

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: P333813

Luminaire Tested: **SA2XXDP-C865D830-4F0-1E-UDD-F**

Issue Date: 10/11/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P333813  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 10/11/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDP-C865D830-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 865 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

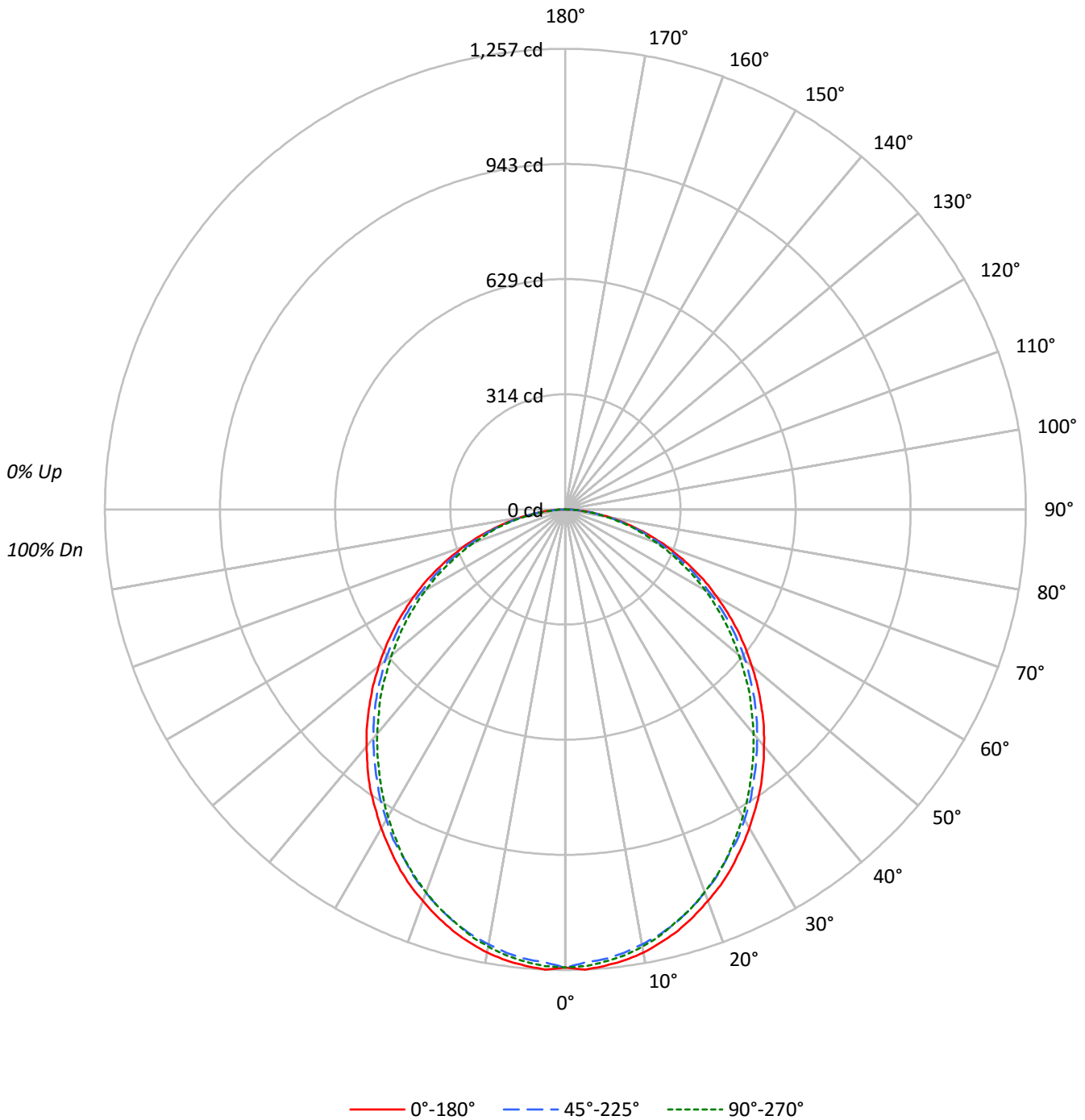
Lumens per Lamp: N/A  
Luminaire Lumens: 3180.3 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 34.8  
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   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 83  | 78  | 86  | 81  | 76  | 83  | 78  | 74  | 80  | 76  | 73  | 71  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 68  | 63  | 71  | 66  | 62  | 60  |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 68  | 61  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 51  |
| 5   | 77  | 64  | 55  | 49  | 75  | 63  | 55  | 48  | 61  | 53  | 48  | 59  | 52  | 47  | 57  | 51  | 47  | 45  |
| 6   | 71  | 58  | 49  | 43  | 69  | 57  | 48  | 42  | 55  | 48  | 42  | 53  | 47  | 42  | 52  | 46  | 41  | 39  |
| 7   | 66  | 52  | 44  | 38  | 64  | 52  | 43  | 38  | 50  | 43  | 37  | 49  | 42  | 37  | 47  | 41  | 37  | 35  |
| 8   | 61  | 48  | 40  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 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  | 53  | 40  | 33  | 28  | 39  | 32  | 27  | 38  | 32  | 27  | 37  | 32  | 27  | 26  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 20184 | 20184 | 20184 |
| 5°  | 20261 | 19968 | 20084 |
| 10° | 20140 | 19766 | 19864 |
| 15° | 19891 | 19509 | 19488 |
| 20° | 19538 | 19124 | 19103 |
| 25° | 19187 | 18650 | 18650 |
| 30° | 18735 | 18219 | 18062 |
| 35° | 18313 | 17698 | 17438 |
| 40° | 17785 | 17176 | 16847 |
| 45° | 17262 | 16659 | 16248 |
| 50° | 16696 | 16124 | 15548 |
| 55° | 16104 | 15496 | 14922 |
| 60° | 15448 | 14751 | 14205 |
| 65° | 14739 | 14006 | 13364 |
| 70° | 13846 | 13109 | 12482 |
| 75° | 12595 | 12071 | 11772 |
| 80° | 11176 | 10841 | 10284 |
| 85° | 9133  | 8688  | 7799  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 117.6  | 3.7       |
| 10°-20°   | 331.0  | 10.4      |
| 20°-30°   | 486.5  | 15.3      |
| 30°-40°   | 565.0  | 17.8      |
| 40°-50°   | 564.3  | 17.7      |
| 50°-60°   | 492.1  | 15.5      |
| 60°-70°   | 363.7  | 11.4      |
| 70°-80°   | 205.8  | 6.5       |
| 80°-90°   | 54.3   | 1.7       |
| 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°    | 935.1  | 29.4      |
| 0°-40°    | 1500.2 | 47.2      |
| 0°-60°    | 2556.5 | 80.4      |
