

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: P1059030

Luminaire Tested: S123RDRP-S1000D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059030
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-S1000D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

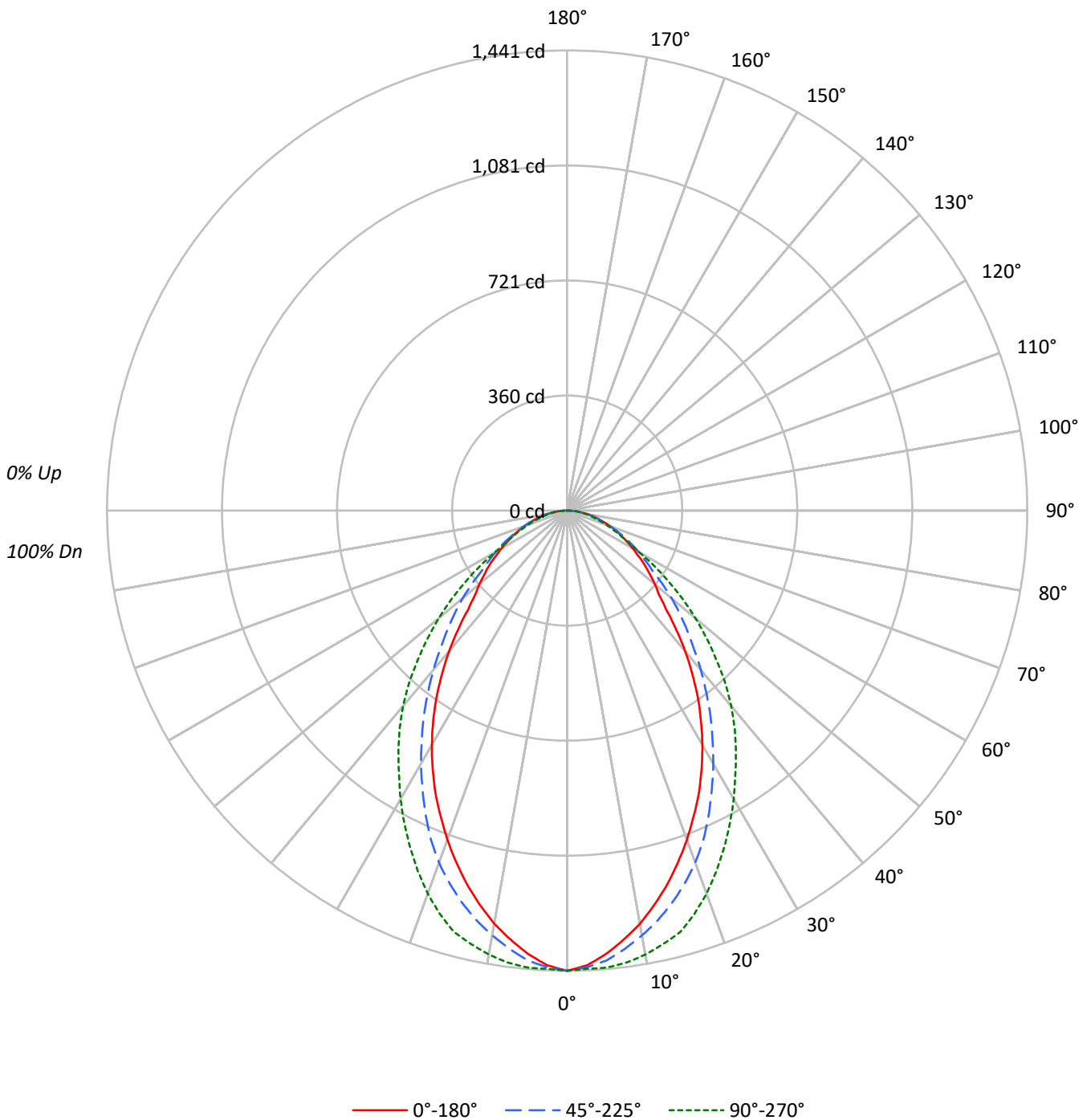
Lumens per Lamp: N/A
Luminaire Lumens: 2532.4 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 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° | 16923 | 16923 | 16923 |
| 5° | 16433 | 16666 | 16929 |
| 10° | 15660 | 16105 | 16829 |
| 15° | 14730 | 15455 | 16616 |
| 20° | 13701 | 14662 | 15947 |
| 25° | 12647 | 13595 | 15073 |
| 30° | 11486 | 12411 | 14143 |
| 35° | 10224 | 11201 | 13210 |
| 40° | 8822 | 9980 | 12243 |
| 45° | 7292 | 8836 | 10978 |
| 50° | 6547 | 7795 | 9583 |
| 55° | 6068 | 6654 | 7947 |
| 60° | 5592 | 6059 | 6087 |
| 65° | 5204 | 5479 | 5101 |
| 70° | 4896 | 4982 | 4470 |
| 75° | 4614 | 4446 | 3938 |
| 80° | 4362 | 4024 | 3692 |
| 85° | 4177 | 4513 | 4177 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10978 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 133.5 | 5.3 |
| 10°-20° | 359.6 | 14.2 |
| 20°-30° | 486.5 | 19.2 |
| 30°-40° | 499.9 | 19.7 |
| 40°-50° | 419.9 | 16.6 |
| 50°-60° | 301.0 | 11.9 |
| 60°-70° | 191.6 | 7.6 |
| 70°-80° | 105.3 | 4.2 |
| 80°-90° | 35.1 | 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° | 979.6 | 38.7 |
| 0°-40° | 1479.5 | 58.4 |
| 0°-60° | 2200.4 | 86.9 |
| 0°-90° | 2532.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2532.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1441 | 1441 | 1441 | 1441 | 1441 | |
| 5° | 1394 | 1419 | 1414 | 1424 | 1436 | 131 |
| 15° | 1212 | 1245 | 1271 | 1326 | 1367 | 340 |
| 25° | 976 | 1013 | 1049 | 1106 | 1163 | 447 |
| 35° | 713 | 752 | 781 | 851 | 922 | 444 |
| 45° | 439 | 478 | 532 | 609 | 661 | 347 |
| 55° | 296 | 303 | 325 | 368 | 388 | 265 |
