

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: P243229

Luminaire Tested: **S122RDR-H675D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243229  
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-H675D840-X4F0-XX-UDD-F-W  
Description: DEFINE 2 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: 2241.2 lumens  
Efficiency: N/A  
Efficacy: 95.0 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

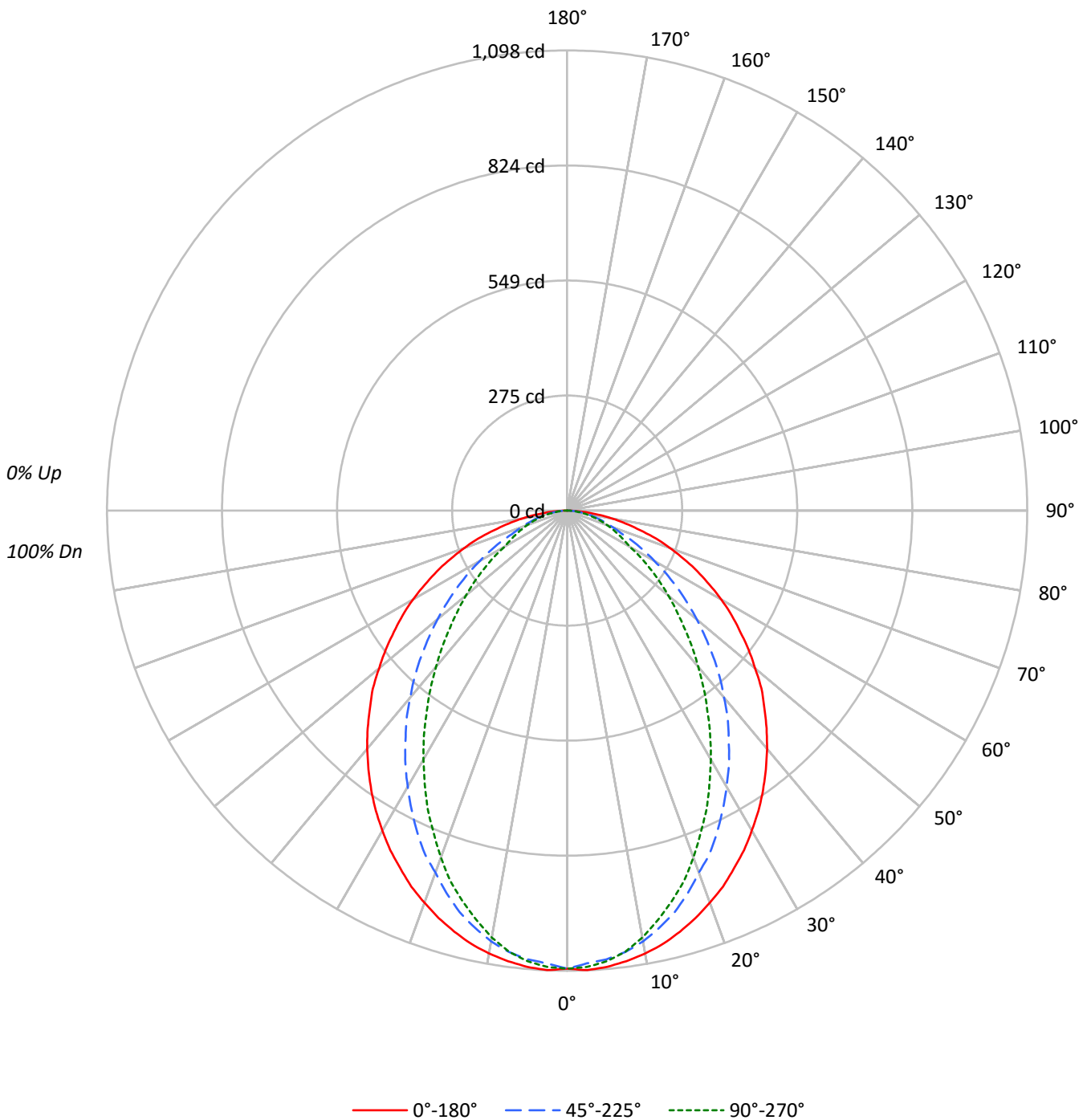
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 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°  | 20815 | 20815 | 20815 |
| 5°  | 20895 | 20553 | 20642 |
| 10° | 20753 | 20189 | 20007 |
| 15° | 20508 | 19560 | 19022 |
| 20° | 20183 | 18634 | 17852 |
| 25° | 19796 | 17795 | 16528 |
| 30° | 19390 | 16736 | 15077 |
| 35° | 18944 | 15633 | 13570 |
| 40° | 18452 | 14489 | 12097 |
| 45° | 17932 | 13283 | 10643 |
| 50° | 17350 | 11960 | 9331  |
| 55° | 16750 | 10647 | 8046  |
| 60° | 16198 | 9158  | 6571  |
| 65° | 15468 | 7734  | 6076  |
| 70° | 14547 | 6405  | 5669  |
| 75° | 13254 | 5829  | 5203  |
| 80° | 11891 | 5166  | 4651  |
| 85° | 9900  | 4327  | 4131  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 102.4  | 4.6       |
| 10°-20°   | 280.5  | 12.5      |
| 20°-30°   | 393.5  | 17.6      |
| 30°-40°   | 428.6  | 19.1      |
| 40°-50°   | 394.0  | 17.6      |
| 50°-60°   | 309.2  | 13.8      |
| 60°-70°   | 201.7  | 9.0       |
| 70°-80°   | 104.3  | 4.7       |
| 80°-90°   | 27.0   | 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°    | 776.4  | 34.6      |
| 0°-40°    | 1205.0 | 53.8      |
| 0°-60°    | 1908.2 | 85.1      |
| 0°-90°    | 2241.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2241.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1093 | 1093  | 1093 | 1093  | 1093 |      |
| 5°  | 1093 | 1087  | 1075 | 1082  | 1080 | 104  |
| 15° | 1040 | 1028  | 992  | 972   | 965  | 293  |
| 25° | 942  | 909   | 847  | 805   | 786  | 434  |
| 35° | 815  | 761   | 672  | 610   | 584  | 509  |
| 45° | 666  | 598   | 493  | 422   | 395  | 514  |
| 55° | 504  | 429   | 321  | 260   | 242  | 452  |
| 65° | 343  | 260   | 172  | 140   | 135  | 339  |
