

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: P1060234

Luminaire Tested: S124RDR-S1020D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060234
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: S124RDR-S1020D835-X4F0-XX-UDD-WVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

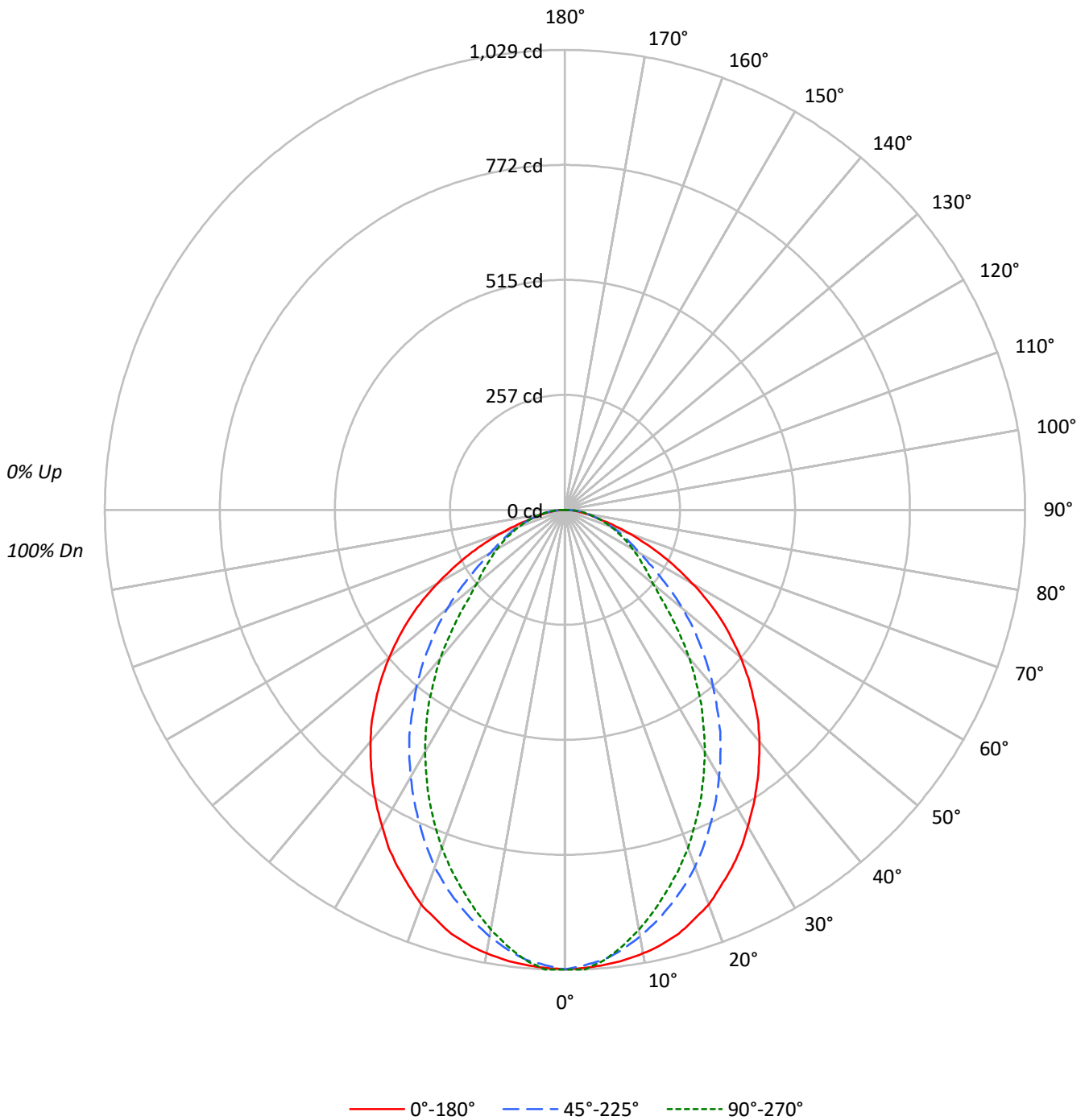
Lumens per Lamp: N/A
Luminaire Lumens: 1982.5 lumens
Efficiency: N/A
Efficacy: 56.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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





