

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: P333963

Luminaire Tested: **S123DW-S1000D840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333963
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DW-S1000D840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1000 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3973.2 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Direct

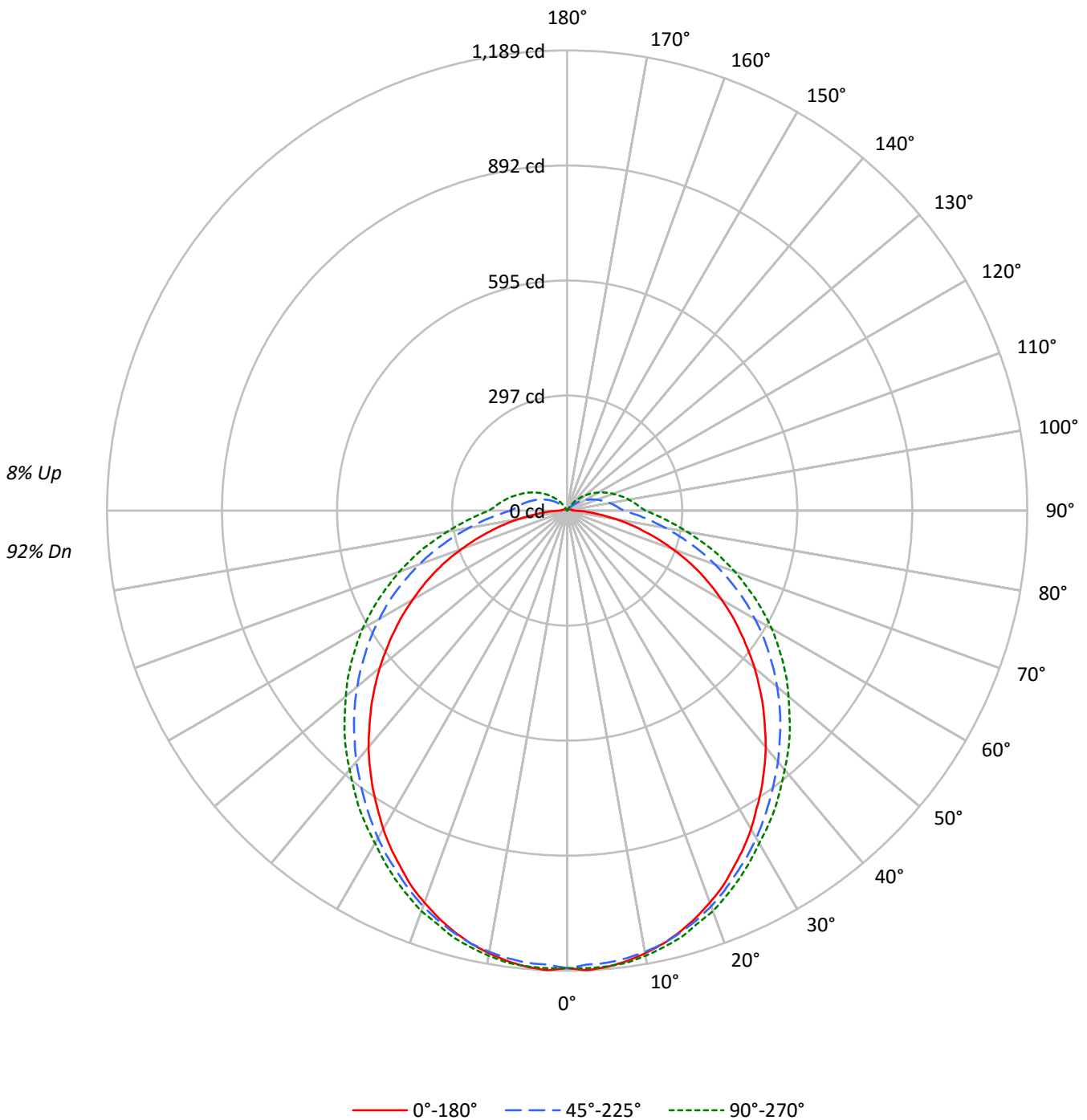
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P333963

