

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: P334166

Luminaire Tested: **S124DS-S575D835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334166  
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: S124DS-S575D835-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 575 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2300.0 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct

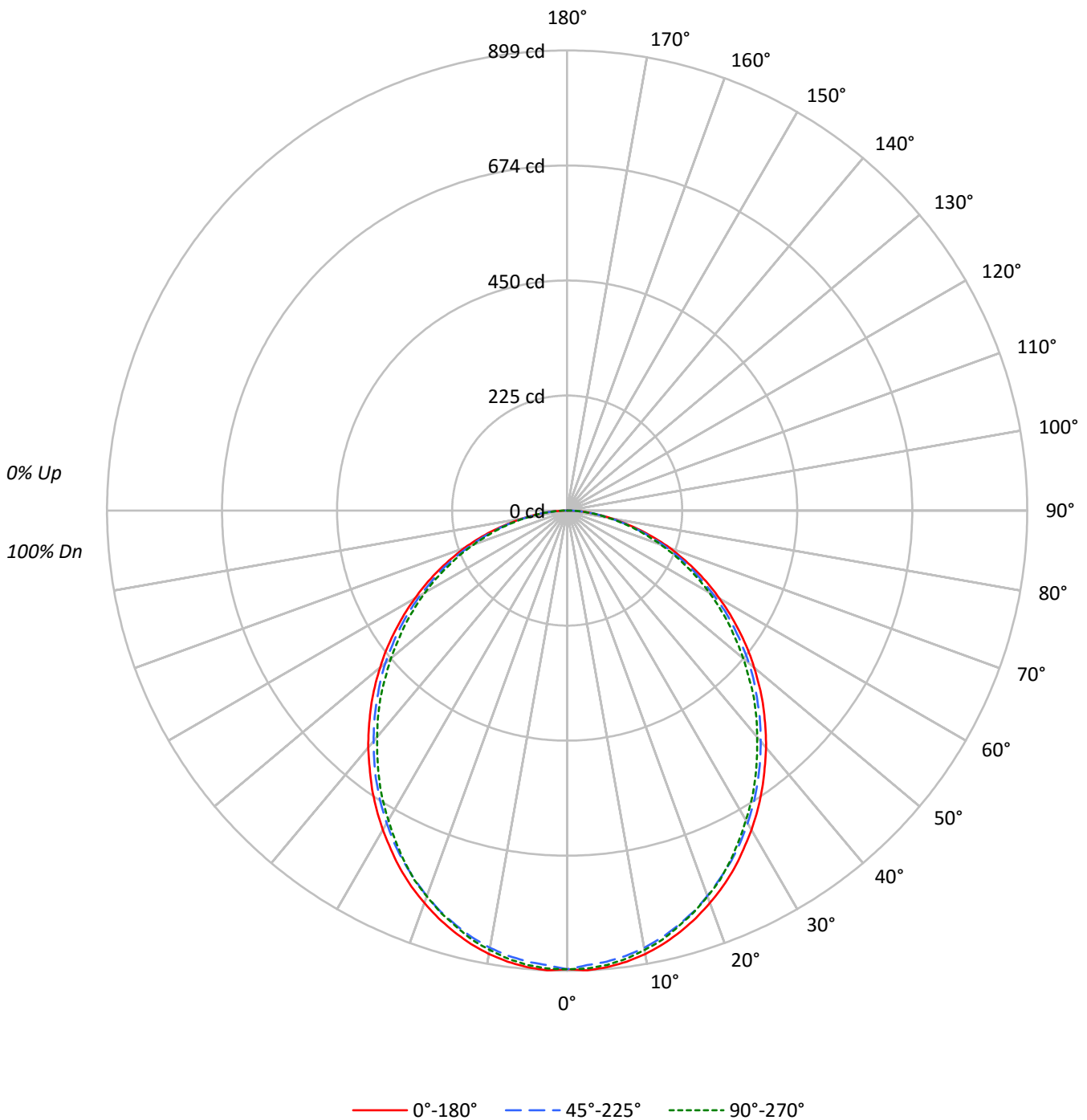
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 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 |    |    |    |    | 100 |   |  |   |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |    |    |    |    | 84  |   |  |   |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 73  | 70  |    |    |    |    | 70  |   |  |   |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 67  | 63  | 70  | 66  | 62  | 60  |    |    |    |    | 60  |   |  |   |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |    |    |    |    | 51  |   |  |   |
| 5   | 77  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 61  | 53  | 48  | 59  | 52  | 47  | 57  | 51  | 47  | 44  |    |    |    |    | 44  |   |  |   |
| 6   | 71  | 58  | 49  | 42  | 69  | 57  | 48  | 42  | 55  | 47  | 42  | 53  | 47  | 41  | 52  | 46  | 41  | 39  |    |    |    |    | 39  |   |  |   |
| 7   | 66  | 52  | 44  | 38  | 64  | 52  | 43  | 37  | 50  | 43  | 37  | 49  | 42  | 37  | 47  | 41  | 37  | 35  |    |    |    |    | 35  |   |  |   |
| 8   | 61  | 48  | 39  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  | 45  | 38  | 33  | 43  | 37  | 33  | 31  |    |    |    |    | 31  |   |  |   |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 36  | 30  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 28  |    |    |    |    | 28  |   |  |   |
| 10  | 54  | 41  | 33  | 28  | 52  | 40  | 33  | 28  | 39  | 32  | 27  | 38  | 32  | 27  | 37  | 31  | 27  | 25  |    |    |    |    | 25  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7234 | 7234 | 7234 |
| 5°  | 7256 | 7169 | 7221 |
| 10° | 7211 | 7110 | 7146 |
| 15° | 7123 | 7010 | 7027 |
| 20° | 7008 | 6884 | 6890 |
| 25° | 6876 | 6741 | 6722 |
| 30° | 6714 | 6573 | 6512 |
| 35° | 6546 | 6397 | 6312 |
| 40° | 6372 | 6198 | 6084 |
| 45° | 6189 | 6001 | 5885 |
| 50° | 5988 | 5825 | 5645 |
| 55° | 5771 | 5599 | 5417 |
| 60° | 5553 | 5344 | 5183 |
| 65° | 5309 | 5102 | 4896 |
| 70° | 5035 | 4780 | 4593 |
| 75° | 4613 | 4389 | 4276 |
| 80° | 4105 | 3938 | 3840 |
| 85° | 3594 | 3455 | 3390 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 84.5   | 3.7       |
| 10°-20°   | 238.0  | 10.3      |
| 20°-30°   | 350.2  | 15.2      |
| 30°-40°   | 407.1  | 17.7      |
| 40°-50°   | 407.0  | 17.7      |
| 50°-60°   | 356.0  | 15.5      |
