

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: P1056011

Luminaire Tested: S124R3DR-S350D835-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056011
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S350D835-X4F0-XX-UDD-FLL-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

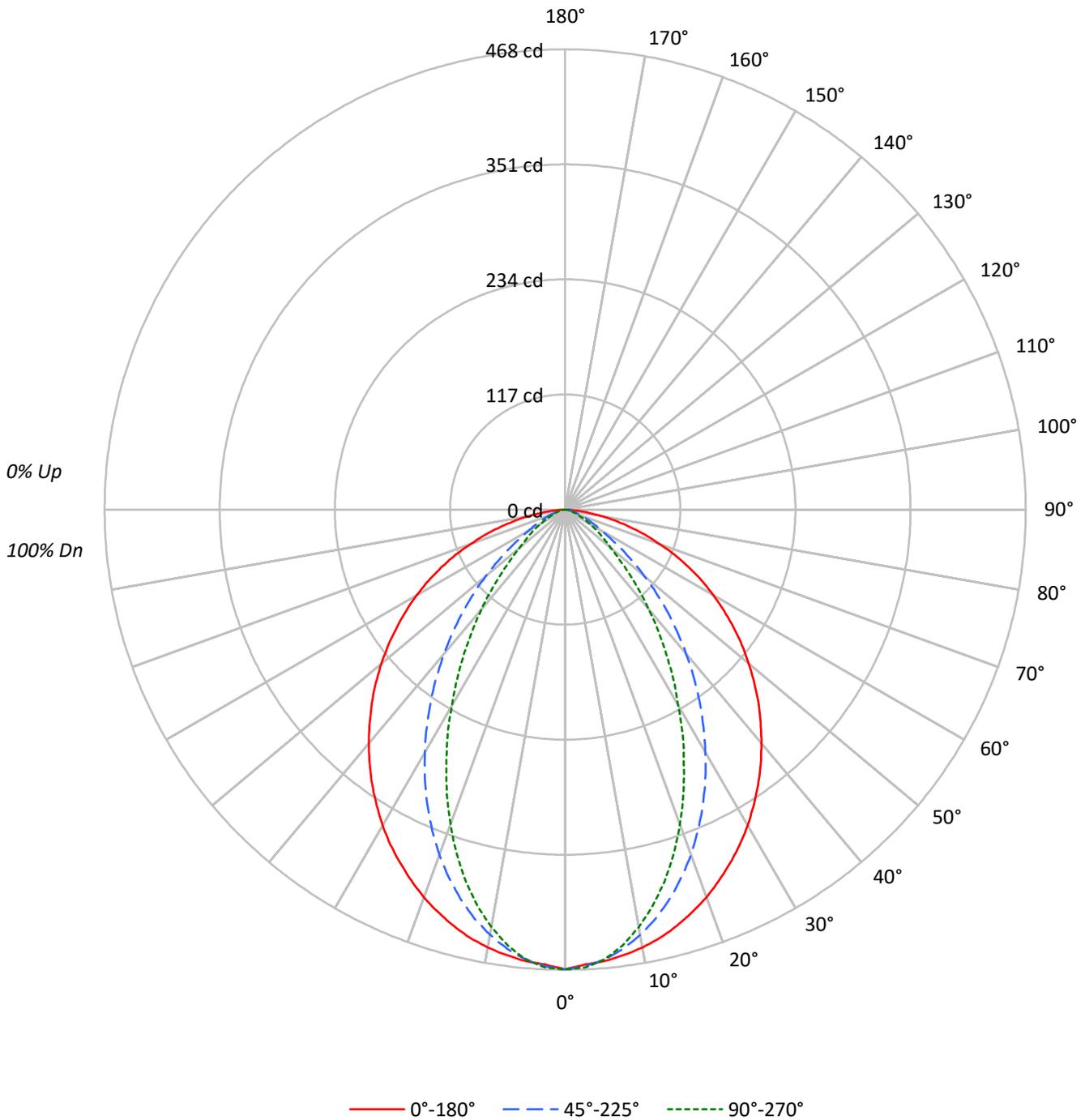
Lumens per Lamp: N/A
Luminaire Lumens: 755.9 lumens
Efficiency: N/A
Efficacy: 60.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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





