

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: P1060981

Luminaire Tested: S124RDRP-H795D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060981
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H795D850-X4F0-XX-UDD-WVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

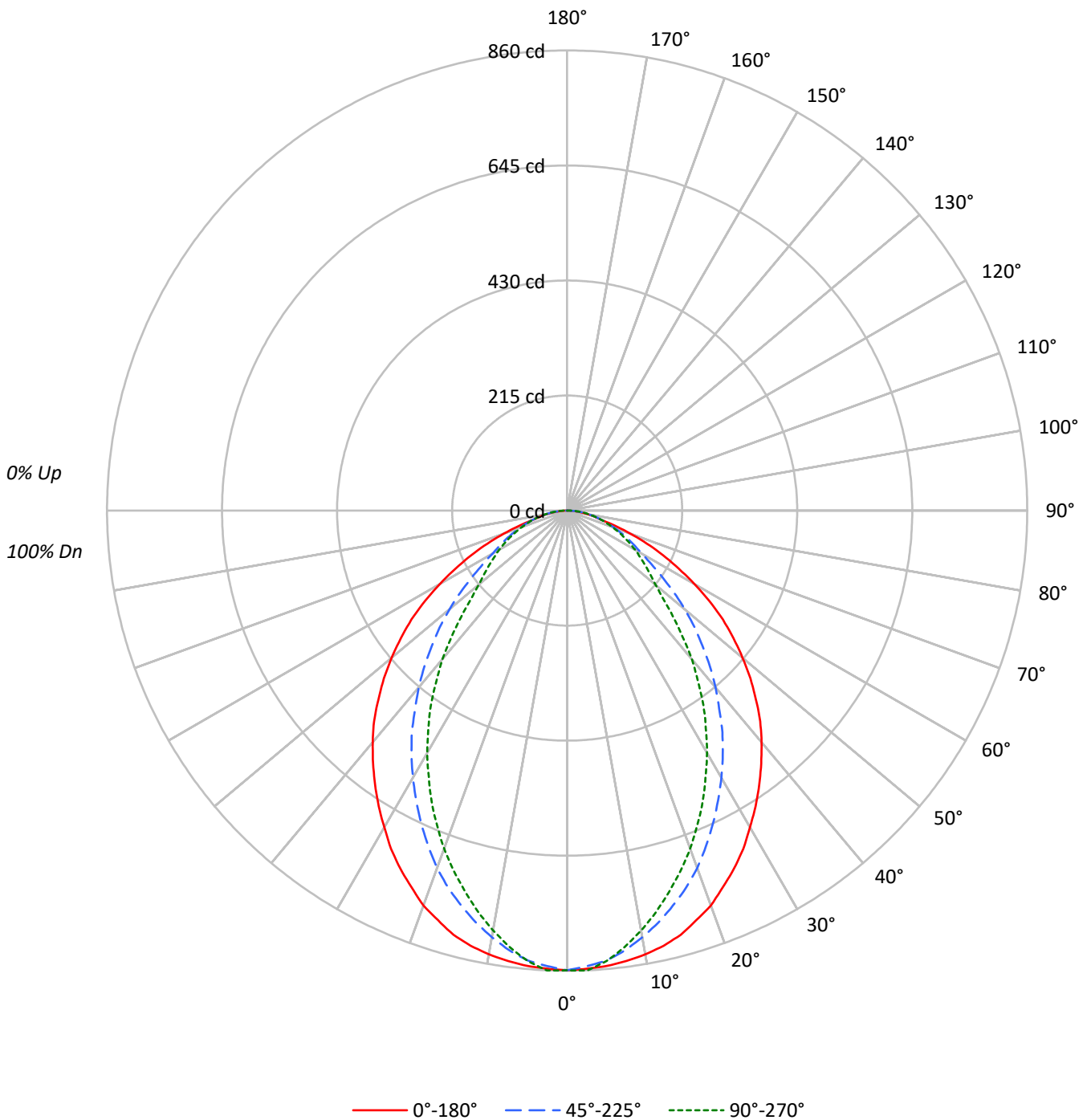
Lumens per Lamp: N/A
Luminaire Lumens: 1656.7 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
Input Voltage (V): 120
Input Current (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 | 107 | 104 | 100 | 97 | 99 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 88 | 86 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 86 | 82 | 89 | 84 | 80 | 85 | 82 | 78 | 82 | 79 | 76 | 74 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 93 | 84 | 76 | 71 | 91 | 82 | 75 | 70 | 79 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 66 | 64 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 67 | 61 | 72 | 65 | 60 | 69 | 64 | 59 | 67 | 62 | 58 | 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 74 | 62 | 54 | 48 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 58 | 51 | 47 | 56 | 51 | 46 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 69 | 57 | 48 | 43 | 68 | 56 | 48 | 43 | 54 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 65 | 52 | 44 | 39 | 63 | 51 | 44 | 39 | 50 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 61 | 48 | 40 | 35 | 59 | 48 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 57 | 45 | 37 | 32 | 56 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 41 | 36 | 32 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7399 | 7399 | 7399 |
| 5° | 7384 | 7296 | 7305 |
| 10° | 7363 | 7080 | 6965 |
| 15° | 7317 | 6814 | 6570 |
| 20° | 7198 | 6514 | 6162 |
| 25° | 7013 | 6130 | 5698 |
| 30° | 6796 | 5732 | 5200 |
| 35° | 6581 | 5317 | 4670 |
| 40° | 6356 | 4846 | 4075 |
| 45° | 6074 | 4352 | 3406 |
| 50° | 5735 | 3841 | 2882 |
| 55° | 5336 | 3259 | 2668 |
| 60° | 4729 | 2764 | 2521 |
| 65° | 4032 | 2551 | 2386 |
| 70° | 3152 | 2364 | 2263 |
| 75° | 2149 | 2183 | 2183 |
| 80° | 1855 | 2053 | 2103 |
| 85° | 1601 | 1996 | 2193 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6074 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 79.9 | 4.8 |
