

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: P1060932

Luminaire Tested: S124RDR-H575D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060932
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H575D940-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

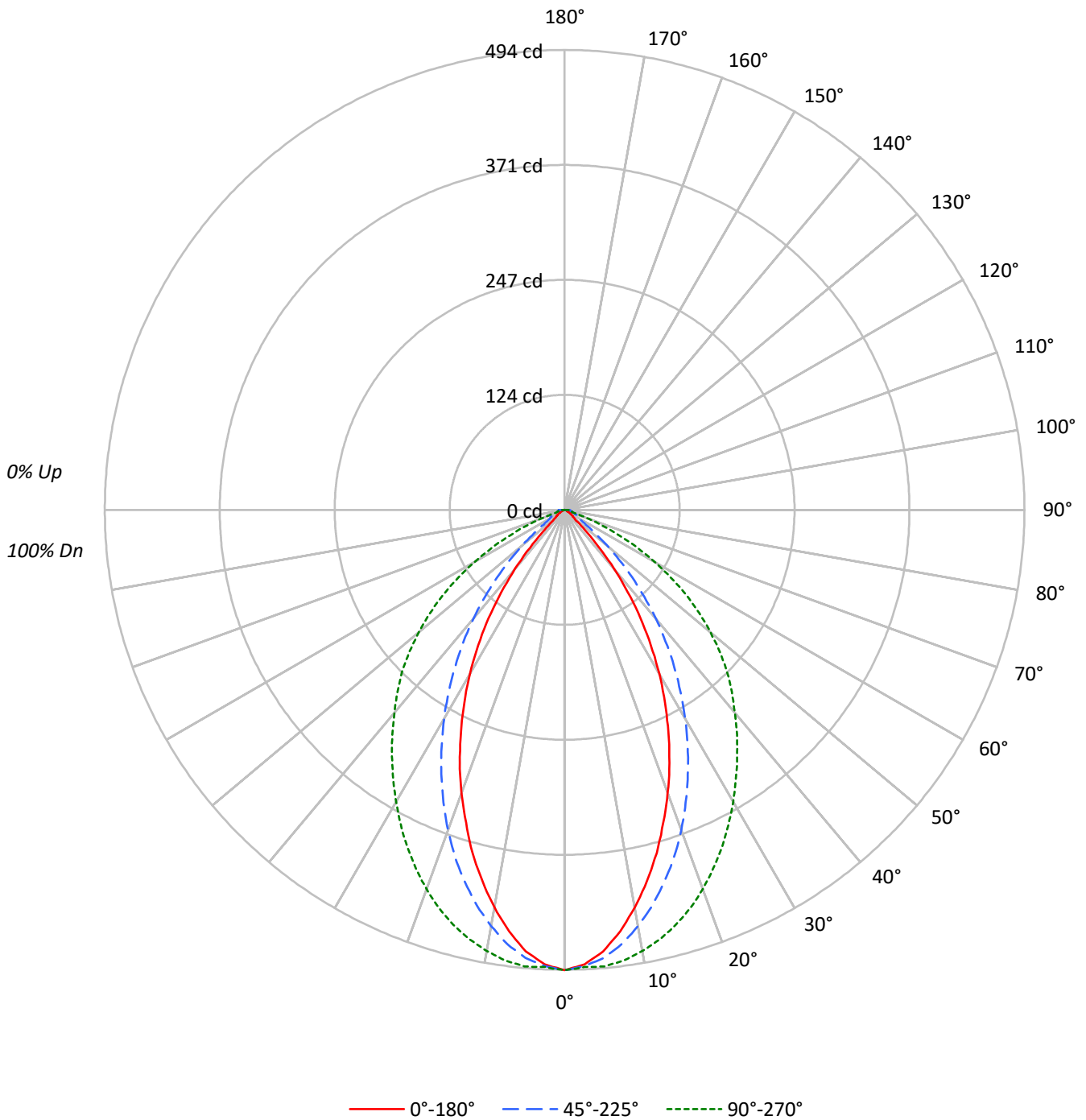
Lumens per Lamp: N/A
Luminaire Lumens: 623.3 lumens
Efficiency: N/A
Efficacy: 35.8 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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: P1060932

CATALOG NUMBER: S124RDR-H575D940-X4F0-XX-UDD-BVL-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|
| RF | 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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 105 | 98 | 93 | 89 | 102 | 97 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | 81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 75 | 81 | 77 | 74 | 72 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 75 | 70 | 79 | 73 | 69 | 76 | 72 | 68 | 74 | 70 | 67 | 65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 86 | 75 | 68 | 63 | 84 | 74 | 68 | 63 | 72 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 56 | 66 | 60 | 56 | 64 | 59 | 56 | 54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 75 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 55 | 51 | 60 | 55 | 51 | 49 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 63 | 52 | 45 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 44 | 41 | 49 | 44 | 40 | 39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4258 | 4258 | 4258 |
| 5° | 4115 | 4174 | 4255 |
| 10° | 3791 | 3969 | 4208 |
| 15° | 3405 | 3689 | 4113 |
| 20° | 2968 | 3357 | 3973 |
| 25° | 2504 | 2978 | 3800 |
| 30° | 2020 | 2574 | 3601 |
| 35° | 1495 | 2154 | 3399 |
| 40° | 926 | 1717 | 3197 |
| 45° | 368 | 1251 | 3012 |
| 50° | 163 | 785 | 2737 |
| 55° | 131 | 410 | 2396 |
| 60° | 90 | 310 | 1910 |
| 65° | 59 | 308 | 1312 |
| 70° | 58 | 277 | 614 |
| 75° | 77 | 269 | 269 |
| 80° | 114 | 317 | 317 |
| 85° | 227 | 632 | 454 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3012 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.4 | 7.3 |
