

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: P1056501

Luminaire Tested: S125R3DR-H1090D840-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056501
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-H1090D840-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

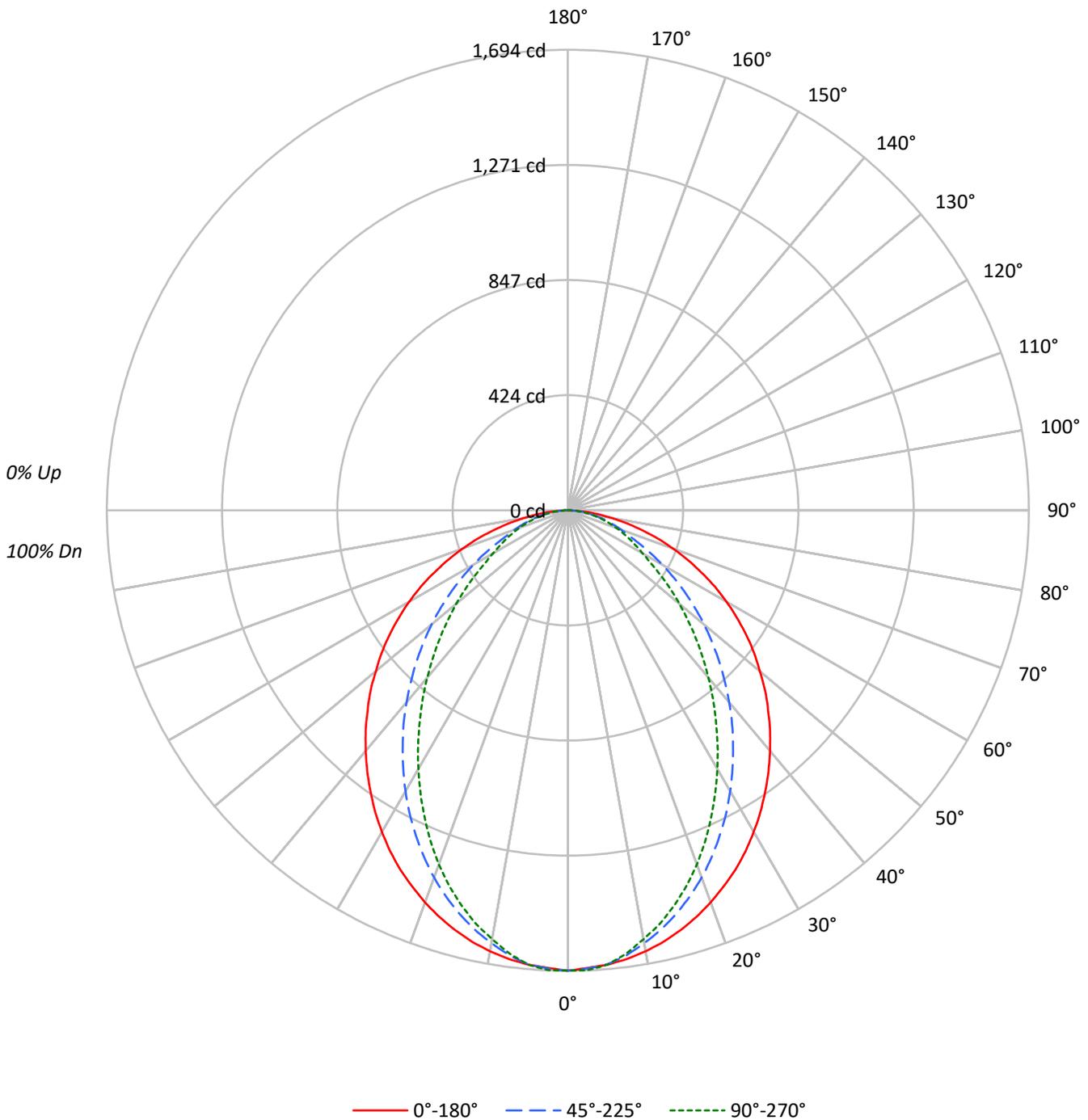
Lumens per Lamp: N/A
Luminaire Lumens: 3589.9 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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 | 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° | 11973 | 11973 | 11973 |
| 5° | 11903 | 11894 | 11903 |
| 10° | 11824 | 11606 | 11498 |
| 15° | 11704 | 11252 | 11021 |
| 20° | 11546 | 10816 | 10427 |
| 25° | 11372 | 10299 | 9719 |
| 30° | 11149 | 9739 | 8967 |
| 35° | 10906 | 9131 | 8185 |
| 40° | 10661 | 8508 | 7414 |
| 45° | 10402 | 7855 | 6644 |
| 50° | 10126 | 7185 | 5881 |
| 55° | 9870 | 6451 | 5114 |
| 60° | 9522 | 5671 | 4493 |
| 65° | 9050 | 4809 | 4177 |
| 70° | 8497 | 4301 | 3911 |
| 75° | 7681 | 3961 | 3685 |
| 80° | 6677 | 3595 | 3440 |
| 85° | 5215 | 3171 | 3171 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10402 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 158.5 | 4.4 |
| 10°-20° | 435.1 | 12.1 |
| 20°-30° | 614.7 | 17.1 |
| 30°-40° | 676.7 | 18.8 |
| 40°-50° | 631.2 | 17.6 |
| 50°-60° | 503.9 | 14.0 |
| 60°-70° | 339.1 | 9.4 |
| 70°-80° | 180.6 | 5.0 |
| 80°-90° | 50.2 | 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° | 1208.3 | 33.7 |
| 0°-40° | 1884.9 | 52.5 |
| 0°-60° | 3020.0 | 84.1 |
| 0°-90° | 3589.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3589.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1694 | 1694 | 1694 | 1694 | 1694 | |
| 5° | 1677 | 1691 | 1676 | 1671 | 1677 | 159 |
| 15° | 1599 | 1590 | 1537 | 1511 | 1506 | 451 |
| 25° | 1458 | 1414 | 1320 | 1262 | 1246 | 671 |
| 35° | 1264 | 1189 | 1058 | 975 | 948 | 791 |
| 45° | 1040 | 942 | 786 | 690 | 665 | 803 |
