

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: P1059146

Luminaire Tested: S123RDRP-S1165D935-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059146  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67 )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1165D935-X4F0-XX-UDD-WVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

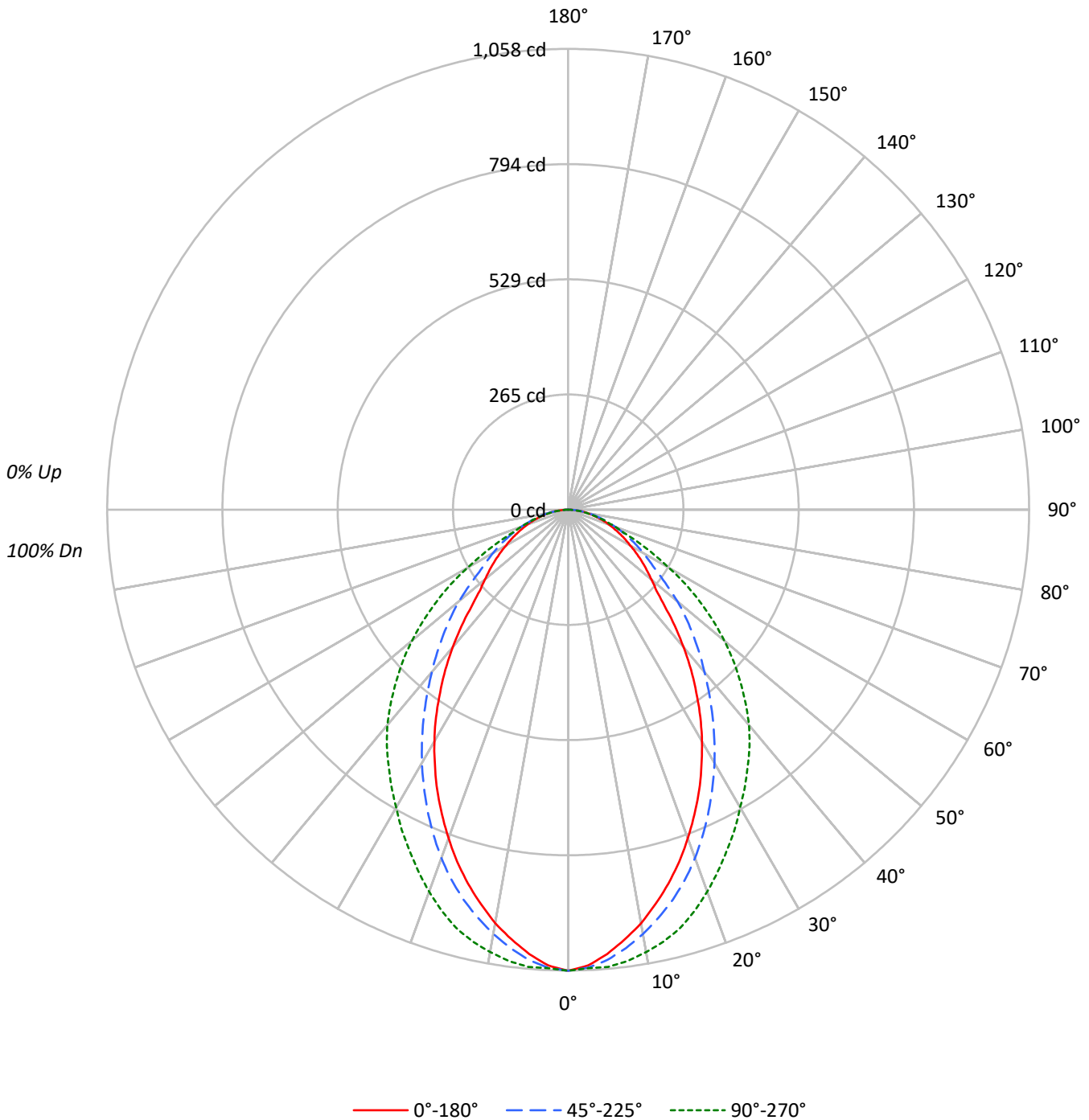
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1912.1 lumens  
Efficiency: N/A  
Efficacy: 45.7 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1  
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  | 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   | 110 | 106 | 102 | 99  | 108 | 104 | 100 | 97  | 100 | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  |     |    |    |    | 87 |     |   |  |   |
| 2   | 102 | 94  | 88  | 83  | 99  | 92  | 87  | 82  | 89  | 84  | 80  | 86  | 82  | 78  | 83  | 80  | 77  |     |    |    |    | 75 |     |   |  |   |
| 3   | 94  | 84  | 77  | 71  | 91  | 83  | 76  | 71  | 80  | 74  | 69  | 77  | 72  | 68  | 75  | 71  | 67  |     |    |    |    | 65 |     |   |  |   |
| 4   | 87  | 76  | 68  | 62  | 84  | 74  | 67  | 61  | 72  | 66  | 61  | 70  | 64  | 60  | 68  | 63  | 59  |     |    |    |    | 57 |     |   |  |   |
| 5   | 80  | 69  | 60  | 54  | 78  | 68  | 60  | 54  | 65  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 53  |     |    |    |    | 51 |     |   |  |   |
| 6   | 75  | 63  | 54  | 48  | 73  | 62  | 54  | 48  | 60  | 53  | 48  | 58  | 52  | 47  | 57  | 51  | 47  |     |    |    |    | 45 |     |   |  |   |
| 7   | 70  | 57  | 49  | 44  | 68  | 56  | 49  | 43  | 55  | 48  | 43  | 54  | 47  | 43  | 52  | 47  | 43  |     |    |    |    | 41 |     |   |  |   |
| 8   | 65  | 53  | 45  | 39  | 64  | 52  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 39  | 48  | 43  | 39  |     |    |    |    | 37 |     |   |  |   |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 36  | 45  | 39  | 35  |     |    |    |    | 34 |     |   |  |   |
| 10  | 58  | 45  | 38  | 33  | 56  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 33  | 42  | 37  | 33  |     |    |    |    | 31 |     |   |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 12429 | 12429 | 12429 |
| 5°  | 12068 | 12228 | 12418 |
| 10° | 11497 | 11792 | 12296 |
| 15° | 10801 | 11269 | 12084 |
| 20° | 10033 | 10638 | 11661 |
| 25° | 9212  | 9888  | 11174 |
| 30° | 8329  | 9102  | 10701 |
| 35° | 7347  | 8271  | 10300 |
| 40° | 6315  | 7456  | 9892  |
| 45° | 5193  | 6717  | 9273  |
| 50° | 4556  | 5985  | 8546  |
| 55° | 4217  | 5106  | 7571  |
| 60° | 3875  | 4692  | 6266  |
| 65° | 3620  | 4309  | 4932  |
| 70° | 3409  | 3921  | 3921  |
| 75° | 3208  | 3602  | 3380  |
| 80° | 3023  | 3273  | 2854  |
