

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059093

Luminaire Tested: S123RDRP-S1165D830-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059093
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: S123RDRP-S1165D830-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

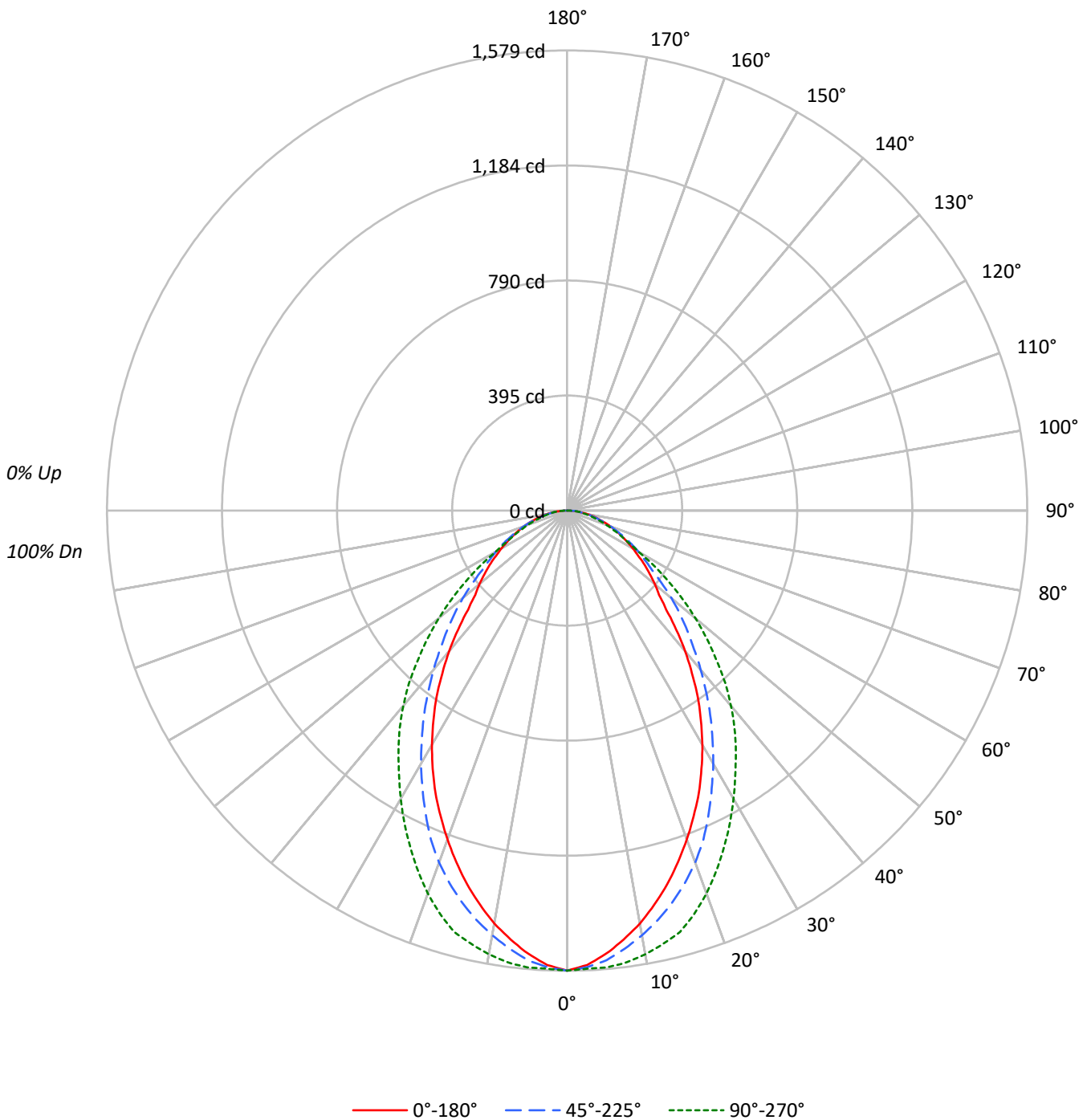
Lumens per Lamp: N/A
Luminaire Lumens: 2773.9 lumens
Efficiency: N/A
Efficacy: 66.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (A_{in}): 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 | 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° | 18537 | 18537 | 18537 |
| 5° | 17999 | 18255 | 18544 |
| 10° | 17154 | 17641 | 18434 |
| 15° | 16136 | 16928 | 18200 |
| 20° | 15008 | 16060 | 17468 |
| 25° | 13853 | 14891 | 16510 |
| 30° | 12581 | 13594 | 15491 |
| 35° | 11198 | 12269 | 14470 |
| 40° | 9663 | 10932 | 13411 |
| 45° | 7986 | 9678 | 12025 |
| 50° | 7172 | 8537 | 10499 |
| 55° | 6647 | 7286 | 8705 |
| 60° | 6125 | 6637 | 6667 |
| 65° | 5699 | 6002 | 5588 |
| 70° | 5363 | 5455 | 4896 |
| 75° | 5054 | 4868 | 4315 |
| 80° | 4774 | 4409 | 4044 |
| 85° | 4581 | 4945 | 4581 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 12025 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 146.2 | 5.3 |
| 10°-20° | 393.9 | 14.2 |
| 20°-30° | 532.9 | 19.2 |
| 30°-40° | 547.6 | 19.7 |
| 40°-50° | 459.9 | 16.6 |
| 50°-60° | 329.7 | 11.9 |
| 60°-70° | 209.9 | 7.6 |
| 70°-80° | 115.4 | 4.2 |
| 80°-90° | 38.4 | 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° | 1073.0 | 38.7 |
| 0°-40° | 1620.6 | 58.4 |
| 0°-60° | 2410.2 | 86.9 |
| 0°-90° | 2773.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2773.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1579 | 1579 | 1579 | 1579 | 1579 | |
| 5° | 1527 | 1554 | 1549 | 1560 | 1573 | 143 |
| 15° | 1327 | 1364 | 1392 | 1452 | 1497 | 372 |
| 25° | 1069 | 1110 | 1149 | 1212 | 1274 | 490 |
| 35° | 781 | 823 | 856 | 932 | 1009 | 486 |
