

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P243737

Luminaire Tested: **S125RDR-H1090D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243737  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125RDR-H1090D830-X4F0-XX-UDD-F-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3792.4 lumens  
Efficiency: N/A  
Efficacy: 120.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.12 / 1.26  
Luminous Opening: Rectangular (W 0.39' x L: 3.88' x H: 0')  
CIE Type: Direct

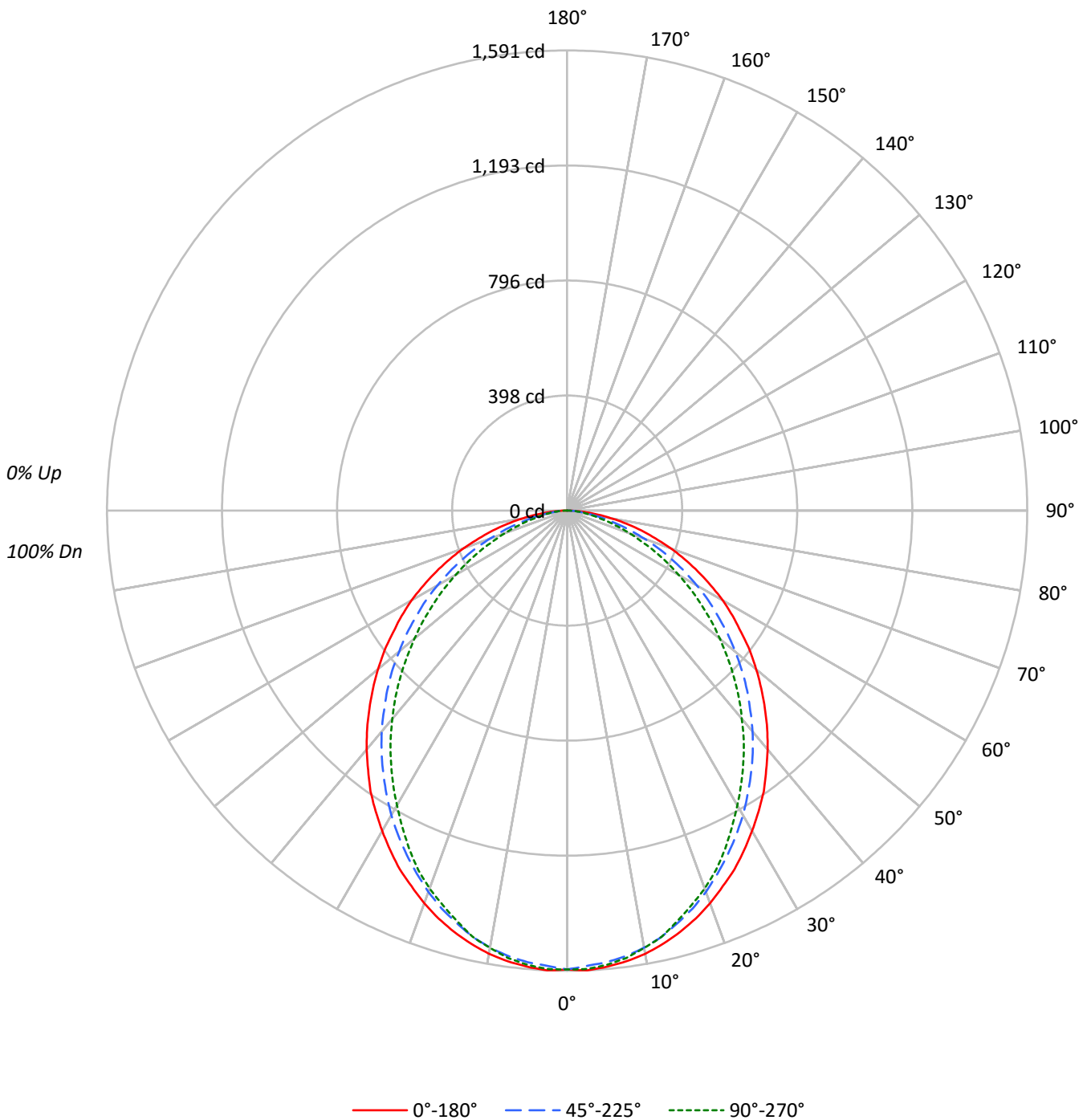
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 92  | 86  | 80  | 97  | 90  | 84  | 79  | 87  | 82  | 78  | 84  | 79  | 76  | 81  | 77  | 74  | 72  |
| 3   | 92  | 82  | 74  | 68  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 74  | 69  | 65  | 72  | 67  | 64  | 61  |
| 4   | 84  | 73  | 64  | 58  | 82  | 71  | 63  | 57  | 69  | 62  | 57  | 67  | 61  | 56  | 64  | 59  | 55  | 53  |
| 5   | 78  | 65  | 57  | 50  | 76  | 64  | 56  | 50  | 62  | 55  | 49  | 60  | 54  | 49  | 58  | 53  | 48  | 46  |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 50  | 44  | 56  | 49  | 43  | 55  | 48  | 43  | 53  | 47  | 43  | 41  |
| 7   | 67  | 54  | 45  | 39  | 65  | 53  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 38  | 49  | 43  | 38  | 36  |
| 8   | 62  | 49  | 41  | 35  | 61  | 48  | 40  | 35  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 34  | 32  |
| 9   | 58  | 45  | 37  | 32  | 57  | 45  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 29  |
| 10  | 55  | 42  | 34  | 29  | 53  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 29  | 38  | 33  | 28  | 27  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11277 | 11277 | 11277 |
| 5°  | 11295 | 11182 | 11247 |
| 10° | 11230 | 11074 | 11082 |
| 15° | 11098 | 10864 | 10814 |
| 20° | 10927 | 10610 | 10516 |
| 25° | 10733 | 10297 | 10128 |
| 30° | 10497 | 9975  | 9659  |
| 35° | 10281 | 9620  | 9217  |
| 40° | 10004 | 9256  | 8719  |
| 45° | 9719  | 8841  | 8202  |
| 50° | 9437  | 8382  | 7617  |
| 55° | 9099  | 7876  | 7004  |
| 60° | 8824  | 7356  | 6340  |
| 65° | 8399  | 6737  | 5612  |
| 70° | 7924  | 5895  | 4788  |
| 75° | 7294  | 4924  | 3897  |
| 80° | 6410  | 3811  | 3205  |
| 85° | 5464  | 3148  | 2960  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 149.4  | 3.9       |
| 10°-20°   | 418.6  | 11.0      |
| 20°-30°   | 609.1  | 16.1      |
| 30°-40°   | 697.6  | 18.4      |
| 40°-50°   | 682.6  | 18.0      |
| 50°-60°   | 576.3  | 15.2      |
| 60°-70°   | 403.5  | 10.6      |
| 70°-80°   | 204.9  | 5.4       |
| 80°-90°   | 50.4   | 1.3       |
| 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°    | 1177.1 | 31.0      |
| 0°-40°    | 1874.7 | 49.4      |
| 0°-60°    | 3133.6 | 82.6      |
| 0°-90°    | 3792.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3792.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1587 | 1587  | 1587 | 1587  | 1587 |      |
| 5°  | 1583 | 1580  | 1567 | 1578  | 1576 | 150  |
| 15° | 1508 | 1503  | 1476 | 1475  | 1470 | 425  |
| 25° | 1369 | 1353  | 1313 | 1300  | 1292 | 630  |
| 35° | 1185 | 1156  | 1109 | 1076  | 1062 | 740  |
| 45° | 967  | 935   | 880  | 833   | 816  | 746  |
| 55° | 734  | 702   | 636  | 584   | 565  | 659  |
| 65° | 499  | 461   | 401  | 351   | 334  | 495  |
| 75° | 266  | 233   | 179  | 150   | 142  | 281  |
| 85° | 67   | 43    | 39   | 36    | 36   | 77   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1586.6 | 1586.6 | 1586.6 | 1586.6 | 1586.6 |
| 2.5°  | 1591.2 | 1587.7 | 1575.3 | 1586.6 | 1586.6 |
| 5°    | 1583.2 | 1579.8 | 1567.3 | 1577.5 | 1576.4 |
| 7.5°  | 1571.9 | 1568.5 | 1553.7 | 1563.9 | 1560.5 |
| 10°   | 1556.0 | 1551.4 | 1534.4 | 1540.1 | 1535.5 |
| 12.5° | 1534.4 | 1529.9 | 1509.4 | 1511.7 | 1509.4 |
| 15°   | 1508.3 | 1502.6 | 1476.5 | 1475.4 | 1469.7 |
| 17.5° | 1478.8 | 1470.8 | 1442.5 | 1439.1 | 1430.0 |
| 20°   | 1444.7 | 1434.5 | 1402.8 | 1395.9 | 1390.3 |
| 22.5° | 1406.2 | 1395.9 | 1358.5 | 1348.3 | 1344.9 |
| 25°   | 1368.7 | 1352.8 | 1313.1 | 1299.5 | 1291.5 |
| 27.5° | 1324.4 | 1306.3 | 1265.4 | 1247.3 | 1233.7 |
| 30°   | 1279.0 | 1258.6 | 1215.5 | 1191.7 | 1176.9 |
| 32.5° | 1232.5 | 1208.7 | 1162.2 | 1132.6 | 1120.2 |
| 35°   | 1184.9 | 1156.5 | 1108.8 | 1075.9 | 1062.3 |
| 37.5° | 1130.4 | 1102.0 | 1054.3 | 1015.7 | 1003.3 |
| 40°   | 1078.2 | 1048.7 | 997.6  | 955.6  | 939.7  |
| 42.5° | 1023.7 | 993.1  | 937.4  | 893.2  | 879.6  |
| 45°   | 966.9  | 935.2  | 879.6  | 833.0  | 816.0  |
| 47.5° | 910.2  | 878.4  | 820.5  | 774.0  | 752.4  |
| 50°   | 853.5  | 819.4  | 758.1  | 710.5  | 688.9  |
| 52.5° | 796.7  | 759.3  | 699.1  | 648.0  | 628.7  |
| 55°   | 734.3  | 702.5  | 635.6  | 584.5  | 565.2  |
| 57.5° | 678.7  | 643.5  | 579.9  | 527.7  | 506.2  |
| 60°   | 620.8  | 582.2  | 517.5  | 466.4  | 446.0  |
| 62.5° | 559.5  | 520.9  | 458.5  | 407.4  | 389.3  |
| 65°   | 499.4  | 460.8  | 400.6  | 350.7  | 333.7  |
| 67.5° | 439.2  | 402.9  | 342.7  | 296.2  | 276.9  |
| 70°   | 381.3  | 343.9  | 283.7  | 241.7  | 230.4  |
| 72.5° | 320.0  | 290.5  | 230.4  | 192.9  | 183.9  |
| 75°   | 265.6  | 232.7  | 179.3  | 149.8  | 141.9  |
| 77.5° | 210.0  | 178.2  | 132.8  | 112.4  | 105.5  |
| 80°   | 156.6  | 129.4  | 93.1   | 80.6   | 78.3   |
| 82.5° | 107.8  | 81.7   | 61.3   | 59.0   | 57.9   |
| 85°   | 67.0   | 43.1   | 38.6   | 36.3   | 36.3   |
| 87.5° | 28.4   | 18.2   | 18.2   | 17.0   | 18.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)