

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: P333996

Luminaire Tested: **S123DW-S560D840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333996
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DW-S560D840-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 560 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2194.7 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

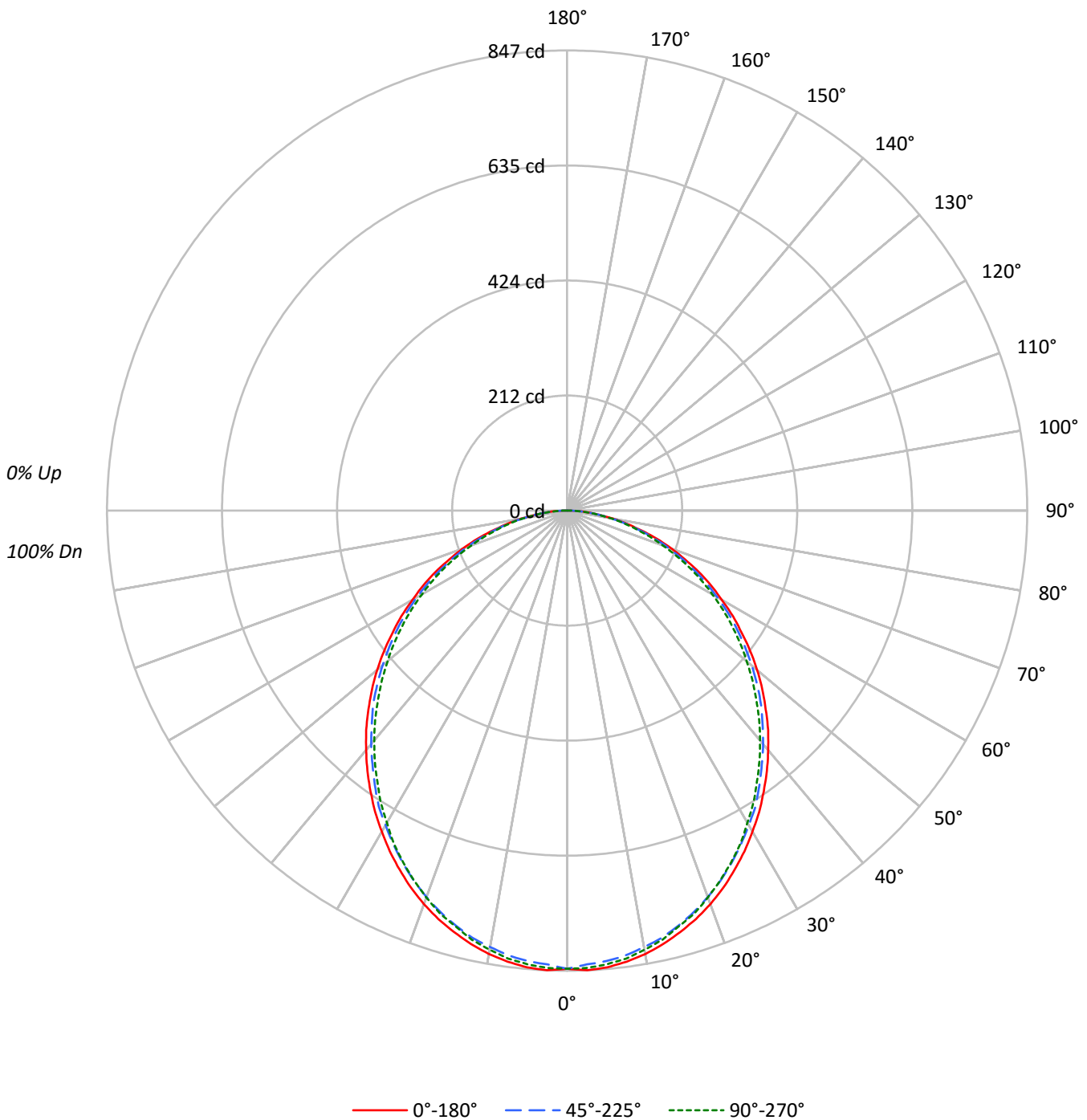
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 94 | 92 | | 94 | 91 | 89 | | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | | 82 | 78 | 74 | | 79 | 76 | 72 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | | 73 | 67 | 63 | | 70 | 66 | 62 | 59 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 62 | 55 | 67 | 60 | 55 | | 65 | 59 | 54 | | 63 | 58 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 60 | 53 | 47 | | 58 | 52 | 47 | | 57 | 51 | 46 | 44 |
| 6 | 71 | 57 | 49 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 42 | | 53 | 46 | 41 | | 51 | 46 | 41 | 39 |
| 7 | 66 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | | 48 | 42 | 37 | | 47 | 41 | 36 | 34 |
| 8 | 61 | 48 | 39 | 33 | 60 | 47 | 39 | 33 | 46 | 38 | 33 | | 44 | 38 | 33 | | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | | 41 | 34 | 30 | | 40 | 34 | 30 | 28 |
| 10 | 54 | 40 | 33 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | | 38 | 32 | 27 | | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9077 | 9077 | 9077 |
| 5° | 9119 | 8994 | 9057 |
| 10° | 9059 | 8916 | 8971 |
| 15° | 8953 | 8816 | 8831 |
| 20° | 8829 | 8671 | 8679 |
| 25° | 8664 | 8500 | 8482 |
| 30° | 8480 | 8310 | 8247 |
| 35° | 8289 | 8109 | 8004 |
| 40° | 8089 | 7886 | 7763 |
| 45° | 7870 | 7683 | 7494 |
| 50° | 7649 | 7432 | 7224 |
| 55° | 7362 | 7171 | 6953 |
| 60° | 7072 | 6867 | 6650 |
| 65° | 6816 | 6538 | 6334 |
| 70° | 6436 | 6162 | 5888 |
| 75° | 5881 | 5669 | 5427 |
| 80° | 5306 | 5077 | 5033 |
| 85° | 4656 | 4483 | 4298 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 79.5 | 3.6 |
| 10°-20° | 224.5 | 10.2 |
| 20°-30° | 331.5 | 15.1 |
| 30°-40° | 387.2 | 17.6 |
| 40°-50° | 389.3 | 17.7 |
| 50°-60° | 341.9 | 15.6 |
| 60°-70° | 254.7 | 11.6 |
| 70°-80° | 144.9 | 6.6 |
| 80°-90° | 41.2 | 1.9 |
| 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° | 635.5 | 29.0 |
| 0°-40° | 1022.7 | 46.6 |
| 0°-60° | 1753.9 | 79.9 |
| 0°-90° | 2194.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2194.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 843 | 843 | 843 | 843 | 843 | |
| 5° | 844 | 840 | 832 | 840 | 838 | 80 |
| 15° | 803 | 800 | 791 | 797 | 792 | 227 |
| 25° | 730 | 725 | 716 | 716 | 714 | 336 |
| 35° | 631 | 626 | 617 | 613 | 609 | 395 |
| 45° | 517 | 514 | 505 | 496 | 492 | 399 |
| 55° | 392 | 392 | 382 | 374 | 370 | 351 |
| 65° | 268 | 264 | 257 | 251 | 249 | 264 |
| 75° | 141 | 138 | 136 | 133 | 130 | 151 |
| 85° | 38 | 36 | 36 | 35 | 35 | 43 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P333996

