

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055575

Luminaire Tested: S123R3DR-S1165D830-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055575
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1165D830-X4F0-XX-UDD-FLL-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

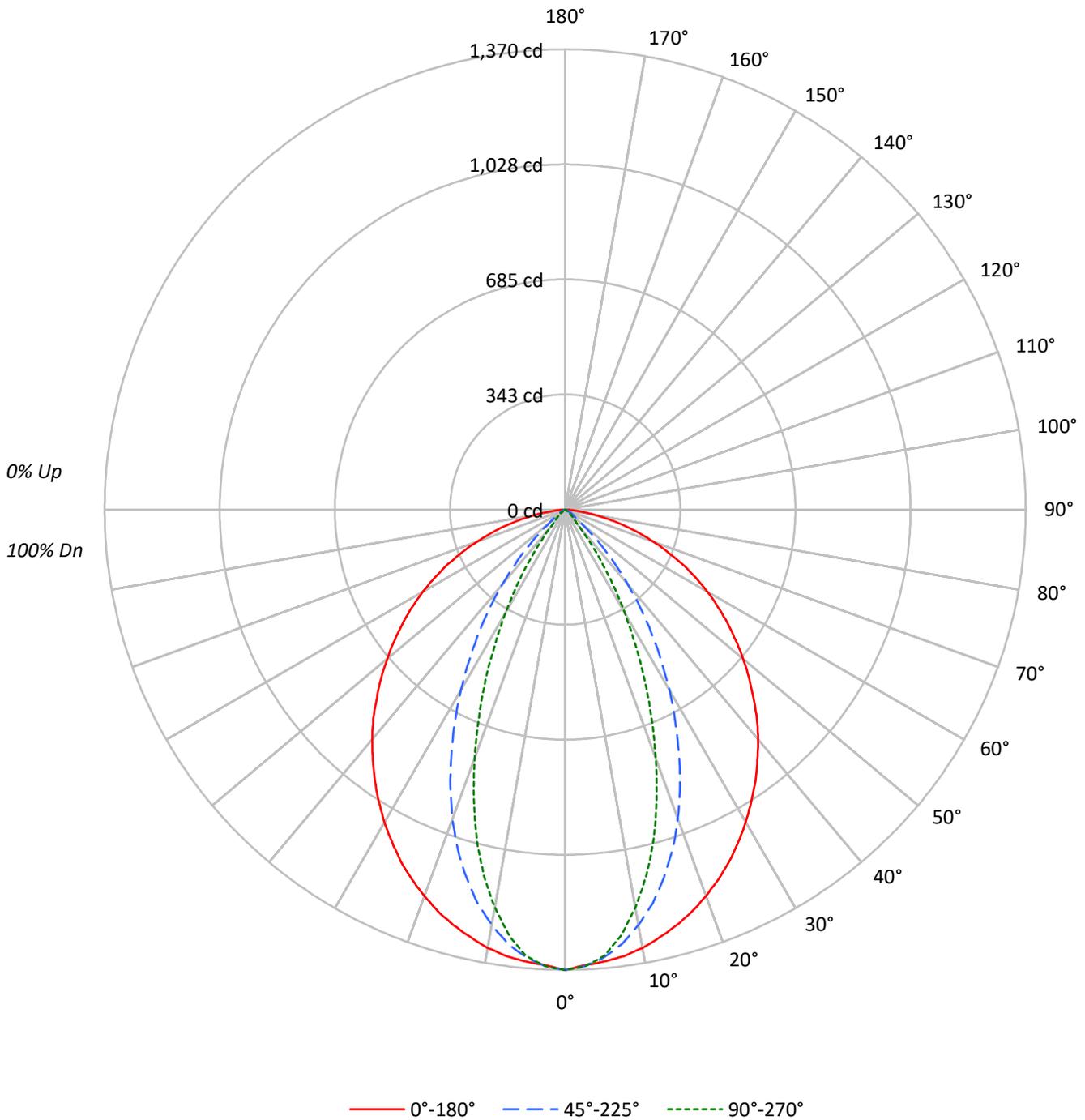
Lumens per Lamp: N/A
Luminaire Lumens: 1603.8 lumens
Efficiency: N/A
Efficacy: 38.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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





