

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: P334154

Luminaire Tested: **S124DS-S1195D935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334154
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-S1195D935-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1195 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

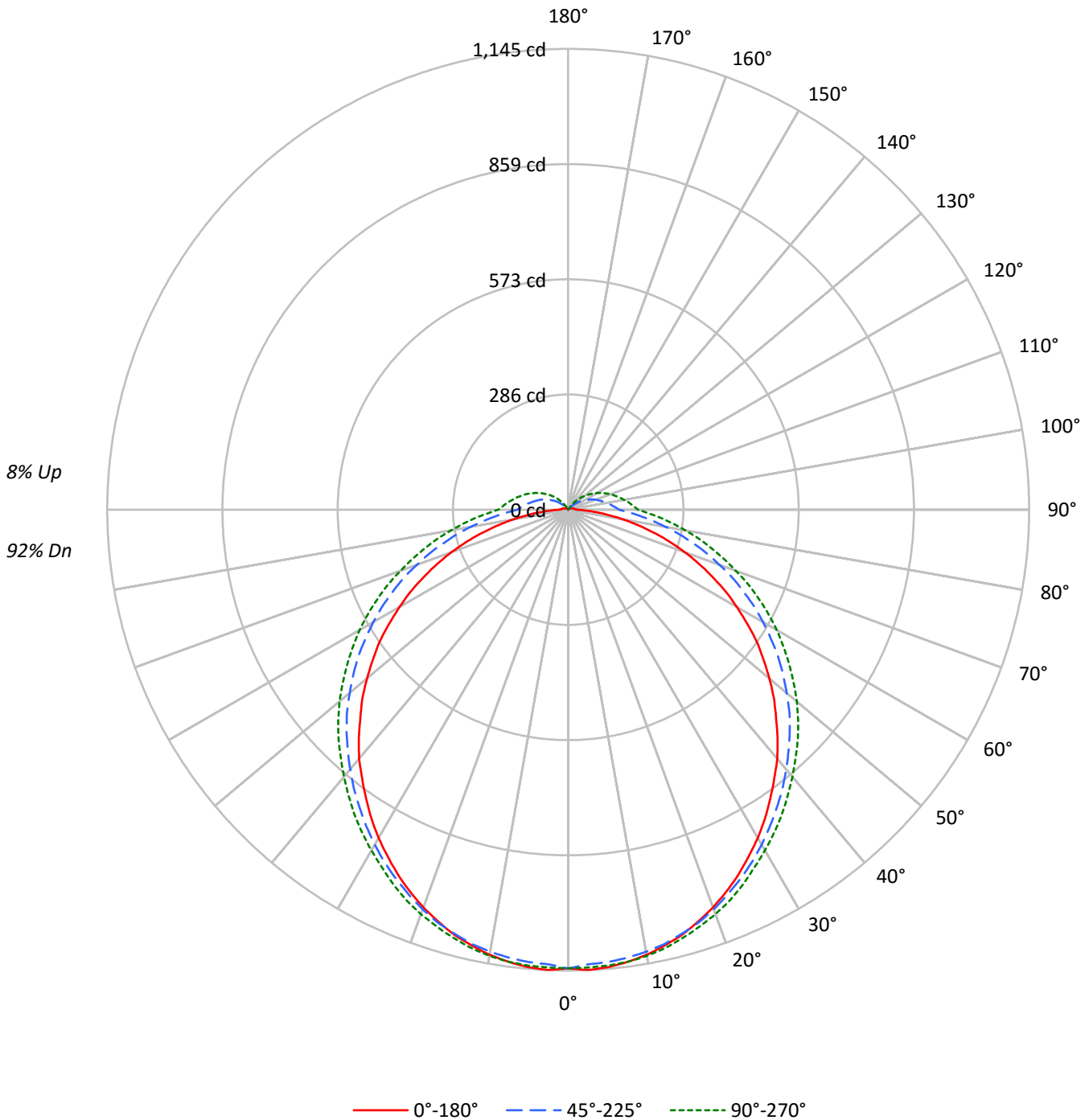
Lumens per Lamp: N/A
Luminaire Lumens: 3885.1 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (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





