

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056496

Luminaire Tested: S125R3DR-H1090D835-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056496
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H1090D835-X4F0-XX-UDD-FLL-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

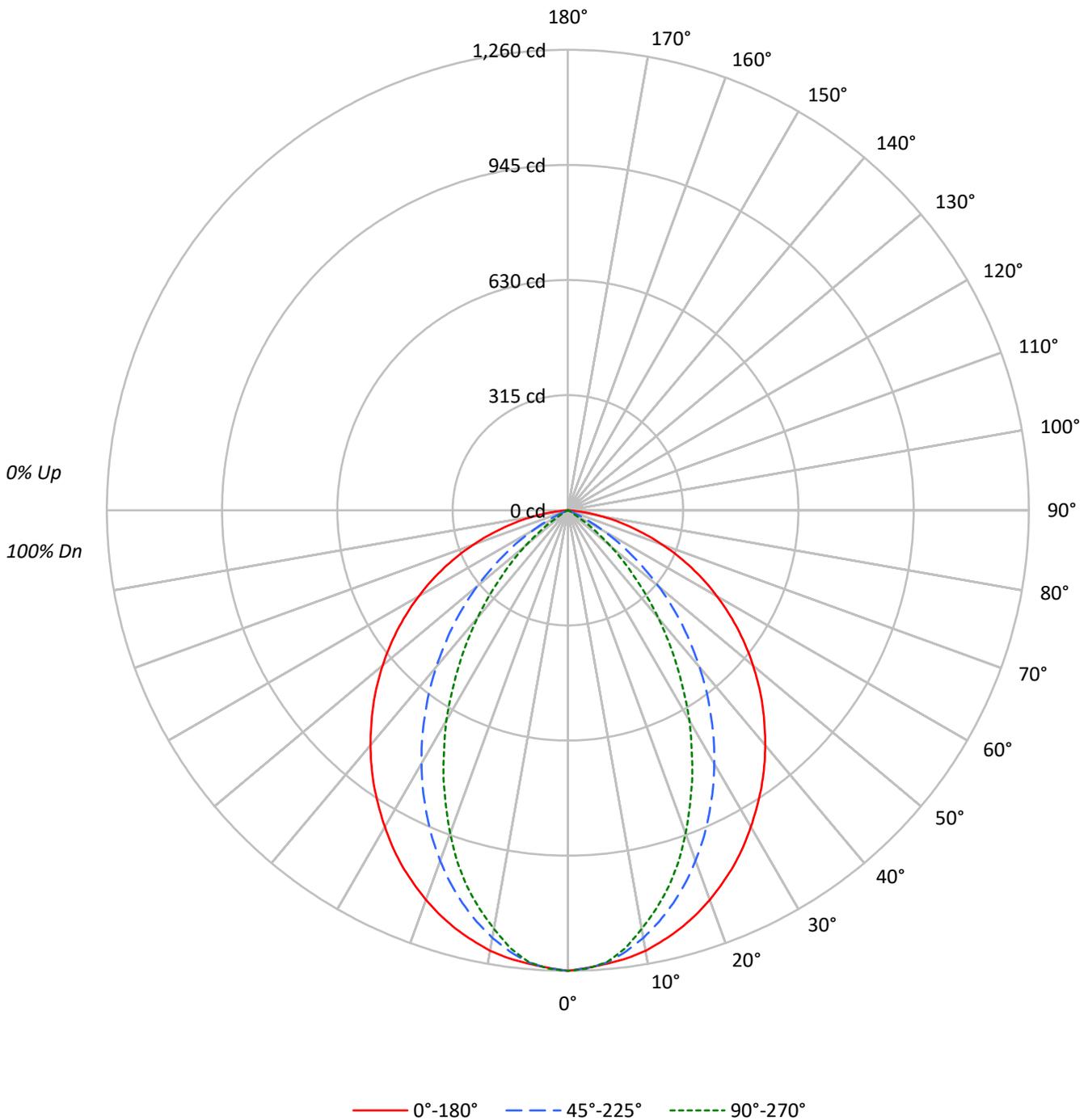
Lumens per Lamp: N/A
Luminaire Lumens: 2042.4 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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 | 111 | 108 | 104 | 101 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | | | 89 | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 88 | 84 | 89 | 85 | 82 | 86 | 83 | 80 | 78 | | | | | 78 | | | |
| 3 | 96 | 87 | 81 | 75 | 94 | 86 | 80 | 75 | 83 | 78 | 74 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | 69 | | | |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 66 | 76 | 70 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | 61 | | | |
| 5 | 83 | 72 | 64 | 59 | 81 | 71 | 64 | 58 | 69 | 63 | 58 | 67 | 62 | 57 | 65 | 61 | 57 | 55 | | | | | 55 | | | |
| 6 | 77 | 66 | 58 | 53 | 76 | 65 | 58 | 52 | 63 | 57 | 52 | 62 | 56 | 52 | 60 | 55 | 51 | 49 | | | | | 49 | | | |
| 7 | 72 | 61 | 53 | 47 | 71 | 60 | 52 | 47 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 50 | 46 | 45 | | | | | 45 | | | |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 46 | 42 | 41 | | | | | 41 | | | |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | 37 | | | |
| 10 | 60 | 48 | 41 | 36 | 59 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | 34 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8908 | 8908 | 8908 |
| 5° | 8836 | 8809 | 8800 |
| 10° | 8786 | 8526 | 8346 |
| 15° | 8674 | 8144 | 7797 |
| 20° | 8531 | 7676 | 7075 |
| 25° | 8368 | 7131 | 6274 |
| 30° | 8165 | 6534 | 5423 |
| 35° | 7965 | 5874 | 4483 |
| 40° | 7744 | 5163 | 3549 |
| 45° | 7516 | 4407 | 2572 |
| 50° | 7265 | 3558 | 1662 |
| 55° | 6988 | 2602 | 738 |
| 60° | 6656 | 1606 | 212 |
| 65° | 6246 | 585 | 125 |
| 70° | 5653 | 207 | 52 |
| 75° | 4911 | 68 | 33 |
| 80° | 3762 | 49 | 0 |
| 85° | 1720 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7516 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 117.0 | 5.7 |
| 10°-20° | 314.3 | 15.4 |
| 20°-30° | 425.2 | 20.8 |
| 30°-40° | 436.8 | 21.4 |
| 40°-50° | 361.8 | 17.7 |
| 50°-60° | 232.3 | 11.4 |
| 60°-70° | 112.2 | 5.5 |
| 70°-80° | 37.9 | 1.9 |
| 80°-90° | 4.9 | 0.2 |
| 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° | 856.5 | 41.9 |
| 0°-40° | 1293.2 | 63.3 |
| 0°-60° | 1887.4 | 92.4 |
| 0°-90° | 2042.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2042.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1260 | 1260 | 1260 | 1260 | 1260 | |
| 5° | 1245 | 1255 | 1241 | 1234 | 1240 | 118 |
| 15° | 1185 | 1170 | 1113 | 1074 | 1065 | 334 |
| 25° | 1073 | 1020 | 914 | 832 | 804 | 494 |
| 35° | 923 | 834 | 681 | 562 | 520 | 577 |
| 45° | 752 | 628 | 441 | 305 | 257 | 580 |
| 55° | 567 | 416 | 211 | 92 | 60 | 507 |
| 65° | 373 | 206 | 35 | 10 | 8 | 369 |
| 75° | 180 | 39 | 2 | 1 | 1 | 191 |
| 85° | 21 | 0 | 0 | 0 | 0 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056496

CATALOG NUMBER: S125R3DR-H1090D835-X4F0-XX-UDD-FLL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1260.1 | 1260.1 | 1260.1 | 1260.1 | 1260.1 |
| 2.5° | 1252.6 | 1262.6 | 1253.8 | 1252.6 | 1255.1 |
| 5° | 1245.1 | 1255.1 | 1241.4 | 1233.9 | 1240.1 |
| 7.5° | 1236.4 | 1241.4 | 1217.6 | 1205.1 | 1207.6 |
| 10° | 1223.9 | 1222.6 | 1187.7 | 1166.4 | 1162.7 |
| 12.5° | 1205.1 | 1198.9 | 1152.7 | 1122.7 | 1116.5 |
| 15° | 1185.2 | 1170.2 | 1112.7 | 1074.0 | 1065.3 |
| 17.5° | 1161.4 | 1137.7 | 1069.0 | 1019.1 | 1006.6 |
| 20° | 1134.0 | 1101.5 | 1020.3 | 959.1 | 940.4 |
| 22.5° | 1104.0 | 1062.8 | 969.1 | 896.7 | 871.7 |
| 25° | 1072.8 | 1020.3 | 914.2 | 831.7 | 804.3 |
| 27.5° | 1037.8 | 976.6 | 859.2 | 765.5 | 731.8 |
| 30° | 1000.3 | 930.4 | 800.5 | 698.1 | 664.4 |
| 32.5° | 961.6 | 884.2 | 741.8 | 630.7 | 589.5 |
| 35° | 922.9 | 834.2 | 680.6 | 562.0 | 519.5 |
| 37.5° | 881.7 | 784.3 | 620.7 | 497.0 | 450.8 |
| 40° | 839.2 | 733.1 | 559.5 | 429.6 | 384.6 |
| 42.5° | 795.5 | 680.6 | 498.3 | 365.9 | 319.7 |
| 45° | 751.8 | 628.2 | 440.8 | 304.7 | 257.3 |
| 47.5° | 706.8 | 574.5 | 380.9 | 244.8 | 203.6 |
| 50° | 660.6 | 522.0 | 323.5 | 191.1 | 151.1 |
| 52.5° | 614.4 | 468.3 | 264.8 | 138.6 | 102.4 |
| 55° | 567.0 | 415.9 | 211.1 | 92.4 | 59.9 |