| 0°-90°    | 3180.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3180.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1250 | 1250  | 1250 | 1250  | 1250 |      |
| 5°  | 1250 | 1245  | 1232 | 1242  | 1239 | 119  |
| 15° | 1190 | 1183  | 1167 | 1172  | 1166 | 335  |
| 25° | 1077 | 1067  | 1047 | 1049  | 1047 | 496  |
| 35° | 929  | 917   | 898  | 891   | 885  | 580  |
| 45° | 756  | 748   | 730  | 716   | 712  | 583  |
| 55° | 572  | 565   | 550  | 536   | 530  | 512  |
| 65° | 386  | 379   | 367  | 356   | 350  | 382  |
| 75° | 202  | 200   | 194  | 186   | 189  | 216  |
| 85° | 49   | 48    | 47   | 43    | 42   | 58   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1250.1 | 1250.1 | 1250.1 | 1250.1 | 1250.1 |
| 2.5°  | 1257.3 | 1251.3 | 1238.0 | 1250.1 | 1247.7 |
| 5°    | 1250.1 | 1245.2 | 1232.0 | 1241.6 | 1239.2 |
| 7.5°  | 1241.6 | 1234.4 | 1221.2 | 1230.8 | 1228.4 |
| 10°   | 1228.4 | 1220.0 | 1205.6 | 1215.2 | 1211.6 |
| 12.5° | 1210.4 | 1203.2 | 1188.8 | 1194.8 | 1192.4 |
| 15°   | 1190.0 | 1182.7 | 1167.1 | 1171.9 | 1165.9 |
| 17.5° | 1164.7 | 1157.5 | 1141.9 | 1147.9 | 1141.9 |
| 20°   | 1137.1 | 1129.9 | 1113.0 | 1116.6 | 1111.8 |
| 22.5° | 1109.4 | 1098.6 | 1083.0 | 1083.0 | 1080.6 |
| 25°   | 1077.0 | 1067.4 | 1046.9 | 1049.3 | 1046.9 |
| 27.5° | 1040.9 | 1032.5 | 1016.9 | 1013.3 | 1007.3 |
| 30°   | 1004.9 | 995.2  | 977.2  | 973.6  | 968.8  |
| 32.5° | 966.4  | 959.2  | 939.9  | 932.7  | 927.9  |
| 35°   | 929.1  | 917.1  | 897.9  | 890.7  | 884.7  |
| 37.5° | 887.1  | 876.2  | 857.0  | 848.6  | 842.6  |
| 40°   | 843.8  | 834.2  | 814.9  | 804.1  | 799.3  |
| 42.5° | 801.7  | 792.1  | 772.9  | 760.9  | 753.6  |
| 45°   | 756.0  | 747.6  | 729.6  | 716.4  | 711.6  |
| 47.5° | 711.6  | 703.2  | 683.9  | 670.7  | 663.5  |
| 50°   | 664.7  | 658.7  | 641.9  | 625.0  | 619.0  |
| 52.5° | 619.0  | 610.6  | 595.0  | 581.8  | 573.3  |
| 55°   | 572.1  | 564.9  | 550.5  | 536.1  | 530.1  |
| 57.5° | 525.3  | 519.3  | 503.6  | 489.2  | 484.4  |
| 60°   | 478.4  | 473.6  | 456.8  | 443.5  | 439.9  |
| 62.5° | 432.7  | 424.3  | 412.3  | 400.3  | 395.4  |
| 65°   | 385.8  | 378.6  | 366.6  | 355.8  | 349.8  |
| 67.5° | 337.8  | 331.7  | 320.9  | 312.5  | 307.7  |
| 70°   | 293.3  | 288.5  | 277.7  | 269.2  | 264.4  |
| 72.5° | 247.6  | 242.8  | 236.8  | 228.4  | 224.8  |
| 75°   | 201.9  | 199.5  | 193.5  | 186.3  | 188.7  |
| 77.5° | 161.1  | 156.3  | 153.9  | 150.2  | 146.6  |
| 80°   | 120.2  | 119.0  | 116.6  | 113.0  | 110.6  |
| 82.5° | 81.7   | 81.7   | 80.5   | 75.7   | 75.7   |
| 85°   | 49.3   | 48.1   | 46.9   | 43.3   | 42.1   |
| 87.5° | 21.6   | 19.2   | 16.8   | 13.2   | 12.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)