

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: P1062169

Luminaire Tested: S125RDR-H850D830-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1062169
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-46)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDR-H850D830-X4F0-XX-UDD-WVL-B
Description: DEFINE 5 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

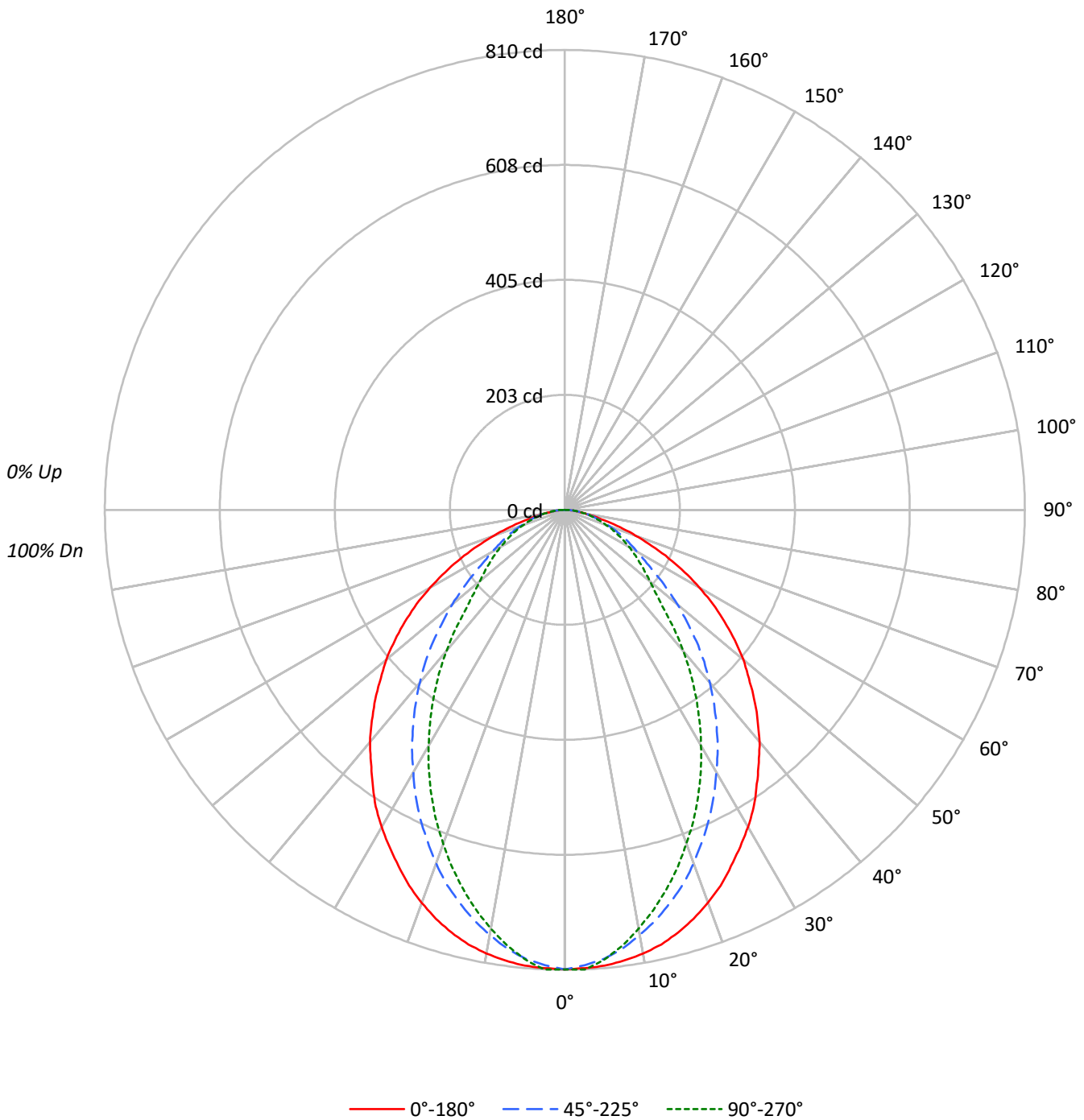
Lumens per Lamp: N/A
Luminaire Lumens: 1533.3 lumens
Efficiency: N/A
Efficacy: 65.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11
Luminous Opening: Rectangular (W 0.39' x L: 4' x H: 0')
CIE Type: Direct

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 | | | | | | | | | 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 | | | | | | | | | | | | | 100 | | | | | | | | | | | | | | | |
| 1 | 110 | 106 | 102 | 99 | 108 | 104 | 100 | 97 | 100 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 89 | 87 | | | | | | | | | | | | | 87 | | | | | | | | | | | | | | | |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 78 | 83 | 80 | 77 | 75 | | | | | | | | | | | | | 75 | | | | | | | | | | | | | | | |
| 3 | 93 | 84 | 77 | 71 | 91 | 82 | 76 | 70 | 80 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 67 | 65 | | | | | | | | | | | | | 65 | | | | | | | | | | | | | | | |
| 4 | 86 | 76 | 68 | 61 | 84 | 74 | 67 | 61 | 72 | 65 | 60 | 70 | 64 | 59 | 67 | 63 | 59 | 57 | | | | | | | | | | | | | 57 | | | | | | | | | | | | | | | |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 59 | 54 | 65 | 58 | 53 | 63 | 57 | 53 | 61 | 56 | 52 | 50 | | | | | | | | | | | | | 50 | | | | | | | | | | | | | | | |
| 6 | 74 | 62 | 54 | 48 | 73 | 61 | 53 | 48 | 59 | 53 | 47 | 58 | 52 | 47 | 56 | 51 | 47 | 45 | | | | | | | | | | | | | 45 | | | | | | | | | | | | | | | |
| 7 | 69 | 57 | 49 | 43 | 68 | 56 | 48 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 52 | 46 | 42 | 40 | | | | | | | | | | | | | 40 | | | | | | | | | | | | | | | |