| 10°-20° | 117.1 | 18.8 |
| 20°-30° | 147.8 | 23.7 |
| 30°-40° | 135.6 | 21.8 |
| 40°-50° | 92.3 | 14.8 |
| 50°-60° | 50.3 | 8.1 |
| 60°-70° | 21.8 | 3.5 |
| 70°-80° | 7.9 | 1.3 |
| 80°-90° | 5.1 | 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° | 310.2 | 49.8 |
| 0°-40° | 445.8 | 71.5 |
| 0°-60° | 588.4 | 94.4 |
| 0°-90° | 623.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 623.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 494 | 494 | 494 | 494 | 494 | |
| 5° | 476 | 482 | 483 | 488 | 492 | 44 |
| 15° | 382 | 395 | 414 | 443 | 461 | 106 |
| 25° | 264 | 282 | 313 | 363 | 400 | 120 |
| 35° | 142 | 163 | 205 | 270 | 323 | 88 |
| 45° | 30 | 50 | 103 | 182 | 247 | 28 |
| 55° | 9 | 9 | 27 | 100 | 160 | 8 |
| 65° | 3 | 4 | 15 | 31 | 64 | 3 |
| 75° | 2 | 8 | 8 | 8 | 8 | 2 |
| 85° | 2 | 5 | 6 | 6 | 5 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 494.5 | 494.5 | 494.5 | 494.5 | 494.5 |
| 2.5° | 488.7 | 494.5 | 490.5 | 491.6 | 491.6 |
| 5° | 476.0 | 482.3 | 482.9 | 488.1 | 492.2 |
| 7.5° | 456.8 | 466.1 | 470.7 | 481.2 | 488.1 |
| 10° | 433.6 | 444.6 | 453.9 | 471.9 | 481.2 |
| 12.5° | 408.6 | 421.4 | 435.3 | 459.1 | 472.5 |
| 15° | 381.9 | 395.3 | 413.8 | 443.4 | 461.4 |
| 17.5° | 352.3 | 368.6 | 391.2 | 426.6 | 448.7 |
| 20° | 323.9 | 340.1 | 366.3 | 406.3 | 433.6 |
| 22.5° | 294.3 | 311.1 | 340.1 | 384.8 | 417.3 |
| 25° | 263.5 | 282.1 | 313.4 | 363.3 | 399.9 |
| 27.5° | 233.3 | 253.1 | 286.2 | 340.7 | 381.3 |
| 30° | 203.2 | 222.9 | 258.9 | 317.5 | 362.2 |
| 32.5° | 172.4 | 192.7 | 231.6 | 293.1 | 342.5 |
| 35° | 142.2 | 163.1 | 204.9 | 269.9 | 323.3 |
| 37.5° | 111.4 | 133.5 | 178.2 | 247.3 | 304.1 |
| 40° | 82.4 | 104.5 | 152.7 | 224.6 | 284.4 |
| 42.5° | 55.1 | 77.2 | 126.5 | 202.6 | 265.8 |
| 45° | 30.2 | 50.5 | 102.7 | 182.3 | 247.3 |
| 47.5° | 16.3 | 27.9 | 79.5 | 162.5 | 226.4 |
| 50° | 12.2 | 15.1 | 58.6 | 141.6 | 204.3 |
| 52.5° | 10.4 | 11.6 | 40.6 | 119.6 | 182.3 |
| 55° | 8.7 | 9.3 | 27.3 | 100.4 | 159.6 |
| 57.5° | 7.0 | 7.5 | 20.3 | 81.3 | 135.2 |
| 60° | 5.2 | 6.4 | 18.0 | 62.7 | 110.9 |
