

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: P1439962

Luminaire Tested: S124DR-S485D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439962
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-S485D927-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

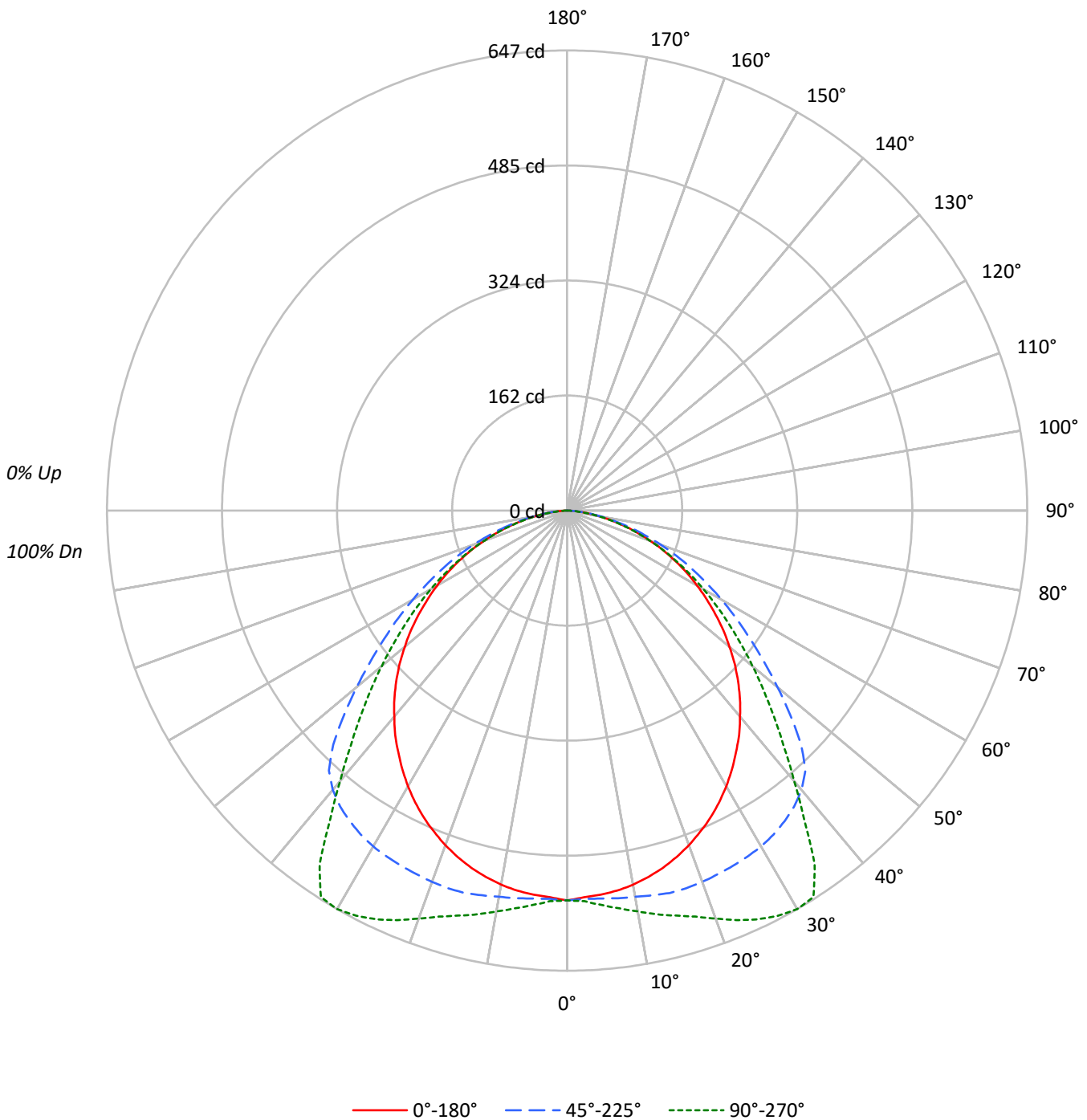
Lumens per Lamp: N/A
Luminaire Lumens: 1665.6 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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

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Luminous Intensity Polar Plot



