

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: P1055166

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055166
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
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-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

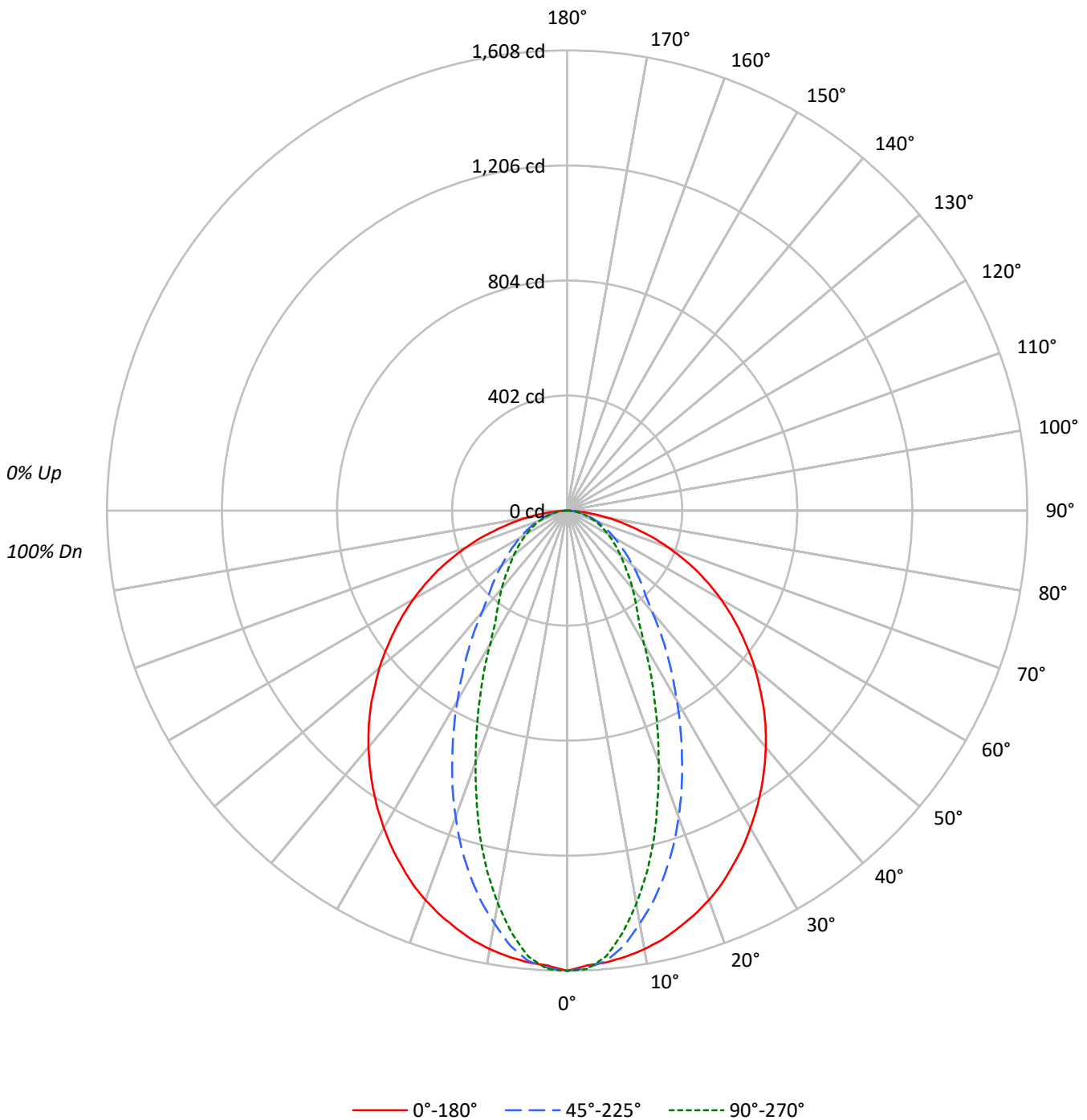
Lumens per Lamp: N/A
Luminaire Lumens: 2432.9 lumens
Efficiency: N/A
Efficacy: 58.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 97 | 100 | 97 | 94 | 96 | 94 | 92 | 92 | 91 | 89 | 87 |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 66 | 61 | 71 | 65 | 61 | 68 | 64 | 60 | 58 |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 52 |
| 6 | 75 | 63 | 55 | 50 | 74 | 63 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 46 |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 9 | 62 | 50 | 43 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 |
| 10 | 59 | 47 | 39 | 35 | 58 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 30473 | 30473 | 30473 |
| 5° | 30129 | 30026 | 29744 |
| 10° | 29935 | 28174 | 26829 |
| 15° | 29596 | 25824 | 23080 |
| 20° | 29202 | 22966 | 18845 |
| 25° | 28618 | 19849 | 15041 |
| 30° | 28009 | 16771 | 11739 |
| 35° | 27373 | 14028 | 9860 |
| 40° | 26708 | 11374 | 8780 |
| 45° | 26016 | 9946 | 7856 |
| 50° | 25251 | 8801 | 7174 |
| 55° | 24387 | 7951 | 6662 |
| 60° | 23542 | 7237 | 6218 |
| 65° | 22428 | 6630 | 5846 |
| 70° | 20784 | 6182 | 5512 |
| 75° | 18410 | 5615 | 5219 |
| 80° | 15700 | 5281 | 4844 |
| 85° | 10825 | 4674 | 4391 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 26016 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 147.4 | 6.1 |
| 10°-20° | 372.1 | 15.3 |
| 20°-30° | 458.6 | 18.8 |
| 30°-40° | 439.9 | 18.1 |
| 40°-50° | 379.5 | 15.6 |
| 50°-60° | 294.4 | 12.1 |
| 60°-70° | 201.6 | 8.3 |
| 70°-80° | 109.5 | 4.5 |
| 80°-90° | 30.0 | 1.2 |
| 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° | 978.1 | 40.2 |
| 0°-40° | 1418.0 | 58.3 |
| 0°-60° | 2091.8 | 86.0 |
| 0°-90° | 2432.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2432.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1608 | 1608 | 1608 | 1608 | 1608 | |
| 5° | 1584 | 1607 | 1579 | 1559 | 1564 | 150 |
| 15° | 1509 | 1463 | 1317 | 1209 | 1177 | 426 |
| 25° | 1369 | 1222 | 950 | 775 | 720 | 631 |
| 35° | 1184 | 939 | 606 | 452 | 426 | 740 |
| 45° | 971 | 654 | 371 | 307 | 293 | 748 |
| 55° | 738 | 393 | 241 | 208 | 202 | 661 |
| 65° | 500 | 214 | 148 | 134 | 130 | 494 |
| 75° | 252 | 98 | 77 | 73 | 71 | 269 |
| 85° | 50 | 24 | 22 | 22 | 20 | 63 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055166

