

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: P1060807

Luminaire Tested: S124RDRP-H350D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060807
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H350D840-X4F0-XX-UDD-SVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

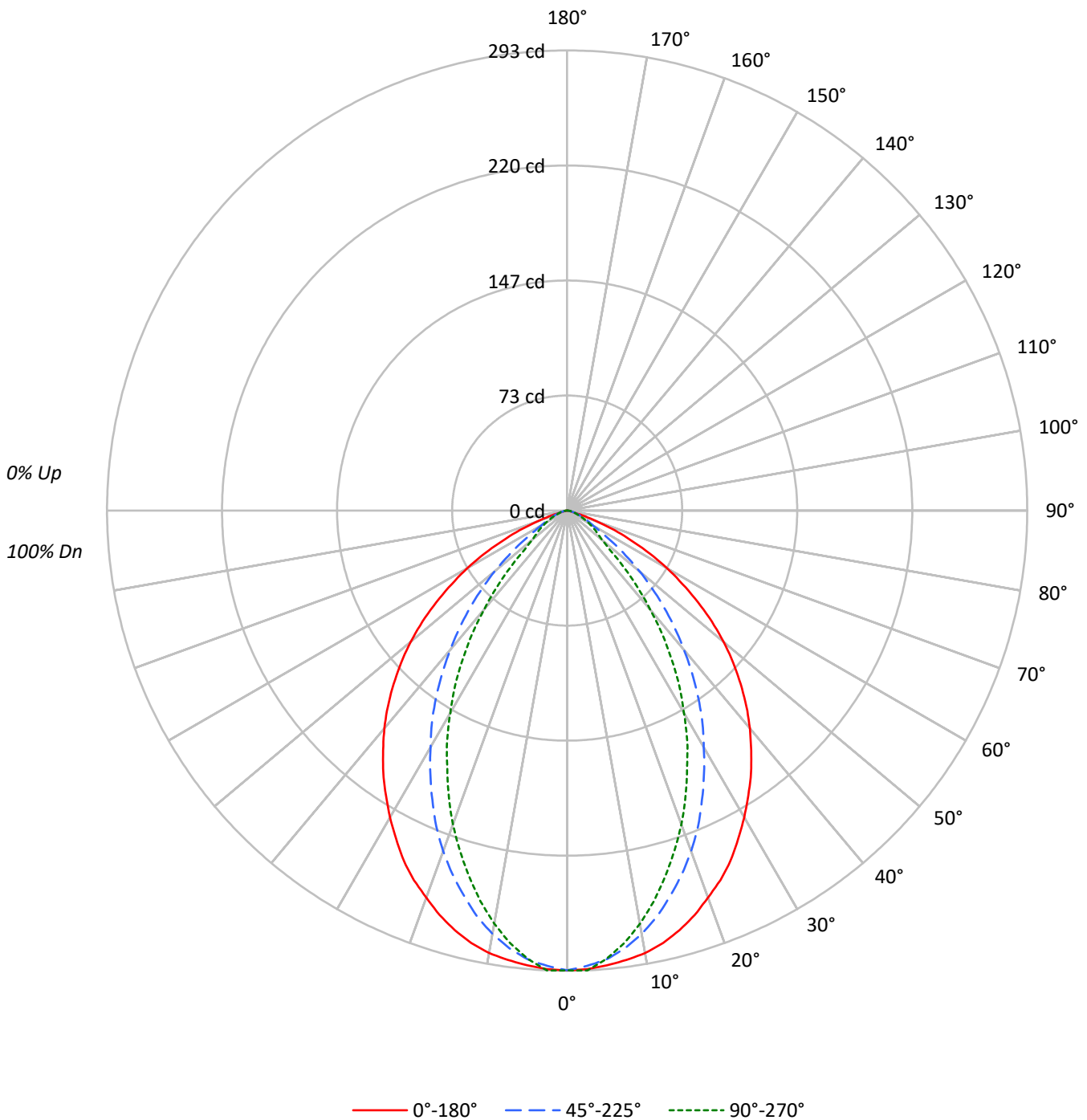
Lumens per Lamp: N/A
Luminaire Lumens: 431.5 lumens
Efficiency: N/A
Efficacy: 36.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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: P1060807

CATALOG NUMBER: S124RDRP-H350D840-X4F0-XX-UDD-SVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1060807

