

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: P1055262

Luminaire Tested: S122R3DRP-S865D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055262
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-S865D850-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

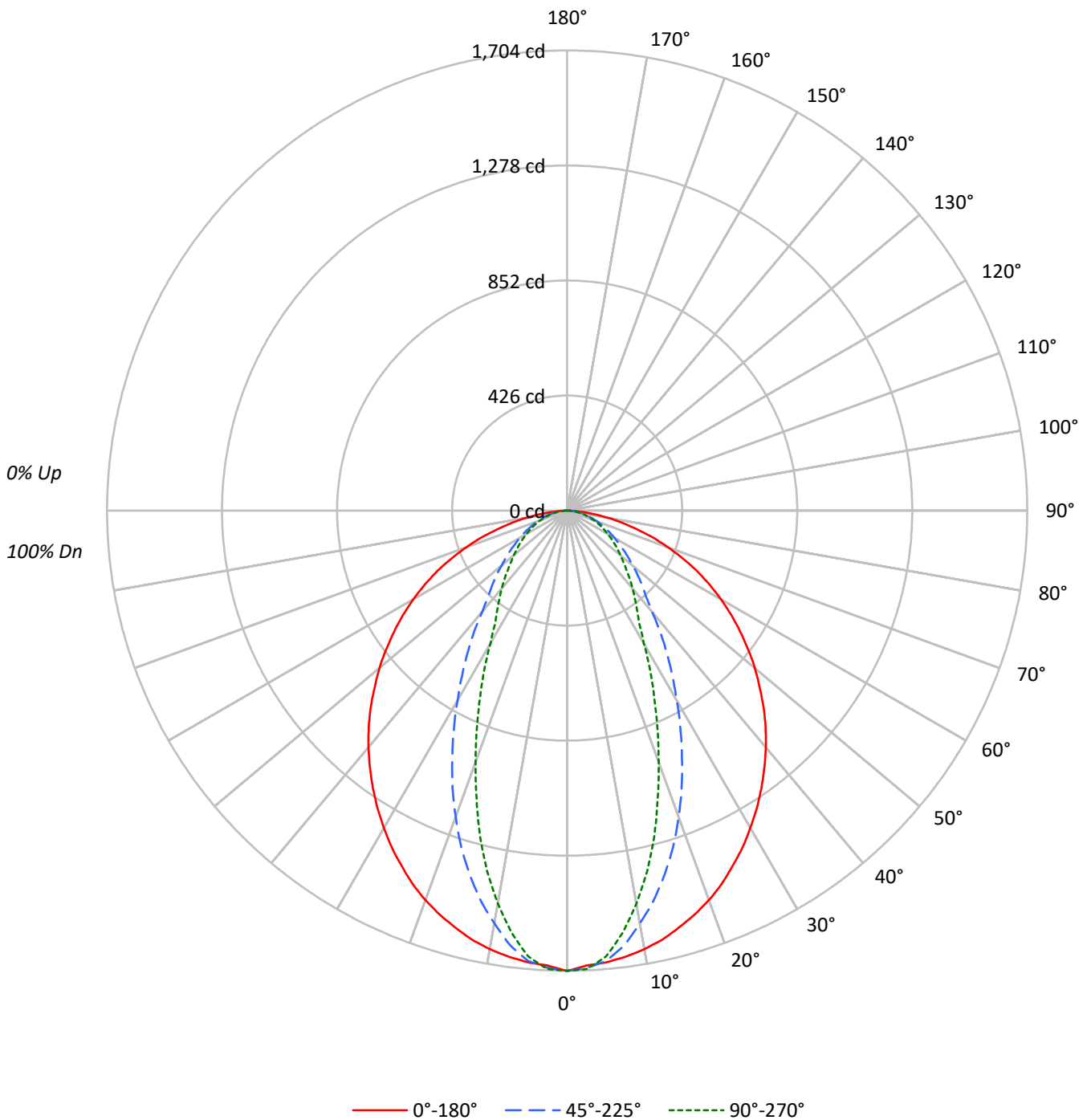
Lumens per Lamp: N/A
Luminaire Lumens: 2578.1 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (Ain): 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 | 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° | 32293 | 32293 | 32293 |
| 5° | 31928 | 31819 | 31521 |
| 10° | 31722 | 29858 | 28432 |
| 15° | 31363 | 27366 | 24459 |
| 20° | 30946 | 24337 | 19970 |
| 25° | 30328 | 21032 | 15938 |
| 30° | 29680 | 17771 | 12439 |
| 35° | 29006 | 14865 | 10450 |
| 40° | 28303 | 12054 | 9304 |
| 45° | 27568 | 10538 | 8325 |
| 50° | 26757 | 9326 | 7601 |
| 55° | 25844 | 8426 | 7062 |
| 60° | 24948 | 7669 | 6589 |
| 65° | 23769 | 7029 | 6195 |
| 70° | 22025 | 6553 | 5844 |
| 75° | 19508 | 5944 | 5527 |
| 80° | 16638 | 5597 | 5128 |
| 85° | 11456 | 4956 | 4652 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 27568 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 156.2 | 6.1 |
| 10°-20° | 394.3 | 15.3 |
| 20°-30° | 485.9 | 18.8 |
| 30°-40° | 466.2 | 18.1 |
| 40°-50° | 402.1 | 15.6 |
| 50°-60° | 312.0 | 12.1 |
| 60°-70° | 213.6 | 8.3 |
| 70°-80° | 116.0 | 4.5 |
| 80°-90° | 31.8 | 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° | 1036.4 | 40.2 |
| 0°-40° | 1502.6 | 58.3 |
| 0°-60° | 2216.7 | 86.0 |
| 0°-90° | 2578.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2578.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1704 | 1704 | 1704 | 1704 | 1704 | |
| 5° | 1679 | 1703 | 1673 | 1652 | 1657 | 159 |
| 15° | 1599 | 1550 | 1395 | 1281 | 1247 | 451 |
| 25° | 1451 | 1295 | 1006 | 821 | 762 | 669 |
| 35° | 1254 | 995 | 643 | 479 | 452 | 784 |
