

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: P1060773

Luminaire Tested: S124RDR-H1195D940-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060773
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-74)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1195D940-X4F0-XX-UDD-SVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

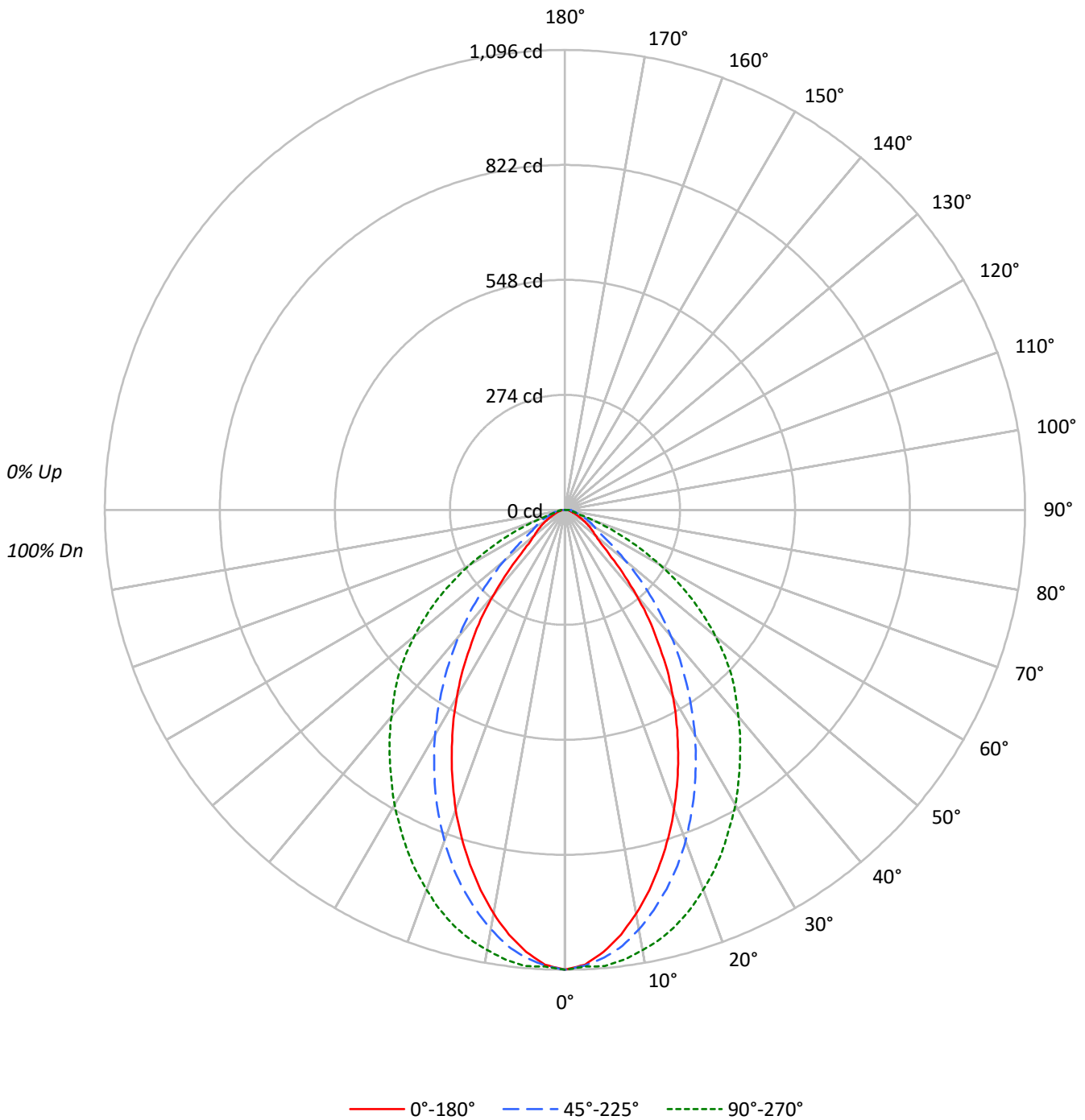
Lumens per Lamp: N/A
Luminaire Lumens: 1550.9 lumens
Efficiency: N/A
Efficacy: 42.5 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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 | | | | | 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 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | 100 | |
| 1 | 111 | 108 | 104 | 102 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | 89 | |
| 2 | 104 | 97 | 92 | 88 | 101 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 83 | 81 | 79 | | | 79 | |
| 3 | 97 | 88 | 82 | 77 | 94 | 87 | 81 | 76 | 84 | 79 | 75 | 81 | 77 | 73 | 79 | 75 | 72 | 70 | | | 70 | |
| 4 | 90 | 80 | 73 | 68 | 88 | 79 | 72 | 67 | 77 | 71 | 66 | 75 | 70 | 66 | 73 | 68 | 65 | 63 | | | 63 | |
| 5 | 84 | 73 | 66 | 60 | 82 | 72 | 65 | 60 | 70 | 64 | 60 | 69 | 63 | 59 | 67 | 62 | 58 | 57 | | | 57 | |
| 6 | 79 | 67 | 60 | 54 | 77 | 67 | 59 | 54 | 65 | 59 | 54 | 63 | 58 | 53 | 62 | 57 | 53 | 51 | | | 51 | |
| 7 | 74 | 62 | 55 | 49 | 72 | 61 | 54 | 49 | 60 | 54 | 49 | 59 | 53 | 49 | 57 | 52 | 48 | 47 | | | 47 | |
| 8 | 69 | 58 | 50 | 45 | 68 | 57 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 45 | 53 | 48 | 44 | 43 | | | 43 | |
| 9 | 65 | 54 | 46 | 42 | 64 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | 39 | |
| 10 | 62 | 50 | 43 | 38 | 60 | 49 | 43 | 38 | 49 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | 36 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9436 | 9436 | 9436 |
| 5° | 9144 | 9260 | 9430 |
| 10° | 8543 | 8875 | 9314 |
| 15° | 7793 | 8339 | 9136 |
| 20° | 6967 | 7697 | 8830 |
| 25° | 6061 | 6957 | 8469 |
| 30° | 5113 | 6160 | 8072 |
| 35° | 4067 | 5302 | 7646 |
| 40° | 2959 | 4418 | 7226 |
| 45° | 1789 | 3489 | 6844 |
| 50° | 1279 | 2527 | 6266 |
| 55° | 1084 | 1710 | 5532 |
| 60° | 885 | 1392 | 4471 |
| 65° | 699 | 1247 | 3217 |
| 70° | 587 | 1047 | 1694 |
| 75° | 529 | 978 | 855 |
