

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: P1055624

Luminaire Tested: S123R3DR-S340D940-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055624
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-S340D940-X4F0-XX-UDD-FLL-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

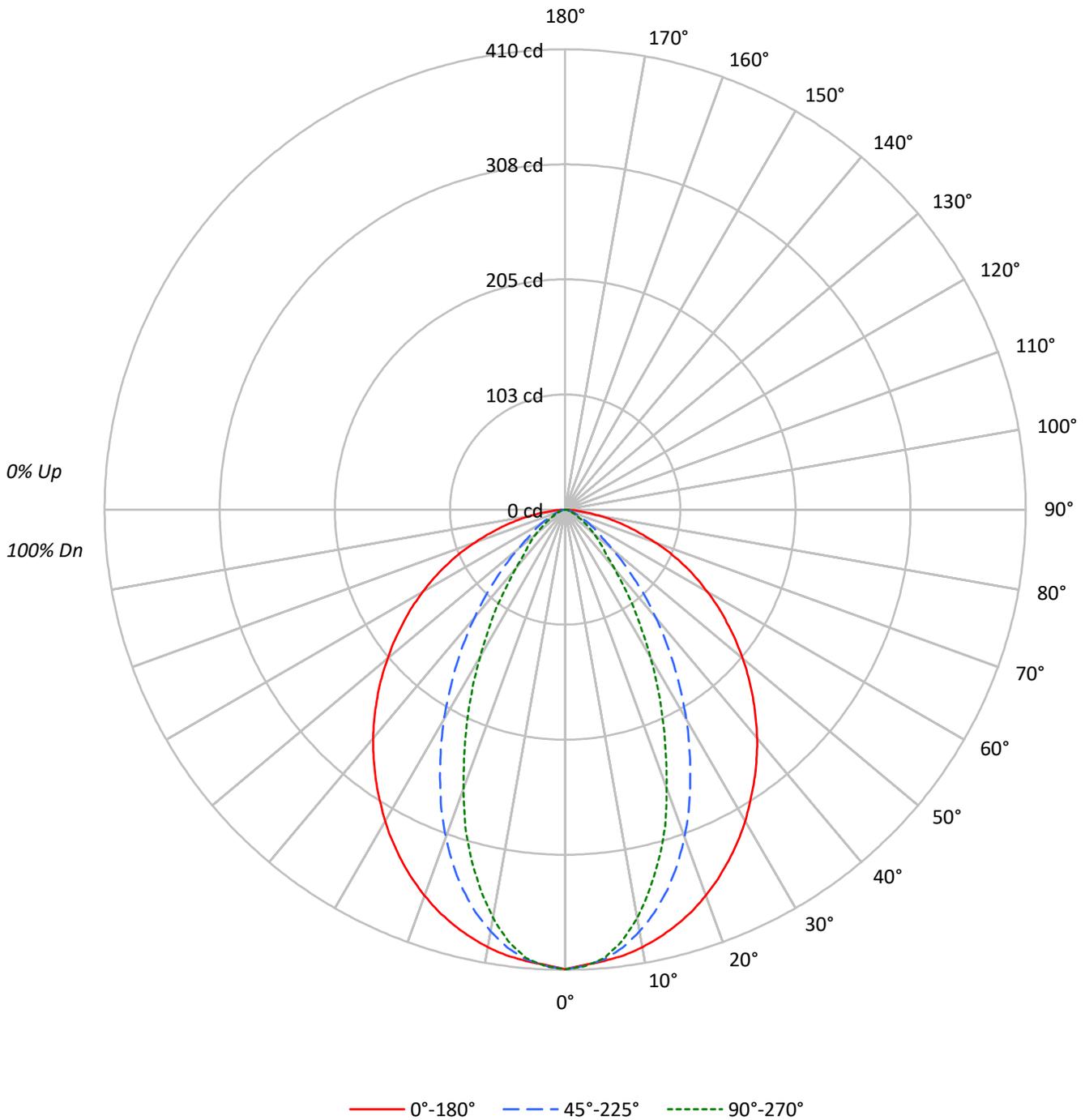
Lumens per Lamp: N/A
Luminaire Lumens: 569.5 lumens
Efficiency: N/A
Efficacy: 45.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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





