

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: P1217434

Luminaire Tested: S124DRP-S865D940-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1217434  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/9/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-S865D940-X4F0-XX-UDD-G-W  
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

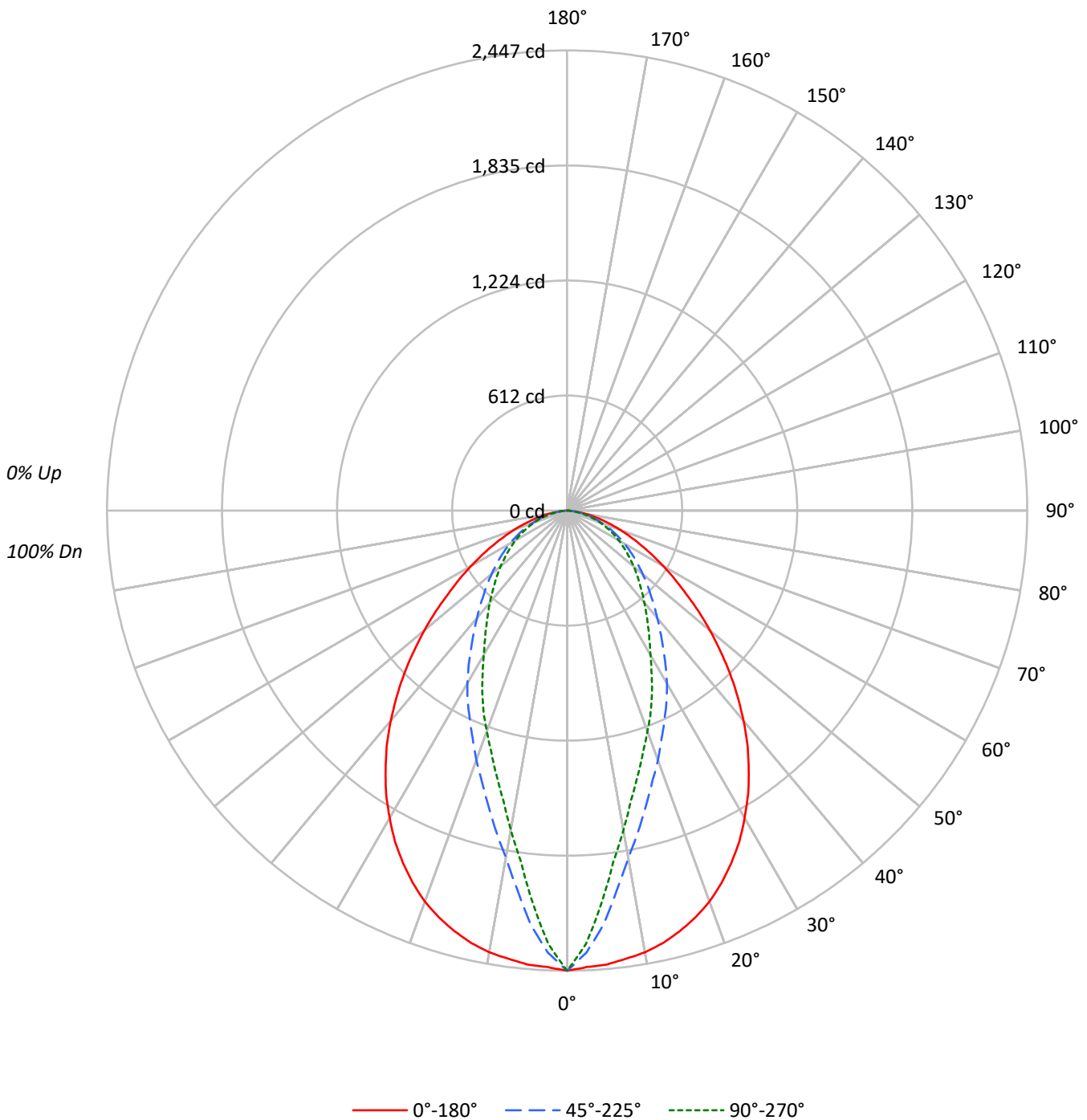
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3431.3 lumens  
Efficiency: N/A  
Efficacy: 98.9 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.7  
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  | 108 | 104 | 100 | 97  | 100 | 97  | 94  | 96  | 94  | 92  | 92  | 90  | 89  | 87  |
| 2   | 102 | 94  | 88  | 83  | 99  | 92  | 87  | 82  | 89  | 84  | 80  | 86  | 82  | 79  | 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  | 75  | 67  | 62  | 72  | 66  | 61  | 70  | 64  | 60  | 68  | 63  | 59  | 57  |
| 5   | 80  | 69  | 61  | 55  | 78  | 68  | 60  | 54  | 66  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 53  | 51  |
| 6   | 75  | 63  | 55  | 49  | 73  | 62  | 54  | 49  | 60  | 53  | 48  | 58  | 52  | 48  | 57  | 52  | 47  | 45  |
| 7   | 70  | 58  | 50  | 44  | 68  | 57  | 49  | 44  | 55  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 43  | 41  |
| 8   | 66  | 53  | 45  | 40  | 64  | 52  | 45  | 40  | 51  | 44  | 40  | 50  | 44  | 39  | 49  | 43  | 39  | 37  |
| 9   | 62  | 49  | 42  | 36  | 60  | 49  | 41  | 36  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 36  | 34  |
| 10  | 58  | 46  | 38  | 34  | 57  | 45  | 38  | 34  | 44  | 38  | 33  | 43  | 37  | 33  | 43  | 37  | 33  | 31  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 21631 | 21631 | 21631 |
| 5°  | 21504 | 19620 | 18597 |
| 10° | 21414 | 16820 | 15475 |
| 15° | 21192 | 14841 | 13313 |
| 20° | 20820 | 13279 | 11758 |
| 25° | 20158 | 11949 | 10415 |
| 30° | 19270 | 10834 | 9041  |
| 35° | 18175 | 9605  | 8093  |
| 40° | 16836 | 8604  | 7374  |
| 45° | 15302 | 7826  | 6803  |
| 50° | 13632 | 7202  | 6357  |
| 55° | 11891 | 6693  | 5945  |
| 60° | 10440 | 6230  | 5600  |
| 65° | 9038  | 5747  | 5228  |
| 70° | 7825  | 5209  | 4819  |
| 75° | 6514  | 4601  | 4232  |
| 80° | 5046  | 3732  | 3457  |
| 85° | 3165  | 2516  | 2293  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15302 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 204.8  | 6.0       |
| 10°-20°   | 486.5  | 14.2      |
| 20°-30°   | 621.7  | 18.1      |
| 30°-40°   | 631.4  | 18.4      |
| 40°-50°   | 559.7  | 16.3      |
| 50°-60°   | 439.8  | 12.8      |
| 60°-70°   | 299.5  | 8.7       |
| 70°-80°   | 153.8  | 4.5       |