| 65° | 187 | 198 | 197 | 186 | 184 | 187 |
| 75° | 102 | 112 | 98 | 90 | 87 | 108 |
| 85° | 31 | 32 | 34 | 35 | 31 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P1059030

CATALOG NUMBER: S123RDRP-S1000D840-X4F0-XX-UDD-WVL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1441.2 | 1441.2 | 1441.2 | 1441.2 | 1441.2 |
| 2.5° | 1425.1 | 1444.9 | 1431.3 | 1432.5 | 1436.2 |
| 5° | 1394.1 | 1418.9 | 1413.9 | 1423.8 | 1436.2 |
| 7.5° | 1355.6 | 1382.9 | 1384.1 | 1407.7 | 1427.6 |
| 10° | 1313.4 | 1342.0 | 1350.7 | 1386.6 | 1411.4 |
| 12.5° | 1263.8 | 1294.8 | 1313.4 | 1358.1 | 1390.3 |
| 15° | 1211.7 | 1245.2 | 1271.3 | 1325.8 | 1366.8 |
| 17.5° | 1154.7 | 1190.7 | 1224.1 | 1282.4 | 1324.6 |
| 20° | 1096.4 | 1134.8 | 1173.3 | 1227.9 | 1276.2 |
| 22.5° | 1035.6 | 1075.3 | 1115.0 | 1168.3 | 1221.7 |
| 25° | 976.1 | 1013.3 | 1049.3 | 1106.3 | 1163.4 |
| 27.5° | 911.6 | 950.0 | 981.1 | 1044.3 | 1103.8 |
| 30° | 847.1 | 885.6 | 915.3 | 981.1 | 1043.1 |
| 32.5° | 780.1 | 819.8 | 847.1 | 915.3 | 979.8 |
| 35° | 713.2 | 751.6 | 781.4 | 850.8 | 921.5 |
| 37.5° | 642.5 | 684.6 | 714.4 | 792.5 | 862.0 |
| 40° | 575.5 | 615.2 | 651.1 | 733.0 | 798.7 |
| 42.5° | 506.0 | 547.0 | 587.9 | 672.2 | 733.0 |
| 45° | 439.1 | 477.5 | 532.1 | 609.0 | 661.1 |
| 47.5° | 390.7 | 415.5 | 478.7 | 543.2 | 592.8 |
| 50° | 358.4 | 368.4 | 426.7 | 483.7 | 524.6 |
| 52.5° | 326.2 | 333.6 | 373.3 | 425.4 | 456.4 |
| 55° | 296.4 | 302.6 | 325.0 | 368.4 | 388.2 |
| 57.5° | 264.2 | 270.4 | 289.0 | 313.8 | 325.0 |
| 60° | 238.1 | 243.1 | 258.0 | 261.7 | 259.2 |
| 62.5° | 212.1 | 219.5 | 227.0 | 218.3 | 214.6 |
| 65° | 187.3 | 198.4 | 197.2 | 186.0 | 183.6 |
| 67.5° | 165.0 | 176.1 | 169.9 | 158.8 | 155.0 |
| 70° | 142.6 | 153.8 | 145.1 | 133.9 | 130.2 |
| 72.5° | 121.5 | 133.9 | 120.3 | 110.4 | 107.9 |
| 75° | 101.7 | 111.6 | 98.0 | 90.5 | 86.8 |
| 77.5° | 83.1 | 90.5 | 78.1 | 71.9 | 69.5 |
