

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: P1056510

Luminaire Tested: S125R3DR-H1090D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056510  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125R3DR-H1090D930-X4F0-XX-UDD-F-W  
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

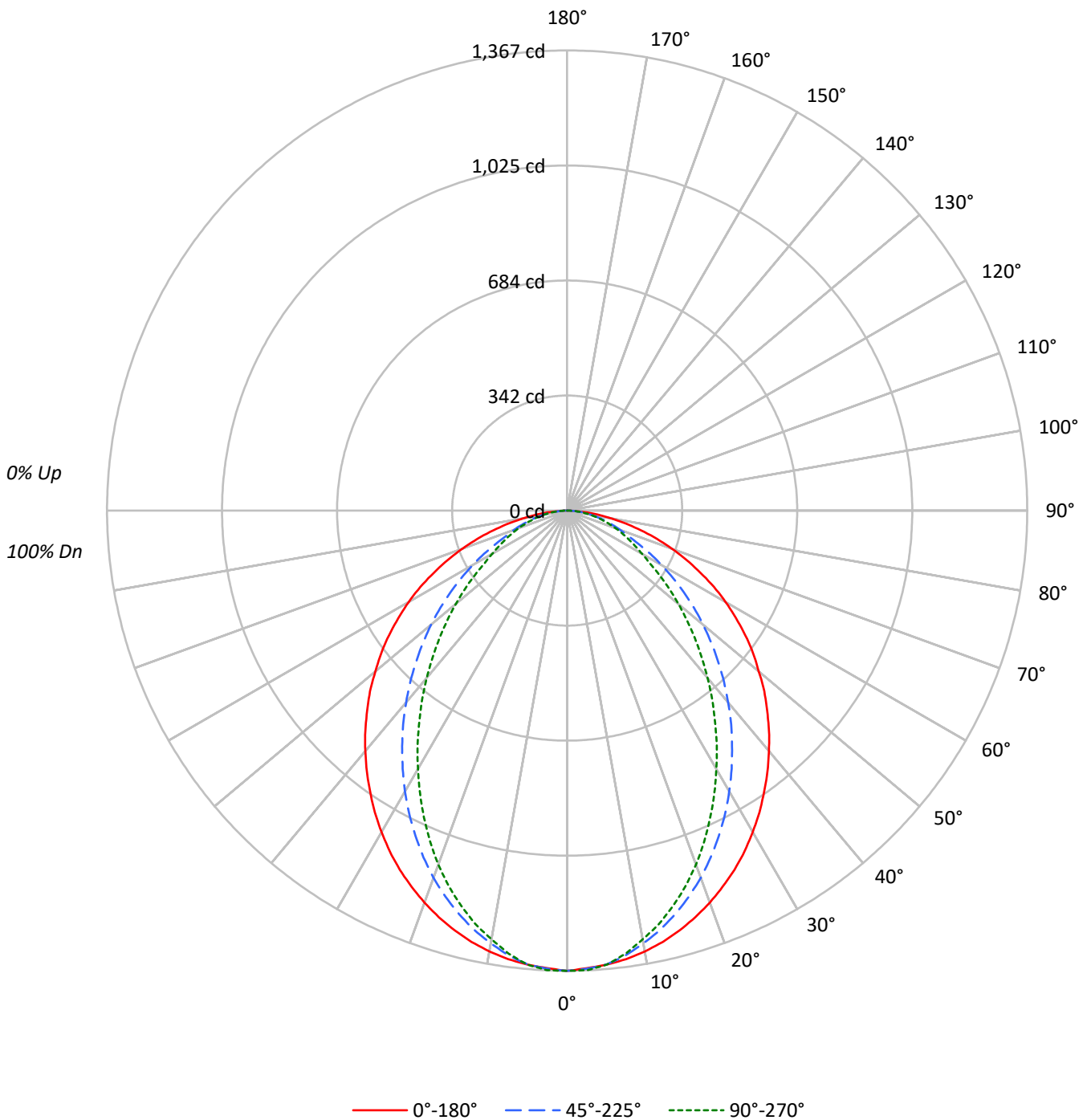
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2898.2 lumens  
Efficiency: N/A  
Efficacy: 93.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17  
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.9  
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 | 105 | 101 | 98  | 107 | 103 | 100 | 96  | 99  | 96  | 93  | 95  | 93  | 90  | 91  | 90  | 88  | 86  |
| 2   | 101 | 93  | 87  | 81  | 98  | 91  | 85  | 80  | 88  | 83  | 79  | 84  | 80  | 77  | 81  | 78  | 75  | 73  |
| 3   | 92  | 83  | 75  | 69  | 90  | 81  | 74  | 68  | 78  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 63  |
| 4   | 85  | 74  | 66  | 59  | 83  | 73  | 65  | 59  | 70  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 55  |
| 5   | 79  | 67  | 58  | 52  | 77  | 66  | 58  | 52  | 63  | 56  | 51  | 62  | 55  | 51  | 60  | 54  | 50  | 48  |
| 6   | 73  | 60  | 52  | 46  | 71  | 59  | 51  | 46  | 58  | 51  | 45  | 56  | 50  | 45  | 55  | 49  | 45  | 43  |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 46  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |
| 8   | 63  | 51  | 42  | 37  | 62  | 50  | 42  | 37  | 49  | 42  | 37  | 47  | 41  | 36  | 46  | 40  | 36  | 34  |
| 9   | 59  | 47  | 39  | 33  | 58  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |
| 10  | 56  | 43  | 36  | 31  | 55  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 28  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9667 | 9667 | 9667 |
| 5°  | 9610 | 9603 | 9610 |
| 10° | 9545 | 9370 | 9282 |
| 15° | 9449 | 9084 | 8897 |
| 20° | 9322 | 8732 | 8418 |
| 25° | 9181 | 8315 | 7847 |
| 30° | 9001 | 7863 | 7239 |
| 35° | 8804 | 7373 | 6608 |
| 40° | 8607 | 6869 | 5986 |
| 45° | 8398 | 6341 | 5365 |
| 50° | 8175 | 5800 | 4748 |
| 55° | 7968 | 5207 | 4129 |
| 60° | 7687 | 4578 | 3628 |
| 65° | 7307 | 3882 | 3372 |
| 70° | 6860 | 3472 | 3156 |
| 75° | 6203 | 3198 | 2974 |
| 80° | 5390 | 2903 | 2776 |
| 85° | 4210 | 2563 | 2563 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8398 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 127.9  | 4.4       |
| 10°-20°   | 351.3  | 12.1      |
| 20°-30°   | 496.2  | 17.1      |
| 30°-40°   | 546.3  | 18.8      |
| 40°-50°   | 509.6  | 17.6      |
| 50°-60°   | 406.8  | 14.0      |
| 60°-70°   | 273.8  | 9.4       |
| 70°-80°   | 145.8  | 5.0       |
