

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: P1060401

Luminaire Tested: S124RDRP-S350D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060401
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: S124RDRP-S350D840-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

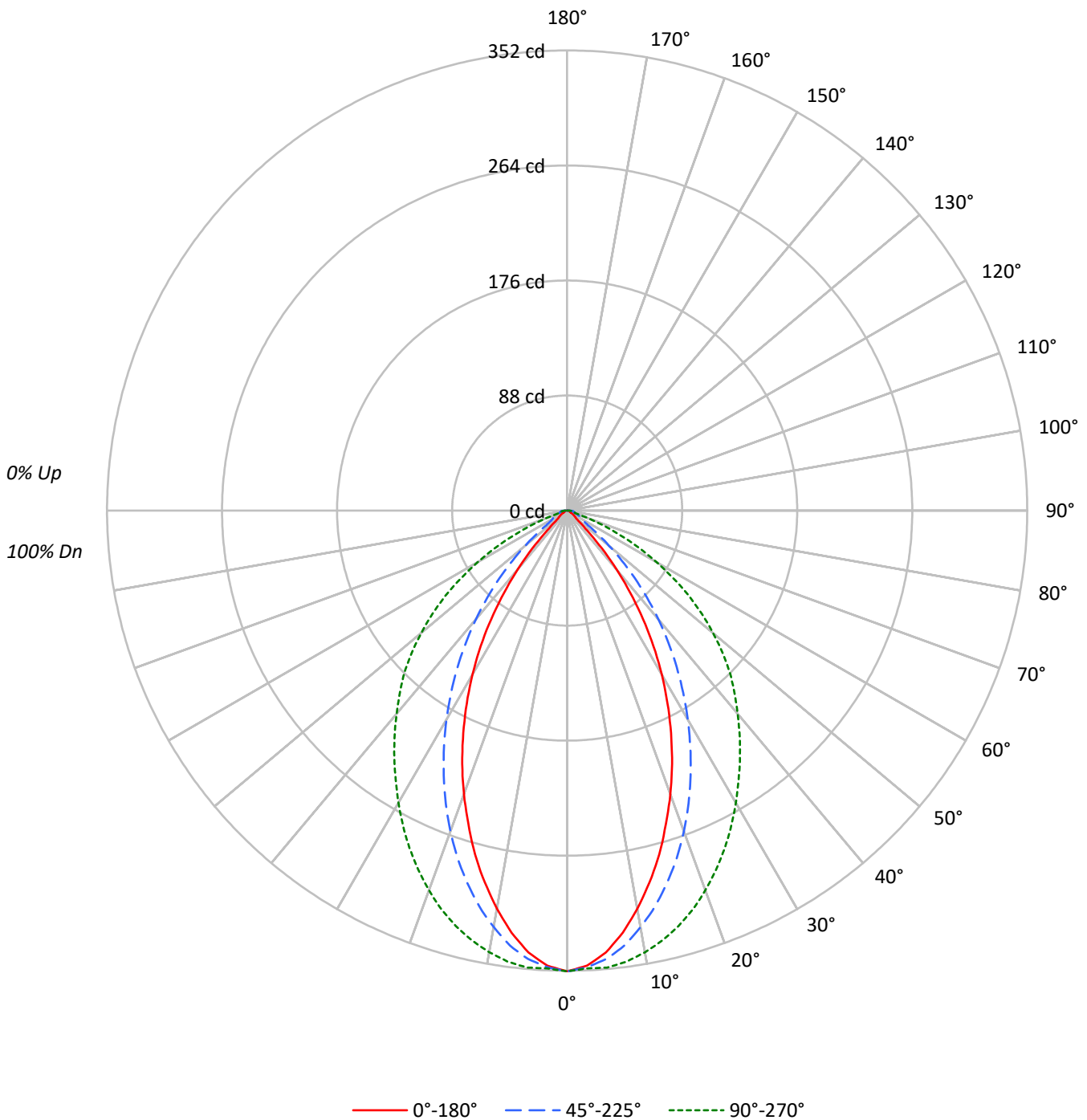
Lumens per Lamp: N/A
Luminaire Lumens: 444.4 lumens
Efficiency: N/A
Efficacy: 35.5 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 12.5
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

TEST NUMBER: P1060401

CATALOG NUMBER: S124RDRP-S350D840-X4F0-XX-UDD-BVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1060401

