

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: P1439625

Luminaire Tested: S122DR-H1005D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439625  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DR-H1005D830-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

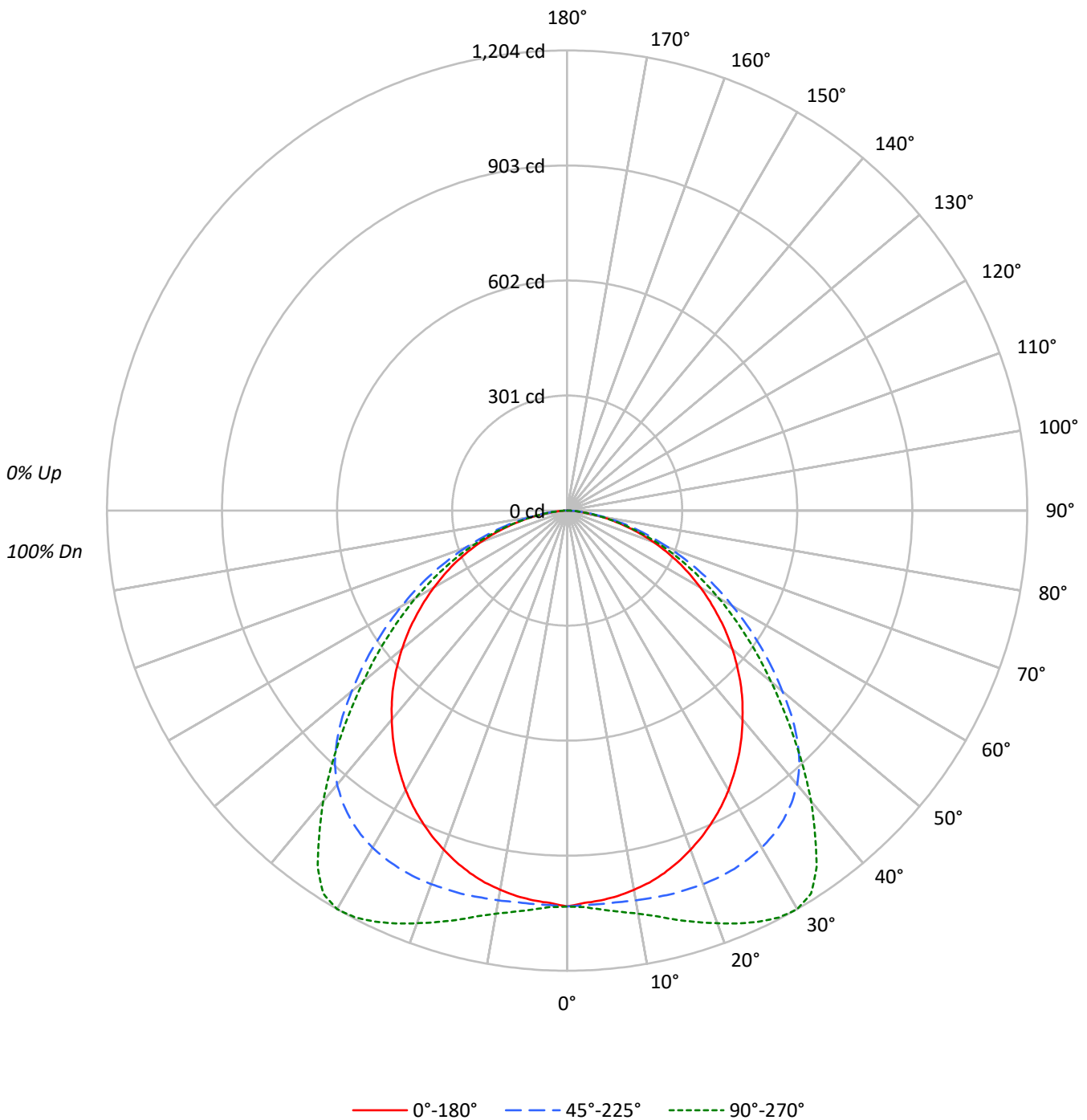
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3185.8 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.6  
Input Voltage (V): 120  
Input Current (Ain): 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   | 109 | 105 | 101 | 97  | 107 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |
| 2   | 100 | 91  | 85  | 79  | 97  | 90  | 84  | 78  | 86  | 81  | 76  | 83  | 79  | 75  | 80  | 76  | 73  | 71  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 66  | 76  | 70  | 64  | 73  | 68  | 63  | 71  | 66  | 62  | 60  |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 68  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |
| 5   | 76  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 61  | 53  | 47  | 59  | 52  | 47  | 57  | 51  | 46  | 44  |
| 6   | 71  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 55  | 47  | 42  | 53  | 46  | 41  | 51  | 45  | 41  | 39  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 32  | 30  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 27  | 38  | 31  | 26  | 37  | 31  | 26  | 25  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 19624 | 19624 | 19624 |
| 5°  | 19469 | 19648 | 19929 |
| 10° | 19382 | 19927 | 20600 |
| 15° | 19259 | 20397 | 21744 |
| 20° | 19037 | 20966 | 23166 |
| 25° | 18781 | 21626 | 24807 |
| 30° | 18477 | 22277 | 26344 |
| 35° | 18100 | 22835 | 26325 |
| 40° | 17656 | 23152 | 24552 |
| 45° | 17215 | 22844 | 22485 |
| 50° | 16635 | 21676 | 20526 |
| 55° | 15974 | 20334 | 18864 |
| 60° | 15259 | 18934 | 17354 |
| 65° | 14431 | 17452 | 15820 |
| 70° | 13283 | 15593 | 14175 |
| 75° | 11734 | 13506 | 12225 |
| 80° | 9699  | 10725 | 9699  |
| 85° | 6434  | 7021  | 6739  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 23026 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 99.1   | 3.1       |
| 10°-20°   | 295.9  | 9.3       |
| 20°-30°   | 480.1  | 15.1      |
| 30°-40°   | 607.5  | 19.1      |
| 40°-50°   | 608.4  | 19.1      |
| 50°-60°   | 509.5  | 16.0      |
| 60°-70°   | 359.1  | 11.3      |
| 70°-80°   | 185.3  | 5.8       |
| 80°-90°   | 41.1   | 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°    | 875.0  | 27.5      |
| 0°-40°    | 1482.5 | 46.5      |
| 0°-60°    | 2600.4 | 81.6      |
