-X4F0-XX-UDD-FLL-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 | 16.74            | 18.18 | 17.10 | 18.50 | 18.81 | 9.37           | 10.82 | 9.74  | 11.13 | 11.45 |
|                 | 3H   | 18.30            | 19.58 | 18.67 | 19.91 | 20.27 | 9.94           | 11.22 | 10.32 | 11.55 | 11.92 |
|                 | 4H   | 18.82            | 20.02 | 19.22 | 20.37 | 20.75 | 10.06          | 11.26 | 10.46 | 11.61 | 11.99 |
|                 | 6H   | 19.15            | 20.26 | 19.57 | 20.63 | 21.02 | 10.13          | 11.23 | 10.54 | 11.60 | 11.99 |
|                 | 8H   | 19.24            | 20.29 | 19.67 | 20.68 | 21.08 | 10.13          | 11.18 | 10.56 | 11.57 | 11.98 |
|                 | 12H  | 19.26            | 20.27 | 19.69 | 20.65 | 21.08 | 10.12          | 11.13 | 10.55 | 11.51 | 11.94 |
| 4H              | 2H   | 16.63            | 17.84 | 17.03 | 18.19 | 18.57 | 9.94           | 11.14 | 10.34 | 11.49 | 11.87 |
|                 | 3H   | 18.30            | 19.29 | 18.71 | 19.69 | 20.09 | 10.61          | 11.60 | 11.02 | 12.00 | 12.40 |
|                 | 4H   | 18.85            | 19.73 | 19.28 | 20.15 | 20.59 | 10.77          | 11.65 | 11.20 | 12.07 | 12.51 |
|                 | 6H   | 19.24            | 20.01 | 19.70 | 20.45 | 20.91 | 10.88          | 11.64 | 11.34 | 12.09 | 12.55 |
|                 | 8H   | 19.35            | 20.06 | 19.81 | 20.50 | 20.97 | 10.89          | 11.61 | 11.36 | 12.05 | 12.52 |
|                 | 12H  | 19.39            | 20.03 | 19.88 | 20.51 | 20.98 | 10.89          | 11.53 | 11.38 | 12.01 | 12.48 |
| 8H              | 4H   | 18.75            | 19.47 | 19.22 | 19.91 | 20.38 | 11.04          | 11.75 | 11.50 | 12.20 | 12.66 |
|                 | 6H   | 19.14            | 19.72 | 19.64 | 20.22 | 20.70 | 11.17          | 11.76 | 11.67 | 12.25 | 12.73 |
|                 | 8H   | 19.25            | 19.77 | 19.76 | 20.28 | 20.77 | 11.20          | 11.73 | 11.72 | 12.24 | 12.73 |
|                 | 12H  | 19.31            | 19.77 | 19.82 | 20.27 | 20.84 | 11.22          | 11.69 | 11.74 | 12.18 | 12.75 |
| 12H             | 4H   | 18.72            | 19.35 | 19.20 | 19.83 | 20.30 | 11.05          | 11.69 | 11.54 | 12.17 | 12.64 |
|                 | 6H   | 19.09            | 19.61 | 19.60 | 20.12 | 20.61 | 11.18          | 11.71 | 11.70 | 12.22 | 12.71 |
|                 | 8H   | 19.21            | 19.68 | 19.73 | 20.17 | 20.74 | 11.24          | 11.71 | 11.76 | 12.20 | 12.77 |