

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: P1060676

Luminaire Tested: S124RDRP-H1020D930-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060676
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H1020D930-X4F0-XX-UDD-WVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

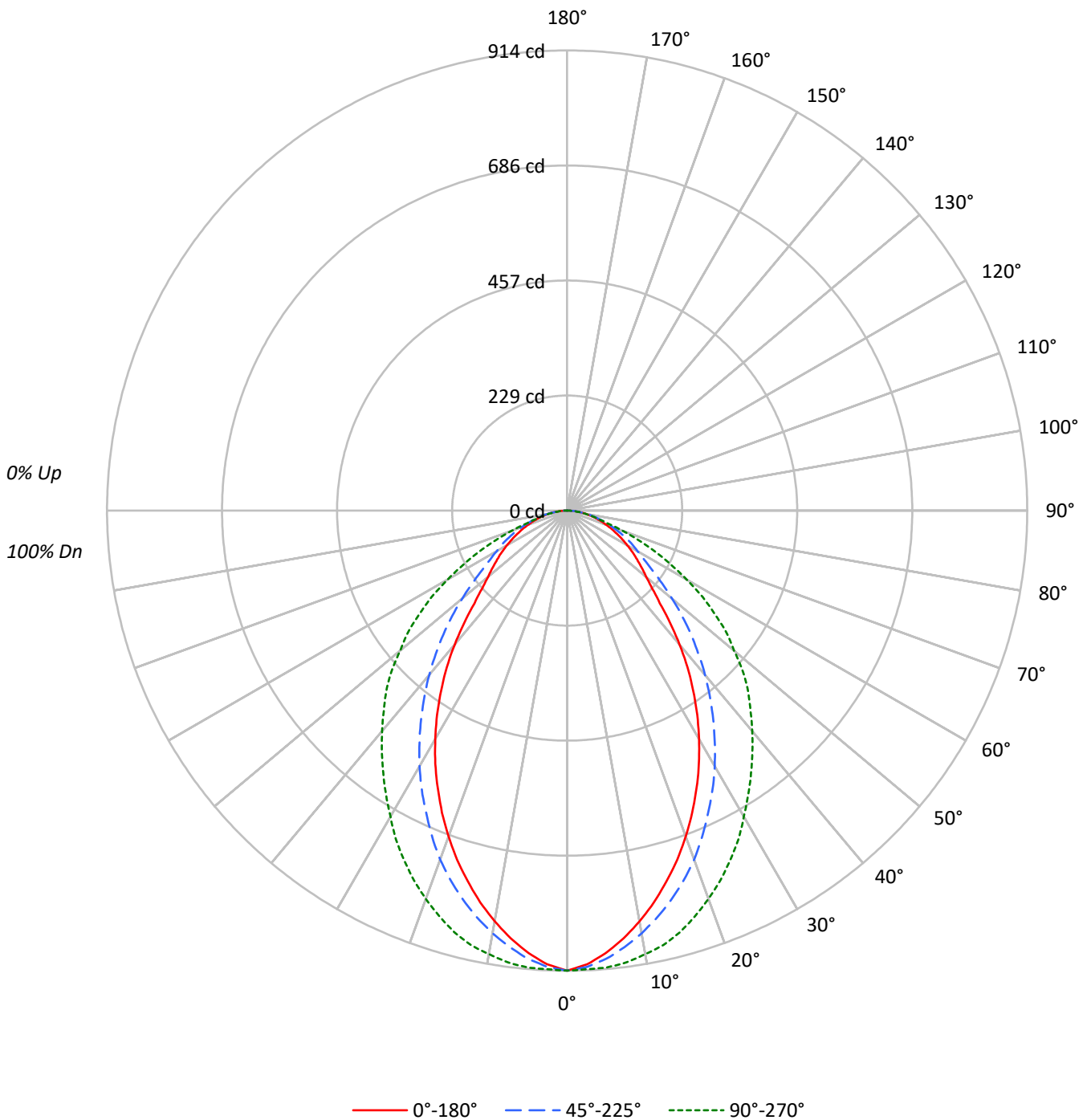
Lumens per Lamp: N/A
Luminaire Lumens: 1663.5 lumens
Efficiency: N/A
Efficacy: 53.3 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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 | 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 | 110 | 106 | 102 | 99 | 108 | 104 | 100 | 97 | 100 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 89 | 87 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 102 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 79 | 83 | 80 | 77 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 94 | 84 | 77 | 71 | 91 | 83 | 76 | 71 | 80 | 74 | 69 | 77 | 72 | 68 | 75 | 71 | 67 | 65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 87 | 76 | 68 | 62 | 84 | 74 | 67 | 61 | 72 | 66 | 61 | 70 | 64 | 60 | 68 | 63 | 59 | 57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 80 | 69 | 60 | 54 | 78 | 68 | 60 | 54 | 65 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 52 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 75 | 62 | 54 | 48 | 73 | 62 | 54 | 48 | 60 | 53 | 48 | 58 | 52 | 47 | 57 | 51 | 47 | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 70 | 57 | 49 | 43 | 68 | 56 | 49 | 43 | 55 | 48 | 43 | 54 | 47 | 43 | 52 | 47 | 42 | 41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 65 | 53 | 45 | 39 | 64 | 52 | 44 | 39 | 51 | 44 | 39 | 50 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | 34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 58 | 45 | 38 | 33 | 56 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 33 | 42 | 36 | 32 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7868 | 7868 | 7868 |
| 5° | 7625 | 7724 | 7874 |
| 10° | 7244 | 7453 | 7822 |
| 15° | 6797 | 7129 | 7727 |
| 20° | 6310 | 6758 | 7522 |
| 25° | 5779 | 6297 | 7280 |
| 30° | 5209 | 5829 | 6981 |
| 35° | 4591 | 5316 | 6695 |
| 40° | 3909 | 4791 | 6428 |
| 45° | 3172 | 4234 | 6194 |
| 50° | 2746 | 3644 | 5799 |
| 55° | 2545 | 3091 | 5378 |
| 60° | 2375 | 2788 | 4717 |
| 65° | 2225 | 2614 | 3922 |
