

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: P1059597

Luminaire Tested: S123RDRP-H340D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059597
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-H340D840-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

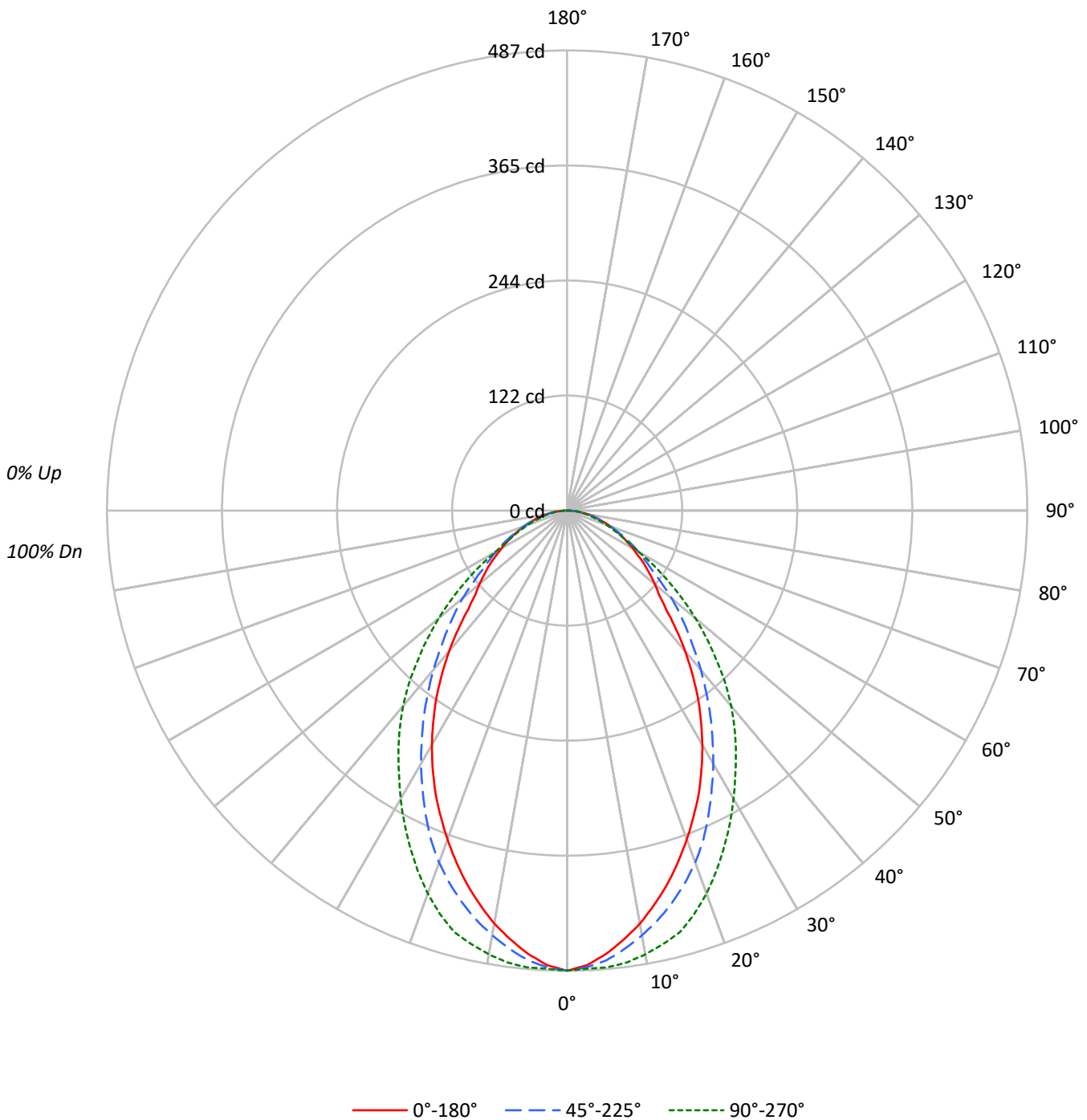
Lumens per Lamp: N/A
Luminaire Lumens: 855.7 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | 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° | 5717 | 5717 | 5717 |
| 5° | 5552 | 5631 | 5720 |
| 10° | 5292 | 5442 | 5686 |
| 15° | 4977 | 5221 | 5614 |
| 20° | 4629 | 4953 | 5388 |
| 25° | 4273 | 4593 | 5093 |
| 30° | 3881 | 4194 | 4778 |
| 35° | 3455 | 3784 | 4464 |
| 40° | 2980 | 3372 | 4137 |
| 45° | 2463 | 2986 | 3710 |
| 50° | 2212 | 2634 | 3239 |
| 55° | 2051 | 2248 | 2686 |
| 60° | 1891 | 2048 | 2057 |
| 65° | 1759 | 1850 | 1723 |
| 70° | 1655 | 1682 | 1511 |
| 75° | 1561 | 1502 | 1329 |
| 80° | 1474 | 1359 | 1244 |
| 85° | 1415 | 1522 | 1415 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3710 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.1 | 5.3 |
| 10°-20° | 121.5 | 14.2 |
| 20°-30° | 164.4 | 19.2 |
| 30°-40° | 168.9 | 19.7 |
| 40°-50° | 141.9 | 16.6 |
| 50°-60° | 101.7 | 11.9 |
| 60°-70° | 64.8 | 7.6 |
| 70°-80° | 35.6 | 4.2 |
| 80°-90° | 11.9 | 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° | 331.0 | 38.7 |
| 0°-40° | 499.9 | 58.4 |
| 0°-60° | 743.5 | 86.9 |
| 0°-90° | 855.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 855.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 487 | 487 | 487 | 487 | 487 | |
| 5° | 471 | 479 | 478 | 481 | 485 | 44 |
| 15° | 409 | 421 | 430 | 448 | 462 | 115 |
| 25° | 330 | 342 | 354 | 374 | 393 | 151 |
| 35° | 241 | 254 | 264 | 288 | 311 | 150 |
| 45° | 148 | 161 | 180 | 206 | 223 | 117 |