TEST NUMBER: P1439962

CATALOG NUMBER: S124DR-S485D927-X4F0-XX-UDD-FLB-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 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 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 73 | 71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 67 | 63 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 66 | 60 | 55 | 63 | 58 | 54 | 52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 47 | 57 | 52 | 47 | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 48 | 42 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 | 39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 37 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4846 | 4846 | 4846 |
| 5° | 4811 | 4859 | 4941 |
| 10° | 4795 | 4949 | 5138 |
| 15° | 4761 | 5096 | 5396 |
| 20° | 4711 | 5228 | 5743 |
| 25° | 4648 | 5378 | 6186 |
| 30° | 4569 | 5568 | 6605 |
| 35° | 4470 | 5753 | 6548 |
| 40° | 4364 | 5916 | 5729 |
| 45° | 4250 | 5817 | 5151 |
| 50° | 4099 | 5312 | 4682 |
| 55° | 3929 | 4834 | 4278 |
| 60° | 3738 | 4431 | 3918 |
| 65° | 3510 | 4040 | 3577 |
| 70° | 3211 | 3614 | 3198 |
| 75° | 2828 | 3105 | 2774 |
| 80° | 2327 | 2490 | 2245 |
| 85° | 1633 | 1694 | 1532 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5817 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 52.6 | 3.2 |
| 10°-20° | 157.6 | 9.5 |
| 20°-30° | 256.5 | 15.4 |
| 30°-40° | 325.8 | 19.6 |
| 40°-50° | 317.4 | 19.1 |
| 50°-60° | 260.2 | 15.6 |
| 60°-70° | 181.6 | 10.9 |
| 70°-80° | 93.2 | 5.6 |
| 80°-90° | 20.7 | 1.2 |
| 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° | 466.7 | 28.0 |
| 0°-40° | 792.5 | 47.6 |
| 0°-60° | 1370.1 | 82.3 |
| 0°-90° | 1665.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1665.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 548 | 548 | 548 | 548 | 548 | |
| 5° | 542 | 550 | 548 | 551 | 557 | 52 |
| 15° | 520 | 536 | 557 | 579 | 590 | 147 |
| 25° | 476 | 507 | 551 | 608 | 634 | 219 |
| 35° | 414 | 454 | 533 | 610 | 607 | 259 |
| 45° | 340 | 382 | 465 | 426 | 412 | 262 |
| 55° | 255 | 294 | 314 | 287 | 278 | 228 |
| 65° | 168 | 192 | 193 | 178 | 171 | 166 |
| 75° | 83 | 92 | 91 | 84 | 81 | 88 |
| 85° | 16 | 17 | 17 | 16 | 15 | 20 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1439962

CATALOG NUMBER: S124DR-S485D927-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 548.1 | 548.1 | 548.1 | 548.1 | 548.1 |
| 2.5° | 544.3 | 551.3 | 546.4 | 548.6 | 549.7 |
| 5° | 542.1 | 550.2 | 547.5 | 551.3 | 556.7 |
| 7.5° | 538.9 | 548.1 | 549.7 | 557.2 | 564.2 |
| 10° | 534.1 | 544.8 | 551.3 | 564.2 | 572.3 |
| 12.5° | 527.6 | 541.1 | 554.0 | 571.7 | 581.4 |
| 15° | 520.1 | 536.2 | 556.7 | 578.7 | 589.5 |
| 17.5° | 510.9 | 530.3 | 556.7 | 584.1 | 598.6 |
| 20° | 500.7 | 523.3 | 555.6 | 591.1 | 610.4 |
| 22.5° | 488.9 | 515.8 | 553.4 | 599.1 | 623.3 |
| 25° | 476.5 | 507.2 | 551.3 | 608.3 | 634.1 |
| 27.5° | 462.5 | 497.0 | 548.6 | 615.3 | 642.2 |
| 30° | 447.5 | 484.6 | 545.4 | 618.5 | 647.0 |
| 32.5° | 431.3 | 470.1 | 540.0 | 618.5 | 644.3 |
| 35° | 414.1 | 454.5 | 533.0 | 610.4 | 606.7 |
| 37.5° | 397.5 | 437.8 | 524.4 | 571.2 | 547.5 |
| 40° | 378.1 | 420.0 | 512.6 | 515.8 | 496.4 |
| 42.5° | 359.8 | 401.2 | 495.9 | 469.0 | 451.8 |
| 45° | 339.9 | 381.9 | 465.2 | 426.5 | 412.0 |
| 47.5° | 319.5 | 360.9 | 425.4 | 388.3 | 374.9 |
| 50° | 298.0 | 339.9 | 386.2 | 352.3 | 340.4 |
| 52.5° | 277.0 | 317.3 | 348.5 | 318.9 | 307.6 |
| 55° | 254.9 | 294.2 | 313.6 | 287.2 | 277.5 |
| 57.5° | 232.9 | 270.5 | 281.8 | 257.6 | 248.5 |
| 60° | 211.4 | 245.3 | 250.6 | 229.7 | 221.6 |
| 62.5° | 189.9 | 218.9 | 221.0 | 202.8 | 195.8 |
| 65° | 167.8 | 192.0 | 193.1 | 177.5 | 171.0 |
| 67.5° | 146.3 | 166.2 | 166.2 | 152.7 | 147.4 |
| 70° | 124.2 | 140.9 | 139.8 | 129.1 | 123.7 |
| 72.5° | 103.3 | 115.1 | 114.0 | 106.0 | 102.2 |
| 75° | 82.8 | 92.0 | 90.9 | 84.4 | 81.2 |
| 77.5° | 63.5 | 69.9 | 68.8 | 64.5 | 61.9 |
| 80° | 45.7 | 49.5 | 48.9 | 45.7 | 44.1 |
| 82.5° | 30.1 | 32.3 | 31.2 | 29.0 | 28.0 |
| 85° | 16.1 | 16.7 | 16.7 | 15.6 | 15.1 |
| 87.5° | 5.9 | 5.9 | 5.9 | 5.9 | 5.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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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 | 17.17 | 18.77 | 17.53 | 19.08 | 19.39 | 16.95 | 18.55 | 17.32 | 18.86 | 19.18 |
| | 3H | 18.67 | 20.11 | 19.05 | 20.44 | 20.80 | 18.42 | 19.86 | 18.80 | 20.19 | 20.55 |
| | 4H | 19.17 | 20.53 | 19.57 | 20.87 | 21.25 | 18.92 | 20.27 | 19.32 | 20.62 | 21.00 |
| | 6H | 19.49 | 20.75 | 19.91 | 21.11 | 21.50 | 19.23 | 20.49 | 19.65 | 20.85 | 21.24 |
| | 8H | 19.58 | 20.77 | 20.00 | 21.16 | 21.56 | 19.31 | 20.51 | 19.74 | 20.89 | 21.29 |
| | 12H | 19.62 | 20.76 | 20.04 | 21.14 | 21.57 | 19.35 | 20.49 | 19.78 | 20.87 | 21.30 |
| 4H | 2H | 17.79 | 19.14 | 18.19 | 19.49 | 19.87 | 17.62 | 18.97 | 18.02 | 19.32 | 19.70 |
| | 3H | 19.52 | 20.65 | 19.93 | 21.04 | 21.44 | 19.29 | 20.41 | 19.70 | 20.81 | 21.21 |
| | 4H | 20.15 | 21.16 | 20.58 | 21.58 | 22.01 | 19.88 | 20.90 | 20.32 | 21.31 | 21.75 |
| | 6H | 20.57 | 21.46 | 21.03 | 21.90 | 22.36 | 20.30 | 21.18 | 20.75 | 21.62 | 22.08 |
| | 8H | 20.69 | 21.51 | 21.15 | 21.96 | 22.42 | 20.40 | 21.23 | 20.86 | 21.67 | 22.14 |
| | 12H | 20.75 | 21.49 | 21.23 | 21.97 | 22.44 | 20.46 | 21.20 | 20.94 | 21.68 | 22.15 |
| 8H | 4H | 20.39 | 21.22 | 20.85 | 21.66 | 22.12 | 20.16 | 20.98 | 20.62 | 21.43 | 21.89 |
| | 6H | 20.91 | 21.60 | 21.41 | 22.09 | 22.56 | 20.66 | 21.34 | 21.15 | 21.83 | 22.31 |
| | 8H | 21.08 | 21.69 | 21.59 | 22.20 | 22.69 | 20.80 | 21.42 | 21.32 | 21.93 | 22.41 |
| | 12H | 21.19 | 21.73 | 21.69 | 22.22 | 22.78 | 20.90 | 21.45 | 21.41 | 21.94 | 22.50 |
| 12H | 4H | 20.40 | 21.14 | 20.88 | 21.62 | 22.09 | 20.17 | 20.92 | 20.65 | 21.39 | 21.86 |
| | 6H | 20.93 | 21.55 | 21.44 | 22.06 | 22.54 | 20.69 | 21.30 | 21.20 | 21.81 | 22.30 |
| | 8H | 21.14 | 21.69 | 21.65 | 22.18 | 22.74 | 20.88 | 21.42 | 21.39 | 21.91 | 22.48 |