

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: P1056555

Luminaire Tested: S125R3DR-H375D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056555  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125R3DR-H375D840-X4F0-XX-UDD-F-W  
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

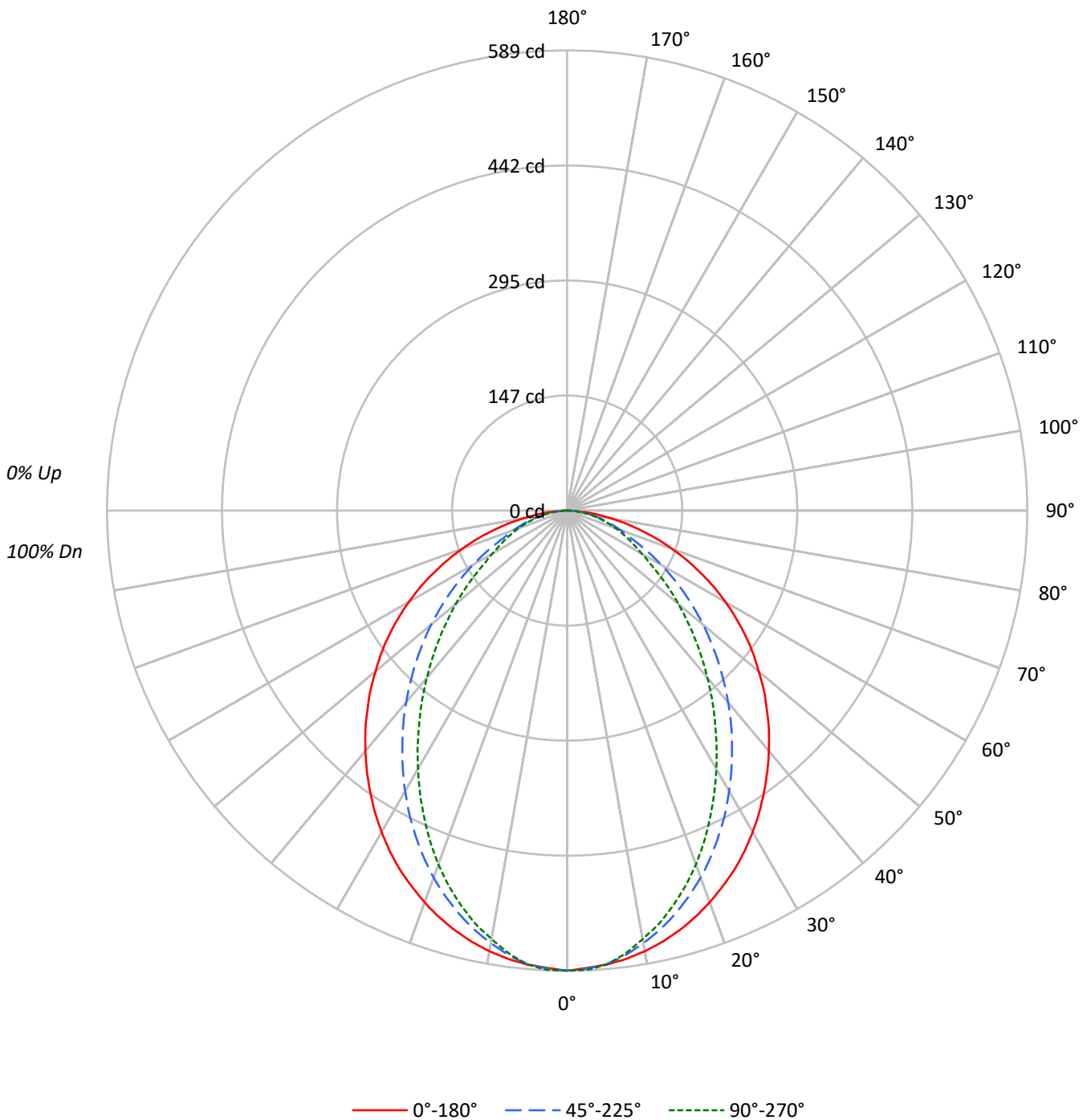
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1248.1 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17  
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 110 | 105 | 101 | 98  | 107 | 103 | 100 | 96  | 99  | 96  | 93  | 95  | 93  | 90  | 91  | 90  | 88  | 86  |
| 2   | 101 | 93  | 87  | 81  | 98  | 91  | 85  | 80  | 88  | 83  | 79  | 84  | 80  | 77  | 81  | 78  | 75  | 73  |
| 3   | 92  | 83  | 75  | 69  | 90  | 81  | 74  | 68  | 78  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 63  |
| 4   | 85  | 74  | 66  | 59  | 83  | 73  | 65  | 59  | 70  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 55  |
| 5   | 79  | 67  | 58  | 52  | 77  | 66  | 58  | 52  | 63  | 56  | 51  | 62  | 55  | 51  | 60  | 54  | 50  | 48  |
| 6   | 73  | 60  | 52  | 46  | 71  | 59  | 51  | 46  | 58  | 51  | 45  | 56  | 50  | 45  | 55  | 49  | 45  | 43  |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 46  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |
| 8   | 63  | 51  | 42  | 37  | 62  | 50  | 42  | 37  | 49  | 42  | 37  | 47  | 41  | 36  | 46  | 40  | 36  | 34  |
| 9   | 59  | 47  | 39  | 33  | 58  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |
| 10  | 56  | 43  | 36  | 31  | 55  | 43  | 35  | 31  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 28  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4163 | 4163 | 4163 |
| 5°  | 4139 | 4135 | 4139 |
| 10° | 4110 | 4035 | 3998 |
| 15° | 4069 | 3912 | 3831 |
| 20° | 4014 | 3761 | 3625 |
| 25° | 3954 | 3581 | 3379 |
| 30° | 3877 | 3386 | 3117 |
| 35° | 3792 | 3175 | 2845 |
| 40° | 3706 | 2958 | 2577 |
| 45° | 3616 | 2731 | 2310 |
| 50° | 3520 | 2498 | 2045 |
| 55° | 3431 | 2243 | 1778 |
| 60° | 3310 | 1971 | 1562 |
| 65° | 3146 | 1673 | 1452 |
| 70° | 2954 | 1494 | 1360 |
| 75° | 2671 | 1377 | 1281 |
| 80° | 2321 | 1250 | 1197 |
| 85° | 1817 | 1103 | 1103 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3616 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 55.1   | 4.4       |
| 10°-20°   | 151.3  | 12.1      |
| 20°-30°   | 213.7  | 17.1      |
| 30°-40°   | 235.3  | 18.8      |
| 40°-50°   | 219.4  | 17.6      |
| 50°-60°   | 175.2  | 14.0      |
| 60°-70°   | 117.9  | 9.4       |
