

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1056528

Luminaire Tested: S125R3DR-H1270D840-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056528
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H1270D840-X4F0-XX-UDD-FLL-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

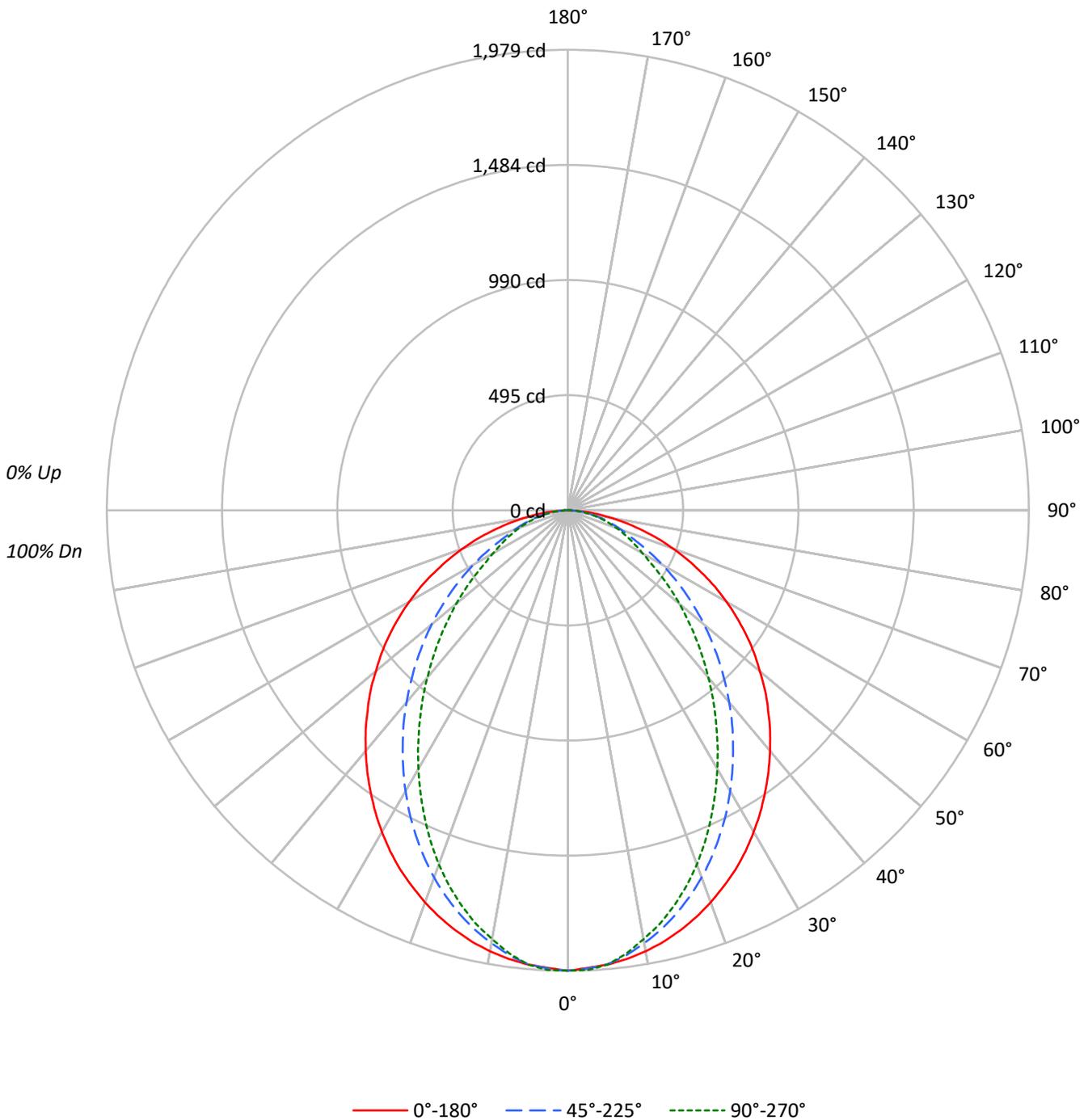
Lumens per Lamp: N/A
Luminaire Lumens: 4193.6 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 110 | 105 | 101 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 90 | 88 | 86 |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 88 | 83 | 79 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 92 | 83 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 |
| 4 | 85 | 74 | 66 | 59 | 83 | 73 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 55 |
| 5 | 79 | 67 | 58 | 52 | 77 | 66 | 58 | 52 | 63 | 56 | 51 | 62 | 55 | 51 | 60 | 54 | 50 | 48 |
| 6 | 73 | 60 | 52 | 46 | 71 | 59 | 51 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 43 |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 46 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 8 | 63 | 51 | 42 | 37 | 62 | 50 | 42 | 37 | 49 | 42 | 37 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 47 | 39 | 33 | 58 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13987 | 13987 | 13987 |
| 5° | 13905 | 13895 | 13905 |
| 10° | 13812 | 13558 | 13431 |
| 15° | 13672 | 13144 | 12874 |
| 20° | 13489 | 12635 | 12181 |
| 25° | 13284 | 12032 | 11354 |
| 30° | 13025 | 11377 | 10475 |
| 35° | 12740 | 10668 | 9561 |
| 40° | 12454 | 9939 | 8661 |
| 45° | 12152 | 9177 | 7762 |
| 50° | 11828 | 8394 | 6870 |
| 55° | 11530 | 7536 | 5974 |
| 60° | 11123 | 6624 | 5250 |
| 65° | 10572 | 5619 | 4879 |
| 70° | 9927 | 5025 | 4568 |
| 75° | 8973 | 4627 | 4305 |
| 80° | 7796 | 4197 | 4018 |
| 85° | 6091 | 3707 | 3707 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12152 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 185.1 | 4.4 |
| 10°-20° | 508.3 | 12.1 |
| 20°-30° | 718.0 | 17.1 |
| 30°-40° | 790.5 | 18.8 |
| 40°-50° | 737.3 | 17.6 |
| 50°-60° | 588.6 | 14.0 |
| 60°-70° | 396.1 | 9.4 |
| 70°-80° | 211.0 | 5.0 |
| 80°-90° | 58.6 | 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° | 1411.5 | 33.7 |
