

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: P1055673

Luminaire Tested: S123R3DRP-S775D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055673
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DRP-S775D930-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

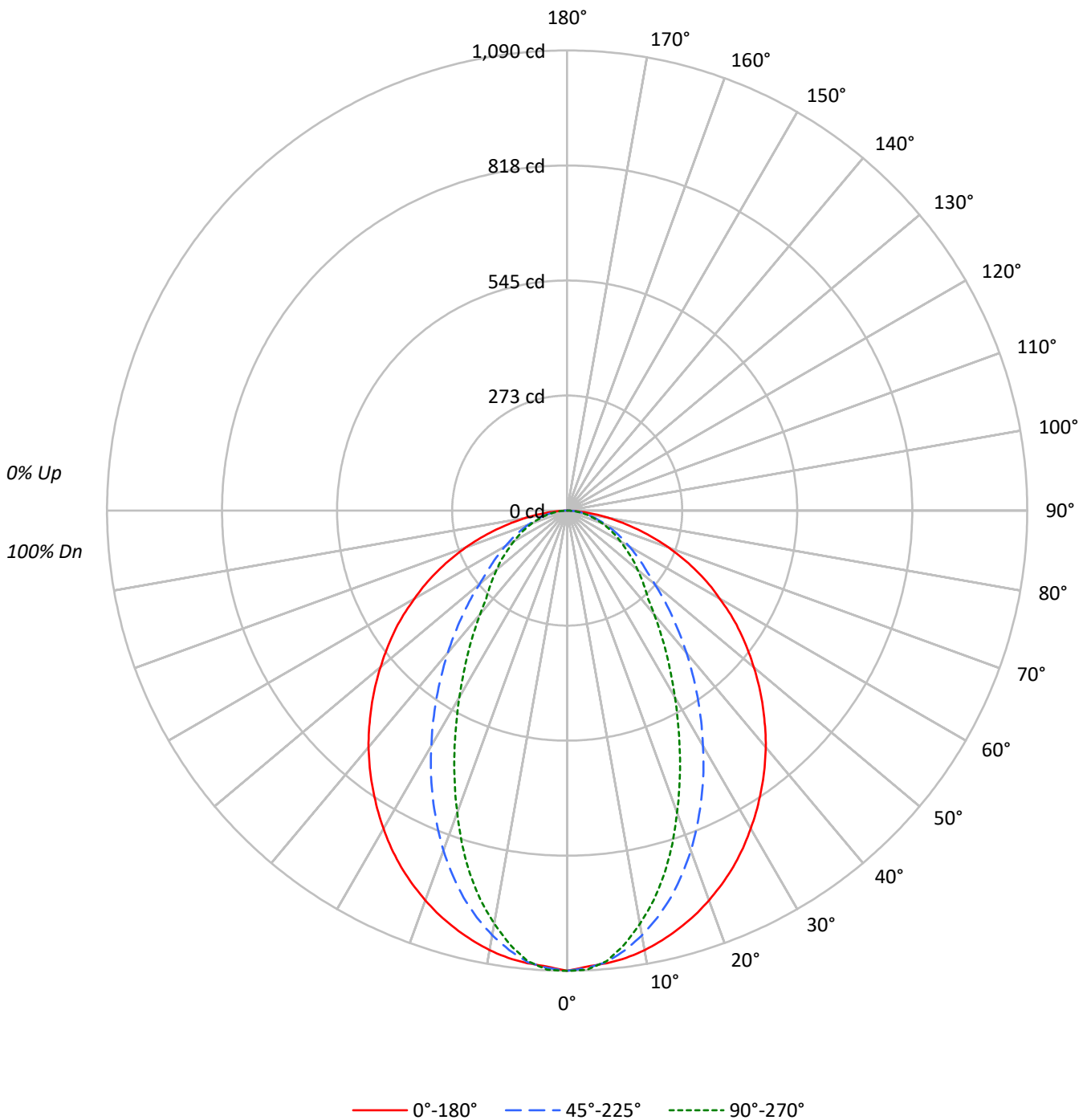
Lumens per Lamp: N/A
Luminaire Lumens: 1911.8 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 |
| 1 | 110 | 106 | 102 | 99 | 107 | 104 | 100 | 97 | 99 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 88 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 85 | 82 | 78 | 83 | 79 | 76 |
| 3 | 93 | 84 | 77 | 71 | 91 | 82 | 76 | 70 | 80 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 67 |
| 4 | 86 | 75 | 68 | 61 | 84 | 74 | 67 | 61 | 72 | 65 | 60 | 70 | 64 | 59 | 67 | 63 | 59 |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 60 | 54 | 65 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 |
| 6 | 75 | 62 | 54 | 48 | 73 | 61 | 54 | 48 | 60 | 53 | 48 | 58 | 52 | 47 | 57 | 51 | 47 |
| 7 | 70 | 57 | 49 | 43 | 68 | 56 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 43 | 52 | 47 | 42 |
| 8 | 65 | 53 | 45 | 39 | 64 | 52 | 44 | 39 | 51 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 |
| 10 | 58 | 45 | 38 | 33 | 56 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 33 | 42 | 37 | 33 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13143 | 13143 | 13143 |
| 5° | 13025 | 12994 | 12965 |
| 10° | 12945 | 12507 | 12166 |
| 15° | 12791 | 11845 | 11112 |
| 20° | 12604 | 10994 | 9770 |
| 25° | 12386 | 10010 | 8406 |
| 30° | 12110 | 8956 | 7106 |
| 35° | 11820 | 7920 | 5999 |
| 40° | 11522 | 6916 | 5043 |
| 45° | 11176 | 5964 | 4448 |
| 50° | 10826 | 5077 | 4083 |
| 55° | 10506 | 4523 | 3771 |
| 60° | 10065 | 4090 | 3518 |
| 65° | 9651 | 3746 | 3304 |
| 70° | 8996 | 3448 | 3106 |
| 75° | 8049 | 3191 | 2925 |
| 80° | 6908 | 2944 | 2715 |
| 85° | 4855 | 2711 | 2601 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11176 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 101.0 | 5.3 |
| 10°-20° | 267.3 | 14.0 |
| 20°-30° | 352.2 | 18.4 |
| 30°-40° | 357.4 | 18.7 |
| 40°-50° | 310.7 | 16.3 |
