

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: P1055988

Luminaire Tested: S124R3DR-S1195D840-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055988
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S1195D840-X4F0-XX-UDD-FLL-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

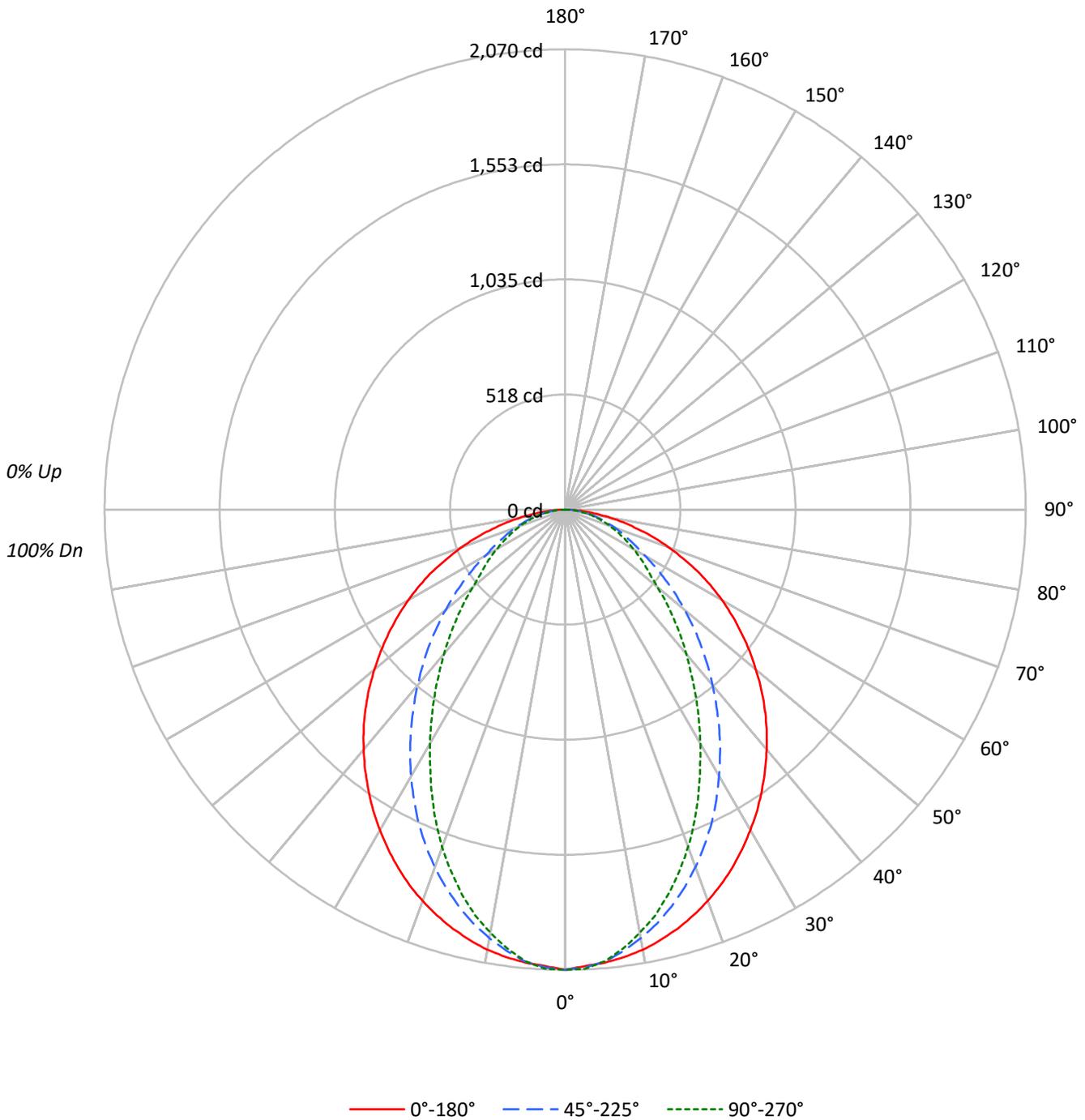
Lumens per Lamp: N/A
Luminaire Lumens: 4122.5 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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