| 0°-40° | 2201.9 | 52.5 |
| 0°-60° | 3527.9 | 84.1 |
| 0°-90° | 4193.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4193.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1979 | 1979 | 1979 | 1979 | 1979 | |
| 5° | 1960 | 1976 | 1958 | 1952 | 1960 | 186 |
| 15° | 1868 | 1858 | 1796 | 1765 | 1759 | 527 |
| 25° | 1703 | 1652 | 1542 | 1475 | 1456 | 784 |
| 35° | 1476 | 1389 | 1236 | 1139 | 1108 | 924 |
| 45° | 1216 | 1100 | 918 | 806 | 776 | 938 |
| 55° | 936 | 794 | 611 | 514 | 485 | 835 |
| 65° | 632 | 494 | 336 | 298 | 292 | 627 |
| 75° | 328 | 218 | 169 | 159 | 158 | 350 |
| 85° | 75 | 52 | 46 | 47 | 46 | 90 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P1056528

CATALOG NUMBER: S125R3DR-H1270D840-X4F0-XX-UDD-FLL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1978.6 | 1978.6 | 1978.6 | 1978.6 | 1978.6 |
| 2.5° | 1968.3 | 1984.5 | 1971.2 | 1974.2 | 1977.1 |
| 5° | 1959.5 | 1975.7 | 1958.0 | 1952.1 | 1959.5 |
| 7.5° | 1944.7 | 1958.0 | 1928.5 | 1915.3 | 1921.2 |
| 10° | 1924.1 | 1932.9 | 1888.7 | 1871.1 | 1871.1 |
| 12.5° | 1899.1 | 1899.1 | 1846.0 | 1821.0 | 1821.0 |
| 15° | 1868.1 | 1857.8 | 1795.9 | 1765.0 | 1759.1 |
| 17.5° | 1832.8 | 1813.6 | 1739.9 | 1700.2 | 1692.8 |
| 20° | 1793.0 | 1762.0 | 1679.5 | 1628.0 | 1619.1 |
| 22.5° | 1748.8 | 1709.0 | 1613.2 | 1549.9 | 1539.6 |
| 25° | 1703.1 | 1651.5 | 1542.5 | 1474.7 | 1455.6 |
| 27.5° | 1651.5 | 1589.7 | 1470.3 | 1393.7 | 1370.1 |
| 30° | 1595.6 | 1524.8 | 1393.7 | 1308.3 | 1283.2 |
| 32.5° | 1538.1 | 1458.5 | 1315.6 | 1224.3 | 1196.3 |
| 35° | 1476.2 | 1389.3 | 1236.1 | 1138.8 | 1107.9 |
| 37.5° | 1414.3 | 1320.1 | 1158.0 | 1056.3 | 1023.9 |
| 40° | 1349.5 | 1246.4 | 1077.0 | 972.4 | 938.5 |
| 42.5° | 1284.7 | 1174.2 | 997.4 | 891.3 | 856.0 |
| 45° | 1215.5 | 1100.5 | 917.9 | 805.9 | 776.4 |
| 47.5° | 1149.2 | 1025.4 | 839.8 | 730.7 | 698.3 |
| 50° | 1075.5 | 947.3 | 763.2 | 654.1 | 624.7 |
| 52.5° | 1007.7 | 870.7 | 686.5 | 584.9 | 554.0 |
| 55° | 935.5 | 794.1 | 611.4 | 514.2 | 484.7 |
| 57.5° | 860.4 | 717.5 | 539.2 | 447.9 | 419.9 |
| 60° | 786.7 | 640.9 | 468.5 | 384.5 | 371.3 |
| 62.5° | 711.6 | 568.7 | 402.2 | 337.4 | 328.5 |
| 65° | 632.0 | 493.5 | 335.9 | 297.6 | 291.7 |