| 50°-60° | 243.4 | 12.7 |
| 60°-70° | 165.4 | 8.7 |
| 70°-80° | 89.6 | 4.7 |
| 80°-90° | 24.7 | 1.3 |
| 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° | 720.5 | 37.7 |
| 0°-40° | 1078.0 | 56.4 |
| 0°-60° | 1632.1 | 85.4 |
| 0°-90° | 1911.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1911.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1090 | 1090 | 1090 | 1090 | 1090 | |
| 5° | 1076 | 1089 | 1074 | 1064 | 1071 | 102 |
| 15° | 1025 | 1010 | 949 | 902 | 890 | 289 |
| 25° | 931 | 875 | 752 | 659 | 632 | 429 |
| 35° | 803 | 708 | 538 | 435 | 408 | 502 |
| 45° | 656 | 526 | 350 | 270 | 261 | 506 |
| 55° | 500 | 347 | 215 | 183 | 179 | 446 |
| 65° | 338 | 188 | 131 | 117 | 116 | 334 |
| 75° | 173 | 86 | 68 | 64 | 63 | 184 |
| 85° | 35 | 21 | 20 | 18 | 19 | 44 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1090.1 | 1090.1 | 1090.1 | 1090.1 | 1090.1 |
| 2.5° | 1081.1 | 1094.9 | 1084.3 | 1085.2 | 1088.4 |
| 5° | 1076.2 | 1089.2 | 1073.7 | 1064.0 | 1071.3 |
| 7.5° | 1068.9 | 1078.6 | 1050.1 | 1034.6 | 1037.1 |
| 10° | 1057.4 | 1060.7 | 1021.6 | 997.1 | 993.8 |
| 12.5° | 1042.0 | 1036.2 | 987.3 | 951.5 | 945.7 |
| 15° | 1024.8 | 1010.2 | 949.0 | 902.5 | 890.3 |
| 17.5° | 1005.3 | 980.8 | 904.2 | 847.1 | 828.3 |
| 20° | 982.4 | 948.2 | 856.9 | 784.3 | 761.5 |
| 22.5° | 958.0 | 913.9 | 805.5 | 719.9 | 696.3 |
| 25° | 931.1 | 874.8 | 752.5 | 658.8 | 631.9 |
| 27.5° | 901.7 | 835.7 | 698.7 | 598.4 | 568.3 |
| 30° | 869.9 | 794.9 | 643.3 | 539.7 | 510.4 |
| 32.5° | 837.3 | 751.7 | 590.3 | 485.1 | 456.6 |
| 35° | 803.1 | 707.7 | 538.1 | 435.4 | 407.6 |
| 37.5° | 768.0 | 662.8 | 487.5 | 388.1 | 362.0 |
| 40° | 732.1 | 617.2 | 439.4 | 344.1 | 320.4 |
| 42.5° | 693.8 | 571.5 | 393.0 | 302.5 | 284.5 |
| 45° | 655.5 | 525.9 | 349.8 | 269.9 | 260.9 |
| 47.5° | 617.2 | 479.4 | 309.0 | 247.0 | 238.9 |
| 50° | 577.2 | 434.6 | 270.7 | 225.8 | 217.7 |
| 52.5° | 538.1 | 390.5 | 238.9 | 205.5 | 199.7 |
| 55° | 499.8 | 347.3 | 215.2 | 183.4 | 179.4 |
| 57.5° | 459.8 | 304.9 | 191.6 | 166.3 | 161.4 |
| 60° | 417.4 | 264.2 | 169.6 | 148.4 | 145.9 |
| 62.5° | 379.1 | 225.8 | 150.0 | 132.9 | 130.4 |
| 65° | 338.3 | 187.5 | 131.3 | 117.4 | 115.8 |