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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 | 110 | 105 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 93 | 95 | 93 | 91 | 92 | 90 | 88 | 86 | | | | 86 |
| 2 | 101 | 93 | 87 | 82 | 98 | 91 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 77 | 82 | 78 | 76 | 73 | | | | 73 |
| 3 | 93 | 83 | 75 | 69 | 90 | 81 | 74 | 69 | 79 | 73 | 68 | 76 | 71 | 67 | 73 | 69 | 65 | 63 | | | | 63 |
| 4 | 85 | 74 | 66 | 60 | 83 | 73 | 65 | 60 | 71 | 64 | 59 | 68 | 63 | 58 | 66 | 61 | 57 | 55 | | | | 55 |
| 5 | 79 | 67 | 59 | 53 | 77 | 66 | 58 | 52 | 64 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 51 | 49 | | | | 49 |
| 6 | 73 | 61 | 53 | 47 | 72 | 60 | 52 | 46 | 58 | 51 | 46 | 57 | 50 | 46 | 55 | 50 | 45 | 43 | | | | 43 |
| 7 | 68 | 56 | 47 | 42 | 67 | 55 | 47 | 42 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 39 | | | | 39 |
| 8 | 64 | 51 | 43 | 38 | 62 | 51 | 43 | 38 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 35 | | | | 35 |
| 9 | 60 | 47 | 39 | 34 | 59 | 47 | 39 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 32 | | | | 32 |
| 10 | 56 | 44 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 41 | 35 | 31 | 29 | | | | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 18300 | 18300 | 18300 |
| 5° | 18153 | 18113 | 18099 |
| 10° | 18049 | 17570 | 17351 |
| 15° | 17858 | 16910 | 16394 |
| 20° | 17625 | 16107 | 15204 |
| 25° | 17339 | 15184 | 13818 |
| 30° | 16995 | 14134 | 12408 |
| 35° | 16636 | 13036 | 11047 |
| 40° | 16260 | 11901 | 9773 |
| 45° | 15863 | 10798 | 8589 |
| 50° | 15376 | 9637 | 7417 |
| 55° | 14907 | 8475 | 6738 |
| 60° | 14381 | 7271 | 6247 |
| 65° | 13732 | 6596 | 5831 |
| 70° | 12757 | 6103 | 5511 |
| 75° | 11550 | 5619 | 5203 |
| 80° | 10081 | 5193 | 4888 |
| 85° | 7730 | 4788 | 4484 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15863 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 192.7 | 4.7 |
| 10°-20° | 522.7 | 12.7 |
| 20°-30° | 723.8 | 17.6 |
| 30°-40° | 776.8 | 18.8 |
| 40°-50° | 706.5 | 17.1 |
| 50°-60° | 556.3 | 13.5 |
| 60°-70° | 380.8 | 9.2 |
| 70°-80° | 205.0 | 5.0 |
| 80°-90° | 58.0 | 1.4 |
| 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° | 1439.2 | 34.9 |
| 0°-40° | 2216.0 | 53.8 |
| 0°-60° | 3478.8 | 84.4 |
| 0°-90° | 4122.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4122.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2070 | 2070 | 2070 | 2070 | 2070 | |
| 5° | 2045 | 2068 | 2041 | 2030 | 2039 | 194 |
| 15° | 1951 | 1930 | 1847 | 1797 | 1791 | 550 |
| 25° | 1777 | 1704 | 1556 | 1444 | 1416 | 818 |
| 35° | 1541 | 1421 | 1208 | 1062 | 1024 | 964 |
| 45° | 1269 | 1107 | 864 | 714 | 687 | 978 |
| 55° | 967 | 783 | 550 | 443 | 437 | 865 |
| 65° | 656 | 469 | 315 | 280 | 279 | 648 |
| 75° | 338 | 206 | 164 | 151 | 152 | 361 |
| 85° | 76 | 52 | 47 | 44 | 44 | 92 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1055988