| 10°-20° | 217.1 | 13.1 |
| 20°-30° | 301.4 | 18.2 |
| 30°-40° | 323.1 | 19.5 |
| 40°-50° | 286.2 | 17.3 |
| 50°-60° | 215.7 | 13.0 |
| 60°-70° | 139.7 | 8.4 |
| 70°-80° | 71.7 | 4.3 |
| 80°-90° | 22.0 | 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° | 598.4 | 36.1 |
| 0°-40° | 921.5 | 55.6 |
| 0°-60° | 1423.4 | 85.9 |
| 0°-90° | 1656.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1656.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 859 | 859 | 859 | 859 | 859 | |
| 5° | 854 | 855 | 844 | 845 | 845 | 81 |
| 15° | 821 | 803 | 764 | 745 | 737 | 231 |
| 25° | 738 | 699 | 645 | 611 | 600 | 340 |
| 35° | 626 | 569 | 506 | 460 | 444 | 391 |
| 45° | 499 | 434 | 357 | 302 | 280 | 385 |
| 55° | 355 | 296 | 217 | 183 | 178 | 316 |
| 65° | 198 | 160 | 125 | 118 | 117 | 196 |
| 75° | 65 | 68 | 66 | 66 | 66 | 76 |
| 85° | 16 | 17 | 20 | 22 | 22 | 19 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 859.2 | 859.2 | 859.2 | 859.2 | 859.2 |
| 2.5° | 857.2 | 860.2 | 852.1 | 858.2 | 860.2 |
| 5° | 854.2 | 855.2 | 844.1 | 845.1 | 845.1 |
| 7.5° | 849.1 | 847.1 | 828.9 | 823.9 | 822.9 |
| 10° | 842.1 | 836.0 | 809.7 | 799.6 | 796.6 |
| 12.5° | 833.0 | 821.9 | 788.5 | 774.4 | 768.3 |
| 15° | 820.8 | 802.7 | 764.3 | 745.1 | 737.0 |
| 17.5° | 802.7 | 779.5 | 739.1 | 714.8 | 705.7 |
| 20° | 785.5 | 754.2 | 710.8 | 680.5 | 672.4 |
| 22.5° | 761.3 | 728.0 | 678.5 | 646.2 | 636.1 |
| 25° | 738.1 | 698.7 | 645.2 | 610.8 | 599.7 |
| 27.5° | 712.8 | 668.4 | 610.8 | 574.5 | 560.4 |
| 30° | 683.5 | 636.1 | 576.5 | 538.1 | 523.0 |
| 32.5° | 655.3 | 604.8 | 541.2 | 498.8 | 482.6 |
| 35° | 626.0 | 569.4 | 505.8 | 460.4 | 444.2 |
| 37.5° | 595.7 | 536.1 | 466.5 | 422.0 | 400.8 |
| 40° | 565.4 | 502.8 | 431.1 | 380.6 | 362.5 |
| 42.5° | 534.1 | 468.5 | 394.8 | 342.3 | 319.1 |
| 45° | 498.8 | 434.2 | 357.4 | 301.9 | 279.7 |
| 47.5° | 464.4 | 400.8 | 323.1 | 262.5 | 242.3 |
| 50° | 428.1 | 365.5 | 286.7 | 228.2 | 215.1 |
| 52.5° | 391.7 | 329.1 | 251.4 | 201.9 | 195.9 |
| 55° | 355.4 | 295.8 | 217.1 | 182.7 | 177.7 |
| 57.5° | 315.0 | 261.5 | 186.8 | 165.6 | 161.5 |
| 60° | 274.6 | 224.1 | 160.5 | 149.4 | 146.4 |
| 62.5° | 235.2 | 191.8 | 142.4 | 133.3 | 131.3 |
