

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055648

Luminaire Tested: S123R3DR-S560D935-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055648
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S560D935-X4F0-XX-UDD-FLL-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

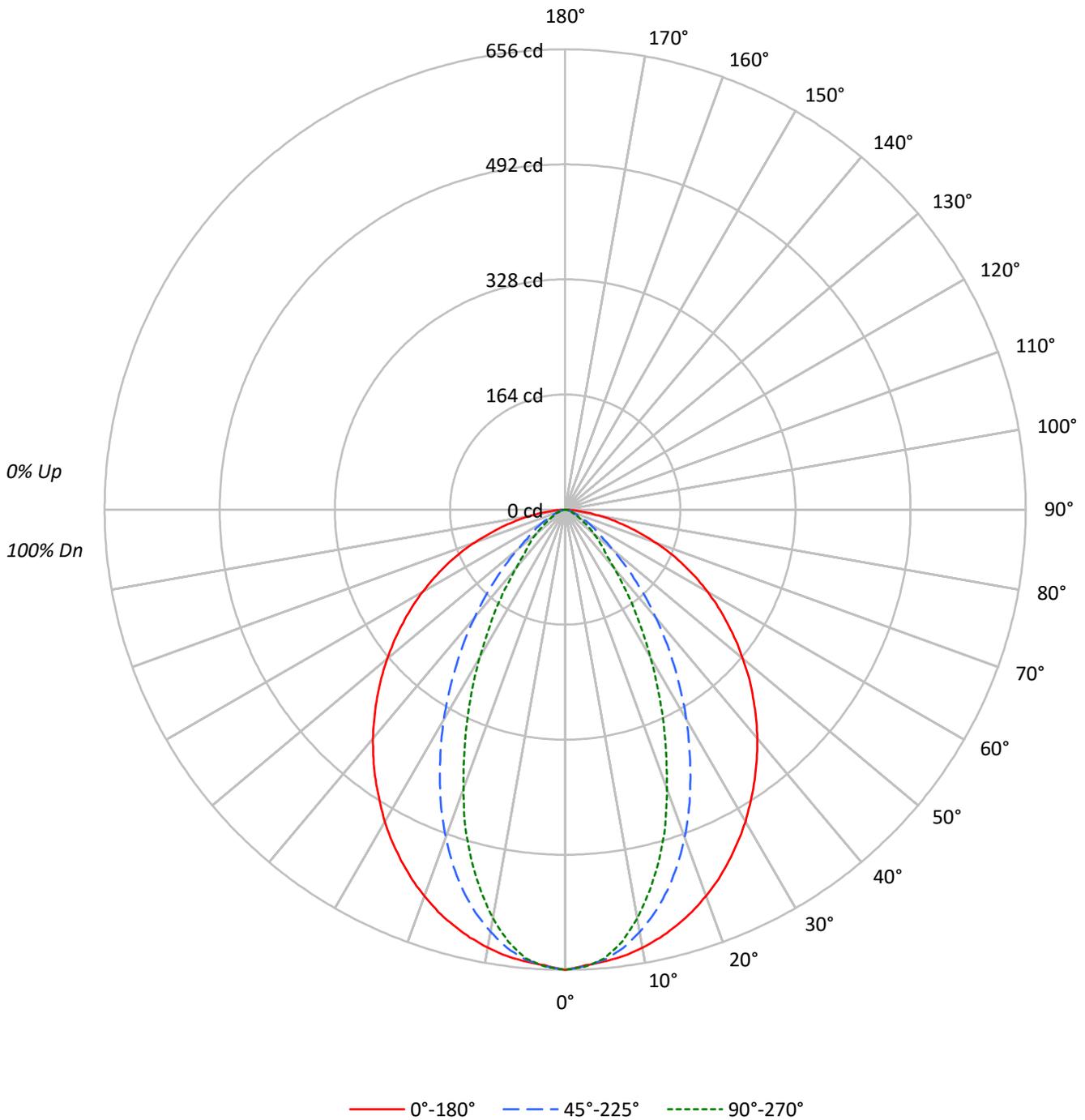
Lumens per Lamp: N/A
Luminaire Lumens: 912.2 lumens
Efficiency: N/A
Efficacy: 47.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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

TEST NUMBER: P1055648

CATALOG NUMBER: S123R3DR-S560D935-X4F0-XX-UDD-FLL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1055648

CATALOG NUMBER: S123R3DR-S560D935-X4F0-XX-UDD-FLL-S

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 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 111 | 108 | 104 | 102 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | | 89 |
| 2 | 104 | 97 | 92 | 87 | 101 | 95 | 90 | 86 | 92 | 88 | 84 | 89 | 85 | 82 | 86 | 83 | 81 | 79 | | | | 79 |
| 3 | 96 | 88 | 81 | 76 | 94 | 86 | 80 | 76 | 84 | 78 | 74 | 81 | 77 | 73 | 79 | 75 | 72 | 70 | | | | 70 |
| 4 | 90 | 80 | 73 | 67 | 88 | 79 | 72 | 67 | 76 | 71 | 66 | 74 | 69 | 65 | 72 | 68 | 64 | 62 | | | | 62 |
| 5 | 84 | 73 | 66 | 60 | 82 | 72 | 65 | 60 | 70 | 64 | 59 | 68 | 63 | 59 | 67 | 62 | 58 | 56 | | | | 56 |
| 6 | 78 | 67 | 60 | 54 | 77 | 66 | 59 | 54 | 65 | 58 | 53 | 63 | 57 | 53 | 62 | 57 | 53 | 51 | | | | 51 |
| 7 | 73 | 62 | 54 | 49 | 72 | 61 | 54 | 49 | 60 | 53 | 49 | 58 | 53 | 48 | 57 | 52 | 48 | 46 | | | | 46 |
| 8 | 69 | 57 | 50 | 45 | 68 | 57 | 50 | 45 | 56 | 49 | 45 | 54 | 49 | 44 | 53 | 48 | 44 | 42 | | | | 42 |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | 39 |
| 10 | 62 | 50 | 43 | 38 | 60 | 49 | 43 | 38 | 48 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | 36 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7909 | 7909 | 7909 |
| 5° | 7825 | 7795 | 7773 |
| 10° | 7764 | 7483 | 7246 |
| 15° | 7660 | 7016 | 6449 |
| 20° | 7522 | 6382 | 5432 |
| 25° | 7344 | 5616 | 4383 |
| 30° | 7150 | 4813 | 3376 |
| 35° | 6928 | 3971 | 2498 |
| 40° | 6703 | 3160 | 1703 |
| 45° | 6457 | 2365 | 1282 |
| 50° | 6193 | 1645 | 1003 |
| 55° | 5921 | 1202 | 731 |
| 60° | 5638 | 899 | 526 |
| 65° | 5303 | 602 | 408 |
| 70° | 4801 | 437 | 328 |
| 75° | 4141 | 317 | 261 |
| 80° | 3326 | 257 | 215 |
| 85° | 1715 | 263 | 166 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6457 cd/sqm



TEST NUMBER: P1055648

CATALOG NUMBER: S123R3DR-S560D935-X4F0-XX-UDD-FLL-S

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 60.6 | 6.6 |
| 10°-20° | 157.8 | 17.3 |
| 20°-30° | 198.3 | 21.7 |
| 30°-40° | 184.7 | 20.2 |
| 40°-50° | 141.4 | 15.5 |
| 50°-60° | 94.0 | 10.3 |
| 60°-70° | 50.7 | 5.6 |
| 70°-80° | 20.7 | 2.3 |
| 80°-90° | 4.0 | 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° | 416.8 | 45.7 |
| 0°-40° | 601.5 | 65.9 |
| 0°-60° | 836.9 | 91.7 |
| 0°-90° | 912.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 912.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 656 | 656 | 656 | 656 | 656 | |
| 5° | 647 | 654 | 644 | 642 | 642 | 61 |
| 15° | 614 | 604 | 562 | 529 | 517 | 173 |
| 25° | 552 | 515 | 422 | 352 | 330 | 254 |
| 35° | 471 | 401 | 270 | 191 | 170 | 294 |
| 45° | 379 | 280 | 139 | 82 | 75 | 292 |
| 55° | 282 | 163 | 57 | 40 | 35 | 252 |
| 65° | 186 | 63 | 21 | 16 | 14 | 184 |
| 75° | 89 | 15 | 7 | 6 | 6 | 95 |
| 85° | 12 | 2 | 2 | 2 | 1 | 18 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055648