| 55° | 100 | 102 | 110 | 124 | 131 | 89 |
| 65° | 63 | 67 | 67 | 63 | 62 | 63 |
| 75° | 34 | 38 | 33 | 31 | 29 | 37 |
| 85° | 10 | 11 | 11 | 12 | 10 | 12 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 486.9 | 486.9 | 486.9 | 486.9 | 486.9 |
| 2.5° | 481.5 | 488.2 | 483.6 | 484.0 | 485.3 |
| 5° | 471.0 | 479.4 | 477.7 | 481.1 | 485.3 |
| 7.5° | 458.0 | 467.2 | 467.7 | 475.6 | 482.3 |
| 10° | 443.8 | 453.4 | 456.4 | 468.5 | 476.9 |
| 12.5° | 427.0 | 437.5 | 443.8 | 458.9 | 469.8 |
| 15° | 409.4 | 420.7 | 429.5 | 448.0 | 461.8 |
| 17.5° | 390.1 | 402.3 | 413.6 | 433.3 | 447.6 |
| 20° | 370.4 | 383.4 | 396.4 | 414.9 | 431.2 |
| 22.5° | 349.9 | 363.3 | 376.7 | 394.8 | 412.8 |
| 25° | 329.8 | 342.4 | 354.5 | 373.8 | 393.1 |
| 27.5° | 308.0 | 321.0 | 331.5 | 352.8 | 373.0 |
| 30° | 286.2 | 299.2 | 309.3 | 331.5 | 352.4 |
| 32.5° | 263.6 | 277.0 | 286.2 | 309.3 | 331.1 |
| 35° | 241.0 | 253.9 | 264.0 | 287.5 | 311.4 |
| 37.5° | 217.1 | 231.3 | 241.4 | 267.8 | 291.2 |
| 40° | 194.4 | 207.9 | 220.0 | 247.7 | 269.9 |
| 42.5° | 171.0 | 184.8 | 198.6 | 227.1 | 247.7 |
| 45° | 148.3 | 161.3 | 179.8 | 205.8 | 223.4 |
| 47.5° | 132.0 | 140.4 | 161.8 | 183.5 | 200.3 |
| 50° | 121.1 | 124.5 | 144.2 | 163.4 | 177.3 |
| 52.5° | 110.2 | 112.7 | 126.1 | 143.7 | 154.2 |
| 55° | 100.2 | 102.2 | 109.8 | 124.5 | 131.2 |
| 57.5° | 89.3 | 91.4 | 97.6 | 106.0 | 109.8 |
| 60° | 80.5 | 82.1 | 87.2 | 88.4 | 87.6 |
| 62.5° | 71.7 | 74.2 | 76.7 | 73.8 | 72.5 |
| 65° | 63.3 | 67.0 | 66.6 | 62.9 | 62.0 |
| 67.5° | 55.7 | 59.5 | 57.4 | 53.6 | 52.4 |
| 70° | 48.2 | 52.0 | 49.0 | 45.3 | 44.0 |
| 72.5° | 41.1 | 45.3 | 40.6 | 37.3 | 36.5 |
| 75° | 34.4 | 37.7 | 33.1 | 30.6 | 29.3 |
| 77.5° | 28.1 | 30.6 | 26.4 | 24.3 | 23.5 |
| 80° | 21.8 | 23.5 | 20.1 | 18.9 | 18.4 |
| 82.5° | 15.9 | 16.8 | 14.7 | 15.5 | 15.1 |