| 55° | 801 | 680 | 523 | 440 | 415 | 715 |
| 65° | 541 | 422 | 288 | 255 | 250 | 537 |
| 75° | 281 | 187 | 145 | 136 | 135 | 300 |
| 85° | 64 | 44 | 39 | 40 | 39 | 77 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056501

CATALOG NUMBER: S125R3DR-H1090D840-X4F0-XX-UDD-FLL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1693.7 | 1693.7 | 1693.7 | 1693.7 | 1693.7 |
| 2.5° | 1684.9 | 1698.8 | 1687.4 | 1690.0 | 1692.5 |
| 5° | 1677.4 | 1691.2 | 1676.1 | 1671.0 | 1677.4 |
| 7.5° | 1664.7 | 1676.1 | 1650.9 | 1639.5 | 1644.6 |
| 10° | 1647.1 | 1654.7 | 1616.8 | 1601.7 | 1601.7 |
| 12.5° | 1625.6 | 1625.6 | 1580.2 | 1558.8 | 1558.8 |
| 15° | 1599.2 | 1590.3 | 1537.4 | 1510.9 | 1505.8 |
| 17.5° | 1568.9 | 1552.5 | 1489.4 | 1455.4 | 1449.1 |
| 20° | 1534.8 | 1508.4 | 1437.7 | 1393.6 | 1386.0 |
| 22.5° | 1497.0 | 1463.0 | 1381.0 | 1326.7 | 1317.9 |
| 25° | 1457.9 | 1413.8 | 1320.4 | 1262.4 | 1246.0 |
| 27.5° | 1413.8 | 1360.8 | 1258.6 | 1193.1 | 1172.9 |
| 30° | 1365.8 | 1305.3 | 1193.1 | 1119.9 | 1098.5 |
| 32.5° | 1316.7 | 1248.6 | 1126.2 | 1048.0 | 1024.1 |
| 35° | 1263.7 | 1189.3 | 1058.1 | 974.9 | 948.4 |
| 37.5° | 1210.7 | 1130.0 | 991.3 | 904.3 | 876.5 |
| 40° | 1155.2 | 1066.9 | 921.9 | 832.4 | 803.4 |
| 42.5° | 1099.7 | 1005.1 | 853.8 | 763.0 | 732.7 |
| 45° | 1040.5 | 942.1 | 785.7 | 689.9 | 664.6 |
| 47.5° | 983.7 | 877.8 | 718.9 | 625.5 | 597.8 |
| 50° | 920.7 | 810.9 | 653.3 | 560.0 | 534.7 |
| 52.5° | 862.6 | 745.3 | 587.7 | 500.7 | 474.2 |
| 55° | 800.8 | 679.8 | 523.4 | 440.1 | 414.9 |
| 57.5° | 736.5 | 614.2 | 461.6 | 383.4 | 359.4 |
| 60° | 673.5 | 548.6 | 401.1 | 329.2 | 317.8 |
| 62.5° | 609.1 | 486.8 | 344.3 | 288.8 | 281.2 |
| 65° | 541.0 | 422.5 | 287.5 | 254.8 | 249.7 |
| 67.5° | 476.7 | 360.7 | 242.1 | 223.2 | 218.2 |
| 70° | 411.1 | 298.9 | 208.1 | 191.7 | 189.2 |
| 72.5° | 346.8 | 239.6 | 175.3 | 164.0 | 161.4 |
| 75° | 281.2 | 186.7 | 145.0 | 136.2 | 134.9 |
| 77.5° | 220.7 | 140.0 | 114.8 | 111.0 | 108.5 |
| 80° | 164.0 | 104.7 | 88.3 | 85.8 | 84.5 |
| 82.5° | 112.2 | 71.9 | 63.1 | 63.1 | 60.5 |
| 85° | 64.3 | 44.1 | 39.1 | 40.4 | 39.1 |
| 87.5° | 24.0 | 18.9 | 17.7 | 18.9 | 18.9 |
| 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 | 19.91 | 21.45 | 20.28 | 21.77 | 22.08 | 16.30 | 17.84 | 16.66 | 18.15 | 18.46 |
| | 3H | 21.70 | 23.08 | 22.08 | 23.41 | 23.77 | 17.77 | 19.16 | 18.15 | 19.48 | 19.85 |
| | 4H | 22.35 | 23.65 | 22.75 | 24.00 | 24.38 | 18.36 | 19.66 | 18.76 | 20.01 | 20.39 |
| | 6H | 22.83 | 24.03 | 23.24 | 24.40 | 24.79 | 18.83 | 20.03 | 19.24 | 20.39 | 20.78 |
| | 8H | 22.98 | 24.13 | 23.41 | 24.52 | 24.92 | 18.99 | 20.13 | 19.41 | 20.52 | 20.92 |
| | 12H | 23.08 | 24.17 | 23.51 | 24.56 | 24.99 | 19.10 | 20.20 | 19.53 | 20.58 | 21.01 |
| 4H | 2H | 20.05 | 21.35 | 20.45 | 21.70 | 22.07 | 16.97 | 18.27 | 17.37 | 18.62 | 19.00 |
| | 3H | 22.02 | 23.10 | 22.43 | 23.50 | 23.90 | 18.65 | 19.73 | 19.06 | 20.13 | 20.53 |
| | 4H | 22.76 | 23.74 | 23.20 | 24.15 | 24.59 | 19.35 | 20.33 | 19.79 | 20.74 | 21.18 |
| | 6H | 23.36 | 24.21 | 23.82 | 24.65 | 25.11 | 19.94 | 20.79 | 20.40 | 21.23 | 21.69 |
| | 8H | 23.56 | 24.36 | 24.03 | 24.80 | 25.27 | 20.15 | 20.94 | 20.61 | 21.38 | 21.85 |
| | 12H | 23.71 | 24.42 | 24.19 | 24.90 | 25.37 | 20.31 | 21.02 | 20.79 | 21.50 | 21.97 |
| 8H | 4H | 22.83 | 23.62 | 23.29 | 24.06 | 24.53 | 19.72 | 20.51 | 20.18 | 20.95 | 21.42 |
| | 6H | 23.49 | 24.14 | 23.98 | 24.63 | 25.11 | 20.42 | 21.08 | 20.92 | 21.57 | 22.04 |
| | 8H | 23.74 | 24.33 | 24.25 | 24.84 | 25.33 | 20.70 | 21.29 | 21.22 | 21.80 | 22.29 |
| | 12H | 23.95 | 24.47 | 24.46 | 24.96 | 25.53 | 20.95 | 21.47 | 21.45 | 21.96 | 22.52 |
| 12H | 4H | 22.82 | 23.53 | 23.30 | 24.01 | 24.48 | 19.77 | 20.47 | 20.25 | 20.95 | 21.42 |
| | 6H | 23.48 | 24.07 | 23.99 | 24.58 | 25.07 | 20.49 | 21.08 | 21.00 | 21.59 | 22.08 |
| | 8H | 23.78 | 24.30 | 24.28 | 24.79 | 25.35 | 20.83 | 21.36 | 21.34 | 21.85 | 22.41 |