| 45° | 481 | 523 | 583 | 667 | 724 | 380 |
| 55° | 325 | 332 | 356 | 404 | 425 | 290 |
| 65° | 205 | 217 | 216 | 204 | 201 | 204 |
| 75° | 111 | 122 | 107 | 99 | 95 | 118 |
| 85° | 34 | 35 | 37 | 38 | 34 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1059093

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1578.6 | 1578.6 | 1578.6 | 1578.6 | 1578.6 |
| 2.5° | 1561.0 | 1582.7 | 1567.8 | 1569.1 | 1573.2 |
| 5° | 1527.0 | 1554.2 | 1548.7 | 1559.6 | 1573.2 |
| 7.5° | 1484.9 | 1514.8 | 1516.1 | 1541.9 | 1563.7 |
| 10° | 1438.7 | 1469.9 | 1479.5 | 1518.9 | 1546.0 |
| 12.5° | 1384.4 | 1418.3 | 1438.7 | 1487.6 | 1522.9 |
| 15° | 1327.3 | 1364.0 | 1392.5 | 1452.3 | 1497.1 |
| 17.5° | 1264.8 | 1304.2 | 1340.9 | 1404.7 | 1450.9 |
| 20° | 1201.0 | 1243.1 | 1285.2 | 1345.0 | 1397.9 |
| 22.5° | 1134.4 | 1177.9 | 1221.3 | 1279.7 | 1338.2 |
| 25° | 1069.2 | 1109.9 | 1149.3 | 1211.8 | 1274.3 |
| 27.5° | 998.5 | 1040.6 | 1074.6 | 1143.9 | 1209.1 |
| 30° | 927.9 | 970.0 | 1002.6 | 1074.6 | 1142.5 |
| 32.5° | 854.5 | 898.0 | 927.9 | 1002.6 | 1073.3 |
| 35° | 781.2 | 823.3 | 855.9 | 932.0 | 1009.4 |
| 37.5° | 703.7 | 749.9 | 782.5 | 868.1 | 944.2 |
| 40° | 630.4 | 673.8 | 713.2 | 802.9 | 874.9 |
| 42.5° | 554.3 | 599.1 | 644.0 | 736.3 | 802.9 |
| 45° | 480.9 | 523.0 | 582.8 | 667.0 | 724.1 |
| 47.5° | 427.9 | 455.1 | 524.4 | 595.0 | 649.4 |
| 50° | 392.6 | 403.5 | 467.3 | 529.8 | 574.7 |
| 52.5° | 357.3 | 365.4 | 408.9 | 466.0 | 499.9 |
| 55° | 324.7 | 331.5 | 355.9 | 403.5 | 425.2 |
| 57.5° | 289.4 | 296.2 | 316.5 | 343.7 | 355.9 |
| 60° | 260.8 | 266.3 | 282.6 | 286.7 | 283.9 |
| 62.5° | 232.3 | 240.5 | 248.6 | 239.1 | 235.0 |
| 65° | 205.1 | 217.4 | 216.0 | 203.8 | 201.1 |
| 67.5° | 180.7 | 192.9 | 186.1 | 173.9 | 169.8 |
| 70° | 156.2 | 168.5 | 158.9 | 146.7 | 142.6 |
| 72.5° | 133.1 | 146.7 | 131.8 | 120.9 | 118.2 |
| 75° | 111.4 | 122.3 | 107.3 | 99.2 | 95.1 |
| 77.5° | 91.0 | 99.2 | 85.6 | 78.8 | 76.1 |