| 45° | 1029 | 693 | 393 | 325 | 311 | 793 |
| 55° | 782 | 416 | 255 | 221 | 214 | 700 |
| 65° | 530 | 227 | 157 | 142 | 138 | 523 |
| 75° | 266 | 104 | 81 | 77 | 76 | 286 |
| 85° | 53 | 26 | 23 | 23 | 21 | 67 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1704.5 | 1704.5 | 1704.5 | 1704.5 | 1704.5 |
| 2.5° | 1685.9 | 1714.4 | 1694.5 | 1694.5 | 1698.8 |
| 5° | 1678.8 | 1703.0 | 1673.1 | 1651.7 | 1657.4 |
| 7.5° | 1666.0 | 1683.1 | 1623.2 | 1577.6 | 1576.2 |
| 10° | 1648.9 | 1650.3 | 1552.0 | 1492.1 | 1477.9 |
| 12.5° | 1627.5 | 1604.7 | 1479.3 | 1389.5 | 1368.1 |
| 15° | 1599.0 | 1550.5 | 1395.2 | 1281.2 | 1247.0 |
| 17.5° | 1569.1 | 1495.0 | 1305.4 | 1162.9 | 1115.9 |
| 20° | 1534.9 | 1428.0 | 1207.1 | 1044.6 | 990.5 |
| 22.5° | 1496.4 | 1363.9 | 1108.8 | 930.6 | 873.6 |
| 25° | 1450.8 | 1295.4 | 1006.1 | 820.9 | 762.4 |
| 27.5° | 1406.6 | 1225.6 | 907.8 | 724.0 | 664.1 |
| 30° | 1356.7 | 1150.1 | 812.3 | 631.3 | 568.6 |
| 32.5° | 1306.9 | 1073.1 | 724.0 | 543.0 | 495.9 |
| 35° | 1254.1 | 994.7 | 642.7 | 478.8 | 451.8 |
| 37.5° | 1200.0 | 917.8 | 565.8 | 436.1 | 411.9 |
| 40° | 1144.4 | 840.8 | 487.4 | 394.8 | 376.2 |
| 42.5° | 1087.4 | 765.3 | 433.2 | 360.6 | 343.5 |
| 45° | 1028.9 | 692.6 | 393.3 | 324.9 | 310.7 |
| 47.5° | 966.2 | 619.9 | 354.9 | 295.0 | 282.2 |
| 50° | 907.8 | 550.1 | 316.4 | 267.9 | 257.9 |
| 52.5° | 845.1 | 481.7 | 285.0 | 243.7 | 235.1 |
| 55° | 782.4 | 416.1 | 255.1 | 220.9 | 213.8 |
| 57.5° | 721.1 | 353.4 | 226.6 | 199.5 | 193.8 |
| 60° | 658.4 | 303.6 | 202.4 | 179.6 | 173.9 |
| 62.5° | 594.3 | 263.7 | 179.6 | 161.0 | 155.3 |
| 65° | 530.2 | 226.6 | 156.8 | 142.5 | 138.2 |
| 67.5° | 463.2 | 191.0 | 136.8 | 125.4 | 122.6 |
| 70° | 397.6 | 159.6 | 118.3 | 108.3 | 105.5 |
| 72.5° | 333.5 | 129.7 | 99.8 | 92.6 | 89.8 |
| 75° | 266.5 | 104.0 | 81.2 | 77.0 | 75.5 |
| 77.5° | 208.1 | 81.2 | 65.6 | 62.7 | 61.3 |
| 80° | 152.5 | 59.9 | 51.3 | 48.5 | 47.0 |
