

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: P1059136

Luminaire Tested: S123RDRP-S1165D930-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059136  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1165D930-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

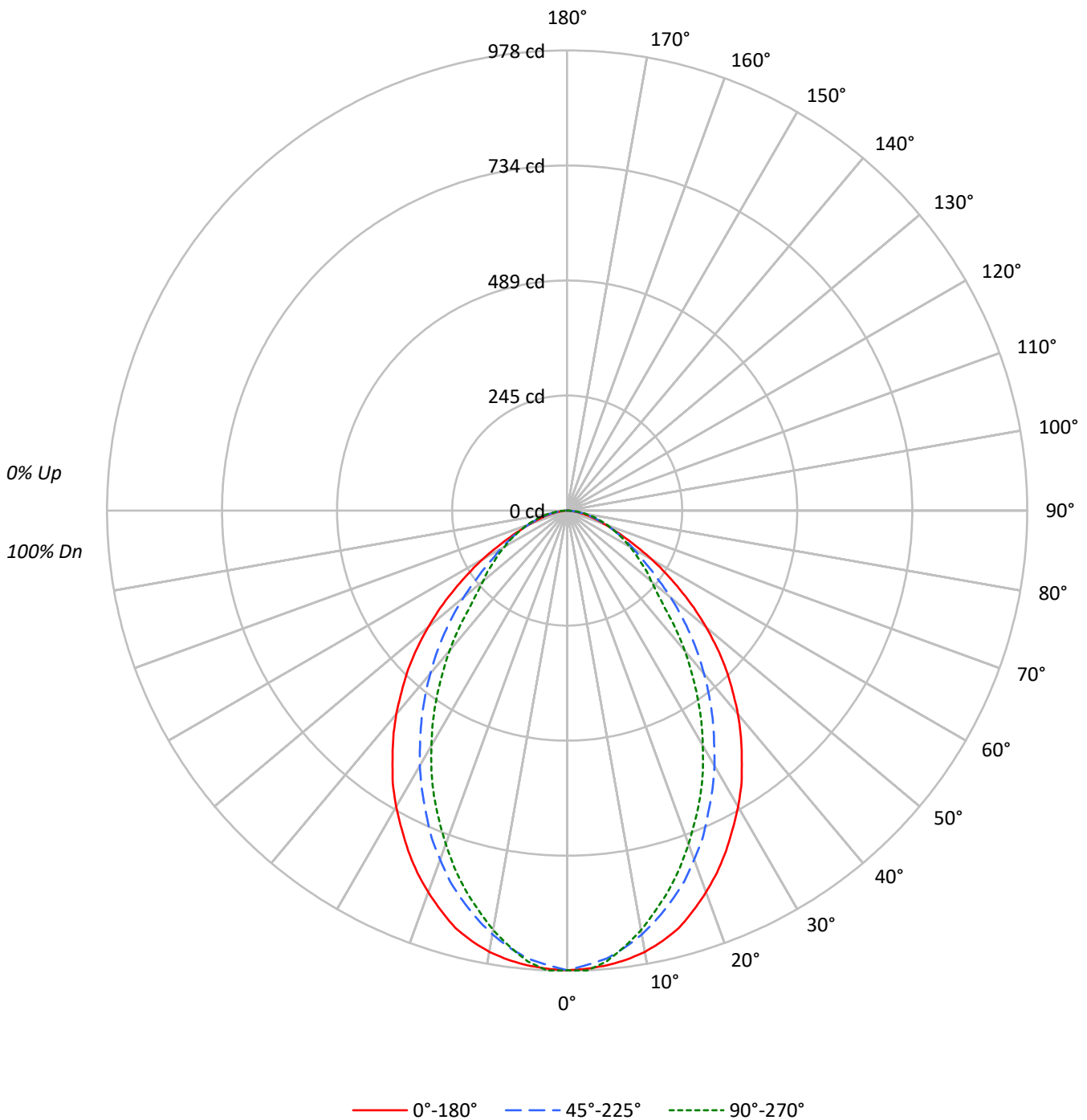
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1708.8 lumens  
Efficiency: N/A  
Efficacy: 40.9 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.8  
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  | 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 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 98  | 95  | 96  | 94  | 92  | 93  | 91  | 89  | 88  |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 81  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |
| 3   | 94  | 85  | 78  | 73  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 73  | 69  | 76  | 72  | 68  | 66  |
| 4   | 87  | 77  | 69  | 63  | 85  | 76  | 68  | 63  | 73  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 52  |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 48  | 47  |
| 7   | 71  | 58  | 50  | 45  | 69  | 58  | 50  | 45  | 56  | 49  | 44  | 55  | 49  | 44  | 53  | 48  | 44  | 42  |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 41  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |
| 10  | 58  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11472 | 11472 | 11472 |
| 5°  | 11434 | 11267 | 11337 |
| 10° | 11356 | 10908 | 10796 |
| 15° | 11163 | 10435 | 10151 |
| 20° | 10785 | 9862  | 9421  |
| 25° | 10347 | 9190  | 8673  |
| 30° | 9856  | 8487  | 7818  |
| 35° | 9276  | 7726  | 6919  |
| 40° | 8659  | 6930  | 5958  |
| 45° | 7938  | 6123  | 4896  |
| 50° | 7037  | 5256  | 4247  |
| 55° | 5986  | 4399  | 3894  |
| 60° | 4883  | 3833  | 3612  |
| 65° | 3720  | 3393  | 3362  |
| 70° | 2905  | 3025  | 3145  |
| 75° | 2346  | 2718  | 2931  |
| 80° | 1745  | 2225  | 2698  |
| 85° | 943   | 1428  | 2371  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7938 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.7   | 5.3       |
| 10°-20°   | 244.0  | 14.3      |
| 20°-30°   | 331.7  | 19.4      |
| 30°-40°   | 343.9  | 20.1      |
| 40°-50°   | 290.0  | 17.0      |
| 50°-60°   | 205.9  | 12.0      |
| 60°-70°   | 125.8  | 7.4       |
| 70°-80°   | 62.6   | 3.7       |
| 80°-90°   | 14.2   | 0.8       |
| 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       |
| <hr/>     |        |           |