TEST NUMBER: P1055575

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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 | | | 100 | |
| 1 | 112 | 108 | 105 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98 | 98 | 97 | 95 | 95 | 93 | 92 | 90 | | | 90 | |
| 2 | 105 | 99 | 94 | 89 | 102 | 97 | 92 | 88 | 93 | 90 | 86 | 90 | 87 | 84 | 87 | 85 | 83 | 81 | | | 81 | |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 77 | 74 | 73 | | | 73 | |
| 4 | 92 | 82 | 75 | 70 | 90 | 81 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 75 | 71 | 67 | 65 | | | 65 | |
| 5 | 86 | 76 | 69 | 63 | 84 | 75 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | 59 | |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 61 | 56 | 64 | 60 | 56 | 54 | | | 54 | |
| 7 | 76 | 65 | 58 | 53 | 74 | 64 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 | | | 50 | |
| 8 | 71 | 60 | 53 | 48 | 70 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 48 | 46 | | | 46 | |
| 9 | 68 | 56 | 49 | 45 | 66 | 56 | 49 | 45 | 55 | 49 | 45 | 54 | 48 | 44 | 53 | 48 | 44 | 43 | | | 43 | |
| 10 | 64 | 53 | 46 | 42 | 63 | 52 | 46 | 42 | 51 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 40 | | | 40 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 16521 | 16521 | 16521 |
| 5° | 16343 | 16188 | 16137 |
| 10° | 16219 | 15367 | 14723 |
| 15° | 15987 | 14159 | 12686 |
| 20° | 15703 | 12566 | 10104 |
| 25° | 15374 | 10646 | 7451 |
| 30° | 14960 | 8629 | 4888 |
| 35° | 14519 | 6569 | 2679 |
| 40° | 14050 | 4542 | 918 |
| 45° | 13500 | 2641 | 534 |
| 50° | 12957 | 1039 | 321 |
| 55° | 12400 | 658 | 149 |
| 60° | 11757 | 412 | 68 |
| 65° | 10949 | 203 | 40 |
| 70° | 9821 | 99 | 49 |
| 75° | 8343 | 65 | 65 |
| 80° | 6221 | 97 | 0 |
| 85° | 2365 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13500 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 125.6 | 7.8 |
| 10°-20° | 318.8 | 19.9 |
| 20°-30° | 380.3 | 23.7 |
| 30°-40° | 322.6 | 20.1 |
| 40°-50° | 219.3 | 13.7 |
| 50°-60° | 135.9 | 8.5 |
| 60°-70° | 68.8 | 4.3 |
| 70°-80° | 28.1 | 1.7 |
| 80°-90° | 4.3 | 0.3 |
| 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° | 824.8 | 51.4 |
| 0°-40° | 1147.4 | 71.5 |
| 0°-60° | 1502.6 | 93.7 |
| 0°-90° | 1603.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1603.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1370 | 1370 | 1370 | 1370 | 1370 | |
| 5° | 1350 | 1363 | 1338 | 1328 | 1333 | 128 |
| 15° | 1281 | 1248 | 1134 | 1045 | 1016 | 361 |
| 25° | 1156 | 1048 | 800 | 618 | 560 | 532 |
| 35° | 986 | 792 | 446 | 240 | 182 | 617 |
| 45° | 792 | 519 | 155 | 38 | 31 | 612 |
| 55° | 590 | 262 | 31 | 11 | 7 | 527 |
| 65° | 384 | 64 | 7 | 1 | 1 | 379 |
| 75° | 179 | 11 | 1 | 1 | 1 | 190 |
| 85° | 17 | 0 | 0 | 1 | 0 | 30 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055575

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1370.3 | 1370.3 | 1370.3 | 1370.3 | 1370.3 |
| 2.5° | 1357.5 | 1376.0 | 1360.4 | 1358.9 | 1360.4 |
| 5° | 1350.4 | 1363.2 | 1337.6 | 1327.7 | 1333.4 |
| 7.5° | 1340.5 | 1346.2 | 1303.5 | 1277.9 | 1277.9 |
| 10° | 1324.8 | 1320.6 | 1255.2 | 1212.5 | 1202.6 |
| 12.5° | 1303.5 | 1286.5 | 1201.2 | 1134.4 | 1115.9 |
| 15° | 1280.8 | 1248.1 | 1134.4 | 1044.8 | 1016.4 |
| 17.5° | 1255.2 | 1205.4 | 1061.9 | 945.3 | 904.1 |
| 20° | 1223.9 | 1157.1 | 979.4 | 837.3 | 787.5 |
| 22.5° | 1191.2 | 1104.5 | 892.7 | 726.4 | 670.9 |
| 25° | 1155.7 | 1047.6 | 800.3 | 618.4 | 560.1 |
| 27.5° | 1115.9 | 987.9 | 709.3 | 514.6 | 450.6 |
| 30° | 1074.6 | 925.4 | 619.8 | 415.1 | 351.1 |
| 32.5° | 1030.6 | 860.0 | 530.2 | 324.1 | 264.4 |
| 35° | 986.5 | 791.8 | 446.3 | 240.2 | 182.0 |
| 37.5° | 939.6 | 723.5 | 365.3 | 166.3 | 115.1 |
| 40° | 892.7 | 656.7 | 288.6 | 105.2 | 58.3 |
| 42.5° | 844.4 | 587.1 | 218.9 | 52.6 | 39.8 |
| 45° | 791.8 | 518.8 | 154.9 | 38.4 | 31.3 |
| 47.5° | 742.0 | 453.5 | 102.3 | 31.3 | 24.2 |
| 50° | 690.8 | 388.1 | 55.4 | 22.7 | 17.1 |
| 52.5° | 639.7 | 325.5 | 39.8 | 17.1 | 11.4 |
| 55° | 589.9 | 261.6 | 31.3 | 11.4 | 7.1 |
| 57.5° | 538.7 | 206.1 | 24.2 | 7.1 | 4.3 |
| 60° | 487.6 | 152.1 | 17.1 | 4.3 | 2.8 |
| 62.5° | 436.4 | 105.2 | 11.4 | 2.8 | 1.4 |
| 65° | 383.8 | 64.0 | 7.1 | 1.4 | 1.4 |
| 67.5° | 329.8 | 44.1 | 4.3 | 1.4 | 1.4 |
| 70° | 278.6 | 31.3 | 2.8 | 1.4 | 1.4 |
| 72.5° | 227.4 | 19.9 | 1.4 | 1.4 | 0.0 |
| 75° | 179.1 | 11.4 | 1.4 | 1.4 | 1.4 |
| 77.5° | 132.2 | 4.3 | 1.4 | 1.4 | 0.0 |
| 80° | 89.6 | 1.4 | 1.4 | 1.4 | 0.0 |
| 82.5° | 49.8 | 0.0 | 1.4 | 1.4 | 0.0 |
| 85° | 17.1 | 0.0 | 0.0 | 1.4 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)