

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: P334081

Luminaire Tested: **S123RDW-S560D935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334081
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDW-S560D935-4F0-1E-UDD-F
Description: DEFINE 3 REGRESSED DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 560 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1722.1 lumens
Efficiency: N/A
Efficacy: 91.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

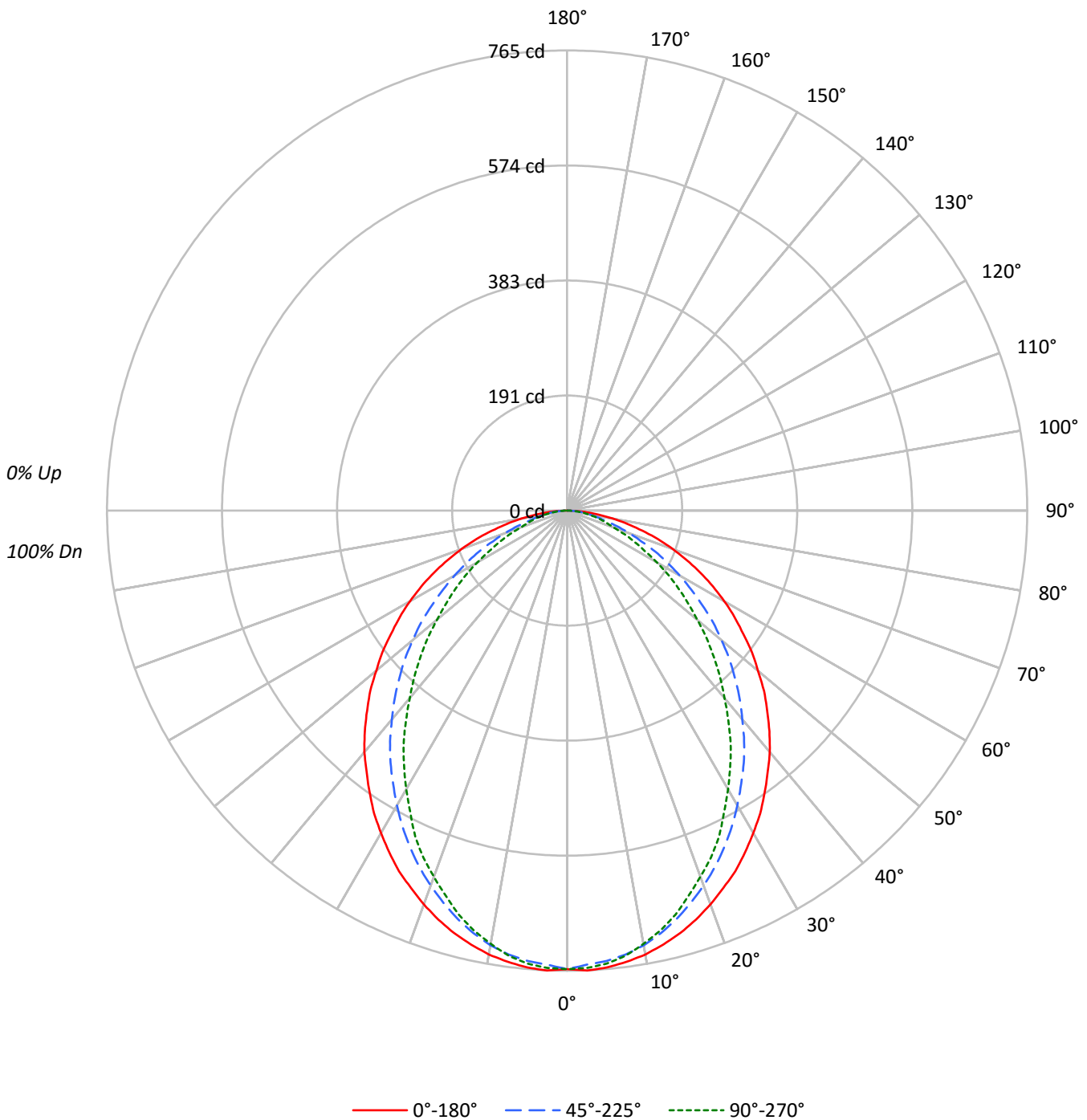
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 89 | 88 | 86 |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 83 | 78 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 92 | 82 | 75 | 68 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 68 | 64 | 62 |
| 4 | 85 | 73 | 65 | 59 | 83 | 72 | 64 | 58 | 70 | 63 | 58 | 67 | 62 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 54 | 48 | 44 | 42 |
| 7 | 67 | 54 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 39 | 49 | 44 | 39 | 37 |
| 8 | 63 | 50 | 42 | 36 | 61 | 49 | 41 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 45 | 38 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 10 | 55 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 39 | 34 | 29 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8205 | 8205 | 8205 |
| 5° | 8237 | 8123 | 8170 |
| 10° | 8190 | 8020 | 7994 |
| 15° | 8101 | 7833 | 7750 |
| 20° | 7981 | 7599 | 7422 |
| 25° | 7856 | 7335 | 7100 |
| 30° | 7691 | 7031 | 6647 |
| 35° | 7523 | 6727 | 6231 |
| 40° | 7367 | 6368 | 5716 |
| 45° | 7162 | 6013 | 5252 |
| 50° | 6936 | 5611 | 4731 |
| 55° | 6705 | 5151 | 4247 |
| 60° | 6495 | 4659 | 3714 |
| 65° | 6220 | 4126 | 3181 |
| 70° | 5876 | 3462 | 2568 |
| 75° | 5373 | 2724 | 2416 |
| 80° | 4792 | 2411 | 2225 |
| 85° | 4051 | 2137 | 1988 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 71.7 | 4.2 |
| 10°-20° | 199.3 | 11.6 |
| 20°-30° | 287.0 | 16.7 |
| 30°-40° | 323.2 | 18.8 |
| 40°-50° | 309.2 | 18.0 |
| 50°-60° | 253.1 | 14.7 |
| 60°-70° | 170.6 | 9.9 |
| 70°-80° | 85.6 | 5.0 |
| 80°-90° | 22.4 | 1.3 |
| 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° | 558.0 | 32.4 |
| 0°-40° | 881.2 | 51.2 |
| 0°-60° | 1443.5 | 83.8 |
