

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: P243235

Luminaire Tested: **S122RDR-H865D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243235  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H865D930-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2333.4 lumens  
Efficiency: N/A  
Efficacy: 74.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct

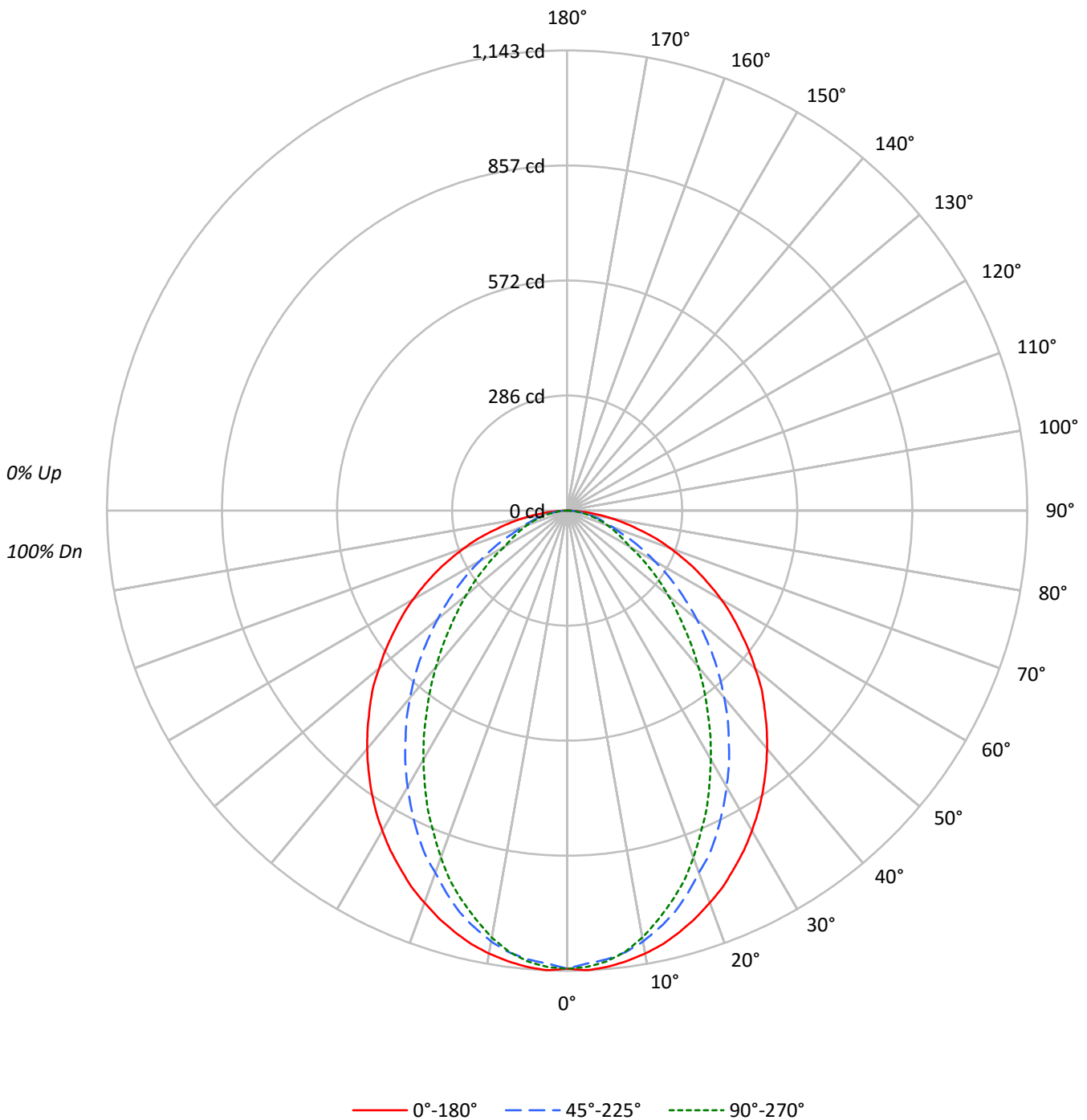
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 110 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  | 95  | 93  | 91  | 92  | 90  | 88  | 86  |
| 2   | 101 | 94  | 87  | 82  | 98  | 92  | 86  | 81  | 88  | 83  | 79  | 85  | 81  | 77  | 82  | 79  | 76  | 74  |
| 3   | 93  | 83  | 76  | 70  | 90  | 82  | 75  | 69  | 79  | 73  | 68  | 76  | 71  | 67  | 74  | 69  | 66  | 64  |
| 4   | 86  | 75  | 66  | 60  | 83  | 73  | 66  | 60  | 71  | 64  | 59  | 69  | 63  | 58  | 66  | 62  | 57  | 55  |
| 5   | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 64  | 57  | 52  | 62  | 56  | 51  | 60  | 55  | 51  | 49  |
| 6   | 74  | 61  | 53  | 47  | 72  | 60  | 52  | 46  | 58  | 51  | 46  | 57  | 50  | 46  | 55  | 50  | 45  | 43  |
| 7   | 68  | 56  | 47  | 42  | 67  | 55  | 47  | 42  | 53  | 46  | 41  | 52  | 46  | 41  | 51  | 45  | 41  | 39  |
| 8   | 64  | 51  | 43  | 38  | 62  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 35  |
| 9   | 60  | 47  | 39  | 34  | 59  | 47  | 39  | 34  | 46  | 39  | 34  | 44  | 38  | 34  | 44  | 38  | 34  | 32  |
| 10  | 56  | 44  | 36  | 31  | 55  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 41  | 35  | 31  | 29  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 21672 | 21672 | 21672 |
| 5°  | 21755 | 21398 | 21491 |
| 10° | 21608 | 21018 | 20829 |
| 15° | 21352 | 20364 | 19804 |
| 20° | 21014 | 19403 | 18586 |
| 25° | 20611 | 18528 | 17206 |
| 30° | 20189 | 17424 | 15697 |
| 35° | 19723 | 16277 | 14131 |
| 40° | 19211 | 15086 | 12597 |
| 45° | 18670 | 13830 | 11079 |
| 50° | 18064 | 12452 | 9717  |
| 55° | 17441 | 11085 | 8379  |
| 60° | 16865 | 9535  | 6846  |
| 65° | 16104 | 8054  | 6328  |
| 70° | 15143 | 6672  | 5903  |
| 75° | 13799 | 6072  | 5417  |
| 80° | 12384 | 5386  | 4848  |
| 85° | 10294 | 4502  | 4284  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 106.6  | 4.6       |
| 10°-20°   | 292.1  | 12.5      |
| 20°-30°   | 409.7  | 17.6      |
| 30°-40°   | 446.3  | 19.1      |
| 40°-50°   | 410.2  | 17.6      |
| 50°-60°   | 321.9  | 13.8      |
| 60°-70°   | 210.0  | 9.0       |
| 70°-80°   | 108.6  | 4.7       |
| 80°-90°   | 28.1   | 1.2       |
| 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°    | 808.4  | 34.6      |
| 0°-40°    | 1254.6 | 53.8      |
| 0°-60°    | 1986.7 | 85.1      |
