

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: P1055161

Luminaire Tested: S122R3DR-S1005D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055161
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S1005D935-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

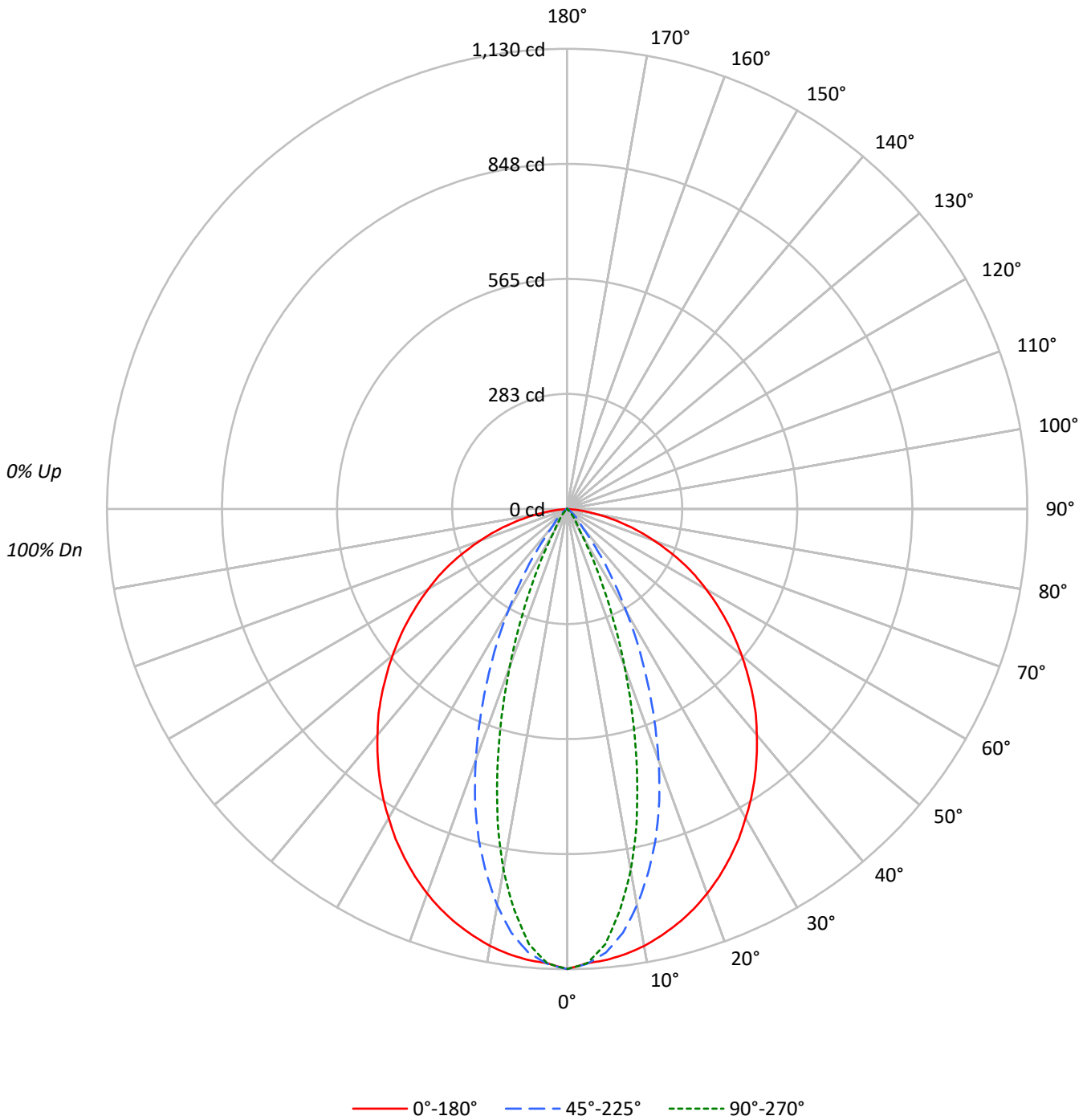
Lumens per Lamp: N/A
Luminaire Lumens: 1027.8 lumens
Efficiency: N/A
Efficacy: 24.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (A_{in}): 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: P1055161

CATALOG NUMBER: S122R3DR-S1005D935-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot



TEST NUMBER: P1055161

CATALOG NUMBER: S122R3DR-S1005D935-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 | 109 | 106 | 103 | 110 | 106 | 104 | 101 | 102 | 100 | 98 | 99 | 97 | 95 | 95 | 94 | 92 | 91 | | | | | 91 | | | |
| 2 | 105 | 99 | 94 | 90 | 103 | 97 | 93 | 89 | 94 | 90 | 87 | 91 | 88 | 85 | 88 | 86 | 83 | 81 | | | | | 81 | | | |
| 3 | 98 | 91 | 85 | 80 | 96 | 89 | 84 | 79 | 86 | 82 | 78 | 84 | 80 | 77 | 82 | 78 | 75 | 74 | | | | | 74 | | | |
| 4 | 92 | 83 | 77 | 72 | 90 | 82 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 70 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 5 | 87 | 77 | 70 | 65 | 85 | 76 | 70 | 65 | 74 | 69 | 64 | 72 | 68 | 64 | 71 | 66 | 63 | 61 | | | | | 61 | | | |
| 6 | 82 | 72 | 65 | 60 | 80 | 71 | 64 | 59 | 69 | 63 | 59 | 68 | 62 | 59 | 66 | 62 | 58 | 56 | | | | | 56 | | | |
| 7 | 77 | 67 | 60 | 55 | 76 | 66 | 59 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 62 | 57 | 54 | 52 | | | | | 52 | | | |
| 8 | 73 | 62 | 56 | 51 | 72 | 62 | 55 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 49 | | | | | 49 | | | |
| 9 | 70 | 59 | 52 | 48 | 68 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 45 | | | | | 45 | | | |
| 10 | 66 | 55 | 49 | 45 | 65 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 43 | | | | | 43 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 21403 | 21403 | 21403 |
| 5° | 21139 | 20795 | 20399 |
| 10° | 20960 | 19011 | 17312 |
| 15° | 20656 | 16452 | 12963 |
| 20° | 20265 | 13222 | 8299 |
| 25° | 19761 | 9691 | 4262 |
| 30° | 19175 | 6336 | 1391 |
| 35° | 18591 | 3513 | 812 |
| 40° | 17921 | 1412 | 450 |
| 45° | 17258 | 940 | 174 |
| 50° | 16497 | 536 | 77 |
| 55° | 15743 | 258 | 43 |
| 60° | 14910 | 99 | 0 |
| 65° | 14027 | 58 | 0 |
| 70° | 12586 | 72 | 0 |
| 75° | 10834 | 95 | 0 |
| 80° | 8216 | 0 | 0 |
| 85° | 3391 | 283 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17258 cd/sqm



TEST NUMBER: P1055161

CATALOG NUMBER: S122R3DR-S1005D935-X4F0-XX-UDD-F-B

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 101.3 | 9.9 |
| 10°-20° | 235.3 | 22.9 |
| 20°-30° | 238.9 | 23.2 |
| 30°-40° | 179.3 | 17.4 |
| 40°-50° | 125.5 | 12.2 |
| 50°-60° | 76.8 | 7.5 |
| 60°-70° | 45.8 | 4.5 |
| 70°-80° | 21.1 | 2.1 |
| 80°-90° | 3.8 | 0.4 |
| 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° | 575.5 | 56.0 |
| 0°-40° | 754.8 | 73.4 |
| 0°-60° | 957.2 | 93.1 |
| 0°-90° | 1027.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1027.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1130 | 1130 | 1130 | 1130 | 1130 | |
| 5° | 1112 | 1122 | 1093 | 1073 | 1073 | 105 |
| 15° | 1053 | 996 | 839 | 710 | 661 | 297 |
| 25° | 945 | 779 | 464 | 265 | 204 | 435 |
| 35° | 804 | 523 | 152 | 45 | 35 | 502 |
| 45° | 644 | 277 | 35 | 10 | 6 | 496 |
| 55° | 477 | 84 | 8 | 3 | 1 | 426 |
| 65° | 313 | 25 | 1 | 1 | 0 | 308 |
| 75° | 148 | 3 | 1 | 1 | 0 | 157 |
| 85° | 16 | 0 | 1 | 1 | 0 | 26 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055161