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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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 89 |
| 2 | 103 | 96 | 91 | 86 | 101 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 78 |
| 3 | 95 | 87 | 80 | 74 | 93 | 85 | 79 | 74 | 82 | 77 | 73 | 80 | 75 | 71 | 77 | 73 | 70 | 68 |
| 4 | 89 | 78 | 71 | 65 | 86 | 77 | 70 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 71 | 66 | 62 | 60 |
| 5 | 82 | 71 | 64 | 58 | 80 | 70 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 56 | 65 | 60 | 56 | 54 |
| 6 | 77 | 65 | 57 | 52 | 75 | 64 | 57 | 52 | 63 | 56 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 48 |
| 7 | 72 | 60 | 52 | 47 | 70 | 59 | 52 | 47 | 58 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 |
| 8 | 67 | 55 | 48 | 42 | 66 | 55 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 |
| 9 | 63 | 51 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 38 | 48 | 42 | 38 | 37 |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 40 | 36 | 46 | 40 | 36 | 45 | 40 | 35 | 45 | 39 | 35 | 34 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4133 | 4133 | 4133 |
| 5° | 4091 | 4075 | 4075 |
| 10° | 4060 | 3943 | 3869 |
| 15° | 4012 | 3753 | 3578 |
| 20° | 3948 | 3514 | 3207 |
| 25° | 3868 | 3231 | 2785 |
| 30° | 3786 | 2911 | 2346 |
| 35° | 3688 | 2570 | 1931 |
| 40° | 3581 | 2206 | 1522 |
| 45° | 3472 | 1834 | 1138 |
| 50° | 3352 | 1443 | 832 |
| 55° | 3220 | 1067 | 664 |
| 60° | 3079 | 739 | 507 |
| 65° | 2895 | 573 | 372 |
| 70° | 2621 | 406 | 292 |
| 75° | 2289 | 284 | 222 |
| 80° | 1838 | 224 | 199 |
| 85° | 1014 | 172 | 172 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3472 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.4 | 5.7 |
| 10°-20° | 115.9 | 15.3 |
| 20°-30° | 154.5 | 20.4 |
| 30°-40° | 155.6 | 20.6 |
| 40°-50° | 127.6 | 16.9 |
| 50°-60° | 87.2 | 11.5 |
| 60°-70° | 48.7 | 6.4 |
| 70°-80° | 19.3 | 2.6 |
| 80°-90° | 3.7 | 0.5 |
| 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° | 313.7 | 41.5 |
| 0°-40° | 469.3 | 62.1 |
| 0°-60° | 684.2 | 90.5 |
| 0°-90° | 755.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 755.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 468 | 468 | 468 | 468 | 468 | |
| 5° | 461 | 466 | 459 | 457 | 459 | 44 |
| 15° | 438 | 434 | 410 | 396 | 391 | 124 |
| 25° | 396 | 377 | 331 | 298 | 286 | 183 |
| 35° | 342 | 306 | 238 | 193 | 179 | 214 |
| 45° | 278 | 227 | 147 | 103 | 91 | 214 |
| 55° | 209 | 147 | 69 | 46 | 43 | 187 |
| 65° | 138 | 70 | 27 | 20 | 18 | 137 |
| 75° | 67 | 18 | 8 | 7 | 6 | 72 |
| 85° | 10 | 2 | 2 | 2 | 2 | 14 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056011

CATALOG NUMBER: S124R3DR-S350D835-X4F0-XX-UDD-FLL-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 467.5 | 467.5 | 467.5 | 467.5 | 467.5 |
| 2.5° | 463.1 | 468.8 | 464.9 | 465.3 | 466.2 |
| 5° | 460.9 | 466.2 | 459.2 | 457.0 | 459.2 |
| 7.5° | 457.0 | 460.9 | 450.5 | 446.1 | 447.0 |
| 10° | 452.2 | 453.5 | 439.2 | 431.8 | 430.9 |
| 12.5° | 446.1 | 444.4 | 425.7 | 414.8 | 412.2 |
| 15° | 438.3 | 433.5 | 410.0 | 395.7 | 390.9 |
| 17.5° | 429.2 | 420.9 | 392.6 | 373.9 | 366.9 |
| 20° | 419.6 | 407.4 | 373.5 | 349.5 | 340.8 |
| 22.5° | 408.3 | 393.0 | 353.0 | 323.8 | 313.8 |
| 25° | 396.5 | 376.9 | 331.2 | 297.7 | 285.5 |
| 27.5° | 384.3 | 360.4 | 308.6 | 271.2 | 259.0 |
| 30° | 370.8 | 342.5 | 285.1 | 244.6 | 229.8 |
| 32.5° | 356.5 | 324.3 | 261.6 | 218.5 | 204.6 |
| 35° | 341.7 | 305.6 | 238.1 | 192.8 | 178.9 |
| 37.5° | 326.4 | 286.4 | 214.6 | 168.4 | 154.5 |
| 40° | 310.3 | 266.8 | 191.1 | 145.4 | 131.9 |
| 42.5° | 293.8 | 246.8 | 168.4 | 123.6 | 111.0 |
| 45° | 277.7 | 226.8 | 146.7 | 103.2 | 91.0 |
| 47.5° | 260.7 | 206.7 | 125.4 | 84.0 | 73.6 |
| 50° | 243.7 | 186.7 | 104.9 | 67.5 | 60.5 |
| 52.5° | 226.3 | 166.7 | 86.2 | 55.3 | 50.5 |
| 55° | 208.9 | 146.7 | 69.2 | 46.1 | 43.1 |
| 57.5° | 191.5 | 126.7 | 53.5 | 39.2 | 35.7 |
| 60° | 174.1 | 107.1 | 41.8 | 31.8 | 28.7 |
| 62.5° | 156.3 | 87.5 | 34.4 | 25.2 | 22.6 |
| 65° | 138.4 | 69.6 | 27.4 | 19.6 | 17.8 |
| 67.5° | 120.6 | 53.1 | 20.9 | 15.2 | 13.9 |
| 70° | 101.4 | 37.9 | 15.7 | 11.8 | 11.3 |
| 72.5° | 84.9 | 25.7 | 11.3 | 9.1 | 8.7 |
| 75° | 67.0 | 18.3 | 8.3 | 7.0 | 6.5 |
| 77.5° | 51.8 | 11.8 | 6.1 | 5.7 | 5.2 |
| 80° | 36.1 | 6.5 | 4.4 | 3.9 | 3.9 |
| 82.5° | 22.2 | 3.5 | 3.0 | 2.6 | 2.6 |
| 85° | 10.0 | 1.7 | 1.7 | 1.7 | 1.7 |
| 87.5° | 1.7 | 0.9 | 0.9 | 0.9 | 0.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)