

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: P334159

Luminaire Tested: **S124DS-S1195D940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334159
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DS-S1195D940-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1195 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

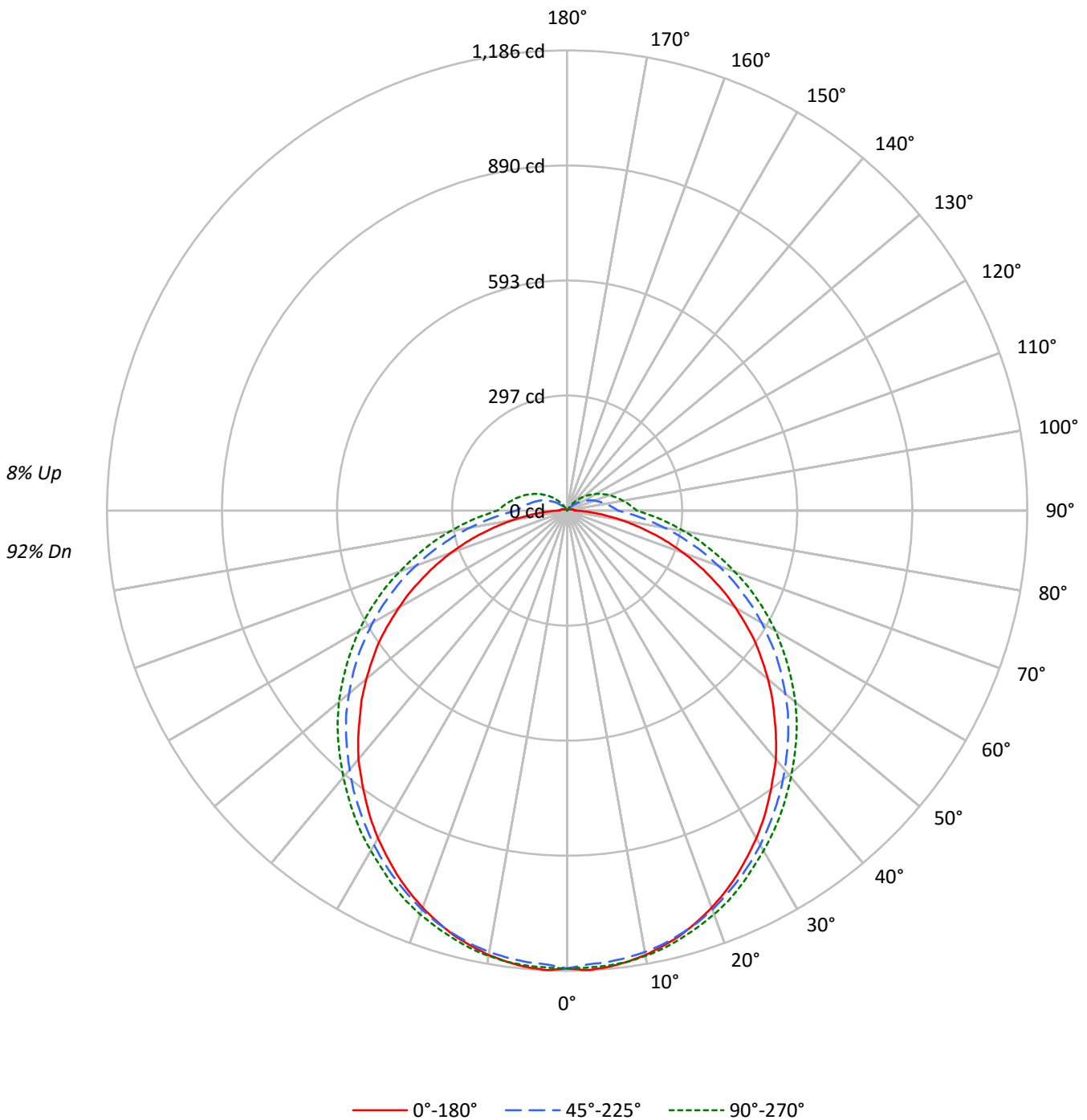
Lumens per Lamp: N/A
Luminaire Lumens: 4023.7 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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





