

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: P1055790

Luminaire Tested: S123R3DRP-H560D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055790
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DRP-H560D950-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

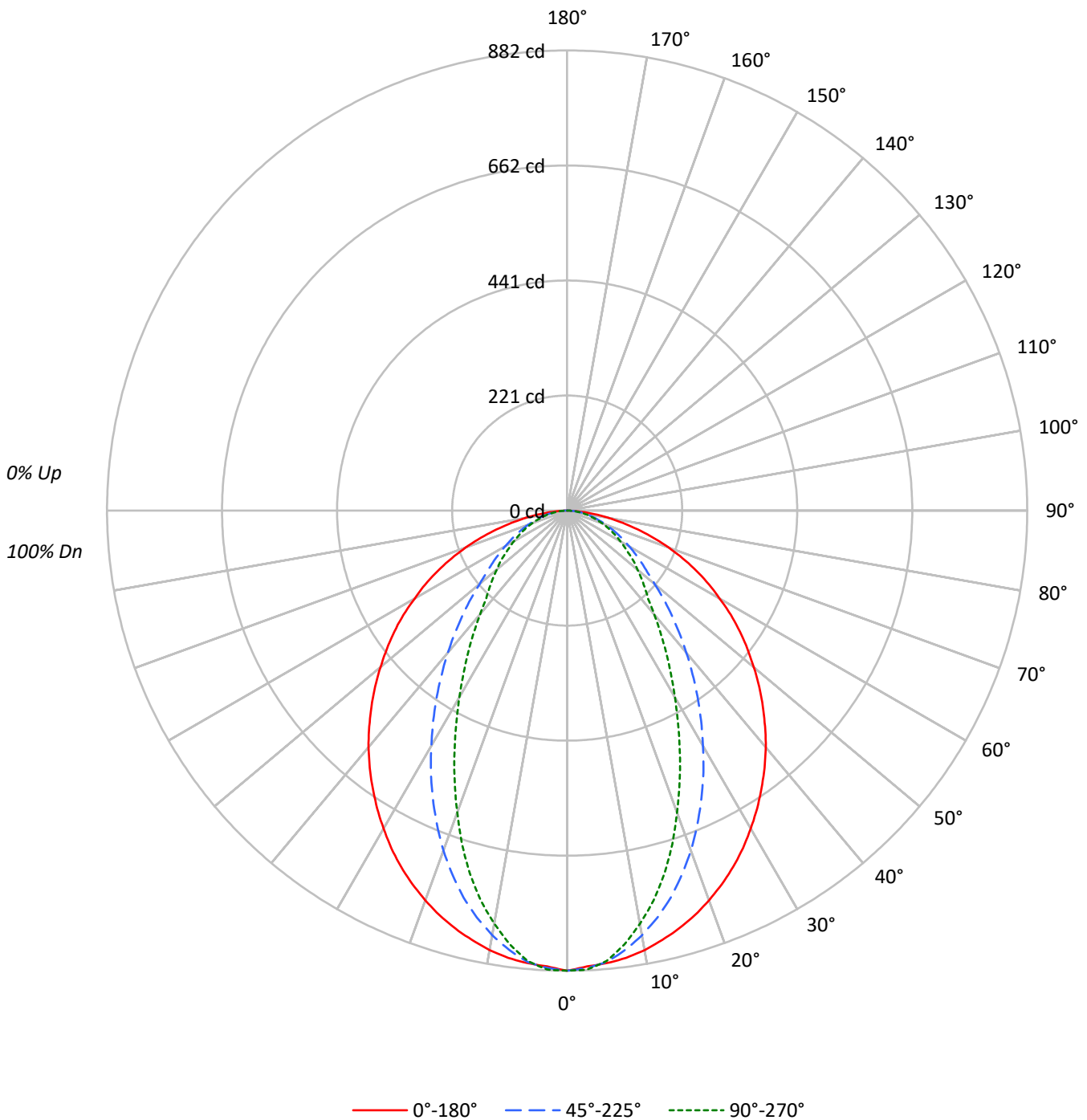
Lumens per Lamp: N/A
Luminaire Lumens: 1546.8 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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: P1055790

CATALOG NUMBER: S123R3DRP-H560D950-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1055790

CATALOG NUMBER: S123R3DRP-H560D950-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 | 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 | 110 | 106 | 102 | 99 | 107 | 104 | 100 | 97 | 99 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 88 | 86 | | | | | 86 | | | |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 85 | 82 | 78 | 83 | 79 | 76 | 74 | | | | | 74 | | | |
| 3 | 93 | 84 | 77 | 71 | 91 | 82 | 76 | 70 | 80 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 67 | 65 | | | | | 65 | | | |
| 4 | 86 | 75 | 68 | 61 | 84 | 74 | 67 | 61 | 72 | 65 | 60 | 70 | 64 | 59 | 67 | 63 | 59 | 57 | | | | | 57 | | | |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 60 | 54 | 65 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 50 | | | | | 50 | | | |
| 6 | 75 | 62 | 54 | 48 | 73 | 61 | 54 | 48 | 60 | 53 | 48 | 58 | 52 | 47 | 57 | 51 | 47 | 45 | | | | | 45 | | | |
| 7 | 70 | 57 | 49 | 43 | 68 | 56 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 43 | 52 | 47 | 42 | 40 | | | | | 40 | | | |
| 8 | 65 | 53 | 45 | 39 | 64 | 52 | 44 | 39 | 51 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | 37 | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | 34 | | | | | 34 | | | |
| 10 | 58 | 45 | 38 | 33 | 56 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | 31 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 10633 | 10633 | 10633 |
| 5° | 10538 | 10515 | 10490 |
| 10° | 10475 | 10118 | 9844 |
| 15° | 10350 | 9583 | 8991 |
| 20° | 10199 | 8895 | 7905 |
| 25° | 10021 | 8100 | 6800 |
| 30° | 9798 | 7246 | 5748 |
| 35° | 9562 | 6408 | 4854 |
| 40° | 9323 | 5595 | 4079 |
| 45° | 9043 | 4825 | 3599 |
| 50° | 8759 | 4108 | 3303 |
| 55° | 8500 | 3660 | 3050 |
| 60° | 8143 | 3308 | 2848 |
| 65° | 7811 | 3030 | 2673 |
| 70° | 7279 | 2792 | 2510 |
| 75° | 6512 | 2581 | 2366 |
| 80° | 5589 | 2381 | 2201 |
| 85° | 3929 | 2186 | 2103 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9043 cd/sqm



TEST NUMBER: P1055790

CATALOG NUMBER: S123R3DRP-H560D950-X4F0-XX-UDD-F-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 81.8 | 5.3 |
| 10°-20° | 216.3 | 14.0 |
| 20°-30° | 284.9 | 18.4 |
| 30°-40° | 289.2 | 18.7 |
| 40°-50° | 251.4 | 16.3 |
| 50°-60° | 196.9 | 12.7 |
| 60°-70° | 133.8 | 8.7 |
| 70°-80° | 72.5 | 4.7 |
| 80°-90° | 20.0 | 1.3 |
| 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° | 583.0 | 37.7 |
| 0°-40° | 872.2 | 56.4 |
| 0°-60° | 1320.5 | 85.4 |
| 0°-90° | 1546.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1546.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 882 | 882 | 882 | 882 | 882 | |
| 5° | 871 | 881 | 869 | 861 | 867 | 83 |
| 15° | 829 | 817 | 768 | 730 | 720 | 234 |
| 25° | 753 | 708 | 609 | 533 | 511 | 347 |
| 35° | 650 | 573 | 435 | 352 | 330 | 406 |
| 45° | 530 | 426 | 283 | 218 | 211 | 409 |
| 55° | 404 | 281 | 174 | 148 | 145 | 361 |
| 65° | 274 | 152 | 106 | 95 | 94 | 270 |
| 75° | 140 | 70 | 55 | 52 | 51 | 149 |
| 85° | 28 | 17 | 16 | 14 | 15 | 36 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055790

CATALOG NUMBER: S123R3DRP-H560D950-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 881.9 | 881.9 | 881.9 | 881.9 | 881.9 |
| 2.5° | 874.7 | 885.9 | 877.3 | 878.0 | 880.6 |
| 5° | 870.7 | 881.3 | 868.8 | 860.8 | 866.8 |
| 7.5° | 864.8 | 872.7 | 849.6 | 837.1 | 839.1 |
| 10° | 855.6 | 858.2 | 826.5 | 806.7 | 804.1 |
| 12.5° | 843.0 | 838.4 | 798.8 | 769.8 | 765.2 |
| 15° | 829.2 | 817.3 | 767.8 | 730.2 | 720.3 |
| 17.5° | 813.3 | 793.6 | 731.5 | 685.4 | 670.2 |
| 20° | 794.9 | 767.2 | 693.3 | 634.6 | 616.1 |
| 22.5° | 775.1 | 739.5 | 651.7 | 582.5 | 563.3 |
| 25° | 753.3 | 707.8 | 608.9 | 533.0 | 511.2 |
| 27.5° | 729.6 | 676.1 | 565.3 | 484.2 | 459.8 |
| 30° | 703.8 | 643.2 | 520.5 | 436.7 | 412.9 |
| 32.5° | 677.5 | 608.2 | 477.6 | 392.5 | 369.4 |
| 35° | 649.7 | 572.6 | 435.4 | 352.2 | 329.8 |
| 37.5° | 621.4 | 536.3 | 394.5 | 314.0 | 292.9 |
| 40° | 592.4 | 499.4 | 355.5 | 278.4 | 259.2 |
| 42.5° | 561.4 | 462.4 | 317.9 | 244.7 | 230.2 |
| 45° | 530.4 | 425.5 | 283.0 | 218.3 | 211.1 |
| 47.5° | 499.4 | 387.9 | 250.0 | 199.9 | 193.3 |
| 50° | 467.0 | 351.6 | 219.0 | 182.7 | 176.1 |
| 52.5° | 435.4 | 316.0 | 193.3 | 166.2 | 161.6 |
| 55° | 404.4 | 281.0 | 174.1 | 148.4 | 145.1 |
| 57.5° | 372.0 | 246.7 | 155.0 | 134.6 | 130.6 |
| 60° | 337.7 | 213.7 | 137.2 | 120.1 | 118.1 |
| 62.5° | 306.7 | 182.7 | 121.4 | 107.5 | 105.5 |
| 65° | 273.8 | 151.7 | 106.2 | 95.0 | 93.7 |
| 67.5° | 240.1 | 126.0 | 92.4 | 83.1 | 82.5 |
| 70° | 206.5 | 106.2 | 79.2 | 71.9 | 71.2 |
| 72.5° | 173.5 | 87.7 | 66.6 | 62.0 | 60.7 |
| 75° | 139.8 | 69.9 | 55.4 | 51.5 | 50.8 |
| 77.5° | 109.5 | 54.1 | 44.2 | 41.6 | 40.9 |
| 80° | 80.5 | 40.2 | 34.3 | 32.3 | 31.7 |
| 82.5° | 52.8 | 27.7 | 24.4 | 23.1 | 23.1 |
| 85° | 28.4 | 17.2 | 15.8 | 14.5 | 15.2 |
| 87.5° | 9.9 | 7.3 | 7.3 | 6.6 | 7.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

