

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: P1061864

Luminaire Tested: S125RDRP-H1090D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1061864  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-85)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125RDRP-H1090D840-X4F0-XX-UDD-WVL-S  
Description: DEFINE 5 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

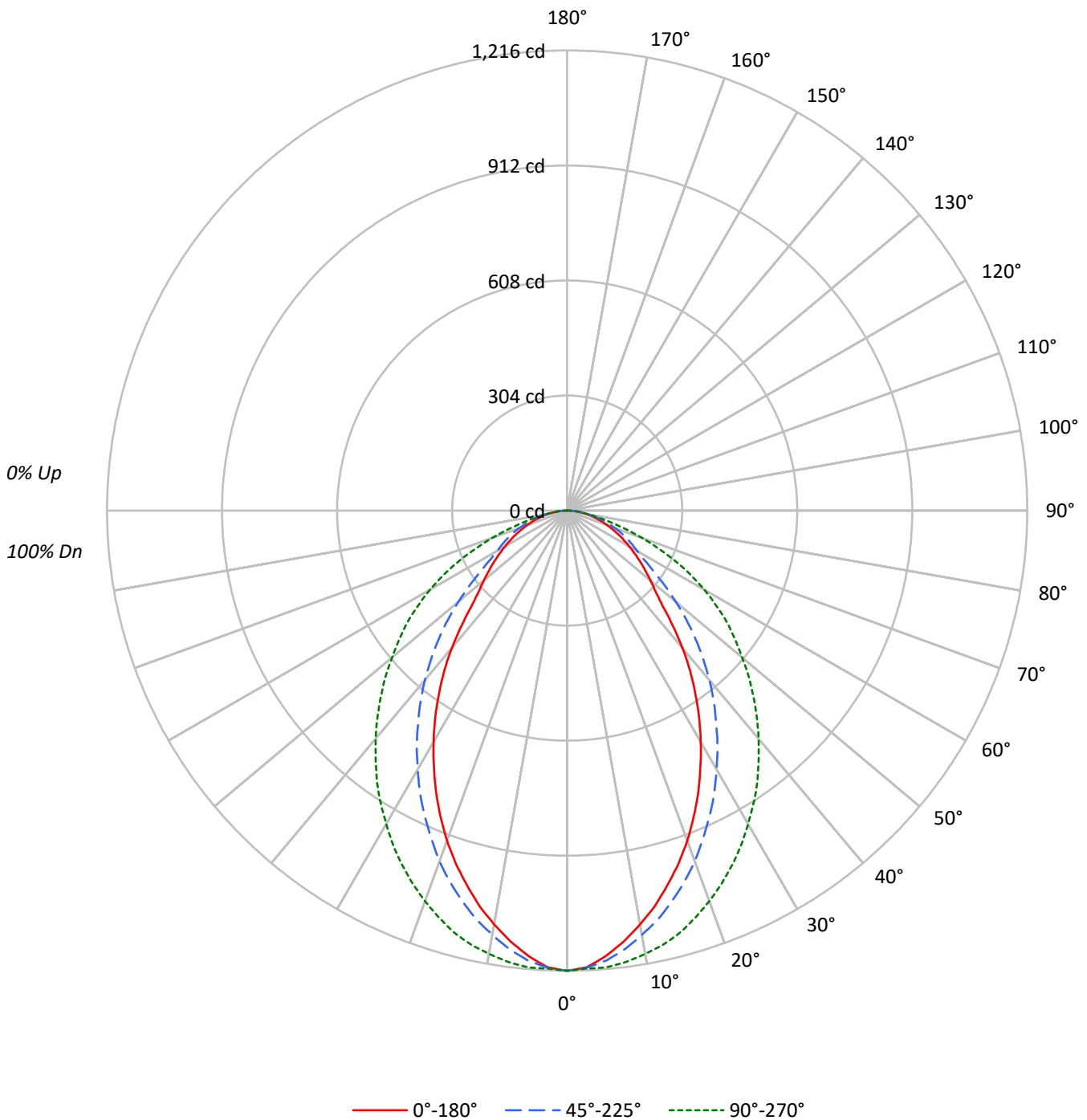
Lumens per Lamp: N/A  
Luminaire Lumens: 2279.8 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 1.18 / 1.12  
Luminous Opening: Rectangular (W 0.39' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31.2  
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   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 88  | 86  |
| 2   | 101 | 94  | 88  | 83  | 99  | 92  | 86  | 82  | 89  | 84  | 80  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |
| 3   | 93  | 84  | 76  | 71  | 91  | 82  | 75  | 70  | 79  | 74  | 69  | 77  | 72  | 68  | 74  | 70  | 66  | 64  |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 67  | 61  | 72  | 65  | 60  | 69  | 64  | 59  | 67  | 62  | 58  | 56  |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 59  | 53  | 65  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 52  | 50  |
| 6   | 74  | 62  | 54  | 48  | 72  | 61  | 53  | 48  | 59  | 52  | 47  | 58  | 52  | 47  | 56  | 51  | 46  | 44  |
| 7   | 69  | 57  | 49  | 43  | 68  | 56  | 48  | 43  | 54  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 40  |
| 8   | 65  | 52  | 44  | 39  | 63  | 52  | 44  | 39  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |
| 9   | 61  | 48  | 41  | 35  | 59  | 48  | 40  | 35  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 35  | 33  |
| 10  | 57  | 45  | 37  | 32  | 56  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 42  | 36  | 32  | 30  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8373 | 8373 | 8373 |
| 5°  | 8162 | 8246 | 8372 |
| 10° | 7763 | 7959 | 8316 |
| 15° | 7301 | 7621 | 8227 |
| 20° | 6801 | 7228 | 8047 |
| 25° | 6230 | 6765 | 7845 |
| 30° | 5612 | 6278 | 7601 |
| 35° | 4963 | 5769 | 7363 |
| 40° | 4259 | 5253 | 7076 |
| 45° | 3478 | 4673 | 6779 |
| 50° | 3084 | 4008 | 6468 |
| 55° | 2829 | 3325 | 6198 |
| 60° | 2610 | 2944 | 5771 |
| 65° | 2434 | 2830 | 5147 |
| 70° | 2275 | 2690 | 4207 |
| 75° | 2102 | 2522 | 3102 |
| 80° | 1975 | 2359 | 2264 |
| 85° | 1825 | 2307 | 1920 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6779 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 112.5  | 4.9       |
| 10°-20°   | 303.2  | 13.3      |
| 20°-30°   | 416.6  | 18.3      |
| 30°-40°   | 441.6  | 19.4      |
| 40°-50°   | 385.4  | 16.9      |
