

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: P1060626

Luminaire Tested: S124RDRP-H1020D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060626
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-H1020D830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

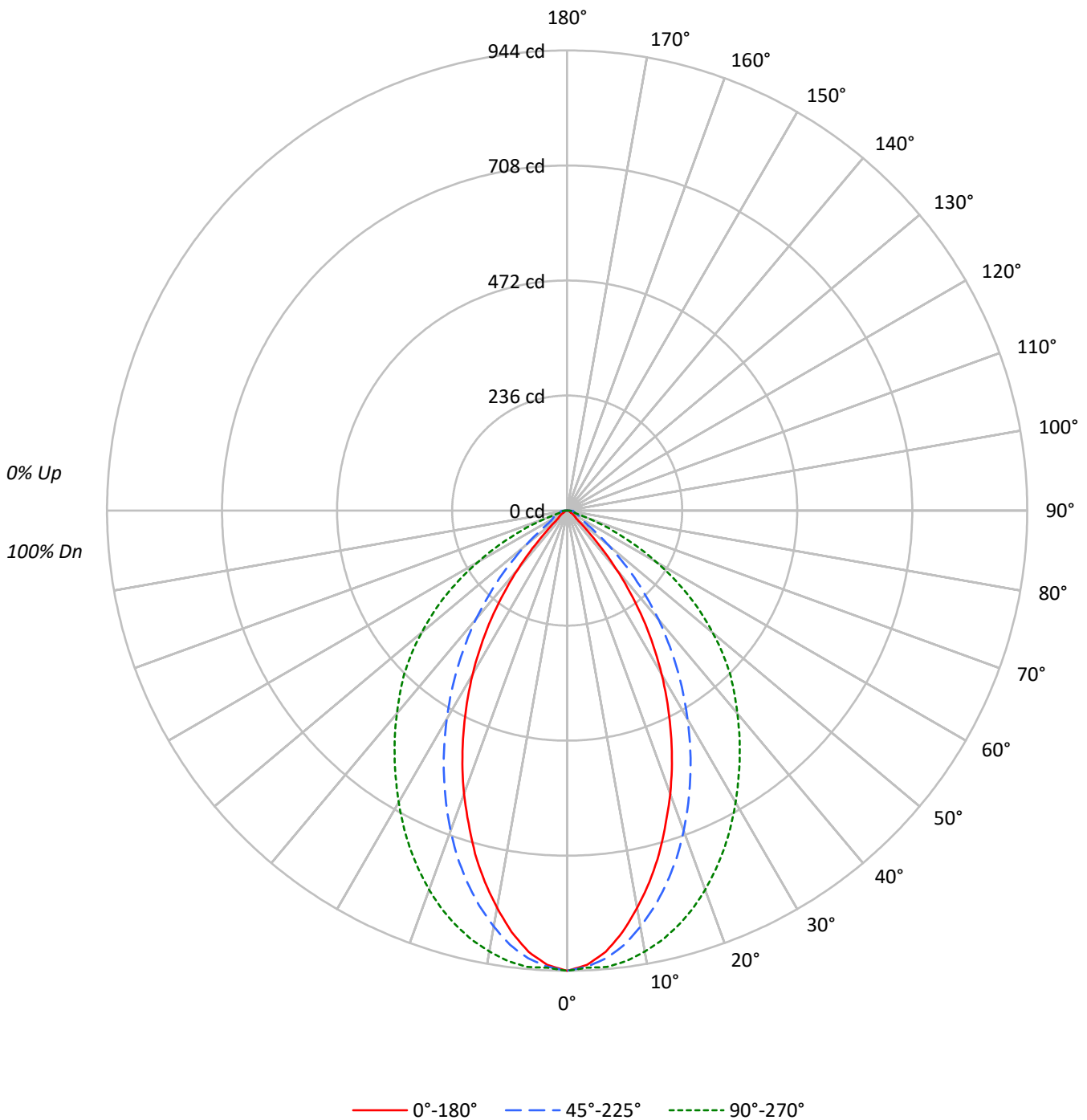
Lumens per Lamp: N/A
Luminaire Lumens: 1189.9 lumens
Efficiency: N/A
Efficacy: 38.1 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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



