

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: P1439975

Luminaire Tested: S124DR-S675D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439975
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-S675D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

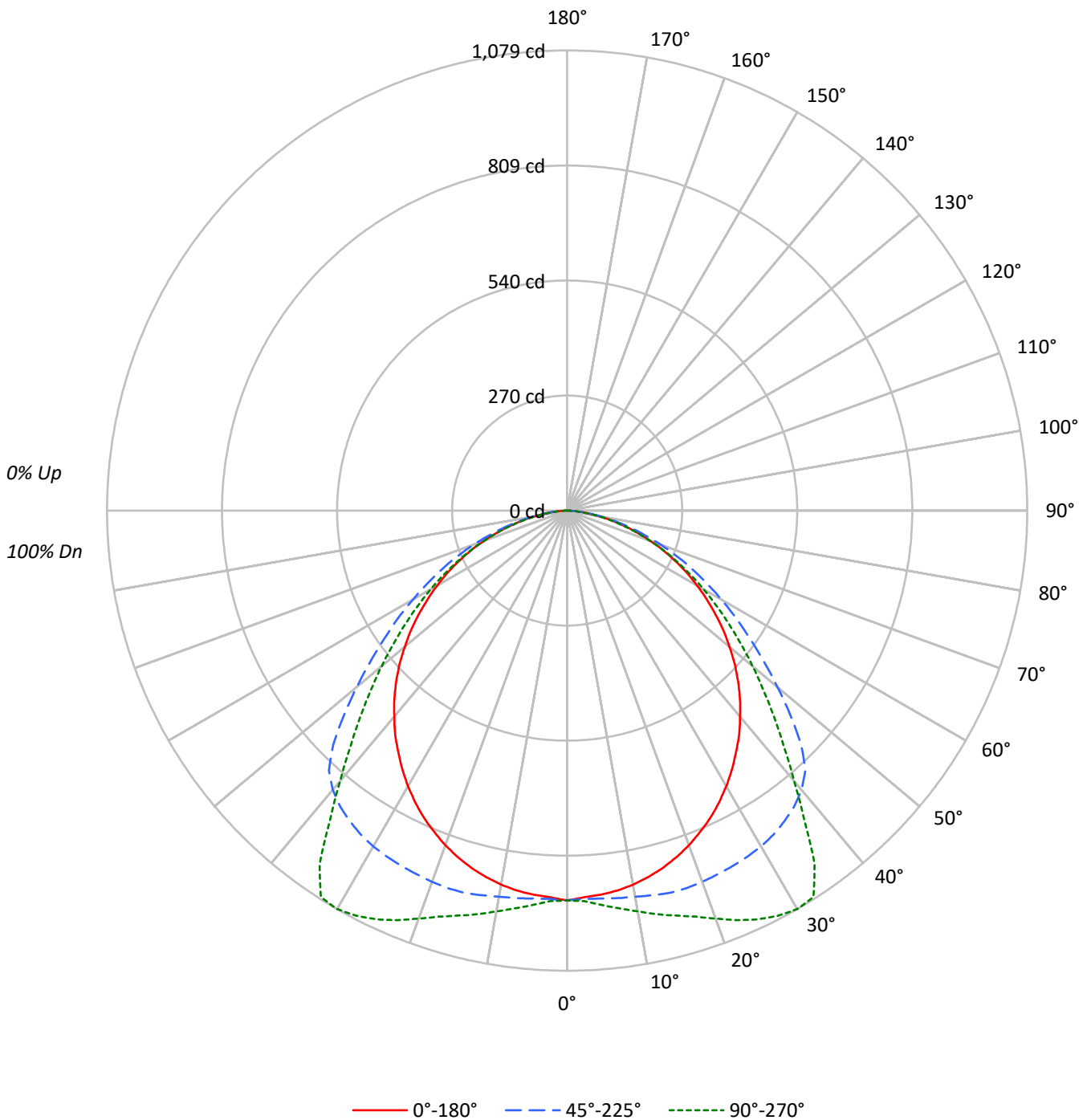
Lumens per Lamp: N/A
Luminaire Lumens: 2777.5 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 73 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 67 | 63 |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 66 | 60 | 55 | 63 | 58 | 54 |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 47 | 57 | 52 | 47 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 48 | 42 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 37 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|-------|
| 0° | 8080 | 8080 | 8080 |
| 5° | 8024 | 8104 | 8239 |
| 10° | 7996 | 8253 | 8567 |
| 15° | 7939 | 8497 | 8998 |
| 20° | 7856 | 8717 | 9578 |
| 25° | 7753 | 8968 | 10316 |
| 30° | 7618 | 9285 | 11016 |
| 35° | 7454 | 9593 | 10920 |
| 40° | 7277 | 9866 | 9554 |
| 45° | 7087 | 9700 | 8590 |
| 50° | 6835 | 8858 | 7809 |
| 55° | 6553 | 8060 | 7134 |
| 60° | 6233 | 7391 | 6534 |
| 65° | 5854 | 6736 | 5967 |
| 70° | 5356 | 6028 | 5333 |
| 75° | 4718 | 5179 | 4625 |
| 80° | 3880 | 4155 | 3742 |
| 85° | 2729 | 2820 | 2546 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9700 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 87.7 | 3.2 |
| 10°-20° | 262.8 | 9.5 |
| 20°-30° | 427.8 | 15.4 |
| 30°-40° | 543.2 | 19.6 |
| 40°-50° | 529.3 | 19.1 |
| 50°-60° | 434.0 | 15.6 |
| 60°-70° | 302.8 | 10.9 |
| 70°-80° | 155.4 | 5.6 |
| 80°-90° | 34.5 | 1.2 |
| 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° | 778.3 | 28.0 |
| 0°-40° | 1321.5 | 47.6 |
| 0°-60° | 2284.9 | 82.3 |
| 0°-90° | 2777.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2777.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|------|------|
| 0° | 914 | 914 | 914 | 914 | 914 | |
| 5° | 904 | 918 | 913 | 919 | 928 | 86 |