| 80° | 70.6 | 76.1 | 65.2 | 61.1 | 59.8 |
| 82.5° | 51.6 | 54.3 | 47.5 | 50.3 | 48.9 |
| 85° | 34.0 | 35.3 | 36.7 | 38.0 | 34.0 |
| 87.5° | 16.3 | 23.1 | 23.1 | 21.7 | 17.7 |
| 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 | 17.33 | 18.79 | 17.69 | 19.11 | 19.42 | 18.40 | 19.86 | 18.76 | 20.17 | 20.49 |
| | 3H | 19.03 | 20.34 | 19.41 | 20.67 | 21.03 | 19.48 | 20.79 | 19.86 | 21.12 | 21.48 |
| | 4H | 19.68 | 20.91 | 20.08 | 21.26 | 21.64 | 19.88 | 21.11 | 20.28 | 21.46 | 21.84 |
| | 6H | 20.18 | 21.32 | 20.60 | 21.68 | 22.08 | 20.19 | 21.33 | 20.61 | 21.70 | 22.09 |
| | 8H | 20.36 | 21.43 | 20.78 | 21.82 | 22.23 | 20.33 | 21.41 | 20.76 | 21.80 | 22.20 |
| | 12H | 20.48 | 21.51 | 20.91 | 21.90 | 22.33 | 20.45 | 21.48 | 20.88 | 21.86 | 22.29 |
| 4H | 2H | 17.93 | 19.16 | 18.33 | 19.51 | 19.89 | 18.80 | 20.03 | 19.20 | 20.38 | 20.76 |
| | 3H | 19.86 | 20.88 | 20.27 | 21.28 | 21.68 | 20.12 | 21.14 | 20.53 | 21.54 | 21.94 |
| | 4H | 20.67 | 21.59 | 21.10 | 22.00 | 22.44 | 20.64 | 21.55 | 21.07 | 21.97 | 22.41 |
| | 6H | 21.32 | 22.11 | 21.78 | 22.56 | 23.02 | 21.07 | 21.87 | 21.53 | 22.31 | 22.77 |
| | 8H | 21.54 | 22.28 | 22.00 | 22.73 | 23.20 | 21.26 | 22.01 | 21.73 | 22.45 | 22.92 |
| | 12H | 21.71 | 22.38 | 22.20 | 22.86 | 23.33 | 21.44 | 22.11 | 21.93 | 22.59 | 23.06 |
| 8H | 4H | 20.91 | 21.65 | 21.37 | 22.10 | 22.57 | 20.88 | 21.63 | 21.35 | 22.07 | 22.54 |
| | 6H | 21.70 | 22.31 | 22.19 | 22.80 | 23.28 | 21.43 | 22.05 | 21.93 | 22.54 | 23.02 |
| | 8H | 22.01 | 22.56 | 22.52 | 23.07 | 23.56 | 21.71 | 22.26 | 22.23 | 22.77 | 23.26 |
| | 12H | 22.28 | 22.77 | 22.79 | 23.26 | 23.82 | 22.00 | 22.49 | 22.51 | 22.98 | 23.55 |
| 12H | 4H | 20.92 | 21.58 | 21.40 | 22.06 | 22.53 | 20.91 | 21.58 | 21.39 | 22.05 | 22.53 |
| | 6H | 21.73 | 22.28 | 22.24 | 22.79 | 23.28 | 21.48 | 22.04 | 22.00 | 22.55 | 23.04 |
| | 8H | 22.10 | 22.59 | 22.62 | 23.09 | 23.65 | 21.83 | 22.31 | 22.34 | 22.81 | 23.37 |