

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: P1060775

Luminaire Tested: S124RDRP-H1195D940-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060775  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H1195D940-X4F0-XX-UDD-WVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

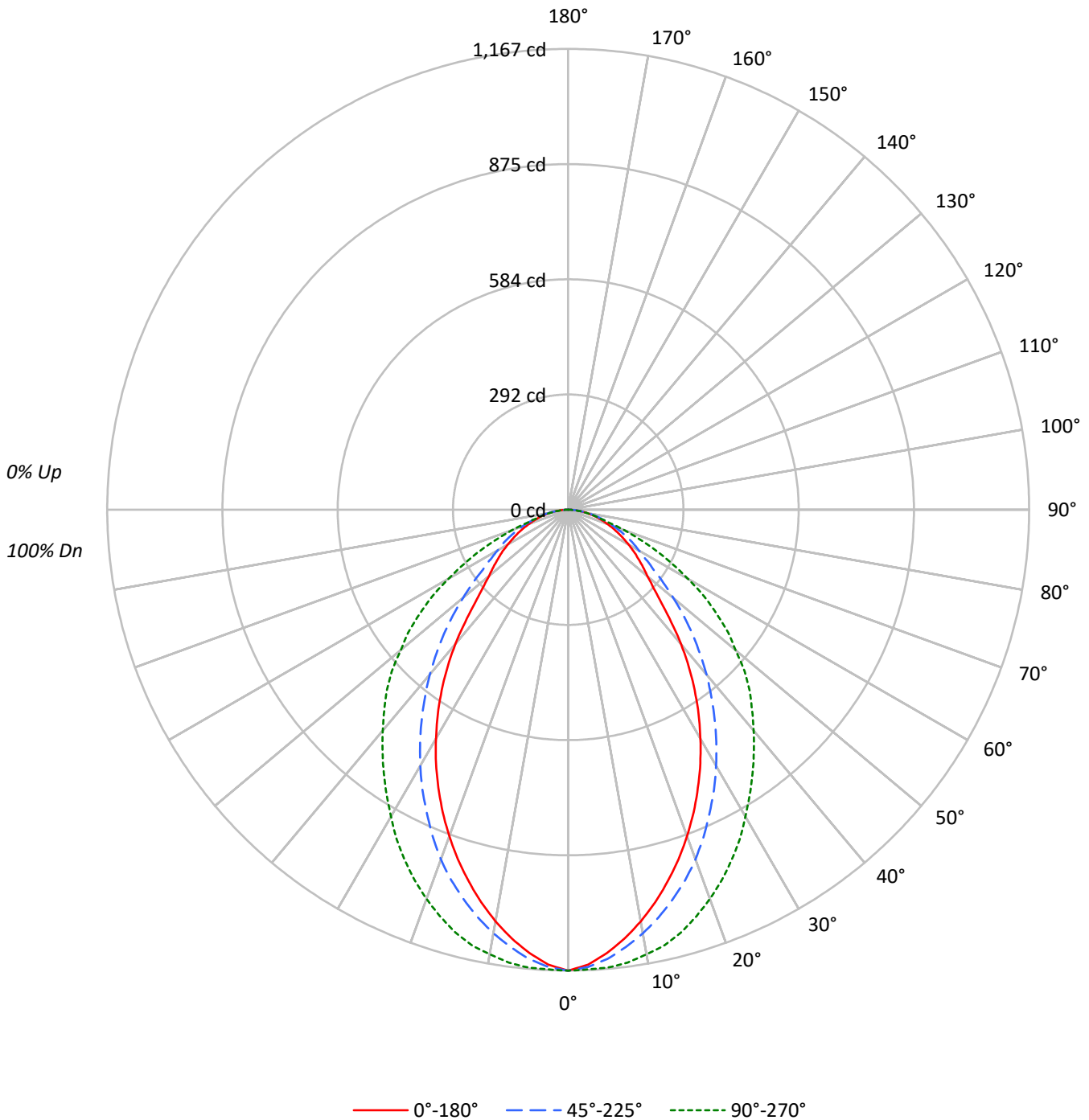
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2125.4 lumens  
Efficiency: N/A  
Efficacy: 58.2 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.5  
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  |    |    |    |    | 87  |   |  |   |
| 2   | 102 | 94  | 88  | 83  | 99  | 92  | 87  | 82  | 89  | 84  | 80  | 86  | 82  | 79  | 83  | 80  | 77  | 75  |    |    |    |    | 75  |   |  |   |
| 3   | 94  | 84  | 77  | 71  | 91  | 83  | 76  | 71  | 80  | 74  | 69  | 77  | 72  | 68  | 75  | 71  | 67  | 65  |    |    |    |    | 65  |   |  |   |
| 4   | 87  | 76  | 68  | 62  | 84  | 74  | 67  | 61  | 72  | 66  | 61  | 70  | 64  | 60  | 68  | 63  | 59  | 57  |    |    |    |    | 57  |   |  |   |
| 5   | 80  | 69  | 60  | 54  | 78  | 68  | 60  | 54  | 65  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 52  | 50  |    |    |    |    | 50  |   |  |   |
| 6   | 75  | 62  | 54  | 48  | 73  | 62  | 54  | 48  | 60  | 53  | 48  | 58  | 52  | 47  | 57  | 51  | 47  | 45  |    |    |    |    | 45  |   |  |   |
| 7   | 70  | 57  | 49  | 43  | 68  | 56  | 49  | 43  | 55  | 48  | 43  | 54  | 47  | 43  | 52  | 47  | 42  | 41  |    |    |    |    | 41  |   |  |   |
| 8   | 65  | 53  | 45  | 39  | 64  | 52  | 44  | 39  | 51  | 44  | 39  | 50  | 43  | 39  | 48  | 43  | 39  | 37  |    |    |    |    | 37  |   |  |   |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 35  | 45  | 39  | 35  | 34  |    |    |    |    | 34  |   |  |   |
| 10  | 58  | 45  | 38  | 33  | 56  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 33  | 42  | 36  | 32  | 31  |    |    |    |    | 31  |   |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10053 | 10053 | 10053 |
| 5°  | 9743  | 9869  | 10060 |
| 10° | 9255  | 9523  | 9994  |
| 15° | 8684  | 9109  | 9873  |
| 20° | 8063  | 8635  | 9610  |
| 25° | 7383  | 8046  | 9302  |
| 30° | 6656  | 7447  | 8919  |
| 35° | 5866  | 6792  | 8555  |
| 40° | 4993  | 6122  | 8213  |
| 45° | 4054  | 5409  | 7913  |
| 50° | 3509  | 4655  | 7410  |
| 55° | 3252  | 3950  | 6871  |
| 60° | 3035  | 3562  | 6028  |
| 65° | 2842  | 3342  | 5012  |
| 70° | 2649  | 3082  | 3789  |
| 75° | 2525  | 2851  | 2728  |
| 80° | 2365  | 2608  | 2306  |
| 85° | 2174  | 2421  | 1818  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7913 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 107.8  | 5.1       |
| 10°-20°   | 289.7  | 13.6      |
