

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: P242368

Luminaire Tested: **S122RDR-S485D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242368
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDR-S485D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1647.9 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

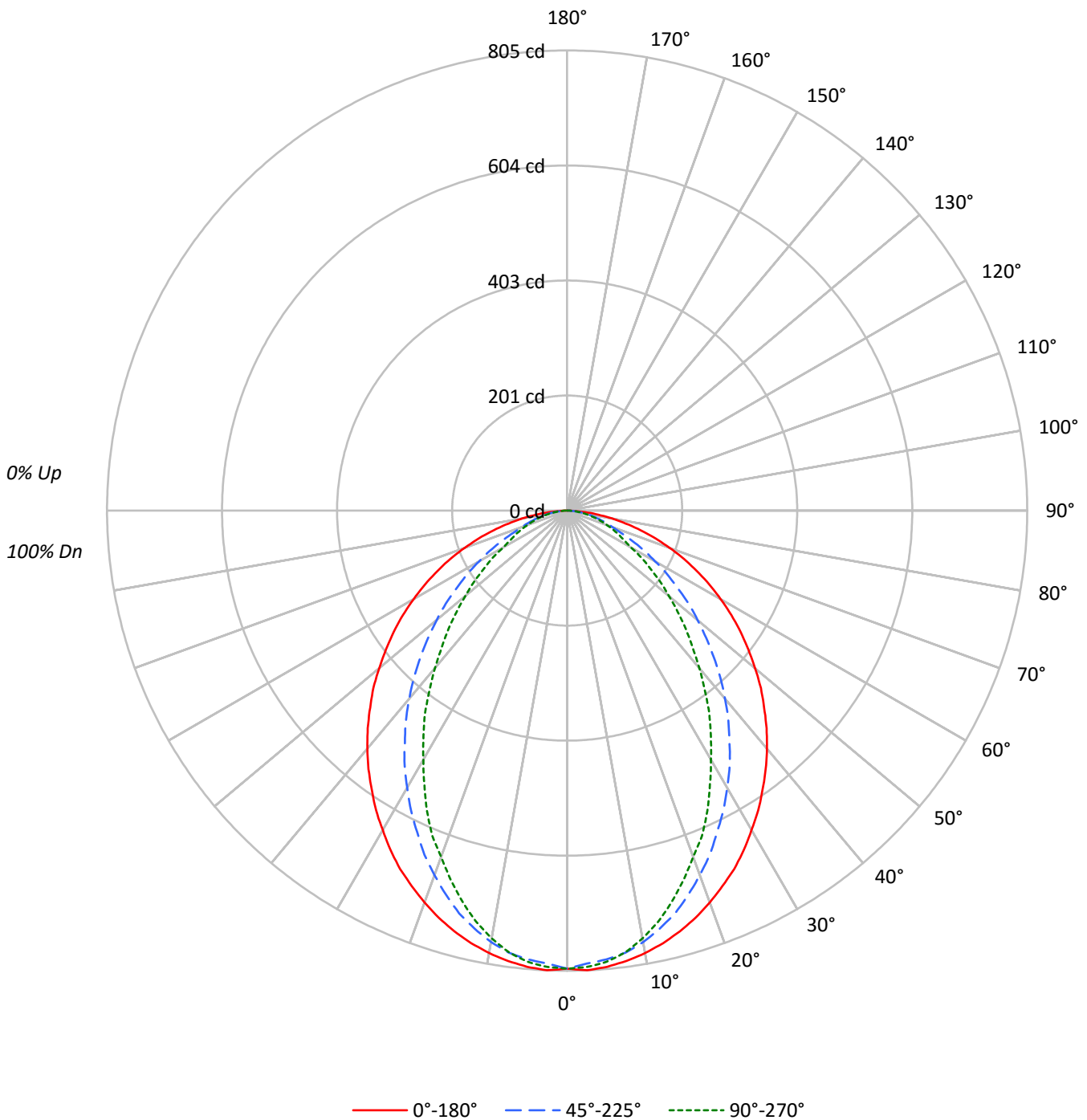
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 110 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 101 | 94 | 87 | 82 | 98 | 92 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 78 | 82 | 79 | 76 | 74 |
| 3 | 93 | 83 | 76 | 70 | 90 | 82 | 75 | 69 | 79 | 73 | 68 | 76 | 71 | 67 | 74 | 69 | 66 | 64 |
| 4 | 86 | 75 | 66 | 60 | 83 | 73 | 66 | 60 | 71 | 64 | 59 | 69 | 63 | 58 | 66 | 62 | 57 | 55 |
| 5 | 79 | 67 | 59 | 53 | 77 | 66 | 58 | 52 | 64 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 51 | 49 |
| 6 | 74 | 61 | 53 | 47 | 72 | 60 | 52 | 46 | 58 | 51 | 46 | 57 | 50 | 46 | 55 | 50 | 45 | 43 |
| 7 | 68 | 56 | 47 | 42 | 67 | 55 | 47 | 42 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 39 |
| 8 | 64 | 51 | 43 | 38 | 62 | 51 | 43 | 37 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 35 |
| 9 | 60 | 47 | 39 | 34 | 59 | 47 | 39 | 34 | 46 | 39 | 34 | 44 | 38 | 34 | 44 | 38 | 34 | 32 |
| 10 | 56 | 44 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 41 | 35 | 31 | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 15261 | 15261 | 15261 |
| 5° | 15319 | 15071 | 15153 |
| 10° | 15202 | 14823 | 14698 |
| 15° | 15028 | 14385 | 13969 |
| 20° | 14787 | 13757 | 13066 |
| 25° | 14539 | 13045 | 12192 |
| 30° | 14193 | 12312 | 11068 |
| 35° | 13859 | 11515 | 10082 |
| 40° | 13522 | 10692 | 8944 |
| 45° | 13127 | 9768 | 7912 |
| 50° | 12721 | 8831 | 6899 |
| 55° | 12304 | 7827 | 5924 |
| 60° | 11821 | 6770 | 4918 |
| 65° | 11277 | 5688 | 4476 |
| 70° | 10620 | 4684 | 4121 |
| 75° | 9818 | 4268 | 3842 |
| 80° | 8666 | 3817 | 3499 |
| 85° | 6819 | 3016 | 3016 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.1 | 4.6 |
| 10°-20° | 206.2 | 12.5 |
| 20°-30° | 289.4 | 17.6 |
| 30°-40° | 315.5 | 19.1 |
| 40°-50° | 290.0 | 17.6 |
| 50°-60° | 227.7 | 13.8 |
| 60°-70° | 148.2 | 9.0 |
| 70°-80° | 76.3 | 4.6 |
| 80°-90° | 19.5 | 1.2 |
| 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° | 570.7 | 34.6 |
| 0°-40° | 886.2 | 53.8 |