| 67.5° | 296.8 | 155.7 | 114.1 | 102.7 | 101.9 |
| 70° | 255.2 | 131.3 | 97.8 | 88.9 | 88.1 |
| 72.5° | 214.4 | 108.4 | 82.3 | 76.6 | 75.0 |
| 75° | 172.8 | 86.4 | 68.5 | 63.6 | 62.8 |
| 77.5° | 135.3 | 66.9 | 54.6 | 51.4 | 50.5 |
| 80° | 99.5 | 49.7 | 42.4 | 39.9 | 39.1 |
| 82.5° | 65.2 | 34.2 | 30.2 | 28.5 | 28.5 |
| 85° | 35.1 | 21.2 | 19.6 | 17.9 | 18.8 |
| 87.5° | 12.2 | 9.0 | 9.0 | 8.2 | 9.0 |
| 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 | 19.51 | 21.00 | 19.87 | 21.31 | 21.63 | 14.66 | 16.15 | 15.02 | 16.46 | 16.78 |
| | 3H | 21.39 | 22.73 | 21.77 | 23.06 | 23.42 | 16.28 | 17.62 | 16.66 | 17.95 | 18.31 |
| | 4H | 22.15 | 23.41 | 22.55 | 23.75 | 24.13 | 16.92 | 18.18 | 17.32 | 18.53 | 18.90 |
| | 6H | 22.71 | 23.87 | 23.13 | 24.24 | 24.63 | 17.41 | 18.57 | 17.82 | 18.94 | 19.33 |
| | 8H | 22.89 | 23.99 | 23.31 | 24.38 | 24.78 | 17.58 | 18.68 | 18.01 | 19.07 | 19.48 |
| | 12H | 22.98 | 24.04 | 23.42 | 24.42 | 24.85 | 17.70 | 18.76 | 18.13 | 19.14 | 19.57 |
| 4H | 2H | 19.55 | 20.81 | 19.95 | 21.16 | 21.54 | 15.38 | 16.64 | 15.78 | 16.99 | 17.37 |
| | 3H | 21.57 | 22.61 | 21.98 | 23.01 | 23.42 | 17.21 | 18.25 | 17.62 | 18.65 | 19.05 |
| | 4H | 22.39 | 23.33 | 22.82 | 23.74 | 24.18 | 17.95 | 18.89 | 18.38 | 19.31 | 19.75 |
| | 6H | 23.07 | 23.89 | 23.53 | 24.33 | 24.79 | 18.56 | 19.38 | 19.02 | 19.82 | 20.28 |
| | 8H | 23.30 | 24.06 | 23.76 | 24.51 | 24.98 | 18.77 | 19.54 | 19.24 | 19.98 | 20.45 |
| | 12H | 23.45 | 24.13 | 23.94 | 24.61 | 25.08 | 18.94 | 19.62 | 19.43 | 20.10 | 20.57 |
| 8H | 4H | 22.41 | 23.18 | 22.88 | 23.62 | 24.09 | 18.34 | 19.10 | 18.80 | 19.54 | 20.01 |
| | 6H | 23.14 | 23.77 | 23.64 | 24.26 | 24.74 | 19.06 | 19.69 | 19.56 | 20.19 | 20.66 |
| | 8H | 23.41 | 23.98 | 23.92 | 24.49 | 24.97 | 19.35 | 19.92 | 19.86 | 20.43 | 20.91 |
| | 12H | 23.62 | 24.12 | 24.13 | 24.61 | 25.18 | 19.59 | 20.09 | 20.10 | 20.59 | 21.15 |
| 12H | 4H | 22.40 | 23.08 | 22.88 | 23.56 | 24.03 | 18.39 | 19.07 | 18.87 | 19.55 | 20.02 |
| | 6H | 23.12 | 23.69 | 23.64 | 24.20 | 24.69 | 19.15 | 19.71 | 19.66 | 20.22 | 20.71 |
| | 8H | 23.43 | 23.93 | 23.94 | 24.42 | 24.99 | 19.49 | 19.99 | 20.00 | 20.48 | 21.05 |