| 67.5° | 556.9 | 421.4 | 282.9 | 260.8 | 254.9 |
| 70° | 480.3 | 349.2 | 243.1 | 223.9 | 221.0 |
| 72.5° | 405.2 | 279.9 | 204.8 | 191.5 | 188.6 |
| 75° | 328.5 | 218.0 | 169.4 | 159.1 | 157.6 |
| 77.5° | 257.8 | 163.5 | 134.1 | 129.6 | 126.7 |
| 80° | 191.5 | 122.3 | 103.1 | 100.2 | 98.7 |
| 82.5° | 131.1 | 84.0 | 73.7 | 73.7 | 70.7 |
| 85° | 75.1 | 51.6 | 45.7 | 47.1 | 45.7 |
| 87.5° | 28.0 | 22.1 | 20.6 | 22.1 | 22.1 |
| 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 | 20.45 | 21.99 | 20.82 | 22.31 | 22.62 | 16.84 | 18.38 | 17.20 | 18.69 | 19.00 |
| | 3H | 22.24 | 23.62 | 22.62 | 23.95 | 24.31 | 18.31 | 19.70 | 18.69 | 20.02 | 20.39 |
| | 4H | 22.89 | 24.19 | 23.29 | 24.54 | 24.92 | 18.90 | 20.20 | 19.30 | 20.55 | 20.93 |
| | 6H | 23.37 | 24.57 | 23.78 | 24.94 | 25.33 | 19.37 | 20.57 | 19.78 | 20.93 | 21.32 |
| | 8H | 23.52 | 24.67 | 23.95 | 25.06 | 25.46 | 19.53 | 20.67 | 19.95 | 21.06 | 21.46 |
| | 12H | 23.62 | 24.71 | 24.05 | 25.10 | 25.53 | 19.64 | 20.74 | 20.07 | 21.12 | 21.55 |
| 4H | 2H | 20.59 | 21.89 | 20.99 | 22.24 | 22.61 | 17.51 | 18.81 | 17.91 | 19.16 | 19.54 |
| | 3H | 22.56 | 23.64 | 22.97 | 24.04 | 24.44 | 19.19 | 20.27 | 19.60 | 20.67 | 21.07 |
| | 4H | 23.30 | 24.28 | 23.74 | 24.69 | 25.13 | 19.89 | 20.87 | 20.33 | 21.28 | 21.72 |
| | 6H | 23.90 | 24.75 | 24.36 | 25.19 | 25.65 | 20.48 | 21.33 | 20.94 | 21.77 | 22.23 |
| | 8H | 24.10 | 24.90 | 24.57 | 25.34 | 25.81 | 20.69 | 21.48 | 21.15 | 21.92 | 22.39 |
| | 12H | 24.25 | 24.96 | 24.73 | 25.44 | 25.91 | 20.85 | 21.56 | 21.33 | 22.04 | 22.51 |
| 8H | 4H | 23.37 | 24.16 | 23.83 | 24.60 | 25.07 | 20.26 | 21.05 | 20.72 | 21.49 | 21.96 |
| | 6H | 24.03 | 24.68 | 24.52 | 25.17 | 25.65 | 20.96 | 21.62 | 21.46 | 22.11 | 22.58 |
| | 8H | 24.28 | 24.87 | 24.79 | 25.38 | 25.87 | 21.24 | 21.83 | 21.76 | 22.34 | 22.83 |
| | 12H | 24.49 | 25.01 | 25.00 | 25.50 | 26.07 | 21.49 | 22.01 | 21.99 | 22.50 | 23.06 |
| 12H | 4H | 23.36 | 24.07 | 23.84 | 24.55 | 25.02 | 20.31 | 21.01 | 20.79 | 21.49 | 21.96 |
| | 6H | 24.02 | 24.61 | 24.53 | 25.12 | 25.61 | 21.03 | 21.62 | 21.54 | 22.13 | 22.62 |
| | 8H | 24.32 | 24.84 | 24.82 | 25.33 | 25.89 | 21.37 | 21.90 | 21.88 | 22.39 | 22.95 |