| 0°-60° | 1403.9 | 85.2 |
| 0°-90° | 1647.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1647.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 801 | 801 | 801 | 801 | 801 | |
| 5° | 801 | 798 | 788 | 795 | 792 | 76 |
| 15° | 762 | 754 | 730 | 716 | 708 | 215 |
| 25° | 692 | 668 | 621 | 591 | 580 | 318 |
| 35° | 596 | 559 | 495 | 450 | 434 | 373 |
| 45° | 487 | 439 | 363 | 311 | 294 | 376 |
| 55° | 370 | 314 | 236 | 192 | 178 | 331 |
| 65° | 250 | 191 | 126 | 102 | 99 | 248 |
| 75° | 133 | 83 | 58 | 53 | 52 | 141 |
| 85° | 31 | 16 | 14 | 14 | 14 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 801.2 | 801.2 | 801.2 | 801.2 | 801.2 |
| 2.5° | 804.9 | 801.2 | 793.3 | 800.5 | 799.1 |
| 5° | 801.2 | 797.6 | 788.2 | 794.7 | 792.5 |
| 7.5° | 794.7 | 790.4 | 780.2 | 783.1 | 779.5 |
| 10° | 786.0 | 780.9 | 766.4 | 764.3 | 759.9 |
| 12.5° | 775.1 | 768.6 | 749.0 | 744.7 | 736.7 |
| 15° | 762.1 | 754.1 | 729.5 | 715.7 | 708.4 |
| 17.5° | 746.9 | 735.3 | 704.8 | 688.9 | 677.3 |
| 20° | 729.5 | 715.0 | 678.7 | 660.6 | 644.6 |
| 22.5° | 710.6 | 693.9 | 651.9 | 627.2 | 616.3 |
| 25° | 691.8 | 668.5 | 620.7 | 591.0 | 580.1 |
| 27.5° | 669.3 | 644.6 | 591.7 | 557.6 | 540.9 |
| 30° | 645.3 | 617.8 | 559.8 | 522.8 | 503.2 |
| 32.5° | 622.1 | 588.8 | 529.3 | 485.8 | 467.7 |
| 35° | 596.0 | 559.1 | 495.2 | 449.6 | 433.6 |
| 37.5° | 570.7 | 530.8 | 463.3 | 413.3 | 395.2 |
| 40° | 543.8 | 500.3 | 430.0 | 378.5 | 359.7 |
| 42.5° | 516.3 | 469.9 | 396.6 | 343.0 | 324.8 |
| 45° | 487.3 | 438.7 | 362.6 | 311.1 | 293.7 |
| 47.5° | 459.7 | 408.2 | 329.9 | 278.4 | 262.5 |
| 50° | 429.3 | 377.8 | 298.0 | 248.0 | 232.8 |
| 52.5° | 399.5 | 345.2 | 267.6 | 219.7 | 205.9 |
| 55° | 370.5 | 314.0 | 235.7 | 192.2 | 178.4 |
| 57.5° | 340.8 | 282.8 | 207.4 | 166.8 | 155.2 |
| 60° | 310.3 | 252.3 | 177.7 | 140.7 | 129.1 |
| 62.5° | 280.6 | 222.6 | 152.3 | 117.5 | 111.7 |
| 65° | 250.2 | 191.4 | 126.2 | 101.5 | 99.3 |
| 67.5° | 221.2 | 162.4 | 101.5 | 89.2 | 87.0 |
| 70° | 190.7 | 134.1 | 84.1 | 76.9 | 74.0 |
| 72.5° | 161.7 | 108.0 | 70.3 | 64.5 | 63.1 |
| 75° | 133.4 | 82.7 | 58.0 | 52.9 | 52.2 |
| 77.5° | 105.1 | 58.7 | 45.7 | 42.8 | 41.3 |
| 80° | 79.0 | 42.1 | 34.8 | 31.9 | 31.9 |
| 82.5° | 55.1 | 28.3 | 23.9 | 22.5 | 22.5 |
| 85° | 31.2 | 16.0 | 13.8 | 13.8 | 13.8 |
| 87.5° | 11.6 | 5.8 | 5.8 | 5.1 | 5.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)