| 82.5° | 101.2 | 41.3 | 37.1 | 35.6 | 34.2 |
| 85° | 52.7 | 25.7 | 22.8 | 22.8 | 21.4 |
| 87.5° | 17.1 | 11.4 | 11.4 | 11.4 | 10.0 |
| 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 | 21.68 | 23.15 | 22.05 | 23.46 | 23.78 | 16.49 | 17.95 | 16.85 | 18.27 | 18.58 |
| | 3H | 24.01 | 25.33 | 24.39 | 25.66 | 26.02 | 18.13 | 19.45 | 18.51 | 19.78 | 20.14 |
| | 4H | 24.91 | 26.14 | 25.31 | 26.49 | 26.87 | 18.77 | 20.00 | 19.17 | 20.35 | 20.73 |
| | 6H | 25.57 | 26.71 | 25.98 | 27.08 | 27.47 | 19.26 | 20.40 | 19.68 | 20.77 | 21.16 |
| | 8H | 25.78 | 26.86 | 26.20 | 27.25 | 27.65 | 19.43 | 20.52 | 19.86 | 20.91 | 21.31 |
| | 12H | 25.89 | 26.93 | 26.32 | 27.31 | 27.74 | 19.55 | 20.59 | 19.98 | 20.97 | 21.40 |
| 4H | 2H | 21.70 | 22.93 | 22.10 | 23.28 | 23.66 | 17.20 | 18.44 | 17.60 | 18.79 | 19.17 |
| | 3H | 24.11 | 25.13 | 24.52 | 25.54 | 25.94 | 19.05 | 20.08 | 19.46 | 20.48 | 20.88 |
| | 4H | 25.04 | 25.96 | 25.47 | 26.38 | 26.82 | 19.80 | 20.72 | 20.23 | 21.14 | 21.58 |
| | 6H | 25.82 | 26.62 | 26.28 | 27.06 | 27.52 | 20.41 | 21.22 | 20.87 | 21.66 | 22.12 |
| | 8H | 26.09 | 26.84 | 26.55 | 27.28 | 27.75 | 20.63 | 21.38 | 21.09 | 21.82 | 22.29 |
| | 12H | 26.27 | 26.93 | 26.75 | 27.41 | 27.88 | 20.79 | 21.46 | 21.27 | 21.94 | 22.41 |
| 8H | 4H | 25.03 | 25.78 | 25.50 | 26.23 | 26.69 | 20.18 | 20.93 | 20.64 | 21.37 | 21.84 |
| | 6H | 25.84 | 26.46 | 26.34 | 26.95 | 27.43 | 20.92 | 21.53 | 21.41 | 22.03 | 22.50 |
| | 8H | 26.14 | 26.70 | 26.66 | 27.21 | 27.70 | 21.21 | 21.76 | 21.73 | 22.28 | 22.76 |
| | 12H | 26.37 | 26.86 | 26.88 | 27.35 | 27.92 | 21.45 | 21.94 | 21.97 | 22.44 | 23.00 |
| 12H | 4H | 25.01 | 25.68 | 25.50 | 26.16 | 26.63 | 20.23 | 20.90 | 20.72 | 21.38 | 21.85 |
| | 6H | 25.82 | 26.37 | 26.33 | 26.88 | 27.37 | 21.00 | 21.56 | 21.52 | 22.07 | 22.56 |
| | 8H | 26.15 | 26.64 | 26.66 | 27.13 | 27.70 | 21.36 | 21.85 | 21.87 | 22.34 | 22.90 |