

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: P1056384

Luminaire Tested: S125R3DR-S1090D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056384
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-S1090D950-X4F0-XX-UDD-F-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

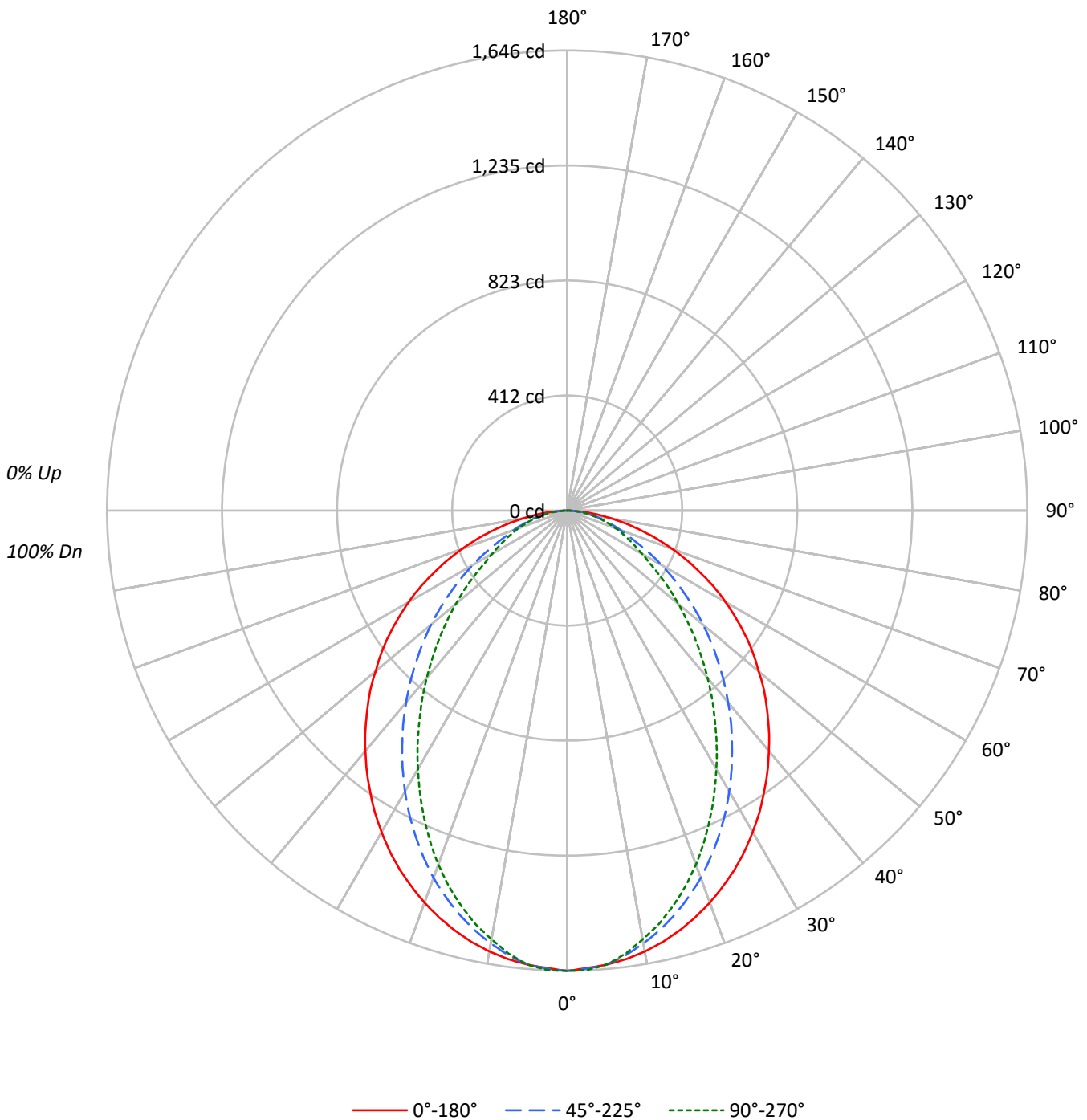
Lumens per Lamp: N/A
Luminaire Lumens: 3489.6 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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: P1056384

CATALOG NUMBER: S125R3DR-S1090D950-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1056384

