

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: P1055557

Luminaire Tested: S123R3DRP-S1000D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055557
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DRP-S1000D850-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

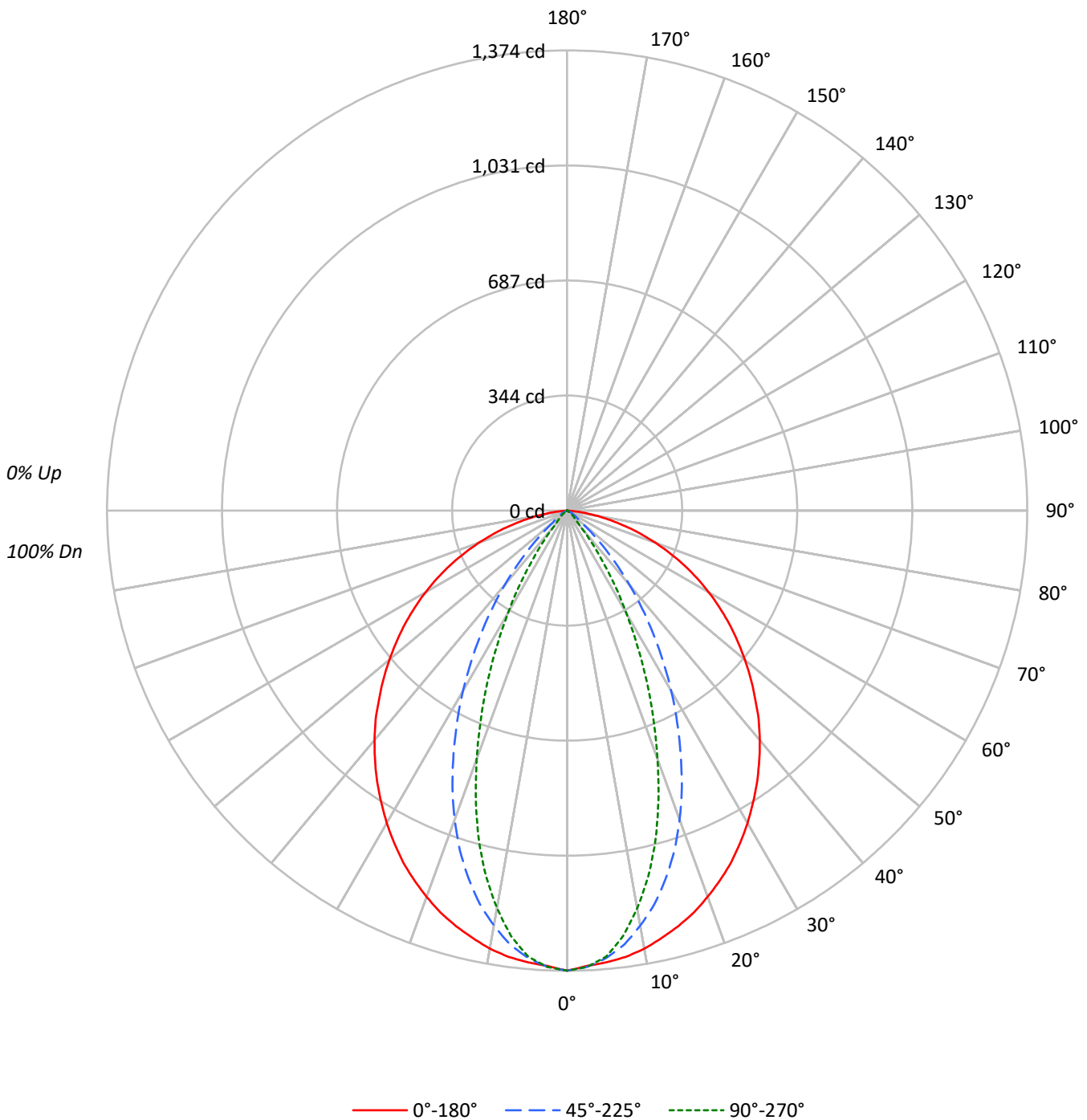
Lumens per Lamp: N/A
Luminaire Lumens: 1607.9 lumens
Efficiency: N/A
Efficacy: 46.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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

TEST NUMBER: P105557

CATALOG NUMBER: S123R3DRP-S1000D850-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055557

