

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: P1439671

Luminaire Tested: S122DR-S1005D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439671
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-S1005D835-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

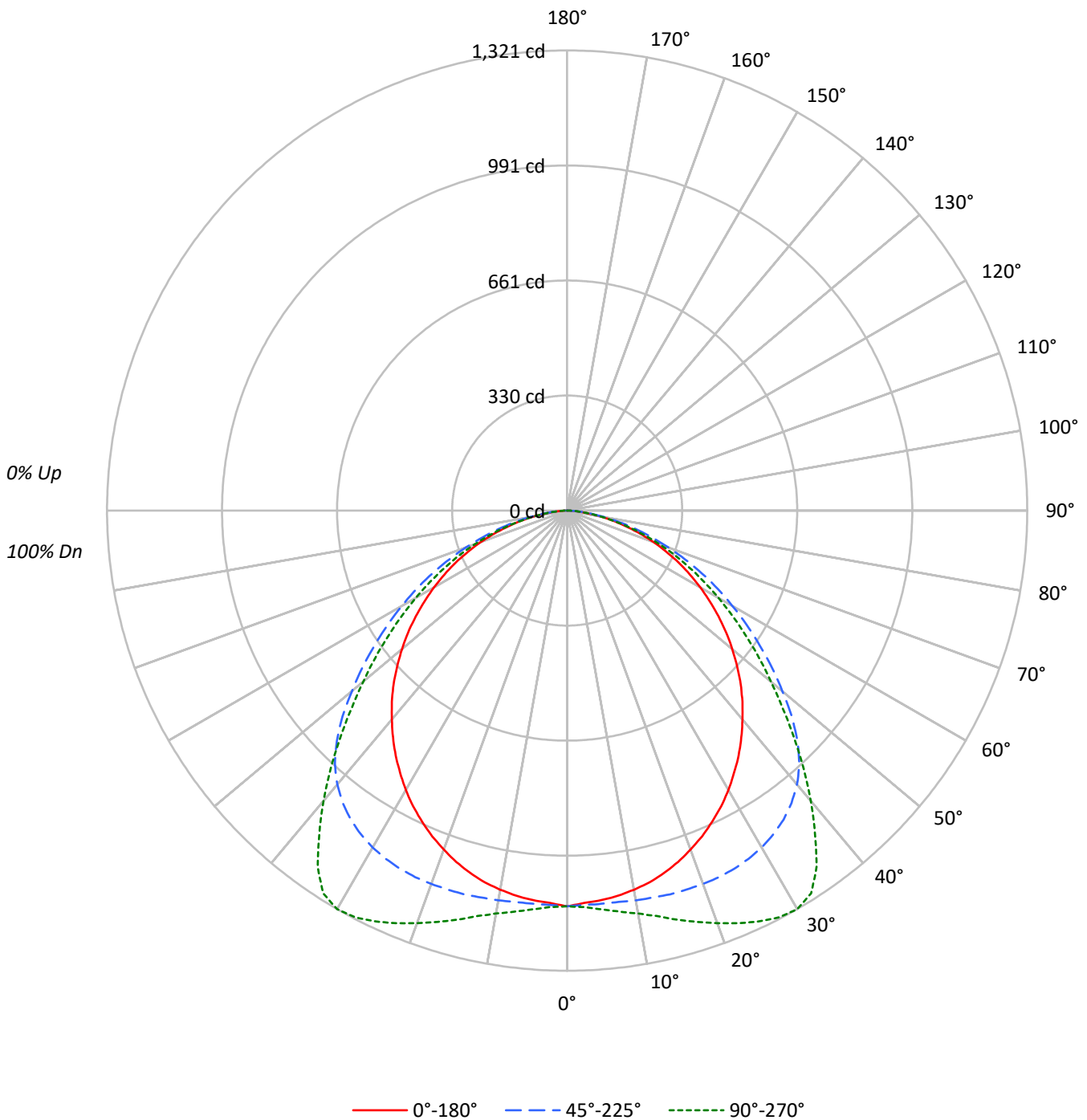
Lumens per Lamp: N/A
Luminaire Lumens: 3494.1 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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° | 21524 | 21524 | 21524 |
| 5° | 21354 | 21550 | 21860 |
| 10° | 21260 | 21856 | 22595 |
| 15° | 21124 | 22370 | 23849 |
| 20° | 20880 | 22994 | 25408 |
| 25° | 20599 | 23718 | 27207 |
| 30° | 20264 | 24434 | 28895 |
| 35° | 19851 | 25046 | 28874 |
| 40° | 19365 | 25395 | 26928 |
| 45° | 18881 | 25057 | 24661 |
| 50° | 18245 | 23774 | 22513 |
| 55° | 17520 | 22303 | 20691 |
| 60° | 16737 | 20768 | 19033 |
| 65° | 15829 | 19142 | 17354 |
| 70° | 14569 | 17106 | 15549 |
| 75° | 12869 | 14816 | 13410 |
| 80° | 10638 | 11761 | 10638 |
| 85° | 7065 | 7717 | 7391 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 25256 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 108.6 | 3.1 |
| 10°-20° | 324.5 | 9.3 |
| 20°-30° | 526.5 | 15.1 |
| 30°-40° | 666.3 | 19.1 |
| 40°-50° | 667.3 | 19.1 |
| 50°-60° | 558.9 | 16.0 |
| 60°-70° | 393.9 | 11.3 |
| 70°-80° | 203.2 | 5.8 |
| 80°-90° | 45.1 | 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° | 959.7 | 27.5 |
| 0°-40° | 1625.9 | 46.5 |
| 0°-60° | 2852.1 | 81.6 |
| 0°-90° | 3494.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3494.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1136 | 1136 | 1136 | 1136 | 1136 | |
| 5° | 1123 | 1142 | 1133 | 1139 | 1149 | 107 |
| 15° | 1077 | 1108 | 1140 | 1186 | 1216 | 304 |
| 25° | 985 | 1039 | 1135 | 1245 | 1302 | 454 |
| 35° | 858 | 928 | 1083 | 1223 | 1248 | 536 |
| 45° | 705 | 779 | 935 | 943 | 920 | 543 |
| 55° | 530 | 595 | 675 | 647 | 626 | 475 |