| 0°-30°    | 666.4  | 39.0      |
| 0°-40°    | 1010.3 | 59.1      |
| 0°-60°    | 1506.2 | 88.1      |
| 0°-90°    | 1708.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1708.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 977 | 977   | 977 | 977   | 977 |      |
| 5°  | 970 | 970   | 956 | 962   | 962 | 92   |
| 15° | 918 | 901   | 858 | 843   | 835 | 258  |
| 25° | 799 | 763   | 709 | 684   | 669 | 367  |
| 35° | 647 | 598   | 539 | 501   | 483 | 405  |
| 45° | 478 | 428   | 369 | 318   | 295 | 367  |
| 55° | 292 | 262   | 215 | 196   | 190 | 263  |
| 65° | 134 | 129   | 122 | 122   | 121 | 137  |
| 75° | 52  | 55    | 60  | 62    | 65  | 56   |
| 85° | 7   | 8     | 11  | 15    | 18  | 10   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 977.0 | 977.0 | 977.0 | 977.0 | 977.0 |
| 2.5°  | 974.7 | 975.9 | 966.5 | 977.0 | 978.2 |
| 5°    | 970.0 | 970.0 | 955.9 | 961.8 | 961.8 |
| 7.5°  | 963.0 | 960.6 | 937.1 | 937.1 | 934.8 |
| 10°   | 952.4 | 945.3 | 914.8 | 908.9 | 905.4 |
| 12.5° | 937.1 | 925.4 | 887.8 | 877.2 | 870.2 |
| 15°   | 918.3 | 900.7 | 858.4 | 843.2 | 835.0 |
| 17.5° | 891.3 | 873.7 | 826.7 | 805.6 | 796.2 |
| 20°   | 863.1 | 837.3 | 789.2 | 768.0 | 753.9 |
| 22.5° | 832.6 | 799.7 | 752.8 | 726.9 | 711.6 |
| 25°   | 798.6 | 763.3 | 709.3 | 683.5 | 669.4 |
| 27.5° | 762.1 | 723.4 | 668.2 | 638.8 | 624.7 |
| 30°   | 726.9 | 682.3 | 625.9 | 593.0 | 576.6 |
| 32.5° | 689.3 | 638.8 | 581.3 | 547.2 | 530.8 |
| 35°   | 647.1 | 597.7 | 539.0 | 501.4 | 482.7 |
| 37.5° | 607.1 | 556.6 | 495.6 | 455.6 | 434.5 |
| 40°   | 564.9 | 514.4 | 452.1 | 411.0 | 388.7 |
| 42.5° | 520.2 | 472.1 | 411.0 | 362.9 | 341.7 |
| 45°   | 478.0 | 427.5 | 368.7 | 318.2 | 294.8 |
| 47.5° | 432.2 | 385.2 | 327.6 | 276.0 | 259.5 |
| 50°   | 385.2 | 341.7 | 287.7 | 240.7 | 232.5 |
| 52.5° | 339.4 | 303.0 | 247.8 | 217.3 | 213.7 |
| 55°   | 292.4 | 261.9 | 214.9 | 196.1 | 190.2 |
| 57.5° | 249.0 | 226.6 | 184.4 | 175.0 | 172.6 |
| 60°   | 207.9 | 189.1 | 163.2 | 157.4 | 153.8 |
| 62.5° | 167.9 | 157.4 | 142.1 | 139.7 | 137.4 |
| 65°   | 133.9 | 129.2 | 122.1 | 122.1 | 121.0 |
| 67.5° | 105.7 | 105.7 | 104.5 | 106.9 | 105.7 |
| 70°   | 84.6  | 85.7  | 88.1  | 90.4  | 91.6  |
| 72.5° | 66.9  | 70.5  | 72.8  | 76.3  | 77.5  |
| 75°   | 51.7  | 55.2  | 59.9  | 62.2  | 64.6  |
| 77.5° | 37.6  | 41.1  | 45.8  | 49.3  | 51.7  |
| 80°   | 25.8  | 28.2  | 32.9  | 37.6  | 39.9  |
| 82.5° | 16.4  | 17.6  | 21.1  | 25.8  | 28.2  |
| 85°   | 7.0   | 8.2   | 10.6  | 15.3  | 17.6  |