| 65° | 197.9 | 159.5 | 125.2 | 118.1 | 117.1 |
| 67.5° | 161.5 | 131.3 | 109.0 | 105.0 | 103.0 |
| 70° | 125.2 | 105.0 | 93.9 | 91.9 | 89.9 |
| 72.5° | 92.9 | 84.8 | 79.8 | 78.8 | 77.7 |
| 75° | 64.6 | 67.6 | 65.6 | 65.6 | 65.6 |
| 77.5° | 51.5 | 52.5 | 53.5 | 54.5 | 53.5 |
| 80° | 37.4 | 40.4 | 41.4 | 43.4 | 42.4 |
| 82.5° | 26.3 | 28.3 | 31.3 | 32.3 | 33.3 |
| 85° | 16.2 | 17.2 | 20.2 | 22.2 | 22.2 |
| 87.5° | 7.1 | 8.1 | 10.1 | 12.1 | 13.1 |
| 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 | 17.39 | 18.89 | 17.76 | 19.20 | 19.52 | 13.96 | 15.46 | 14.32 | 15.77 | 16.08 |
| | 3H | 18.60 | 19.94 | 18.98 | 20.27 | 20.63 | 15.65 | 17.00 | 16.03 | 17.32 | 17.69 |
| | 4H | 18.90 | 20.16 | 19.30 | 20.51 | 20.89 | 16.33 | 17.59 | 16.73 | 17.94 | 18.32 |
| | 6H | 19.11 | 20.27 | 19.52 | 20.64 | 21.03 | 16.88 | 18.04 | 17.29 | 18.41 | 18.80 |
| | 8H | 19.16 | 20.27 | 19.59 | 20.66 | 21.06 | 17.10 | 18.20 | 17.52 | 18.59 | 18.99 |
| | 12H | 19.20 | 20.26 | 19.63 | 20.64 | 21.07 | 17.27 | 18.33 | 17.70 | 18.71 | 19.14 |
| 4H | 2H | 17.53 | 18.79 | 17.93 | 19.14 | 19.52 | 14.62 | 15.88 | 15.02 | 16.23 | 16.60 |
| | 3H | 18.94 | 19.98 | 19.35 | 20.38 | 20.78 | 16.53 | 17.57 | 16.94 | 17.97 | 18.37 |
| | 4H | 19.36 | 20.30 | 19.80 | 20.72 | 21.16 | 17.33 | 18.27 | 17.76 | 18.68 | 19.12 |
| | 6H | 19.69 | 20.50 | 20.14 | 20.95 | 21.41 | 18.02 | 18.83 | 18.47 | 19.28 | 19.74 |
| | 8H | 19.79 | 20.55 | 20.25 | 20.99 | 21.46 | 18.29 | 19.05 | 18.75 | 19.50 | 19.97 |
| | 12H | 19.86 | 20.54 | 20.34 | 21.02 | 21.49 | 18.52 | 19.20 | 19.00 | 19.68 | 20.15 |
| 8H | 4H | 19.49 | 20.25 | 19.95 | 20.70 | 21.17 | 17.65 | 18.41 | 18.11 | 18.85 | 19.32 |
| | 6H | 19.91 | 20.54 | 20.41 | 21.03 | 21.51 | 18.47 | 19.11 | 18.97 | 19.60 | 20.07 |
| | 8H | 20.07 | 20.64 | 20.58 | 21.15 | 21.63 | 18.84 | 19.41 | 19.35 | 19.92 | 20.40 |
| | 12H | 20.20 | 20.70 | 20.71 | 21.19 | 21.76 | 19.17 | 19.67 | 19.68 | 20.17 | 20.73 |
| 12H | 4H | 19.50 | 20.18 | 19.98 | 20.66 | 21.13 | 17.67 | 18.36 | 18.16 | 18.84 | 19.31 |
| | 6H | 19.94 | 20.50 | 20.45 | 21.01 | 21.50 | 18.53 | 19.10 | 19.05 | 19.61 | 20.10 |
| | 8H | 20.15 | 20.65 | 20.66 | 21.14 | 21.70 | 18.97 | 19.47 | 19.48 | 19.96 | 20.52 |