

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: P333779

Luminaire Tested: **SA2XXDP-C1005D830-4F0-1E-UDD-D**

Issue Date: 10/11/2019

Test Information

Test Method: LM-79-08
Report Number: P333779
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 10/11/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDP-C1005D830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1005 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

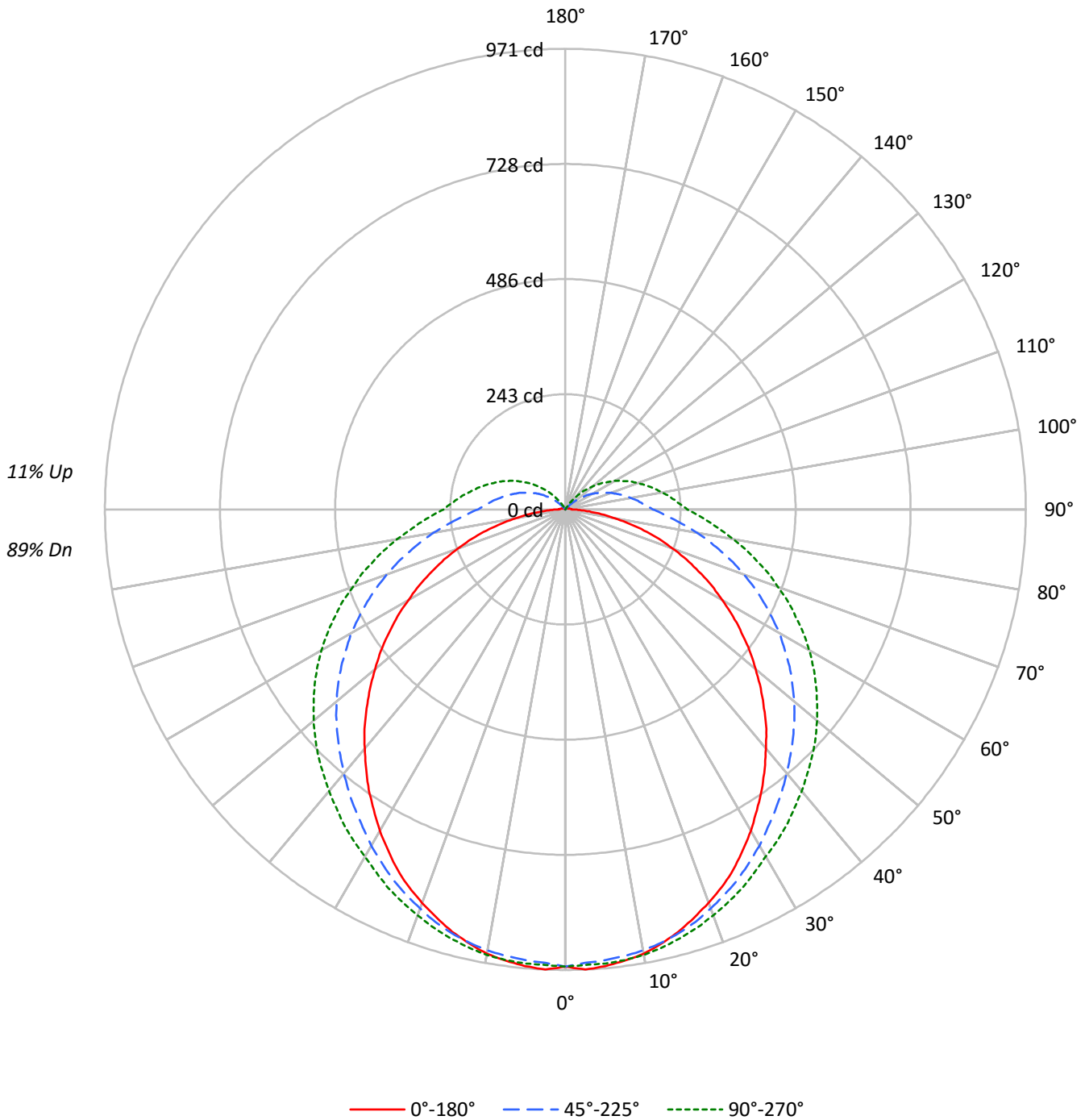
Lumens per Lamp: N/A
Luminaire Lumens: 3677.8 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 41.1
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