| 65° | 353 | 393 | 427 | 400 | 387 | 349 |
| 75° | 176 | 194 | 202 | 188 | 183 | 187 |
| 85° | 32 | 36 | 36 | 36 | 34 | 42 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1439671

CATALOG NUMBER: S122DR-S1005D835-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1136.1 | 1136.1 | 1136.1 | 1136.1 | 1136.1 |
| 2.5° | 1127.2 | 1144.9 | 1133.1 | 1134.6 | 1139.0 |
| 5° | 1122.8 | 1142.0 | 1133.1 | 1139.0 | 1149.4 |
| 7.5° | 1115.4 | 1136.1 | 1133.1 | 1144.9 | 1161.2 |
| 10° | 1105.1 | 1128.7 | 1136.1 | 1156.8 | 1174.5 |
| 12.5° | 1093.2 | 1118.4 | 1137.6 | 1170.1 | 1192.2 |
| 15° | 1077.0 | 1108.0 | 1140.5 | 1186.3 | 1215.9 |
| 17.5° | 1057.8 | 1094.7 | 1140.5 | 1204.0 | 1238.0 |
| 20° | 1035.6 | 1078.5 | 1140.5 | 1218.8 | 1260.2 |
| 22.5° | 1012.0 | 1059.3 | 1139.0 | 1232.1 | 1282.3 |
| 25° | 985.4 | 1038.6 | 1134.6 | 1245.4 | 1301.5 |
| 27.5° | 957.3 | 1014.9 | 1127.2 | 1255.8 | 1316.3 |
| 30° | 926.3 | 988.3 | 1116.9 | 1260.2 | 1320.8 |
| 32.5° | 892.3 | 960.3 | 1102.1 | 1251.3 | 1303.0 |
| 35° | 858.3 | 927.8 | 1082.9 | 1223.2 | 1248.4 |
| 37.5° | 821.4 | 893.8 | 1057.8 | 1168.6 | 1168.6 |
| 40° | 783.0 | 856.9 | 1026.8 | 1093.2 | 1088.8 |
| 42.5° | 744.6 | 818.5 | 986.9 | 1019.4 | 1004.6 |
| 45° | 704.7 | 778.6 | 935.2 | 942.6 | 920.4 |
| 47.5° | 661.9 | 734.2 | 874.6 | 864.3 | 839.1 |
| 50° | 619.0 | 689.9 | 806.6 | 788.9 | 763.8 |
| 52.5° | 576.2 | 644.1 | 741.6 | 716.5 | 694.4 |
| 55° | 530.4 | 595.4 | 675.2 | 647.1 | 626.4 |
| 57.5° | 486.0 | 546.6 | 611.6 | 580.6 | 562.9 |
| 60° | 441.7 | 496.4 | 548.1 | 518.6 | 502.3 |
| 62.5° | 397.4 | 444.7 | 487.5 | 458.0 | 443.2 |
| 65° | 353.1 | 393.0 | 427.0 | 400.4 | 387.1 |
| 67.5° | 307.3 | 342.7 | 366.4 | 342.7 | 333.9 |
| 70° | 263.0 | 291.0 | 308.8 | 288.1 | 280.7 |
| 72.5° | 218.6 | 242.3 | 254.1 | 237.9 | 230.5 |
| 75° | 175.8 | 193.5 | 202.4 | 187.6 | 183.2 |
| 77.5° | 134.4 | 147.7 | 152.2 | 141.8 | 135.9 |
