

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: P242619

Luminaire Tested: **S124DR-S575D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242619  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DR-S575D935-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1980.3 lumens  
Efficiency: N/A  
Efficacy: 105.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct

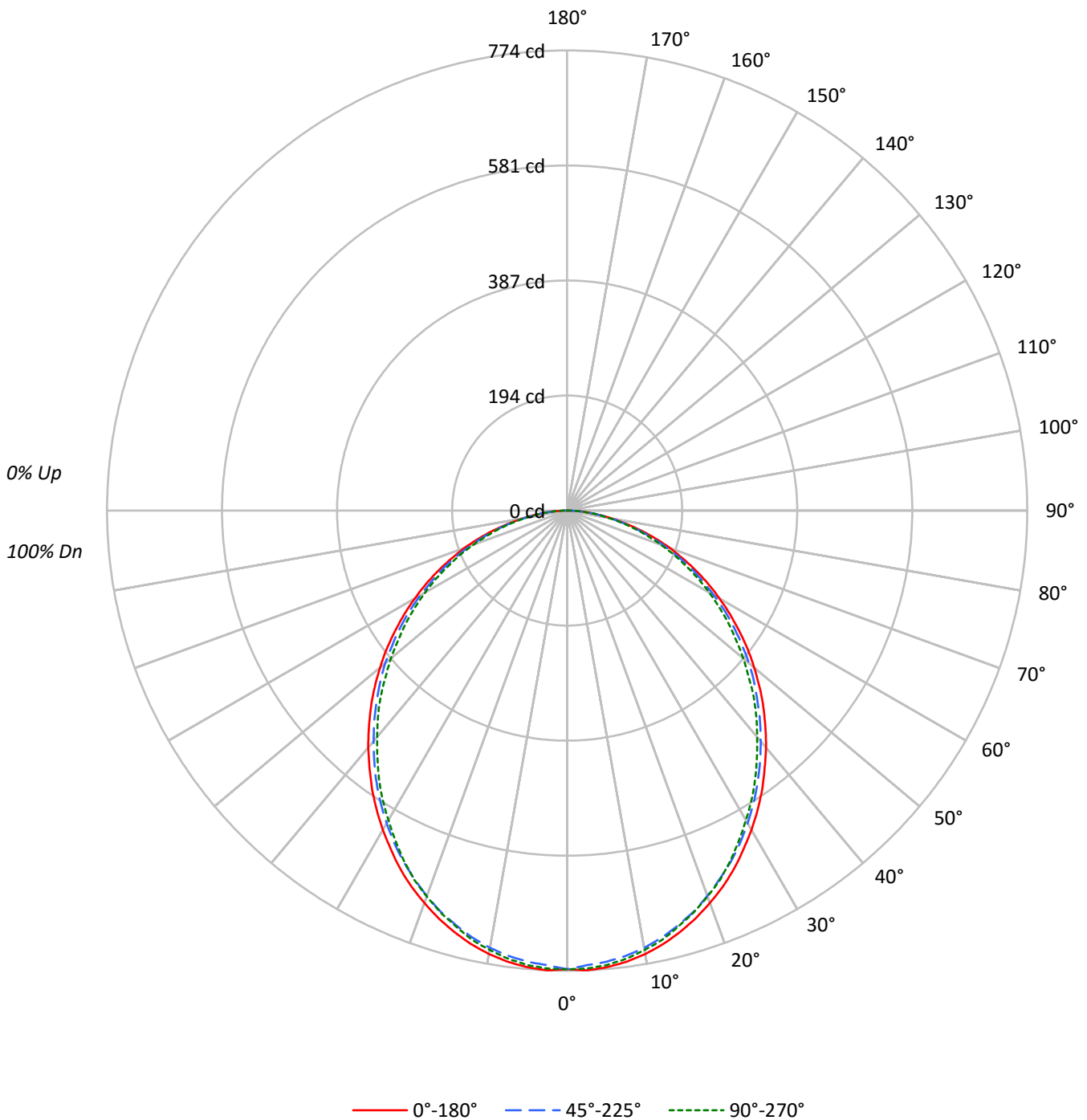
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 91  | 89  |  | 90  | 88  | 86  | 84  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  |  | 82  | 78  | 74  |  | 79  | 76  | 73  | 70  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  |  | 73  | 67  | 63  |  | 70  | 66  | 62  | 60  |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 67  | 60  | 55  |  | 65  | 59  | 54  |  | 63  | 58  | 53  | 51  |
| 5   | 77  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 61  | 53  | 48  |  | 59  | 52  | 47  |  | 57  | 51  | 47  | 44  |
| 6   | 71  | 58  | 49  | 42  | 69  | 57  | 48  | 42  | 55  | 47  | 42  |  | 53  | 47  | 41  |  | 52  | 46  | 41  | 39  |
| 7   | 66  | 52  | 44  | 38  | 64  | 52  | 43  | 37  | 50  | 43  | 37  |  | 49  | 42  | 37  |  | 47  | 41  | 37  | 35  |
| 8   | 61  | 48  | 39  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  |  | 45  | 38  | 33  |  | 43  | 37  | 33  | 31  |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 36  | 30  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  | 34  | 30  | 28  |
| 10  | 54  | 41  | 33  | 28  | 52  | 40  | 33  | 28  | 39  | 32  | 27  |  | 38  | 32  | 27  |  | 37  | 31  | 27  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6858 | 6858 | 6858 |
| 5°  | 6879 | 6796 | 6846 |
| 10° | 6835 | 6741 | 6774 |
| 15° | 6753 | 6645 | 6662 |
| 20° | 6643 | 6526 | 6533 |
| 25° | 6518 | 6391 | 6373 |
| 30° | 6365 | 6231 | 6174 |
| 35° | 6206 | 6065 | 5985 |
| 40° | 6040 | 5875 | 5768 |
| 45° | 5868 | 5688 | 5580 |
| 50° | 5677 | 5523 | 5352 |
| 55° | 5471 | 5308 | 5136 |
| 60° | 5264 | 5067 | 4912 |
| 65° | 5033 | 4838 | 4642 |
| 70° | 4772 | 4530 | 4353 |
| 75° | 4375 | 4163 | 4056 |
| 80° | 3890 | 3737 | 3640 |
| 85° | 3406 | 3274 | 3213 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 72.7   | 3.7       |
| 10°-20°   | 204.9  | 10.3      |
| 20°-30°   | 301.5  | 15.2      |
| 30°-40°   | 350.5  | 17.7      |
| 40°-50°   | 350.5  | 17.7      |
| 50°-60°   | 306.5  | 15.5      |
| 60°-70°   | 227.6  | 11.5      |
| 70°-80°   | 129.1  | 6.5       |
| 80°-90°   | 37.0   | 1.9       |
| 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°    | 579.1  | 29.2      |