| 75° | 180  | 112   | 79   | 73    | 71   | 193  |
| 85° | 45   | 22    | 20   | 19    | 19   | 52   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1092.8 | 1092.8 | 1092.8 | 1092.8 | 1092.8 |
| 2.5°  | 1097.5 | 1092.8 | 1081.5 | 1091.9 | 1090.0 |
| 5°    | 1092.8 | 1087.2 | 1074.9 | 1082.4 | 1079.6 |
| 7.5°  | 1084.3 | 1078.7 | 1062.6 | 1066.4 | 1061.7 |
| 10°   | 1073.0 | 1065.5 | 1043.8 | 1040.0 | 1034.4 |
| 12.5° | 1058.9 | 1048.5 | 1019.3 | 1007.9 | 1000.4 |
| 15°   | 1040.0 | 1027.8 | 991.9  | 972.1  | 964.6  |
| 17.5° | 1019.3 | 1001.3 | 957.0  | 934.4  | 926.9  |
| 20°   | 995.7  | 974.9  | 919.3  | 895.7  | 880.7  |
| 22.5° | 971.2  | 944.8  | 887.3  | 850.5  | 832.6  |
| 25°   | 941.9  | 908.9  | 846.7  | 805.2  | 786.4  |
| 27.5° | 913.7  | 875.0  | 804.3  | 756.2  | 735.5  |
| 30°   | 881.6  | 839.2  | 760.9  | 705.3  | 685.5  |
| 32.5° | 849.5  | 800.5  | 718.5  | 658.1  | 635.5  |
| 35°   | 814.7  | 760.9  | 672.3  | 610.1  | 583.6  |
| 37.5° | 778.8  | 723.2  | 629.9  | 561.0  | 535.6  |
| 40°   | 742.1  | 679.8  | 582.7  | 511.0  | 486.5  |
| 42.5° | 704.3  | 641.2  | 538.4  | 464.8  | 441.3  |
| 45°   | 665.7  | 597.8  | 493.1  | 421.5  | 395.1  |
| 47.5° | 628.9  | 555.4  | 446.9  | 379.0  | 353.6  |
| 50°   | 585.5  | 512.9  | 403.6  | 334.7  | 314.9  |
| 52.5° | 545.9  | 470.5  | 361.1  | 295.1  | 278.2  |
| 55°   | 504.4  | 429.0  | 320.6  | 260.2  | 242.3  |
| 57.5° | 465.8  | 385.6  | 280.0  | 225.4  | 208.4  |
| 60°   | 425.2  | 344.2  | 240.4  | 190.5  | 172.5  |
| 62.5° | 382.8  | 301.7  | 205.6  | 158.4  | 152.7  |
| 65°   | 343.2  | 260.2  | 171.6  | 139.5  | 134.8  |
| 67.5° | 300.8  | 221.6  | 136.7  | 122.6  | 117.9  |
| 70°   | 261.2  | 183.9  | 115.0  | 104.7  | 101.8  |
| 72.5° | 222.5  | 148.0  | 97.1   | 88.6   | 85.8   |
| 75°   | 180.1  | 112.2  | 79.2   | 72.6   | 70.7   |
| 77.5° | 143.3  | 79.2   | 63.2   | 58.5   | 56.6   |
| 80°   | 108.4  | 57.5   | 47.1   | 44.3   | 42.4   |
| 82.5° | 74.5   | 38.7   | 33.0   | 31.1   | 30.2   |
| 85°   | 45.3   | 21.7   | 19.8   | 18.9   | 18.9   |
| 87.5° | 17.9   | 8.5    | 8.5    | 7.5    | 7.5    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)