

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: P1056061

Luminaire Tested: S124R3DRP-S795D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056061
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DRP-S795D830-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

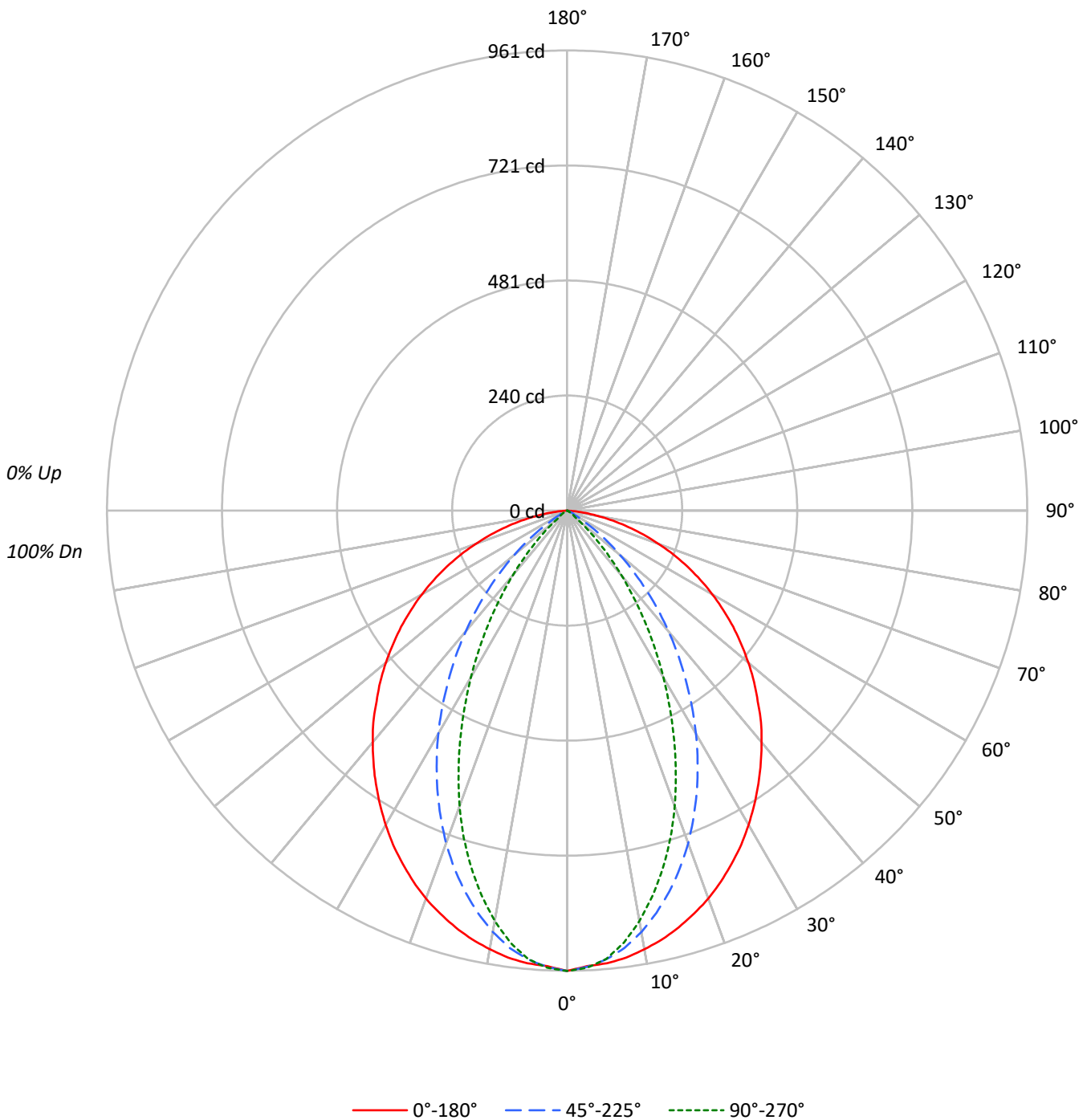
Lumens per Lamp: N/A
Luminaire Lumens: 1343.7 lumens
Efficiency: N/A
Efficacy: 50.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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 | 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 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99 | 97 | 98 | 96 | 94 | 95 | 93 | 92 | 90 |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 85 | 90 | 86 | 83 | 87 | 84 | 82 | 80 |
| 3 | 97 | 89 | 82 | 77 | 95 | 87 | 81 | 77 | 84 | 79 | 75 | 82 | 78 | 74 | 79 | 76 | 73 | 71 |
| 4 | 90 | 81 | 74 | 68 | 88 | 80 | 73 | 68 | 77 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 64 |
| 5 | 84 | 74 | 66 | 61 | 83 | 73 | 66 | 61 | 71 | 65 | 60 | 69 | 64 | 60 | 67 | 63 | 59 | 57 |
| 6 | 79 | 68 | 60 | 55 | 77 | 67 | 60 | 55 | 65 | 59 | 54 | 64 | 58 | 54 | 62 | 57 | 54 | 52 |
| 7 | 74 | 63 | 55 | 50 | 73 | 62 | 55 | 50 | 60 | 54 | 50 | 59 | 53 | 49 | 58 | 53 | 49 | 47 |
| 8 | 70 | 58 | 51 | 46 | 68 | 57 | 50 | 46 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 43 |
| 9 | 66 | 54 | 47 | 42 | 64 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 50 | 45 | 41 | 40 |
| 10 | 62 | 50 | 43 | 39 | 61 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 42 | 39 | 47 | 42 | 38 | 37 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8500 | 8500 | 8500 |
| 5° | 8423 | 8349 | 8340 |
| 10° | 8352 | 8022 | 7811 |
| 15° | 8248 | 7540 | 7075 |
| 20° | 8114 | 6953 | 6182 |
| 25° | 7935 | 6262 | 5159 |
| 30° | 7736 | 5495 | 4099 |
| 35° | 7518 | 4659 | 3052 |
| 40° | 7289 | 3796 | 2035 |
| 45° | 7036 | 2900 | 1119 |
| 50° | 6793 | 1983 | 311 |
| 55° | 6523 | 1074 | 203 |
| 60° | 6200 | 334 | 117 |
| 65° | 5797 | 218 | 59 |
| 70° | 5237 | 98 | 23 |
| 75° | 4509 | 31 | 0 |
| 80° | 3406 | 0 | 0 |
| 85° | 1430 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7036 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 88.7 | 6.6 |