CATALOG NUMBER: S124RDRP-H350D840-X4F0-XX-UDD-SVL-B

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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 97 | 98 | 96 | 94 | 95 | 93 | 92 | 90 | | | | | 90 | | | |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 85 | 90 | 86 | 83 | 87 | 84 | 82 | 80 | | | | | 80 | | | |
| 3 | 97 | 89 | 82 | 77 | 95 | 87 | 81 | 76 | 84 | 79 | 75 | 82 | 78 | 74 | 79 | 76 | 73 | 71 | | | | | 71 | | | |
| 4 | 90 | 81 | 74 | 68 | 88 | 79 | 73 | 68 | 77 | 71 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 | | | | | 63 | | | |
| 5 | 84 | 74 | 66 | 61 | 82 | 73 | 66 | 60 | 71 | 65 | 60 | 69 | 63 | 59 | 67 | 62 | 59 | 57 | | | | | 57 | | | |
| 6 | 79 | 68 | 60 | 55 | 77 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 58 | 54 | 62 | 57 | 53 | 51 | | | | | 51 | | | |
| 7 | 74 | 62 | 55 | 50 | 72 | 62 | 54 | 49 | 60 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 47 | | | | | 47 | | | |
| 8 | 69 | 58 | 50 | 45 | 68 | 57 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 45 | 54 | 48 | 44 | 43 | | | | | 43 | | | |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | | 39 | | | |
| 10 | 62 | 50 | 43 | 38 | 60 | 49 | 43 | 38 | 48 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | | 36 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2520 | 2520 | 2520 |
| 5° | 2512 | 2480 | 2477 |
| 10° | 2502 | 2393 | 2336 |
| 15° | 2466 | 2263 | 2150 |
| 20° | 2403 | 2115 | 1949 |
| 25° | 2338 | 1931 | 1716 |
| 30° | 2242 | 1730 | 1480 |
| 35° | 2146 | 1530 | 1222 |
| 40° | 2035 | 1302 | 926 |
| 45° | 1902 | 1064 | 622 |
| 50° | 1740 | 806 | 387 |
| 55° | 1528 | 533 | 327 |
| 60° | 1264 | 327 | 270 |
| 65° | 915 | 253 | 218 |
| 70° | 499 | 186 | 166 |
| 75° | 110 | 136 | 150 |
| 80° | 79 | 104 | 124 |
| 85° | 79 | 79 | 119 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1902 cd/sqm



TEST NUMBER: P1060807

CATALOG NUMBER: S124RDRP-H350D840-X4F0-XX-UDD-SVL-B

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 27.1 | 6.3 |
| 10°-20° | 72.0 | 16.7 |
| 20°-30° | 95.4 | 22.1 |
| 30°-40° | 94.7 | 21.9 |
| 40°-50° | 72.9 | 16.9 |
| 50°-60° | 43.4 | 10.1 |
| 60°-70° | 19.7 | 4.6 |
| 70°-80° | 5.1 | 1.2 |
| 80°-90° | 1.1 | 0.3 |
| 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° | 194.5 | 45.1 |
| 0°-40° | 289.2 | 67.0 |
| 0°-60° | 405.6 | 94.0 |
| 0°-90° | 431.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 431.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 293 | 293 | 293 | 293 | 293 | |
| 5° | 291 | 291 | 287 | 287 | 286 | 28 |
| 15° | 277 | 270 | 254 | 245 | 241 | 78 |
| 25° | 246 | 228 | 203 | 186 | 181 | 113 |
| 35° | 204 | 178 | 146 | 123 | 116 | 127 |
| 45° | 156 | 126 | 87 | 61 | 51 | 120 |
| 55° | 102 | 73 | 36 | 22 | 22 | 91 |
| 65° | 45 | 27 | 12 | 11 | 11 | 45 |
| 75° | 3 | 4 | 4 | 4 | 4 | 7 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1060807

CATALOG NUMBER: S124RDRP-H350D840-X4F0-XX-UDD-SVL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 292.7 | 292.7 | 292.7 | 292.7 | 292.7 |
| 2.5° | 292.3 | 292.7 | 290.2 | 292.3 | 293.1 |
| 5° | 290.6 | 291.0 | 286.9 | 286.9 | 286.5 |
| 7.5° | 288.6 | 287.7 | 281.1 | 278.7 | 277.8 |
| 10° | 286.1 | 283.2 | 273.7 | 268.8 | 267.1 |
| 12.5° | 282.0 | 277.4 | 264.7 | 257.6 | 254.8 |
| 15° | 276.6 | 269.6 | 253.9 | 245.3 | 241.2 |
| 17.5° | 270.0 | 261.4 | 242.8 | 231.7 | 227.1 |
| 20° | 262.2 | 250.6 | 230.8 | 216.8 | 212.7 |
| 22.5° | 254.8 | 240.3 | 217.7 | 201.6 | 197.0 |
| 25° | 246.1 | 228.4 | 203.2 | 186.3 | 180.6 |
| 27.5° | 235.8 | 216.8 | 188.8 | 171.5 | 165.7 |
| 30° | 225.5 | 204.5 | 174.0 | 155.8 | 148.8 |
| 32.5° | 214.8 | 191.7 | 160.4 | 139.7 | 133.2 |
| 35° | 204.1 | 178.5 | 145.5 | 123.3 | 116.2 |
| 37.5° | 192.5 | 165.3 | 130.7 | 107.6 | 99.8 |
| 40° | 181.0 | 152.5 | 115.8 | 92.3 | 82.4 |
| 42.5° | 169.0 | 139.3 | 101.4 | 76.7 | 66.8 |
| 45° | 156.2 | 125.7 | 87.4 | 61.0 | 51.1 |
| 47.5° | 143.5 | 113.0 | 73.4 | 45.8 | 36.7 |
| 50° | 129.9 | 99.3 | 60.2 | 33.4 | 28.9 |
| 52.5° | 116.2 | 86.2 | 47.0 | 26.0 | 24.7 |
| 55° | 101.8 | 72.6 | 35.5 | 22.3 | 21.8 |
| 57.5° | 87.0 | 60.2 | 25.6 | 19.4 | 18.6 |
| 60° | 73.4 | 48.6 | 19.0 | 16.5 | 15.7 |
| 62.5° | 59.4 | 36.7 | 15.7 | 13.6 | 12.8 |
| 65° | 44.9 | 26.8 | 12.4 | 10.7 | 10.7 |
| 67.5° | 32.6 | 18.1 | 9.9 | 8.7 | 8.2 |
| 70° | 19.8 | 11.1 | 7.4 | 7.0 | 6.6 |
| 72.5° | 9.9 | 6.6 | 5.8 | 5.4 | 5.4 |
| 75° | 3.3 | 4.1 | 4.1 | 4.5 | 4.5 |
| 77.5° | 2.5 | 2.9 | 2.9 | 3.3 | 3.3 |
| 80° | 1.6 | 2.1 | 2.1 | 2.5 | 2.5 |
| 82.5° | 1.2 | 1.2 | 1.6 | 1.6 | 2.1 |
| 85° | 0.8 | 0.8 | 0.8 | 1.2 | 1.2 |
| 87.5° | 0.4 | 0.4 | 0.4 | 0.8 | 0.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P1060807
 CATALOG NUMBER: S124RDRP-H350D840-X4F0-XX-UDD-SVL-B

