

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: P243131

Luminaire Tested: **S122DR-H675D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243131
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DR-H675D930-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2101.7 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

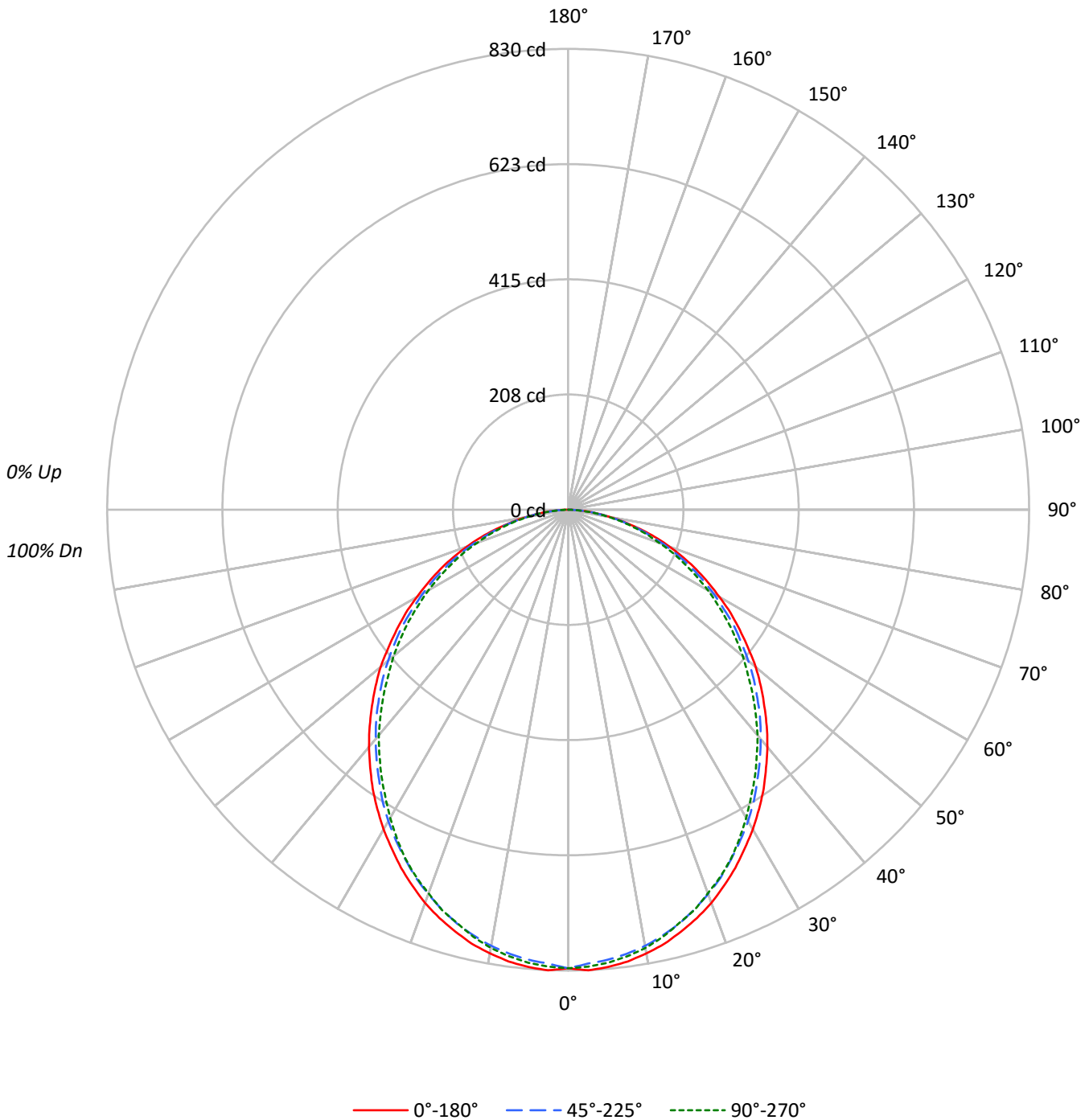
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 28 | 38 | 32 | 27 | 37 | 32 | 27 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 15732 | 15732 | 15732 |
| 5° | 15807 | 15560 | 15662 |
| 10° | 15696 | 15431 | 15504 |
| 15° | 15506 | 15222 | 15206 |
| 20° | 15276 | 14937 | 14905 |
| 25° | 14958 | 14590 | 14575 |
| 30° | 14617 | 14248 | 14098 |
| 35° | 14268 | 13808 | 13629 |
| 40° | 13875 | 13402 | 13193 |
| 45° | 13453 | 12981 | 12653 |
| 50° | 13062 | 12541 | 12158 |
| 55° | 12513 | 12085 | 11630 |
| 60° | 11977 | 11512 | 11078 |
| 65° | 11461 | 10912 | 10429 |
| 70° | 10771 | 10219 | 9707 |
| 75° | 9803 | 9413 | 8964 |
| 80° | 8512 | 8271 | 7931 |
| 85° | 7321 | 6491 | 5988 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 77.8 | 3.7 |
| 10°-20° | 218.9 | 10.4 |
| 20°-30° | 321.9 | 15.3 |
| 30°-40° | 373.7 | 17.8 |
| 40°-50° | 373.2 | 17.8 |
| 50°-60° | 325.0 | 15.5 |
| 60°-70° | 240.4 | 11.4 |
| 70°-80° | 135.5 | 6.4 |
| 80°-90° | 35.3 | 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° | 618.5 | 29.4 |
| 0°-40° | 992.2 | 47.2 |
| 0°-60° | 1690.5 | 80.4 |
| 0°-90° | 2101.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2101.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 826 | 826 | 826 | 826 | 826 | |
| 5° | 827 | 823 | 814 | 821 | 819 | 78 |
| 15° | 786 | 782 | 772 | 775 | 771 | 222 |
| 25° | 712 | 706 | 694 | 694 | 694 | 328 |
| 35° | 614 | 607 | 594 | 588 | 586 | 383 |
| 45° | 499 | 494 | 482 | 474 | 470 | 386 |
| 55° | 377 | 374 | 364 | 354 | 350 | 337 |
| 65° | 254 | 250 | 242 | 234 | 231 | 251 |