| 62.5° | 4.1 | 5.2 | 16.8 | 45.9 | 87.6 |
| 65° | 2.9 | 4.1 | 15.1 | 31.3 | 64.4 |
| 67.5° | 2.9 | 4.6 | 12.8 | 20.3 | 43.5 |
| 70° | 2.3 | 6.4 | 11.0 | 13.3 | 24.4 |
| 72.5° | 2.3 | 7.0 | 9.3 | 9.3 | 9.3 |
| 75° | 2.3 | 7.5 | 8.1 | 8.1 | 8.1 |
| 77.5° | 2.3 | 7.0 | 7.5 | 7.0 | 7.0 |
| 80° | 2.3 | 6.4 | 6.4 | 6.4 | 6.4 |
| 82.5° | 2.3 | 5.8 | 6.4 | 6.4 | 5.2 |
| 85° | 2.3 | 5.2 | 6.4 | 6.4 | 4.6 |
| 87.5° | 1.7 | 5.2 | 5.8 | 5.8 | 3.5 |
| 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.44 | 14.72 | 13.81 | 15.04 | 15.35 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.82 | 14.95 | 14.20 | 15.28 | 15.65 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.09 | 0.48 | 13.80 | 14.85 | 14.20 | 15.20 | 15.59 |
| | 6H | 0.00 | 0.84 | 0.29 | 1.21 | 1.61 | 13.79 | 14.75 | 14.20 | 15.12 | 15.52 |
| | 8H | 0.46 | 1.38 | 0.89 | 1.77 | 2.17 | 13.79 | 14.70 | 14.22 | 15.09 | 15.50 |
| | 12H | 1.13 | 2.00 | 1.56 | 2.38 | 2.82 | 13.80 | 14.67 | 14.23 | 15.06 | 15.49 |
| 4H | 2H | 0.00 | 0.73 | 0.08 | 1.08 | 1.47 | 13.26 | 14.31 | 13.66 | 14.66 | 15.04 |
| | 3H | 1.27 | 2.13 | 1.68 | 2.53 | 2.93 | 13.67 | 14.53 | 14.09 | 14.94 | 15.34 |
| | 4H | 2.55 | 3.32 | 2.99 | 3.74 | 4.18 | 13.67 | 14.44 | 14.11 | 14.86 | 15.30 |
| | 6H | 3.69 | 4.35 | 4.15 | 4.79 | 5.26 | 13.71 | 14.37 | 14.18 | 14.82 | 15.29 |
| | 8H | 4.19 | 4.81 | 4.66 | 5.26 | 5.73 | 13.74 | 14.36 | 14.21 | 14.81 | 15.28 |
| | 12H | 4.74 | 5.28 | 5.22 | 5.77 | 6.24 | 13.80 | 14.35 | 14.29 | 14.83 | 15.31 |
| 8H | 4H | 3.64 | 4.25 | 4.11 | 4.70 | 5.17 | 13.58 | 14.20 | 14.05 | 14.65 | 15.12 |
| | 6H | 5.19 | 5.69 | 5.69 | 6.19 | 6.67 | 13.66 | 14.17 | 14.16 | 14.66 | 15.15 |
| | 8H | 5.99 | 6.45 | 6.52 | 6.97 | 7.46 | 13.74 | 14.20 | 14.27 | 14.72 | 15.21 |
| | 12H | 6.82 | 7.22 | 7.34 | 7.72 | 8.29 | 13.91 | 14.32 | 14.43 | 14.81 | 15.38 |
| 12H | 4H | 3.83 | 4.37 | 4.31 | 4.86 | 5.33 | 13.55 | 14.09 | 14.03 | 14.57 | 15.05 |
| | 6H | 5.55 | 6.00 | 6.07 | 6.52 | 7.01 | 13.63 | 14.09 | 14.16 | 14.61 | 15.10 |
| | 8H | 6.56 | 6.96 | 7.07 | 7.45 | 8.03 | 13.77 | 14.17 | 14.29 | 14.67 | 15.24 |