| 8 | 65 | 52 | 44 | 39 | 63 | 52 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 38 | 48 | 42 | 38 | 36 | | | | | | | | | | | | | 36 | | | | | | | | | | | | | | | |
| 9 | 61 | 48 | 41 | 35 | 60 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 35 | 33 | | | | | | | | | | | | | 33 | | | | | | | | | | | | | | | |
| 10 | 57 | 45 | 37 | 32 | 56 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 42 | 36 | 32 | 30 | | | | | | | | | | | | | 30 | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5573 | 5573 | 5573 |
| 5° | 5570 | 5485 | 5497 |
| 10° | 5548 | 5315 | 5235 |
| 15° | 5494 | 5106 | 4931 |
| 20° | 5396 | 4855 | 4585 |
| 25° | 5261 | 4567 | 4219 |
| 30° | 5129 | 4242 | 3815 |
| 35° | 4957 | 3915 | 3383 |
| 40° | 4795 | 3570 | 2915 |
| 45° | 4595 | 3192 | 2388 |
| 50° | 4396 | 2768 | 2090 |
| 55° | 4125 | 2311 | 1930 |
| 60° | 3763 | 2022 | 1803 |
| 65° | 3293 | 1847 | 1675 |
| 70° | 2671 | 1663 | 1556 |
| 75° | 1918 | 1519 | 1450 |
| 80° | 1324 | 1360 | 1360 |
| 85° | 972 | 1177 | 1248 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4595 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.3 | 4.9 |
| 10°-20° | 203.6 | 13.3 |
| 20°-30° | 281.3 | 18.3 |
| 30°-40° | 299.7 | 19.5 |
| 40°-50° | 263.2 | 17.2 |
| 50°-60° | 199.6 | 13.0 |
| 60°-70° | 129.6 | 8.5 |
| 70°-80° | 64.2 | 4.2 |
| 80°-90° | 16.8 | 1.1 |
| 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° | 560.2 | 36.5 |
| 0°-40° | 859.8 | 56.1 |
| 0°-60° | 1322.7 | 86.3 |
| 0°-90° | 1533.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1533.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 809 | 809 | 809 | 809 | 809 | |
| 5° | 806 | 804 | 794 | 796 | 795 | 77 |
| 15° | 771 | 753 | 716 | 700 | 692 | 217 |
| 25° | 692 | 655 | 601 | 570 | 555 | 319 |
| 35° | 590 | 535 | 466 | 424 | 402 | 369 |
| 45° | 472 | 406 | 328 | 269 | 245 | 364 |