| 57.5° | 519.5 | 362.2 | 161.1 | 51.2 | 22.5 |
| 60° | 470.8 | 311.0 | 113.6 | 17.5 | 15.0 |
| 62.5° | 423.4 | 256.0 | 71.2 | 13.7 | 11.2 |
| 65° | 373.4 | 206.1 | 35.0 | 10.0 | 7.5 |
| 67.5° | 324.7 | 158.6 | 15.0 | 6.2 | 3.7 |
| 70° | 273.5 | 114.9 | 10.0 | 3.7 | 2.5 |
| 72.5° | 226.0 | 73.7 | 6.2 | 2.5 | 1.2 |
| 75° | 179.8 | 38.7 | 2.5 | 1.2 | 1.2 |
| 77.5° | 134.9 | 16.2 | 1.2 | 1.2 | 1.2 |
| 80° | 92.4 | 7.5 | 1.2 | 1.2 | 0.0 |
| 82.5° | 54.9 | 2.5 | 1.2 | 1.2 | 0.0 |
| 85° | 21.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 1.2 | 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 | 18.67 | 20.05 | 19.03 | 20.36 | 20.68 | 3.53 | 4.92 | 3.90 | 5.23 | 5.54 |
| | 3H | 20.22 | 21.44 | 20.60 | 21.77 | 22.14 | 3.45 | 4.68 | 3.83 | 5.01 | 5.37 |
| | 4H | 20.74 | 21.88 | 21.14 | 22.23 | 22.62 | 3.39 | 4.53 | 3.79 | 4.88 | 5.26 |
| | 6H | 21.08 | 22.13 | 21.49 | 22.50 | 22.89 | 3.32 | 4.37 | 3.73 | 4.74 | 5.13 |
| | 8H | 21.16 | 22.16 | 21.59 | 22.55 | 22.95 | 3.27 | 4.27 | 3.70 | 4.66 | 5.07 |
| | 12H | 21.18 | 22.13 | 21.61 | 22.51 | 22.94 | 3.24 | 4.19 | 3.67 | 4.57 | 5.00 |
| 4H | 2H | 18.47 | 19.61 | 18.87 | 19.97 | 20.35 | 4.40 | 5.54 | 4.80 | 5.89 | 6.27 |
| | 3H | 20.08 | 21.02 | 20.50 | 21.42 | 21.82 | 4.35 | 5.28 | 4.76 | 5.68 | 6.08 |
| | 4H | 20.61 | 21.44 | 21.04 | 21.86 | 22.30 | 4.27 | 5.10 | 4.70 | 5.52 | 5.96 |
| | 6H | 20.98 | 21.70 | 21.44 | 22.15 | 22.61 | 4.20 | 4.92 | 4.66 | 5.37 | 5.83 |
| | 8H | 21.08 | 21.75 | 21.55 | 22.20 | 22.67 | 4.15 | 4.82 | 4.62 | 5.27 | 5.74 |
| | 12H | 21.12 | 21.71 | 21.60 | 22.19 | 22.66 | 4.11 | 4.70 | 4.59 | 5.18 | 5.66 |
| 8H | 4H | 20.48 | 21.15 | 20.95 | 21.60 | 22.07 | 5.29 | 5.96 | 5.76 | 6.41 | 6.88 |
| | 6H | 20.83 | 21.38 | 21.34 | 21.88 | 22.36 | 5.20 | 5.75 | 5.71 | 6.25 | 6.73 |
| | 8H | 20.93 | 21.42 | 21.45 | 21.94 | 22.43 | 5.15 | 5.64 | 5.67 | 6.16 | 6.65 |
| | 12H | 20.97 | 21.41 | 21.49 | 21.90 | 22.47 | 5.11 | 5.55 | 5.62 | 6.04 | 6.61 |
| 12H | 4H | 20.44 | 21.03 | 20.92 | 21.51 | 21.99 | 5.37 | 5.96 | 5.85 | 6.44 | 6.92 |
| | 6H | 20.77 | 21.27 | 21.29 | 21.78 | 22.27 | 5.27 | 5.76 | 5.79 | 6.27 | 6.77 |
| | 8H | 20.89 | 21.32 | 21.40 | 21.82 | 22.39 | 5.23 | 5.67 | 5.75 | 6.16 | 6.73 |