CATALOG NUMBER: S124RDRP-S350D840-X4F0-XX-UDD-BVL-W

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 | 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° | 3035 | 3035 | 3035 |
| 5° | 2933 | 2976 | 3033 |
| 10° | 2703 | 2830 | 2999 |
| 15° | 2428 | 2630 | 2933 |
| 20° | 2116 | 2393 | 2833 |
| 25° | 1785 | 2123 | 2709 |
| 30° | 1440 | 1835 | 2567 |
| 35° | 1066 | 1536 | 2423 |
| 40° | 661 | 1223 | 2280 |
| 45° | 262 | 891 | 2147 |
| 50° | 117 | 560 | 1952 |
| 55° | 93 | 291 | 1708 |
| 60° | 64 | 220 | 1361 |
| 65° | 43 | 220 | 935 |
| 70° | 43 | 199 | 438 |
| 75° | 57 | 193 | 193 |
| 80° | 84 | 228 | 228 |
| 85° | 168 | 454 | 326 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2147 cd/sqm



TEST NUMBER: P1060401

CATALOG NUMBER: S124RDRP-S350D840-X4F0-XX-UDD-BVL-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 32.3 | 7.3 |
| 10°-20° | 83.5 | 18.8 |
| 20°-30° | 105.4 | 23.7 |
| 30°-40° | 96.7 | 21.8 |
| 40°-50° | 65.8 | 14.8 |
| 50°-60° | 35.9 | 8.1 |
| 60°-70° | 15.5 | 3.5 |
| 70°-80° | 5.7 | 1.3 |
| 80°-90° | 3.7 | 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° | 221.2 | 49.8 |
| 0°-40° | 317.8 | 71.5 |
| 0°-60° | 419.5 | 94.4 |
| 0°-90° | 444.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 444.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 352 | 352 | 352 | 352 | 352 | |
| 5° | 339 | 344 | 344 | 348 | 351 | 31 |
| 15° | 272 | 282 | 295 | 316 | 329 | 76 |
| 25° | 188 | 201 | 223 | 259 | 285 | 86 |
| 35° | 101 | 116 | 146 | 192 | 230 | 63 |
| 45° | 22 | 36 | 73 | 130 | 176 | 20 |
| 55° | 6 | 7 | 19 | 72 | 114 | 6 |
| 65° | 2 | 3 | 11 | 22 | 46 | 2 |
| 75° | 2 | 5 | 6 | 6 | 6 | 2 |
| 85° | 2 | 4 | 5 | 5 | 3 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1060401

CATALOG NUMBER: S124RDRP-S350D840-X4F0-XX-UDD-BVL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 352.5 | 352.5 | 352.5 | 352.5 | 352.5 |
| 2.5° | 348.4 | 352.5 | 349.6 | 350.5 | 350.5 |
| 5° | 339.3 | 343.9 | 344.3 | 348.0 | 350.9 |
| 7.5° | 325.7 | 332.3 | 335.6 | 343.0 | 348.0 |
| 10° | 309.1 | 317.0 | 323.6 | 336.4 | 343.0 |
| 12.5° | 291.3 | 300.4 | 310.3 | 327.3 | 336.8 |
| 15° | 272.3 | 281.8 | 295.0 | 316.1 | 329.0 |
| 17.5° | 251.2 | 262.8 | 278.9 | 304.1 | 319.9 |
| 20° | 230.9 | 242.5 | 261.1 | 289.7 | 309.1 |
| 22.5° | 209.8 | 221.8 | 242.5 | 274.3 | 297.5 |
| 25° | 187.9 | 201.1 | 223.4 | 259.0 | 285.1 |
| 27.5° | 166.3 | 180.4 | 204.0 | 242.9 | 271.9 |
| 30° | 144.8 | 158.9 | 184.5 | 226.3 | 258.2 |
| 32.5° | 122.9 | 137.4 | 165.1 | 209.0 | 244.1 |
| 35° | 101.4 | 116.3 | 146.1 | 192.4 | 230.5 |
| 37.5° | 79.4 | 95.2 | 127.0 | 176.3 | 216.8 |
| 40° | 58.8 | 74.5 | 108.8 | 160.1 | 202.8 |
| 42.5° | 39.3 | 55.0 | 90.2 | 144.4 | 189.5 |
| 45° | 21.5 | 36.0 | 73.2 | 129.9 | 176.3 |
| 47.5° | 11.6 | 19.9 | 56.7 | 115.9 | 161.4 |
| 50° | 8.7 | 10.8 | 41.8 | 101.0 | 145.7 |
| 52.5° | 7.4 | 8.3 | 29.0 | 85.2 | 129.9 |
| 55° | 6.2 | 6.6 | 19.4 | 71.6 | 113.8 |
| 57.5° | 5.0 | 5.4 | 14.5 | 57.9 | 96.4 |
| 60° | 3.7 | 4.6 | 12.8 | 44.7 | 79.0 |
| 62.5° | 2.9 | 3.7 | 12.0 | 32.7 | 62.5 |
| 65° | 2.1 | 2.9 | 10.8 | 22.3 | 45.9 |
| 67.5° | 2.1 | 3.3 | 9.1 | 14.5 | 31.0 |
| 70° | 1.7 | 4.6 | 7.9 | 9.5 | 17.4 |
| 72.5° | 1.7 | 5.0 | 6.6 | 6.6 | 6.6 |
| 75° | 1.7 | 5.4 | 5.8 | 5.8 | 5.8 |
| 77.5° | 1.7 | 5.0 | 5.4 | 5.0 | 5.0 |
| 80° | 1.7 | 4.6 | 4.6 | 4.6 | 4.6 |
| 82.5° | 1.7 | 4.1 | 4.6 | 4.6 | 3.7 |
| 85° | 1.7 | 3.7 | 4.6 | 4.6 | 3.3 |
| 87.5° | 1.2 | 3.7 | 4.1 | 4.1 | 2.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P1060401
 CATALOG NUMBER: S124RDRP-S350D840-X4F0-XX-UDD-BVL-W