| 10°-20° | 232.8 | 17.3 |
| 20°-30° | 300.9 | 22.4 |
| 30°-40° | 287.6 | 21.4 |
| 40°-50° | 215.1 | 16.0 |
| 50°-60° | 128.0 | 9.5 |
| 60°-70° | 65.0 | 4.8 |
| 70°-80° | 22.6 | 1.7 |
| 80°-90° | 3.1 | 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° | 622.4 | 46.3 |
| 0°-40° | 910.0 | 67.7 |
| 0°-60° | 1253.1 | 93.3 |
| 0°-90° | 1343.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1343.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 961 | 961 | 961 | 961 | 961 | |
| 5° | 949 | 957 | 941 | 936 | 940 | 90 |
| 15° | 901 | 882 | 824 | 785 | 773 | 254 |
| 25° | 813 | 757 | 642 | 557 | 529 | 375 |
| 35° | 696 | 600 | 432 | 321 | 283 | 436 |
| 45° | 563 | 432 | 232 | 124 | 90 | 435 |
| 55° | 423 | 263 | 70 | 16 | 13 | 378 |
| 65° | 277 | 106 | 10 | 4 | 3 | 274 |
| 75° | 132 | 14 | 1 | 1 | 0 | 140 |
| 85° | 14 | 0 | 0 | 0 | 0 | 23 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056061

CATALOG NUMBER: S124R3DRP-S795D830-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 961.4 | 961.4 | 961.4 | 961.4 | 961.4 |
| 2.5° | 952.0 | 963.3 | 953.9 | 954.8 | 955.7 |
| 5° | 949.1 | 956.7 | 940.7 | 935.9 | 939.7 |
| 7.5° | 941.6 | 944.4 | 920.9 | 908.6 | 909.6 |
| 10° | 930.3 | 927.5 | 893.5 | 872.8 | 870.0 |
| 12.5° | 917.1 | 907.7 | 860.5 | 830.4 | 823.8 |
| 15° | 901.1 | 882.2 | 823.8 | 785.1 | 772.9 |
| 17.5° | 882.2 | 854.9 | 783.3 | 732.4 | 717.3 |
| 20° | 862.4 | 824.7 | 739.0 | 675.8 | 657.0 |
| 22.5° | 838.9 | 790.8 | 690.9 | 616.4 | 592.9 |
| 25° | 813.4 | 756.9 | 641.9 | 557.0 | 528.8 |
| 27.5° | 787.0 | 720.1 | 590.0 | 496.7 | 463.7 |
| 30° | 757.8 | 681.5 | 538.2 | 435.5 | 401.5 |
| 32.5° | 727.6 | 641.9 | 484.5 | 378.9 | 341.2 |
| 35° | 696.5 | 600.4 | 431.7 | 321.4 | 282.8 |
| 37.5° | 664.5 | 558.9 | 380.8 | 266.7 | 227.2 |
| 40° | 631.5 | 516.5 | 328.9 | 214.9 | 176.3 |
| 42.5° | 599.5 | 474.1 | 279.9 | 165.9 | 130.1 |
| 45° | 562.7 | 431.7 | 231.9 | 123.5 | 89.5 |
| 47.5° | 529.7 | 390.2 | 185.7 | 83.9 | 52.8 |
| 50° | 493.9 | 345.9 | 144.2 | 49.0 | 22.6 |
| 52.5° | 458.1 | 304.4 | 105.6 | 21.7 | 17.0 |
| 55° | 423.2 | 263.0 | 69.7 | 16.0 | 13.2 |
| 57.5° | 386.4 | 221.5 | 37.7 | 12.3 | 9.4 |
