

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: P1055165

Luminaire Tested: S122R3DR-S1005D940-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055165
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S1005D940-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

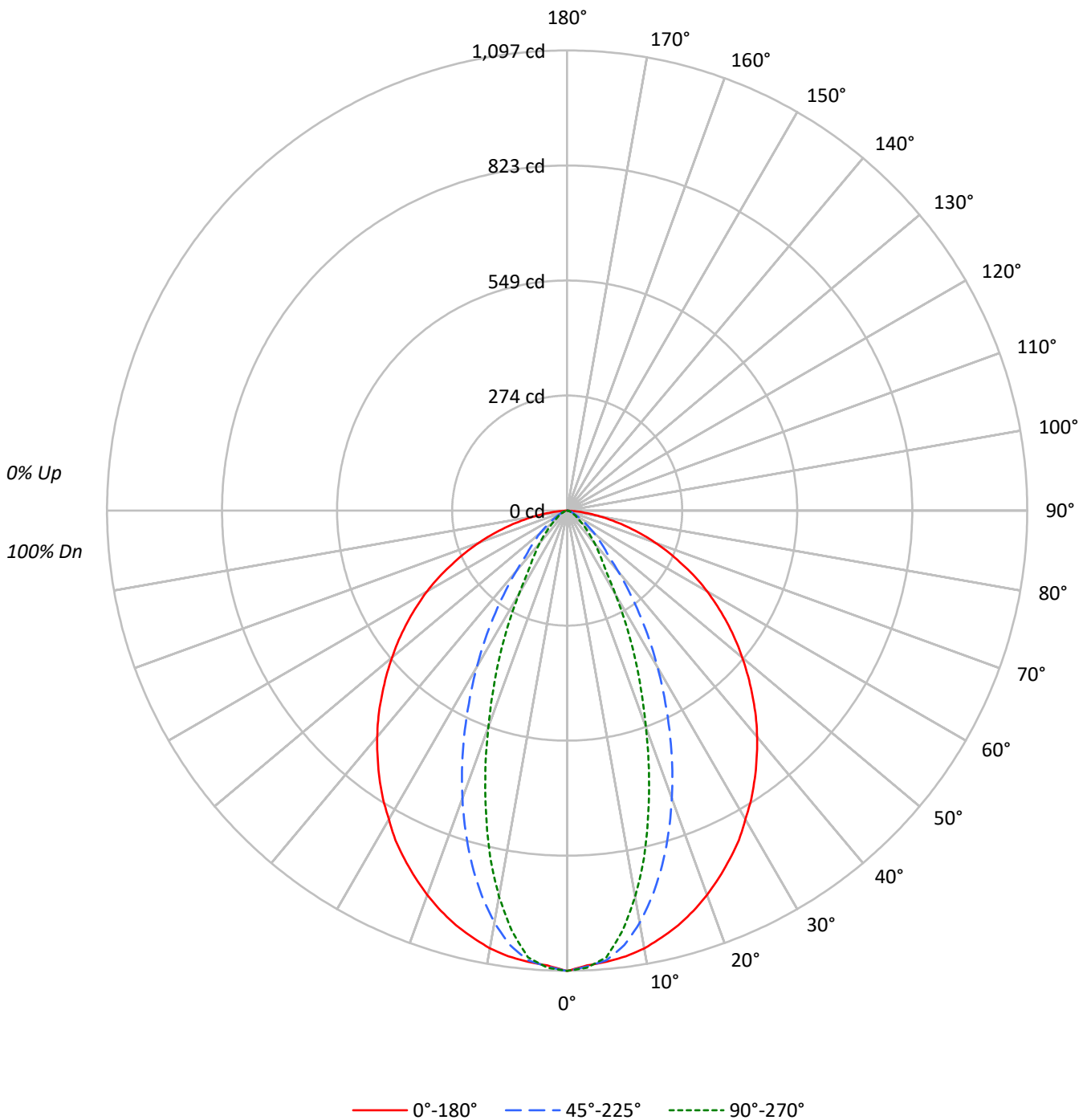
Lumens per Lamp: N/A
Luminaire Lumens: 1257.6 lumens
Efficiency: N/A
Efficacy: 30.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 92 | 90 |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 85 | 90 | 86 | 83 | 87 | 84 | 82 | 80 |
| 3 | 97 | 89 | 83 | 78 | 95 | 88 | 82 | 77 | 85 | 80 | 76 | 82 | 78 | 74 | 80 | 76 | 73 | 71 |
| 4 | 91 | 81 | 74 | 69 | 89 | 80 | 74 | 69 | 78 | 72 | 68 | 76 | 71 | 67 | 74 | 70 | 66 | 64 |
| 5 | 85 | 75 | 67 | 62 | 83 | 74 | 67 | 62 | 72 | 66 | 61 | 70 | 65 | 61 | 68 | 64 | 60 | 58 |
| 6 | 80 | 69 | 62 | 56 | 78 | 68 | 61 | 56 | 66 | 60 | 56 | 65 | 59 | 55 | 63 | 59 | 55 | 53 |
| 7 | 75 | 64 | 57 | 52 | 74 | 63 | 56 | 51 | 62 | 56 | 51 | 60 | 55 | 51 | 59 | 54 | 50 | 49 |
| 8 | 71 | 59 | 52 | 47 | 69 | 59 | 52 | 47 | 58 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 45 |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 52 | 47 | 43 | 42 |
| 10 | 63 | 52 | 45 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 44 | 40 | 49 | 44 | 40 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 20791 | 20791 | 20791 |
| 5° | 20538 | 20462 | 20332 |
| 10° | 20387 | 19198 | 17982 |
| 15° | 20073 | 17172 | 14666 |
| 20° | 19658 | 14722 | 11063 |
| 25° | 19174 | 12060 | 7900 |
| 30° | 18593 | 9414 | 5032 |
| 35° | 18040 | 6906 | 3358 |
| 40° | 17429 | 4657 | 2528 |
| 45° | 16754 | 3280 | 1801 |
| 50° | 16055 | 2496 | 1267 |
| 55° | 15369 | 1731 | 931 |
| 60° | 14626 | 1171 | 765 |
| 65° | 13565 | 843 | 601 |
| 70° | 12364 | 670 | 521 |
| 75° | 10731 | 593 | 395 |
| 80° | 8510 | 436 | 436 |
| 85° | 4674 | 587 | 283 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16754 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.3 | 8.0 |
| 10°-20° | 246.3 | 19.6 |
| 20°-30° | 281.3 | 22.4 |
| 30°-40° | 238.6 | 19.0 |
| 40°-50° | 178.0 | 14.2 |