CATALOG NUMBER: S123DW-S1000D840-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P333963

CATALOG NUMBER: S123DW-S1000D840-4F0-1E-UDD-D

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 | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 106 | 106 | 106 | 100 | 100 | 100 | 94 | 94 | 94 | 92 |
| 1 | 105 | 100 | 95 | 90 | 102 | 97 | 92 | 88 | 91 | 87 | 84 | 85 | 82 | 80 | 80 | 78 | 76 | 73 |
| 2 | 95 | 86 | 79 | 72 | 92 | 83 | 77 | 71 | 79 | 73 | 68 | 74 | 69 | 65 | 70 | 66 | 63 | 60 |
| 3 | 86 | 75 | 67 | 60 | 83 | 73 | 65 | 59 | 69 | 62 | 56 | 65 | 59 | 54 | 61 | 56 | 52 | 50 |
| 4 | 79 | 66 | 57 | 50 | 76 | 64 | 56 | 49 | 61 | 54 | 48 | 57 | 51 | 46 | 54 | 49 | 45 | 42 |
| 5 | 72 | 59 | 50 | 43 | 70 | 58 | 49 | 42 | 54 | 47 | 41 | 52 | 45 | 40 | 49 | 43 | 39 | 36 |
| 6 | 67 | 53 | 44 | 37 | 64 | 52 | 43 | 37 | 49 | 42 | 36 | 47 | 40 | 35 | 44 | 38 | 34 | 32 |
| 7 | 62 | 48 | 39 | 33 | 60 | 47 | 38 | 32 | 45 | 37 | 32 | 42 | 36 | 31 | 40 | 35 | 30 | 28 |
| 8 | 58 | 44 | 35 | 29 | 56 | 43 | 35 | 29 | 41 | 33 | 28 | 39 | 32 | 28 | 37 | 31 | 27 | 25 |
| 9 | 54 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 37 | 30 | 25 | 36 | 29 | 25 | 34 | 28 | 24 | 22 |
| 10 | 50 | 37 | 29 | 24 | 49 | 36 | 29 | 24 | 35 | 28 | 23 | 33 | 27 | 23 | 32 | 26 | 22 | 20 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 12725 | 12725 | 12725 |
| 5° | 12788 | 12676 | 12774 |
| 10° | 12696 | 12655 | 12767 |
| 15° | 12557 | 12586 | 12715 |
| 20° | 12347 | 12465 | 12613 |
| 25° | 12083 | 12282 | 12481 |
| 30° | 11813 | 12149 | 12341 |
| 35° | 11507 | 11998 | 12319 |
| 40° | 11220 | 11907 | 12286 |
| 45° | 10899 | 11860 | 12390 |
| 50° | 10588 | 11861 | 12507 |
| 55° | 10246 | 11915 | 12761 |
| 60° | 9924 | 12060 | 13141 |
| 65° | 9610 | 12332 | 13644 |
| 70° | 9120 | 12809 | 14508 |
| 75° | 8517 | 13712 | 16120 |
| 80° | 7903 | 15968 | 19476 |
| 85° | 7793 | 24169 | 31172 |