| 50°-60°   | 292.8  | 12.8      |
| 60°-70°   | 196.2  | 8.6       |
| 70°-80°   | 101.2  | 4.4       |
| 80°-90°   | 30.3   | 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°    | 832.3  | 36.5      |
| 0°-40°    | 1273.9 | 55.9      |
| 0°-60°    | 1952.2 | 85.6      |
| 0°-90°    | 2279.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2279.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1216 | 1216  | 1216 | 1216  | 1216 |      |
| 5°  | 1181 | 1193  | 1193 | 1202  | 1211 | 111  |
| 15° | 1024 | 1044  | 1069 | 1116  | 1154 | 287  |
| 25° | 820  | 846   | 890  | 965   | 1033 | 376  |
| 35° | 590  | 624   | 686  | 784   | 876  | 368  |
| 45° | 357  | 392   | 480  | 594   | 696  | 282  |
| 55° | 236  | 243   | 277  | 407   | 516  | 211  |
| 65° | 149  | 153   | 174  | 232   | 316  | 148  |
| 75° | 79   | 84    | 95   | 101   | 117  | 85   |
| 85° | 23   | 29    | 29   | 27    | 24   | 26   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1216.1 | 1216.1 | 1216.1 | 1216.1 | 1216.1 |
| 2.5°  | 1207.6 | 1216.1 | 1208.8 | 1208.8 | 1211.3 |
| 5°    | 1180.9 | 1193.1 | 1193.1 | 1201.6 | 1211.3 |
| 7.5°  | 1148.1 | 1161.5 | 1168.8 | 1188.2 | 1202.8 |
| 10°   | 1110.4 | 1125.0 | 1138.4 | 1167.5 | 1189.4 |
| 12.5° | 1070.3 | 1086.1 | 1106.8 | 1144.5 | 1174.8 |
| 15°   | 1024.2 | 1043.6 | 1069.1 | 1116.5 | 1154.2 |
| 17.5° | 978.0  | 997.5  | 1029.0 | 1084.9 | 1127.4 |
| 20°   | 928.2  | 948.9  | 986.5  | 1047.3 | 1098.3 |
| 22.5° | 874.7  | 897.8  | 937.9  | 1007.2 | 1066.7 |
| 25°   | 820.1  | 845.6  | 890.5  | 964.6  | 1032.7 |
| 27.5° | 763.0  | 793.3  | 841.9  | 920.9  | 996.2  |
| 30°   | 705.9  | 736.2  | 789.7  | 876.0  | 956.1  |
| 32.5° | 648.8  | 681.6  | 739.9  | 831.0  | 917.3  |
| 35°   | 590.5  | 624.5  | 686.4  | 783.6  | 876.0  |
| 37.5° | 533.4  | 567.4  | 636.6  | 737.5  | 831.0  |
| 40°   | 473.8  | 509.1  | 584.4  | 690.1  | 787.3  |
| 42.5° | 413.1  | 450.7  | 532.1  | 641.5  | 742.3  |
| 45°   | 357.2  | 392.4  | 479.9  | 594.1  | 696.2  |
| 47.5° | 315.9  | 339.0  | 427.7  | 545.5  | 651.2  |
| 50°   | 287.9  | 300.1  | 374.2  | 498.1  | 603.8  |
| 52.5° | 260.0  | 269.7  | 324.4  | 449.5  | 558.9  |
| 55°   | 235.7  | 243.0  | 277.0  | 407.0  | 516.3  |
| 57.5° | 211.4  | 218.7  | 240.6  | 364.5  | 466.5  |
| 60°   | 189.5  | 195.6  | 213.8  | 319.5  | 419.1  |
| 62.5° | 168.9  | 173.7  | 193.2  | 277.0  | 368.1  |
| 65°   | 149.4  | 153.1  | 173.7  | 232.1  | 315.9  |
| 67.5° | 130.0  | 133.6  | 154.3  | 189.5  | 260.0  |
| 70°   | 113.0  | 114.2  | 133.6  | 154.3  | 209.0  |
| 72.5° | 96.0   | 97.2   | 113.0  | 125.1  | 160.4  |
| 75°   | 79.0   | 83.8   | 94.8   | 100.8  | 116.6  |
| 77.5° | 64.4   | 70.5   | 76.5   | 79.0   | 79.0   |