TEST NUMBER: P334159

CATALOG NUMBER: S124DS-S1195D940-4F0-1E-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 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 101 | 101 | 101 | 95 | 95 | 95 | 92 |
| 1 | 105 | 100 | 95 | 91 | 102 | 97 | 93 | 89 | 91 | 88 | 84 | 86 | 83 | 80 | 81 | 79 | 77 | 74 |
| 2 | 95 | 86 | 79 | 73 | 92 | 84 | 77 | 71 | 79 | 73 | 68 | 74 | 70 | 66 | 70 | 67 | 63 | 60 |
| 3 | 87 | 75 | 67 | 60 | 83 | 73 | 65 | 59 | 69 | 62 | 57 | 65 | 60 | 55 | 62 | 57 | 53 | 50 |
| 4 | 79 | 66 | 57 | 50 | 76 | 65 | 56 | 49 | 61 | 54 | 48 | 58 | 52 | 47 | 55 | 49 | 45 | 43 |
| 5 | 73 | 59 | 50 | 43 | 70 | 58 | 49 | 42 | 55 | 47 | 41 | 52 | 45 | 40 | 49 | 44 | 39 | 37 |
| 6 | 67 | 53 | 44 | 37 | 64 | 52 | 43 | 37 | 49 | 42 | 36 | 47 | 40 | 35 | 45 | 39 | 34 | 32 |
| 7 | 62 | 48 | 39 | 33 | 60 | 47 | 38 | 32 | 45 | 37 | 32 | 43 | 36 | 31 | 41 | 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 | 38 | 30 | 25 | 36 | 29 | 25 | 34 | 29 | 24 | 22 |
| 10 | 50 | 37 | 29 | 24 | 49 | 36 | 29 | 23 | 35 | 28 | 23 | 33 | 27 | 23 | 32 | 26 | 22 | 20 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 9528 | 9528 | 9528 |
| 5° | 9575 | 9468 | 9542 |
| 10° | 9534 | 9469 | 9555 |
| 15° | 9466 | 9444 | 9532 |
| 20° | 9356 | 9401 | 9515 |
| 25° | 9229 | 9335 | 9477 |
| 30° | 9092 | 9277 | 9436 |
| 35° | 8935 | 9222 | 9442 |
| 40° | 8816 | 9192 | 9457 |
| 45° | 8630 | 9204 | 9535 |
| 50° | 8481 | 9212 | 9643 |
| 55° | 8334 | 9282 | 9765 |
| 60° | 8087 | 9347 | 10007 |
| 65° | 7826 | 9492 | 10325 |
| 70° | 7518 | 9765 | 10825 |
| 75° | 7090 | 10346 | 11871 |
| 80° | 6699 | 11860 | 14193 |
| 85° | 6484 | 17136 | 22036 |



TEST NUMBER: P334159

CATALOG NUMBER: S124DS-S1195D940-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 111.8 | 2.8 |
| 10°-20° | 320.4 | 8.0 |
| 20°-30° | 484.4 | 12.0 |
| 30°-40° | 586.1 | 14.6 |
| 40°-50° | 619.6 | 15.4 |
| 50°-60° | 583.1 | 14.5 |
| 60°-70° | 483.9 | 12.0 |
| 70°-80° | 339.5 | 8.4 |
| 80°-90° | 191.4 | 4.8 |
| 90°-100° | 114.0 | 2.8 |
| 100°-110° | 84.4 | 2.1 |
| 110°-120° | 56.6 | 1.4 |
| 120°-130° | 31.9 | 0.8 |
| 130°-140° | 13.8 | 0.3 |
| 140°-150° | 2.7 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 916.7 | 22.8 |
| 0°-40° | 1502.7 | 37.3 |
| 0°-60° | 2705.4 | 67.2 |
| 0°-90° | 3720.3 | 92.5 |
| 90°-120° | 255.0 | 6.3 |
| 90°-150° | 303.4 | 7.5 |
| 90°-180° | 303.0 | 7.5 |
| 0°-180° | 4023.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1180 | 1180 | 1180 | 1180 | 1180 | |
| 5° | 1182 | 1178 | 1168 | 1179 | 1178 | 112 |
| 15° | 1133 | 1134 | 1130 | 1142 | 1140 | 319 |
| 25° | 1036 | 1044 | 1048 | 1063 | 1064 | 477 |
| 35° | 907 | 922 | 936 | 954 | 958 | 568 |
| 45° | 756 | 781 | 806 | 829 | 835 | 584 |
| 55° | 592 | 620 | 660 | 686 | 694 | 528 |
| 65° | 410 | 452 | 497 | 530 | 540 | 406 |
| 75° | 227 | 276 | 332 | 369 | 381 | 242 |
| 85° | 70 | 126 | 185 | 225 | 238 | 73 |
| 90° | 21 | 74 | 131 | 169 | 180 | 14 |
| 95° | 17 | 61 | 115 | 151 | 163 | 14 |
| 105° | 12 | 38 | 87 | 120 | 131 | 13 |
| 115° | 8 | 20 | 62 | 91 | 100 | 8 |
| 125° | 5 | 4 | 37 | 62 | 70 | 5 |
| 135° | 3 | 3 | 12 | 33 | 41 | 2 |
| 145° | 1 | 0 | 0 | 8 | 13 | 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: P334159