| 70° | 2075 | 2412 | 2966 |
| 75° | 1976 | 2229 | 2136 |
| 80° | 1855 | 2043 | 1805 |
| 85° | 1699 | 1897 | 1423 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6194 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 84.4 | 5.1 |
| 10°-20° | 226.7 | 13.6 |
| 20°-30° | 309.6 | 18.6 |
| 30°-40° | 324.4 | 19.5 |
| 40°-50° | 280.8 | 16.9 |
| 50°-60° | 211.0 | 12.7 |
| 60°-70° | 136.1 | 8.2 |
| 70°-80° | 69.8 | 4.2 |
| 80°-90° | 20.8 | 1.3 |
| 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° | 620.7 | 37.3 |
| 0°-40° | 945.1 | 56.8 |
| 0°-60° | 1436.9 | 86.4 |
| 0°-90° | 1663.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1663.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 914 | 914 | 914 | 914 | 914 | |
| 5° | 882 | 896 | 894 | 900 | 911 | 83 |
| 15° | 762 | 782 | 800 | 836 | 867 | 214 |
| 25° | 608 | 631 | 663 | 714 | 766 | 279 |
| 35° | 437 | 462 | 506 | 573 | 637 | 272 |
| 45° | 260 | 287 | 348 | 433 | 509 | 205 |
| 55° | 170 | 175 | 206 | 294 | 358 | 152 |
| 65° | 109 | 111 | 128 | 155 | 192 | 109 |
| 75° | 59 | 66 | 67 | 66 | 64 | 63 |
| 85° | 17 | 20 | 19 | 18 | 14 | 20 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 913.7 | 913.7 | 913.7 | 913.7 | 913.7 |
| 2.5° | 902.2 | 913.7 | 907.0 | 908.9 | 911.8 |
| 5° | 882.1 | 895.5 | 893.6 | 900.3 | 910.9 |
| 7.5° | 857.2 | 871.6 | 874.5 | 889.8 | 905.1 |
| 10° | 828.5 | 844.8 | 852.4 | 875.4 | 894.6 |
| 12.5° | 796.9 | 814.1 | 827.5 | 856.3 | 884.0 |
| 15° | 762.4 | 781.6 | 799.7 | 836.1 | 866.8 |
| 17.5° | 727.0 | 746.1 | 770.1 | 810.3 | 844.8 |
| 20° | 688.6 | 709.7 | 737.5 | 779.6 | 820.8 |
| 22.5° | 649.4 | 671.4 | 701.1 | 747.1 | 795.0 |
| 25° | 608.2 | 631.2 | 662.8 | 714.5 | 766.2 |
| 27.5° | 567.0 | 590.0 | 625.4 | 680.0 | 736.5 |
| 30° | 523.9 | 547.9 | 586.2 | 645.5 | 702.1 |
| 32.5° | 480.8 | 506.7 | 545.9 | 609.1 | 669.5 |
| 35° | 436.7 | 461.7 | 505.7 | 572.8 | 636.9 |
| 37.5° | 392.7 | 418.6 | 465.5 | 537.3 | 604.4 |
| 40° | 347.7 | 374.5 | 426.2 | 501.9 | 571.8 |
| 42.5° | 302.7 | 331.4 | 386.0 | 465.5 | 539.2 |
| 45° | 260.5 | 287.3 | 347.7 | 432.9 | 508.6 |
| 47.5° | 228.9 | 247.1 | 309.4 | 401.3 | 474.1 |
| 50° | 205.0 | 214.5 | 272.0 | 366.8 | 432.9 |
| 52.5° | 186.8 | 193.5 | 237.5 | 329.5 | 399.4 |
| 55° | 169.5 | 175.3 | 205.9 | 294.0 | 358.2 |