| 87.5° | 0.0   | 0.0   | 1.2   | 4.7   | 8.2   |
| 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 | 17.29            | 18.74 | 17.65 | 19.05 | 19.36 | 15.38          | 16.83 | 15.75 | 17.15 | 17.46 |
|                 | 3H   | 18.18            | 19.48 | 18.56 | 19.81 | 20.17 | 16.96          | 18.25 | 17.34 | 18.58 | 18.94 |
|                 | 4H   | 18.47            | 19.68 | 18.87 | 20.03 | 20.41 | 17.55          | 18.76 | 17.95 | 19.11 | 19.49 |
|                 | 6H   | 18.62            | 19.73 | 19.03 | 20.10 | 20.49 | 18.00          | 19.12 | 18.42 | 19.49 | 19.88 |
|                 | 8H   | 18.64            | 19.70 | 19.07 | 20.09 | 20.49 | 18.15          | 19.21 | 18.58 | 19.60 | 20.01 |
|                 | 12H  | 18.63            | 19.65 | 19.06 | 20.03 | 20.46 | 18.25          | 19.27 | 18.68 | 19.65 | 20.08 |
| 4H              | 2H   | 17.53            | 18.74 | 17.93 | 19.09 | 19.47 | 15.92          | 17.14 | 16.33 | 17.49 | 17.87 |
|                 | 3H   | 18.64            | 19.64 | 19.05 | 20.05 | 20.45 | 17.70          | 18.70 | 18.11 | 19.10 | 19.50 |
|                 | 4H   | 19.03            | 19.93 | 19.47 | 20.35 | 20.79 | 18.41          | 19.31 | 18.84 | 19.73 | 20.17 |
|                 | 6H   | 19.28            | 20.05 | 19.73 | 20.50 | 20.96 | 18.98          | 19.76 | 19.44 | 20.20 | 20.67 |
|                 | 8H   | 19.32            | 20.05 | 19.78 | 20.49 | 20.96 | 19.17          | 19.90 | 19.64 | 20.35 | 20.81 |
|                 | 12H  | 19.33            | 19.97 | 19.81 | 20.45 | 20.93 | 19.31          | 19.96 | 19.80 | 20.44 | 20.91 |
| 8H              | 4H   | 19.19            | 19.92 | 19.66 | 20.36 | 20.83 | 18.62          | 19.35 | 19.08 | 19.79 | 20.26 |
|                 | 6H   | 19.50            | 20.10 | 20.00 | 20.60 | 21.07 | 19.30          | 19.89 | 19.79 | 20.39 | 20.87 |
|                 | 8H   | 19.58            | 20.12 | 20.10 | 20.63 | 21.12 | 19.55          | 20.09 | 20.07 | 20.60 | 21.09 |
|                 | 12H  | 19.61            | 20.09 | 20.13 | 20.58 | 21.15 | 19.76          | 20.23 | 20.27 | 20.73 | 21.30 |
| 12H             | 4H   | 19.20            | 19.84 | 19.68 | 20.32 | 20.80 | 18.62          | 19.26 | 19.10 | 19.74 | 20.22 |
|                 | 6H   | 19.52            | 20.06 | 20.03 | 20.57 | 21.06 | 19.30          | 19.84 | 19.82 | 20.35 | 20.84 |
|                 | 8H   | 19.63            | 20.11 | 20.14 | 20.60 | 21.17 | 19.61          | 20.08 | 20.12 | 20.57 | 21.14 |