| 15° | 867 | 894 | 928 | 965 | 983 | 245 |
| 25° | 795 | 846 | 919 | 1014 | 1058 | 366 |
| 35° | 691 | 758 | 889 | 1018 | 1012 | 432 |
| 45° | 567 | 637 | 776 | 711 | 687 | 437 |
| 55° | 425 | 491 | 523 | 479 | 463 | 380 |
| 65° | 280 | 320 | 322 | 296 | 285 | 277 |
| 75° | 138 | 153 | 152 | 141 | 135 | 147 |
| 85° | 27 | 28 | 28 | 26 | 25 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1439975

CATALOG NUMBER: S124DR-S675D950-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|--------|--------|
| 0° | 913.9 | 913.9 | 913.9 | 913.9 | 913.9 |
| 2.5° | 907.7 | 919.3 | 911.3 | 914.8 | 916.6 |
| 5° | 904.1 | 917.5 | 913.1 | 919.3 | 928.3 |
| 7.5° | 898.7 | 913.9 | 916.6 | 929.2 | 940.9 |
| 10° | 890.6 | 908.6 | 919.3 | 940.9 | 954.3 |
| 12.5° | 879.9 | 902.3 | 923.8 | 953.4 | 969.6 |
| 15° | 867.3 | 894.2 | 928.3 | 965.1 | 983.0 |
| 17.5° | 852.1 | 884.4 | 928.3 | 974.0 | 998.3 |
| 20° | 835.0 | 872.7 | 926.5 | 985.7 | 1018.0 |
| 22.5° | 815.3 | 860.1 | 922.9 | 999.2 | 1039.5 |
| 25° | 794.7 | 845.8 | 919.3 | 1014.4 | 1057.5 |
| 27.5° | 771.3 | 828.7 | 914.8 | 1026.1 | 1070.9 |
| 30° | 746.2 | 808.1 | 909.5 | 1031.4 | 1079.0 |
| 32.5° | 719.3 | 783.9 | 900.5 | 1031.4 | 1074.5 |
| 35° | 690.6 | 757.9 | 888.8 | 1018.0 | 1011.7 |
| 37.5° | 662.8 | 730.1 | 874.5 | 952.5 | 913.1 |
| 40° | 630.5 | 700.5 | 854.8 | 860.1 | 827.8 |
| 42.5° | 600.0 | 669.1 | 826.9 | 782.1 | 753.4 |
| 45° | 566.8 | 636.8 | 775.8 | 711.2 | 687.0 |
| 47.5° | 532.8 | 601.8 | 709.5 | 647.6 | 625.1 |
| 50° | 496.9 | 566.8 | 644.0 | 587.5 | 567.7 |
| 52.5° | 461.9 | 529.2 | 581.2 | 531.9 | 513.0 |
| 55° | 425.1 | 490.6 | 522.9 | 478.9 | 462.8 |
| 57.5° | 388.4 | 451.1 | 470.0 | 429.6 | 414.4 |
| 60° | 352.5 | 409.0 | 418.0 | 383.0 | 369.5 |
| 62.5° | 316.6 | 365.0 | 368.6 | 338.1 | 326.5 |
| 65° | 279.8 | 320.2 | 322.0 | 296.0 | 285.2 |
| 67.5° | 244.0 | 277.1 | 277.1 | 254.7 | 245.8 |
| 70° | 207.2 | 235.0 | 233.2 | 215.3 | 206.3 |
| 72.5° | 172.2 | 191.9 | 190.1 | 176.7 | 170.4 |
