

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: P1055256

Luminaire Tested: S122R3DRP-S865D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055256
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DRP-S865D835-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

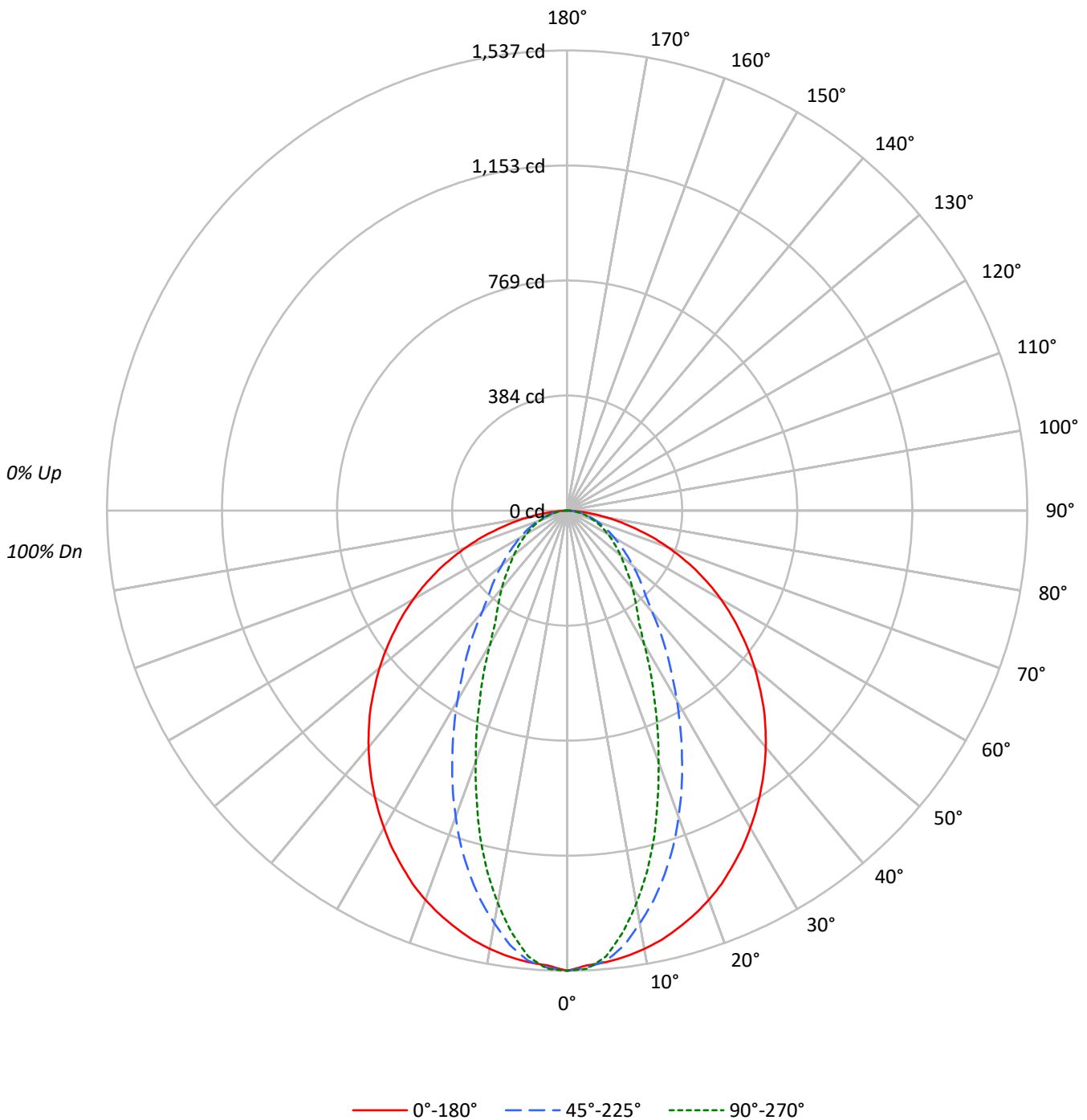
Lumens per Lamp: N/A
Luminaire Lumens: 2324.7 lumens
Efficiency: N/A
Efficacy: 67.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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

TEST NUMBER: P105256

CATALOG NUMBER: S122R3DRP-S865D835-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P1055256

