

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: P1056547

Luminaire Tested: S125R3DR-H375D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056547  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125R3DR-H375D830-X4F0-XX-UDD-F-B  
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

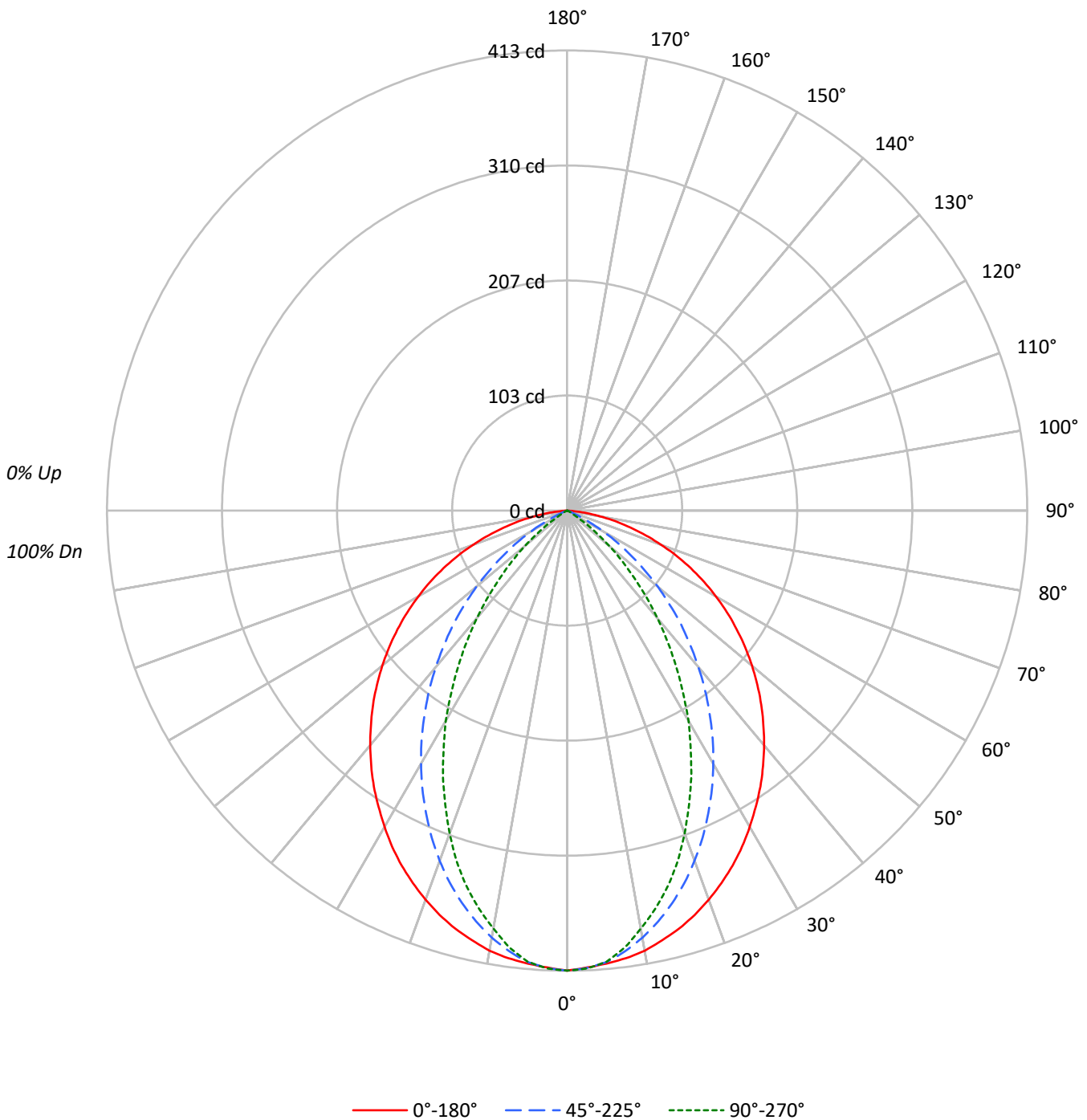
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 669.3 lumens  
Efficiency: N/A  
Efficacy: 57.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.9 / 1.07  
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 (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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 |
| 1   | 111 | 108 | 104 | 101 | 109 | 106 | 103 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  |
| 2   | 103 | 97  | 91  | 87  | 101 | 95  | 90  | 86  | 92  | 88  | 84  | 89  | 85  | 82  | 86  | 83  | 80  |
| 3   | 96  | 87  | 81  | 75  | 94  | 86  | 80  | 75  | 83  | 78  | 74  | 80  | 76  | 72  | 78  | 74  | 71  |
| 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 66  | 76  | 70  | 65  | 73  | 68  | 64  | 71  | 67  | 63  |
| 5   | 83  | 72  | 64  | 59  | 81  | 71  | 64  | 58  | 69  | 63  | 58  | 67  | 62  | 57  | 65  | 61  | 57  |
| 6   | 77  | 66  | 58  | 53  | 76  | 65  | 58  | 52  | 63  | 57  | 52  | 62  | 56  | 52  | 60  | 55  | 51  |
| 7   | 72  | 61  | 53  | 47  | 71  | 60  | 52  | 47  | 58  | 52  | 47  | 57  | 51  | 47  | 56  | 50  | 46  |
| 8   | 68  | 56  | 48  | 43  | 66  | 55  | 48  | 43  | 54  | 47  | 43  | 53  | 47  | 43  | 52  | 46  | 42  |
| 9   | 64  | 52  | 44  | 39  | 62  | 51  | 44  | 39  | 50  | 44  | 39  | 49  | 43  | 39  | 48  | 43  | 39  |
| 10  | 60  | 48  | 41  | 36  | 59  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 36  | 45  | 40  | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2919 | 2919 | 2919 |
| 5°  | 2895 | 2887 | 2884 |
| 10° | 2879 | 2794 | 2735 |
| 15° | 2843 | 2668 | 2555 |
| 20° | 2796 | 2516 | 2319 |
| 25° | 2742 | 2337 | 2056 |
| 30° | 2676 | 2141 | 1777 |
| 35° | 2610 | 1925 | 1469 |
| 40° | 2538 | 1692 | 1163 |
| 45° | 2463 | 1445 | 843  |
| 50° | 2381 | 1166 | 544  |
| 55° | 2290 | 853  | 242  |
| 60° | 2182 | 526  | 69   |
| 65° | 2047 | 192  | 42   |
| 70° | 1852 | 68   | 17   |
| 75° | 1609 | 22   | 11   |
| 80° | 1234 | 16   | 0    |
| 85° | 568  | 0    | 0    |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2463 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 38.4   | 5.7       |
| 10°-20°   | 103.0  | 15.4      |
| 20°-30°   | 139.3  | 20.8      |
| 30°-40°   | 143.1  | 21.4      |