| 60°-70°   | 264.3  | 11.5      |
| 70°-80°   | 150.0  | 6.5       |
| 80°-90°   | 42.9   | 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°    | 672.6  | 29.2      |
| 0°-40°    | 1079.7 | 46.9      |
| 0°-60°    | 1842.8 | 80.1      |
| 0°-90°    | 2300.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2300.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 896 | 896   | 896 | 896   | 896 |      |
| 5°  | 895 | 892   | 885 | 892   | 891 | 85   |
| 15° | 852 | 849   | 839 | 843   | 841 | 240  |
| 25° | 772 | 767   | 757 | 758   | 755 | 355  |
| 35° | 664 | 659   | 649 | 644   | 640 | 415  |
| 45° | 542 | 537   | 526 | 518   | 516 | 418  |
| 55° | 410 | 408   | 398 | 389   | 385 | 367  |
| 65° | 278 | 274   | 267 | 260   | 256 | 275  |
| 75° | 148 | 144   | 141 | 138   | 137 | 157  |
| 85° | 39  | 39    | 37  | 37    | 37  | 44   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 896.1 | 896.1 | 896.1 | 896.1 | 896.1 |
| 2.5°  | 899.0 | 896.8 | 888.9 | 896.1 | 895.4 |
| 5°    | 895.4 | 892.5 | 884.6 | 892.5 | 891.1 |
| 7.5°  | 888.9 | 886.0 | 877.4 | 883.9 | 883.2 |
| 10°   | 879.6 | 876.7 | 867.4 | 873.1 | 871.7 |
| 12.5° | 867.4 | 864.5 | 854.5 | 860.9 | 858.8 |
| 15°   | 852.3 | 849.4 | 838.7 | 843.0 | 840.8 |
| 17.5° | 835.1 | 831.5 | 821.4 | 824.3 | 822.9 |
| 20°   | 815.7 | 812.1 | 801.3 | 803.5 | 802.0 |
| 22.5° | 794.9 | 789.8 | 779.1 | 783.4 | 780.5 |
| 25°   | 771.9 | 766.9 | 756.8 | 757.5 | 754.6 |
| 27.5° | 746.0 | 741.0 | 731.7 | 730.2 | 726.6 |
| 30°   | 720.2 | 714.4 | 705.1 | 702.2 | 698.6 |
| 32.5° | 692.9 | 687.9 | 677.8 | 674.2 | 670.6 |
| 35°   | 664.2 | 659.1 | 649.1 | 644.1 | 640.5 |
| 37.5° | 634.0 | 629.7 | 618.9 | 613.9 | 608.9 |
| 40°   | 604.6 | 598.8 | 588.1 | 580.9 | 577.3 |
| 42.5° | 573.0 | 570.1 | 557.9 | 549.3 | 547.1 |
| 45°   | 542.1 | 537.1 | 525.6 | 517.7 | 515.5 |
| 47.5° | 509.8 | 506.2 | 495.4 | 486.8 | 481.1 |
| 50°   | 476.8 | 473.9 | 463.8 | 453.8 | 449.5 |
| 52.5° | 444.5 | 440.9 | 430.1 | 421.5 | 415.7 |
| 55°   | 410.0 | 407.8 | 397.8 | 389.2 | 384.9 |
| 57.5° | 377.7 | 375.5 | 365.5 | 356.9 | 352.6 |
| 60°   | 343.9 | 340.3 | 331.0 | 324.5 | 321.0 |
| 62.5° | 310.9 | 308.0 | 298.0 | 292.2 | 288.6 |
| 65°   | 277.9 | 274.3 | 267.1 | 259.9 | 256.3 |
| 67.5° | 244.1 | 241.3 | 234.1 | 226.9 | 226.2 |
| 70°   | 213.3 | 208.2 | 202.5 | 196.7 | 194.6 |
| 72.5° | 180.2 | 175.2 | 170.9 | 166.6 | 164.4 |
| 75°   | 147.9 | 144.3 | 140.7 | 137.9 | 137.1 |
| 77.5° | 116.3 | 114.9 | 111.3 | 110.6 | 108.4 |
| 80°   | 88.3  | 86.2  | 84.7  | 83.3  | 82.6  |
| 82.5° | 61.0  | 60.3  | 60.3  | 59.6  | 58.9  |
| 85°   | 38.8  | 38.8  | 37.3  | 37.3  | 36.6  |
| 87.5° | 18.7  | 18.0  | 17.2  | 17.2  | 17.2  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)