CATALOG NUMBER: S124DS-S1195D940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1180.2 | 1180.2 | 1180.2 | 1180.2 | 1180.2 |
| 2.5° | 1185.5 | 1181.5 | 1170.9 | 1180.2 | 1178.9 |
| 5° | 1181.5 | 1177.5 | 1168.3 | 1178.9 | 1177.5 |
| 7.5° | 1173.6 | 1170.9 | 1163.0 | 1174.9 | 1173.6 |
| 10° | 1163.0 | 1161.7 | 1155.1 | 1167.0 | 1165.6 |
| 12.5° | 1148.5 | 1148.5 | 1144.5 | 1155.1 | 1155.1 |
| 15° | 1132.6 | 1133.9 | 1130.0 | 1141.8 | 1140.5 |
| 17.5° | 1111.5 | 1115.4 | 1114.1 | 1126.0 | 1124.7 |
| 20° | 1089.0 | 1092.9 | 1094.3 | 1107.5 | 1107.5 |
| 22.5° | 1063.9 | 1069.2 | 1071.8 | 1085.0 | 1087.7 |
| 25° | 1036.1 | 1044.1 | 1048.0 | 1062.6 | 1063.9 |
| 27.5° | 1005.7 | 1017.6 | 1022.9 | 1036.1 | 1037.4 |
| 30° | 975.3 | 985.9 | 995.2 | 1009.7 | 1012.3 |
| 32.5° | 942.3 | 955.5 | 966.1 | 983.3 | 985.9 |
| 35° | 906.6 | 922.5 | 935.7 | 954.2 | 958.1 |
| 37.5° | 870.9 | 889.4 | 905.3 | 923.8 | 927.8 |
| 40° | 836.6 | 853.7 | 872.2 | 892.1 | 897.4 |
| 42.5° | 796.9 | 816.7 | 839.2 | 861.7 | 865.6 |
| 45° | 755.9 | 781.1 | 806.2 | 828.6 | 835.2 |
| 47.5° | 717.6 | 742.7 | 771.8 | 794.3 | 802.2 |
| 50° | 675.3 | 704.4 | 733.5 | 759.9 | 767.8 |
| 52.5° | 633.0 | 662.1 | 696.5 | 722.9 | 730.8 |
| 55° | 592.1 | 619.8 | 659.5 | 685.9 | 693.8 |
| 57.5° | 545.8 | 580.2 | 618.5 | 650.2 | 656.8 |
| 60° | 500.9 | 535.2 | 578.9 | 609.2 | 619.8 |
| 62.5° | 457.3 | 495.6 | 539.2 | 569.6 | 580.2 |
| 65° | 409.7 | 452.0 | 496.9 | 530.0 | 540.5 |
| 67.5° | 364.8 | 409.7 | 457.3 | 490.3 | 500.9 |
| 70° | 318.5 | 363.4 | 413.7 | 449.3 | 458.6 |
| 72.5° | 273.6 | 319.8 | 374.0 | 408.4 | 418.9 |
| 75° | 227.3 | 276.2 | 331.7 | 368.7 | 380.6 |
| 77.5° | 183.7 | 235.2 | 293.4 | 330.4 | 343.6 |
| 80° | 144.1 | 196.9 | 255.1 | 294.7 | 305.3 |
| 82.5° | 104.4 | 159.9 | 218.1 | 259.0 | 270.9 |
| 85° | 70.0 | 125.6 | 185.0 | 224.7 | 237.9 |
| 87.5° | 43.6 | 97.8 | 155.9 | 194.3 | 206.2 |
| 90° | 21.1 | 74.0 | 130.8 | 169.2 | 179.7 |
| 92.5° | 19.8 | 66.1 | 122.9 | 159.9 | 170.5 |
| 95° | 17.2 | 60.8 | 115.0 | 150.7 | 162.6 |
| 97.5° | 15.9 | 54.2 | 108.4 | 142.7 | 154.6 |
| 100° | 14.5 | 48.9 | 100.4 | 136.1 | 145.4 |
| 102.5° | 14.5 | 43.6 | 93.8 | 128.2 | 138.8 |
| 105° | 11.9 | 38.3 | 87.2 | 120.3 | 130.8 |
| 107.5° | 11.9 | 34.4 | 80.6 | 113.7 | 122.9 |
| 110° | 10.6 | 29.1 | 75.3 | 105.7 | 116.3 |



TEST NUMBER: P334159

CATALOG NUMBER: S124DS-S1195D940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|-------|
| 112.5° | 9.3 | 25.1 | 68.7 | 97.8 | 108.4 |
| 115° | 7.9 | 19.8 | 62.1 | 91.2 | 100.4 |
| 117.5° | 7.9 | 15.9 | 55.5 | 83.3 | 93.8 |
| 120° | 6.6 | 10.6 | 48.9 | 75.3 | 85.9 |
| 122.5° | 6.6 | 6.6 | 42.3 | 68.7 | 78.0 |
| 125° | 5.3 | 4.0 | 37.0 | 62.1 | 70.0 |
| 127.5° | 5.3 | 4.0 | 30.4 | 54.2 | 63.4 |
| 130° | 4.0 | 2.6 | 23.8 | 47.6 | 55.5 |
| 132.5° | 4.0 | 2.6 | 18.5 | 41.0 | 48.9 |
| 135° | 2.6 | 2.6 | 11.9 | 33.0 | 41.0 |
| 137.5° | 2.6 | 1.3 | 6.6 | 26.4 | 33.0 |
| 140° | 2.6 | 1.3 | 2.6 | 19.8 | 26.4 |
| 142.5° | 1.3 | 1.3 | 0.0 | 14.5 | 19.8 |
| 145° | 1.3 | 0.0 | 0.0 | 7.9 | 13.2 |
| 147.5° | 1.3 | 0.0 | 0.0 | 1.3 | 6.6 |
| 150° | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)