TEST NUMBER: P1060626

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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 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | | | 90 | | | |
| 2 | 105 | 98 | 93 | 89 | 102 | 97 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | 81 | | | | | 81 | | | |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 75 | 81 | 77 | 74 | 72 | | | | | 72 | | | |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 75 | 70 | 79 | 73 | 69 | 76 | 72 | 68 | 74 | 70 | 67 | 65 | | | | | 65 | | | |
| 5 | 86 | 75 | 68 | 63 | 84 | 74 | 68 | 63 | 72 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | 59 | | | |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 56 | 66 | 60 | 56 | 64 | 59 | 56 | 54 | | | | | 54 | | | |
| 7 | 75 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 55 | 51 | 60 | 55 | 51 | 49 | | | | | 49 | | | |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 45 | | | | | 45 | | | |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 | | | | | 42 | | | |
| 10 | 63 | 52 | 45 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 44 | 41 | 49 | 44 | 40 | 39 | | | | | 39 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8130 | 8130 | 8130 |
| 5° | 7854 | 7969 | 8123 |
| 10° | 7237 | 7577 | 8032 |
| 15° | 6500 | 7044 | 7853 |
| 20° | 5666 | 6407 | 7585 |
| 25° | 4780 | 5686 | 7254 |
| 30° | 3856 | 4914 | 6875 |
| 35° | 2854 | 4112 | 6488 |
| 40° | 1768 | 3276 | 6104 |
| 45° | 701 | 2388 | 5748 |
| 50° | 312 | 1499 | 5225 |
| 55° | 249 | 782 | 4574 |
| 60° | 172 | 592 | 3644 |
| 65° | 112 | 587 | 2506 |
| 70° | 111 | 531 | 1171 |
| 75° | 146 | 516 | 516 |
| 80° | 218 | 605 | 605 |
| 85° | 435 | 1205 | 879 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5748 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 86.6 | 7.3 |
| 10°-20° | 223.5 | 18.8 |
| 20°-30° | 282.1 | 23.7 |
| 30°-40° | 258.8 | 21.8 |
| 40°-50° | 176.3 | 14.8 |
| 50°-60° | 96.0 | 8.1 |
| 60°-70° | 41.6 | 3.5 |
| 70°-80° | 15.1 | 1.3 |
| 80°-90° | 9.8 | 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° | 592.2 | 49.8 |
| 0°-40° | 851.1 | 71.5 |
| 0°-60° | 1123.4 | 94.4 |
| 0°-90° | 1189.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1189.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 944 | 944 | 944 | 944 | 944 | |
| 5° | 909 | 921 | 922 | 932 | 940 | 84 |
| 15° | 729 | 755 | 790 | 847 | 881 | 203 |
| 25° | 503 | 538 | 598 | 694 | 764 | 230 |
| 35° | 272 | 311 | 391 | 515 | 617 | 168 |
| 45° | 58 | 96 | 196 | 348 | 472 | 54 |
| 55° | 17 | 18 | 52 | 192 | 305 | 15 |
| 65° | 6 | 8 | 29 | 60 | 123 | 6 |
| 75° | 4 | 14 | 16 | 16 | 16 | 5 |
| 85° | 4 | 10 | 12 | 12 | 9 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: S124RDRP-H1020D830-X4F0-XX-UDD-BVL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 944.1 | 944.1 | 944.1 | 944.1 | 944.1 |
| 2.5° | 933.0 | 944.1 | 936.3 | 938.6 | 938.6 |
| 5° | 908.6 | 920.8 | 921.9 | 931.9 | 939.7 |
| 7.5° | 872.1 | 889.8 | 898.7 | 918.6 | 931.9 |
| 10° | 827.7 | 848.8 | 866.5 | 900.9 | 918.6 |