CATALOG NUMBER: S124R3DR-S1195D840-X4F0-XX-UDD-FLL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2069.8 | 2069.8 | 2069.8 | 2069.8 | 2069.8 |
| 2.5° | 2054.6 | 2078.9 | 2060.7 | 2063.7 | 2066.8 |
| 5° | 2045.4 | 2068.3 | 2040.9 | 2030.2 | 2039.3 |
| 7.5° | 2030.2 | 2045.4 | 2002.8 | 1983.0 | 1992.1 |
| 10° | 2010.4 | 2013.5 | 1957.1 | 1928.2 | 1932.7 |
| 12.5° | 1983.0 | 1975.4 | 1906.8 | 1865.7 | 1868.8 |
| 15° | 1951.0 | 1929.7 | 1847.4 | 1797.2 | 1791.1 |
| 17.5° | 1914.5 | 1879.4 | 1782.0 | 1718.0 | 1705.8 |
| 20° | 1873.3 | 1826.1 | 1711.9 | 1629.6 | 1615.9 |
| 22.5° | 1827.6 | 1766.7 | 1635.7 | 1538.3 | 1518.5 |
| 25° | 1777.4 | 1704.3 | 1556.5 | 1443.8 | 1416.4 |
| 27.5° | 1722.6 | 1637.3 | 1471.3 | 1347.9 | 1312.9 |
| 30° | 1664.7 | 1567.2 | 1384.4 | 1251.9 | 1215.4 |
| 32.5° | 1605.3 | 1495.6 | 1296.1 | 1156.0 | 1117.9 |
| 35° | 1541.3 | 1421.0 | 1207.8 | 1061.6 | 1023.5 |
| 37.5° | 1475.8 | 1343.3 | 1117.9 | 970.2 | 930.6 |
| 40° | 1408.8 | 1265.6 | 1031.1 | 878.8 | 846.8 |
| 42.5° | 1340.3 | 1186.4 | 945.8 | 793.5 | 764.6 |
| 45° | 1268.7 | 1107.2 | 863.6 | 714.3 | 686.9 |
| 47.5° | 1195.6 | 1026.5 | 779.8 | 639.7 | 613.8 |
| 50° | 1117.9 | 945.8 | 700.6 | 566.6 | 539.2 |
| 52.5° | 1043.3 | 863.6 | 624.4 | 495.0 | 481.3 |
| 55° | 967.1 | 782.8 | 549.8 | 443.2 | 437.1 |
| 57.5° | 891.0 | 702.1 | 481.3 | 402.1 | 396.0 |
| 60° | 813.3 | 622.9 | 411.2 | 359.4 | 353.3 |
| 62.5° | 735.6 | 545.2 | 359.4 | 318.3 | 315.3 |
| 65° | 656.4 | 469.1 | 315.3 | 280.2 | 278.7 |
| 67.5° | 572.7 | 396.0 | 275.7 | 246.7 | 245.2 |
| 70° | 493.5 | 322.9 | 236.1 | 213.2 | 213.2 |
| 72.5° | 418.8 | 255.9 | 199.5 | 181.2 | 181.2 |
| 75° | 338.1 | 205.6 | 164.5 | 150.8 | 152.3 |
| 77.5° | 266.5 | 161.4 | 132.5 | 123.4 | 123.4 |
| 80° | 198.0 | 120.3 | 102.0 | 94.4 | 96.0 |
| 82.5° | 134.0 | 83.8 | 73.1 | 68.5 | 68.5 |
| 85° | 76.2 | 51.8 | 47.2 | 44.2 | 44.2 |
| 87.5° | 27.4 | 24.4 | 22.8 | 19.8 | 21.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)