CATALOG NUMBER: S125R3DR-S1090D950-X4F0-XX-UDD-F-W

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 | 105 | 101 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 90 | 88 | 86 |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 88 | 83 | 79 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 92 | 83 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 |
| 4 | 85 | 74 | 66 | 59 | 83 | 73 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 55 |
| 5 | 79 | 67 | 58 | 52 | 77 | 66 | 58 | 52 | 63 | 56 | 51 | 62 | 55 | 51 | 60 | 54 | 50 | 48 |
| 6 | 73 | 60 | 52 | 46 | 71 | 59 | 51 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 43 |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 46 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 8 | 63 | 51 | 42 | 37 | 62 | 50 | 42 | 37 | 49 | 42 | 37 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 47 | 39 | 33 | 58 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 11640 | 11640 | 11640 |
| 5° | 11571 | 11562 | 11571 |
| 10° | 11493 | 11282 | 11177 |
| 15° | 11377 | 10937 | 10713 |
| 20° | 11224 | 10514 | 10136 |
| 25° | 11054 | 10012 | 9448 |
| 30° | 10838 | 9467 | 8716 |
| 35° | 10601 | 8877 | 7956 |
| 40° | 10363 | 8270 | 7206 |
| 45° | 10112 | 7636 | 6459 |
| 50° | 9842 | 6984 | 5717 |
| 55° | 9595 | 6271 | 4971 |
| 60° | 9257 | 5513 | 4367 |
| 65° | 8797 | 4675 | 4060 |
| 70° | 8262 | 4181 | 3801 |
| 75° | 7468 | 3851 | 3584 |
| 80° | 6489 | 3493 | 3342 |
| 85° | 5069 | 3082 | 3082 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10112 cd/sqm



TEST NUMBER: P1056384

CATALOG NUMBER: S125R3DR-S1090D950-X4F0-XX-UDD-F-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 154.0 | 4.4 |
| 10°-20° | 423.0 | 12.1 |
| 20°-30° | 597.5 | 17.1 |
| 30°-40° | 657.8 | 18.8 |
| 40°-50° | 613.6 | 17.6 |
| 50°-60° | 489.8 | 14.0 |
| 60°-70° | 329.6 | 9.4 |
| 70°-80° | 175.6 | 5.0 |
| 80°-90° | 48.8 | 1.4 |
| 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° | 1174.5 | 33.7 |
| 0°-40° | 1832.3 | 52.5 |
| 0°-60° | 2935.7 | 84.1 |
| 0°-90° | 3489.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3489.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1646 | 1646 | 1646 | 1646 | 1646 | |
| 5° | 1630 | 1644 | 1629 | 1624 | 1630 | 155 |
| 15° | 1554 | 1546 | 1494 | 1469 | 1464 | 438 |
| 25° | 1417 | 1374 | 1284 | 1227 | 1211 | 652 |
| 35° | 1228 | 1156 | 1029 | 948 | 922 | 769 |
| 45° | 1011 | 916 | 764 | 671 | 646 | 781 |
| 55° | 778 | 661 | 509 | 428 | 403 | 695 |
| 65° | 526 | 411 | 280 | 248 | 243 | 522 |
| 75° | 273 | 181 | 141 | 132 | 131 | 291 |
| 85° | 62 | 43 | 38 | 39 | 38 | 75 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056384

CATALOG NUMBER: S125R3DR-S1090D950-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1646.5 | 1646.5 | 1646.5 | 1646.5 | 1646.5 |
| 2.5° | 1637.9 | 1651.4 | 1640.3 | 1642.8 | 1645.2 |
| 5° | 1630.5 | 1644.0 | 1629.3 | 1624.4 | 1630.5 |
| 7.5° | 1618.3 | 1629.3 | 1604.8 | 1593.7 | 1598.6 |
| 10° | 1601.1 | 1608.4 | 1571.7 | 1557.0 | 1557.0 |
| 12.5° | 1580.3 | 1580.3 | 1536.1 | 1515.3 | 1515.3 |
| 15° | 1554.5 | 1545.9 | 1494.4 | 1468.7 | 1463.8 |
| 17.5° | 1525.1 | 1509.1 | 1447.8 | 1414.7 | 1408.6 |
| 20° | 1492.0 | 1466.2 | 1397.6 | 1354.7 | 1347.3 |
| 22.5° | 1455.2 | 1422.1 | 1342.4 | 1289.7 | 1281.1 |
| 25° | 1417.2 | 1374.3 | 1283.6 | 1227.2 | 1211.2 |
| 27.5° | 1374.3 | 1322.8 | 1223.5 | 1159.8 | 1140.1 |
| 30° | 1327.7 | 1268.9 | 1159.8 | 1088.6 | 1067.8 |
| 32.5° | 1279.9 | 1213.7 | 1094.8 | 1018.8 | 995.5 |
| 35° | 1228.4 | 1156.1 | 1028.6 | 947.7 | 921.9 |
| 37.5° | 1176.9 | 1098.5 | 963.6 | 879.0 | 852.0 |
| 40° | 1123.0 | 1037.2 | 896.2 | 809.1 | 780.9 |
| 42.5° | 1069.0 | 977.1 | 830.0 | 741.7 | 712.3 |
| 45° | 1011.4 | 915.8 | 763.8 | 670.6 | 646.1 |
| 47.5° | 956.2 | 853.3 | 698.8 | 608.1 | 581.1 |
| 50° | 894.9 | 788.3 | 635.0 | 544.3 | 519.8 |
| 52.5° | 838.6 | 724.5 | 571.3 | 486.7 | 461.0 |
| 55° | 778.5 | 660.8 | 508.8 | 427.9 | 403.3 |
| 57.5° | 716.0 | 597.0 | 448.7 | 372.7 | 349.4 |
| 60° | 654.7 | 533.3 | 389.9 | 320.0 | 308.9 |
| 62.5° | 592.1 | 473.2 | 334.7 | 280.7 | 273.4 |
| 65° | 525.9 | 410.7 | 279.5 | 247.6 | 242.7 |
| 67.5° | 463.4 | 350.6 | 235.4 | 217.0 | 212.1 |
| 70° | 399.7 | 290.6 | 202.3 | 186.3 | 183.9 |
| 72.5° | 337.1 | 232.9 | 170.4 | 159.4 | 156.9 |
| 75° | 273.4 | 181.4 | 141.0 | 132.4 | 131.2 |
| 77.5° | 214.5 | 136.1 | 111.6 | 107.9 | 105.4 |
| 80° | 159.4 | 101.8 | 85.8 | 83.4 | 82.1 |
| 82.5° | 109.1 | 69.9 | 61.3 | 61.3 | 58.8 |
| 85° | 62.5 | 42.9 | 38.0 | 39.2 | 38.0 |
| 87.5° | 23.3 | 18.4 | 17.2 | 18.4 | 18.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P1056384
 CATALOG NUMBER: S125R3DR-S1090D950-X4F0-XX-UDD-F-W

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 | 19.82 | 21.36 | 20.18 | 21.67 | 21.98 | 16.20 | 17.74 | 16.56 | 18.05 | 18.37 |
| | 3H | 21.60 | 22.98 | 21.98 | 23.31 | 23.67 | 17.67 | 19.06 | 18.05 | 19.39 | 19.75 |
| | 4H | 22.25 | 23.55 | 22.65 | 23.90 | 24.28 | 18.26 | 19.56 | 18.66 | 19.91 | 20.29 |
| | 6H | 22.73 | 23.93 | 23.14 | 24.30 | 24.69 | 18.73 | 19.93 | 19.14 | 20.29 | 20.69 |
| | 8H | 22.88 | 24.03 | 23.31 | 24.42 | 24.82 | 18.89 | 20.03 | 19.31 | 20.42 | 20.82 |
| | 12H | 22.98 | 24.08 | 23.41 | 24.46 | 24.89 | 19.00 | 20.10 | 19.43 | 20.48 | 20.91 |
| 4H | 2H | 19.95 | 21.25 | 20.35 | 21.60 | 21.98 | 16.87 | 18.17 | 17.27 | 18.52 | 18.90 |
| | 3H | 21.92 | 23.00 | 22.33 | 23.40 | 23.80 | 18.55 | 19.63 | 18.96 | 20.03 | 20.43 |
| | 4H | 22.67 | 23.64 | 23.10 | 24.05 | 24.49 | 19.25 | 20.23 | 19.69 | 20.64 | 21.08 |
| | 6H | 23.26 | 24.11 | 23.72 | 24.55 | 25.01 | 19.84 | 20.69 | 20.30 | 21.13 | 21.59 |
| | 8H | 23.47 | 24.26 | 23.93 | 24.70 | 25.17 | 20.05 | 20.84 | 20.51 | 21.29 | 21.75 |
| | 12H | 23.61 | 24.32 | 24.10 | 24.80 | 25.27 | 20.21 | 20.92 | 20.69 | 21.40 | 21.87 |
| 8H | 4H | 22.73 | 23.52 | 23.19 | 23.97 | 24.43 | 19.62 | 20.41 | 20.08 | 20.86 | 21.32 |
| | 6H | 23.39 | 24.04 | 23.88 | 24.54 | 25.01 | 20.32 | 20.98 | 20.82 | 21.47 | 21.94 |
| | 8H | 23.64 | 24.23 | 24.16 | 24.74 | 25.23 | 20.61 | 21.19 | 21.12 | 21.70 | 22.19 |
| | 12H | 23.85 | 24.37 | 24.36 | 24.86 | 25.43 | 20.85 | 21.37 | 21.36 | 21.86 | 22.42 |
| 12H | 4H | 22.72 | 23.43 | 23.20 | 23.91 | 24.38 | 19.67 | 20.38 | 20.15 | 20.85 | 21.32 |
| | 6H | 23.38 | 23.97 | 23.90 | 24.48 | 24.97 | 20.39 | 20.98 | 20.91 | 21.49 | 21.98 |
| | 8H | 23.68 | 24.20 | 24.19 | 24.69 | 25.25 | 20.74 | 21.26 | 21.24 | 21.75 | 22.31 |