| 12.5° | 780.1 | 804.5 | 831.1 | 876.5 | 902.0 |
| 15° | 729.1 | 754.6 | 790.1 | 846.6 | 880.9 |
| 17.5° | 672.6 | 703.6 | 746.9 | 814.4 | 856.6 |
| 20° | 618.3 | 649.3 | 699.2 | 775.7 | 827.7 |
| 22.5° | 561.8 | 593.9 | 649.3 | 734.7 | 796.7 |
| 25° | 503.1 | 538.5 | 598.4 | 693.7 | 763.5 |
| 27.5° | 445.5 | 483.1 | 546.3 | 650.4 | 728.0 |
| 30° | 387.8 | 425.5 | 494.2 | 606.1 | 691.4 |
| 32.5° | 329.1 | 367.9 | 442.1 | 559.6 | 653.8 |
| 35° | 271.5 | 311.4 | 391.2 | 515.3 | 617.2 |
| 37.5° | 212.8 | 254.9 | 340.2 | 472.0 | 580.6 |
| 40° | 157.3 | 199.5 | 291.4 | 428.8 | 543.0 |
| 42.5° | 105.3 | 147.4 | 241.6 | 386.7 | 507.5 |
| 45° | 57.6 | 96.4 | 196.1 | 347.9 | 472.0 |
| 47.5° | 31.0 | 53.2 | 151.8 | 310.3 | 432.2 |
| 50° | 23.3 | 28.8 | 111.9 | 270.4 | 390.0 |
| 52.5° | 19.9 | 22.2 | 77.6 | 228.3 | 347.9 |
| 55° | 16.6 | 17.7 | 52.1 | 191.7 | 304.7 |
| 57.5° | 13.3 | 14.4 | 38.8 | 155.1 | 258.2 |
| 60° | 10.0 | 12.2 | 34.4 | 119.7 | 211.6 |
| 62.5° | 7.8 | 10.0 | 32.1 | 87.5 | 167.3 |
| 65° | 5.5 | 7.8 | 28.8 | 59.8 | 123.0 |
| 67.5° | 5.5 | 8.9 | 24.4 | 38.8 | 83.1 |
| 70° | 4.4 | 12.2 | 21.1 | 25.5 | 46.5 |
| 72.5° | 4.4 | 13.3 | 17.7 | 17.7 | 17.7 |
| 75° | 4.4 | 14.4 | 15.5 | 15.5 | 15.5 |
| 77.5° | 4.4 | 13.3 | 14.4 | 13.3 | 13.3 |
| 80° | 4.4 | 12.2 | 12.2 | 12.2 | 12.2 |
| 82.5° | 4.4 | 11.1 | 12.2 | 12.2 | 10.0 |
| 85° | 4.4 | 10.0 | 12.2 | 12.2 | 8.9 |
| 87.5° | 3.3 | 10.0 | 11.1 | 11.1 | 6.6 |
| 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 | 0.22 | 15.69 | 16.97 | 16.05 | 17.28 | 17.59 |
| | 3H | 0.00 | 0.87 | 0.12 | 1.20 | 1.57 | 16.06 | 17.20 | 16.44 | 17.53 | 17.89 |
| | 4H | 0.96 | 2.01 | 1.36 | 2.36 | 2.74 | 16.04 | 17.09 | 16.45 | 17.45 | 17.83 |
| | 6H | 2.13 | 3.10 | 2.55 | 3.47 | 3.87 | 16.03 | 17.00 | 16.45 | 17.37 | 17.76 |
| | 8H | 2.72 | 3.64 | 3.15 | 4.03 | 4.43 | 16.03 | 16.95 | 16.46 | 17.34 | 17.74 |
| | 12H | 3.39 | 4.26 | 3.82 | 4.65 | 5.08 | 16.04 | 16.92 | 16.48 | 17.30 | 17.73 |
| 4H | 2H | 1.93 | 2.98 | 2.33 | 3.33 | 3.72 | 15.50 | 16.55 | 15.90 | 16.90 | 17.29 |
| | 3H | 3.52 | 4.38 | 3.93 | 4.78 | 5.18 | 15.92 | 16.78 | 16.33 | 17.18 | 17.59 |
| | 4H | 4.81 | 5.58 | 5.24 | 6.00 | 6.44 | 15.92 | 16.68 | 16.35 | 17.10 | 17.55 |
| | 6H | 5.94 | 6.60 | 6.40 | 7.04 | 7.51 | 15.96 | 16.62 | 16.42 | 17.07 | 17.53 |
| | 8H | 6.44 | 7.06 | 6.91 | 7.51 | 7.98 | 15.98 | 16.60 | 16.46 | 17.05 | 17.52 |
| | 12H | 6.99 | 7.54 | 7.48 | 8.02 | 8.50 | 16.05 | 16.60 | 16.54 | 17.08 | 17.55 |
| 8H | 4H | 5.89 | 6.51 | 6.36 | 6.96 | 7.43 | 15.83 | 16.44 | 16.30 | 16.89 | 17.36 |
| | 6H | 7.44 | 7.94 | 7.94 | 8.44 | 8.92 | 15.91 | 16.41 | 16.41 | 16.91 | 17.39 |
| | 8H | 8.25 | 8.70 | 8.77 | 9.22 | 9.71 | 15.99 | 16.44 | 16.51 | 16.96 | 17.45 |
| | 12H | 9.08 | 9.48 | 9.59 | 9.98 | 10.55 | 16.16 | 16.56 | 16.68 | 17.06 | 17.63 |
| 12H | 4H | 6.08 | 6.63 | 6.57 | 7.11 | 7.59 | 15.79 | 16.34 | 16.28 | 16.82 | 17.29 |
| | 6H | 7.79 | 8.25 | 8.32 | 8.77 | 9.26 | 15.88 | 16.33 | 16.40 | 16.85 | 17.34 |
| | 8H | 8.81 | 9.21 | 9.32 | 9.70 | 10.28 | 16.02 | 16.42 | 16.53 | 16.91 | 17.49 |