TEST NUMBER: P333963

CATALOG NUMBER: S123DW-S1000D840-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 112.1 | 2.8 |
| 10°-20° | 319.7 | 8.0 |
| 20°-30° | 478.1 | 12.0 |
| 30°-40° | 570.8 | 14.4 |
| 40°-50° | 597.2 | 15.0 |
| 50°-60° | 560.5 | 14.1 |
| 60°-70° | 468.1 | 11.8 |
| 70°-80° | 334.7 | 8.4 |
| 80°-90° | 199.2 | 5.0 |
| 90°-100° | 125.2 | 3.1 |
| 100°-110° | 92.0 | 2.3 |
| 110°-120° | 61.4 | 1.5 |
| 120°-130° | 35.1 | 0.9 |
| 130°-140° | 15.7 | 0.4 |
| 140°-150° | 3.3 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 909.9 | 22.9 |
| 0°-40° | 1480.8 | 37.3 |
| 0°-60° | 2638.5 | 66.4 |
| 0°-90° | 3640.5 | 91.6 |
| 90°-120° | 278.6 | 7.0 |
| 90°-150° | 332.7 | 8.4 |
| 90°-180° | 333.0 | 8.4 |
| 0°-180° | 3973.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1182 | 1182 | 1182 | 1182 | 1182 | |
| 5° | 1184 | 1181 | 1173 | 1184 | 1182 | 112 |
| 15° | 1127 | 1131 | 1129 | 1142 | 1141 | 317 |
| 25° | 1017 | 1030 | 1034 | 1051 | 1051 | 469 |
| 35° | 876 | 896 | 913 | 932 | 938 | 548 |
| 45° | 716 | 747 | 779 | 804 | 814 | 552 |
| 55° | 546 | 588 | 635 | 670 | 680 | 489 |
| 65° | 377 | 428 | 484 | 523 | 536 | 373 |
| 75° | 205 | 265 | 330 | 372 | 388 | 219 |
| 85° | 63 | 128 | 196 | 240 | 252 | 65 |
| 90° | 17 | 80 | 146 | 189 | 202 | 12 |
| 95° | 14 | 64 | 128 | 167 | 180 | 11 |
| 105° | 10 | 41 | 97 | 133 | 144 | 10 |
| 115° | 6 | 22 | 68 | 99 | 110 | 7 |
| 125° | 4 | 4 | 41 | 68 | 77 | 4 |
| 135° | 3 | 1 | 16 | 39 | 45 | 2 |
| 145° | 1 | 0 | 0 | 10 | 16 | 1 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P333963

CATALOG NUMBER: S123DW-S1000D840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1182.2 | 1182.2 | 1182.2 | 1182.2 | 1182.2 |
| 2.5° | 1188.7 | 1184.8 | 1174.5 | 1184.8 | 1183.5 |
| 5° | 1183.5 | 1180.9 | 1173.2 | 1183.5 | 1182.2 |
| 7.5° | 1174.5 | 1174.5 | 1166.8 | 1179.6 | 1178.4 |
| 10° | 1161.6 | 1164.2 | 1157.8 | 1170.6 | 1168.1 |
| 12.5° | 1146.2 | 1150.0 | 1146.2 | 1157.8 | 1155.2 |
| 15° | 1126.8 | 1130.7 | 1129.4 | 1142.3 | 1141.0 |
| 17.5° | 1103.7 | 1111.4 | 1110.1 | 1121.7 | 1119.1 |
| 20° | 1077.9 | 1085.6 | 1088.2 | 1099.8 | 1101.1 |
| 22.5° | 1050.9 | 1058.6 | 1062.5 | 1077.9 | 1076.6 |
| 25° | 1017.4 | 1030.3 | 1034.1 | 1050.9 | 1050.9 |
| 27.5° | 985.2 | 999.4 | 1007.1 | 1021.2 | 1022.5 |
| 30° | 950.4 | 967.2 | 977.5 | 992.9 | 992.9 |
| 32.5° | 911.8 | 931.1 | 945.3 | 962.0 | 965.9 |
| 35° | 875.7 | 896.3 | 913.1 | 932.4 | 937.5 |
| 37.5° | 837.1 | 860.3 | 879.6 | 901.5 | 905.3 |
| 40° | 798.5 | 821.6 | 847.4 | 869.3 | 874.4 |
| 42.5° | 756.0 | 785.6 | 812.6 | 837.1 | 844.8 |
| 45° | 716.0 | 746.9 | 779.1 | 803.6 | 813.9 |
| 47.5° | 673.5 | 708.3 | 744.4 | 771.4 | 779.1 |
| 50° | 632.3 | 668.4 | 708.3 | 737.9 | 746.9 |
| 52.5° | 588.5 | 627.2 | 672.2 | 703.2 | 714.7 |
| 55° | 546.0 | 588.5 | 634.9 | 669.7 | 680.0 |
| 57.5° | 504.8 | 548.6 | 598.8 | 633.6 | 645.2 |
| 60° | 461.0 | 507.4 | 560.2 | 596.3 | 610.4 |
| 62.5° | 419.8 | 467.5 | 524.1 | 560.2 | 573.1 |
| 65° | 377.3 | 427.6 | 484.2 | 522.9 | 535.7 |
| 67.5° | 334.8 | 387.6 | 444.3 | 486.8 | 497.1 |
| 70° | 289.8 | 345.1 | 407.0 | 448.2 | 461.0 |
| 72.5° | 248.6 | 303.9 | 368.3 | 410.8 | 423.7 |
| 75° | 204.8 | 265.3 | 329.7 | 372.2 | 387.6 |
| 77.5° | 167.4 | 227.9 | 292.3 | 337.4 | 349.0 |
| 80° | 127.5 | 190.6 | 257.6 | 301.4 | 314.2 |
| 82.5° | 92.7 | 157.1 | 225.4 | 269.2 | 282.0 |
| 85° | 63.1 | 127.5 | 195.7 | 239.5 | 252.4 |
| 87.5° | 38.6 | 103.0 | 168.7 | 212.5 | 225.4 |
| 90° | 16.7 | 79.8 | 145.5 | 189.3 | 202.2 |
| 92.5° | 15.5 | 70.8 | 135.2 | 177.7 | 189.3 |
| 95° | 14.2 | 64.4 | 127.5 | 167.4 | 180.3 |
| 97.5° | 12.9 | 59.2 | 119.8 | 158.4 | 171.3 |
| 100° | 11.6 | 52.8 | 112.0 | 149.4 | 162.3 |
| 102.5° | 10.3 | 46.4 | 104.3 | 140.4 | 153.3 |
| 105° | 10.3 | 41.2 | 96.6 | 132.6 | 144.2 |
| 107.5° | 9.0 | 36.1 | 88.9 | 123.6 | 135.2 |
| 110° | 7.7 | 30.9 | 82.4 | 115.9 | 126.2 |



TEST NUMBER: P333963

CATALOG NUMBER: S123DW-S1000D840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|-------|
| 112.5° | 7.7 | 25.8 | 74.7 | 106.9 | 118.5 |
| 115° | 6.4 | 21.9 | 68.3 | 99.2 | 109.5 |
| 117.5° | 6.4 | 16.7 | 60.5 | 91.4 | 101.7 |
| 120° | 5.2 | 11.6 | 54.1 | 83.7 | 92.7 |
| 122.5° | 5.2 | 7.7 | 47.6 | 76.0 | 85.0 |
| 125° | 3.9 | 3.9 | 41.2 | 68.3 | 77.3 |
| 127.5° | 3.9 | 2.6 | 34.8 | 60.5 | 69.5 |
| 130° | 3.9 | 2.6 | 28.3 | 52.8 | 60.5 |
| 132.5° | 2.6 | 2.6 | 21.9 | 45.1 | 54.1 |
| 135° | 2.6 | 1.3 | 15.5 | 38.6 | 45.1 |
| 137.5° | 2.6 | 1.3 | 10.3 | 30.9 | 37.3 |
| 140° | 1.3 | 1.3 | 5.2 | 24.5 | 30.9 |
| 142.5° | 1.3 | 0.0 | 0.0 | 16.7 | 23.2 |
| 145° | 1.3 | 0.0 | 0.0 | 10.3 | 15.5 |
| 147.5° | 0.0 | 0.0 | 0.0 | 3.9 | 9.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)