| 80°-90°   | 34.1   | 1.0       |
| 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°    | 1313.0 | 38.3      |
| 0°-40°    | 1944.4 | 56.7      |
| 0°-60°    | 2944.0 | 85.8      |
| 0°-90°    | 3431.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3431.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2447 | 2447  | 2447 | 2447  | 2447 |      |
| 5°  | 2423 | 2362  | 2211 | 2126  | 2095 | 230  |
| 15° | 2315 | 1933  | 1621 | 1488  | 1454 | 652  |
| 25° | 2066 | 1515  | 1225 | 1108  | 1068 | 950  |
| 35° | 1684 | 1147  | 890  | 777   | 750  | 1051 |
| 45° | 1224 | 826   | 626  | 561   | 544  | 943  |
| 55° | 771  | 550   | 434  | 395   | 386  | 697  |
| 65° | 432  | 334   | 275  | 255   | 250  | 432  |
| 75° | 191  | 157   | 135  | 128   | 124  | 205  |
| 85° | 31   | 29    | 25   | 25    | 23   | 42   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2446.6 | 2446.6 | 2446.6 | 2446.6 | 2446.6 |
| 2.5°  | 2429.4 | 2432.6 | 2351.8 | 2322.7 | 2305.5 |
| 5°    | 2422.9 | 2361.5 | 2210.7 | 2125.6 | 2095.4 |
| 7.5°  | 2403.5 | 2269.9 | 2031.8 | 1914.4 | 1883.2 |
| 10°   | 2385.2 | 2165.4 | 1873.5 | 1757.1 | 1723.7 |
| 12.5° | 2355.0 | 2050.2 | 1746.3 | 1612.8 | 1572.9 |
| 15°   | 2315.2 | 1932.7 | 1621.4 | 1487.8 | 1454.4 |
| 17.5° | 2267.8 | 1820.7 | 1508.3 | 1380.1 | 1343.4 |
| 20°   | 2212.8 | 1717.3 | 1411.3 | 1279.9 | 1249.7 |
| 22.5° | 2143.9 | 1614.9 | 1312.2 | 1193.7 | 1160.3 |
| 25°   | 2066.3 | 1514.7 | 1224.9 | 1107.5 | 1067.6 |
| 27.5° | 1983.4 | 1417.8 | 1144.1 | 1013.8 | 971.7  |
| 30°   | 1887.5 | 1325.1 | 1061.2 | 924.3  | 885.6  |
| 32.5° | 1790.5 | 1233.5 | 973.9  | 844.6  | 813.4  |
| 35°   | 1683.9 | 1147.4 | 889.9  | 776.8  | 749.8  |
| 37.5° | 1576.1 | 1064.4 | 814.5  | 715.3  | 691.6  |
| 40°   | 1458.7 | 983.6  | 745.5  | 658.2  | 638.9  |
| 42.5° | 1341.3 | 902.8  | 683.0  | 607.6  | 589.3  |
| 45°   | 1223.8 | 826.3  | 625.9  | 561.3  | 544.1  |
| 47.5° | 1105.3 | 750.9  | 573.1  | 516.0  | 502.0  |
| 50°   | 991.1  | 679.8  | 523.6  | 474.0  | 462.2  |
| 52.5° | 880.2  | 613.0  | 476.2  | 434.2  | 421.2  |
| 55°   | 771.4  | 550.5  | 434.2  | 395.4  | 385.7  |
| 57.5° | 678.7  | 492.3  | 392.1  | 358.7  | 351.2  |
| 60°   | 590.4  | 436.3  | 352.3  | 324.3  | 316.7  |
| 62.5° | 507.4  | 384.6  | 312.4  | 289.8  | 284.4  |
| 65°   | 432.0  | 334.0  | 274.7  | 255.3  | 249.9  |
| 67.5° | 363.1  | 287.6  | 235.9  | 221.9  | 217.6  |
| 70°   | 302.7  | 241.3  | 201.5  | 189.6  | 186.4  |
| 72.5° | 242.4  | 197.2  | 167.0  | 158.4  | 155.1  |
| 75°   | 190.7  | 157.3  | 134.7  | 128.2  | 123.9  |
| 77.5° | 143.3  | 119.6  | 103.4  | 98.0   | 94.8   |