CATALOG NUMBER: S122R3DRP-S865D835-X4F0-XX-UDD-F-W

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 | 106 | 102 | 99 | 108 | 104 | 101 | 97 | 100 | 97 | 94 | 96 | 94 | 92 | 92 | 91 | 89 | 87 |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 66 | 61 | 71 | 65 | 61 | 68 | 64 | 60 | 58 |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 52 |
| 6 | 75 | 63 | 55 | 50 | 74 | 63 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 46 |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 9 | 62 | 50 | 43 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 |
| 10 | 59 | 47 | 39 | 35 | 58 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 29118 | 29118 | 29118 |
| 5° | 28790 | 28693 | 28423 |
| 10° | 28603 | 26922 | 25637 |
| 15° | 28280 | 24677 | 22054 |
| 20° | 27904 | 21944 | 18006 |
| 25° | 27347 | 18967 | 14372 |
| 30° | 26764 | 16025 | 11216 |
| 35° | 26156 | 13405 | 9423 |
| 40° | 25521 | 10870 | 8392 |
| 45° | 24859 | 9504 | 7505 |
| 50° | 24128 | 8409 | 6856 |
| 55° | 23303 | 7597 | 6368 |
| 60° | 22496 | 6915 | 5941 |
| 65° | 21429 | 6339 | 5590 |
| 70° | 19859 | 5911 | 5268 |
| 75° | 17590 | 5358 | 4985 |
| 80° | 15002 | 5052 | 4626 |
| 85° | 10326 | 4478 | 4195 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 24859 cd/sqm



TEST NUMBER: P1055256

CATALOG NUMBER: S122R3DRP-S865D835-X4F0-XX-UDD-F-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 140.8 | 6.1 |
| 10°-20° | 355.6 | 15.3 |
| 20°-30° | 438.2 | 18.8 |
| 30°-40° | 420.4 | 18.1 |
| 40°-50° | 362.6 | 15.6 |
| 50°-60° | 281.3 | 12.1 |
| 60°-70° | 192.6 | 8.3 |
| 70°-80° | 104.6 | 4.5 |
| 80°-90° | 28.7 | 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° | 934.6 | 40.2 |
| 0°-40° | 1355.0 | 58.3 |
| 0°-60° | 1998.9 | 86.0 |
| 0°-90° | 2324.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2324.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1537 | 1537 | 1537 | 1537 | 1537 | |
| 5° | 1514 | 1536 | 1509 | 1489 | 1494 | 144 |
| 15° | 1442 | 1398 | 1258 | 1155 | 1124 | 407 |
| 25° | 1308 | 1168 | 907 | 740 | 688 | 603 |
| 35° | 1131 | 897 | 580 | 432 | 407 | 707 |
| 45° | 928 | 624 | 355 | 293 | 280 | 715 |
| 55° | 706 | 375 | 230 | 199 | 193 | 631 |
| 65° | 478 | 204 | 141 | 128 | 125 | 472 |
| 75° | 240 | 94 | 73 | 69 | 68 | 257 |
| 85° | 48 | 23 | 21 | 21 | 19 | 61 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055256

CATALOG NUMBER: S122R3DRP-S865D835-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1536.9 | 1536.9 | 1536.9 | 1536.9 | 1536.9 |
| 2.5° | 1520.2 | 1545.9 | 1527.9 | 1527.9 | 1531.8 |
| 5° | 1513.8 | 1535.7 | 1508.7 | 1489.4 | 1494.5 |
| 7.5° | 1502.2 | 1517.7 | 1463.7 | 1422.6 | 1421.3 |
| 10° | 1486.8 | 1488.1 | 1399.4 | 1345.5 | 1332.6 |
| 12.5° | 1467.5 | 1447.0 | 1333.9 | 1252.9 | 1233.7 |
| 15° | 1441.8 | 1398.2 | 1258.1 | 1155.3 | 1124.4 |
| 17.5° | 1414.9 | 1348.0 | 1177.1 | 1048.6 | 1006.2 |
| 20° | 1384.0 | 1287.6 | 1088.4 | 942.0 | 893.1 |
| 22.5° | 1349.3 | 1229.8 | 999.8 | 839.1 | 787.7 |
| 25° | 1308.2 | 1168.1 | 907.3 | 740.2 | 687.5 |
| 27.5° | 1268.4 | 1105.2 | 818.6 | 652.8 | 598.8 |
| 30° | 1223.4 | 1037.0 | 732.5 | 569.3 | 512.7 |
| 32.5° | 1178.4 | 967.7 | 652.8 | 489.6 | 447.2 |
| 35° | 1130.9 | 897.0 | 579.6 | 431.8 | 407.4 |
| 37.5° | 1082.0 | 827.6 | 510.2 | 393.2 | 371.4 |
| 40° | 1031.9 | 758.2 | 439.5 | 356.0 | 339.3 |
| 42.5° | 980.5 | 690.1 | 390.7 | 325.1 | 309.7 |
| 45° | 927.8 | 624.5 | 354.7 | 293.0 | 280.1 |
| 47.5° | 871.3 | 559.0 | 320.0 | 266.0 | 254.4 |
| 50° | 818.6 | 496.0 | 285.3 | 241.6 | 232.6 |
| 52.5° | 762.0 | 434.4 | 257.0 | 219.7 | 212.0 |
| 55° | 705.5 | 375.2 | 230.0 | 199.2 | 192.8 |
| 57.5° | 650.2 | 318.7 | 204.3 | 179.9 | 174.8 |
| 60° | 593.7 | 273.7 | 182.5 | 161.9 | 156.8 |
| 62.5° | 535.9 | 237.7 | 161.9 | 145.2 | 140.1 |
| 65° | 478.0 | 204.3 | 141.4 | 128.5 | 124.7 |
| 67.5° | 417.6 | 172.2 | 123.4 | 113.1 | 110.5 |
| 70° | 358.5 | 143.9 | 106.7 | 97.7 | 95.1 |
| 72.5° | 300.7 | 116.9 | 90.0 | 83.5 | 81.0 |
| 75° | 240.3 | 93.8 | 73.2 | 69.4 | 68.1 |
| 77.5° | 187.6 | 73.2 | 59.1 | 56.5 | 55.3 |
| 80° | 137.5 | 54.0 | 46.3 | 43.7 | 42.4 |
| 82.5° | 91.2 | 37.3 | 33.4 | 32.1 | 30.8 |
| 85° | 47.5 | 23.1 | 20.6 | 20.6 | 19.3 |
| 87.5° | 15.4 | 10.3 | 10.3 | 10.3 | 9.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P1055256
 CATALOG NUMBER: S122R3DRP-S865D835-X4F0-XX-UDD-F-W

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 | 21.32 | 22.79 | 21.69 | 23.10 | 23.42 | 16.13 | 17.60 | 16.49 | 17.91 | 18.22 |
| | 3H | 23.65 | 24.97 | 24.03 | 25.30 | 25.66 | 17.78 | 19.09 | 18.15 | 19.42 | 19.78 |
| | 4H | 24.55 | 25.78 | 24.95 | 26.13 | 26.51 | 18.41 | 19.65 | 18.81 | 19.99 | 20.37 |
| | 6H | 25.21 | 26.35 | 25.62 | 26.72 | 27.11 | 18.90 | 20.04 | 19.32 | 20.41 | 20.80 |
| | 8H | 25.42 | 26.50 | 25.84 | 26.89 | 27.29 | 19.07 | 20.16 | 19.50 | 20.55 | 20.95 |
| | 12H | 25.53 | 26.57 | 25.96 | 26.95 | 27.38 | 19.19 | 20.23 | 19.62 | 20.61 | 21.04 |
| 4H | 2H | 21.34 | 22.57 | 21.74 | 22.92 | 23.30 | 16.84 | 18.08 | 17.24 | 18.43 | 18.81 |
| | 3H | 23.75 | 24.78 | 24.16 | 25.18 | 25.58 | 18.69 | 19.72 | 19.10 | 20.12 | 20.52 |
| | 4H | 24.68 | 25.60 | 25.11 | 26.02 | 26.46 | 19.44 | 20.36 | 19.87 | 20.78 | 21.22 |
| | 6H | 25.46 | 26.26 | 25.92 | 26.70 | 27.16 | 20.05 | 20.86 | 20.51 | 21.30 | 21.76 |
| | 8H | 25.73 | 26.48 | 26.19 | 26.92 | 27.39 | 20.27 | 21.02 | 20.73 | 21.46 | 21.93 |
| | 12H | 25.90 | 26.57 | 26.39 | 27.05 | 27.52 | 20.43 | 21.10 | 20.91 | 21.58 | 22.05 |
| 8H | 4H | 24.67 | 25.42 | 25.14 | 25.87 | 26.34 | 19.82 | 20.57 | 20.28 | 21.01 | 21.48 |
| | 6H | 25.48 | 26.10 | 25.98 | 26.59 | 27.07 | 20.56 | 21.17 | 21.05 | 21.67 | 22.14 |
| | 8H | 25.78 | 26.34 | 26.30 | 26.85 | 27.34 | 20.85 | 21.40 | 21.37 | 21.91 | 22.40 |
| | 12H | 26.01 | 26.50 | 26.52 | 26.99 | 27.56 | 21.09 | 21.58 | 21.61 | 22.08 | 22.64 |
| 12H | 4H | 24.65 | 25.32 | 25.14 | 25.80 | 26.27 | 19.87 | 20.54 | 20.36 | 21.02 | 21.49 |
| | 6H | 25.46 | 26.01 | 25.97 | 26.52 | 27.01 | 20.64 | 21.20 | 21.16 | 21.71 | 22.20 |
| | 8H | 25.79 | 26.28 | 26.30 | 26.77 | 27.34 | 21.00 | 21.49 | 21.51 | 21.98 | 22.54 |