

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: P231669

Luminaire Tested: **S122-DR-1-35-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231669
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33909)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122-DR-1-35-X-0048-1-U-DD-1-W
Description: DEFINE 2 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2607.7 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.13 / 1.26
Luminous Opening: Rectangular (W 0.14' x L: 3.92' x H: 0')
CIE Type: Direct

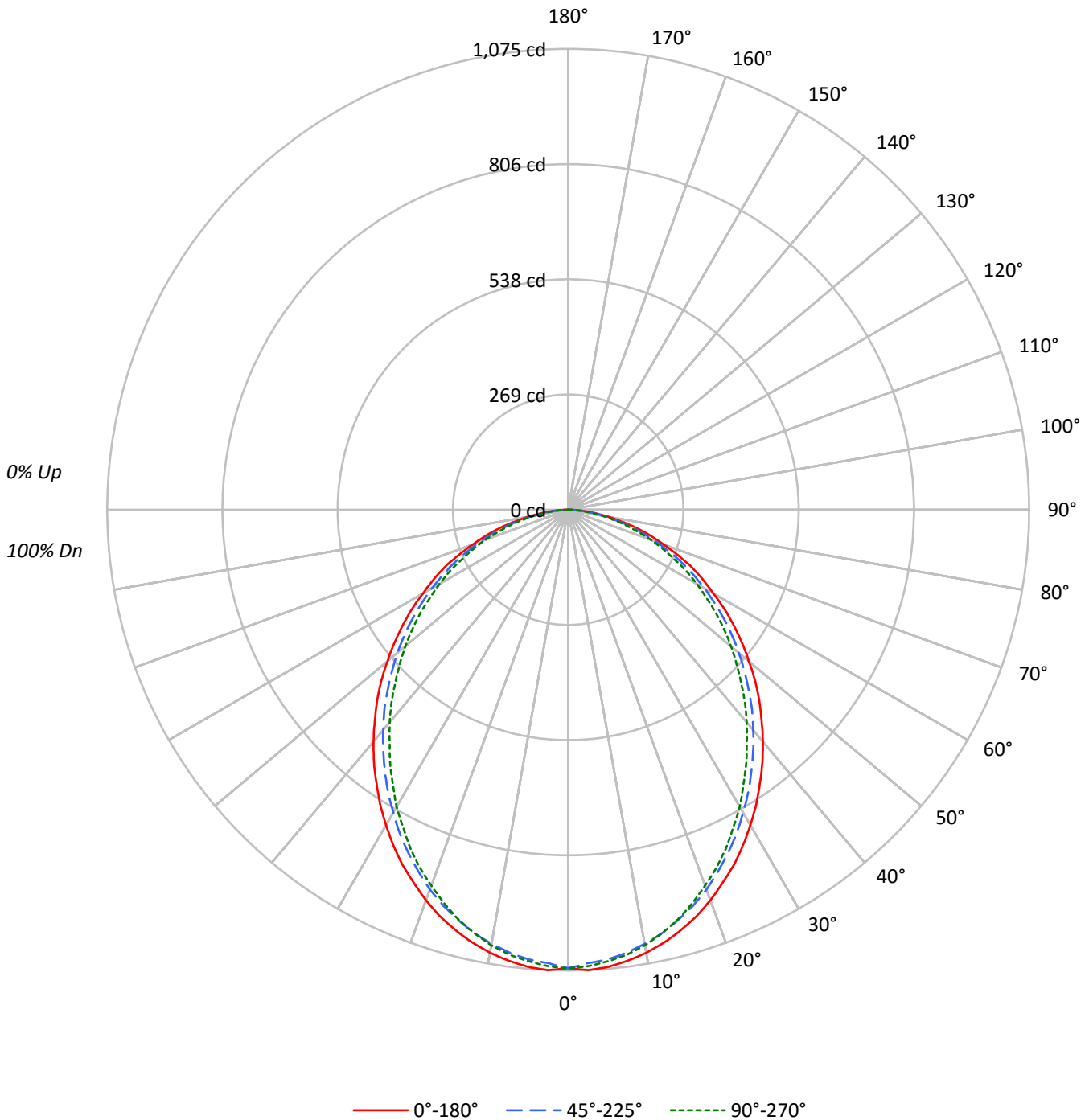
Input Watts (W): 27.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 105 | 100 | 97 | 106 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 67 | 63 | 61 |
| 4 | 84 | 72 | 63 | 57 | 81 | 71 | 63 | 56 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 58 | 54 | 52 |
| 5 | 77 | 65 | 56 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 58 | 52 | 47 | 45 |
| 6 | 71 | 58 | 50 | 43 | 69 | 57 | 49 | 43 | 56 | 48 | 43 | 54 | 47 | 42 | 52 | 46 | 42 | 40 |
| 7 | 66 | 53 | 44 | 38 | 65 | 52 | 44 | 38 | 51 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 37 | 35 |
| 8 | 62 | 48 | 40 | 34 | 60 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 56 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 41 | 33 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 20994 | 20994 | 20994 |
| 5° | 21096 | 20749 | 20842 |
| 10° | 20920 | 20497 | 20567 |
| 15° | 20636 | 20134 | 20109 |
| 20° | 20255 | 19689 | 19492 |
| 25° | 19803 | 19117 | 18861 |
| 30° | 19260 | 18487 | 18140 |
| 35° | 18673 | 17855 | 17347 |
| 40° | 18099 | 17197 | 16592 |
| 45° | 17487 | 16540 | 15824 |
| 50° | 16796 | 15862 | 15144 |
| 55° | 16130 | 15165 | 14398 |
| 60° | 15362 | 14397 | 13611 |
| 65° | 14794 | 13591 | 12667 |
| 70° | 13557 | 12546 | 11737 |
| 75° | 12476 | 11233 | 10429 |
| 80° | 10626 | 9699 | 9032 |
| 85° | 8739 | 7680 | 6892 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.5 | 3.9 |
| 10°-20° | 281.0 | 10.8 |
| 20°-30° | 408.9 | 15.7 |
| 30°-40° | 468.3 | 18.0 |
| 40°-50° | 461.3 | 17.7 |
| 50°-60° | 397.8 | 15.3 |
| 60°-70° | 290.7 | 11.1 |
| 70°-80° | 158.6 | 6.1 |
| 80°-90° | 40.5 | 1.6 |
| 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° | 790.4 | 30.3 |
| 0°-40° | 1258.7 | 48.3 |
| 0°-60° | 2117.8 | 81.2 |
| 0°-90° | 2607.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2607.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1070 | 1070 | 1070 | 1070 | 1070 | |
| 5° | 1071 | 1065 | 1053 | 1060 | 1058 | 101 |
| 15° | 1015 | 1006 | 991 | 993 | 990 | 286 |
| 25° | 914 | 903 | 883 | 878 | 871 | 421 |
| 35° | 779 | 767 | 745 | 731 | 724 | 488 |
| 45° | 630 | 617 | 596 | 579 | 570 | 486 |
| 55° | 471 | 464 | 443 | 427 | 421 | 422 |
| 65° | 318 | 308 | 293 | 280 | 273 | 313 |
| 75° | 164 | 156 | 148 | 141 | 138 | 173 |
| 85° | 39 | 36 | 34 | 32 | 31 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P231669