| 40°-50°   | 118.6  | 17.7      |
| 50°-60°   | 76.1   | 11.4      |
| 60°-70°   | 36.8   | 5.5       |
| 70°-80°   | 12.4   | 1.9       |
| 80°-90°   | 1.6    | 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°    | 280.7  | 41.9      |
| 0°-40°    | 423.8  | 63.3      |
| 0°-60°    | 618.5  | 92.4      |
| 0°-90°    | 669.3  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 669.3  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 413 | 413   | 413 | 413   | 413 |      |
| 5°  | 408 | 411   | 407 | 404   | 406 | 39   |
| 15° | 388 | 384   | 365 | 352   | 349 | 109  |
| 25° | 352 | 334   | 300 | 273   | 264 | 162  |
| 35° | 302 | 273   | 223 | 184   | 170 | 189  |
| 45° | 246 | 206   | 144 | 100   | 84  | 190  |
| 55° | 186 | 136   | 69  | 30    | 20  | 166  |
| 65° | 122 | 68    | 12  | 3     | 2   | 121  |
| 75° | 59  | 13    | 1   | 0     | 0   | 62   |
| 85° | 7   | 0     | 0   | 0     | 0   | 11   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 412.9 | 412.9 | 412.9 | 412.9 | 412.9 |
| 2.5°  | 410.5 | 413.7 | 410.9 | 410.5 | 411.3 |
| 5°    | 408.0 | 411.3 | 406.8 | 404.3 | 406.4 |
| 7.5°  | 405.2 | 406.8 | 399.0 | 394.9 | 395.7 |
| 10°   | 401.1 | 400.7 | 389.2 | 382.2 | 381.0 |
| 12.5° | 394.9 | 392.9 | 377.7 | 367.9 | 365.9 |
| 15°   | 388.4 | 383.5 | 364.6 | 352.0 | 349.1 |
| 17.5° | 380.6 | 372.8 | 350.3 | 333.9 | 329.9 |
| 20°   | 371.6 | 361.0 | 334.4 | 314.3 | 308.2 |
| 22.5° | 361.8 | 348.3 | 317.6 | 293.8 | 285.7 |
| 25°   | 351.5 | 334.4 | 299.6 | 272.6 | 263.6 |
| 27.5° | 340.1 | 320.0 | 281.6 | 250.9 | 239.8 |
| 30°   | 327.8 | 304.9 | 262.3 | 228.8 | 217.7 |
| 32.5° | 315.1 | 289.7 | 243.1 | 206.7 | 193.2 |
| 35°   | 302.4 | 273.4 | 223.0 | 184.2 | 170.2 |
| 37.5° | 288.9 | 257.0 | 203.4 | 162.9 | 147.7 |
| 40°   | 275.0 | 240.2 | 183.3 | 140.8 | 126.0 |
| 42.5° | 260.7 | 223.0 | 163.3 | 119.9 | 104.8 |
| 45°   | 246.4 | 205.9 | 144.5 | 99.9  | 84.3  |
| 47.5° | 231.6 | 188.3 | 124.8 | 80.2  | 66.7  |
| 50°   | 216.5 | 171.1 | 106.0 | 62.6  | 49.5  |
| 52.5° | 201.3 | 153.5 | 86.8  | 45.4  | 33.6  |
| 55°   | 185.8 | 136.3 | 69.2  | 30.3  | 19.6  |
| 57.5° | 170.2 | 118.7 | 52.8  | 16.8  | 7.4   |
| 60°   | 154.3 | 101.9 | 37.2  | 5.7   | 4.9   |
| 62.5° | 138.7 | 83.9  | 23.3  | 4.5   | 3.7   |
| 65°   | 122.4 | 67.5  | 11.5  | 3.3   | 2.5   |
| 67.5° | 106.4 | 52.0  | 4.9   | 2.0   | 1.2   |
| 70°   | 89.6  | 37.7  | 3.3   | 1.2   | 0.8   |
| 72.5° | 74.1  | 24.1  | 2.0   | 0.8   | 0.4   |
| 75°   | 58.9  | 12.7  | 0.8   | 0.4   | 0.4   |
| 77.5° | 44.2  | 5.3   | 0.4   | 0.4   | 0.4   |
