

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: P1059607

Luminaire Tested: S123RDRP-H340D927-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059607
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-H340D927-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

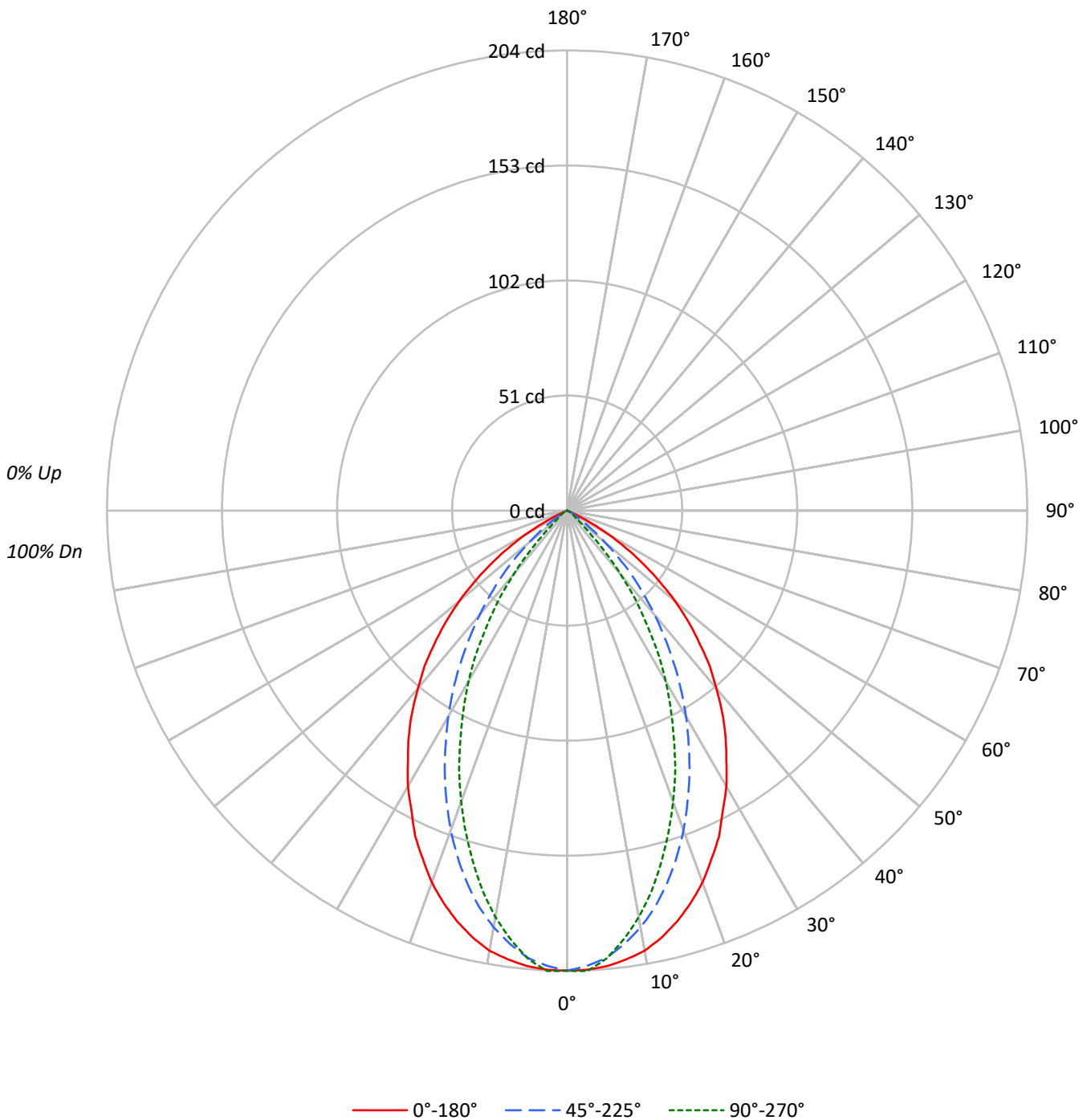
Lumens per Lamp: N/A
Luminaire Lumens: 232.8 lumens
Efficiency: N/A
Efficacy: 19.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.93
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