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 843.3 | 843.3 | 843.3 | 843.3 | 843.3 |
| 2.5° | 846.9 | 844.0 | 836.1 | 843.3 | 842.6 |
| 5° | 844.0 | 840.4 | 832.4 | 839.7 | 838.2 |
| 7.5° | 837.5 | 833.9 | 825.9 | 832.4 | 831.7 |
| 10° | 828.8 | 825.2 | 815.7 | 822.3 | 820.8 |
| 12.5° | 817.2 | 814.3 | 805.6 | 809.9 | 809.2 |
| 15° | 803.4 | 800.5 | 791.1 | 796.9 | 792.5 |
| 17.5° | 788.2 | 784.6 | 775.1 | 779.5 | 778.0 |
| 20° | 770.8 | 766.4 | 757.0 | 759.9 | 757.7 |
| 22.5° | 751.2 | 746.9 | 737.4 | 739.6 | 736.7 |
| 25° | 729.5 | 725.1 | 715.7 | 716.4 | 714.2 |
| 27.5° | 707.0 | 702.6 | 692.5 | 693.2 | 691.0 |
| 30° | 682.3 | 678.7 | 668.6 | 668.6 | 663.5 |
| 32.5° | 657.7 | 652.6 | 645.3 | 640.3 | 638.1 |
| 35° | 630.8 | 626.5 | 617.1 | 612.7 | 609.1 |
| 37.5° | 604.0 | 598.2 | 588.8 | 583.7 | 581.5 |
| 40° | 575.7 | 571.4 | 561.2 | 555.4 | 552.5 |
| 42.5° | 547.5 | 542.4 | 532.2 | 526.4 | 523.5 |
| 45° | 517.0 | 514.1 | 504.7 | 496.0 | 492.3 |
| 47.5° | 487.3 | 482.9 | 474.2 | 465.5 | 462.6 |
| 50° | 456.8 | 453.2 | 443.8 | 435.8 | 431.4 |
| 52.5° | 424.9 | 422.7 | 412.6 | 406.1 | 401.7 |
| 55° | 392.3 | 391.6 | 382.1 | 374.2 | 370.5 |
| 57.5° | 361.8 | 358.9 | 351.7 | 344.4 | 340.1 |
| 60° | 328.5 | 327.7 | 319.0 | 312.5 | 308.9 |
| 62.5° | 298.7 | 296.6 | 287.9 | 281.3 | 279.2 |
| 65° | 267.6 | 263.9 | 256.7 | 250.9 | 248.7 |
| 67.5° | 234.2 | 231.3 | 225.5 | 220.4 | 217.5 |
| 70° | 204.5 | 200.1 | 195.8 | 190.7 | 187.1 |
| 72.5° | 173.3 | 170.4 | 165.3 | 161.0 | 159.5 |
| 75° | 141.4 | 138.5 | 136.3 | 132.7 | 130.5 |
| 77.5° | 113.1 | 111.7 | 108.8 | 105.9 | 105.9 |
| 80° | 85.6 | 83.4 | 81.9 | 81.2 | 81.2 |
| 82.5° | 58.7 | 58.7 | 58.7 | 57.3 | 56.6 |
| 85° | 37.7 | 36.3 | 36.3 | 34.8 | 34.8 |
| 87.5° | 18.9 | 16.7 | 16.0 | 15.2 | 15.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)