| 20°-30°   | 395.6  | 18.6      |
| 30°-40°   | 414.5  | 19.5      |
| 40°-50°   | 358.7  | 16.9      |
| 50°-60°   | 269.6  | 12.7      |
| 60°-70°   | 173.8  | 8.2       |
| 70°-80°   | 89.1   | 4.2       |
| 80°-90°   | 26.6   | 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°    | 793.1  | 37.3      |
| 0°-40°    | 1207.5 | 56.8      |
| 0°-60°    | 1835.8 | 86.4      |
| 0°-90°    | 2125.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2125.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1167 | 1167  | 1167 | 1167  | 1167 |      |
| 5°  | 1127 | 1144  | 1142 | 1150  | 1164 | 105  |
| 15° | 974  | 999   | 1022 | 1068  | 1108 | 273  |
| 25° | 777  | 806   | 847  | 913   | 979  | 357  |
| 35° | 558  | 590   | 646  | 732   | 814  | 348  |
| 45° | 333  | 367   | 444  | 553   | 650  | 262  |
| 55° | 217  | 224   | 263  | 376   | 458  | 195  |
| 65° | 140  | 142   | 164  | 198   | 246  | 139  |
| 75° | 76   | 84    | 86   | 84    | 82   | 80   |
| 85° | 22   | 26    | 24   | 23    | 18   | 25   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1167.4 | 1167.4 | 1167.4 | 1167.4 | 1167.4 |
| 2.5°  | 1152.8 | 1167.4 | 1158.9 | 1161.3 | 1165.0 |
| 5°    | 1127.1 | 1144.2 | 1141.7 | 1150.3 | 1163.8 |
| 7.5°  | 1095.2 | 1113.6 | 1117.3 | 1136.8 | 1156.4 |
| 10°   | 1058.5 | 1079.3 | 1089.1 | 1118.5 | 1143.0 |
| 12.5° | 1018.1 | 1040.2 | 1057.3 | 1094.0 | 1129.5 |
| 15°   | 974.1  | 998.6  | 1021.8 | 1068.3 | 1107.5 |
| 17.5° | 928.8  | 953.3  | 983.9  | 1035.3 | 1079.3 |
| 20°   | 879.9  | 906.8  | 942.3  | 996.1  | 1048.7 |
| 22.5° | 829.7  | 857.8  | 895.8  | 954.5  | 1015.7 |
| 25°   | 777.1  | 806.4  | 846.8  | 912.9  | 979.0  |
| 27.5° | 724.4  | 753.8  | 799.1  | 868.8  | 941.0  |
| 30°   | 669.4  | 700.0  | 748.9  | 824.8  | 897.0  |
| 32.5° | 614.3  | 647.4  | 697.5  | 778.3  | 855.4  |
| 35°   | 558.0  | 589.8  | 646.1  | 731.8  | 813.8  |
| 37.5° | 501.7  | 534.8  | 594.7  | 686.5  | 772.2  |
| 40°   | 444.2  | 478.5  | 544.6  | 641.2  | 730.6  |
| 42.5° | 386.7  | 423.4  | 493.2  | 594.7  | 689.0  |
| 45°   | 332.9  | 367.1  | 444.2  | 553.1  | 649.8  |
| 47.5° | 292.5  | 315.7  | 395.3  | 512.7  | 605.7  |
| 50°   | 261.9  | 274.1  | 347.5  | 468.7  | 553.1  |
| 52.5° | 238.6  | 247.2  | 303.5  | 421.0  | 510.3  |
| 55°   | 216.6  | 223.9  | 263.1  | 375.7  | 457.7  |
| 57.5° | 197.0  | 200.7  | 232.5  | 331.6  | 407.5  |
| 60°   | 176.2  | 179.9  | 206.8  | 283.9  | 350.0  |
| 62.5° | 157.9  | 160.3  | 186.0  | 238.6  | 297.4  |
| 65°   | 139.5  | 142.0  | 164.0  | 198.2  | 246.0  |
| 67.5° | 122.4  | 126.0  | 143.2  | 161.5  | 195.8  |
| 70°   | 105.2  | 112.6  | 122.4  | 130.9  | 150.5  |
| 72.5° | 90.6   | 97.9   | 102.8  | 105.2  | 106.5  |
| 75°   | 75.9   | 84.4   | 85.7   | 84.4   | 82.0   |