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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 | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 100 | 100 | 98 | 97 | 96 | 95 | 94 | 92 | | | | | 92 | | | |
| 2 | 106 | 101 | 96 | 92 | 104 | 99 | 95 | 91 | 96 | 92 | 89 | 93 | 90 | 87 | 90 | 87 | 85 | 84 | | | | | 84 | | | |
| 3 | 100 | 92 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | 86 | 82 | 79 | 83 | 80 | 78 | 76 | | | | | 76 | | | |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | 80 | 75 | 72 | 78 | 74 | 71 | 69 | | | | | 69 | | | |
| 5 | 88 | 79 | 72 | 67 | 86 | 78 | 71 | 67 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 65 | 63 | | | | | 63 | | | |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 66 | 61 | 70 | 65 | 60 | 69 | 64 | 60 | 67 | 63 | 60 | 58 | | | | | 58 | | | |
| 7 | 78 | 68 | 61 | 56 | 77 | 67 | 60 | 56 | 66 | 60 | 56 | 64 | 59 | 55 | 63 | 58 | 55 | 53 | | | | | 53 | | | |
| 8 | 74 | 63 | 56 | 52 | 72 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 49 | | | | | 49 | | | |
| 9 | 70 | 59 | 52 | 48 | 68 | 58 | 52 | 48 | 57 | 52 | 47 | 56 | 51 | 47 | 55 | 51 | 47 | 46 | | | | | 46 | | | |
| 10 | 66 | 55 | 49 | 44 | 65 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 | | | | | 42 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2395 | 2395 | 2395 |
| 5° | 2389 | 2347 | 2350 |
| 10° | 2362 | 2237 | 2182 |
| 15° | 2292 | 2080 | 1961 |
| 20° | 2192 | 1884 | 1716 |
| 25° | 2064 | 1664 | 1451 |
| 30° | 1915 | 1429 | 1185 |
| 35° | 1756 | 1181 | 880 |
| 40° | 1576 | 926 | 564 |
| 45° | 1375 | 676 | 234 |
| 50° | 1140 | 402 | 90 |
| 55° | 841 | 168 | 68 |
| 60° | 510 | 61 | 38 |
| 65° | 136 | 36 | 19 |
| 70° | 0 | 10 | 10 |
| 75° | 0 | 0 | 14 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1375 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 18.8 | 8.1 |
| 10°-20° | 48.5 | 20.8 |
| 20°-30° | 60.4 | 25.9 |
| 30°-40° | 54.0 | 23.2 |
| 40°-50° | 34.1 | 14.6 |
| 50°-60° | 14.3 | 6.1 |
| 60°-70° | 2.7 | 1.2 |
| 70°-80° | 0.1 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 127.6 | 54.8 |
| 0°-40° | 181.6 | 78.0 |
| 0°-60° | 230.0 | 98.8 |
| 0°-90° | 232.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 232.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 204 | 204 | 204 | 204 | 204 | |
| 5° | 203 | 202 | 199 | 200 | 199 | 19 |
| 15° | 188 | 184 | 171 | 164 | 161 | 53 |
| 25° | 159 | 146 | 128 | 117 | 112 | 73 |
| 35° | 122 | 105 | 82 | 68 | 61 | 76 |
| 45° | 83 | 64 | 41 | 22 | 14 | 64 |
| 55° | 41 | 28 | 8 | 3 | 3 | 37 |
| 65° | 5 | 4 | 1 | 1 | 1 | 7 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