| 0°-90°    | 2333.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2333.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1138 | 1138  | 1138 | 1138  | 1138 |      |
| 5°  | 1138 | 1132  | 1119 | 1127  | 1124 | 108  |
| 15° | 1083 | 1070  | 1033 | 1012  | 1004 | 305  |
| 25° | 981  | 946   | 882  | 838   | 819  | 452  |
| 35° | 848  | 792   | 700  | 635   | 608  | 530  |
| 45° | 693  | 622   | 513  | 439   | 411  | 535  |
| 55° | 525  | 447   | 334  | 271   | 252  | 471  |
| 65° | 357  | 271   | 179  | 145   | 140  | 353  |
| 75° | 188  | 117   | 82   | 76    | 74   | 201  |
| 85° | 47   | 23    | 21   | 20    | 20   | 54   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1137.8 | 1137.8 | 1137.8 | 1137.8 | 1137.8 |
| 2.5°  | 1142.7 | 1137.8 | 1126.0 | 1136.8 | 1134.8 |
| 5°    | 1137.8 | 1131.9 | 1119.1 | 1127.0 | 1124.0 |
| 7.5°  | 1129.0 | 1123.1 | 1106.4 | 1110.3 | 1105.4 |
| 10°   | 1117.2 | 1109.3 | 1086.7 | 1082.8 | 1076.9 |
| 12.5° | 1102.5 | 1091.7 | 1061.2 | 1049.4 | 1041.6 |
| 15°   | 1082.8 | 1070.1 | 1032.7 | 1012.1 | 1004.3 |
| 17.5° | 1061.2 | 1042.6 | 996.4  | 972.9  | 965.0  |
| 20°   | 1036.7 | 1015.1 | 957.2  | 932.6  | 916.9  |
| 22.5° | 1011.2 | 983.7  | 923.8  | 885.5  | 866.8  |
| 25°   | 980.7  | 946.4  | 881.6  | 838.4  | 818.7  |
| 27.5° | 951.3  | 911.0  | 837.4  | 787.3  | 765.7  |
| 30°   | 917.9  | 873.7  | 792.2  | 734.3  | 713.7  |
| 32.5° | 884.5  | 833.5  | 748.1  | 685.2  | 661.7  |
| 35°   | 848.2  | 792.2  | 700.0  | 635.2  | 607.7  |
| 37.5° | 810.9  | 753.0  | 655.8  | 584.1  | 557.6  |
| 40°   | 772.6  | 707.8  | 606.7  | 532.1  | 506.6  |
| 42.5° | 733.3  | 667.6  | 560.6  | 484.0  | 459.4  |
| 45°   | 693.1  | 622.4  | 513.4  | 438.8  | 411.3  |
| 47.5° | 654.8  | 578.2  | 465.3  | 394.6  | 368.1  |
| 50°   | 609.6  | 534.0  | 420.2  | 348.5  | 327.9  |
| 52.5° | 568.4  | 489.9  | 376.0  | 307.3  | 289.6  |
| 55°   | 525.2  | 446.7  | 333.8  | 270.9  | 252.3  |
| 57.5° | 485.0  | 401.5  | 291.6  | 234.6  | 217.0  |
| 60°   | 442.7  | 358.3  | 250.3  | 198.3  | 179.7  |
| 62.5° | 398.6  | 314.1  | 214.0  | 164.9  | 159.0  |
| 65°   | 357.3  | 270.9  | 178.7  | 145.3  | 140.4  |
| 67.5° | 313.2  | 230.7  | 142.3  | 127.6  | 122.7  |
| 70°   | 271.9  | 191.4  | 119.8  | 109.0  | 106.0  |
| 72.5° | 231.7  | 154.1  | 101.1  | 92.3   | 89.3   |
| 75°   | 187.5  | 116.8  | 82.5   | 75.6   | 73.6   |
| 77.5° | 149.2  | 82.5   | 65.8   | 60.9   | 58.9   |
| 80°   | 112.9  | 59.9   | 49.1   | 46.1   | 44.2   |
| 82.5° | 77.6   | 40.2   | 34.4   | 32.4   | 31.4   |
| 85°   | 47.1   | 22.6   | 20.6   | 19.6   | 19.6   |
| 87.5° | 18.7   | 8.8    | 8.8    | 7.9    | 7.9    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)