| 85° | 2843  | 3180  | 2169  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9273 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 97.9   | 5.1       |
| 10°-20°   | 262.4  | 13.7      |
| 20°-30°   | 355.7  | 18.6      |
| 30°-40°   | 371.9  | 19.5      |
| 40°-50°   | 322.6  | 16.9      |
| 50°-60°   | 240.0  | 12.6      |
| 60°-70°   | 154.0  | 8.1       |
| 70°-80°   | 82.6   | 4.3       |
| 80°-90°   | 25.0   | 1.3       |
| 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°    | 716.0  | 37.4      |
| 0°-40°    | 1088.0 | 56.9      |
| 0°-60°    | 1650.5 | 86.3      |
| 0°-90°    | 1912.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1912.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1058 | 1058  | 1058 | 1058  | 1058 |      |
| 5°  | 1024 | 1041  | 1037 | 1045  | 1054 | 96   |
| 15° | 888  | 910   | 927  | 964   | 994  | 249  |
| 25° | 711  | 733   | 763  | 814   | 862  | 326  |
| 35° | 512  | 537   | 577  | 650   | 718  | 320  |
| 45° | 313  | 336   | 404  | 491   | 558  | 246  |
| 55° | 206  | 211   | 249  | 320   | 370  | 184  |
| 65° | 130  | 142   | 155  | 165   | 178  | 130  |
| 75° | 71   | 82    | 79   | 76    | 74   | 75   |
| 85° | 21   | 26    | 24   | 20    | 16   | 24   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1058.5 | 1058.5 | 1058.5 | 1058.5 | 1058.5 |
| 2.5°  | 1047.3 | 1062.2 | 1052.3 | 1052.3 | 1053.5 |
| 5°    | 1023.8 | 1041.1 | 1037.4 | 1044.9 | 1053.5 |
| 7.5°  | 995.2  | 1013.8 | 1015.1 | 1032.4 | 1044.9 |
| 10°   | 964.2  | 982.8  | 989.0  | 1013.8 | 1031.2 |
| 12.5° | 927.0  | 948.1  | 959.2  | 990.3  | 1015.1 |
| 15°   | 888.5  | 909.6  | 927.0  | 964.2  | 994.0  |
| 17.5° | 847.5  | 868.6  | 891.0  | 933.2  | 965.4  |
| 20°   | 802.9  | 825.2  | 851.3  | 893.5  | 933.2  |
| 22.5° | 757.0  | 780.5  | 807.8  | 853.7  | 898.4  |
| 25°   | 711.0  | 733.4  | 763.2  | 814.0  | 862.4  |
| 27.5° | 662.6  | 686.2  | 717.2  | 773.1  | 827.7  |
| 30°   | 614.3  | 637.8  | 671.3  | 730.9  | 789.2  |
| 32.5° | 564.6  | 588.2  | 624.2  | 691.2  | 754.5  |
| 35°   | 512.5  | 537.3  | 577.0  | 650.2  | 718.5  |
| 37.5° | 462.9  | 486.4  | 531.1  | 611.8  | 683.7  |
| 40°   | 412.0  | 436.8  | 486.4  | 573.3  | 645.3  |
| 42.5° | 362.3  | 387.2  | 445.5  | 532.4  | 603.1  |
| 45°   | 312.7  | 336.3  | 404.5  | 491.4  | 558.4  |
| 47.5° | 274.2  | 291.6  | 366.1  | 448.0  | 515.0  |
| 50°   | 249.4  | 255.6  | 327.6  | 405.8  | 467.8  |
| 52.5° | 227.1  | 232.1  | 285.4  | 363.6  | 419.4  |
| 55°   | 206.0  | 211.0  | 249.4  | 320.2  | 369.8  |
| 57.5° | 184.9  | 191.1  | 222.1  | 275.5  | 320.2  |
| 60°   | 165.0  | 172.5  | 199.8  | 235.8  | 266.8  |
| 62.5° | 147.7  | 156.4  | 177.5  | 199.8  | 220.9  |
| 65°   | 130.3  | 141.5  | 155.1  | 165.0  | 177.5  |
| 67.5° | 114.2  | 126.6  | 134.0  | 136.5  | 137.7  |
| 70°   | 99.3   | 111.7  | 114.2  | 114.2  | 114.2  |