TEST NUMBER: P1060234

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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 | 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° | 8853 | 8853 | 8853 |
| 5° | 8835 | 8730 | 8741 |
| 10° | 8810 | 8472 | 8335 |
| 15° | 8756 | 8154 | 7863 |
| 20° | 8613 | 7794 | 7373 |
| 25° | 8392 | 7335 | 6818 |
| 30° | 8133 | 6860 | 6223 |
| 35° | 7875 | 6363 | 5588 |
| 40° | 7606 | 5799 | 4875 |
| 45° | 7268 | 5209 | 4076 |
| 50° | 6863 | 4596 | 3447 |
| 55° | 6385 | 3900 | 3192 |
| 60° | 5659 | 3308 | 3017 |
| 65° | 4825 | 3052 | 2855 |
| 70° | 3772 | 2830 | 2707 |
| 75° | 2572 | 2612 | 2612 |
| 80° | 2217 | 2455 | 2514 |
| 85° | 1907 | 2391 | 2628 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7268 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 95.7 | 4.8 |
| 10°-20° | 259.8 | 13.1 |
| 20°-30° | 360.6 | 18.2 |
| 30°-40° | 386.6 | 19.5 |
| 40°-50° | 342.5 | 17.3 |
| 50°-60° | 258.1 | 13.0 |
| 60°-70° | 167.1 | 8.4 |
| 70°-80° | 85.7 | 4.3 |
| 80°-90° | 26.3 | 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° | 716.1 | 36.1 |
| 0°-40° | 1102.7 | 55.6 |
| 0°-60° | 1703.3 | 85.9 |
| 0°-90° | 1982.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1982.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1028 | 1028 | 1028 | 1028 | 1028 | |
| 5° | 1022 | 1023 | 1010 | 1011 | 1011 | 97 |
| 15° | 982 | 960 | 915 | 892 | 882 | 276 |
| 25° | 883 | 836 | 772 | 731 | 718 | 406 |
| 35° | 749 | 681 | 605 | 551 | 532 | 468 |
| 45° | 597 | 520 | 428 | 361 | 335 | 460 |
| 55° | 425 | 354 | 260 | 219 | 213 | 378 |
| 65° | 237 | 191 | 150 | 141 | 140 | 235 |
| 75° | 77 | 81 | 78 | 78 | 78 | 91 |
| 85° | 19 | 20 | 24 | 27 | 27 | 22 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1060234

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1028.1 | 1028.1 | 1028.1 | 1028.1 | 1028.1 |
| 2.5° | 1025.7 | 1029.4 | 1019.7 | 1026.9 | 1029.4 |
| 5° | 1022.1 | 1023.3 | 1010.0 | 1011.2 | 1011.2 |
| 7.5° | 1016.1 | 1013.6 | 991.9 | 985.9 | 984.6 |
| 10° | 1007.6 | 1000.4 | 968.9 | 956.9 | 953.2 |
| 12.5° | 996.7 | 983.4 | 943.6 | 926.7 | 919.4 |
| 15° | 982.2 | 960.5 | 914.6 | 891.6 | 882.0 |
| 17.5° | 960.5 | 932.7 | 884.4 | 855.4 | 844.5 |
| 20° | 939.9 | 902.5 | 850.5 | 814.3 | 804.6 |
| 22.5° | 911.0 | 871.1 | 811.9 | 773.2 | 761.1 |
| 25° | 883.2 | 836.0 | 772.0 | 730.9 | 717.6 |
| 27.5° | 853.0 | 799.8 | 730.9 | 687.4 | 670.5 |
| 30° | 817.9 | 761.1 | 689.9 | 643.9 | 625.8 |
| 32.5° | 784.1 | 723.7 | 647.6 | 596.8 | 577.5 |
| 35° | 749.1 | 681.4 | 605.3 | 550.9 | 531.6 |
| 37.5° | 712.8 | 641.5 | 558.2 | 505.0 | 479.6 |
| 40° | 676.6 | 601.7 | 515.9 | 455.5 | 433.7 |
| 42.5° | 639.1 | 560.6 | 472.4 | 409.6 | 381.8 |
| 45° | 596.8 | 519.5 | 427.7 | 361.2 | 334.7 |
| 47.5° | 555.8 | 479.6 | 386.6 | 314.1 | 290.0 |
| 50° | 512.3 | 437.4 | 343.1 | 273.0 | 257.3 |
| 52.5° | 468.8 | 393.9 | 300.8 | 241.6 | 234.4 |
| 55° | 425.3 | 354.0 | 259.8 | 218.7 | 212.6 |
| 57.5° | 376.9 | 312.9 | 223.5 | 198.1 | 193.3 |
| 60° | 328.6 | 268.2 | 192.1 | 178.8 | 175.2 |
| 62.5° | 281.5 | 229.6 | 170.4 | 159.5 | 157.1 |
| 65° | 236.8 | 190.9 | 149.8 | 141.4 | 140.1 |
| 67.5° | 193.3 | 157.1 | 130.5 | 125.6 | 123.2 |
| 70° | 149.8 | 125.6 | 112.4 | 109.9 | 107.5 |
| 72.5° | 111.2 | 101.5 | 95.4 | 94.2 | 93.0 |
| 75° | 77.3 | 80.9 | 78.5 | 78.5 | 78.5 |
| 77.5° | 61.6 | 62.8 | 64.0 | 65.2 | 64.0 |
| 80° | 44.7 | 48.3 | 49.5 | 52.0 | 50.7 |
| 82.5° | 31.4 | 33.8 | 37.5 | 38.7 | 39.9 |
| 85° | 19.3 | 20.5 | 24.2 | 26.6 | 26.6 |
| 87.5° | 8.5 | 9.7 | 12.1 | 14.5 | 15.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)