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 | 12.33 | 13.67 | 12.70 | 13.98 | 14.29 | 3.89 | 5.22 | 4.26 | 5.54 | 5.85 |
| | 3H | 12.84 | 14.02 | 13.22 | 14.35 | 14.72 | 4.70 | 5.88 | 5.08 | 6.21 | 6.58 |
| | 4H | 12.81 | 13.90 | 13.21 | 14.26 | 14.64 | 4.98 | 6.08 | 5.39 | 6.43 | 6.82 |
| | 6H | 12.74 | 13.75 | 13.16 | 14.12 | 14.51 | 5.16 | 6.17 | 5.57 | 6.54 | 6.93 |
| | 8H | 12.70 | 13.66 | 13.13 | 14.05 | 14.45 | 5.22 | 6.18 | 5.66 | 6.57 | 6.97 |
| | 12H | 12.66 | 13.58 | 13.10 | 13.96 | 14.39 | 5.27 | 6.18 | 5.70 | 6.56 | 6.99 |
| 4H | 2H | 12.17 | 13.27 | 12.58 | 13.62 | 14.01 | 4.33 | 5.43 | 4.74 | 5.78 | 6.16 |
| | 3H | 12.73 | 13.62 | 13.14 | 14.03 | 14.43 | 5.29 | 6.19 | 5.71 | 6.59 | 7.00 |
| | 4H | 12.70 | 13.49 | 13.13 | 13.91 | 14.35 | 5.65 | 6.45 | 6.09 | 6.87 | 7.31 |
| | 6H | 12.64 | 13.33 | 13.11 | 13.78 | 14.24 | 5.91 | 6.59 | 6.37 | 7.04 | 7.51 |
| | 8H | 12.60 | 13.24 | 13.07 | 13.68 | 14.15 | 6.00 | 6.64 | 6.47 | 7.08 | 7.56 |
| | 12H | 12.56 | 13.12 | 13.04 | 13.61 | 14.08 | 6.07 | 6.63 | 6.56 | 7.12 | 7.59 |
| 8H | 4H | 12.59 | 13.23 | 13.06 | 13.67 | 14.14 | 5.74 | 6.38 | 6.21 | 6.83 | 7.30 |
| | 6H | 12.52 | 13.05 | 13.03 | 13.54 | 14.02 | 6.06 | 6.58 | 6.56 | 7.07 | 7.56 |
| | 8H | 12.48 | 12.95 | 13.00 | 13.46 | 13.95 | 6.19 | 6.65 | 6.71 | 7.17 | 7.66 |
| | 12H | 12.44 | 12.86 | 12.96 | 13.35 | 13.92 | 6.32 | 6.73 | 6.83 | 7.22 | 7.80 |
| 12H | 4H | 12.54 | 13.11 | 13.03 | 13.59 | 14.06 | 5.72 | 6.28 | 6.20 | 6.76 | 7.24 |
| | 6H | 12.47 | 12.94 | 12.99 | 13.45 | 13.95 | 6.04 | 6.50 | 6.56 | 7.02 | 7.51 |
| | 8H | 12.44 | 12.86 | 12.96 | 13.35 | 13.92 | 6.20 | 6.62 | 6.72 | 7.11 | 7.68 |