| 75° | 133 | 132 | 128 | 123 | 122 | 142 |
| 85° | 34 | 32 | 30 | 28 | 27 | 38 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 825.9 | 825.9 | 825.9 | 825.9 | 825.9 |
| 2.5° | 830.5 | 826.7 | 818.3 | 825.2 | 823.7 |
| 5° | 826.7 | 822.9 | 813.8 | 820.6 | 819.1 |
| 7.5° | 820.6 | 816.8 | 806.9 | 813.8 | 811.5 |
| 10° | 811.5 | 806.9 | 797.8 | 802.3 | 801.6 |
| 12.5° | 800.8 | 796.2 | 785.6 | 789.4 | 787.9 |
| 15° | 786.3 | 782.5 | 771.9 | 774.9 | 771.1 |
| 17.5° | 771.1 | 765.0 | 755.1 | 758.2 | 755.9 |
| 20° | 753.6 | 747.5 | 736.9 | 738.4 | 735.3 |
| 22.5° | 733.1 | 727.0 | 717.1 | 717.1 | 715.6 |
| 25° | 711.7 | 705.7 | 694.2 | 693.5 | 693.5 |
| 27.5° | 688.2 | 682.8 | 671.4 | 669.1 | 667.6 |
| 30° | 664.6 | 660.0 | 647.8 | 643.2 | 641.0 |
| 32.5° | 639.4 | 633.3 | 621.9 | 616.6 | 612.8 |
| 35° | 613.6 | 606.7 | 593.8 | 588.4 | 586.1 |
| 37.5° | 585.4 | 578.5 | 567.1 | 562.5 | 558.0 |
| 40° | 558.0 | 551.9 | 539.0 | 532.1 | 530.6 |
| 42.5° | 529.1 | 523.0 | 511.5 | 503.9 | 499.4 |
| 45° | 499.4 | 494.0 | 481.9 | 474.2 | 469.7 |
| 47.5° | 470.4 | 464.3 | 453.7 | 444.6 | 438.5 |
| 50° | 440.8 | 434.7 | 423.2 | 412.6 | 410.3 |
| 52.5° | 408.0 | 404.2 | 392.8 | 382.9 | 379.9 |
| 55° | 376.8 | 373.8 | 363.9 | 354.0 | 350.2 |
| 57.5° | 347.1 | 343.3 | 331.9 | 324.3 | 319.7 |
| 60° | 314.4 | 312.1 | 302.2 | 293.8 | 290.8 |
| 62.5° | 283.9 | 280.9 | 272.5 | 264.1 | 260.3 |
| 65° | 254.3 | 250.4 | 242.1 | 234.5 | 231.4 |
| 67.5° | 223.8 | 220.0 | 213.1 | 207.1 | 204.0 |
| 70° | 193.4 | 190.3 | 183.5 | 178.1 | 174.3 |
| 72.5° | 163.7 | 160.6 | 154.5 | 149.2 | 148.4 |
| 75° | 133.2 | 132.5 | 127.9 | 123.3 | 121.8 |
| 77.5° | 105.0 | 104.3 | 101.2 | 99.0 | 97.4 |
| 80° | 77.6 | 77.6 | 75.4 | 73.1 | 72.3 |
| 82.5° | 53.3 | 54.0 | 51.8 | 50.2 | 50.2 |
| 85° | 33.5 | 32.0 | 29.7 | 28.2 | 27.4 |
| 87.5° | 13.7 | 11.4 | 10.7 | 8.4 | 7.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)