

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: P334183

Luminaire Tested: **S124DS-S1020D930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334183
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DS-S1020D930-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1020 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

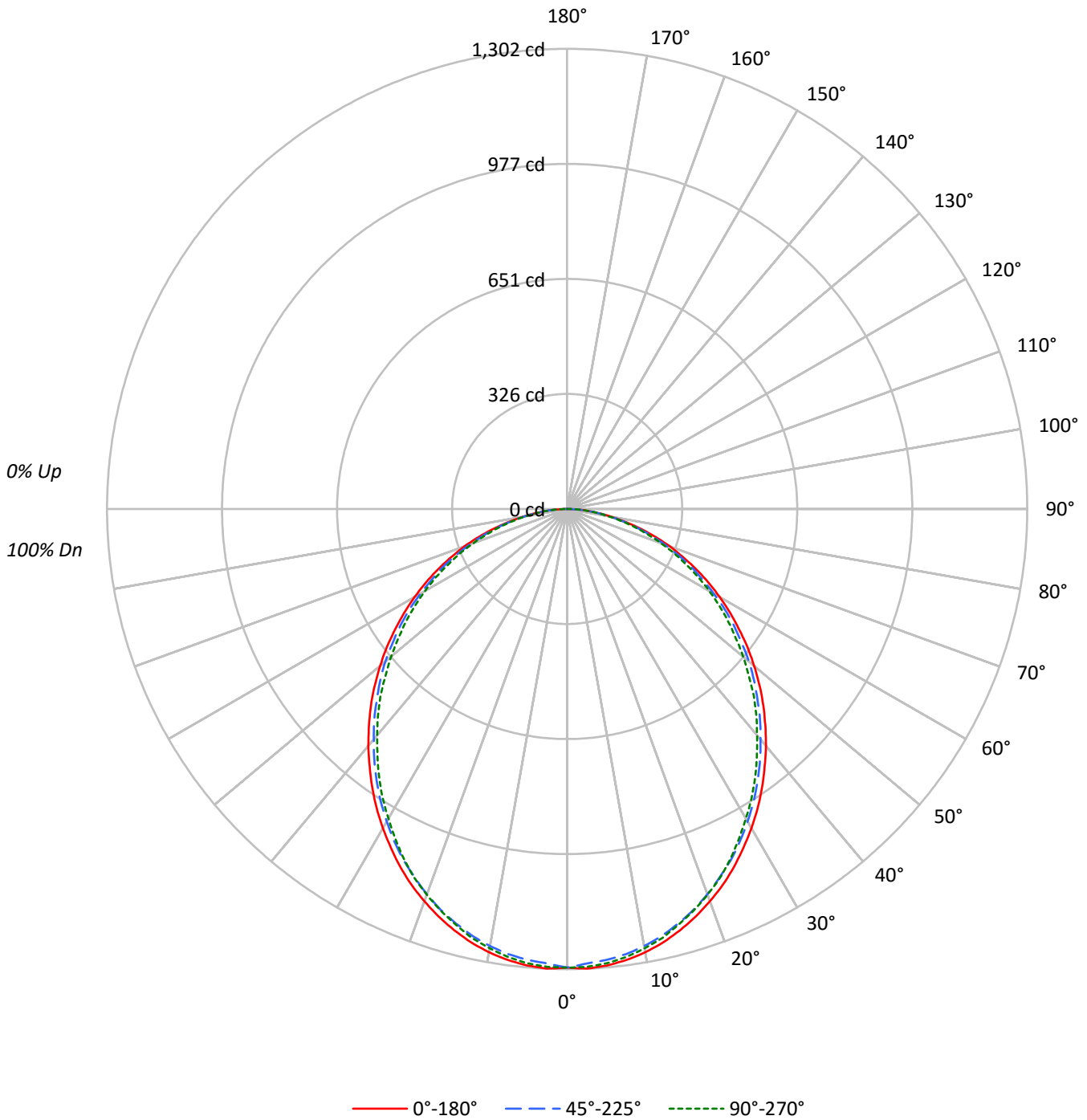
Lumens per Lamp: N/A
Luminaire Lumens: 3330.5 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

