

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: P1059786

Luminaire Tested: S123RDR-H775D930-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059786
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D930-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE 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

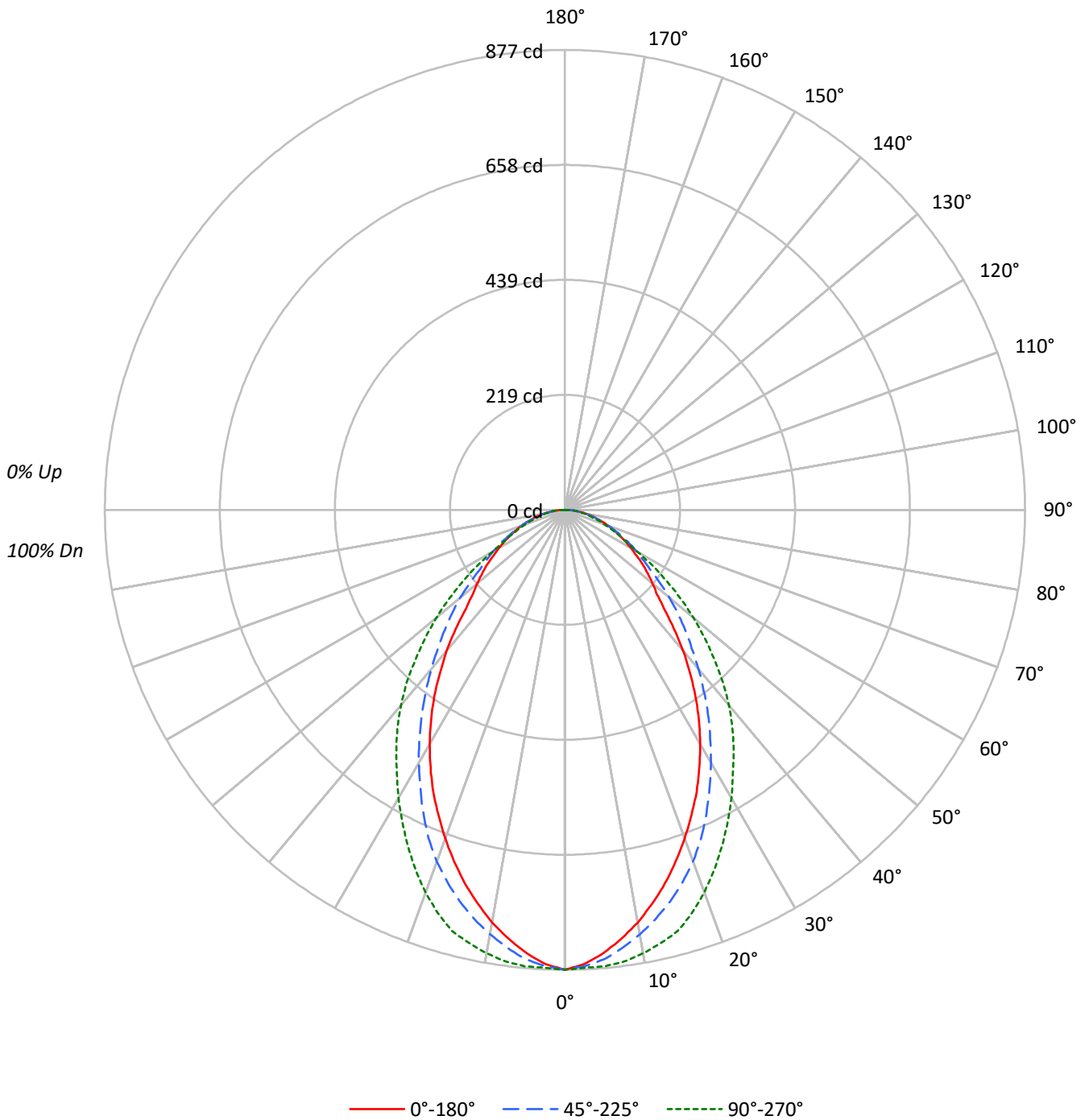
Lumens per Lamp: N/A
Luminaire Lumens: 1540.7 lumens
Efficiency: N/A
Efficacy: 65.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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 | |
| 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 | 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 | 101 | 97 | 100 | 97 | 94 | 96 | 94 | 92 | 92 | 91 | 89 | 87 |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 |
| 3 | 94 | 85 | 77 | 72 | 92 | 83 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 66 | 61 | 70 | 65 | 61 | 68 | 64 | 60 | 58 |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 59 | 54 | 64 | 58 | 54 | 62 | 57 | 53 | 51 |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 48 | 46 |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 43 | 41 |
| 8 | 66 | 53 | 46 | 40 | 64 | 53 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 49 | 44 | 39 | 38 |
| 9 | 62 | 49 | 42 | 37 | 60 | 49 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 10 | 58 | 46 | 39 | 34 | 57 | 45 | 38 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 43 | 37 | 33 | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 10296 | 10296 | 10296 |
| 5° | 9997 | 10139 | 10300 |
| 10° | 9528 | 9798 | 10239 |
| 15° | 8962 | 9402 | 10108 |
| 20° | 8335 | 8920 | 9702 |
| 25° | 7693 | 8270 | 9171 |
| 30° | 6988 | 7551 | 8605 |
| 35° | 6220 | 6815 | 8036 |
| 40° | 5367 | 6072 | 7448 |
| 45° | 4436 | 5375 | 6679 |
| 50° | 3984 | 4742 | 5831 |
| 55° | 3691 | 4047 | 4836 |
| 60° | 3403 | 3685 | 3704 |
| 65° | 3165 | 3334 | 3104 |
| 70° | 2980 | 3032 | 2719 |
| 75° | 2808 | 2704 | 2395 |
| 80° | 2651 | 2448 | 2245 |
| 85° | 2546 | 2748 | 2546 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6679 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 81.2 | 5.3 |
| 10°-20° | 218.8 | 14.2 |