| 80° | 97.5 | 104.9 | 107.8 | 100.5 | 97.5 |
| 82.5° | 60.6 | 66.5 | 69.4 | 63.5 | 62.0 |
| 85° | 32.5 | 35.5 | 35.5 | 35.5 | 34.0 |
| 87.5° | 11.8 | 14.8 | 14.8 | 14.8 | 13.3 |
| 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 | 22.15 | 23.76 | 22.51 | 24.07 | 24.39 | 22.66 | 24.27 | 23.03 | 24.59 | 24.90 |
| | 3H | 23.72 | 25.17 | 24.10 | 25.50 | 25.86 | 24.13 | 25.58 | 24.51 | 25.91 | 26.27 |
| | 4H | 24.25 | 25.62 | 24.65 | 25.97 | 26.35 | 24.62 | 25.99 | 25.02 | 26.34 | 26.71 |
| | 6H | 24.60 | 25.86 | 25.01 | 26.23 | 26.62 | 24.92 | 26.19 | 25.33 | 26.55 | 26.94 |
| | 8H | 24.68 | 25.89 | 25.11 | 26.28 | 26.68 | 25.00 | 26.20 | 25.42 | 26.59 | 26.99 |
| | 12H | 24.72 | 25.87 | 25.15 | 26.26 | 26.68 | 25.03 | 26.19 | 25.46 | 26.57 | 27.00 |
| 4H | 2H | 22.90 | 24.27 | 23.30 | 24.62 | 24.99 | 23.30 | 24.67 | 23.70 | 25.01 | 25.39 |
| | 3H | 24.67 | 25.81 | 25.08 | 26.21 | 26.61 | 24.97 | 26.11 | 25.38 | 26.51 | 26.91 |
| | 4H | 25.32 | 26.35 | 25.75 | 26.76 | 27.20 | 25.56 | 26.59 | 25.99 | 27.00 | 27.44 |
| | 6H | 25.76 | 26.66 | 26.22 | 27.10 | 27.56 | 25.96 | 26.85 | 26.41 | 27.29 | 27.75 |
| | 8H | 25.87 | 26.71 | 26.33 | 27.15 | 27.62 | 26.06 | 26.90 | 26.52 | 27.34 | 27.80 |
| | 12H | 25.93 | 26.69 | 26.41 | 27.16 | 27.63 | 26.12 | 26.87 | 26.60 | 27.34 | 27.81 |
| 8H | 4H | 25.60 | 26.44 | 26.06 | 26.88 | 27.35 | 25.82 | 26.66 | 26.28 | 27.10 | 27.56 |
| | 6H | 26.14 | 26.84 | 26.64 | 27.32 | 27.80 | 26.30 | 27.00 | 26.80 | 27.49 | 27.96 |
| | 8H | 26.30 | 26.92 | 26.81 | 27.43 | 27.92 | 26.45 | 27.07 | 26.96 | 27.58 | 28.06 |
| | 12H | 26.41 | 26.96 | 26.91 | 27.45 | 28.01 | 26.55 | 27.10 | 27.05 | 27.59 | 28.15 |
| 12H | 4H | 25.62 | 26.37 | 26.10 | 26.85 | 27.32 | 25.83 | 26.59 | 26.31 | 27.06 | 27.53 |
| | 6H | 26.17 | 26.79 | 26.68 | 27.30 | 27.79 | 26.33 | 26.95 | 26.84 | 27.46 | 27.95 |
| | 8H | 26.38 | 26.93 | 26.88 | 27.42 | 27.98 | 26.52 | 27.07 | 27.03 | 27.56 | 28.12 |