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CATALOG NUMBER: S123RDRP-H340D927-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 204.0 | 204.0 | 204.0 | 204.0 | 204.0 |
| 2.5° | 203.7 | 204.0 | 202.0 | 204.0 | 204.3 |
| 5° | 202.7 | 202.3 | 199.1 | 199.7 | 199.4 |
| 7.5° | 200.7 | 199.7 | 193.8 | 192.5 | 191.8 |
| 10° | 198.1 | 195.4 | 187.6 | 184.3 | 183.0 |
| 12.5° | 193.8 | 190.2 | 180.0 | 174.8 | 172.8 |
| 15° | 188.5 | 184.0 | 171.1 | 163.9 | 161.3 |
| 17.5° | 182.3 | 175.7 | 161.3 | 153.4 | 149.5 |
| 20° | 175.4 | 166.2 | 150.8 | 141.2 | 137.3 |
| 22.5° | 167.2 | 157.0 | 139.6 | 129.4 | 125.2 |
| 25° | 159.3 | 146.5 | 128.4 | 117.3 | 112.0 |
| 27.5° | 149.5 | 136.0 | 116.6 | 105.1 | 99.5 |
| 30° | 141.2 | 125.8 | 105.4 | 92.6 | 87.4 |
| 32.5° | 131.4 | 115.3 | 93.9 | 79.8 | 74.9 |
| 35° | 122.5 | 104.8 | 82.4 | 67.7 | 61.4 |
| 37.5° | 113.0 | 94.6 | 71.0 | 55.5 | 49.6 |
| 40° | 102.8 | 84.4 | 60.4 | 43.4 | 36.8 |
| 42.5° | 93.6 | 74.2 | 49.9 | 32.2 | 25.6 |
| 45° | 82.8 | 64.4 | 40.7 | 21.7 | 14.1 |
| 47.5° | 72.9 | 55.2 | 30.9 | 12.2 | 7.6 |
| 50° | 62.4 | 45.7 | 22.0 | 6.2 | 4.9 |
| 52.5° | 51.6 | 36.5 | 14.5 | 4.3 | 3.9 |
| 55° | 41.1 | 28.2 | 8.2 | 3.3 | 3.3 |
| 57.5° | 30.9 | 20.4 | 4.3 | 2.6 | 2.3 |
| 60° | 21.7 | 13.5 | 2.6 | 2.0 | 1.6 |
| 62.5° | 12.5 | 7.9 | 2.0 | 1.3 | 1.3 |
| 65° | 4.9 | 3.6 | 1.3 | 0.7 | 0.7 |
| 67.5° | 0.3 | 1.0 | 0.7 | 0.3 | 0.3 |
| 70° | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 |
| 72.5° | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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 | 8.24 | 9.41 | 8.60 | 9.72 | 10.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 8.08 | 9.11 | 8.46 | 9.44 | 9.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 7.99 | 8.94 | 8.39 | 9.30 | 9.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 7.90 | 8.77 | 8.31 | 9.14 | 9.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 7.85 | 8.67 | 8.28 | 9.06 | 9.47 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 7.80 | 8.58 | 8.23 | 8.97 | 9.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 7.99 | 8.95 | 8.40 | 9.30 | 9.69 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 7.83 | 8.60 | 8.24 | 9.00 | 9.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 7.72 | 8.41 | 8.16 | 8.83 | 9.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 7.63 | 8.21 | 8.10 | 8.66 | 9.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 7.56 | 8.11 | 8.04 | 8.56 | 9.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 7.51 | 7.98 | 8.00 | 8.47 | 8.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 7.56 | 8.11 | 8.04 | 8.56 | 9.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 7.45 | 7.89 | 7.95 | 8.39 | 8.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 7.37 | 7.77 | 7.90 | 8.29 | 8.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 7.32 | 7.67 | 7.84 | 8.17 | 8.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 7.51 | 7.98 | 8.00 | 8.47 | 8.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 7.38 | 7.77 | 7.90 | 8.29 | 8.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 7.32 | 7.67 | 7.84 | 8.17 | 8.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |