

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: P243745

Luminaire Tested: **S125RDR-H850D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243745  
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-H850D840-X4F0-XX-UDD-F-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3150.7 lumens  
Efficiency: N/A  
Efficacy: 133.5 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

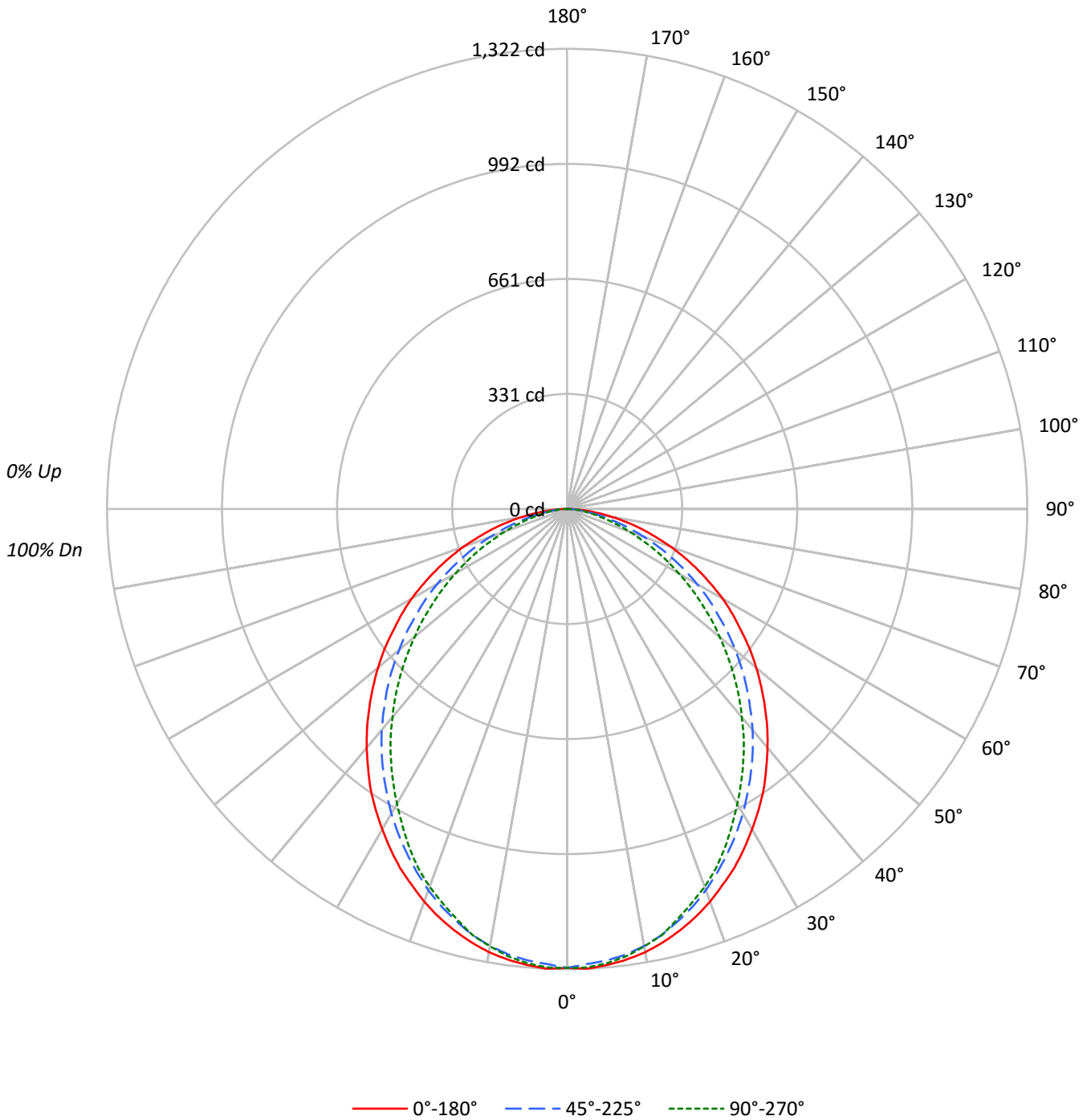
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 9369 | 9369 | 9369 |
| 5°  | 9384 | 9290 | 9344 |
| 10° | 9329 | 9200 | 9207 |
| 15° | 9220 | 9026 | 8984 |
| 20° | 9078 | 8814 | 8736 |
| 25° | 8917 | 8555 | 8415 |
| 30° | 8721 | 8287 | 8025 |
| 35° | 8541 | 7993 | 7657 |
| 40° | 8310 | 7690 | 7243 |
| 45° | 8074 | 7344 | 6814 |
| 50° | 7841 | 6965 | 6328 |
| 55° | 7560 | 6543 | 5819 |
| 60° | 7332 | 6112 | 5268 |
| 65° | 6978 | 5597 | 4662 |
| 70° | 6583 | 4898 | 3977 |
| 75° | 6058 | 4092 | 3238 |
| 80° | 5325 | 3164 | 2665 |
| 85° | 4534 | 2618 | 2463 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 124.1  | 3.9       |
| 10°-20°   | 347.8  | 11.0      |
| 20°-30°   | 506.0  | 16.1      |
| 30°-40°   | 579.5  | 18.4      |
| 40°-50°   | 567.1  | 18.0      |
| 50°-60°   | 478.8  | 15.2      |
| 60°-70°   | 335.2  | 10.6      |
| 70°-80°   | 170.2  | 5.4       |
| 80°-90°   | 41.9   | 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°    | 978.0  | 31.0      |
| 0°-40°    | 1557.5 | 49.4      |
| 0°-60°    | 2603.4 | 82.6      |
| 0°-90°    | 3150.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3150.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1318 | 1318  | 1318 | 1318  | 1318 |      |
| 5°  | 1315 | 1312  | 1302 | 1311  | 1310 | 125  |
| 15° | 1253 | 1248  | 1227 | 1226  | 1221 | 353  |
| 25° | 1137 | 1124  | 1091 | 1080  | 1073 | 523  |
| 35° | 984  | 961   | 921  | 894   | 882  | 615  |
| 45° | 803  | 777   | 731  | 692   | 678  | 620  |
| 55° | 610  | 584   | 528  | 486   | 470  | 547  |
| 65° | 415  | 383   | 333  | 291   | 277  | 411  |
| 75° | 221  | 193   | 149  | 124   | 118  | 233  |
| 85° | 56   | 36    | 32   | 30    | 30   | 64   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1318.2 | 1318.2 | 1318.2 | 1318.2 | 1318.2 |
| 2.5°  | 1321.9 | 1319.1 | 1308.7 | 1318.2 | 1318.2 |
| 5°    | 1315.3 | 1312.5 | 1302.1 | 1310.6 | 1309.7 |
| 7.5°  | 1305.9 | 1303.1 | 1290.8 | 1299.3 | 1296.5 |
| 10°   | 1292.7 | 1288.9 | 1274.8 | 1279.5 | 1275.7 |
| 12.5° | 1274.8 | 1271.0 | 1254.0 | 1255.9 | 1254.0 |
| 15°   | 1253.1 | 1248.4 | 1226.7 | 1225.8 | 1221.0 |
| 17.5° | 1228.6 | 1222.0 | 1198.4 | 1195.6 | 1188.0 |
| 20°   | 1200.3 | 1191.8 | 1165.4 | 1159.8 | 1155.0 |
| 22.5° | 1168.2 | 1159.8 | 1128.6 | 1120.2 | 1117.3 |
| 25°   | 1137.1 | 1123.9 | 1090.9 | 1079.6 | 1073.0 |
| 27.5° | 1100.4 | 1085.3 | 1051.3 | 1036.2 | 1024.9 |
| 30°   | 1062.6 | 1045.7 | 1009.8 | 990.0  | 977.8  |
| 32.5° | 1024.0 | 1004.2 | 965.5  | 941.0  | 930.6  |
| 35°   | 984.4  | 960.8  | 921.2  | 893.9  | 882.5  |
| 37.5° | 939.1  | 915.5  | 875.9  | 843.9  | 833.5  |
| 40°   | 895.7  | 871.2  | 828.8  | 793.9  | 780.7  |
| 42.5° | 850.5  | 825.0  | 778.8  | 742.1  | 730.7  |
| 45°   | 803.3  | 776.9  | 730.7  | 692.1  | 677.9  |
| 47.5° | 756.2  | 729.8  | 681.7  | 643.1  | 625.1  |
| 50°   | 709.1  | 680.8  | 629.9  | 590.2  | 572.3  |
| 52.5° | 661.9  | 630.8  | 580.8  | 538.4  | 522.4  |
| 55°   | 610.1  | 583.6  | 528.0  | 485.6  | 469.6  |
| 57.5° | 563.8  | 534.6  | 481.8  | 438.4  | 420.5  |
| 60°   | 515.8  | 483.7  | 430.0  | 387.5  | 370.6  |
| 62.5° | 464.8  | 432.8  | 380.9  | 338.5  | 323.4  |
| 65°   | 414.9  | 382.8  | 332.8  | 291.4  | 277.2  |
| 67.5° | 364.9  | 334.7  | 284.8  | 246.1  | 230.1  |
| 70°   | 316.8  | 285.7  | 235.7  | 200.8  | 191.4  |
| 72.5° | 265.9  | 241.4  | 191.4  | 160.3  | 152.7  |
| 75°   | 220.6  | 193.3  | 149.0  | 124.5  | 117.9  |
| 77.5° | 174.4  | 148.0  | 110.3  | 93.3   | 87.7   |
| 80°   | 130.1  | 107.5  | 77.3   | 66.9   | 65.1   |
| 82.5° | 89.6   | 67.9   | 50.9   | 49.0   | 48.1   |
| 85°   | 55.6   | 35.8   | 32.1   | 30.2   | 30.2   |
| 87.5° | 23.6   | 15.1   | 15.1   | 14.1   | 15.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)