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

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1608.4 | 1608.4 | 1608.4 | 1608.4 | 1608.4 |
| 2.5° | 1590.9 | 1617.8 | 1599.0 | 1599.0 | 1603.0 |
| 5° | 1584.2 | 1607.1 | 1578.8 | 1558.7 | 1564.0 |
| 7.5° | 1572.1 | 1588.3 | 1531.8 | 1488.7 | 1487.4 |
| 10° | 1556.0 | 1557.3 | 1464.5 | 1408.0 | 1394.6 |
| 12.5° | 1535.8 | 1514.3 | 1395.9 | 1311.2 | 1291.0 |
| 15° | 1508.9 | 1463.2 | 1316.6 | 1209.0 | 1176.7 |
| 17.5° | 1480.7 | 1410.7 | 1231.9 | 1097.4 | 1053.0 |
| 20° | 1448.4 | 1347.5 | 1139.1 | 985.8 | 934.7 |
| 22.5° | 1412.1 | 1287.0 | 1046.3 | 878.2 | 824.4 |
| 25° | 1369.0 | 1222.5 | 949.5 | 774.6 | 719.5 |
| 27.5° | 1327.4 | 1156.6 | 856.7 | 683.2 | 626.7 |
| 30° | 1280.3 | 1085.3 | 766.6 | 595.8 | 536.6 |
| 32.5° | 1233.2 | 1012.7 | 683.2 | 512.4 | 468.0 |
| 35° | 1183.5 | 938.7 | 606.5 | 451.9 | 426.3 |
| 37.5° | 1132.4 | 866.1 | 533.9 | 411.5 | 388.7 |
| 40° | 1079.9 | 793.5 | 459.9 | 372.5 | 355.0 |
| 42.5° | 1026.1 | 722.2 | 408.8 | 340.2 | 324.1 |
| 45° | 971.0 | 653.6 | 371.2 | 306.6 | 293.2 |
| 47.5° | 911.8 | 585.0 | 334.9 | 278.4 | 266.3 |
| 50° | 856.7 | 519.1 | 298.6 | 252.8 | 243.4 |
| 52.5° | 797.5 | 454.6 | 269.0 | 230.0 | 221.9 |
| 55° | 738.3 | 392.7 | 240.7 | 208.4 | 201.7 |
| 57.5° | 680.5 | 333.5 | 213.8 | 188.3 | 182.9 |
| 60° | 621.3 | 286.5 | 191.0 | 169.4 | 164.1 |
| 62.5° | 560.8 | 248.8 | 169.4 | 152.0 | 146.6 |
| 65° | 500.3 | 213.8 | 147.9 | 134.5 | 130.4 |
| 67.5° | 437.1 | 180.2 | 129.1 | 118.3 | 115.7 |
| 70° | 375.2 | 150.6 | 111.6 | 102.2 | 99.5 |
| 72.5° | 314.7 | 122.4 | 94.1 | 87.4 | 84.7 |
| 75° | 251.5 | 98.2 | 76.7 | 72.6 | 71.3 |
| 77.5° | 196.3 | 76.7 | 61.9 | 59.2 | 57.8 |
| 80° | 143.9 | 56.5 | 48.4 | 45.7 | 44.4 |
| 82.5° | 95.5 | 39.0 | 35.0 | 33.6 | 32.3 |
| 85° | 49.8 | 24.2 | 21.5 | 21.5 | 20.2 |
| 87.5° | 16.1 | 10.8 | 10.8 | 10.8 | 9.4 |
| 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 | 21.48 | 22.95 | 21.85 | 23.26 | 23.58 | 16.29 | 17.75 | 16.65 | 18.07 | 18.38 |
| | 3H | 23.81 | 25.13 | 24.19 | 25.45 | 25.82 | 17.93 | 19.25 | 18.31 | 19.58 | 19.94 |
| | 4H | 24.71 | 25.94 | 25.11 | 26.29 | 26.67 | 18.57 | 19.80 | 18.97 | 20.15 | 20.53 |
| | 6H | 25.37 | 26.51 | 25.78 | 26.87 | 27.27 | 19.06 | 20.20 | 19.48 | 20.57 | 20.96 |
| | 8H | 25.58 | 26.66 | 26.00 | 27.05 | 27.45 | 19.23 | 20.32 | 19.66 | 20.71 | 21.11 |
| | 12H | 25.69 | 26.73 | 26.12 | 27.11 | 27.54 | 19.35 | 20.39 | 19.78 | 20.77 | 21.20 |
| 4H | 2H | 21.50 | 22.73 | 21.90 | 23.08 | 23.46 | 17.00 | 18.24 | 17.40 | 18.58 | 18.96 |
| | 3H | 23.91 | 24.93 | 24.32 | 25.33 | 25.74 | 18.85 | 19.87 | 19.26 | 20.27 | 20.68 |
| | 4H | 24.84 | 25.76 | 25.27 | 26.18 | 26.62 | 19.60 | 20.52 | 20.03 | 20.94 | 21.37 |
| | 6H | 25.62 | 26.42 | 26.07 | 26.86 | 27.32 | 20.21 | 21.01 | 20.67 | 21.46 | 21.92 |
| | 8H | 25.89 | 26.64 | 26.35 | 27.08 | 27.55 | 20.43 | 21.18 | 20.89 | 21.62 | 22.09 |
| | 12H | 26.06 | 26.73 | 26.55 | 27.21 | 27.68 | 20.59 | 21.26 | 21.07 | 21.74 | 22.21 |
| 8H | 4H | 24.83 | 25.58 | 25.30 | 26.03 | 26.49 | 19.97 | 20.72 | 20.44 | 21.17 | 21.64 |
| | 6H | 25.64 | 26.26 | 26.14 | 26.75 | 27.23 | 20.71 | 21.33 | 21.21 | 21.82 | 22.30 |
| | 8H | 25.94 | 26.49 | 26.46 | 27.01 | 27.49 | 21.01 | 21.56 | 21.52 | 22.07 | 22.56 |
| | 12H | 26.17 | 26.66 | 26.68 | 27.15 | 27.72 | 21.25 | 21.74 | 21.76 | 22.23 | 22.80 |
| 12H | 4H | 24.81 | 25.48 | 25.29 | 25.96 | 26.43 | 20.03 | 20.70 | 20.52 | 21.18 | 21.65 |
| | 6H | 25.61 | 26.17 | 26.13 | 26.68 | 27.17 | 20.80 | 21.35 | 21.31 | 21.86 | 22.35 |
| | 8H | 25.95 | 26.44 | 26.46 | 26.93 | 27.50 | 21.15 | 21.64 | 21.67 | 22.14 | 22.70 |