

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1060986

Luminaire Tested: S124RDR-H795D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060986
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: S124RDR-H795D927-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

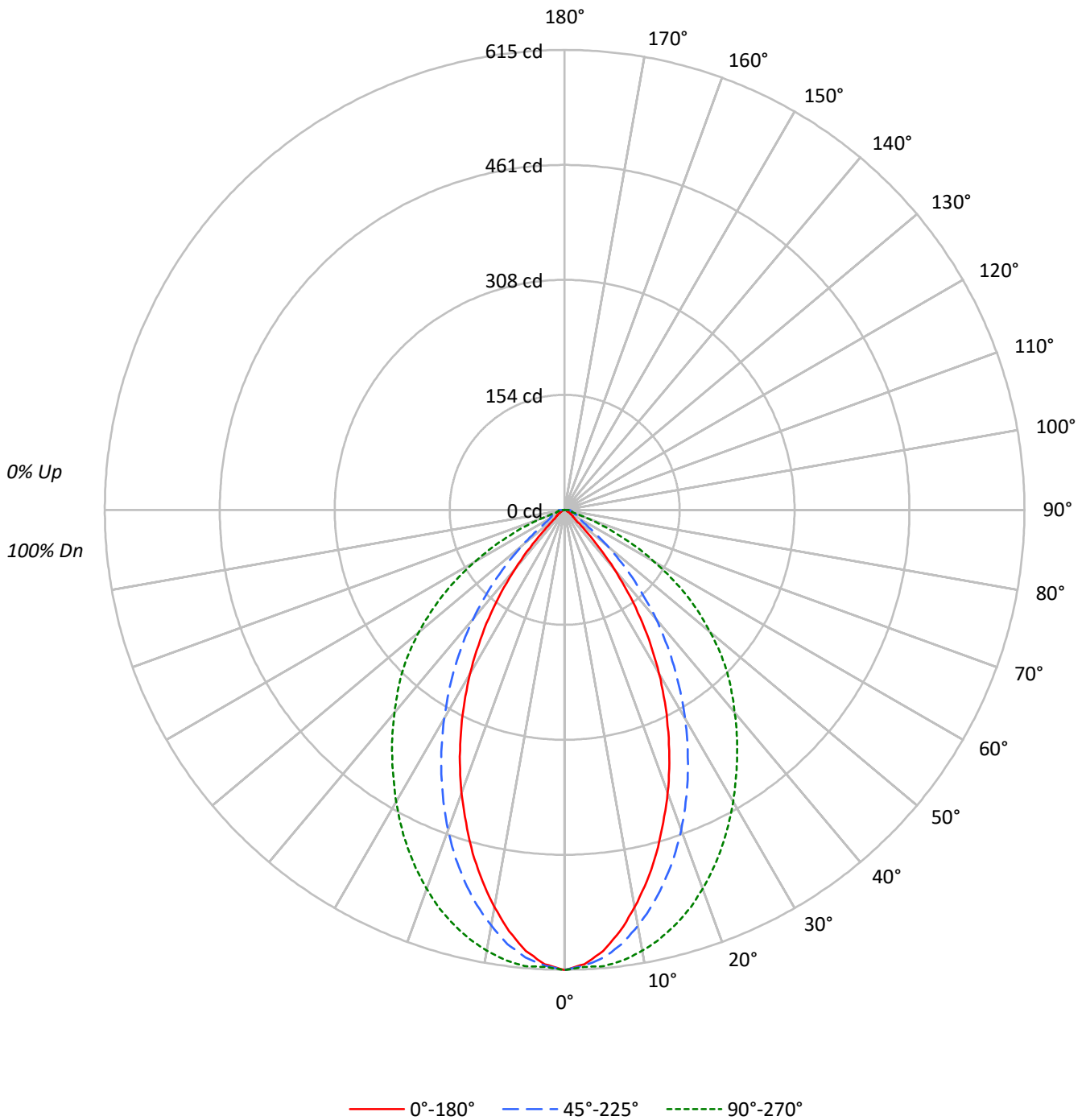
Lumens per Lamp: N/A
Luminaire Lumens: 775.4 lumens
Efficiency: N/A
Efficacy: 33.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.96
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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 | | | | | | | | | | | | | | | | | | |
| 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 | 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° | 5298 | 5298 | 5298 |
| 5° | 5119 | 5193 | 5294 |
| 10° | 4717 | 4938 | 5235 |
| 15° | 4236 | 4590 | 5118 |
| 20° | 3693 | 4176 | 4944 |
| 25° | 3115 | 3706 | 4728 |
| 30° | 2514 | 3203 | 4480 |
| 35° | 1860 | 2680 | 4228 |
| 40° | 1152 | 2135 | 3978 |
| 45° | 458 | 1556 | 3746 |
| 50° | 204 | 977 | 3405 |
| 55° | 162 | 509 | 2982 |
| 60° | 112 | 386 | 2375 |
| 65° | 73 | 383 | 1634 |
| 70° | 73 | 345 | 763 |
| 75° | 96 | 336 | 336 |
| 80° | 144 | 392 | 392 |
| 85° | 287 | 781 | 573 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3746 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 56.4 | 7.3 |
| 10°-20° | 145.7 | 18.8 |
| 20°-30° | 183.9 | 23.7 |
| 30°-40° | 168.7 | 21.8 |
| 40°-50° | 114.9 | 14.8 |
| 50°-60° | 62.6 | 8.1 |
| 60°-70° | 27.1 | 3.5 |
| 70°-80° | 9.9 | 1.3 |
| 80°-90° | 6.3 | 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° | 386.0 | 49.8 |
| 0°-40° | 554.7 | 71.5 |
| 0°-60° | 732.1 | 94.4 |
| 0°-90° | 775.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 775.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 615 | 615 | 615 | 615 | 615 | |
| 5° | 592 | 600 | 601 | 607 | 612 | 55 |
| 15° | 475 | 492 | 515 | 552 | 574 | 132 |
| 25° | 328 | 351 | 390 | 452 | 498 | 150 |
| 35° | 177 | 203 | 255 | 336 | 402 | 109 |
| 45° | 38 | 63 | 128 | 227 | 308 | 35 |
| 55° | 11 | 12 | 34 | 125 | 199 | 10 |
| 65° | 4 | 5 | 19 | 39 | 80 | 4 |
| 75° | 3 | 9 | 10 | 10 | 10 | 3 |
| 85° | 3 | 6 | 8 | 8 | 6 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 615.3 | 615.3 | 615.3 | 615.3 | 615.3 |
| 2.5° | 608.1 | 615.3 | 610.2 | 611.7 | 611.7 |
| 5° | 592.2 | 600.1 | 600.8 | 607.3 | 612.4 |
| 7.5° | 568.3 | 579.9 | 585.7 | 598.7 | 607.3 |
| 10° | 539.5 | 553.2 | 564.7 | 587.1 | 598.7 |
| 12.5° | 508.4 | 524.3 | 541.6 | 571.2 | 587.8 |
| 15° | 475.2 | 491.8 | 514.9 | 551.7 | 574.1 |
| 17.5° | 438.3 | 458.6 | 486.7 | 530.8 | 558.2 |
| 20° | 403.0 | 423.2 | 455.7 | 505.5 | 539.5 |
| 22.5° | 366.1 | 387.1 | 423.2 | 478.8 | 519.2 |
| 25° | 327.9 | 351.0 | 390.0 | 452.1 | 497.6 |
| 27.5° | 290.3 | 314.9 | 356.0 | 423.9 | 474.5 |
| 30° | 252.8 | 277.3 | 322.1 | 395.0 | 450.6 |
| 32.5° | 214.5 | 239.8 | 288.1 | 364.7 | 426.1 |
| 35° | 176.9 | 202.9 | 254.9 | 335.8 | 402.2 |
| 37.5° | 138.7 | 166.1 | 221.7 | 307.6 | 378.4 |
| 40° | 102.5 | 130.0 | 189.9 | 279.5 | 353.9 |
| 42.5° | 68.6 | 96.0 | 157.4 | 252.0 | 330.7 |
| 45° | 37.6 | 62.8 | 127.8 | 226.8 | 307.6 |
| 47.5° | 20.2 | 34.7 | 98.9 | 202.2 | 281.6 |
| 50° | 15.2 | 18.8 | 72.9 | 176.2 | 254.2 |
| 52.5° | 13.0 | 14.4 | 50.6 | 148.8 | 226.8 |
| 55° | 10.8 | 11.6 | 33.9 | 124.9 | 198.6 |
| 57.5° | 8.7 | 9.4 | 25.3 | 101.1 | 168.3 |
| 60° | 6.5 | 7.9 | 22.4 | 78.0 | 137.9 |
| 62.5° | 5.1 | 6.5 | 20.9 | 57.1 | 109.0 |
| 65° | 3.6 | 5.1 | 18.8 | 39.0 | 80.2 |
| 67.5° | 3.6 | 5.8 | 15.9 | 25.3 | 54.2 |
| 70° | 2.9 | 7.9 | 13.7 | 16.6 | 30.3 |
| 72.5° | 2.9 | 8.7 | 11.6 | 11.6 | 11.6 |
| 75° | 2.9 | 9.4 | 10.1 | 10.1 | 10.1 |
| 77.5° | 2.9 | 8.7 | 9.4 | 8.7 | 8.7 |
| 80° | 2.9 | 7.9 | 7.9 | 7.9 | 7.9 |
| 82.5° | 2.9 | 7.2 | 7.9 | 7.9 | 6.5 |
| 85° | 2.9 | 6.5 | 7.9 | 7.9 | 5.8 |
| 87.5° | 2.2 | 6.5 | 7.2 | 7.2 | 4.3 |
| 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 | 14.20 | 15.48 | 14.57 | 15.79 | 16.11 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 14.58 | 15.71 | 14.96 | 16.04 | 16.40 |
| | 4H | 0.00 | 0.54 | 0.00 | 0.89 | 1.27 | 14.56 | 15.61 | 14.96 | 15.96 | 16.34 |
| | 6H | 0.67 | 1.64 | 1.09 | 2.01 | 2.40 | 14.54 | 15.51 | 14.96 | 15.88 | 16.28 |
| | 8H | 1.26 | 2.17 | 1.69 | 2.57 | 2.97 | 14.54 | 15.46 | 14.98 | 15.85 | 16.26 |
| | 12H | 1.93 | 2.81 | 2.37 | 3.19 | 3.62 | 14.56 | 15.43 | 14.99 | 15.81 | 16.24 |
| 4H | 2H | 0.45 | 1.51 | 0.86 | 1.86 | 2.24 | 14.01 | 15.07 | 14.42 | 15.42 | 15.80 |
| | 3H | 2.03 | 2.89 | 2.45 | 3.30 | 3.70 | 14.43 | 15.29 | 14.85 | 15.70 | 16.10 |
| | 4H | 3.33 | 4.10 | 3.77 | 4.52 | 4.96 | 14.43 | 15.20 | 14.87 | 15.62 | 16.06 |
| | 6H | 4.46 | 5.12 | 4.92 | 5.57 | 6.03 | 14.47 | 15.13 | 14.94 | 15.58 | 16.05 |
| | 8H | 4.97 | 5.58 | 5.44 | 6.03 | 6.50 | 14.50 | 15.12 | 14.97 | 15.56 | 16.04 |
| | 12H | 5.52 | 6.06 | 6.00 | 6.55 | 7.02 | 14.56 | 15.11 | 15.05 | 15.59 | 16.07 |
| 8H | 4H | 4.42 | 5.03 | 4.89 | 5.48 | 5.95 | 14.34 | 14.96 | 14.81 | 15.41 | 15.88 |
| | 6H | 5.95 | 6.46 | 6.45 | 6.95 | 7.43 | 14.42 | 14.92 | 14.92 | 15.42 | 15.90 |
| | 8H | 6.76 | 7.21 | 7.28 | 7.73 | 8.22 | 14.50 | 14.96 | 15.02 | 15.47 | 15.96 |
| | 12H | 7.59 | 7.99 | 8.11 | 8.49 | 9.06 | 14.67 | 15.07 | 15.19 | 15.57 | 16.14 |
| 12H | 4H | 4.60 | 5.15 | 5.09 | 5.63 | 6.11 | 14.30 | 14.85 | 14.79 | 15.33 | 15.81 |
| | 6H | 6.30 | 6.76 | 6.83 | 7.27 | 7.77 | 14.39 | 14.85 | 14.92 | 15.36 | 15.86 |
| | 8H | 7.31 | 7.71 | 7.83 | 8.21 | 8.78 | 14.53 | 14.93 | 15.04 | 15.42 | 16.00 |