| 80°-90°   | 40.5   | 1.4       |
| 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°    | 975.5  | 33.7      |
| 0°-40°    | 1521.8 | 52.5      |
| 0°-60°    | 2438.1 | 84.1      |
| 0°-90°    | 2898.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2898.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1367 | 1367  | 1367 | 1367  | 1367 |      |
| 5°  | 1354 | 1365  | 1353 | 1349  | 1354 | 129  |
| 15° | 1291 | 1284  | 1241 | 1220  | 1216 | 364  |
| 25° | 1177 | 1141  | 1066 | 1019  | 1006 | 542  |
| 35° | 1020 | 960   | 854  | 787   | 766  | 638  |
| 45° | 840  | 761   | 634  | 557   | 537  | 649  |
| 55° | 646  | 549   | 422  | 355   | 335  | 577  |
| 65° | 437  | 341   | 232  | 206   | 202  | 433  |
| 75° | 227  | 151   | 117  | 110   | 109  | 242  |
| 85° | 52   | 36    | 32   | 33    | 32   | 62   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1367.4 | 1367.4 | 1367.4 | 1367.4 | 1367.4 |
| 2.5°  | 1360.3 | 1371.5 | 1362.3 | 1364.4 | 1366.4 |
| 5°    | 1354.2 | 1365.4 | 1353.2 | 1349.1 | 1354.2 |
| 7.5°  | 1344.0 | 1353.2 | 1332.8 | 1323.6 | 1327.7 |
| 10°   | 1329.7 | 1335.9 | 1305.3 | 1293.1 | 1293.1 |
| 12.5° | 1312.4 | 1312.4 | 1275.8 | 1258.5 | 1258.5 |
| 15°   | 1291.1 | 1283.9 | 1241.2 | 1219.8 | 1215.7 |
| 17.5° | 1266.6 | 1253.4 | 1202.5 | 1175.0 | 1169.9 |
| 20°   | 1239.1 | 1217.7 | 1160.7 | 1125.1 | 1119.0 |
| 22.5° | 1208.6 | 1181.1 | 1114.9 | 1071.1 | 1064.0 |
| 25°   | 1177.0 | 1141.4 | 1066.0 | 1019.2 | 1006.0 |
| 27.5° | 1141.4 | 1098.6 | 1016.1 | 963.2  | 946.9  |
| 30°   | 1102.7 | 1053.8 | 963.2  | 904.1  | 886.8  |
| 32.5° | 1063.0 | 1008.0 | 909.2  | 846.1  | 826.8  |
| 35°   | 1020.2 | 960.1  | 854.3  | 787.1  | 765.7  |
| 37.5° | 977.5  | 912.3  | 800.3  | 730.0  | 707.6  |
| 40°   | 932.7  | 861.4  | 744.3  | 672.0  | 648.6  |
| 42.5° | 887.9  | 811.5  | 689.3  | 616.0  | 591.6  |
| 45°   | 840.0  | 760.6  | 634.3  | 556.9  | 536.6  |
| 47.5° | 794.2  | 708.7  | 580.4  | 505.0  | 482.6  |
| 50°   | 743.3  | 654.7  | 527.4  | 452.1  | 431.7  |
| 52.5° | 696.4  | 601.7  | 474.5  | 404.2  | 382.8  |
| 55°   | 646.5  | 548.8  | 422.5  | 355.3  | 335.0  |
| 57.5° | 594.6  | 495.9  | 372.7  | 309.5  | 290.2  |
| 60°   | 543.7  | 442.9  | 323.8  | 265.7  | 256.6  |
| 62.5° | 491.8  | 393.0  | 278.0  | 233.2  | 227.1  |
| 65°   | 436.8  | 341.1  | 232.1  | 205.7  | 201.6  |
| 67.5° | 384.9  | 291.2  | 195.5  | 180.2  | 176.1  |
| 70°   | 331.9  | 241.3  | 168.0  | 154.8  | 152.7  |
| 72.5° | 280.0  | 193.5  | 141.5  | 132.4  | 130.3  |
| 75°   | 227.1  | 150.7  | 117.1  | 110.0  | 108.9  |
| 77.5° | 178.2  | 113.0  | 92.7   | 89.6   | 87.6   |
| 80°   | 132.4  | 84.5   | 71.3   | 69.2   | 68.2   |
| 82.5° | 90.6   | 58.0   | 50.9   | 50.9   | 48.9   |
| 85°   | 51.9   | 35.6   | 31.6   | 32.6   | 31.6   |
| 87.5° | 19.3   | 15.3   | 14.3   | 15.3   | 15.3   |
| 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 | 19.17            | 20.71 | 19.54 | 21.02 | 21.34 | 15.55          | 17.09 | 15.92 | 17.41 | 17.72 |
|                 | 3H   | 20.96            | 22.34 | 21.33 | 22.67 | 23.03 | 17.03          | 18.41 | 17.41 | 18.74 | 19.10 |
|                 | 4H   | 21.61            | 22.91 | 22.01 | 23.26 | 23.63 | 17.62          | 18.92 | 18.02 | 19.27 | 19.64 |
|                 | 6H   | 22.09            | 23.29 | 22.50 | 23.65 | 24.04 | 18.08          | 19.28 | 18.49 | 19.65 | 20.04 |
|                 | 8H   | 22.24            | 23.38 | 22.67 | 23.77 | 24.17 | 18.24          | 19.39 | 18.67 | 19.78 | 20.18 |
|                 | 12H  | 22.34            | 23.43 | 22.77 | 23.81 | 24.24 | 18.36          | 19.45 | 18.79 | 19.83 | 20.26 |
| 4H              | 2H   | 19.31            | 20.60 | 19.70 | 20.95 | 21.33 | 16.23          | 17.53 | 16.63 | 17.88 | 18.25 |
|                 | 3H   | 21.28            | 22.36 | 21.69 | 22.76 | 23.16 | 17.91          | 18.99 | 18.32 | 19.39 | 19.79 |
|                 | 4H   | 22.02            | 22.99 | 22.45 | 23.41 | 23.85 | 18.61          | 19.58 | 19.04 | 20.00 | 20.44 |
|                 | 6H   | 22.62            | 23.46 | 23.07 | 23.91 | 24.36 | 19.20          | 20.04 | 19.65 | 20.49 | 20.94 |
|                 | 8H   | 22.82            | 23.61 | 23.28 | 24.06 | 24.52 | 19.40          | 20.20 | 19.87 | 20.64 | 21.11 |
|                 | 12H  | 22.97            | 23.68 | 23.45 | 24.16 | 24.63 | 19.56          | 20.27 | 20.05 | 20.75 | 21.22 |
| 8H              | 4H   | 22.08            | 22.88 | 22.55 | 23.32 | 23.79 | 18.97          | 19.77 | 19.44 | 20.21 | 20.68 |
|                 | 6H   | 22.74            | 23.40 | 23.24 | 23.89 | 24.37 | 19.68          | 20.33 | 20.17 | 20.82 | 21.30 |
|                 | 8H   | 23.00            | 23.59 | 23.51 | 24.10 | 24.58 | 19.96          | 20.55 | 20.47 | 21.06 | 21.55 |
|                 | 12H  | 23.21            | 23.73 | 23.71 | 24.22 | 24.78 | 20.20          | 20.72 | 20.71 | 21.21 | 21.78 |
| 12H             | 4H   | 22.08            | 22.79 | 22.56 | 23.26 | 23.73 | 19.02          | 19.73 | 19.50 | 20.21 | 20.68 |
|                 | 6H   | 22.74            | 23.33 | 23.25 | 23.84 | 24.32 | 19.75          | 20.34 | 20.26 | 20.85 | 21.33 |
|                 | 8H   | 23.03            | 23.55 | 23.54 | 24.04 | 24.61 | 20.09          | 20.61 | 20.60 | 21.10 | 21.67 |