TEST NUMBER: P1055624

CATALOG NUMBER: S123R3DR-S340D940-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 | 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 | 111 | 108 | 104 | 102 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 104 | 97 | 92 | 87 | 101 | 95 | 90 | 86 | 92 | 88 | 84 | 89 | 85 | 82 | 86 | 83 | 81 | 79 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 96 | 88 | 81 | 76 | 94 | 86 | 80 | 76 | 84 | 78 | 74 | 81 | 77 | 73 | 79 | 75 | 72 | 70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 90 | 80 | 73 | 67 | 88 | 79 | 72 | 67 | 76 | 71 | 66 | 74 | 69 | 65 | 72 | 68 | 64 | 62 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 84 | 73 | 66 | 60 | 82 | 72 | 65 | 60 | 70 | 64 | 59 | 68 | 63 | 59 | 67 | 62 | 58 | 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 78 | 67 | 60 | 54 | 77 | 66 | 59 | 54 | 65 | 58 | 53 | 63 | 57 | 53 | 62 | 57 | 53 | 51 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 73 | 62 | 54 | 49 | 72 | 61 | 54 | 49 | 60 | 53 | 49 | 58 | 53 | 48 | 57 | 52 | 48 | 46 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 69 | 57 | 50 | 45 | 68 | 57 | 50 | 45 | 56 | 49 | 45 | 54 | 49 | 44 | 53 | 48 | 44 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 61 | 50 | 43 | 38 | 60 | 49 | 43 | 38 | 48 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4937 | 4937 | 4937 |
| 5° | 4885 | 4866 | 4852 |
| 10° | 4847 | 4670 | 4524 |
| 15° | 4782 | 4380 | 4025 |
| 20° | 4696 | 3984 | 3391 |
| 25° | 4585 | 3505 | 2736 |
| 30° | 4463 | 3004 | 2108 |
| 35° | 4324 | 2479 | 1560 |
| 40° | 4185 | 1974 | 1062 |
| 45° | 4031 | 1477 | 801 |
| 50° | 3866 | 1026 | 626 |
| 55° | 3695 | 750 | 456 |
| 60° | 3518 | 562 | 328 |
| 65° | 3309 | 377 | 254 |
| 70° | 2996 | 275 | 204 |
| 75° | 2585 | 200 | 163 |
| 80° | 2076 | 160 | 132 |
| 85° | 1079 | 166 | 111 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4031 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 37.9 | 6.6 |
| 10°-20° | 98.5 | 17.3 |
| 20°-30° | 123.8 | 21.7 |
| 30°-40° | 115.3 | 20.2 |
| 40°-50° | 88.3 | 15.5 |
| 50°-60° | 58.7 | 10.3 |
| 60°-70° | 31.6 | 5.6 |
| 70°-80° | 12.9 | 2.3 |
| 80°-90° | 2.5 | 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° | 260.2 | 45.7 |
| 0°-40° | 375.5 | 65.9 |
| 0°-60° | 522.4 | 91.7 |
| 0°-90° | 569.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 569.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 410 | 410 | 410 | 410 | 410 | |
| 5° | 404 | 408 | 402 | 400 | 401 | 38 |
| 15° | 383 | 377 | 351 | 330 | 322 | 108 |
| 25° | 345 | 321 | 264 | 220 | 206 | 159 |
| 35° | 294 | 250 | 168 | 119 | 106 | 184 |
| 45° | 236 | 175 | 87 | 51 | 47 | 182 |
| 55° | 176 | 102 | 36 | 25 | 22 | 158 |
| 65° | 116 | 39 | 13 | 10 | 9 | 115 |
| 75° | 56 | 9 | 4 | 4 | 4 | 59 |
| 85° | 8 | 1 | 1 | 1 | 1 | 11 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 409.5 | 409.5 | 409.5 | 409.5 | 409.5 |
| 2.5° | 406.0 | 411.0 | 406.8 | 407.1 | 407.1 |
| 5° | 403.6 | 407.9 | 402.1 | 400.5 | 400.9 |
| 7.5° | 400.5 | 403.3 | 393.6 | 388.5 | 387.7 |
| 10° | 395.9 | 396.7 | 381.5 | 372.6 | 369.5 |
| 12.5° | 390.1 | 387.3 | 367.6 | 352.8 | 347.0 |
| 15° | 383.1 | 376.9 | 350.9 | 330.3 | 322.5 |
| 17.5° | 375.3 | 364.8 | 331.8 | 305.1 | 295.8 |
| 20° | 366.0 | 351.3 | 310.5 | 277.1 | 264.3 |
| 22.5° | 355.9 | 336.9 | 288.0 | 248.4 | 234.0 |
| 25° | 344.7 | 321.4 | 263.5 | 219.7 | 205.7 |
| 27.5° | 333.0 | 304.7 | 239.5 | 192.5 | 178.1 |
| 30° | 320.6 | 287.6 | 215.8 | 166.1 | 151.4 |
| 32.5° | 307.0 | 269.0 | 191.3 | 141.7 | 126.9 |
| 35° | 293.8 | 250.3 | 168.4 | 119.2 | 106.0 |
| 37.5° | 279.8 | 231.7 | 146.3 | 99.4 | 84.6 |
| 40° | 265.9 | 212.7 | 125.4 | 80.0 | 67.5 |
| 42.5° | 251.1 | 193.7 | 105.6 | 63.7 | 53.9 |
| 45° | 236.4 | 174.7 | 86.6 | 50.8 | 47.0 |
| 47.5° | 221.6 | 155.6 | 69.9 | 43.9 | 40.0 |
| 50° | 206.1 | 137.4 | 54.7 | 37.3 | 33.4 |
| 52.5° | 191.3 | 119.2 | 42.7 | 30.7 | 27.2 |
| 55° | 175.8 | 101.7 | 35.7 | 24.8 | 21.7 |
| 57.5° | 161.5 | 83.8 | 29.5 | 19.4 | 17.1 |
| 60° | 145.9 | 67.9 | 23.3 | 15.1 | 13.6 |
| 62.5° | 131.2 | 53.2 | 17.9 | 12.0 | 10.9 |
| 65° | 116.0 | 39.2 | 13.2 | 9.7 | 8.9 |
| 67.5° | 100.9 | 28.3 | 10.1 | 7.8 | 7.4 |
| 70° | 85.0 | 21.3 | 7.8 | 6.2 | 5.8 |
| 72.5° | 69.9 | 15.1 | 5.8 | 5.0 | 4.7 |
| 75° | 55.5 | 9.3 | 4.3 | 3.9 | 3.5 |
| 77.5° | 42.7 | 5.4 | 3.1 | 3.1 | 2.7 |
| 80° | 29.9 | 3.1 | 2.3 | 2.3 | 1.9 |
| 82.5° | 18.2 | 1.9 | 1.6 | 1.6 | 1.6 |
| 85° | 7.8 | 1.2 | 1.2 | 1.2 | 0.8 |
| 87.5° | 1.2 | 0.4 | 0.4 | 0.4 | 0.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)