

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: P1059784

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059784
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
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-B
Description: DEFINE 3 BLACK 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

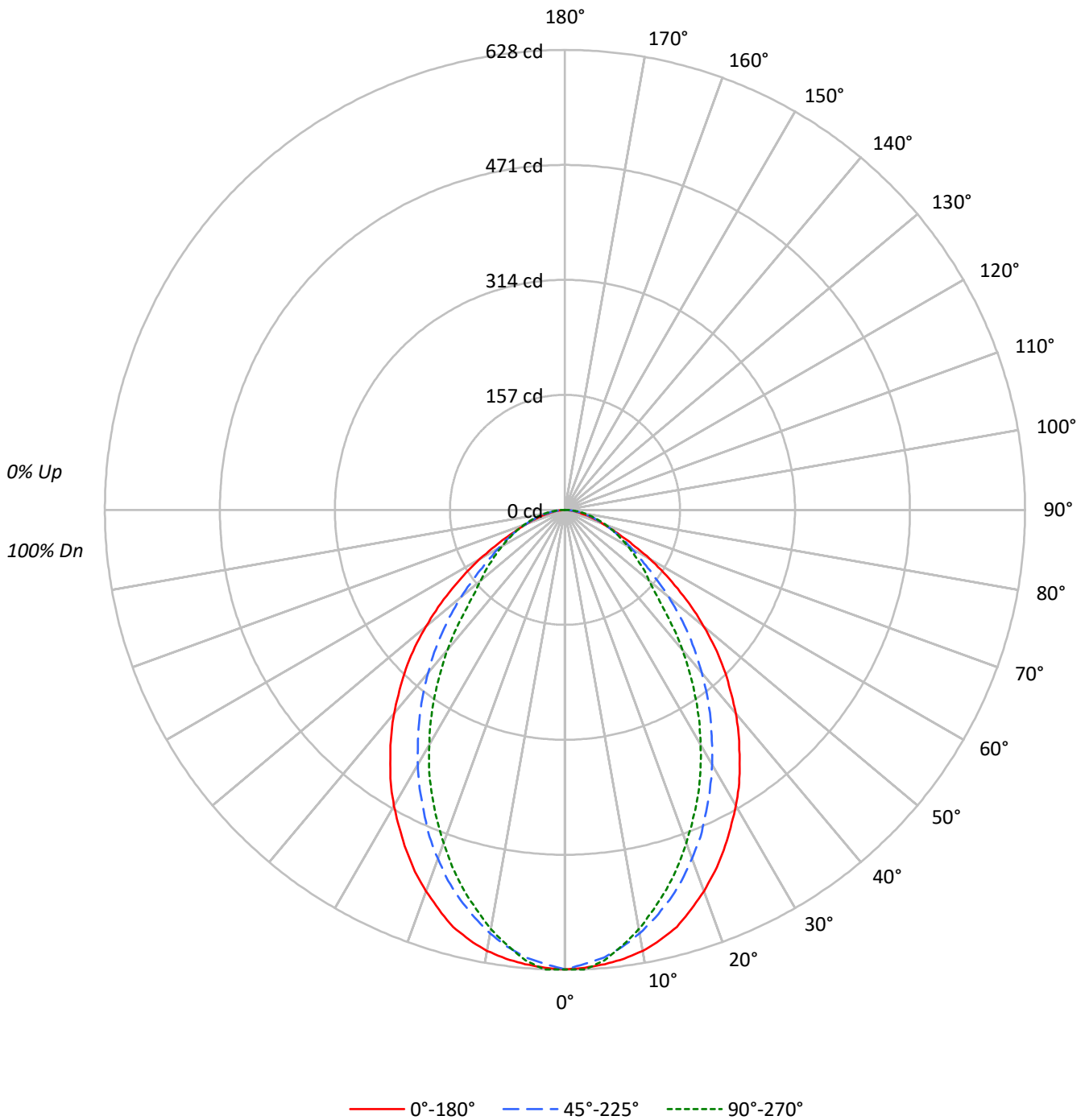
Lumens per Lamp: N/A
Luminaire Lumens: 1097.2 lumens
Efficiency: N/A
Efficacy: 46.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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 | 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 | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98 | 100 | 98 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 88 | | | | |
| 2 | 102 | 95 | 89 | 84 | 100 | 93 | 88 | 83 | 90 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | |
| 3 | 94 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 73 | 69 | 76 | 72 | 68 | 66 | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 48 | 47 | | | | |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7367 | 7367 | 7367 |
| 5° | 7341 | 7235 | 7280 |
| 10° | 7291 | 7004 | 6932 |
| 15° | 7169 | 6701 | 6517 |
| 20° | 6925 | 6332 | 6049 |
| 25° | 6643 | 5900 | 5569 |
| 30° | 6328 | 5449 | 5020 |
| 35° | 5956 | 4961 | 4442 |
| 40° | 5560 | 4450 | 3826 |
| 45° | 5096 | 3932 | 3144 |
| 50° | 4518 | 3374 | 2727 |
| 55° | 3845 | 2825 | 2502 |
| 60° | 3135 | 2461 | 2320 |
| 65° | 2390 | 2178 | 2159 |
| 70° | 1864 | 1943 | 2019 |
| 75° | 1506 | 1747 | 1883 |
| 80° | 1123 | 1427 | 1731 |
| 85° | 606 | 916 | 1522 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5096 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 58.2 | 5.3 |
| 10°-20° | 156.7 | 14.3 |
| 20°-30° | 213.0 | 19.4 |
| 30°-40° | 220.8 | 20.1 |
| 40°-50° | 186.2 | 17.0 |
| 50°-60° | 132.2 | 12.0 |
| 60°-70° | 80.8 | 7.4 |
| 70°-80° | 40.2 | 3.7 |
| 80°-90° | 9.1 | 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° | 427.9 | 39.0 |
| 0°-40° | 648.7 | 59.1 |
| 0°-60° | 967.1 | 88.1 |