TEST NUMBER: P334154

CATALOG NUMBER: S124DS-S1195D935-4F0-1E-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° | 9199 | 9199 | 9199 |
| 5° | 9245 | 9141 | 9214 |
| 10° | 9205 | 9143 | 9226 |
| 15° | 9140 | 9118 | 9204 |
| 20° | 9033 | 9077 | 9186 |
| 25° | 8911 | 9014 | 9150 |
| 30° | 8778 | 8957 | 9112 |
| 35° | 8627 | 8904 | 9117 |
| 40° | 8513 | 8876 | 9131 |
| 45° | 8333 | 8887 | 9208 |
| 50° | 8190 | 8894 | 9311 |
| 55° | 8047 | 8963 | 9429 |
| 60° | 7808 | 9024 | 9663 |
| 65° | 7557 | 9165 | 9969 |
| 70° | 7258 | 9427 | 10452 |
| 75° | 6847 | 9991 | 11463 |
| 80° | 6467 | 11451 | 13705 |
| 85° | 6262 | 16543 | 21276 |



TEST NUMBER: P334154

CATALOG NUMBER: S124DS-S1195D935-4F0-1E-UDD-D

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 108.0 | 2.8 |
| 10°-20° | 309.4 | 8.0 |
| 20°-30° | 467.8 | 12.0 |
| 30°-40° | 565.9 | 14.6 |
| 40°-50° | 598.2 | 15.4 |
| 50°-60° | 563.0 | 14.5 |
| 60°-70° | 467.2 | 12.0 |
| 70°-80° | 327.9 | 8.4 |
| 80°-90° | 184.8 | 4.8 |
| 90°-100° | 110.0 | 2.8 |
| 100°-110° | 81.5 | 2.1 |
| 110°-120° | 54.7 | 1.4 |
| 120°-130° | 30.8 | 0.8 |
| 130°-140° | 13.3 | 0.3 |
| 140°-150° | 2.6 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 885.1 | 22.8 |
| 0°-40° | 1451.0 | 37.3 |
| 0°-60° | 2612.2 | 67.2 |
| 0°-90° | 3592.1 | 92.5 |
| 90°-120° | 246.2 | 6.3 |
| 90°-150° | 293.0 | 7.5 |
| 90°-180° | 293.0 | 7.5 |
| 0°-180° | 3885.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1140 | 1140 | 1140 | 1140 | 1140 | |
| 5° | 1141 | 1137 | 1128 | 1138 | 1137 | 108 |
| 15° | 1094 | 1095 | 1091 | 1102 | 1101 | 308 |
| 25° | 1000 | 1008 | 1012 | 1026 | 1027 | 461 |
| 35° | 875 | 891 | 904 | 921 | 925 | 548 |
| 45° | 730 | 754 | 778 | 800 | 806 | 564 |
| 55° | 572 | 598 | 637 | 662 | 670 | 509 |
| 65° | 396 | 436 | 480 | 512 | 522 | 392 |
| 75° | 220 | 267 | 320 | 356 | 368 | 233 |
| 85° | 68 | 121 | 179 | 217 | 230 | 70 |
| 90° | 20 | 72 | 126 | 163 | 174 | 14 |
| 95° | 17 | 59 | 111 | 146 | 157 | 13 |
| 105° | 12 | 37 | 84 | 116 | 126 | 13 |
| 115° | 8 | 19 | 60 | 88 | 97 | 8 |
| 125° | 5 | 4 | 36 | 60 | 68 | 5 |
| 135° | 3 | 3 | 12 | 32 | 40 | 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: P334154