| 77.5° | 61.2   | 68.5   | 68.5   | 66.1   | 63.6   |
| 80°   | 47.7   | 53.8   | 52.6   | 50.2   | 46.5   |
| 82.5° | 35.5   | 39.2   | 37.9   | 35.5   | 31.8   |
| 85°   | 22.0   | 25.7   | 24.5   | 23.3   | 18.4   |
| 87.5° | 11.0   | 14.7   | 13.5   | 12.2   | 7.3    |
| 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 | 14.45            | 15.93 | 14.82 | 16.25 | 16.56 | 18.22          | 19.71 | 18.59 | 20.02 | 20.34 |
|                 | 3H   | 16.11            | 17.43 | 16.48 | 17.76 | 18.13 | 19.34          | 20.67 | 19.72 | 20.99 | 21.36 |
|                 | 4H   | 16.78            | 18.02 | 17.18 | 18.37 | 18.75 | 19.63          | 20.87 | 20.03 | 21.22 | 21.60 |
|                 | 6H   | 17.29            | 18.44 | 17.70 | 18.81 | 19.20 | 19.82          | 20.97 | 20.24 | 21.34 | 21.73 |
|                 | 8H   | 17.47            | 18.56 | 17.90 | 18.95 | 19.36 | 19.88          | 20.97 | 20.31 | 21.36 | 21.76 |
|                 | 12H  | 17.60            | 18.64 | 18.03 | 19.03 | 19.45 | 19.90          | 20.95 | 20.34 | 21.33 | 21.76 |
| 4H              | 2H   | 15.23            | 16.48 | 15.63 | 16.83 | 17.21 | 18.38          | 19.63 | 18.78 | 19.98 | 20.36 |
|                 | 3H   | 17.10            | 18.13 | 17.51 | 18.53 | 18.93 | 19.69          | 20.73 | 20.11 | 21.13 | 21.53 |
|                 | 4H   | 17.90            | 18.83 | 18.34 | 19.25 | 19.69 | 20.10          | 21.03 | 20.54 | 21.45 | 21.89 |
|                 | 6H   | 18.55            | 19.36 | 19.01 | 19.80 | 20.26 | 20.42          | 21.23 | 20.88 | 21.67 | 22.13 |
|                 | 8H   | 18.78            | 19.53 | 19.24 | 19.98 | 20.45 | 20.51          | 21.26 | 20.97 | 21.71 | 22.18 |
|                 | 12H  | 18.95            | 19.62 | 19.43 | 20.10 | 20.57 | 20.57          | 21.25 | 21.06 | 21.72 | 22.20 |
| 8H              | 4H   | 18.25            | 19.01 | 18.72 | 19.45 | 19.92 | 20.24          | 20.99 | 20.70 | 21.43 | 21.90 |
|                 | 6H   | 19.05            | 19.67 | 19.54 | 20.16 | 20.64 | 20.65          | 21.27 | 21.15 | 21.76 | 22.24 |
|                 | 8H   | 19.37            | 19.93 | 19.88 | 20.44 | 20.93 | 20.80          | 21.36 | 21.31 | 21.87 | 22.36 |
|                 | 12H  | 19.63            | 20.13 | 20.14 | 20.62 | 21.18 | 20.92          | 21.42 | 21.43 | 21.91 | 22.48 |
| 12H             | 4H   | 18.28            | 18.96 | 18.77 | 19.43 | 19.91 | 20.24          | 20.91 | 20.72 | 21.39 | 21.86 |
|                 | 6H   | 19.11            | 19.67 | 19.62 | 20.18 | 20.67 | 20.67          | 21.23 | 21.18 | 21.74 | 22.23 |
|                 | 8H   | 19.49            | 19.99 | 20.00 | 20.48 | 21.05 | 20.87          | 21.37 | 21.38 | 21.86 | 22.42 |