| 55° | 344 | 276 | 192 | 166 | 161 | 307 |
| 65° | 202 | 150 | 113 | 105 | 103 | 200 |
| 75° | 72 | 63 | 57 | 55 | 54 | 80 |
| 85° | 12 | 14 | 15 | 15 | 16 | 15 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P1062169

CATALOG NUMBER: S125RDR-H850D830-X4F0-XX-UDD-WVL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 809.4 | 809.4 | 809.4 | 809.4 | 809.4 |
| 2.5° | 807.7 | 809.4 | 802.4 | 808.5 | 810.3 |
| 5° | 805.9 | 804.1 | 793.6 | 796.2 | 795.4 |
| 7.5° | 800.6 | 797.1 | 779.5 | 777.8 | 774.3 |
| 10° | 793.6 | 784.8 | 760.2 | 754.0 | 748.8 |
| 12.5° | 783.9 | 769.9 | 740.0 | 727.7 | 721.5 |
| 15° | 770.7 | 753.2 | 716.3 | 699.6 | 691.7 |
| 17.5° | 754.9 | 730.3 | 691.7 | 668.8 | 660.0 |
| 20° | 736.5 | 707.5 | 662.6 | 636.3 | 625.7 |
| 22.5° | 716.3 | 682.0 | 631.9 | 603.8 | 592.3 |
| 25° | 692.5 | 654.7 | 601.1 | 570.4 | 555.4 |
| 27.5° | 668.8 | 626.6 | 568.6 | 534.3 | 518.5 |
| 30° | 645.1 | 596.7 | 533.5 | 496.5 | 479.8 |
| 32.5° | 619.6 | 566.0 | 500.9 | 460.5 | 441.2 |
| 35° | 589.7 | 535.2 | 465.8 | 423.6 | 402.5 |
| 37.5° | 560.7 | 502.7 | 431.5 | 384.1 | 363.8 |
| 40° | 533.5 | 471.9 | 397.2 | 345.4 | 324.3 |
| 42.5° | 502.7 | 439.4 | 363.0 | 308.5 | 284.7 |
| 45° | 471.9 | 406.0 | 327.8 | 268.9 | 245.2 |
| 47.5° | 439.4 | 374.4 | 290.9 | 232.9 | 217.1 |
| 50° | 410.4 | 341.9 | 258.4 | 205.6 | 195.1 |
| 52.5° | 377.0 | 310.2 | 225.0 | 184.6 | 177.5 |
| 55° | 343.6 | 276.0 | 192.5 | 166.1 | 160.8 |
| 57.5° | 309.4 | 245.2 | 167.0 | 150.3 | 145.0 |
| 60° | 273.3 | 213.6 | 146.8 | 133.6 | 130.9 |
| 62.5° | 237.3 | 181.0 | 129.2 | 119.5 | 116.0 |
| 65° | 202.1 | 150.3 | 113.4 | 104.6 | 102.8 |
| 67.5° | 166.1 | 122.2 | 97.6 | 91.4 | 90.5 |
| 70° | 132.7 | 99.3 | 82.6 | 79.1 | 77.3 |
| 72.5° | 101.9 | 79.1 | 69.4 | 66.8 | 65.9 |
| 75° | 72.1 | 63.3 | 57.1 | 55.4 | 54.5 |
| 77.5° | 48.3 | 48.3 | 45.7 | 43.9 | 44.8 |