CATALOG NUMBER: S122-DR-1-35-X-0048-1-U-DD-1-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1069.5 | 1069.5 | 1069.5 | 1069.5 | 1069.5 |
| 2.5° | 1075.3 | 1070.6 | 1058.9 | 1068.3 | 1065.9 |
| 5° | 1070.6 | 1064.8 | 1053.0 | 1060.1 | 1057.7 |
| 7.5° | 1061.2 | 1055.4 | 1042.4 | 1049.5 | 1047.1 |
| 10° | 1049.5 | 1041.2 | 1028.3 | 1034.2 | 1031.8 |
| 12.5° | 1034.2 | 1024.8 | 1011.9 | 1016.6 | 1011.9 |
| 15° | 1015.4 | 1006.0 | 990.7 | 993.1 | 989.5 |
| 17.5° | 994.2 | 983.7 | 968.4 | 968.4 | 962.5 |
| 20° | 969.6 | 959.0 | 942.5 | 939.0 | 933.1 |
| 22.5° | 941.4 | 930.8 | 913.1 | 910.8 | 903.7 |
| 25° | 914.3 | 902.6 | 882.6 | 877.9 | 870.8 |
| 27.5° | 882.6 | 870.8 | 850.9 | 841.5 | 834.4 |
| 30° | 849.7 | 836.8 | 815.6 | 807.4 | 800.3 |
| 32.5° | 815.6 | 803.9 | 781.5 | 769.8 | 760.4 |
| 35° | 779.2 | 767.4 | 745.1 | 731.0 | 723.9 |
| 37.5° | 743.9 | 729.8 | 708.7 | 693.4 | 684.0 |
| 40° | 706.3 | 692.2 | 671.1 | 655.8 | 647.5 |
| 42.5° | 667.5 | 654.6 | 634.6 | 617.0 | 609.9 |
| 45° | 629.9 | 617.0 | 595.8 | 579.4 | 570.0 |
| 47.5° | 591.1 | 578.2 | 557.1 | 539.4 | 532.4 |
| 50° | 550.0 | 540.6 | 519.4 | 501.8 | 495.9 |
| 52.5° | 511.2 | 501.8 | 481.8 | 464.2 | 458.3 |
| 55° | 471.3 | 464.2 | 443.1 | 426.6 | 420.7 |
| 57.5° | 432.5 | 424.3 | 404.3 | 390.2 | 381.9 |
| 60° | 391.3 | 384.3 | 366.7 | 352.6 | 346.7 |
| 62.5° | 354.9 | 346.7 | 329.1 | 316.1 | 311.4 |
| 65° | 318.5 | 307.9 | 292.6 | 279.7 | 272.7 |
| 67.5° | 276.2 | 270.3 | 255.0 | 242.1 | 239.7 |
| 70° | 236.2 | 230.3 | 218.6 | 208.0 | 204.5 |
| 72.5° | 201.0 | 193.9 | 182.2 | 173.9 | 169.2 |
| 75° | 164.5 | 156.3 | 148.1 | 141.0 | 137.5 |
| 77.5° | 126.9 | 123.4 | 115.2 | 109.3 | 106.9 |
| 80° | 94.0 | 91.7 | 85.8 | 79.9 | 79.9 |
| 82.5° | 65.8 | 62.3 | 57.6 | 54.1 | 52.9 |
| 85° | 38.8 | 36.4 | 34.1 | 31.7 | 30.6 |
| 87.5° | 16.5 | 15.3 | 12.9 | 11.8 | 10.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)