| 0°-90° | 1722.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1722.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 762 | 762 | 762 | 762 | 762 | |
| 5° | 762 | 759 | 752 | 757 | 756 | 72 |
| 15° | 727 | 720 | 703 | 700 | 696 | 205 |
| 25° | 662 | 646 | 618 | 605 | 598 | 304 |
| 35° | 572 | 550 | 512 | 485 | 474 | 358 |
| 45° | 470 | 443 | 395 | 360 | 345 | 363 |
| 55° | 357 | 327 | 274 | 239 | 226 | 320 |
| 65° | 244 | 210 | 162 | 132 | 125 | 242 |
| 75° | 129 | 100 | 66 | 59 | 58 | 138 |
| 85° | 33 | 19 | 17 | 16 | 16 | 38 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 762.3 | 762.3 | 762.3 | 762.3 | 762.3 |
| 2.5° | 765.4 | 762.9 | 755.5 | 762.3 | 761.0 |
| 5° | 762.3 | 759.2 | 751.8 | 757.3 | 756.1 |
| 7.5° | 756.7 | 753.6 | 744.3 | 748.0 | 746.2 |
| 10° | 749.3 | 745.0 | 733.8 | 734.4 | 731.4 |
| 12.5° | 738.8 | 733.8 | 719.6 | 719.0 | 715.3 |
| 15° | 727.0 | 720.2 | 702.9 | 699.8 | 695.5 |
| 17.5° | 712.8 | 705.4 | 683.8 | 677.6 | 671.4 |
| 20° | 696.7 | 686.8 | 663.4 | 655.3 | 647.9 |
| 22.5° | 678.8 | 667.1 | 641.7 | 631.2 | 624.4 |
| 25° | 661.5 | 646.0 | 617.6 | 604.6 | 597.8 |
| 27.5° | 640.5 | 623.8 | 592.9 | 575.6 | 565.1 |
| 30° | 618.8 | 600.3 | 565.7 | 544.7 | 534.8 |
| 32.5° | 597.2 | 575.6 | 538.5 | 515.0 | 504.5 |
| 35° | 572.5 | 550.2 | 511.9 | 485.3 | 474.2 |
| 37.5° | 547.7 | 523.6 | 483.4 | 453.8 | 440.2 |
| 40° | 524.3 | 497.0 | 453.2 | 421.0 | 406.8 |
| 42.5° | 497.7 | 470.5 | 424.7 | 388.9 | 376.5 |
| 45° | 470.5 | 442.6 | 395.0 | 359.8 | 345.0 |
| 47.5° | 443.9 | 413.0 | 366.0 | 327.7 | 314.7 |
| 50° | 414.2 | 385.2 | 335.1 | 296.7 | 282.5 |
| 52.5° | 387.6 | 355.5 | 306.0 | 265.8 | 253.5 |
| 55° | 357.3 | 327.0 | 274.5 | 238.6 | 226.3 |
| 57.5° | 330.1 | 297.4 | 244.2 | 210.2 | 199.7 |
| 60° | 301.7 | 267.7 | 216.4 | 183.0 | 172.5 |
| 62.5° | 273.3 | 239.3 | 187.9 | 157.0 | 145.9 |
| 65° | 244.2 | 210.2 | 162.0 | 131.7 | 124.9 |
| 67.5° | 215.1 | 180.5 | 133.5 | 110.7 | 103.2 |
| 70° | 186.7 | 153.3 | 110.0 | 88.4 | 81.6 |
| 72.5° | 158.3 | 125.5 | 87.2 | 70.5 | 68.6 |
| 75° | 129.2 | 99.5 | 65.5 | 59.3 | 58.1 |
| 77.5° | 102.6 | 75.4 | 51.3 | 47.6 | 46.4 |
| 80° | 77.3 | 51.9 | 38.9 | 37.1 | 35.9 |
| 82.5° | 53.2 | 32.1 | 27.8 | 26.0 | 26.0 |
| 85° | 32.8 | 19.2 | 17.3 | 16.1 | 16.1 |
| 87.5° | 14.8 | 8.0 | 8.0 | 7.4 | 6.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)