| 80° | 545 | 972 | 848 |
| 85° | 721 | 1452 | 968 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6844 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.9 | 6.5 |
| 10°-20° | 264.4 | 17.0 |
| 20°-30° | 342.9 | 22.1 |
| 30°-40° | 330.0 | 21.3 |
| 40°-50° | 245.5 | 15.8 |
| 50°-60° | 151.0 | 9.7 |
| 60°-70° | 74.2 | 4.8 |
| 70°-80° | 28.9 | 1.9 |
| 80°-90° | 13.2 | 0.9 |
| 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° | 708.1 | 45.7 |
| 0°-40° | 1038.1 | 66.9 |
| 0°-60° | 1434.7 | 92.5 |
| 0°-90° | 1550.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1550.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1096 | 1096 | 1096 | 1096 | 1096 | |
| 5° | 1058 | 1074 | 1071 | 1081 | 1091 | 98 |
| 15° | 874 | 902 | 935 | 992 | 1025 | 244 |
| 25° | 638 | 672 | 732 | 824 | 891 | 292 |
| 35° | 387 | 424 | 504 | 630 | 727 | 242 |
| 45° | 147 | 182 | 286 | 442 | 562 | 122 |
| 55° | 72 | 75 | 114 | 260 | 368 | 65 |
| 65° | 34 | 37 | 61 | 98 | 158 | 35 |
| 75° | 16 | 28 | 29 | 27 | 26 | 17 |
| 85° | 7 | 14 | 15 | 15 | 10 | 7 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1095.8 | 1095.8 | 1095.8 | 1095.8 | 1095.8 |
| 2.5° | 1084.8 | 1097.0 | 1087.2 | 1088.5 | 1089.7 |
| 5° | 1057.8 | 1073.8 | 1071.3 | 1081.1 | 1090.9 |
| 7.5° | 1021.1 | 1039.5 | 1048.1 | 1067.6 | 1081.1 |
| 10° | 977.0 | 997.9 | 1015.0 | 1046.8 | 1065.2 |
| 12.5° | 928.1 | 952.6 | 977.0 | 1019.9 | 1048.1 |
| 15° | 874.2 | 902.4 | 935.4 | 991.7 | 1024.8 |
| 17.5° | 819.1 | 847.3 | 890.1 | 955.0 | 996.6 |
| 20° | 760.3 | 790.9 | 839.9 | 912.1 | 963.6 |
| 22.5° | 699.1 | 732.2 | 786.0 | 868.1 | 929.3 |
| 25° | 637.9 | 672.2 | 732.2 | 824.0 | 891.3 |
| 27.5° | 576.7 | 609.7 | 674.6 | 777.5 | 850.9 |
| 30° | 514.2 | 548.5 | 619.5 | 727.3 | 811.8 |
| 32.5° | 454.2 | 486.1 | 562.0 | 679.5 | 768.9 |
| 35° | 386.9 | 423.6 | 504.4 | 630.5 | 727.3 |
| 37.5° | 329.4 | 362.4 | 449.3 | 581.6 | 685.6 |
| 40° | 263.2 | 300.0 | 393.0 | 533.8 | 642.8 |
| 42.5° | 202.0 | 238.8 | 339.1 | 486.1 | 602.4 |
| 45° | 146.9 | 182.4 | 286.5 | 442.0 | 562.0 |
| 47.5° | 111.4 | 132.2 | 235.1 | 399.1 | 516.7 |
| 50° | 95.5 | 101.6 | 188.6 | 352.6 | 467.7 |
| 52.5° | 84.5 | 86.9 | 146.9 | 306.1 | 418.7 |
| 55° | 72.2 | 74.7 | 113.9 | 259.6 | 368.5 |
| 57.5° | 61.2 | 62.4 | 91.8 | 215.5 | 314.7 |