| 57.5° | 154.2 | 157.1 | 182.0 | 259.6 | 318.9 |
| 60° | 137.9 | 140.8 | 161.9 | 222.2 | 273.9 |
| 62.5° | 123.6 | 125.5 | 145.6 | 186.8 | 232.7 |
| 65° | 109.2 | 111.1 | 128.3 | 155.2 | 192.5 |
| 67.5° | 95.8 | 98.7 | 112.1 | 126.4 | 153.2 |
| 70° | 82.4 | 88.1 | 95.8 | 102.5 | 117.8 |
| 72.5° | 70.9 | 76.6 | 80.5 | 82.4 | 83.3 |
| 75° | 59.4 | 66.1 | 67.0 | 66.1 | 64.2 |
| 77.5° | 47.9 | 53.6 | 53.6 | 51.7 | 49.8 |
| 80° | 37.4 | 42.1 | 41.2 | 39.3 | 36.4 |
| 82.5° | 27.8 | 30.6 | 29.7 | 27.8 | 24.9 |
| 85° | 17.2 | 20.1 | 19.2 | 18.2 | 14.4 |
| 87.5° | 8.6 | 11.5 | 10.5 | 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 | 13.60 | 15.08 | 13.97 | 15.40 | 15.71 | 17.37 | 18.86 | 17.74 | 19.17 | 19.49 |
| | 3H | 15.26 | 16.58 | 15.63 | 16.91 | 17.28 | 18.49 | 19.82 | 18.86 | 20.14 | 20.51 |
| | 4H | 15.93 | 17.17 | 16.33 | 17.52 | 17.90 | 18.78 | 20.02 | 19.18 | 20.37 | 20.75 |
| | 6H | 16.44 | 17.59 | 16.85 | 17.96 | 18.35 | 18.97 | 20.12 | 19.39 | 20.49 | 20.88 |
| | 8H | 16.62 | 17.71 | 17.05 | 18.10 | 18.51 | 19.03 | 20.12 | 19.45 | 20.51 | 20.91 |
| | 12H | 16.75 | 17.79 | 17.18 | 18.18 | 18.60 | 19.05 | 20.10 | 19.48 | 20.48 | 20.91 |
| 4H | 2H | 14.38 | 15.63 | 14.78 | 15.98 | 16.36 | 17.53 | 18.78 | 17.93 | 19.13 | 19.51 |
| | 3H | 16.24 | 17.28 | 16.66 | 17.68 | 18.08 | 18.84 | 19.88 | 19.25 | 20.28 | 20.68 |
| | 4H | 17.05 | 17.98 | 17.49 | 18.40 | 18.84 | 19.25 | 20.18 | 19.68 | 20.60 | 21.04 |
| | 6H | 17.70 | 18.51 | 18.16 | 18.95 | 19.41 | 19.57 | 20.37 | 20.03 | 20.82 | 21.28 |
| | 8H | 17.93 | 18.68 | 18.39 | 19.13 | 19.60 | 19.66 | 20.41 | 20.12 | 20.86 | 21.33 |
| | 12H | 18.10 | 18.77 | 18.58 | 19.25 | 19.72 | 19.72 | 20.40 | 20.20 | 20.87 | 21.35 |
| 8H | 4H | 17.40 | 18.16 | 17.87 | 18.60 | 19.07 | 19.38 | 20.14 | 19.85 | 20.58 | 21.05 |
| | 6H | 18.19 | 18.82 | 18.69 | 19.31 | 19.79 | 19.80 | 20.42 | 20.29 | 20.91 | 21.39 |
| | 8H | 18.52 | 19.07 | 19.03 | 19.59 | 20.07 | 19.95 | 20.51 | 20.46 | 21.02 | 21.51 |
| | 12H | 18.78 | 19.27 | 19.29 | 19.77 | 20.33 | 20.07 | 20.57 | 20.58 | 21.06 | 21.62 |
| 12H | 4H | 17.43 | 18.10 | 17.91 | 18.58 | 19.06 | 19.39 | 20.06 | 19.87 | 20.54 | 21.01 |
| | 6H | 18.26 | 18.82 | 18.77 | 19.33 | 19.82 | 19.82 | 20.38 | 20.33 | 20.89 | 21.38 |
| | 8H | 18.64 | 19.14 | 19.15 | 19.63 | 20.20 | 20.02 | 20.52 | 20.53 | 21.01 | 21.57 |