| 80°   | 99.1   | 85.1   | 73.3   | 71.1   | 67.9   |
| 82.5° | 62.5   | 53.9   | 47.4   | 46.3   | 43.1   |
| 85°   | 31.2   | 29.1   | 24.8   | 24.8   | 22.6   |
| 87.5° | 10.8   | 9.7    | 9.7    | 9.7    | 8.6    |
| 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 | 19.58            | 21.07 | 19.95 | 21.39 | 21.70 | 16.91          | 18.40 | 17.27 | 18.71 | 19.02 |
|                 | 3H   | 21.18            | 22.51 | 21.56 | 22.84 | 23.20 | 18.51          | 19.84 | 18.89 | 20.17 | 20.53 |
|                 | 4H   | 21.71            | 22.96 | 22.11 | 23.31 | 23.69 | 19.07          | 20.32 | 19.47 | 20.67 | 21.04 |
|                 | 6H   | 22.04            | 23.19 | 22.45 | 23.56 | 23.95 | 19.42          | 20.58 | 19.83 | 20.94 | 21.34 |
|                 | 8H   | 22.12            | 23.21 | 22.54 | 23.60 | 24.01 | 19.51          | 20.61 | 19.94 | 21.00 | 21.40 |
|                 | 12H  | 22.15            | 23.20 | 22.58 | 23.58 | 24.01 | 19.55          | 20.60 | 19.98 | 20.98 | 21.41 |
| 4H              | 2H   | 19.81            | 21.06 | 20.21 | 21.41 | 21.79 | 17.59          | 18.84 | 17.99 | 19.18 | 19.56 |
|                 | 3H   | 21.60            | 22.63 | 22.01 | 23.03 | 23.44 | 19.37          | 20.41 | 19.78 | 20.81 | 21.21 |
|                 | 4H   | 22.24            | 23.17 | 22.67 | 23.59 | 24.03 | 20.04          | 20.97 | 20.47 | 21.39 | 21.82 |
|                 | 6H   | 22.68            | 23.49 | 23.14 | 23.94 | 24.40 | 20.49          | 21.30 | 20.95 | 21.75 | 22.21 |
|                 | 8H   | 22.80            | 23.55 | 23.26 | 24.00 | 24.46 | 20.61          | 21.37 | 21.07 | 21.81 | 22.28 |
|                 | 12H  | 22.85            | 23.53 | 23.34 | 24.01 | 24.48 | 20.67          | 21.34 | 21.15 | 21.82 | 22.30 |
| 8H              | 4H   | 22.34            | 23.10 | 22.81 | 23.54 | 24.01 | 20.34          | 21.09 | 20.80 | 21.54 | 22.01 |
|                 | 6H   | 22.86            | 23.48 | 23.36 | 23.97 | 24.45 | 20.89          | 21.51 | 21.38 | 22.00 | 22.48 |
|                 | 8H   | 23.01            | 23.57 | 23.53 | 24.08 | 24.57 | 21.05          | 21.61 | 21.57 | 22.12 | 22.61 |
|                 | 12H  | 23.12            | 23.61 | 23.63 | 24.10 | 24.67 | 21.16          | 21.65 | 21.67 | 22.15 | 22.71 |
| 12H             | 4H   | 22.33            | 23.01 | 22.82 | 23.49 | 23.96 | 20.36          | 21.03 | 20.84 | 21.51 | 21.99 |
|                 | 6H   | 22.85            | 23.41 | 23.37 | 23.92 | 24.41 | 20.92          | 21.48 | 21.44 | 21.99 | 22.48 |
|                 | 8H   | 23.05            | 23.54 | 23.56 | 24.03 | 24.60 | 21.14          | 21.63 | 21.65 | 22.12 | 22.69 |