| 50°-60° | 115.0 | 9.1 |
| 60°-70° | 64.1 | 5.1 |
| 70°-80° | 28.2 | 2.2 |
| 80°-90° | 5.8 | 0.5 |
| 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° | 627.9 | 49.9 |
| 0°-40° | 866.5 | 68.9 |
| 0°-60° | 1159.5 | 92.2 |
| 0°-90° | 1257.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1257.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1097 | 1097 | 1097 | 1097 | 1097 | |
| 5° | 1080 | 1093 | 1076 | 1065 | 1069 | 102 |
| 15° | 1023 | 998 | 876 | 783 | 748 | 288 |
| 25° | 917 | 810 | 577 | 422 | 378 | 422 |
| 35° | 780 | 588 | 299 | 163 | 145 | 488 |
| 45° | 625 | 371 | 122 | 79 | 67 | 482 |
| 55° | 465 | 176 | 52 | 32 | 28 | 416 |
| 65° | 303 | 65 | 19 | 15 | 13 | 301 |
| 75° | 147 | 13 | 8 | 7 | 5 | 156 |
| 85° | 22 | 1 | 3 | 1 | 1 | 31 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055165

CATALOG NUMBER: S122R3DR-S1005D940-X4F0-XX-UDD-F-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1097.4 | 1097.4 | 1097.4 | 1097.4 | 1097.4 |
| 2.5° | 1085.3 | 1101.4 | 1088.0 | 1088.0 | 1090.7 |
| 5° | 1079.9 | 1093.4 | 1075.9 | 1065.1 | 1069.1 |
| 7.5° | 1071.8 | 1081.2 | 1044.9 | 1012.7 | 1010.0 |
| 10° | 1059.7 | 1063.8 | 997.9 | 948.1 | 934.7 |
| 12.5° | 1042.2 | 1032.8 | 940.0 | 870.1 | 847.2 |
| 15° | 1023.4 | 997.9 | 875.5 | 782.7 | 747.7 |
| 17.5° | 1000.6 | 954.8 | 804.2 | 691.2 | 648.2 |
| 20° | 975.0 | 910.5 | 730.2 | 595.8 | 548.7 |
| 22.5° | 946.8 | 860.7 | 653.6 | 505.7 | 458.6 |
| 25° | 917.2 | 809.6 | 576.9 | 422.3 | 377.9 |
| 27.5° | 886.2 | 755.8 | 501.6 | 347.0 | 298.6 |
| 30° | 849.9 | 700.7 | 430.3 | 274.3 | 230.0 |
| 32.5° | 816.3 | 642.8 | 364.5 | 212.5 | 174.8 |
| 35° | 780.0 | 587.7 | 298.6 | 162.7 | 145.2 |
| 37.5° | 742.3 | 532.6 | 240.7 | 137.2 | 122.4 |
| 40° | 704.7 | 477.4 | 188.3 | 115.7 | 102.2 |
| 42.5° | 665.7 | 423.6 | 145.2 | 96.8 | 83.4 |
| 45° | 625.3 | 371.2 | 122.4 | 79.3 | 67.2 |
| 47.5° | 585.0 | 318.7 | 102.2 | 63.2 | 53.8 |
| 50° | 544.7 | 269.0 | 84.7 | 49.8 | 43.0 |
| 52.5° | 505.7 | 221.9 | 67.2 | 40.3 | 35.0 |
| 55° | 465.3 | 176.2 | 52.4 | 32.3 | 28.2 |
| 57.5° | 425.0 | 137.2 | 40.3 | 26.9 | 24.2 |
| 60° | 386.0 | 103.6 | 30.9 | 21.5 | 20.2 |