| 60° | 51.4 | 52.6 | 80.8 | 172.6 | 259.6 |
| 62.5° | 42.9 | 44.1 | 72.2 | 133.5 | 206.9 |
| 65° | 34.3 | 36.7 | 61.2 | 97.9 | 157.9 |
| 67.5° | 28.2 | 33.1 | 51.4 | 68.6 | 110.2 |
| 70° | 23.3 | 31.8 | 41.6 | 47.8 | 67.3 |
| 72.5° | 19.6 | 29.4 | 35.5 | 34.3 | 33.1 |
| 75° | 15.9 | 28.2 | 29.4 | 26.9 | 25.7 |
| 77.5° | 13.5 | 24.5 | 24.5 | 22.0 | 20.8 |
| 80° | 11.0 | 19.6 | 19.6 | 19.6 | 17.1 |
| 82.5° | 9.8 | 15.9 | 17.1 | 17.1 | 13.5 |
| 85° | 7.3 | 13.5 | 14.7 | 14.7 | 9.8 |
| 87.5° | 4.9 | 12.2 | 13.5 | 12.2 | 7.3 |
| 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 | 7.58 | 8.92 | 7.94 | 9.23 | 9.55 | 16.75 | 18.09 | 17.12 | 18.41 | 18.72 |
| | 3H | 8.69 | 9.88 | 9.07 | 10.21 | 10.58 | 17.26 | 18.45 | 17.64 | 18.78 | 19.14 |
| | 4H | 9.21 | 10.32 | 9.61 | 10.67 | 11.05 | 17.28 | 18.39 | 17.68 | 18.74 | 19.12 |
| | 6H | 9.65 | 10.67 | 10.06 | 11.04 | 11.43 | 17.29 | 18.31 | 17.70 | 18.68 | 19.07 |
| | 8H | 9.84 | 10.80 | 10.27 | 11.19 | 11.60 | 17.29 | 18.26 | 17.72 | 18.65 | 19.06 |
| | 12H | 10.02 | 10.94 | 10.45 | 11.32 | 11.75 | 17.30 | 18.22 | 17.73 | 18.60 | 19.03 |
| 4H | 2H | 8.72 | 9.83 | 9.13 | 10.19 | 10.57 | 16.64 | 17.75 | 17.05 | 18.10 | 18.49 |
| | 3H | 10.07 | 10.98 | 10.48 | 11.38 | 11.78 | 17.23 | 18.14 | 17.65 | 18.55 | 18.95 |
| | 4H | 10.80 | 11.62 | 11.24 | 12.04 | 12.48 | 17.29 | 18.10 | 17.73 | 18.52 | 18.97 |
| | 6H | 11.41 | 12.12 | 11.88 | 12.56 | 13.03 | 17.37 | 18.07 | 17.83 | 18.52 | 18.98 |
| | 8H | 11.66 | 12.31 | 12.12 | 12.76 | 13.23 | 17.40 | 18.05 | 17.87 | 18.50 | 18.97 |
| | 12H | 11.89 | 12.47 | 12.38 | 12.95 | 13.43 | 17.44 | 18.02 | 17.92 | 18.50 | 18.98 |
| 8H | 4H | 11.27 | 11.93 | 11.74 | 12.37 | 12.84 | 17.25 | 17.91 | 17.72 | 18.35 | 18.82 |
| | 6H | 12.12 | 12.66 | 12.62 | 13.15 | 13.63 | 17.38 | 17.91 | 17.88 | 18.41 | 18.89 |
| | 8H | 12.53 | 13.01 | 13.05 | 13.52 | 14.02 | 17.46 | 17.94 | 17.98 | 18.46 | 18.95 |
| | 12H | 12.95 | 13.38 | 13.46 | 13.87 | 14.44 | 17.58 | 18.01 | 18.09 | 18.50 | 19.07 |
| 12H | 4H | 11.32 | 11.91 | 11.81 | 12.39 | 12.86 | 17.22 | 17.80 | 17.71 | 18.29 | 18.76 |
| | 6H | 12.25 | 12.74 | 12.77 | 13.25 | 13.74 | 17.36 | 17.84 | 17.88 | 18.36 | 18.85 |
| | 8H | 12.77 | 13.20 | 13.29 | 13.70 | 14.27 | 17.49 | 17.92 | 18.01 | 18.41 | 18.98 |