| 80° | 33.4 | 35.2 | 34.3 | 34.3 | 34.3 |
| 82.5° | 22.0 | 23.7 | 24.6 | 24.6 | 24.6 |
| 85° | 12.3 | 14.1 | 14.9 | 14.9 | 15.8 |
| 87.5° | 4.4 | 5.3 | 6.2 | 7.0 | 7.0 |
| 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 | 16.52 | 18.01 | 16.89 | 18.33 | 18.64 | 12.76 | 14.26 | 13.13 | 14.57 | 14.88 |
| | 3H | 17.83 | 19.17 | 18.21 | 19.50 | 19.86 | 14.35 | 15.68 | 14.72 | 16.01 | 16.37 |
| | 4H | 18.20 | 19.46 | 18.60 | 19.81 | 20.18 | 14.95 | 16.20 | 15.35 | 16.55 | 16.93 |
| | 6H | 18.38 | 19.53 | 18.79 | 19.90 | 20.29 | 15.42 | 16.58 | 15.83 | 16.94 | 17.34 |
| | 8H | 18.42 | 19.52 | 18.84 | 19.91 | 20.31 | 15.58 | 16.68 | 16.01 | 17.07 | 17.47 |
| | 12H | 18.43 | 19.48 | 18.86 | 19.86 | 20.29 | 15.69 | 16.75 | 16.12 | 17.13 | 17.56 |
| 4H | 2H | 16.63 | 17.89 | 17.03 | 18.24 | 18.62 | 13.43 | 14.68 | 13.83 | 15.03 | 15.41 |
| | 3H | 18.12 | 19.16 | 18.53 | 19.56 | 19.96 | 15.21 | 16.24 | 15.62 | 16.64 | 17.05 |
| | 4H | 18.60 | 19.53 | 19.03 | 19.95 | 20.39 | 15.92 | 16.86 | 16.36 | 17.27 | 17.71 |
| | 6H | 18.88 | 19.69 | 19.34 | 20.14 | 20.60 | 16.51 | 17.32 | 16.97 | 17.77 | 18.23 |
| | 8H | 18.95 | 19.71 | 19.42 | 20.15 | 20.62 | 16.72 | 17.48 | 17.18 | 17.92 | 18.39 |
| | 12H | 18.99 | 19.67 | 19.47 | 20.15 | 20.62 | 16.87 | 17.55 | 17.36 | 18.03 | 18.50 |
| 8H | 4H | 18.68 | 19.44 | 19.14 | 19.88 | 20.35 | 16.24 | 16.99 | 16.70 | 17.44 | 17.91 |
| | 6H | 19.04 | 19.67 | 19.54 | 20.16 | 20.64 | 16.94 | 17.57 | 17.44 | 18.06 | 18.54 |
| | 8H | 19.16 | 19.72 | 19.67 | 20.23 | 20.72 | 17.22 | 17.78 | 17.74 | 18.29 | 18.78 |
| | 12H | 19.25 | 19.74 | 19.76 | 20.23 | 20.80 | 17.45 | 17.95 | 17.96 | 18.44 | 19.00 |
| 12H | 4H | 18.67 | 19.35 | 19.16 | 19.83 | 20.30 | 16.26 | 16.94 | 16.74 | 17.42 | 17.89 |
| | 6H | 19.05 | 19.61 | 19.56 | 20.12 | 20.61 | 16.99 | 17.55 | 17.51 | 18.07 | 18.55 |
| | 8H | 19.21 | 19.70 | 19.72 | 20.19 | 20.76 | 17.33 | 17.82 | 17.84 | 18.32 | 18.88 |