| 85° | 10.5 | 10.9 | 11.3 | 11.7 | 10.5 |
| 87.5° | 5.0 | 7.1 | 7.1 | 6.7 | 5.4 |
| 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 | 13.25 | 14.71 | 13.61 | 15.02 | 15.34 | 14.31 | 15.77 | 14.68 | 16.09 | 16.40 |
| | 3H | 14.94 | 16.25 | 15.32 | 16.58 | 16.94 | 15.40 | 16.71 | 15.77 | 17.04 | 17.40 |
| | 4H | 15.60 | 16.82 | 16.00 | 17.17 | 17.55 | 15.80 | 17.03 | 16.20 | 17.37 | 17.75 |
| | 6H | 16.10 | 17.23 | 16.51 | 17.60 | 17.99 | 16.11 | 17.24 | 16.52 | 17.61 | 18.00 |
| | 8H | 16.27 | 17.35 | 16.70 | 17.74 | 18.14 | 16.24 | 17.32 | 16.67 | 17.71 | 18.11 |
| | 12H | 16.40 | 17.43 | 16.83 | 17.81 | 18.24 | 16.36 | 17.40 | 16.79 | 17.78 | 18.21 |
| 4H | 2H | 13.85 | 15.07 | 14.25 | 15.42 | 15.80 | 14.71 | 15.94 | 15.11 | 16.29 | 16.67 |
| | 3H | 15.77 | 16.79 | 16.18 | 17.19 | 17.59 | 16.03 | 17.05 | 16.44 | 17.45 | 17.85 |
| | 4H | 16.58 | 17.50 | 17.02 | 17.92 | 18.36 | 16.55 | 17.47 | 16.99 | 17.88 | 18.32 |
| | 6H | 17.23 | 18.03 | 17.69 | 18.47 | 18.93 | 16.99 | 17.78 | 17.44 | 18.22 | 18.69 |
| | 8H | 17.45 | 18.20 | 17.92 | 18.64 | 19.11 | 17.18 | 17.92 | 17.64 | 18.36 | 18.83 |
| | 12H | 17.63 | 18.29 | 18.11 | 18.77 | 19.24 | 17.36 | 18.02 | 17.84 | 18.50 | 18.97 |
| 8H | 4H | 16.82 | 17.57 | 17.29 | 18.01 | 18.48 | 16.80 | 17.54 | 17.26 | 17.99 | 18.46 |
| | 6H | 17.61 | 18.23 | 18.11 | 18.72 | 19.20 | 17.35 | 17.96 | 17.84 | 18.45 | 18.93 |
| | 8H | 17.92 | 18.48 | 18.44 | 18.99 | 19.48 | 17.62 | 18.18 | 18.14 | 18.69 | 19.18 |
| | 12H | 18.19 | 18.68 | 18.70 | 19.17 | 19.74 | 17.92 | 18.40 | 18.43 | 18.90 | 19.46 |
| 12H | 4H | 16.83 | 17.50 | 17.32 | 17.98 | 18.45 | 16.82 | 17.49 | 17.31 | 17.97 | 18.44 |
| | 6H | 17.64 | 18.20 | 18.16 | 18.71 | 19.20 | 17.40 | 17.95 | 17.91 | 18.46 | 18.95 |
| | 8H | 18.02 | 18.51 | 18.53 | 19.00 | 19.57 | 17.74 | 18.23 | 18.25 | 18.72 | 19.29 |