CATALOG NUMBER: S124DS-S1195D935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1139.5 | 1139.5 | 1139.5 | 1139.5 | 1139.5 |
| 2.5° | 1144.6 | 1140.8 | 1130.6 | 1139.5 | 1138.3 |
| 5° | 1140.8 | 1137.0 | 1128.0 | 1138.3 | 1137.0 |
| 7.5° | 1133.1 | 1130.6 | 1122.9 | 1134.4 | 1133.1 |
| 10° | 1122.9 | 1121.7 | 1115.3 | 1126.8 | 1125.5 |
| 12.5° | 1108.9 | 1108.9 | 1105.1 | 1115.3 | 1115.3 |
| 15° | 1093.6 | 1094.9 | 1091.0 | 1102.5 | 1101.2 |
| 17.5° | 1073.2 | 1077.0 | 1075.7 | 1087.2 | 1085.9 |
| 20° | 1051.5 | 1055.3 | 1056.6 | 1069.3 | 1069.3 |
| 22.5° | 1027.2 | 1032.3 | 1034.9 | 1047.7 | 1050.2 |
| 25° | 1000.4 | 1008.1 | 1011.9 | 1026.0 | 1027.2 |
| 27.5° | 971.1 | 982.6 | 987.7 | 1000.4 | 1001.7 |
| 30° | 941.7 | 951.9 | 960.9 | 974.9 | 977.5 |
| 32.5° | 909.8 | 922.6 | 932.8 | 949.4 | 951.9 |
| 35° | 875.4 | 890.7 | 903.5 | 921.3 | 925.1 |
| 37.5° | 840.9 | 858.8 | 874.1 | 892.0 | 895.8 |
| 40° | 807.8 | 824.3 | 842.2 | 861.3 | 866.4 |
| 42.5° | 769.5 | 788.6 | 810.3 | 832.0 | 835.8 |
| 45° | 729.9 | 754.2 | 778.4 | 800.1 | 806.5 |
| 47.5° | 692.9 | 717.1 | 745.2 | 766.9 | 774.6 |
| 50° | 652.1 | 680.1 | 708.2 | 733.7 | 741.4 |
| 52.5° | 611.2 | 639.3 | 672.5 | 698.0 | 705.7 |
| 55° | 571.7 | 598.5 | 636.8 | 662.3 | 669.9 |
| 57.5° | 527.0 | 560.2 | 597.2 | 627.8 | 634.2 |
| 60° | 483.6 | 516.8 | 558.9 | 588.3 | 598.5 |
| 62.5° | 441.5 | 478.5 | 520.6 | 550.0 | 560.2 |
| 65° | 395.6 | 436.4 | 479.8 | 511.7 | 521.9 |
| 67.5° | 352.2 | 395.6 | 441.5 | 473.4 | 483.6 |
| 70° | 307.5 | 350.9 | 399.4 | 433.9 | 442.8 |
| 72.5° | 264.1 | 308.8 | 361.1 | 394.3 | 404.5 |
| 75° | 219.5 | 266.7 | 320.3 | 356.0 | 367.5 |
| 77.5° | 177.4 | 227.1 | 283.3 | 319.0 | 331.8 |
| 80° | 139.1 | 190.1 | 246.3 | 284.6 | 294.8 |
| 82.5° | 100.8 | 154.4 | 210.6 | 250.1 | 261.6 |
| 85° | 67.6 | 121.2 | 178.6 | 216.9 | 229.7 |
| 87.5° | 42.1 | 94.4 | 150.6 | 187.6 | 199.1 |
| 90° | 20.4 | 71.5 | 126.3 | 163.3 | 173.5 |
| 92.5° | 19.1 | 63.8 | 118.7 | 154.4 | 164.6 |
| 95° | 16.6 | 58.7 | 111.0 | 145.5 | 157.0 |
| 97.5° | 15.3 | 52.3 | 104.6 | 137.8 | 149.3 |
| 100° | 14.0 | 47.2 | 97.0 | 131.4 | 140.4 |
| 102.5° | 14.0 | 42.1 | 90.6 | 123.8 | 134.0 |
| 105° | 11.5 | 37.0 | 84.2 | 116.1 | 126.3 |
| 107.5° | 11.5 | 33.2 | 77.8 | 109.7 | 118.7 |
| 110° | 10.2 | 28.1 | 72.7 | 102.1 | 112.3 |



TEST NUMBER: P334154

CATALOG NUMBER: S124DS-S1195D935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|-------|
| 112.5° | 8.9 | 24.2 | 66.4 | 94.4 | 104.6 |
| 115° | 7.7 | 19.1 | 60.0 | 88.0 | 97.0 |
| 117.5° | 7.7 | 15.3 | 53.6 | 80.4 | 90.6 |
| 120° | 6.4 | 10.2 | 47.2 | 72.7 | 82.9 |
| 122.5° | 6.4 | 6.4 | 40.8 | 66.4 | 75.3 |
| 125° | 5.1 | 3.8 | 35.7 | 60.0 | 67.6 |
| 127.5° | 5.1 | 3.8 | 29.3 | 52.3 | 61.3 |
| 130° | 3.8 | 2.6 | 23.0 | 45.9 | 53.6 |
| 132.5° | 3.8 | 2.6 | 17.9 | 39.6 | 47.2 |
| 135° | 2.6 | 2.6 | 11.5 | 31.9 | 39.6 |
| 137.5° | 2.6 | 1.3 | 6.4 | 25.5 | 31.9 |
| 140° | 2.6 | 1.3 | 2.6 | 19.1 | 25.5 |
| 142.5° | 1.3 | 1.3 | 0.0 | 14.0 | 19.1 |
| 145° | 1.3 | 0.0 | 0.0 | 7.7 | 12.8 |
| 147.5° | 1.3 | 0.0 | 0.0 | 1.3 | 6.4 |
| 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)