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 | 12.26 | 13.54 | 12.63 | 13.85 | 14.17 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.64 | 13.77 | 13.02 | 14.10 | 14.47 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.62 | 13.67 | 13.02 | 14.02 | 14.41 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.14 | 0.53 | 12.61 | 13.57 | 13.02 | 13.94 | 14.34 |
| | 8H | 0.00 | 0.31 | 0.00 | 0.70 | 1.11 | 12.61 | 13.52 | 13.04 | 13.91 | 14.32 |
| | 12H | 0.08 | 0.95 | 0.51 | 1.33 | 1.76 | 12.62 | 13.49 | 13.05 | 13.88 | 14.31 |
| 4H | 2H | 0.00 | 0.00 | 0.00 | 0.00 | 0.33 | 12.07 | 13.13 | 12.48 | 13.48 | 13.86 |
| | 3H | 0.13 | 0.99 | 0.54 | 1.39 | 1.80 | 12.49 | 13.35 | 12.91 | 13.76 | 14.16 |
| | 4H | 1.43 | 2.19 | 1.86 | 2.61 | 3.06 | 12.49 | 13.26 | 12.93 | 13.68 | 14.12 |
| | 6H | 2.57 | 3.23 | 3.03 | 3.68 | 4.15 | 12.54 | 13.20 | 13.00 | 13.64 | 14.11 |
| | 8H | 3.08 | 3.70 | 3.55 | 4.15 | 4.62 | 12.56 | 13.18 | 13.03 | 13.63 | 14.10 |
| | 12H | 3.63 | 4.18 | 4.12 | 4.66 | 5.14 | 12.63 | 13.17 | 13.12 | 13.66 | 14.13 |
| 8H | 4H | 2.51 | 3.12 | 2.98 | 3.57 | 4.04 | 12.40 | 13.02 | 12.87 | 13.47 | 13.94 |
| | 6H | 4.06 | 4.57 | 4.57 | 5.07 | 5.55 | 12.49 | 12.99 | 12.99 | 13.49 | 13.97 |
| | 8H | 4.86 | 5.32 | 5.39 | 5.83 | 6.33 | 12.57 | 13.03 | 13.09 | 13.54 | 14.03 |
| | 12H | 5.69 | 6.09 | 6.20 | 6.59 | 7.16 | 12.74 | 13.14 | 13.26 | 13.64 | 14.21 |
| 12H | 4H | 2.70 | 3.24 | 3.19 | 3.73 | 4.20 | 12.37 | 12.91 | 12.85 | 13.40 | 13.87 |
| | 6H | 4.42 | 4.88 | 4.95 | 5.39 | 5.89 | 12.46 | 12.91 | 12.98 | 13.43 | 13.92 |
| | 8H | 5.42 | 5.82 | 5.94 | 6.32 | 6.89 | 12.60 | 13.00 | 13.11 | 13.50 | 14.07 |