| 20°-30° | 296.0 | 19.2 |
| 30°-40° | 304.1 | 19.7 |
| 40°-50° | 255.4 | 16.6 |
| 50°-60° | 183.1 | 11.9 |
| 60°-70° | 116.6 | 7.6 |
| 70°-80° | 64.1 | 4.2 |
| 80°-90° | 21.4 | 1.4 |
| 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° | 595.9 | 38.7 |
| 0°-40° | 900.1 | 58.4 |
| 0°-60° | 1338.7 | 86.9 |
| 0°-90° | 1540.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1540.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 877 | 877 | 877 | 877 | 877 | |
| 5° | 848 | 863 | 860 | 866 | 874 | 79 |
| 15° | 737 | 758 | 773 | 807 | 832 | 207 |
| 25° | 594 | 616 | 638 | 673 | 708 | 272 |
| 35° | 434 | 457 | 475 | 518 | 561 | 270 |
| 45° | 267 | 290 | 324 | 370 | 402 | 211 |
| 55° | 180 | 184 | 198 | 224 | 236 | 161 |
| 65° | 114 | 121 | 120 | 113 | 112 | 114 |
| 75° | 62 | 68 | 60 | 55 | 53 | 66 |
| 85° | 19 | 20 | 20 | 21 | 19 | 21 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 876.8 | 876.8 | 876.8 | 876.8 | 876.8 |
| 2.5° | 867.0 | 879.0 | 870.7 | 871.5 | 873.8 |
| 5° | 848.1 | 863.2 | 860.2 | 866.2 | 873.8 |
| 7.5° | 824.7 | 841.3 | 842.1 | 856.4 | 868.5 |
| 10° | 799.1 | 816.4 | 821.7 | 843.6 | 858.7 |
| 12.5° | 768.9 | 787.7 | 799.1 | 826.2 | 845.8 |
| 15° | 737.2 | 757.6 | 773.4 | 806.6 | 831.5 |
| 17.5° | 702.5 | 724.4 | 744.7 | 780.2 | 805.9 |
| 20° | 667.0 | 690.4 | 713.8 | 747.0 | 776.4 |
| 22.5° | 630.0 | 654.2 | 678.3 | 710.8 | 743.2 |
| 25° | 593.8 | 616.5 | 638.3 | 673.1 | 707.8 |
| 27.5° | 554.6 | 578.0 | 596.8 | 635.3 | 671.5 |
| 30° | 515.4 | 538.7 | 556.9 | 596.8 | 634.6 |
| 32.5° | 474.6 | 498.8 | 515.4 | 556.9 | 596.1 |
| 35° | 433.9 | 457.3 | 475.4 | 517.6 | 560.6 |
| 37.5° | 390.9 | 416.5 | 434.6 | 482.2 | 524.4 |
| 40° | 350.1 | 374.3 | 396.1 | 445.9 | 485.9 |
| 42.5° | 307.9 | 332.8 | 357.7 | 409.0 | 445.9 |
| 45° | 267.1 | 290.5 | 323.7 | 370.5 | 402.2 |
| 47.5° | 237.7 | 252.8 | 291.3 | 330.5 | 360.7 |
| 50° | 218.1 | 224.1 | 259.6 | 294.3 | 319.2 |
| 52.5° | 198.4 | 203.0 | 227.1 | 258.8 | 277.7 |
| 55° | 180.3 | 184.1 | 197.7 | 224.1 | 236.2 |
| 57.5° | 160.7 | 164.5 | 175.8 | 190.9 | 197.7 |
| 60° | 144.9 | 147.9 | 156.9 | 159.2 | 157.7 |
| 62.5° | 129.0 | 133.6 | 138.1 | 132.8 | 130.5 |