| 0°-40°    | 929.6  | 46.9      |
| 0°-60°    | 1586.6 | 80.1      |
| 0°-90°    | 1980.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1980.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 772 | 772   | 772 | 772   | 772 |      |
| 5°  | 771 | 768   | 762 | 768   | 767 | 73   |
| 15° | 734 | 731   | 722 | 726   | 724 | 207  |
| 25° | 665 | 660   | 652 | 652   | 650 | 306  |
| 35° | 572 | 568   | 559 | 554   | 552 | 358  |
| 45° | 467 | 462   | 452 | 446   | 444 | 360  |
| 55° | 353 | 351   | 342 | 335   | 331 | 316  |
| 65° | 239 | 236   | 230 | 224   | 221 | 237  |
| 75° | 127 | 124   | 121 | 119   | 118 | 135  |
| 85° | 33  | 33    | 32  | 32    | 32  | 38   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 771.5 | 771.5 | 771.5 | 771.5 | 771.5 |
| 2.5°  | 774.0 | 772.2 | 765.4 | 771.5 | 770.9 |
| 5°    | 770.9 | 768.4 | 761.6 | 768.4 | 767.2 |
| 7.5°  | 765.4 | 762.9 | 755.5 | 761.0 | 760.4 |
| 10°   | 757.3 | 754.8 | 746.8 | 751.8 | 750.5 |
| 12.5° | 746.8 | 744.3 | 735.7 | 741.2 | 739.4 |
| 15°   | 733.8 | 731.4 | 722.1 | 725.8 | 723.9 |
| 17.5° | 719.0 | 715.9 | 707.2 | 709.7 | 708.5 |
| 20°   | 702.3 | 699.2 | 689.9 | 691.8 | 690.6 |
| 22.5° | 684.4 | 680.0 | 670.8 | 674.5 | 672.0 |
| 25°   | 664.6 | 660.3 | 651.6 | 652.2 | 649.8 |
| 27.5° | 642.3 | 638.0 | 630.0 | 628.7 | 625.6 |
| 30°   | 620.1 | 615.1 | 607.1 | 604.6 | 601.5 |
| 32.5° | 596.6 | 592.3 | 583.6 | 580.5 | 577.4 |
| 35°   | 571.9 | 567.5 | 558.9 | 554.5 | 551.5 |
| 37.5° | 545.9 | 542.2 | 532.9 | 528.6 | 524.3 |
| 40°   | 520.5 | 515.6 | 506.3 | 500.1 | 497.1 |
| 42.5° | 493.3 | 490.9 | 480.4 | 472.9 | 471.1 |
| 45°   | 466.8 | 462.4 | 452.5 | 445.7 | 443.9 |
| 47.5° | 438.9 | 435.8 | 426.6 | 419.2 | 414.2 |
| 50°   | 410.5 | 408.0 | 399.4 | 390.7 | 387.0 |
| 52.5° | 382.7 | 379.6 | 370.3 | 362.9 | 358.0 |
| 55°   | 353.0 | 351.1 | 342.5 | 335.1 | 331.4 |
| 57.5° | 325.2 | 323.3 | 314.7 | 307.3 | 303.5 |
| 60°   | 296.1 | 293.0 | 285.0 | 279.4 | 276.3 |
| 62.5° | 267.7 | 265.2 | 256.6 | 251.6 | 248.5 |
| 65°   | 239.3 | 236.2 | 230.0 | 223.8 | 220.7 |
| 67.5° | 210.2 | 207.7 | 201.5 | 195.4 | 194.7 |
| 70°   | 183.6 | 179.3 | 174.3 | 169.4 | 167.5 |
| 72.5° | 155.2 | 150.8 | 147.1 | 143.4 | 141.6 |
| 75°   | 127.4 | 124.3 | 121.2 | 118.7 | 118.1 |
| 77.5° | 100.2 | 98.9  | 95.8  | 95.2  | 93.4  |
| 80°   | 76.0  | 74.2  | 73.0  | 71.7  | 71.1  |
| 82.5° | 52.5  | 51.9  | 51.9  | 51.3  | 50.7  |
| 85°   | 33.4  | 33.4  | 32.1  | 32.1  | 31.5  |
| 87.5° | 16.1  | 15.5  | 14.8  | 14.8  | 14.8  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)