| 0°-90° | 1097.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1097.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 627 | 627 | 627 | 627 | 627 | |
| 5° | 623 | 623 | 614 | 618 | 618 | 59 |
| 15° | 590 | 578 | 551 | 541 | 536 | 165 |
| 25° | 513 | 490 | 455 | 439 | 430 | 236 |
| 35° | 416 | 384 | 346 | 322 | 310 | 260 |
| 45° | 307 | 274 | 237 | 204 | 189 | 236 |
| 55° | 188 | 168 | 138 | 126 | 122 | 169 |
| 65° | 86 | 83 | 78 | 78 | 78 | 88 |
| 75° | 33 | 35 | 38 | 40 | 42 | 36 |
| 85° | 4 | 5 | 7 | 10 | 11 | 6 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 627.4 | 627.4 | 627.4 | 627.4 | 627.4 |
| 2.5° | 625.8 | 626.6 | 620.6 | 627.4 | 628.1 |
| 5° | 622.8 | 622.8 | 613.8 | 617.6 | 617.6 |
| 7.5° | 618.3 | 616.8 | 601.7 | 601.7 | 600.2 |
| 10° | 611.5 | 607.0 | 587.4 | 583.6 | 581.4 |
| 12.5° | 601.7 | 594.2 | 570.0 | 563.3 | 558.7 |
| 15° | 589.7 | 578.3 | 551.2 | 541.4 | 536.1 |
| 17.5° | 572.3 | 561.0 | 530.8 | 517.3 | 511.2 |
| 20° | 554.2 | 537.6 | 506.7 | 493.1 | 484.1 |
| 22.5° | 534.6 | 513.5 | 483.3 | 466.7 | 456.9 |
| 25° | 512.7 | 490.1 | 455.4 | 438.8 | 429.8 |
| 27.5° | 489.4 | 464.5 | 429.0 | 410.2 | 401.1 |
| 30° | 466.7 | 438.1 | 401.9 | 380.8 | 370.2 |
| 32.5° | 442.6 | 410.2 | 373.2 | 351.4 | 340.8 |
| 35° | 415.5 | 383.8 | 346.1 | 322.0 | 309.9 |
| 37.5° | 389.8 | 357.4 | 318.2 | 292.6 | 279.0 |
| 40° | 362.7 | 330.3 | 290.3 | 263.9 | 249.6 |
| 42.5° | 334.0 | 303.1 | 263.9 | 233.0 | 219.4 |
| 45° | 306.9 | 274.5 | 236.8 | 204.3 | 189.3 |
| 47.5° | 277.5 | 247.3 | 210.4 | 177.2 | 166.6 |
| 50° | 247.3 | 219.4 | 184.7 | 154.6 | 149.3 |
| 52.5° | 217.9 | 194.5 | 159.1 | 139.5 | 137.2 |
| 55° | 187.8 | 168.1 | 138.0 | 125.9 | 122.2 |
| 57.5° | 159.9 | 145.5 | 118.4 | 112.4 | 110.8 |
| 60° | 133.5 | 121.4 | 104.8 | 101.0 | 98.8 |
| 62.5° | 107.8 | 101.0 | 91.2 | 89.7 | 88.2 |
| 65° | 86.0 | 82.9 | 78.4 | 78.4 | 77.7 |
| 67.5° | 67.9 | 67.9 | 67.1 | 68.6 | 67.9 |
| 70° | 54.3 | 55.0 | 56.6 | 58.1 | 58.8 |
| 72.5° | 43.0 | 45.2 | 46.7 | 49.0 | 49.8 |