CATALOG NUMBER: S123R3DRP-S1000D850-X4F0-XX-UDD-F-B

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 | 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 | | | | | 100 | | | |
| 1 | 112 | 108 | 105 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98 | 98 | 97 | 95 | 95 | 93 | 92 | 90 | | | | | 90 | | | |
| 2 | 105 | 99 | 94 | 89 | 102 | 97 | 92 | 88 | 93 | 90 | 86 | 90 | 87 | 84 | 87 | 85 | 83 | 81 | | | | | 81 | | | |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 77 | 74 | 73 | | | | | 73 | | | |
| 4 | 92 | 82 | 75 | 70 | 90 | 81 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 75 | 71 | 67 | 65 | | | | | 65 | | | |
| 5 | 86 | 76 | 69 | 63 | 84 | 75 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | 59 | | | |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 61 | 56 | 64 | 60 | 56 | 54 | | | | | 54 | | | |
| 7 | 76 | 65 | 58 | 53 | 74 | 64 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 | | | | | 50 | | | |
| 8 | 71 | 60 | 53 | 48 | 70 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 48 | 46 | | | | | 46 | | | |
| 9 | 68 | 56 | 49 | 45 | 66 | 56 | 49 | 45 | 55 | 49 | 45 | 54 | 48 | 44 | 53 | 48 | 44 | 43 | | | | | 43 | | | |
| 10 | 64 | 53 | 46 | 42 | 63 | 52 | 46 | 42 | 51 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 40 | | | | | 40 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 16563 | 16563 | 16563 |
| 5° | 16386 | 16231 | 16179 |
| 10° | 16260 | 15406 | 14761 |
| 15° | 16027 | 14195 | 12719 |
| 20° | 15743 | 12598 | 10129 |
| 25° | 15413 | 10673 | 7470 |
| 30° | 14999 | 8651 | 4900 |
| 35° | 14556 | 6586 | 2685 |
| 40° | 14086 | 4553 | 919 |
| 45° | 13535 | 2648 | 535 |
| 50° | 12991 | 1043 | 321 |
| 55° | 12431 | 660 | 149 |
| 60° | 11786 | 412 | 70 |
| 65° | 10978 | 203 | 40 |
| 70° | 9845 | 102 | 49 |
| 75° | 8366 | 65 | 65 |
| 80° | 6235 | 97 | 0 |
| 85° | 2365 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13535 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 126.0 | 7.8 |
| 10°-20° | 319.7 | 19.9 |
| 20°-30° | 381.3 | 23.7 |
| 30°-40° | 323.4 | 20.1 |
| 40°-50° | 219.8 | 13.7 |
| 50°-60° | 136.2 | 8.5 |
| 60°-70° | 69.0 | 4.3 |
| 70°-80° | 28.1 | 1.7 |
| 80°-90° | 4.3 | 0.3 |
| 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° | 826.9 | 51.4 |
| 0°-40° | 1150.3 | 71.5 |
| 0°-60° | 1506.4 | 93.7 |
| 0°-90° | 1607.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1607.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1374 | 1374 | 1374 | 1374 | 1374 | |
| 5° | 1354 | 1367 | 1341 | 1331 | 1337 | 128 |
| 15° | 1284 | 1251 | 1137 | 1048 | 1019 | 362 |
| 25° | 1159 | 1050 | 802 | 620 | 562 | 533 |
| 35° | 989 | 794 | 448 | 241 | 182 | 618 |
| 45° | 794 | 520 | 155 | 38 | 31 | 613 |
| 55° | 591 | 262 | 31 | 11 | 7 | 528 |
| 65° | 385 | 64 | 7 | 1 | 1 | 380 |
| 75° | 180 | 11 | 1 | 1 | 1 | 191 |
| 85° | 17 | 0 | 0 | 1 | 0 | 30 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P105557