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



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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 | 95 | 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 | 73 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 67 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 |
| 5 | 77 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 44 |
| 6 | 71 | 58 | 49 | 42 | 69 | 57 | 48 | 42 | 55 | 47 | 42 | 53 | 47 | 41 | 52 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 37 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 52 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 10475 | 10475 | 10475 |
| 5° | 10507 | 10380 | 10456 |
| 10° | 10440 | 10296 | 10347 |
| 15° | 10314 | 10150 | 10176 |
| 20° | 10147 | 9968 | 9978 |
| 25° | 9956 | 9762 | 9733 |
| 30° | 9721 | 9518 | 9430 |
| 35° | 9478 | 9263 | 9140 |
| 40° | 9225 | 8974 | 8809 |
| 45° | 8962 | 8689 | 8523 |
| 50° | 8671 | 8436 | 8175 |
| 55° | 8356 | 8107 | 7844 |
| 60° | 8041 | 7739 | 7503 |
| 65° | 7687 | 7389 | 7091 |
| 70° | 7289 | 6921 | 6652 |
| 75° | 6681 | 6357 | 6195 |
| 80° | 5946 | 5704 | 5560 |
| 85° | 5196 | 5011 | 4909 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 122.3 | 3.7 |
| 10°-20° | 344.6 | 10.3 |
| 20°-30° | 507.1 | 15.2 |
| 30°-40° | 589.5 | 17.7 |
| 40°-50° | 589.4 | 17.7 |
| 50°-60° | 515.5 | 15.5 |
| 60°-70° | 382.7 | 11.5 |
| 70°-80° | 217.2 | 6.5 |
| 80°-90° | 62.2 | 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° | 974.0 | 29.2 |
| 0°-40° | 1563.4 | 46.9 |
| 0°-60° | 2668.4 | 80.1 |
| 0°-90° | 3330.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3330.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1298 | 1298 | 1298 | 1298 | 1298 | |
| 5° | 1296 | 1292 | 1281 | 1292 | 1290 | 123 |
| 15° | 1234 | 1230 | 1214 | 1221 | 1218 | 348 |
| 25° | 1118 | 1110 | 1096 | 1097 | 1093 | 514 |
| 35° | 962 | 954 | 940 | 933 | 927 | 601 |
| 45° | 785 | 778 | 761 | 750 | 746 | 605 |
| 55° | 594 | 591 | 576 | 564 | 557 | 532 |
| 65° | 402 | 397 | 387 | 376 | 371 | 398 |
| 75° | 214 | 209 | 204 | 200 | 199 | 227 |
| 85° | 56 | 56 | 54 | 54 | 53 | 64 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P334183

CATALOG NUMBER: S124DS-S1020D930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1297.6 | 1297.6 | 1297.6 | 1297.6 | 1297.6 |
| 2.5° | 1301.7 | 1298.6 | 1287.2 | 1297.6 | 1296.5 |
| 5° | 1296.5 | 1292.4 | 1280.9 | 1292.4 | 1290.3 |
| 7.5° | 1287.2 | 1283.0 | 1270.5 | 1279.9 | 1278.8 |
| 10° | 1273.6 | 1269.5 | 1256.0 | 1264.3 | 1262.2 |
| 12.5° | 1256.0 | 1251.8 | 1237.3 | 1246.6 | 1243.5 |
| 15° | 1234.1 | 1230.0 | 1214.4 | 1220.6 | 1217.5 |
| 17.5° | 1209.2 | 1204.0 | 1189.4 | 1193.6 | 1191.5 |
| 20° | 1181.1 | 1175.9 | 1160.3 | 1163.4 | 1161.4 |
| 22.5° | 1151.0 | 1143.7 | 1128.1 | 1134.3 | 1130.2 |
| 25° | 1117.7 | 1110.4 | 1095.9 | 1096.9 | 1092.7 |
| 27.5° | 1080.3 | 1073.0 | 1059.5 | 1057.4 | 1052.2 |
| 30° | 1042.8 | 1034.5 | 1021.0 | 1016.8 | 1011.6 |
| 32.5° | 1003.3 | 996.0 | 981.5 | 976.3 | 971.1 |
| 35° | 961.7 | 954.5 | 939.9 | 932.6 | 927.4 |
| 37.5° | 918.1 | 911.8 | 896.2 | 889.0 | 881.7 |
| 40° | 875.4 | 867.1 | 851.5 | 841.1 | 835.9 |
| 42.5° | 829.7 | 825.5 | 807.9 | 795.4 | 792.3 |
| 45° | 785.0 | 777.7 | 761.1 | 749.6 | 746.5 |
| 47.5° | 738.2 | 733.0 | 717.4 | 704.9 | 696.6 |
| 50° | 690.4 | 686.2 | 671.7 | 657.1 | 650.9 |
| 52.5° | 643.6 | 638.4 | 622.8 | 610.3 | 602.0 |
| 55° | 593.7 | 590.6 | 576.0 | 563.5 | 557.3 |
| 57.5° | 546.9 | 543.8 | 529.2 | 516.7 | 510.5 |
| 60° | 498.0 | 492.8 | 479.3 | 469.9 | 464.7 |
| 62.5° | 450.2 | 446.0 | 431.5 | 423.2 | 418.0 |
| 65° | 402.4 | 397.2 | 386.8 | 376.4 | 371.2 |
| 67.5° | 353.5 | 349.3 | 338.9 | 328.5 | 327.5 |
| 70° | 308.8 | 301.5 | 293.2 | 284.9 | 281.8 |
| 72.5° | 261.0 | 253.7 | 247.5 | 241.2 | 238.1 |
| 75° | 214.2 | 209.0 | 203.8 | 199.6 | 198.6 |
| 77.5° | 168.4 | 166.4 | 161.2 | 160.1 | 157.0 |
| 80° | 127.9 | 124.8 | 122.7 | 120.6 | 119.6 |
| 82.5° | 88.4 | 87.3 | 87.3 | 86.3 | 85.3 |
| 85° | 56.1 | 56.1 | 54.1 | 54.1 | 53.0 |
| 87.5° | 27.0 | 26.0 | 25.0 | 25.0 | 25.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)