| 75° | 138.1 | 153.4 | 151.6 | 140.8 | 135.4 |
| 77.5° | 105.8 | 116.6 | 114.8 | 107.6 | 103.1 |
| 80° | 76.2 | 82.5 | 81.6 | 76.2 | 73.5 |
| 82.5° | 50.2 | 53.8 | 52.0 | 48.4 | 46.6 |
| 85° | 26.9 | 27.8 | 27.8 | 26.0 | 25.1 |
| 87.5° | 9.9 | 9.9 | 9.9 | 9.9 | 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 | 18.94 | 20.54 | 19.31 | 20.86 | 21.17 | 18.73 | 20.33 | 19.09 | 20.64 | 20.96 |
| | 3H | 20.45 | 21.89 | 20.82 | 22.21 | 22.57 | 20.20 | 21.64 | 20.58 | 21.97 | 22.33 |
| | 4H | 20.95 | 22.30 | 21.35 | 22.65 | 23.03 | 20.70 | 22.05 | 21.09 | 22.40 | 22.77 |
| | 6H | 21.27 | 22.52 | 21.68 | 22.89 | 23.28 | 21.01 | 22.26 | 21.42 | 22.63 | 23.02 |
| | 8H | 21.35 | 22.55 | 21.78 | 22.94 | 23.34 | 21.09 | 22.28 | 21.51 | 22.67 | 23.07 |
| | 12H | 21.39 | 22.54 | 21.82 | 22.92 | 23.35 | 21.12 | 22.27 | 21.55 | 22.65 | 23.08 |
| 4H | 2H | 19.57 | 20.92 | 19.96 | 21.27 | 21.64 | 19.40 | 20.75 | 19.79 | 21.10 | 21.47 |
| | 3H | 21.30 | 22.42 | 21.71 | 22.82 | 23.22 | 21.06 | 22.19 | 21.47 | 22.59 | 22.99 |
| | 4H | 21.92 | 22.94 | 22.36 | 23.35 | 23.79 | 21.66 | 22.68 | 22.09 | 23.09 | 23.53 |
| | 6H | 22.35 | 23.24 | 22.81 | 23.68 | 24.13 | 22.07 | 22.96 | 22.53 | 23.40 | 23.86 |
| | 8H | 22.46 | 23.29 | 22.92 | 23.73 | 24.20 | 22.18 | 23.00 | 22.64 | 23.45 | 23.91 |
| | 12H | 22.53 | 23.27 | 23.01 | 23.75 | 24.22 | 22.23 | 22.98 | 22.72 | 23.45 | 23.92 |
| 8H | 4H | 22.17 | 22.99 | 22.63 | 23.44 | 23.90 | 21.93 | 22.76 | 22.39 | 23.20 | 23.67 |
| | 6H | 22.69 | 23.37 | 23.18 | 23.86 | 24.34 | 22.43 | 23.12 | 22.93 | 23.61 | 24.08 |
| | 8H | 22.85 | 23.47 | 23.36 | 23.98 | 24.46 | 22.58 | 23.20 | 23.09 | 23.70 | 24.19 |
| | 12H | 22.96 | 23.51 | 23.47 | 24.00 | 24.56 | 22.68 | 23.22 | 23.19 | 23.72 | 24.28 |
| 12H | 4H | 22.18 | 22.92 | 22.66 | 23.39 | 23.86 | 21.95 | 22.69 | 22.43 | 23.17 | 23.64 |
| | 6H | 22.71 | 23.33 | 23.22 | 23.83 | 24.32 | 22.46 | 23.08 | 22.97 | 23.59 | 24.07 |
| | 8H | 22.92 | 23.46 | 23.43 | 23.95 | 24.52 | 22.66 | 23.20 | 23.16 | 23.69 | 24.25 |