TEST NUMBER: P1055790
 CATALOG NUMBER: S123R3DRP-H560D950-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 | 18.77 | 20.26 | 19.14 | 20.58 | 20.89 | 13.92 | 15.41 | 14.29 | 15.73 | 16.04 |
| | 3H | 20.66 | 22.00 | 21.04 | 22.32 | 22.69 | 15.55 | 16.89 | 15.93 | 17.22 | 17.58 |
| | 4H | 21.41 | 22.67 | 21.81 | 23.02 | 23.40 | 16.19 | 17.44 | 16.59 | 17.79 | 18.17 |
| | 6H | 21.98 | 23.14 | 22.39 | 23.51 | 23.90 | 16.68 | 17.84 | 17.09 | 18.20 | 18.60 |
| | 8H | 22.15 | 23.26 | 22.58 | 23.65 | 24.05 | 16.85 | 17.95 | 17.27 | 18.34 | 18.74 |
| | 12H | 22.25 | 23.31 | 22.68 | 23.69 | 24.12 | 16.97 | 18.03 | 17.40 | 18.41 | 18.84 |
| 4H | 2H | 18.82 | 20.07 | 19.22 | 20.42 | 20.80 | 14.65 | 15.91 | 15.05 | 16.25 | 16.63 |
| | 3H | 20.83 | 21.88 | 21.25 | 22.28 | 22.68 | 16.47 | 17.51 | 16.88 | 17.91 | 18.32 |
| | 4H | 21.65 | 22.59 | 22.08 | 23.01 | 23.45 | 17.22 | 18.16 | 17.65 | 18.57 | 19.01 |
| | 6H | 22.33 | 23.15 | 22.79 | 23.59 | 24.06 | 17.83 | 18.64 | 18.28 | 19.09 | 19.55 |
| | 8H | 22.56 | 23.33 | 23.03 | 23.77 | 24.24 | 18.04 | 18.81 | 18.51 | 19.25 | 19.72 |
| | 12H | 22.72 | 23.40 | 23.20 | 23.88 | 24.35 | 18.21 | 18.89 | 18.69 | 19.37 | 19.84 |
| 8H | 4H | 21.68 | 22.44 | 22.14 | 22.88 | 23.35 | 17.60 | 18.36 | 18.06 | 18.81 | 19.28 |
| | 6H | 22.40 | 23.04 | 22.90 | 23.53 | 24.01 | 18.33 | 18.96 | 18.83 | 19.45 | 19.93 |
| | 8H | 22.67 | 23.24 | 23.19 | 23.75 | 24.24 | 18.62 | 19.18 | 19.13 | 19.69 | 20.18 |
| | 12H | 22.88 | 23.38 | 23.39 | 23.88 | 24.44 | 18.86 | 19.36 | 19.37 | 19.85 | 20.42 |
| 12H | 4H | 21.66 | 22.34 | 22.14 | 22.82 | 23.29 | 17.65 | 18.34 | 18.14 | 18.82 | 19.29 |
| | 6H | 22.39 | 22.96 | 22.90 | 23.47 | 23.95 | 18.41 | 18.98 | 18.93 | 19.49 | 19.98 |
| | 8H | 22.69 | 23.19 | 23.20 | 23.69 | 24.25 | 18.76 | 19.26 | 19.27 | 19.75 | 20.32 |