| 75° | 33.2 | 35.4 | 38.5 | 40.0 | 41.5 |
| 77.5° | 24.1 | 26.4 | 29.4 | 31.7 | 33.2 |
| 80° | 16.6 | 18.1 | 21.1 | 24.1 | 25.6 |
| 82.5° | 10.6 | 11.3 | 13.6 | 16.6 | 18.1 |
| 85° | 4.5 | 5.3 | 6.8 | 9.8 | 11.3 |
| 87.5° | 0.0 | 0.0 | 0.8 | 3.0 | 5.3 |
| 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 | 15.75 | 17.20 | 16.11 | 17.51 | 17.83 | 13.85 | 15.30 | 14.21 | 15.61 | 15.92 |
| | 3H | 16.64 | 17.94 | 17.02 | 18.27 | 18.63 | 15.42 | 16.71 | 15.80 | 17.04 | 17.41 |
| | 4H | 16.93 | 18.14 | 17.33 | 18.49 | 18.87 | 16.01 | 17.23 | 16.42 | 17.58 | 17.96 |
| | 6H | 17.08 | 18.19 | 17.49 | 18.56 | 18.95 | 16.47 | 17.58 | 16.88 | 17.95 | 18.34 |
| | 8H | 17.10 | 18.16 | 17.53 | 18.55 | 18.95 | 16.61 | 17.68 | 17.04 | 18.07 | 18.47 |
| | 12H | 17.09 | 18.11 | 17.52 | 18.49 | 18.92 | 16.71 | 17.73 | 17.14 | 18.11 | 18.54 |
| 4H | 2H | 15.99 | 17.20 | 16.39 | 17.55 | 17.93 | 14.39 | 15.60 | 14.79 | 15.95 | 16.33 |
| | 3H | 17.10 | 18.10 | 17.52 | 18.51 | 18.91 | 16.16 | 17.16 | 16.57 | 17.56 | 17.96 |
| | 4H | 17.49 | 18.39 | 17.93 | 18.81 | 19.25 | 16.87 | 17.77 | 17.31 | 18.19 | 18.63 |
| | 6H | 17.74 | 18.51 | 18.19 | 18.96 | 19.42 | 17.44 | 18.22 | 17.90 | 18.67 | 19.13 |
| | 8H | 17.78 | 18.51 | 18.24 | 18.95 | 19.42 | 17.64 | 18.36 | 18.10 | 18.81 | 19.28 |
| | 12H | 17.79 | 18.43 | 18.27 | 18.91 | 19.39 | 17.77 | 18.42 | 18.26 | 18.90 | 19.37 |
| 8H | 4H | 17.65 | 18.38 | 18.12 | 18.82 | 19.29 | 17.08 | 17.81 | 17.55 | 18.25 | 18.72 |
| | 6H | 17.96 | 18.56 | 18.46 | 19.06 | 19.53 | 17.76 | 18.36 | 18.26 | 18.85 | 19.33 |
| | 8H | 18.04 | 18.58 | 18.56 | 19.09 | 19.58 | 18.01 | 18.55 | 18.53 | 19.06 | 19.55 |
| | 12H | 18.08 | 18.55 | 18.59 | 19.04 | 19.61 | 18.22 | 18.70 | 18.73 | 19.19 | 19.76 |
| 12H | 4H | 17.66 | 18.30 | 18.14 | 18.78 | 19.26 | 17.08 | 17.73 | 17.56 | 18.21 | 18.68 |
| | 6H | 17.98 | 18.52 | 18.50 | 19.03 | 19.52 | 17.77 | 18.30 | 18.28 | 18.82 | 19.31 |
| | 8H | 18.09 | 18.57 | 18.61 | 19.06 | 19.63 | 18.07 | 18.54 | 18.58 | 19.04 | 19.60 |