| 80°   | 30.3  | 2.5   | 0.4   | 0.4   | 0.0   |
| 82.5° | 18.0  | 0.8   | 0.4   | 0.4   | 0.0   |
| 85°   | 7.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 0.4   | 0.0   | 0.0   | 0.0   | 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 | 14.79            | 16.18 | 15.16 | 16.49 | 16.80 | 0.00           | 1.05 | 0.03 | 1.36 | 1.68 |
|                 | 3H   | 16.34            | 17.57 | 16.72 | 17.90 | 18.26 | 0.00           | 0.81 | 0.00 | 1.14 | 1.50 |
|                 | 4H   | 16.86            | 18.01 | 17.27 | 18.36 | 18.74 | 0.00           | 0.66 | 0.00 | 1.01 | 1.39 |
|                 | 6H   | 17.20            | 18.25 | 17.62 | 18.62 | 19.02 | 0.00           | 0.50 | 0.00 | 0.87 | 1.26 |
|                 | 8H   | 17.28            | 18.28 | 17.71 | 18.67 | 19.08 | 0.00           | 0.40 | 0.00 | 0.79 | 1.20 |
|                 | 12H  | 17.30            | 18.25 | 17.73 | 18.64 | 19.07 | 0.00           | 0.32 | 0.00 | 0.70 | 1.13 |
| 4H              | 2H   | 14.59            | 15.74 | 15.00 | 16.09 | 16.47 | 0.53           | 1.68 | 0.93 | 2.03 | 2.41 |
|                 | 3H   | 16.21            | 17.14 | 16.62 | 17.55 | 17.95 | 0.48           | 1.41 | 0.89 | 1.81 | 2.22 |
|                 | 4H   | 16.73            | 17.56 | 17.16 | 17.98 | 18.42 | 0.40           | 1.23 | 0.83 | 1.65 | 2.09 |
|                 | 6H   | 17.11            | 17.82 | 17.57 | 18.27 | 18.73 | 0.33           | 1.05 | 0.80 | 1.50 | 1.96 |
|                 | 8H   | 17.20            | 17.88 | 17.67 | 18.32 | 18.79 | 0.28           | 0.95 | 0.75 | 1.40 | 1.87 |
|                 | 12H  | 17.24            | 17.83 | 17.73 | 18.32 | 18.79 | 0.24           | 0.83 | 0.73 | 1.32 | 1.79 |
| 8H              | 4H   | 16.60            | 17.27 | 17.07 | 17.72 | 18.19 | 1.42           | 2.09 | 1.89 | 2.54 | 3.01 |
|                 | 6H   | 16.96            | 17.51 | 17.46 | 18.00 | 18.48 | 1.33           | 1.88 | 1.84 | 2.38 | 2.86 |
|                 | 8H   | 17.05            | 17.55 | 17.57 | 18.06 | 18.55 | 1.28           | 1.77 | 1.80 | 2.29 | 2.78 |
|                 | 12H  | 17.10            | 17.53 | 17.61 | 18.03 | 18.60 | 1.24           | 1.68 | 1.75 | 2.17 | 2.74 |
| 12H             | 4H   | 16.56            | 17.15 | 17.05 | 17.64 | 18.11 | 1.50           | 2.09 | 1.98 | 2.57 | 3.05 |
|                 | 6H   | 16.90            | 17.39 | 17.42 | 17.91 | 18.40 | 1.40           | 1.89 | 1.92 | 2.41 | 2.90 |
|                 | 8H   | 17.01            | 17.45 | 17.53 | 17.94 | 18.51 | 1.36           | 1.80 | 1.88 | 2.29 | 2.86 |