| 72.5° | 84.4   | 98.0   | 95.6   | 94.3   | 93.1   |
| 75°   | 70.7   | 81.9   | 79.4   | 75.7   | 74.5   |
| 77.5° | 57.1   | 67.0   | 63.3   | 60.8   | 57.1   |
| 80°   | 44.7   | 52.1   | 48.4   | 45.9   | 42.2   |
| 82.5° | 33.5   | 38.5   | 34.7   | 32.3   | 28.5   |
| 85°   | 21.1   | 26.1   | 23.6   | 19.9   | 16.1   |
| 87.5° | 11.2   | 14.9   | 12.4   | 11.2   | 6.2    |
| 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 | 15.54            | 17.02 | 15.91 | 17.34 | 17.65 | 18.30          | 19.78 | 18.66 | 20.09 | 20.41 |
|                 | 3H   | 17.25            | 18.58 | 17.63 | 18.91 | 19.27 | 19.32          | 20.65 | 19.70 | 20.98 | 21.34 |
|                 | 4H   | 17.91            | 19.16 | 18.31 | 19.51 | 19.89 | 19.68          | 20.93 | 20.08 | 21.28 | 21.66 |
|                 | 6H   | 18.41            | 19.56 | 18.83 | 19.93 | 20.32 | 19.94          | 21.09 | 20.35 | 21.46 | 21.85 |
|                 | 8H   | 18.59            | 19.69 | 19.02 | 20.08 | 20.48 | 20.01          | 21.10 | 20.44 | 21.49 | 21.90 |
|                 | 12H  | 18.72            | 19.77 | 19.15 | 20.15 | 20.58 | 20.05          | 21.09 | 20.48 | 21.47 | 21.90 |
| 4H              | 2H   | 16.32            | 17.56 | 16.72 | 17.91 | 18.29 | 18.57          | 19.81 | 18.97 | 20.16 | 20.54 |
|                 | 3H   | 18.24            | 19.28 | 18.65 | 19.68 | 20.08 | 19.82          | 20.86 | 20.23 | 21.26 | 21.66 |
|                 | 4H   | 19.05            | 19.98 | 19.49 | 20.40 | 20.84 | 20.31          | 21.24 | 20.74 | 21.66 | 22.10 |
|                 | 6H   | 19.69            | 20.50 | 20.15 | 20.95 | 21.41 | 20.69          | 21.50 | 21.15 | 21.94 | 22.40 |
|                 | 8H   | 19.92            | 20.68 | 20.39 | 21.12 | 21.59 | 20.80          | 21.56 | 21.27 | 22.00 | 22.47 |
|                 | 12H  | 20.10            | 20.77 | 20.58 | 21.25 | 21.72 | 20.87          | 21.55 | 21.36 | 22.03 | 22.50 |
| 8H              | 4H   | 19.37            | 20.13 | 19.84 | 20.57 | 21.04 | 20.50          | 21.26 | 20.97 | 21.70 | 22.17 |
|                 | 6H   | 20.17            | 20.79 | 20.66 | 21.28 | 21.76 | 20.99          | 21.61 | 21.49 | 22.11 | 22.58 |
|                 | 8H   | 20.49            | 21.05 | 21.01 | 21.56 | 22.05 | 21.17          | 21.73 | 21.68 | 22.24 | 22.73 |
|                 | 12H  | 20.77            | 21.27 | 21.28 | 21.76 | 22.33 | 21.30          | 21.79 | 21.81 | 22.29 | 22.85 |
| 12H             | 4H   | 19.40            | 20.07 | 19.88 | 20.55 | 21.02 | 20.52          | 21.19 | 21.00 | 21.67 | 22.14 |
|                 | 6H   | 20.22            | 20.78 | 20.73 | 21.29 | 21.78 | 21.03          | 21.59 | 21.54 | 22.10 | 22.59 |
|                 | 8H   | 20.61            | 21.11 | 21.12 | 21.60 | 22.17 | 21.26          | 21.75 | 21.77 | 22.24 | 22.81 |