| 62.5° | 345.6 | 83.4 | 24.2 | 17.5 | 16.1 |
| 65° | 302.6 | 64.6 | 18.8 | 14.8 | 13.4 |
| 67.5° | 263.6 | 47.1 | 14.8 | 12.1 | 10.8 |
| 70° | 223.2 | 32.3 | 12.1 | 10.8 | 9.4 |
| 72.5° | 184.2 | 20.2 | 9.4 | 8.1 | 8.1 |
| 75° | 146.6 | 13.4 | 8.1 | 6.7 | 5.4 |
| 77.5° | 111.6 | 8.1 | 5.4 | 5.4 | 4.0 |
| 80° | 78.0 | 5.4 | 4.0 | 4.0 | 4.0 |
| 82.5° | 48.4 | 4.0 | 2.7 | 2.7 | 2.7 |
| 85° | 21.5 | 1.3 | 2.7 | 1.3 | 1.3 |
| 87.5° | 4.0 | 1.3 | 1.3 | 1.3 | 1.3 |
| 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 | 18.80 | 20.12 | 19.16 | 20.43 | 20.74 | 5.11 | 6.42 | 5.47 | 6.74 | 7.05 |
| | 3H | 21.26 | 22.44 | 21.64 | 22.77 | 23.13 | 5.96 | 7.13 | 6.34 | 7.46 | 7.82 |
| | 4H | 22.22 | 23.31 | 22.62 | 23.66 | 24.05 | 6.23 | 7.33 | 6.64 | 7.68 | 8.06 |
| | 6H | 22.91 | 23.91 | 23.32 | 24.28 | 24.68 | 6.42 | 7.42 | 6.84 | 7.79 | 8.19 |
| | 8H | 23.10 | 24.05 | 23.53 | 24.44 | 24.85 | 6.50 | 7.45 | 6.93 | 7.84 | 8.24 |
| | 12H | 23.18 | 24.09 | 23.62 | 24.48 | 24.91 | 6.52 | 7.43 | 6.95 | 7.81 | 8.24 |
| 4H | 2H | 18.58 | 19.67 | 18.98 | 20.02 | 20.41 | 5.68 | 6.77 | 6.08 | 7.12 | 7.50 |
| | 3H | 21.06 | 21.96 | 21.48 | 22.36 | 22.77 | 6.71 | 7.61 | 7.12 | 8.01 | 8.41 |
| | 4H | 22.01 | 22.81 | 22.44 | 23.23 | 23.67 | 7.08 | 7.88 | 7.51 | 8.30 | 8.74 |
| | 6H | 22.76 | 23.45 | 23.23 | 23.90 | 24.37 | 7.37 | 8.06 | 7.83 | 8.50 | 8.97 |
| | 8H | 23.01 | 23.65 | 23.47 | 24.10 | 24.57 | 7.47 | 8.11 | 7.93 | 8.56 | 9.03 |
| | 12H | 23.13 | 23.70 | 23.62 | 24.19 | 24.66 | 7.51 | 8.08 | 7.99 | 8.56 | 9.03 |
| 8H | 4H | 21.88 | 22.52 | 22.34 | 22.97 | 23.44 | 7.45 | 8.09 | 7.92 | 8.54 | 9.01 |
| | 6H | 22.61 | 23.14 | 23.12 | 23.63 | 24.12 | 7.81 | 8.33 | 8.31 | 8.83 | 9.31 |
| | 8H | 22.86 | 23.33 | 23.38 | 23.84 | 24.34 | 7.95 | 8.42 | 8.47 | 8.93 | 9.42 |
| | 12H | 23.01 | 23.42 | 23.52 | 23.92 | 24.49 | 8.03 | 8.44 | 8.54 | 8.93 | 9.51 |
| 12H | 4H | 21.83 | 22.40 | 22.32 | 22.88 | 23.36 | 7.57 | 8.14 | 8.06 | 8.62 | 9.10 |
| | 6H | 22.55 | 23.02 | 23.07 | 23.54 | 24.03 | 7.93 | 8.40 | 8.45 | 8.91 | 9.40 |
| | 8H | 22.82 | 23.23 | 23.33 | 23.73 | 24.30 | 8.11 | 8.52 | 8.62 | 9.01 | 9.59 |