| 70°-80°   | 62.8   | 5.0       |
| 80°-90°   | 17.4   | 1.4       |
| 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°    | 420.1  | 33.7      |
| 0°-40°    | 655.3  | 52.5      |
| 0°-60°    | 1050.0 | 84.1      |
| 0°-90°    | 1248.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1248.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 589 | 589   | 589 | 589   | 589 |      |
| 5°  | 583 | 588   | 583 | 581   | 583 | 55   |
| 15° | 556 | 553   | 534 | 525   | 524 | 157  |
| 25° | 507 | 492   | 459 | 439   | 433 | 233  |
| 35° | 439 | 414   | 368 | 339   | 330 | 275  |
| 45° | 362 | 328   | 273 | 240   | 231 | 279  |
| 55° | 278 | 236   | 182 | 153   | 144 | 249  |
| 65° | 188 | 147   | 100 | 89    | 87  | 187  |
| 75° | 98  | 65    | 50  | 47    | 47  | 104  |
| 85° | 22  | 15    | 14  | 14    | 14  | 27   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 588.9 | 588.9 | 588.9 | 588.9 | 588.9 |
| 2.5°  | 585.8 | 590.6 | 586.7 | 587.6 | 588.4 |
| 5°    | 583.2 | 588.0 | 582.7 | 581.0 | 583.2 |
| 7.5°  | 578.8 | 582.7 | 574.0 | 570.0 | 571.8 |
| 10°   | 572.6 | 575.3 | 562.1 | 556.9 | 556.9 |
| 12.5° | 565.2 | 565.2 | 549.4 | 542.0 | 542.0 |
| 15°   | 556.0 | 552.9 | 534.5 | 525.3 | 523.5 |
| 17.5° | 545.5 | 539.8 | 517.8 | 506.0 | 503.8 |
| 20°   | 533.6 | 524.4 | 499.9 | 484.5 | 481.9 |
| 22.5° | 520.5 | 508.6 | 480.1 | 461.3 | 458.2 |
| 25°   | 506.9 | 491.5 | 459.1 | 438.9 | 433.2 |
| 27.5° | 491.5 | 473.1 | 437.6 | 414.8 | 407.8 |
| 30°   | 474.9 | 453.8 | 414.8 | 389.4 | 381.9 |
| 32.5° | 457.8 | 434.1 | 391.6 | 364.4 | 356.0 |
| 35°   | 439.4 | 413.5 | 367.9 | 338.9 | 329.7 |
| 37.5° | 420.9 | 392.9 | 344.6 | 314.4 | 304.7 |
| 40°   | 401.6 | 371.0 | 320.5 | 289.4 | 279.3 |
| 42.5° | 382.4 | 349.5 | 296.8 | 265.3 | 254.8 |
| 45°   | 361.7 | 327.5 | 273.2 | 239.8 | 231.1 |
| 47.5° | 342.0 | 305.2 | 249.9 | 217.5 | 207.8 |
| 50°   | 320.1 | 281.9 | 227.1 | 194.7 | 185.9 |
| 52.5° | 299.9 | 259.1 | 204.3 | 174.1 | 164.9 |
| 55°   | 278.4 | 236.3 | 182.0 | 153.0 | 144.3 |
| 57.5° | 256.1 | 213.5 | 160.5 | 133.3 | 125.0 |
| 60°   | 234.1 | 190.7 | 139.4 | 114.4 | 110.5 |
| 62.5° | 211.8 | 169.3 | 119.7 | 100.4 | 97.8  |
| 65°   | 188.1 | 146.9 | 100.0 | 88.6  | 86.8  |
| 67.5° | 165.7 | 125.4 | 84.2  | 77.6  | 75.9  |
| 70°   | 142.9 | 103.9 | 72.3  | 66.6  | 65.8  |
| 72.5° | 120.6 | 83.3  | 60.9  | 57.0  | 56.1  |
| 75°   | 97.8  | 64.9  | 50.4  | 47.4  | 46.9  |
| 77.5° | 76.7  | 48.7  | 39.9  | 38.6  | 37.7  |
| 80°   | 57.0  | 36.4  | 30.7  | 29.8  | 29.4  |
| 82.5° | 39.0  | 25.0  | 21.9  | 21.9  | 21.0  |
| 85°   | 22.4  | 15.3  | 13.6  | 14.0  | 13.6  |
| 87.5° | 8.3   | 6.6   | 6.1   | 6.6   | 6.6   |
| 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 | 16.24            | 17.78 | 16.61 | 18.10 | 18.41 | 12.63          | 14.17 | 12.99 | 14.48 | 14.79 |
|                 | 3H   | 18.03            | 19.41 | 18.41 | 19.74 | 20.10 | 14.10          | 15.49 | 14.48 | 15.81 | 16.17 |
|                 | 4H   | 18.68            | 19.98 | 19.08 | 20.33 | 20.71 | 14.69          | 15.99 | 15.09 | 16.34 | 16.72 |
|                 | 6H   | 19.16            | 20.36 | 19.57 | 20.72 | 21.12 | 15.15          | 16.36 | 15.57 | 16.72 | 17.11 |
|                 | 8H   | 19.31            | 20.46 | 19.74 | 20.85 | 21.25 | 15.31          | 16.46 | 15.74 | 16.85 | 17.25 |
|                 | 12H  | 19.41            | 20.50 | 19.84 | 20.89 | 21.31 | 15.43          | 16.52 | 15.86 | 16.91 | 17.34 |
| 4H              | 2H   | 16.38            | 17.68 | 16.78 | 18.02 | 18.40 | 13.30          | 14.60 | 13.70 | 14.95 | 15.33 |
|                 | 3H   | 18.35            | 19.43 | 18.76 | 19.83 | 20.23 | 14.98          | 16.06 | 15.39 | 16.46 | 16.86 |
|                 | 4H   | 19.09            | 20.07 | 19.53 | 20.48 | 20.92 | 15.68          | 16.66 | 16.12 | 17.07 | 17.51 |
|                 | 6H   | 19.69            | 20.54 | 20.14 | 20.98 | 21.44 | 16.27          | 17.12 | 16.73 | 17.56 | 18.02 |
|                 | 8H   | 19.89            | 20.69 | 20.36 | 21.13 | 21.60 | 16.48          | 17.27 | 16.94 | 17.71 | 18.18 |
|                 | 12H  | 20.04            | 20.75 | 20.52 | 21.23 | 21.70 | 16.64          | 17.35 | 17.12 | 17.82 | 18.30 |
| 8H              | 4H   | 19.16            | 19.95 | 19.62 | 20.39 | 20.86 | 16.05          | 16.84 | 16.51 | 17.28 | 17.75 |
|                 | 6H   | 19.82            | 20.47 | 20.31 | 20.96 | 21.44 | 16.75          | 17.41 | 17.24 | 17.90 | 18.37 |
|                 | 8H   | 20.07            | 20.66 | 20.58 | 21.17 | 21.66 | 17.03          | 17.62 | 17.55 | 18.13 | 18.62 |
|                 | 12H  | 20.28            | 20.80 | 20.79 | 21.29 | 21.85 | 17.27          | 17.79 | 17.78 | 18.29 | 18.85 |
| 12H             | 4H   | 19.15            | 19.86 | 19.63 | 20.34 | 20.81 | 16.09          | 16.80 | 16.58 | 17.28 | 17.75 |
|                 | 6H   | 19.81            | 20.40 | 20.32 | 20.91 | 21.40 | 16.82          | 17.41 | 17.33 | 17.92 | 18.41 |
|                 | 8H   | 20.10            | 20.63 | 20.61 | 21.12 | 21.68 | 17.16          | 17.68 | 17.67 | 18.18 | 18.74 |