CATALOG NUMBER: S123R3DR-S560D935-X4F0-XX-UDD-FLL-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 656.0 | 656.0 | 656.0 | 656.0 | 656.0 |
| 2.5° | 650.4 | 658.4 | 651.6 | 652.2 | 652.2 |
| 5° | 646.6 | 653.5 | 644.1 | 641.7 | 642.3 |
| 7.5° | 641.7 | 646.0 | 630.5 | 622.4 | 621.1 |
| 10° | 634.2 | 635.4 | 611.2 | 596.9 | 591.9 |
| 12.5° | 624.9 | 620.5 | 588.8 | 565.2 | 555.9 |
| 15° | 613.7 | 603.7 | 562.1 | 529.1 | 516.7 |
| 17.5° | 601.2 | 584.5 | 531.6 | 488.7 | 473.8 |
| 20° | 586.3 | 562.7 | 497.4 | 443.9 | 423.4 |
| 22.5° | 570.2 | 539.7 | 461.3 | 397.9 | 374.9 |
| 25° | 552.1 | 514.8 | 422.2 | 351.9 | 329.5 |
| 27.5° | 533.5 | 488.1 | 383.6 | 308.4 | 285.4 |
| 30° | 513.6 | 460.7 | 345.7 | 266.1 | 242.5 |
| 32.5° | 491.8 | 430.9 | 306.5 | 226.9 | 203.3 |
| 35° | 470.7 | 401.0 | 269.8 | 190.9 | 169.7 |
| 37.5° | 448.3 | 371.2 | 234.4 | 159.2 | 135.5 |
| 40° | 425.9 | 340.7 | 200.8 | 128.1 | 108.2 |
| 42.5° | 402.3 | 310.3 | 169.1 | 102.0 | 86.4 |
| 45° | 378.7 | 279.8 | 138.7 | 81.5 | 75.2 |
| 47.5° | 355.0 | 249.3 | 111.9 | 70.3 | 64.0 |
| 50° | 330.2 | 220.1 | 87.7 | 59.7 | 53.5 |
| 52.5° | 306.5 | 190.9 | 68.4 | 49.1 | 43.5 |
| 55° | 281.7 | 162.9 | 57.2 | 39.8 | 34.8 |
| 57.5° | 258.7 | 134.3 | 47.3 | 31.1 | 27.4 |
| 60° | 233.8 | 108.8 | 37.3 | 24.2 | 21.8 |
| 62.5° | 210.2 | 85.2 | 28.6 | 19.3 | 17.4 |
| 65° | 185.9 | 62.8 | 21.1 | 15.5 | 14.3 |
| 67.5° | 161.7 | 45.4 | 16.2 | 12.4 | 11.8 |
| 70° | 136.2 | 34.2 | 12.4 | 9.9 | 9.3 |
| 72.5° | 111.9 | 24.2 | 9.3 | 8.1 | 7.5 |
| 75° | 88.9 | 14.9 | 6.8 | 6.2 | 5.6 |
| 77.5° | 68.4 | 8.7 | 5.0 | 5.0 | 4.4 |
| 80° | 47.9 | 5.0 | 3.7 | 3.7 | 3.1 |
| 82.5° | 29.2 | 3.1 | 2.5 | 2.5 | 2.5 |
| 85° | 12.4 | 1.9 | 1.9 | 1.9 | 1.2 |
| 87.5° | 1.9 | 0.6 | 0.6 | 0.6 | 0.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)