CATALOG NUMBER: S123R3DRP-S1000D850-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1373.8 | 1373.8 | 1373.8 | 1373.8 | 1373.8 |
| 2.5° | 1361.0 | 1379.5 | 1363.9 | 1362.4 | 1363.9 |
| 5° | 1353.9 | 1366.7 | 1341.1 | 1331.1 | 1336.8 |
| 7.5° | 1343.9 | 1349.6 | 1306.8 | 1281.2 | 1281.2 |
| 10° | 1328.2 | 1323.9 | 1258.4 | 1215.6 | 1205.7 |
| 12.5° | 1306.8 | 1289.7 | 1204.2 | 1137.3 | 1118.7 |
| 15° | 1284.0 | 1251.3 | 1137.3 | 1047.5 | 1019.0 |
| 17.5° | 1258.4 | 1208.5 | 1064.6 | 947.7 | 906.4 |
| 20° | 1227.0 | 1160.1 | 981.9 | 839.4 | 789.5 |
| 22.5° | 1194.3 | 1107.3 | 895.0 | 728.2 | 672.7 |
| 25° | 1158.6 | 1050.3 | 802.3 | 619.9 | 561.5 |
| 27.5° | 1118.7 | 990.5 | 711.1 | 515.9 | 451.8 |
| 30° | 1077.4 | 927.8 | 621.4 | 416.1 | 352.0 |
| 32.5° | 1033.2 | 862.2 | 531.6 | 324.9 | 265.1 |
| 35° | 989.0 | 793.8 | 447.5 | 240.8 | 182.4 |
| 37.5° | 942.0 | 725.4 | 366.3 | 166.7 | 115.4 |
| 40° | 895.0 | 658.4 | 289.3 | 105.5 | 58.4 |
| 42.5° | 846.5 | 588.6 | 219.5 | 52.7 | 39.9 |
| 45° | 793.8 | 520.2 | 155.3 | 38.5 | 31.4 |
| 47.5° | 743.9 | 454.6 | 102.6 | 31.4 | 24.2 |
| 50° | 692.6 | 389.1 | 55.6 | 22.8 | 17.1 |
| 52.5° | 641.3 | 326.4 | 39.9 | 17.1 | 11.4 |
| 55° | 591.4 | 262.2 | 31.4 | 11.4 | 7.1 |
| 57.5° | 540.1 | 206.6 | 24.2 | 7.1 | 4.3 |
| 60° | 488.8 | 152.5 | 17.1 | 4.3 | 2.9 |
| 62.5° | 437.5 | 105.5 | 11.4 | 2.9 | 1.4 |
| 65° | 384.8 | 64.1 | 7.1 | 1.4 | 1.4 |
| 67.5° | 330.6 | 44.2 | 4.3 | 1.4 | 1.4 |
| 70° | 279.3 | 31.4 | 2.9 | 1.4 | 1.4 |
| 72.5° | 228.0 | 20.0 | 1.4 | 1.4 | 0.0 |
| 75° | 179.6 | 11.4 | 1.4 | 1.4 | 1.4 |
| 77.5° | 132.5 | 4.3 | 1.4 | 1.4 | 0.0 |
| 80° | 89.8 | 1.4 | 1.4 | 1.4 | 0.0 |
| 82.5° | 49.9 | 0.0 | 1.4 | 1.4 | 0.0 |
| 85° | 17.1 | 0.0 | 0.0 | 1.4 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 |
| 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 | 18.80 | 20.08 | 19.16 | 20.39 | 20.71 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 20.75 | 21.88 | 21.13 | 22.21 | 22.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 21.57 | 22.63 | 21.98 | 22.98 | 23.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 22.13 | 23.10 | 22.54 | 23.47 | 23.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 22.25 | 23.17 | 22.68 | 23.56 | 23.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 22.28 | 23.15 | 22.71 | 23.54 | 23.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 18.56 | 19.62 | 18.97 | 19.97 | 20.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 20.52 | 21.38 | 20.93 | 21.78 | 22.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 21.33 | 22.10 | 21.77 | 22.52 | 22.96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.93 | 22.59 | 22.40 | 23.04 | 23.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 22.08 | 22.70 | 22.55 | 23.15 | 23.62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 22.13 | 22.68 | 22.62 | 23.16 | 23.63 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 21.19 | 21.81 | 21.66 | 22.25 | 22.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.77 | 22.27 | 22.27 | 22.77 | 23.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.92 | 22.37 | 22.44 | 22.89 | 23.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 21.98 | 22.37 | 22.49 | 22.87 | 23.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 21.14 | 21.68 | 21.63 | 22.17 | 22.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.71 | 22.16 | 22.23 | 22.67 | 23.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.88 | 22.27 | 22.39 | 22.77 | 23.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |