

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: P1055224

Luminaire Tested: S122R3DR-S675D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055224
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S675D830-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

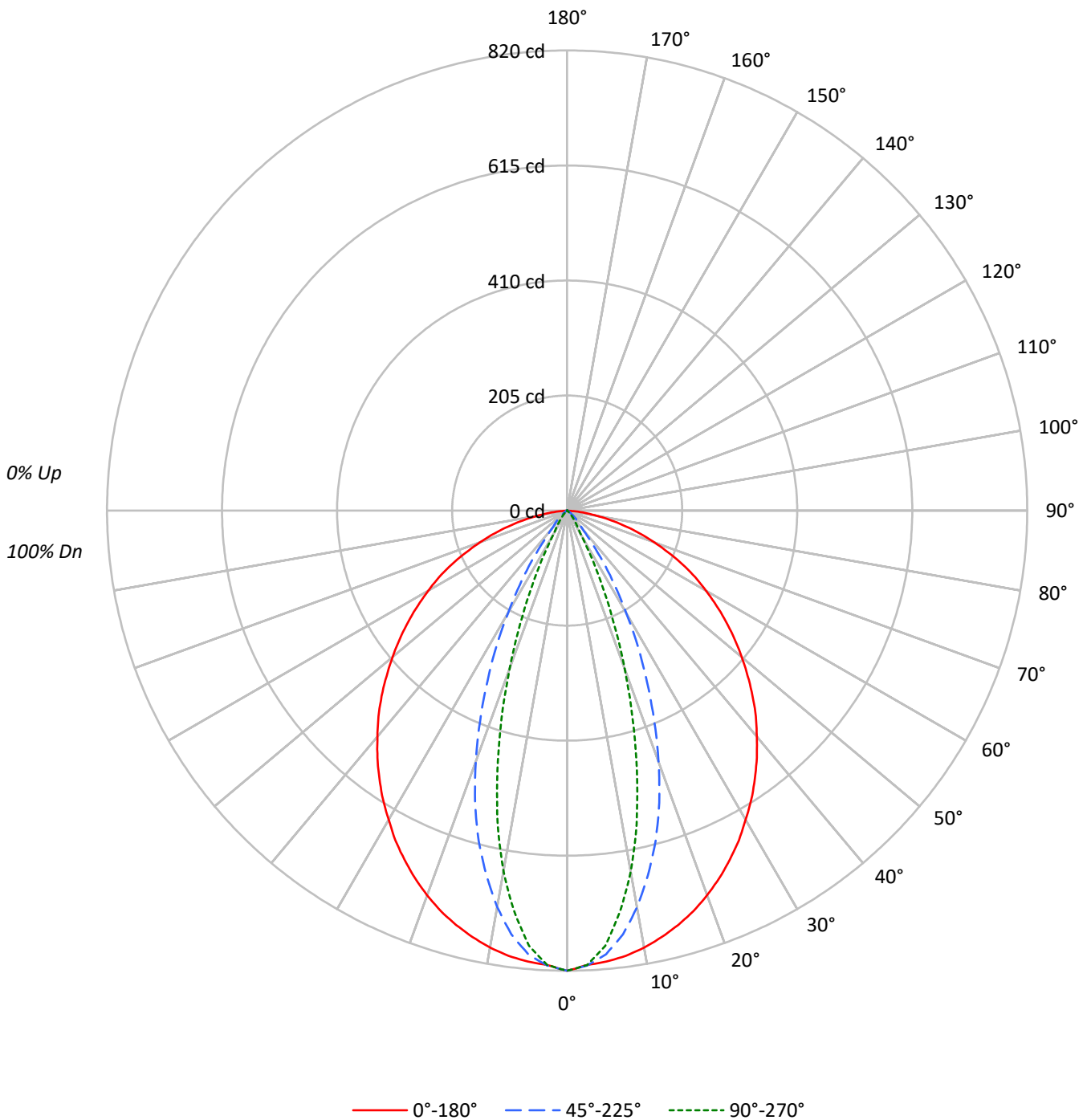
Lumens per Lamp: N/A
Luminaire Lumens: 746.0 lumens
Efficiency: N/A
Efficacy: 28.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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 | 112 | 109 | 106 | 103 | 110 | 106 | 104 | 101 | 102 | 100 | 98 | 99 | 97 | 95 | 95 | 94 | 92 | 91 |
| 2 | 105 | 99 | 94 | 90 | 103 | 97 | 93 | 89 | 94 | 90 | 87 | 91 | 88 | 85 | 88 | 86 | 83 | 81 |
| 3 | 98 | 91 | 85 | 80 | 96 | 89 | 84 | 79 | 86 | 82 | 78 | 84 | 80 | 77 | 82 | 78 | 75 | 74 |
| 4 | 92 | 83 | 77 | 72 | 90 | 82 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 70 | 76 | 72 | 69 | 67 |
| 5 | 87 | 77 | 70 | 65 | 85 | 76 | 70 | 65 | 74 | 69 | 64 | 72 | 68 | 64 | 71 | 66 | 63 | 61 |
| 6 | 82 | 72 | 65 | 60 | 80 | 71 | 64 | 59 | 69 | 63 | 59 | 68 | 63 | 59 | 66 | 62 | 58 | 56 |
| 7 | 77 | 67 | 60 | 55 | 76 | 66 | 59 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 62 | 57 | 54 | 52 |
| 8 | 73 | 62 | 56 | 51 | 72 | 62 | 55 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 49 |
| 9 | 70 | 59 | 52 | 48 | 68 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 45 |
| 10 | 66 | 55 | 49 | 45 | 65 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 48 | 44 | 43 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 15536 | 15536 | 15536 |
| 5° | 15344 | 15093 | 14806 |
| 10° | 15214 | 13800 | 12566 |
| 15° | 14993 | 11943 | 9411 |
| 20° | 14708 | 9597 | 6024 |
| 25° | 14345 | 7034 | 3094 |
| 30° | 13918 | 4599 | 1011 |
| 35° | 13493 | 2551 | 587 |
| 40° | 13007 | 1026 | 326 |
| 45° | 12526 | 681 | 126 |
| 50° | 11973 | 389 | 56 |
| 55° | 11425 | 188 | 30 |
| 60° | 10822 | 72 | 0 |
| 65° | 10185 | 40 | 0 |
| 70° | 9134 | 50 | 0 |
| 75° | 7869 | 66 | 0 |
| 80° | 5968 | 0 | 0 |
| 85° | 2456 | 196 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12526 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 73.5 | 9.9 |
| 10°-20° | 170.8 | 22.9 |
| 20°-30° | 173.4 | 23.2 |
| 30°-40° | 130.1 | 17.4 |
| 40°-50° | 91.1 | 12.2 |
| 50°-60° | 55.8 | 7.5 |
| 60°-70° | 33.2 | 4.5 |
| 70°-80° | 15.3 | 2.1 |
| 80°-90° | 2.7 | 0.4 |
| 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° | 417.7 | 56.0 |
| 0°-40° | 547.9 | 73.4 |
| 0°-60° | 694.8 | 93.1 |
| 0°-90° | 746.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 746.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 820 | 820 | 820 | 820 | 820 | |
| 5° | 807 | 814 | 794 | 778 | 778 | 77 |
| 15° | 764 | 723 | 609 | 516 | 480 | 215 |
| 25° | 686 | 566 | 336 | 192 | 148 | 316 |
| 35° | 583 | 380 | 110 | 33 | 25 | 365 |
| 45° | 468 | 201 | 25 | 8 | 5 | 360 |
| 55° | 346 | 61 | 6 | 2 | 1 | 309 |
| 65° | 227 | 18 | 1 | 1 | 0 | 224 |
| 75° | 108 | 2 | 1 | 1 | 0 | 114 |
| 85° | 11 | 0 | 1 | 1 | 0 | 19 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055224

CATALOG NUMBER: S122R3DR-S675D830-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 820.0 | 820.0 | 820.0 | 820.0 | 820.0 |
| 2.5° | 810.6 | 822.8 | 811.5 | 809.6 | 810.6 |
| 5° | 806.8 | 814.4 | 793.6 | 778.5 | 778.5 |
| 7.5° | 800.2 | 800.2 | 761.6 | 730.5 | 721.0 |
| 10° | 790.8 | 780.4 | 717.3 | 667.3 | 653.2 |
| 12.5° | 778.5 | 754.0 | 665.4 | 594.7 | 572.1 |
| 15° | 764.4 | 722.9 | 608.9 | 515.6 | 479.8 |
| 17.5° | 748.4 | 688.1 | 545.7 | 429.8 | 388.3 |
| 20° | 729.5 | 650.4 | 476.0 | 342.1 | 298.8 |
| 22.5° | 708.8 | 608.9 | 405.3 | 263.9 | 217.7 |
| 25° | 686.2 | 565.5 | 336.5 | 192.3 | 148.0 |
| 27.5° | 662.6 | 520.3 | 273.3 | 132.0 | 90.5 |
| 30° | 636.2 | 473.2 | 210.2 | 78.2 | 46.2 |
| 32.5° | 610.8 | 427.9 | 157.4 | 42.4 | 33.9 |
| 35° | 583.4 | 379.8 | 110.3 | 33.0 | 25.4 |
| 37.5° | 555.2 | 334.6 | 67.9 | 24.5 | 18.9 |
| 40° | 525.9 | 288.4 | 41.5 | 17.9 | 13.2 |
| 42.5° | 497.7 | 245.1 | 33.0 | 12.3 | 8.5 |
| 45° | 467.5 | 200.8 | 25.4 | 7.5 | 4.7 |
| 47.5° | 436.4 | 160.2 | 18.9 | 4.7 | 2.8 |
| 50° | 406.2 | 124.4 | 13.2 | 2.8 | 1.9 |
| 52.5° | 376.1 | 91.4 | 8.5 | 1.9 | 0.9 |
| 55° | 345.9 | 61.3 | 5.7 | 1.9 | 0.9 |
| 57.5° | 315.8 | 43.4 | 3.8 | 0.9 | 0.9 |
| 60° | 285.6 | 33.9 | 1.9 | 0.9 | 0.0 |
| 62.5° | 257.3 | 26.4 | 1.9 | 0.9 | 0.9 |
| 65° | 227.2 | 17.9 | 0.9 | 0.9 | 0.0 |
| 67.5° | 195.1 | 11.3 | 0.9 | 0.9 | 0.0 |
| 70° | 164.9 | 6.6 | 0.9 | 0.9 | 0.0 |
| 72.5° | 135.7 | 3.8 | 0.9 | 0.9 | 0.0 |
| 75° | 107.5 | 1.9 | 0.9 | 0.9 | 0.0 |
| 77.5° | 80.1 | 0.9 | 0.0 | 0.9 | 0.0 |
| 80° | 54.7 | 0.0 | 0.0 | 0.9 | 0.0 |
| 82.5° | 32.0 | 0.0 | 0.0 | 0.9 | 0.0 |
| 85° | 11.3 | 0.0 | 0.9 | 0.9 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.9 | 0.9 | 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 | 15.75 | 17.01 | 16.11 | 17.32 | 17.63 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 19.48 | 20.60 | 19.86 | 20.93 | 21.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 20.80 | 21.84 | 21.20 | 22.19 | 22.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.65 | 22.61 | 22.07 | 22.98 | 23.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.86 | 22.77 | 22.29 | 23.16 | 23.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 21.93 | 22.79 | 22.36 | 23.17 | 23.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 15.50 | 16.54 | 15.90 | 16.89 | 17.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 19.24 | 20.09 | 19.65 | 20.50 | 20.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 20.53 | 21.30 | 20.97 | 21.72 | 22.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.45 | 22.11 | 21.92 | 22.56 | 23.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.71 | 22.32 | 22.18 | 22.77 | 23.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 21.81 | 22.35 | 22.30 | 22.83 | 23.31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 20.39 | 21.00 | 20.86 | 21.45 | 21.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.29 | 21.79 | 21.79 | 22.28 | 22.77 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.55 | 21.99 | 22.07 | 22.51 | 23.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 21.66 | 22.05 | 22.18 | 22.55 | 23.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 20.34 | 20.88 | 20.83 | 21.36 | 21.84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 21.23 | 21.67 | 21.75 | 22.19 | 22.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 21.50 | 21.89 | 22.02 | 22.39 | 22.96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |