

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: P1056366

Luminaire Tested: S125R3DR-S1090D840-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1056366  
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-S1090D840-X4F0-XX-UDD-FLL-W  
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

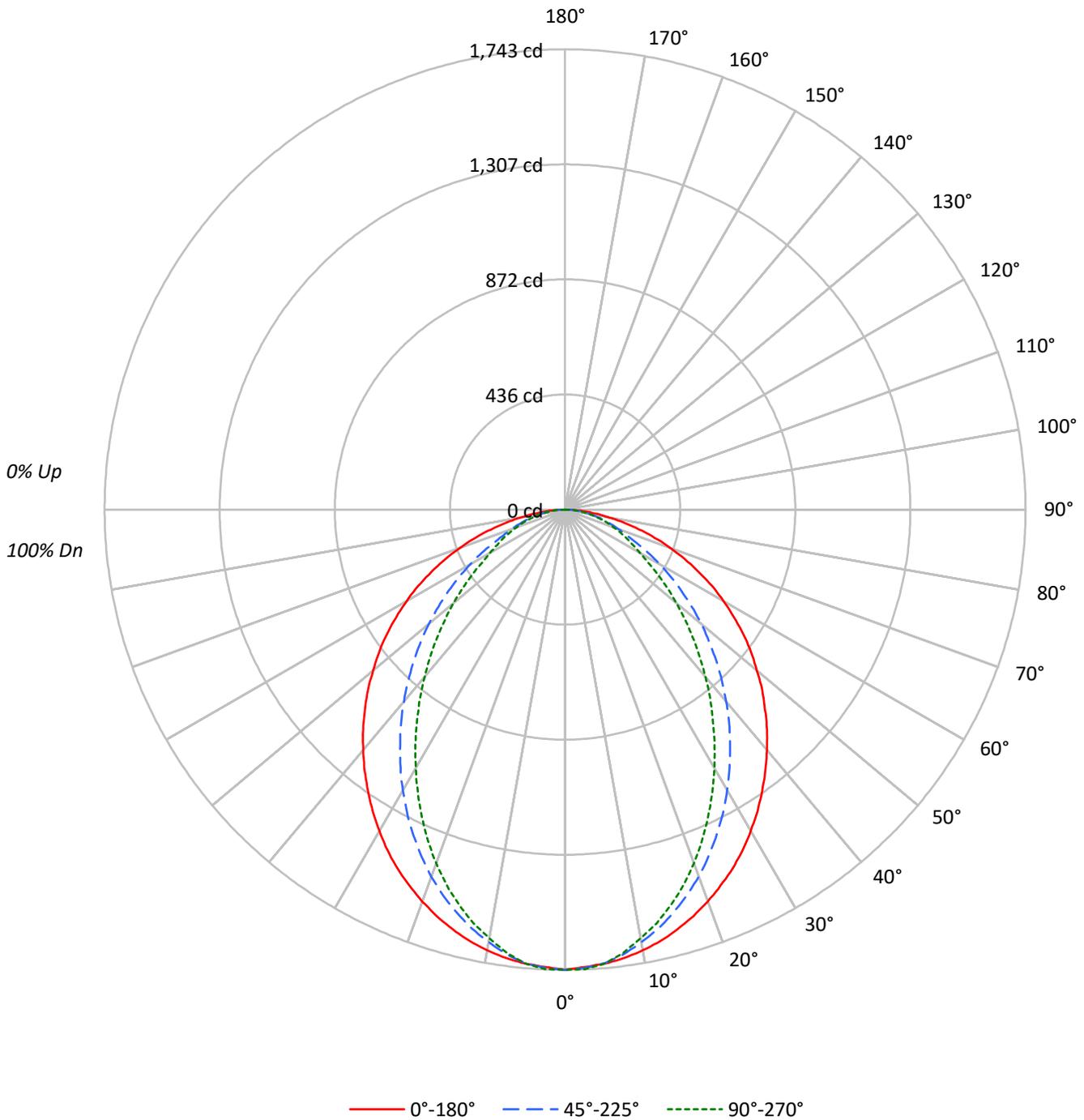
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3694.0 lumens  
Efficiency: N/A  
Efficacy: 106.5 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): 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  | 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°  | 12321 | 12321 | 12321 |
| 5°  | 12248 | 12239 | 12248 |
| 10° | 12167 | 11943 | 11831 |
| 15° | 12043 | 11577 | 11340 |
| 20° | 11882 | 11130 | 10729 |
| 25° | 11702 | 10598 | 10001 |
| 30° | 11473 | 10022 | 9227  |
| 35° | 11222 | 9396  | 8422  |
| 40° | 10970 | 8755  | 7629  |
| 45° | 10703 | 8083  | 6837  |
| 50° | 10419 | 7393  | 6051  |
| 55° | 10157 | 6638  | 5263  |
| 60° | 9798  | 5835  | 4623  |
| 65° | 9312  | 4950  | 4299  |
| 70° | 8745  | 4425  | 4024  |
| 75° | 7905  | 4075  | 3794  |
| 80° | 6868  | 3697  | 3538  |
| 85° | 5370  | 3261  | 3261  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10703 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 163.1  | 4.4       |
| 10°-20°   | 447.8  | 12.1      |
| 20°-30°   | 632.5  | 17.1      |
| 30°-40°   | 696.3  | 18.8      |
| 40°-50°   | 649.5  | 17.6      |
| 50°-60°   | 518.5  | 14.0      |
| 60°-70°   | 348.9  | 9.4       |
| 70°-80°   | 185.8  | 5.0       |
| 80°-90°   | 51.7   | 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°    | 1243.3 | 33.7      |
| 0°-40°    | 1939.6 | 52.5      |
| 0°-60°    | 3107.6 | 84.1      |
| 0°-90°    | 3694.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3694.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1743 | 1743  | 1743 | 1743  | 1743 |      |
| 5°  | 1726 | 1740  | 1725 | 1720  | 1726 | 164  |
| 15° | 1646 | 1636  | 1582 | 1555  | 1550 | 464  |
| 25° | 1500 | 1455  | 1359 | 1299  | 1282 | 691  |
| 35° | 1300 | 1224  | 1089 | 1003  | 976  | 814  |
| 45° | 1071 | 969   | 808  | 710   | 684  | 827  |
| 55° | 824  | 700   | 539  | 453   | 427  | 736  |
| 65° | 557  | 435   | 296  | 262   | 257  | 552  |
| 75° | 289  | 192   | 149  | 140   | 139  | 308  |
| 85° | 66   | 45    | 40   | 42    | 40   | 79   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1742.9 | 1742.9 | 1742.9 | 1742.9 | 1742.9 |
| 2.5°  | 1733.8 | 1748.1 | 1736.4 | 1739.0 | 1741.6 |
| 5°    | 1726.0 | 1740.3 | 1724.7 | 1719.5 | 1726.0 |
| 7.5°  | 1713.0 | 1724.7 | 1698.7 | 1687.1 | 1692.3 |
| 10°   | 1694.9 | 1702.6 | 1663.7 | 1648.1 | 1648.1 |
| 12.5° | 1672.8 | 1672.8 | 1626.1 | 1604.0 | 1604.0 |
| 15°   | 1645.5 | 1636.5 | 1581.9 | 1554.7 | 1549.5 |
| 17.5° | 1614.4 | 1597.5 | 1532.6 | 1497.6 | 1491.1 |
| 20°   | 1579.4 | 1552.1 | 1479.4 | 1434.0 | 1426.2 |
| 22.5° | 1540.4 | 1505.4 | 1421.0 | 1365.2 | 1356.1 |
| 25°   | 1500.2 | 1454.8 | 1358.7 | 1299.0 | 1282.2 |
| 27.5° | 1454.8 | 1400.3 | 1295.1 | 1227.7 | 1206.9 |
| 30°   | 1405.5 | 1343.2 | 1227.7 | 1152.4 | 1130.3 |
| 32.5° | 1354.8 | 1284.8 | 1158.9 | 1078.4 | 1053.8 |
| 35°   | 1300.3 | 1223.8 | 1088.8 | 1003.2 | 975.9  |
| 37.5° | 1245.8 | 1162.8 | 1020.0 | 930.5  | 901.9  |
| 40°   | 1188.7 | 1097.9 | 948.7  | 856.5  | 826.7  |
| 42.5° | 1131.6 | 1034.3 | 878.6  | 785.1  | 754.0  |
| 45°   | 1070.6 | 969.4  | 808.5  | 709.9  | 683.9  |
| 47.5° | 1012.2 | 903.2  | 739.7  | 643.7  | 615.1  |
| 50°   | 947.4  | 834.4  | 672.2  | 576.2  | 550.2  |
| 52.5° | 887.7  | 767.0  | 604.7  | 515.2  | 488.0  |
| 55°   | 824.1  | 699.5  | 538.6  | 452.9  | 427.0  |
| 57.5° | 757.9  | 632.0  | 475.0  | 394.5  | 369.9  |
| 60°   | 693.0  | 564.5  | 412.7  | 338.7  | 327.0  |
| 62.5° | 626.8  | 500.9  | 354.3  | 297.2  | 289.4  |
| 65°   | 556.7  | 434.7  | 295.9  | 262.1  | 257.0  |
| 67.5° | 490.5  | 371.2  | 249.2  | 229.7  | 224.5  |
| 70°   | 423.1  | 307.6  | 214.1  | 197.3  | 194.7  |
| 72.5° | 356.9  | 246.6  | 180.4  | 168.7  | 166.1  |
| 75°   | 289.4  | 192.1  | 149.2  | 140.2  | 138.9  |
| 77.5° | 227.1  | 144.0  | 118.1  | 114.2  | 111.6  |
| 80°   | 168.7  | 107.7  | 90.8   | 88.2   | 86.9   |
| 82.5° | 115.5  | 74.0   | 64.9   | 64.9   | 62.3   |
| 85°   | 66.2   | 45.4   | 40.2   | 41.5   | 40.2   |
| 87.5° | 24.7   | 19.5   | 18.2   | 19.5   | 19.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)