TEST NUMBER: P333779
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Luminous Intensity Polar Plot





TEST NUMBER: P333779

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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 | 0 | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 | 98 | 98 | 98 | 92 | 92 | 92 | 89 | | | | 89 | | | | |
| 1 | 104 | 98 | 93 | 88 | 100 | 95 | 90 | 86 | 88 | 85 | 81 | 82 | 79 | 77 | 77 | 75 | 72 | 69 | | | | 69 | | | | |
| 2 | 94 | 84 | 77 | 70 | 90 | 81 | 74 | 68 | 76 | 70 | 65 | 71 | 66 | 62 | 66 | 62 | 59 | 56 | | | | 56 | | | | |
| 3 | 85 | 73 | 64 | 57 | 81 | 71 | 63 | 56 | 66 | 59 | 54 | 62 | 56 | 51 | 58 | 53 | 49 | 46 | | | | 46 | | | | |
| 4 | 77 | 64 | 55 | 48 | 74 | 62 | 54 | 47 | 58 | 51 | 45 | 55 | 48 | 43 | 51 | 46 | 42 | 39 | | | | 39 | | | | |
| 5 | 71 | 57 | 48 | 41 | 68 | 56 | 47 | 40 | 52 | 44 | 39 | 49 | 42 | 37 | 46 | 40 | 36 | 33 | | | | 33 | | | | |
| 6 | 65 | 51 | 42 | 35 | 63 | 50 | 41 | 35 | 47 | 39 | 34 | 44 | 37 | 32 | 42 | 36 | 31 | 29 | | | | 29 | | | | |
| 7 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 43 | 35 | 30 | 40 | 34 | 29 | 38 | 32 | 28 | 25 | | | | 25 | | | | |
| 8 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 27 | 39 | 32 | 26 | 37 | 30 | 25 | 35 | 29 | 25 | 23 | | | | 23 | | | | |
| 9 | 52 | 39 | 30 | 25 | 50 | 38 | 30 | 24 | 36 | 29 | 24 | 34 | 27 | 23 | 32 | 26 | 22 | 20 | | | | 20 | | | | |
| 10 | 49 | 36 | 28 | 22 | 47 | 35 | 27 | 22 | 33 | 26 | 21 | 31 | 25 | 21 | 30 | 24 | 20 | 18 | | | | 18 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 15563 | 15563 | 15563 |
| 5° | 15668 | 15464 | 15577 |
| 10° | 15596 | 15482 | 15642 |
| 15° | 15412 | 15458 | 15644 |
| 20° | 15170 | 15385 | 15649 |
| 25° | 14933 | 15330 | 15704 |
| 30° | 14585 | 15262 | 15756 |
| 35° | 14235 | 15226 | 16025 |
| 40° | 13869 | 15310 | 16341 |
| 45° | 13524 | 15502 | 16810 |
| 50° | 13157 | 15825 | 17405 |
| 55° | 12780 | 16239 | 18168 |
| 60° | 12316 | 16827 | 19172 |
| 65° | 11847 | 17612 | 20493 |
| 70° | 11344 | 18859 | 22490 |
| 75° | 10717 | 21179 | 26057 |
| 80° | 9744 | 26109 | 33380 |
| 85° | 9318 | 41923 | 56409 |