| 80° | 64.5 | 69.5 | 59.5 | 55.8 | 54.6 |
| 82.5° | 47.1 | 49.6 | 43.4 | 45.9 | 44.6 |
| 85° | 31.0 | 32.2 | 33.5 | 34.7 | 31.0 |
| 87.5° | 14.9 | 21.1 | 21.1 | 19.8 | 16.1 |
| 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 | 17.01 | 18.48 | 17.38 | 18.79 | 19.10 | 18.08 | 19.55 | 18.45 | 19.86 | 20.17 |
| | 3H | 18.71 | 20.02 | 19.09 | 20.35 | 20.71 | 19.17 | 20.48 | 19.55 | 20.81 | 21.17 |
| | 4H | 19.36 | 20.59 | 19.76 | 20.94 | 21.32 | 19.57 | 20.80 | 19.97 | 21.15 | 21.53 |
| | 6H | 19.87 | 21.00 | 20.28 | 21.37 | 21.76 | 19.88 | 21.01 | 20.29 | 21.38 | 21.77 |
| | 8H | 20.04 | 21.12 | 20.47 | 21.51 | 21.91 | 20.01 | 21.09 | 20.44 | 21.48 | 21.88 |
| | 12H | 20.16 | 21.20 | 20.60 | 21.58 | 22.01 | 20.13 | 21.17 | 20.56 | 21.55 | 21.98 |
| 4H | 2H | 17.61 | 18.84 | 18.01 | 19.19 | 19.57 | 18.49 | 19.71 | 18.89 | 20.06 | 20.44 |
| | 3H | 19.54 | 20.56 | 19.95 | 20.96 | 21.36 | 19.80 | 20.82 | 20.21 | 21.22 | 21.62 |
| | 4H | 20.35 | 21.27 | 20.79 | 21.69 | 22.13 | 20.32 | 21.24 | 20.76 | 21.65 | 22.09 |
| | 6H | 21.00 | 21.80 | 21.46 | 22.24 | 22.70 | 20.76 | 21.55 | 21.21 | 21.99 | 22.46 |
| | 8H | 21.22 | 21.97 | 21.69 | 22.41 | 22.88 | 20.94 | 21.69 | 21.41 | 22.13 | 22.60 |
| | 12H | 21.40 | 22.06 | 21.88 | 22.54 | 23.01 | 21.13 | 21.79 | 21.61 | 22.27 | 22.74 |
| 8H | 4H | 20.59 | 21.33 | 21.06 | 21.78 | 22.25 | 20.57 | 21.31 | 21.03 | 21.76 | 22.23 |
| | 6H | 21.38 | 21.99 | 21.88 | 22.49 | 22.96 | 21.12 | 21.73 | 21.61 | 22.22 | 22.70 |
| | 8H | 21.69 | 22.24 | 22.21 | 22.76 | 23.24 | 21.39 | 21.95 | 21.91 | 22.46 | 22.95 |
| | 12H | 21.96 | 22.45 | 22.47 | 22.94 | 23.51 | 21.68 | 22.17 | 22.20 | 22.67 | 23.23 |
| 12H | 4H | 20.60 | 21.27 | 21.09 | 21.75 | 22.22 | 20.59 | 21.26 | 21.08 | 21.74 | 22.21 |
| | 6H | 21.41 | 21.97 | 21.93 | 22.48 | 22.97 | 21.17 | 21.72 | 21.68 | 22.23 | 22.72 |
| | 8H | 21.79 | 22.28 | 22.30 | 22.77 | 23.34 | 21.51 | 22.00 | 22.02 | 22.49 | 23.06 |