

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: P1056471

Luminaire Tested: S125R3DR-S850D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056471
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-S850D835-X4F0-XX-UDD-F-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

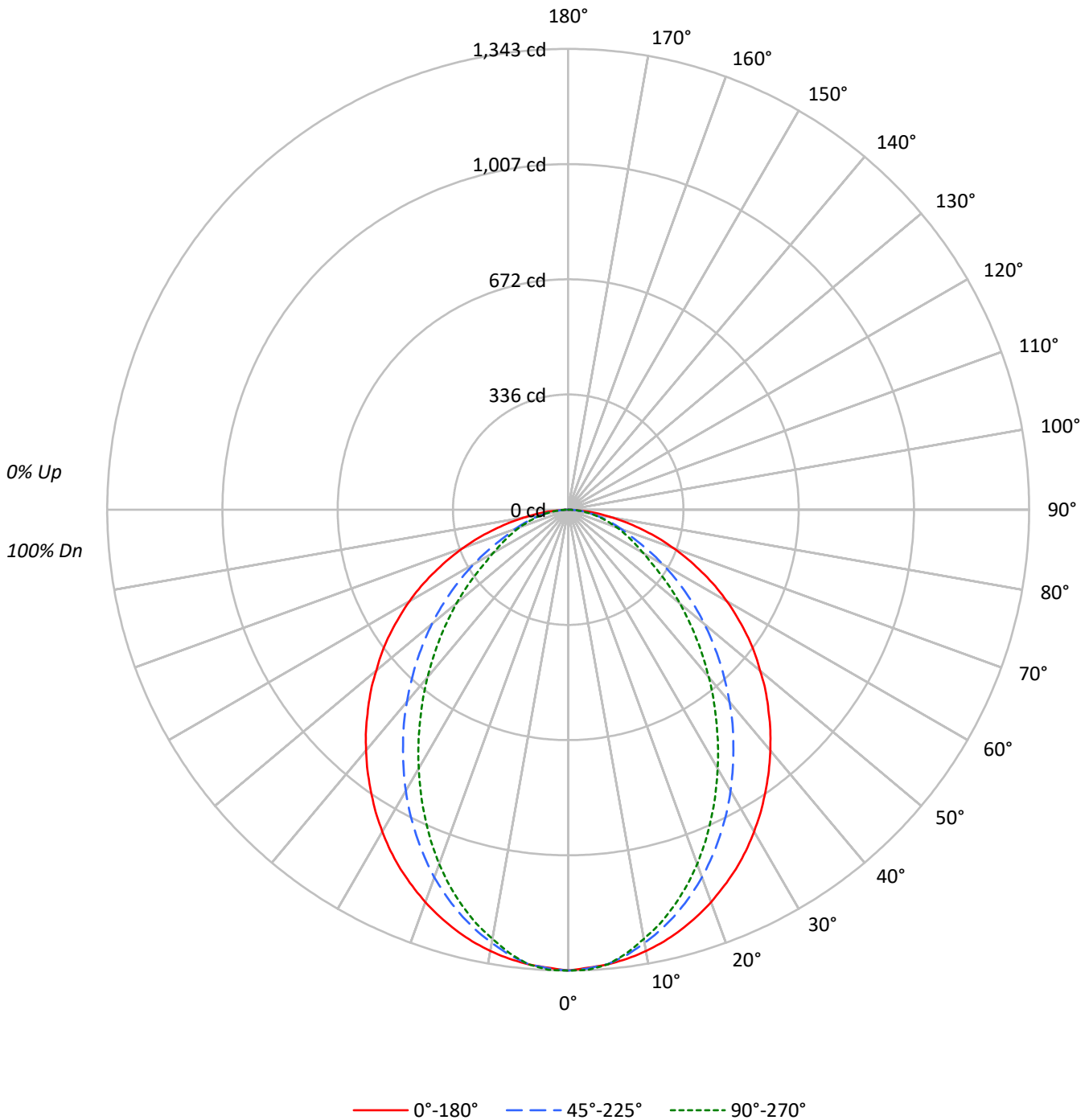
Lumens per Lamp: N/A
Luminaire Lumens: 2846.5 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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 | 105 | 101 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 90 | 88 | 86 |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 88 | 83 | 79 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 92 | 83 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 |
| 4 | 85 | 74 | 66 | 59 | 83 | 73 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 55 |
| 5 | 79 | 67 | 58 | 52 | 77 | 66 | 58 | 52 | 63 | 56 | 51 | 62 | 55 | 51 | 60 | 54 | 50 | 48 |
| 6 | 73 | 60 | 52 | 46 | 71 | 59 | 51 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 43 |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 46 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 8 | 63 | 51 | 42 | 37 | 62 | 50 | 42 | 37 | 49 | 42 | 37 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 47 | 39 | 33 | 58 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9494 | 9494 | 9494 |
| 5° | 9438 | 9431 | 9438 |
| 10° | 9375 | 9203 | 9117 |
| 15° | 9280 | 8922 | 8739 |
| 20° | 9156 | 8576 | 8268 |
| 25° | 9017 | 8167 | 7707 |
| 30° | 8840 | 7722 | 7110 |
| 35° | 8647 | 7241 | 6490 |
| 40° | 8453 | 6746 | 5878 |
| 45° | 8248 | 6228 | 5269 |
| 50° | 8028 | 5697 | 4663 |
| 55° | 7826 | 5115 | 4055 |
| 60° | 7550 | 4496 | 3563 |
| 65° | 7176 | 3814 | 3312 |
| 70° | 6738 | 3410 | 3100 |
| 75° | 6091 | 3141 | 2923 |
| 80° | 5292 | 2850 | 2728 |
| 85° | 4137 | 2514 | 2514 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8248 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 125.7 | 4.4 |
| 10°-20° | 345.0 | 12.1 |
| 20°-30° | 487.4 | 17.1 |
| 30°-40° | 536.5 | 18.8 |
| 40°-50° | 500.5 | 17.6 |
| 50°-60° | 399.5 | 14.0 |
| 60°-70° | 268.9 | 9.4 |
| 70°-80° | 143.2 | 5.0 |
| 80°-90° | 39.8 | 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° | 958.1 | 33.7 |
| 0°-40° | 1494.6 | 52.5 |
| 0°-60° | 2394.6 | 84.1 |
| 0°-90° | 2846.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2846.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1343 | 1343 | 1343 | 1343 | 1343 | |
| 5° | 1330 | 1341 | 1329 | 1325 | 1330 | 126 |
| 15° | 1268 | 1261 | 1219 | 1198 | 1194 | 357 |
| 25° | 1156 | 1121 | 1047 | 1001 | 988 | 532 |
| 35° | 1002 | 943 | 839 | 773 | 752 | 627 |
| 45° | 825 | 747 | 623 | 547 | 527 | 637 |
| 55° | 635 | 539 | 415 | 349 | 329 | 567 |
| 65° | 429 | 335 | 228 | 202 | 198 | 426 |
| 75° | 223 | 148 | 115 | 108 | 107 | 238 |
| 85° | 51 | 35 | 31 | 32 | 31 | 61 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056471

CATALOG NUMBER: S125R3DR-S850D835-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|------|-------|------|-------|------|
| 0° | 1343 | 1343 | 1343 | 1343 | 1343 |
| 2.5° | 1336 | 1347 | 1338 | 1340 | 1342 |
| 5° | 1330 | 1341 | 1329 | 1325 | 1330 |
| 7.5° | 1320 | 1329 | 1309 | 1300 | 1304 |
| 10° | 1306 | 1312 | 1282 | 1270 | 1270 |
| 12.5° | 1289 | 1289 | 1253 | 1236 | 1236 |
| 15° | 1268 | 1261 | 1219 | 1198 | 1194 |
| 17.5° | 1244 | 1231 | 1181 | 1154 | 1149 |
| 20° | 1217 | 1196 | 1140 | 1105 | 1099 |
| 22.5° | 1187 | 1160 | 1095 | 1052 | 1045 |
| 25° | 1156 | 1121 | 1047 | 1001 | 988 |
| 27.5° | 1121 | 1079 | 998 | 946 | 930 |
| 30° | 1083 | 1035 | 946 | 888 | 871 |
| 32.5° | 1044 | 990 | 893 | 831 | 812 |
| 35° | 1002 | 943 | 839 | 773 | 752 |
| 37.5° | 960 | 896 | 786 | 717 | 695 |
| 40° | 916 | 846 | 731 | 660 | 637 |
| 42.5° | 872 | 797 | 677 | 605 | 581 |
| 45° | 825 | 747 | 623 | 547 | 527 |
| 47.5° | 780 | 696 | 570 | 496 | 474 |
| 50° | 730 | 643 | 518 | 444 | 424 |
| 52.5° | 684 | 591 | 466 | 397 | 376 |
| 55° | 635 | 539 | 415 | 349 | 329 |
| 57.5° | 584 | 487 | 366 | 304 | 285 |
| 60° | 534 | 435 | 318 | 261 | 252 |
| 62.5° | 483 | 386 | 273 | 229 | 223 |
| 65° | 429 | 335 | 228 | 202 | 198 |
| 67.5° | 378 | 286 | 192 | 177 | 173 |
| 70° | 326 | 237 | 165 | 152 | 150 |
| 72.5° | 275 | 190 | 139 | 130 | 128 |
| 75° | 223 | 148 | 115 | 108 | 107 |
| 77.5° | 175 | 111 | 91 | 88 | 86 |
| 80° | 130 | 83 | 70 | 68 | 67 |
| 82.5° | 89 | 57 | 50 | 50 | 48 |
| 85° | 51 | 35 | 31 | 32 | 31 |
| 87.5° | 19 | 15 | 14 | 15 | 15 |
| 90° | 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 | 19.11 | 20.65 | 19.47 | 20.96 | 21.28 | 15.49 | 17.03 | 15.86 | 17.34 | 17.66 |
| | 3H | 20.89 | 22.28 | 21.27 | 22.60 | 22.97 | 16.97 | 18.35 | 17.34 | 18.68 | 19.04 |
| | 4H | 21.55 | 22.85 | 21.95 | 23.19 | 23.57 | 17.56 | 18.86 | 17.96 | 19.20 | 19.58 |
| | 6H | 22.02 | 23.22 | 22.44 | 23.59 | 23.98 | 18.02 | 19.22 | 18.43 | 19.59 | 19.98 |
| | 8H | 22.18 | 23.32 | 22.60 | 23.71 | 24.11 | 18.18 | 19.32 | 18.61 | 19.71 | 20.11 |
| | 12H | 22.27 | 23.37 | 22.70 | 23.75 | 24.18 | 18.29 | 19.39 | 18.72 | 19.77 | 20.20 |
| 4H | 2H | 19.24 | 20.54 | 19.64 | 20.89 | 21.27 | 16.17 | 17.47 | 16.57 | 17.81 | 18.19 |
| | 3H | 21.21 | 22.29 | 21.62 | 22.69 | 23.09 | 17.84 | 18.92 | 18.25 | 19.32 | 19.72 |
| | 4H | 21.96 | 22.93 | 22.39 | 23.35 | 23.78 | 18.55 | 19.52 | 18.98 | 19.94 | 20.37 |
| | 6H | 22.55 | 23.40 | 23.01 | 23.84 | 24.30 | 19.13 | 19.98 | 19.59 | 20.42 | 20.88 |
| | 8H | 22.76 | 23.55 | 23.22 | 24.00 | 24.46 | 19.34 | 20.13 | 19.80 | 20.58 | 21.04 |
| | 12H | 22.91 | 23.62 | 23.39 | 24.09 | 24.56 | 19.50 | 20.21 | 19.98 | 20.69 | 21.16 |
| 8H | 4H | 22.02 | 22.81 | 22.48 | 23.26 | 23.72 | 18.91 | 19.70 | 19.37 | 20.15 | 20.61 |
| | 6H | 22.68 | 23.34 | 23.18 | 23.83 | 24.30 | 19.61 | 20.27 | 20.11 | 20.76 | 21.24 |
| | 8H | 22.93 | 23.52 | 23.45 | 24.03 | 24.52 | 19.90 | 20.49 | 20.41 | 21.00 | 21.48 |
| | 12H | 23.14 | 23.66 | 23.65 | 24.16 | 24.72 | 20.14 | 20.66 | 20.65 | 21.15 | 21.72 |
| 12H | 4H | 22.01 | 22.72 | 22.50 | 23.20 | 23.67 | 18.96 | 19.67 | 19.44 | 20.15 | 20.62 |
| | 6H | 22.67 | 23.27 | 23.19 | 23.77 | 24.26 | 19.68 | 20.27 | 20.20 | 20.78 | 21.27 |
| | 8H | 22.97 | 23.49 | 23.48 | 23.98 | 24.55 | 20.03 | 20.55 | 20.54 | 21.04 | 21.60 |