TEST NUMBER: P333779

CATALOG NUMBER: SA2XXDP-C1005D830-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 91.4 | 2.5 |
| 10°-20° | 262.1 | 7.1 |
| 20°-30° | 397.1 | 10.8 |
| 30°-40° | 483.5 | 13.1 |
| 40°-50° | 520.3 | 14.1 |
| 50°-60° | 505.2 | 13.7 |
| 60°-70° | 441.2 | 12.0 |
| 70°-80° | 339.6 | 9.2 |
| 80°-90° | 227.4 | 6.2 |
| 90°-100° | 156.9 | 4.3 |
| 100°-110° | 114.6 | 3.1 |
| 110°-120° | 75.7 | 2.1 |
| 120°-130° | 42.2 | 1.1 |
| 130°-140° | 17.7 | 0.5 |
| 140°-150° | 3.0 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 750.5 | 20.4 |
| 0°-40° | 1234.1 | 33.6 |
| 0°-60° | 2259.6 | 61.4 |
| 0°-90° | 3267.8 | 88.9 |
| 90°-120° | 347.2 | 9.4 |
| 90°-150° | 410.0 | 11.1 |
| 90°-180° | 410.0 | 11.1 |
| 0°-180° | 3677.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 964 | 964 | 964 | 964 | 964 | |
| 5° | 967 | 962 | 954 | 962 | 961 | 92 |
| 15° | 922 | 925 | 925 | 937 | 936 | 260 |
| 25° | 838 | 848 | 860 | 877 | 882 | 385 |
| 35° | 722 | 746 | 772 | 803 | 813 | 451 |
| 45° | 592 | 630 | 679 | 722 | 736 | 457 |
| 55° | 454 | 504 | 577 | 627 | 645 | 406 |
| 65° | 310 | 379 | 461 | 518 | 536 | 308 |
| 75° | 172 | 250 | 340 | 400 | 418 | 182 |
| 85° | 50 | 137 | 226 | 285 | 304 | 53 |
| 90° | 14 | 95 | 184 | 240 | 257 | 10 |
| 95° | 11 | 77 | 161 | 214 | 230 | 9 |
| 105° | 7 | 48 | 120 | 169 | 184 | 8 |
| 115° | 6 | 21 | 84 | 126 | 141 | 5 |
| 125° | 3 | 3 | 48 | 85 | 98 | 3 |
| 135° | 1 | 1 | 15 | 45 | 56 | 2 |
| 145° | 0 | 0 | 0 | 8 | 15 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P333779

CATALOG NUMBER: SA2XXDP-C1005D830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 963.9 | 963.9 | 963.9 | 963.9 | 963.9 |
| 2.5° | 970.9 | 966.7 | 956.9 | 963.9 | 961.1 |
| 5° | 966.7 | 962.5 | 954.1 | 962.5 | 961.1 |
| 7.5° | 959.7 | 956.9 | 949.9 | 959.7 | 958.3 |
| 10° | 951.3 | 948.5 | 944.3 | 955.5 | 954.1 |
| 12.5° | 937.3 | 938.7 | 935.9 | 947.1 | 945.7 |
| 15° | 922.0 | 924.8 | 924.8 | 937.3 | 935.9 |
| 17.5° | 902.4 | 908.0 | 912.2 | 924.8 | 924.8 |
| 20° | 882.9 | 889.8 | 895.4 | 910.8 | 910.8 |
| 22.5° | 861.9 | 870.3 | 878.7 | 894.0 | 896.8 |
| 25° | 838.2 | 847.9 | 860.5 | 877.3 | 881.5 |
| 27.5° | 810.2 | 825.6 | 839.6 | 860.5 | 863.3 |
| 30° | 782.3 | 800.4 | 818.6 | 840.9 | 845.1 |
| 32.5° | 751.5 | 772.5 | 794.8 | 821.4 | 829.8 |
| 35° | 722.2 | 746.0 | 772.5 | 803.2 | 813.0 |
| 37.5° | 690.1 | 716.6 | 750.1 | 783.7 | 793.5 |
| 40° | 658.0 | 688.7 | 726.4 | 762.7 | 775.3 |
| 42.5° | 627.2 | 658.0 | 702.7 | 743.2 | 755.7 |
| 45° | 592.3 | 630.0 | 678.9 | 722.2 | 736.2 |
| 47.5° | 558.8 | 599.3 | 655.2 | 699.9 | 715.2 |
| 50° | 523.8 | 567.2 | 630.0 | 677.5 | 692.9 |
| 52.5° | 490.3 | 536.4 | 603.5 | 652.4 | 669.1 |
| 55° | 454.0 | 504.3 | 576.9 | 627.2 | 645.4 |
| 57.5° | 419.1 | 475.0 | 547.6 | 602.1 | 620.2 |
| 60° | 381.4 | 441.4 | 521.1 | 574.1 | 593.7 |
| 62.5° | 347.8 | 410.7 | 490.3 | 547.6 | 565.8 |
| 65° | 310.1 | 378.6 | 461.0 | 518.3 | 536.4 |
| 67.5° | 276.6 | 347.8 | 431.6 | 488.9 | 508.5 |
| 70° | 240.3 | 312.9 | 399.5 | 459.6 | 476.4 |
| 72.5° | 206.7 | 282.2 | 370.2 | 428.9 | 449.8 |
| 75° | 171.8 | 250.0 | 339.5 | 399.5 | 417.7 |
| 77.5° | 138.3 | 219.3 | 310.1 | 370.2 | 389.7 |
| 80° | 104.8 | 190.0 | 280.8 | 339.5 | 359.0 |
| 82.5° | 76.8 | 160.6 | 252.8 | 311.5 | 329.7 |
| 85° | 50.3 | 136.9 | 226.3 | 285.0 | 304.5 |
| 87.5° | 30.7 | 114.5 | 204.0 | 261.2 | 279.4 |
| 90° | 14.0 | 95.0 | 184.4 | 240.3 | 257.0 |
| 92.5° | 12.6 | 86.6 | 171.8 | 226.3 | 243.1 |
| 95° | 11.2 | 76.8 | 160.6 | 213.7 | 230.5 |
| 97.5° | 9.8 | 69.8 | 150.9 | 202.6 | 219.3 |
| 100° | 9.8 | 61.5 | 139.7 | 191.4 | 206.7 |
| 102.5° | 8.4 | 54.5 | 129.9 | 180.2 | 195.6 |
| 105° | 7.0 | 47.5 | 120.1 | 169.0 | 184.4 |
| 107.5° | 7.0 | 40.5 | 110.4 | 157.9 | 173.2 |
| 110° | 5.6 | 33.5 | 102.0 | 146.7 | 162.0 |



TEST NUMBER: P333779

CATALOG NUMBER: SA2XXDP-C1005D830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|-------|
| 112.5° | 5.6 | 27.9 | 92.2 | 136.9 | 152.3 |
| 115° | 5.6 | 21.0 | 83.8 | 125.7 | 141.1 |
| 117.5° | 4.2 | 15.4 | 74.0 | 115.9 | 129.9 |
| 120° | 4.2 | 9.8 | 65.7 | 104.8 | 120.1 |
| 122.5° | 4.2 | 5.6 | 57.3 | 95.0 | 107.6 |
| 125° | 2.8 | 2.8 | 47.5 | 85.2 | 97.8 |
| 127.5° | 2.8 | 1.4 | 39.1 | 74.0 | 86.6 |
| 130° | 2.8 | 1.4 | 30.7 | 64.3 | 75.4 |
| 132.5° | 2.8 | 1.4 | 22.4 | 54.5 | 65.7 |
| 135° | 1.4 | 1.4 | 15.4 | 44.7 | 55.9 |
| 137.5° | 1.4 | 1.4 | 8.4 | 34.9 | 44.7 |
| 140° | 1.4 | 0.0 | 2.8 | 25.1 | 33.5 |
| 142.5° | 1.4 | 0.0 | 0.0 | 16.8 | 23.7 |
| 145° | 0.0 | 0.0 | 0.0 | 8.4 | 15.4 |
| 147.5° | 0.0 | 0.0 | 0.0 | 1.4 | 5.6 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)