

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: P1060257

Luminaire Tested: S124RDRP-S1020D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060257
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1020D927-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

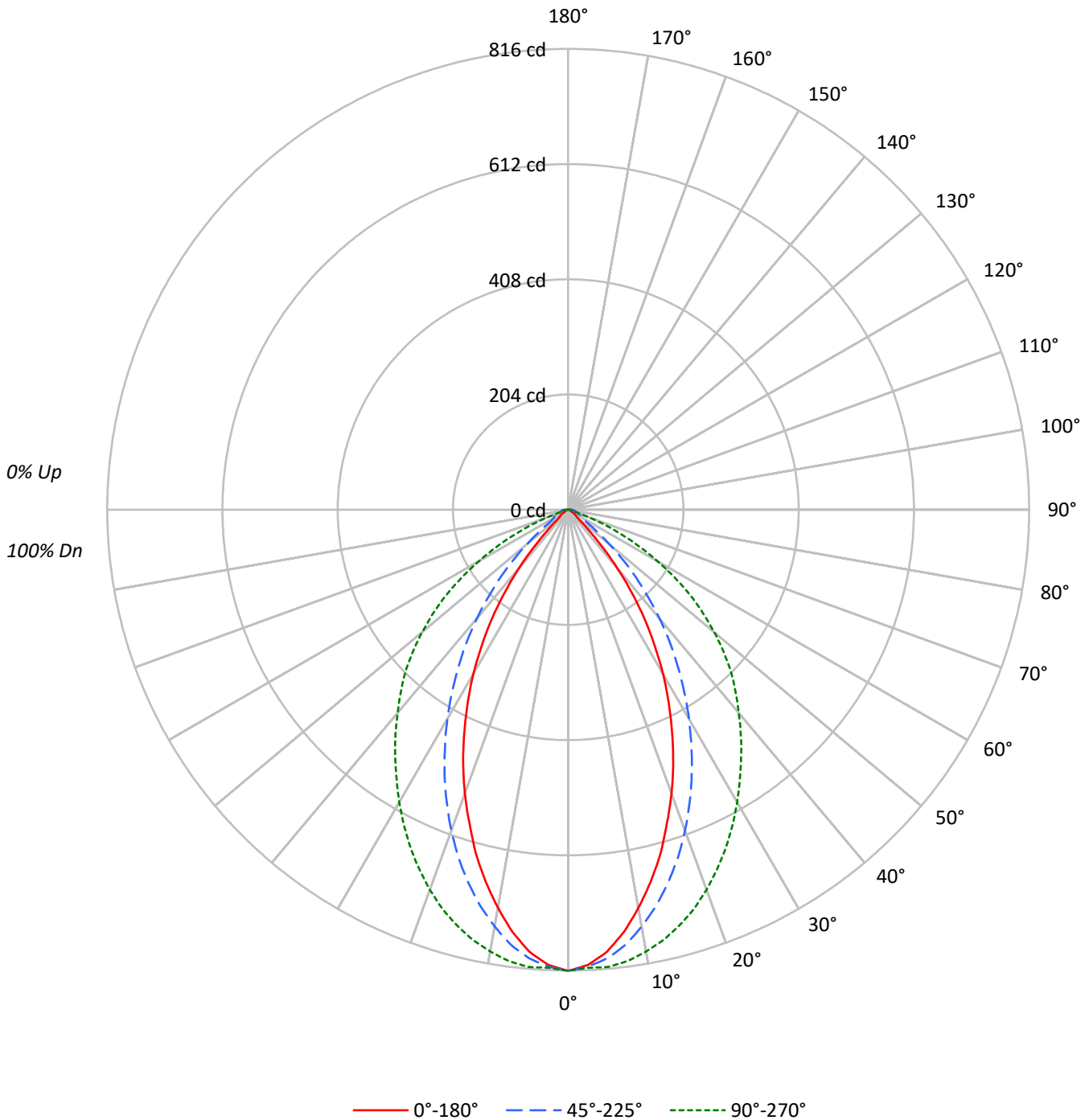
Lumens per Lamp: N/A
Luminaire Lumens: 1029.0 lumens
Efficiency: N/A
Efficacy: 29.4 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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





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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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 98 | 93 | 89 | 102 | 97 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 75 | 81 | 77 | 74 | 72 |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 75 | 70 | 79 | 73 | 69 | 76 | 72 | 68 | 74 | 70 | 67 | 65 |
| 5 | 86 | 75 | 68 | 63 | 84 | 74 | 68 | 63 | 72 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 56 | 66 | 60 | 56 | 64 | 59 | 56 | 54 |
| 7 | 75 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 55 | 51 | 60 | 55 | 51 | 49 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 45 |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 |
| 10 | 63 | 52 | 45 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 44 | 41 | 49 | 44 | 40 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7031 | 7031 | 7031 |
| 5° | 6792 | 6892 | 7025 |
| 10° | 6260 | 6553 | 6947 |
| 15° | 5622 | 6092 | 6792 |
| 20° | 4900 | 5541 | 6560 |
| 25° | 4134 | 4917 | 6274 |
| 30° | 3335 | 4250 | 5946 |
| 35° | 2468 | 3556 | 5611 |
| 40° | 1530 | 2833 | 5279 |
| 45° | 606 | 2065 | 4971 |
| 50° | 269 | 1297 | 4519 |
| 55° | 216 | 676 | 3956 |
| 60° | 148 | 512 | 3152 |
| 65° | 98 | 507 | 2168 |
| 70° | 96 | 458 | 1012 |
| 75° | 126 | 446 | 446 |
| 80° | 188 | 521 | 521 |
| 85° | 375 | 1037 | 761 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4971 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 74.9 | 7.3 |
| 10°-20° | 193.3 | 18.8 |
| 20°-30° | 244.0 | 23.7 |
| 30°-40° | 223.9 | 21.8 |
| 40°-50° | 152.5 | 14.8 |
| 50°-60° | 83.0 | 8.1 |
| 60°-70° | 35.9 | 3.5 |
| 70°-80° | 13.1 | 1.3 |
| 80°-90° | 8.4 | 0.8 |
| 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° | 512.2 | 49.8 |
| 0°-40° | 736.1 | 71.5 |
| 0°-60° | 971.6 | 94.4 |
| 0°-90° | 1029.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1029.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 816 | 816 | 816 | 816 | 816 | |
| 5° | 786 | 796 | 797 | 806 | 813 | 73 |
| 15° | 631 | 653 | 683 | 732 | 762 | 175 |
| 25° | 435 | 466 | 518 | 600 | 660 | 199 |
| 35° | 235 | 269 | 338 | 446 | 534 | 145 |
| 45° | 50 | 83 | 170 | 301 | 408 | 46 |
| 55° | 14 | 15 | 45 | 166 | 264 | 13 |
| 65° | 5 | 7 | 25 | 52 | 106 | 6 |
| 75° | 4 | 12 | 13 | 13 | 13 | 4 |
| 85° | 4 | 9 | 10 | 10 | 8 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 816.5 | 816.5 | 816.5 | 816.5 | 816.5 |
| 2.5° | 806.9 | 816.5 | 809.8 | 811.7 | 811.7 |
| 5° | 785.8 | 796.4 | 797.3 | 806.0 | 812.7 |
| 7.5° | 754.2 | 769.5 | 777.2 | 794.5 | 806.0 |
| 10° | 715.9 | 734.1 | 749.4 | 779.1 | 794.5 |
| 12.5° | 674.7 | 695.7 | 718.7 | 758.0 | 780.1 |
| 15° | 630.6 | 652.6 | 683.3 | 732.2 | 761.9 |
| 17.5° | 581.7 | 608.5 | 645.9 | 704.4 | 740.8 |
| 20° | 534.7 | 561.6 | 604.7 | 670.8 | 715.9 |
| 22.5° | 485.9 | 513.7 | 561.6 | 635.4 | 689.0 |
| 25° | 435.1 | 465.7 | 517.5 | 599.9 | 660.3 |
| 27.5° | 385.2 | 417.8 | 472.5 | 562.5 | 629.6 |
| 30° | 335.4 | 368.0 | 427.4 | 524.2 | 598.0 |
| 32.5° | 284.6 | 318.2 | 382.4 | 484.0 | 565.4 |
| 35° | 234.8 | 269.3 | 338.3 | 445.6 | 533.8 |
| 37.5° | 184.0 | 220.4 | 294.2 | 408.2 | 502.2 |
| 40° | 136.1 | 172.5 | 252.0 | 370.9 | 469.6 |
| 42.5° | 91.0 | 127.5 | 208.9 | 334.5 | 438.9 |
| 45° | 49.8 | 83.4 | 169.6 | 300.9 | 408.2 |
| 47.5° | 26.8 | 46.0 | 131.3 | 268.3 | 373.7 |
| 50° | 20.1 | 24.9 | 96.8 | 233.8 | 337.3 |
| 52.5° | 17.2 | 19.2 | 67.1 | 197.4 | 300.9 |
| 55° | 14.4 | 15.3 | 45.0 | 165.8 | 263.5 |
| 57.5° | 11.5 | 12.5 | 33.5 | 134.2 | 223.3 |
| 60° | 8.6 | 10.5 | 29.7 | 103.5 | 183.0 |
| 62.5° | 6.7 | 8.6 | 27.8 | 75.7 | 144.7 |
| 65° | 4.8 | 6.7 | 24.9 | 51.7 | 106.4 |
| 67.5° | 4.8 | 7.7 | 21.1 | 33.5 | 71.9 |
| 70° | 3.8 | 10.5 | 18.2 | 22.0 | 40.2 |
| 72.5° | 3.8 | 11.5 | 15.3 | 15.3 | 15.3 |
| 75° | 3.8 | 12.5 | 13.4 | 13.4 | 13.4 |
| 77.5° | 3.8 | 11.5 | 12.5 | 11.5 | 11.5 |
| 80° | 3.8 | 10.5 | 10.5 | 10.5 | 10.5 |
| 82.5° | 3.8 | 9.6 | 10.5 | 10.5 | 8.6 |
| 85° | 3.8 | 8.6 | 10.5 | 10.5 | 7.7 |
| 87.5° | 2.9 | 8.6 | 9.6 | 9.6 | 5.7 |
| 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.19 | 16.47 | 15.55 | 16.78 | 17.09 |
| | 3H | 0.00 | 0.38 | 0.00 | 0.71 | 1.08 | 15.56 | 16.69 | 15.94 | 17.02 | 17.39 |
| | 4H | 0.46 | 1.52 | 0.87 | 1.87 | 2.25 | 15.54 | 16.59 | 15.94 | 16.94 | 17.33 |
| | 6H | 1.63 | 2.60 | 2.05 | 2.97 | 3.36 | 15.53 | 16.49 | 15.94 | 16.86 | 17.26 |
| | 8H | 2.22 | 3.13 | 2.65 | 3.52 | 3.93 | 15.53 | 16.44 | 15.96 | 16.83 | 17.24 |
| | 12H | 2.88 | 3.76 | 3.32 | 4.14 | 4.57 | 15.54 | 16.41 | 15.97 | 16.80 | 17.23 |
| 4H | 2H | 1.43 | 2.48 | 1.84 | 2.84 | 3.22 | 15.00 | 16.05 | 15.40 | 16.40 | 16.78 |
| | 3H | 3.01 | 3.87 | 3.43 | 4.28 | 4.68 | 15.42 | 16.27 | 15.83 | 16.68 | 17.08 |
| | 4H | 4.31 | 5.08 | 4.75 | 5.50 | 5.94 | 15.41 | 16.18 | 15.85 | 16.60 | 17.05 |
| | 6H | 5.43 | 6.09 | 5.89 | 6.54 | 7.01 | 15.45 | 16.12 | 15.92 | 16.56 | 17.03 |
| | 8H | 5.94 | 6.56 | 6.41 | 7.00 | 7.47 | 15.48 | 16.10 | 15.95 | 16.55 | 17.02 |
| | 12H | 6.48 | 7.03 | 6.97 | 7.51 | 7.99 | 15.55 | 16.09 | 16.03 | 16.57 | 17.05 |
| 8H | 4H | 5.39 | 6.01 | 5.86 | 6.46 | 6.93 | 15.32 | 15.94 | 15.79 | 16.39 | 16.86 |
| | 6H | 6.93 | 7.43 | 7.43 | 7.93 | 8.41 | 15.40 | 15.91 | 15.90 | 16.40 | 16.89 |
| | 8H | 7.74 | 8.19 | 8.26 | 8.71 | 9.20 | 15.48 | 15.94 | 16.01 | 16.45 | 16.95 |
| | 12H | 8.56 | 8.97 | 9.08 | 9.46 | 10.03 | 15.65 | 16.06 | 16.17 | 16.55 | 17.12 |
| 12H | 4H | 5.58 | 6.13 | 6.07 | 6.61 | 7.09 | 15.29 | 15.83 | 15.77 | 16.32 | 16.79 |
| | 6H | 7.28 | 7.74 | 7.81 | 8.25 | 8.75 | 15.37 | 15.83 | 15.90 | 16.35 | 16.84 |
| | 8H | 8.29 | 8.70 | 8.81 | 9.19 | 9.76 | 15.51 | 15.91 | 16.03 | 16.41 | 16.98 |