| 60° | 350.6 | 181.0 | 18.9 | 9.4 | 6.6 |
| 62.5° | 313.9 | 142.3 | 15.1 | 5.7 | 3.8 |
| 65° | 277.1 | 106.5 | 10.4 | 3.8 | 2.8 |
| 67.5° | 240.3 | 72.6 | 6.6 | 1.9 | 0.9 |
| 70° | 202.6 | 44.3 | 3.8 | 0.9 | 0.9 |
| 72.5° | 166.8 | 22.6 | 1.9 | 0.9 | 0.9 |
| 75° | 132.0 | 14.1 | 0.9 | 0.9 | 0.0 |
| 77.5° | 98.0 | 7.5 | 0.9 | 0.9 | 0.0 |
| 80° | 66.9 | 2.8 | 0.0 | 0.0 | 0.0 |
| 82.5° | 38.6 | 0.9 | 0.0 | 0.0 | 0.0 |
| 85° | 14.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 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 | 17.89 | 19.22 | 18.26 | 19.53 | 19.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 19.43 | 20.61 | 19.81 | 20.94 | 21.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 20.03 | 21.12 | 20.43 | 21.47 | 21.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 20.44 | 21.45 | 20.86 | 21.82 | 22.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 20.54 | 21.49 | 20.97 | 21.89 | 22.29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 20.56 | 21.47 | 20.99 | 21.85 | 22.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 17.67 | 18.76 | 18.07 | 19.11 | 19.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 19.23 | 20.13 | 19.64 | 20.53 | 20.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 19.81 | 20.61 | 20.25 | 21.03 | 21.47 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 20.27 | 20.96 | 20.74 | 21.41 | 21.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 20.39 | 21.03 | 20.86 | 21.48 | 21.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 20.43 | 21.00 | 20.92 | 21.48 | 21.96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 19.68 | 20.32 | 20.15 | 20.77 | 21.24 | 0.00 | 0.00 | 0.00 | 0.28 | 0.75 |
| | 6H | 20.12 | 20.64 | 20.62 | 21.14 | 21.62 | 0.00 | 0.00 | 0.00 | 0.12 | 0.60 |
| | 8H | 20.24 | 20.70 | 20.76 | 21.22 | 21.71 | 0.00 | 0.00 | 0.00 | 0.02 | 0.51 |
| | 12H | 20.28 | 20.70 | 20.80 | 21.19 | 21.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.47 |
| 12H | 4H | 19.63 | 20.20 | 20.12 | 20.68 | 21.16 | 0.00 | 0.16 | 0.09 | 0.65 | 1.12 |
| | 6H | 20.06 | 20.53 | 20.58 | 21.04 | 21.53 | 0.00 | 0.00 | 0.01 | 0.47 | 0.97 |
| | 8H | 20.19 | 20.60 | 20.71 | 21.10 | 21.67 | 0.00 | 0.00 | 0.00 | 0.36 | 0.93 |