| 0°-90°    | 3185.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3185.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1036 | 1036  | 1036 | 1036  | 1036 |      |
| 5°  | 1024 | 1041  | 1033 | 1038  | 1048 | 97   |
| 15° | 982  | 1010  | 1040 | 1082  | 1109 | 277  |
| 25° | 898  | 947   | 1034 | 1136  | 1187 | 414  |
| 35° | 783  | 846   | 987  | 1115  | 1138 | 489  |
| 45° | 642  | 710   | 853  | 859   | 839  | 495  |
| 55° | 484  | 543   | 616  | 590   | 571  | 433  |
| 65° | 322  | 358   | 389  | 365   | 353  | 318  |
| 75° | 160  | 176   | 184  | 171   | 167  | 170  |
| 85° | 30   | 32    | 32   | 32    | 31   | 38   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1035.8 | 1035.8 | 1035.8 | 1035.8 | 1035.8 |
| 2.5°  | 1027.7 | 1043.9 | 1033.1 | 1034.5 | 1038.5 |
| 5°    | 1023.7 | 1041.2 | 1033.1 | 1038.5 | 1047.9 |
| 7.5°  | 1017.0 | 1035.8 | 1033.1 | 1043.9 | 1058.7 |
| 10°   | 1007.5 | 1029.1 | 1035.8 | 1054.7 | 1070.8 |
| 12.5° | 996.8  | 1019.7 | 1037.2 | 1066.8 | 1087.0 |
| 15°   | 981.9  | 1010.2 | 1039.9 | 1081.6 | 1108.6 |
| 17.5° | 964.4  | 998.1  | 1039.9 | 1097.8 | 1128.8 |
| 20°   | 944.2  | 983.3  | 1039.9 | 1111.3 | 1149.0 |
| 22.5° | 922.7  | 965.8  | 1038.5 | 1123.4 | 1169.2 |
| 25°   | 898.4  | 946.9  | 1034.5 | 1135.5 | 1186.7 |
| 27.5° | 872.8  | 925.4  | 1027.7 | 1144.9 | 1200.2 |
| 30°   | 844.6  | 901.1  | 1018.3 | 1149.0 | 1204.2 |
| 32.5° | 813.6  | 875.5  | 1004.8 | 1140.9 | 1188.0 |
| 35°   | 782.6  | 845.9  | 987.3  | 1115.3 | 1138.2 |
| 37.5° | 748.9  | 814.9  | 964.4  | 1065.5 | 1065.5 |
| 40°   | 713.9  | 781.2  | 936.1  | 996.8  | 992.7  |
| 42.5° | 678.9  | 746.2  | 899.8  | 929.4  | 915.9  |
| 45°   | 642.5  | 709.9  | 852.6  | 859.4  | 839.2  |
| 47.5° | 603.4  | 669.4  | 797.4  | 788.0  | 765.1  |
| 50°   | 564.4  | 629.0  | 735.4  | 719.3  | 696.4  |
| 52.5° | 525.3  | 587.3  | 676.2  | 653.3  | 633.1  |
| 55°   | 483.6  | 542.8  | 615.6  | 590.0  | 571.1  |
| 57.5° | 443.2  | 498.4  | 557.6  | 529.4  | 513.2  |
| 60°   | 402.7  | 452.6  | 499.7  | 472.8  | 458.0  |
| 62.5° | 362.3  | 405.4  | 444.5  | 417.6  | 404.1  |
| 65°   | 321.9  | 358.3  | 389.3  | 365.0  | 352.9  |
| 67.5° | 280.2  | 312.5  | 334.1  | 312.5  | 304.4  |
| 70°   | 239.8  | 265.4  | 281.5  | 262.7  | 255.9  |
| 72.5° | 199.4  | 220.9  | 231.7  | 216.9  | 210.1  |
| 75°   | 160.3  | 176.5  | 184.5  | 171.1  | 167.0  |
| 77.5° | 122.6  | 134.7  | 138.7  | 129.3  | 123.9  |
| 80°   | 88.9   | 95.6   | 98.3   | 91.6   | 88.9   |
| 82.5° | 55.2   | 60.6   | 63.3   | 57.9   | 56.6   |
| 85°   | 29.6   | 32.3   | 32.3   | 32.3   | 31.0   |
| 87.5° | 10.8   | 13.5   | 13.5   | 13.5   | 12.1   |
| 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 | 21.83            | 23.44 | 22.19 | 23.75 | 24.07 | 22.34          | 23.95 | 22.71 | 24.27 | 24.58 |
|                 | 3H   | 23.40            | 24.85 | 23.78 | 25.18 | 25.54 | 23.81          | 25.26 | 24.19 | 25.59 | 25.95 |
|                 | 4H   | 23.93            | 25.30 | 24.33 | 25.65 | 26.03 | 24.30          | 25.67 | 24.70 | 26.02 | 26.39 |
|                 | 6H   | 24.28            | 25.54 | 24.69 | 25.91 | 26.30 | 24.60          | 25.87 | 25.01 | 26.23 | 26.62 |
|                 | 8H   | 24.36            | 25.57 | 24.79 | 25.96 | 26.36 | 24.67          | 25.88 | 25.10 | 26.27 | 26.67 |
|                 | 12H  | 24.40            | 25.55 | 24.83 | 25.93 | 26.36 | 24.71          | 25.86 | 25.14 | 26.25 | 26.68 |
| 4H              | 2H   | 22.58            | 23.95 | 22.98 | 24.30 | 24.67 | 22.98          | 24.35 | 23.38 | 24.69 | 25.07 |
|                 | 3H   | 24.35            | 25.49 | 24.76 | 25.89 | 26.29 | 24.65          | 25.79 | 25.06 | 26.18 | 26.58 |
|                 | 4H   | 25.00            | 26.03 | 25.43 | 26.44 | 26.88 | 25.24          | 26.27 | 25.67 | 26.68 | 27.12 |
|                 | 6H   | 25.44            | 26.34 | 25.90 | 26.78 | 27.24 | 25.64          | 26.53 | 26.09 | 26.97 | 27.43 |
|                 | 8H   | 25.55            | 26.39 | 26.01 | 26.83 | 27.30 | 25.74          | 26.57 | 26.20 | 27.02 | 27.48 |
|                 | 12H  | 25.61            | 26.36 | 26.09 | 26.84 | 27.31 | 25.80          | 26.55 | 26.28 | 27.02 | 27.49 |
| 8H              | 4H   | 25.28            | 26.12 | 25.74 | 26.56 | 27.03 | 25.50          | 26.34 | 25.96 | 26.78 | 27.24 |
|                 | 6H   | 25.82            | 26.52 | 26.32 | 27.00 | 27.48 | 25.98          | 26.68 | 26.48 | 27.16 | 27.64 |
|                 | 8H   | 25.98            | 26.60 | 26.49 | 27.11 | 27.60 | 26.13          | 26.75 | 26.64 | 27.26 | 27.74 |
|                 | 12H  | 26.08            | 26.64 | 26.59 | 27.13 | 27.69 | 26.23          | 26.78 | 26.73 | 27.27 | 27.83 |
| 12H             | 4H   | 25.30            | 26.05 | 25.78 | 26.53 | 27.00 | 25.51          | 26.26 | 25.99 | 26.74 | 27.21 |
|                 | 6H   | 25.85            | 26.47 | 26.36 | 26.98 | 27.47 | 26.01          | 26.63 | 26.52 | 27.14 | 27.63 |
|                 | 8H   | 26.06            | 26.61 | 26.56 | 27.10 | 27.66 | 26.20          | 26.75 | 26.70 | 27.24 | 27.80 |