| 80°   | 49.8   | 57.1   | 59.5   | 59.5   | 57.1   |
| 82.5° | 36.4   | 42.5   | 43.7   | 41.3   | 38.9   |
| 85°   | 23.1   | 29.2   | 29.2   | 26.7   | 24.3   |
| 87.5° | 10.9   | 15.8   | 15.8   | 14.6   | 10.9   |
| 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 | 13.99            | 15.49 | 14.36 | 15.80 | 16.12 | 17.92          | 19.41 | 18.28 | 19.73 | 20.04 |
|                 | 3H   | 15.56            | 16.90 | 15.94 | 17.23 | 17.59 | 19.34          | 20.68 | 19.72 | 21.01 | 21.37 |
|                 | 4H   | 16.17            | 17.43 | 16.57 | 17.78 | 18.16 | 19.75          | 21.01 | 20.15 | 21.36 | 21.74 |
|                 | 6H   | 16.67            | 17.83 | 17.08 | 18.20 | 18.59 | 19.97          | 21.13 | 20.38 | 21.50 | 21.89 |
|                 | 8H   | 16.84            | 17.95 | 17.27 | 18.34 | 18.74 | 20.03          | 21.14 | 20.46 | 21.53 | 21.93 |
|                 | 12H  | 16.97            | 18.03 | 17.40 | 18.41 | 18.84 | 20.06          | 21.12 | 20.49 | 21.51 | 21.94 |
| 4H              | 2H   | 14.73            | 15.99 | 15.13 | 16.34 | 16.71 | 18.04          | 19.30 | 18.44 | 19.65 | 20.03 |
|                 | 3H   | 16.51            | 17.55 | 16.92 | 17.95 | 18.35 | 19.65          | 20.70 | 20.06 | 21.10 | 21.50 |
|                 | 4H   | 17.24            | 18.18 | 17.67 | 18.60 | 19.04 | 20.18          | 21.12 | 20.61 | 21.54 | 21.98 |
|                 | 6H   | 17.88            | 18.70 | 18.34 | 19.14 | 19.60 | 20.52          | 21.34 | 20.98 | 21.78 | 22.24 |
|                 | 8H   | 18.11            | 18.87 | 18.57 | 19.31 | 19.78 | 20.62          | 21.39 | 21.09 | 21.83 | 22.30 |
|                 | 12H  | 18.28            | 18.96 | 18.76 | 19.44 | 19.91 | 20.70          | 21.38 | 21.18 | 21.86 | 22.33 |
| 8H              | 4H   | 17.64            | 18.41 | 18.11 | 18.85 | 19.32 | 20.29          | 21.05 | 20.75 | 21.50 | 21.96 |
|                 | 6H   | 18.43            | 19.06 | 18.93 | 19.55 | 20.03 | 20.73          | 21.36 | 21.22 | 21.85 | 22.33 |
|                 | 8H   | 18.75            | 19.32 | 19.27 | 19.83 | 20.32 | 20.88          | 21.45 | 21.40 | 21.96 | 22.45 |
|                 | 12H  | 19.03            | 19.53 | 19.54 | 20.02 | 20.59 | 21.02          | 21.52 | 21.53 | 22.01 | 22.58 |
| 12H             | 4H   | 17.69            | 18.37 | 18.17 | 18.85 | 19.32 | 20.29          | 20.97 | 20.77 | 21.45 | 21.92 |
|                 | 6H   | 18.51            | 19.08 | 19.03 | 19.59 | 20.08 | 20.74          | 21.31 | 21.26 | 21.82 | 22.31 |
|                 | 8H   | 18.91            | 19.41 | 19.42 | 19.90 | 20.47 | 20.95          | 21.45 | 21.46 | 21.94 | 22.51 |