| 65° | 113.9 | 120.7 | 120.0 | 113.2 | 111.7 |
| 67.5° | 100.4 | 107.1 | 103.4 | 96.6 | 94.3 |
| 70° | 86.8 | 93.6 | 88.3 | 81.5 | 79.2 |
| 72.5° | 73.9 | 81.5 | 73.2 | 67.2 | 65.6 |
| 75° | 61.9 | 67.9 | 59.6 | 55.1 | 52.8 |
| 77.5° | 50.6 | 55.1 | 47.5 | 43.8 | 42.3 |
| 80° | 39.2 | 42.3 | 36.2 | 34.0 | 33.2 |
| 82.5° | 28.7 | 30.2 | 26.4 | 27.9 | 27.2 |
| 85° | 18.9 | 19.6 | 20.4 | 21.1 | 18.9 |
| 87.5° | 9.1 | 12.8 | 12.8 | 12.1 | 9.8 |
| 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 | 15.29 | 16.75 | 15.65 | 17.06 | 17.38 | 16.36 | 17.82 | 16.72 | 18.13 | 18.45 |
| | 3H | 16.98 | 18.29 | 17.36 | 18.62 | 18.99 | 17.44 | 18.75 | 17.82 | 19.08 | 19.44 |
| | 4H | 17.64 | 18.87 | 18.04 | 19.21 | 19.59 | 17.84 | 19.07 | 18.24 | 19.42 | 19.80 |
| | 6H | 18.14 | 19.27 | 18.55 | 19.64 | 20.03 | 18.15 | 19.29 | 18.56 | 19.65 | 20.05 |
| | 8H | 18.31 | 19.39 | 18.74 | 19.78 | 20.18 | 18.29 | 19.37 | 18.71 | 19.76 | 20.16 |
| | 12H | 18.44 | 19.47 | 18.87 | 19.85 | 20.28 | 18.41 | 19.44 | 18.84 | 19.82 | 20.25 |
| 4H | 2H | 15.89 | 17.12 | 16.29 | 17.46 | 17.84 | 16.76 | 17.99 | 17.16 | 18.34 | 18.72 |
| | 3H | 17.82 | 18.83 | 18.23 | 19.23 | 19.64 | 18.08 | 19.10 | 18.49 | 19.50 | 19.90 |
| | 4H | 18.63 | 19.54 | 19.06 | 19.96 | 20.40 | 18.60 | 19.51 | 19.03 | 19.93 | 20.37 |
| | 6H | 19.28 | 20.07 | 19.73 | 20.52 | 20.98 | 19.03 | 19.83 | 19.49 | 20.27 | 20.73 |
| | 8H | 19.50 | 20.24 | 19.96 | 20.69 | 21.16 | 19.22 | 19.96 | 19.68 | 20.41 | 20.88 |
| | 12H | 19.67 | 20.33 | 20.15 | 20.81 | 21.29 | 19.40 | 20.07 | 19.89 | 20.55 | 21.02 |
| 8H | 4H | 18.86 | 19.61 | 19.33 | 20.05 | 20.52 | 18.84 | 19.59 | 19.31 | 20.03 | 20.50 |
| | 6H | 19.65 | 20.27 | 20.15 | 20.76 | 21.24 | 19.39 | 20.01 | 19.89 | 20.50 | 20.98 |
| | 8H | 19.97 | 20.52 | 20.48 | 21.03 | 21.52 | 19.67 | 20.22 | 20.18 | 20.73 | 21.22 |
| | 12H | 20.23 | 20.72 | 20.75 | 21.22 | 21.78 | 19.96 | 20.45 | 20.47 | 20.94 | 21.51 |
| 12H | 4H | 18.88 | 19.54 | 19.36 | 20.02 | 20.49 | 18.87 | 19.53 | 19.35 | 20.01 | 20.48 |
| | 6H | 19.69 | 20.24 | 20.20 | 20.75 | 21.24 | 19.44 | 20.00 | 19.96 | 20.51 | 21.00 |
| | 8H | 20.06 | 20.55 | 20.57 | 21.04 | 21.61 | 19.78 | 20.27 | 20.29 | 20.77 | 21.33 |