CATALOG NUMBER: S122R3DR-S1005D935-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1129.7 | 1129.7 | 1129.7 | 1129.7 | 1129.7 |
| 2.5° | 1116.7 | 1133.6 | 1118.0 | 1115.4 | 1116.7 |
| 5° | 1111.5 | 1121.9 | 1093.4 | 1072.6 | 1072.6 |
| 7.5° | 1102.4 | 1102.4 | 1049.2 | 1006.4 | 993.4 |
| 10° | 1089.5 | 1075.2 | 988.2 | 919.4 | 899.9 |
| 12.5° | 1072.6 | 1038.8 | 916.8 | 819.4 | 788.2 |
| 15° | 1053.1 | 996.0 | 838.8 | 710.3 | 660.9 |
| 17.5° | 1031.0 | 947.9 | 751.8 | 592.1 | 535.0 |
| 20° | 1005.1 | 896.0 | 655.8 | 471.4 | 411.6 |
| 22.5° | 976.5 | 838.8 | 558.4 | 363.6 | 300.0 |
| 25° | 945.3 | 779.1 | 463.6 | 264.9 | 203.9 |
| 27.5° | 912.9 | 716.8 | 376.6 | 181.8 | 124.7 |
| 30° | 876.5 | 651.9 | 289.6 | 107.8 | 63.6 |
| 32.5° | 841.4 | 589.5 | 216.9 | 58.4 | 46.7 |
| 35° | 803.8 | 523.3 | 151.9 | 45.4 | 35.1 |
| 37.5° | 764.8 | 461.0 | 93.5 | 33.8 | 26.0 |
| 40° | 724.6 | 397.3 | 57.1 | 24.7 | 18.2 |
| 42.5° | 685.6 | 337.6 | 45.4 | 16.9 | 11.7 |
| 45° | 644.1 | 276.6 | 35.1 | 10.4 | 6.5 |
| 47.5° | 601.2 | 220.7 | 26.0 | 6.5 | 3.9 |
| 50° | 559.7 | 171.4 | 18.2 | 3.9 | 2.6 |
| 52.5° | 518.1 | 126.0 | 11.7 | 2.6 | 1.3 |
| 55° | 476.6 | 84.4 | 7.8 | 2.6 | 1.3 |
| 57.5° | 435.0 | 59.7 | 5.2 | 1.3 | 1.3 |
| 60° | 393.5 | 46.7 | 2.6 | 1.3 | 0.0 |
| 62.5° | 354.5 | 36.4 | 2.6 | 1.3 | 1.3 |
| 65° | 312.9 | 24.7 | 1.3 | 1.3 | 0.0 |
| 67.5° | 268.8 | 15.6 | 1.3 | 1.3 | 0.0 |
| 70° | 227.2 | 9.1 | 1.3 | 1.3 | 0.0 |
| 72.5° | 187.0 | 5.2 | 1.3 | 1.3 | 0.0 |
| 75° | 148.0 | 2.6 | 1.3 | 1.3 | 0.0 |
| 77.5° | 110.4 | 1.3 | 0.0 | 1.3 | 0.0 |
| 80° | 75.3 | 0.0 | 0.0 | 1.3 | 0.0 |
| 82.5° | 44.1 | 0.0 | 0.0 | 1.3 | 0.0 |
| 85° | 15.6 | 0.0 | 1.3 | 1.3 | 0.0 |
| 87.5° | 0.0 | 0.0 | 1.3 | 1.3 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P1055161
 CATALOG NUMBER: S122R3DR-S1005D935-X4F0-XX-UDD-F-B

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 | 16.85 | 18.11 | 17.22 | 18.43 | 18.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 20.60 | 21.71 | 20.98 | 22.04 | 22.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 21.91 | 22.95 | 22.31 | 23.30 | 23.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 22.76 | 23.72 | 23.18 | 24.09 | 24.48 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 22.98 | 23.88 | 23.41 | 24.27 | 24.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 23.04 | 23.90 | 23.47 | 24.29 | 24.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 16.61 | 17.65 | 17.01 | 18.00 | 18.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 20.35 | 21.20 | 20.76 | 21.61 | 22.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 21.65 | 22.41 | 22.08 | 22.83 | 23.27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 22.56 | 23.22 | 23.03 | 23.67 | 24.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 22.82 | 23.43 | 23.29 | 23.88 | 24.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 22.92 | 23.46 | 23.41 | 23.95 | 24.42 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 21.50 | 22.11 | 21.97 | 22.56 | 23.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 22.40 | 22.90 | 22.91 | 23.40 | 23.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 22.66 | 23.10 | 23.18 | 23.62 | 24.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 22.78 | 23.17 | 23.29 | 23.66 | 24.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 21.45 | 21.99 | 21.94 | 22.47 | 22.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 22.34 | 22.78 | 22.86 | 23.30 | 23.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 22.62 | 23.00 | 23.13 | 23.50 | 24.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |