

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: P334188

Luminaire Tested: **S124DP-S1020D935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334188
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: S124DP-S1020D935-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT LED LUMINAIRE, FLUSH SATIN WHITE DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 1020 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3517.1 lumens
Efficiency: N/A
Efficacy: 101.1 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

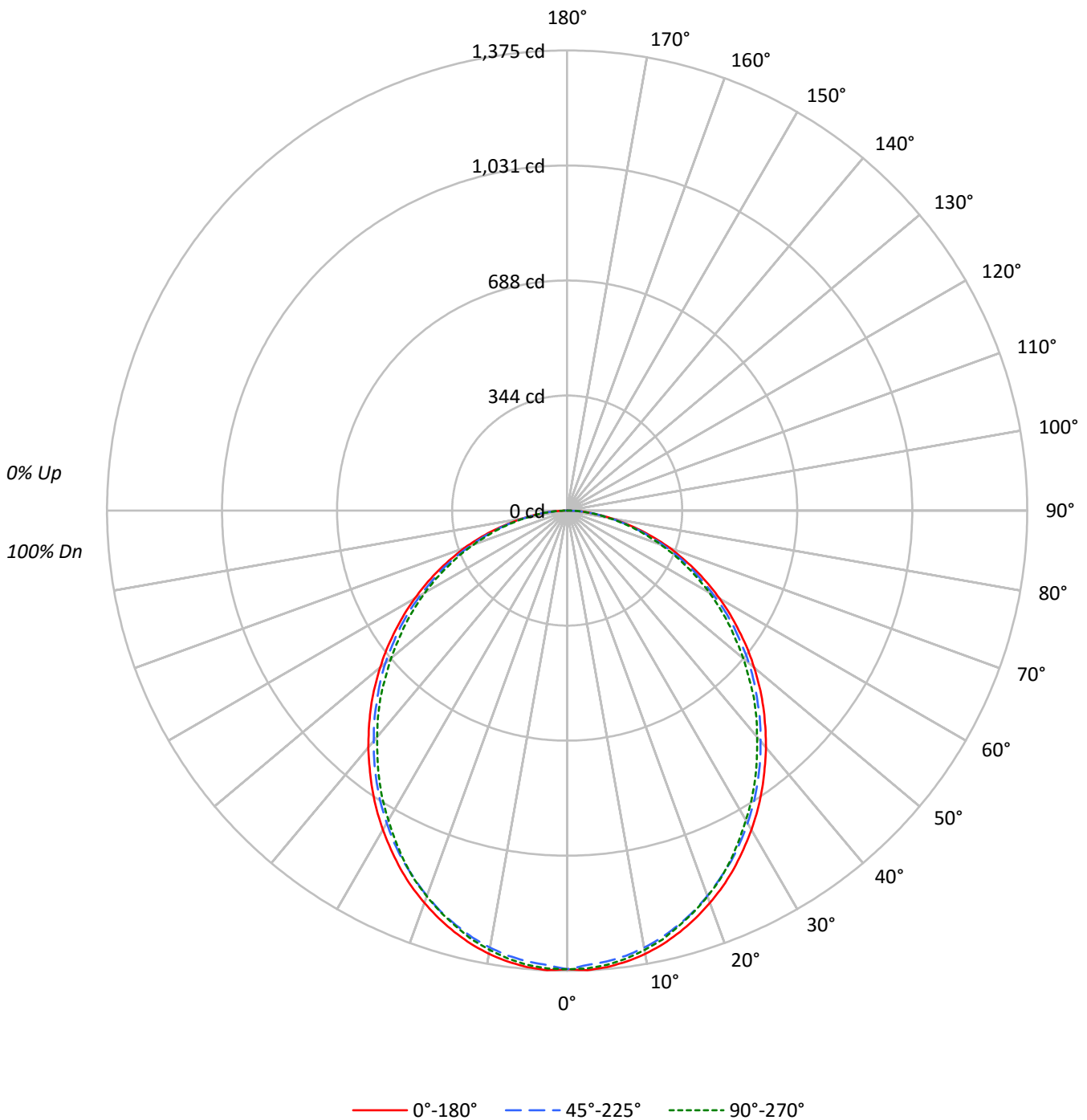
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 11062 | 11062 | 11062 |
| 5° | 11096 | 10962 | 11042 |
| 10° | 11026 | 10873 | 10927 |
| 15° | 10893 | 10719 | 10746 |
| 20° | 10716 | 10527 | 10537 |
| 25° | 10514 | 10309 | 10279 |
| 30° | 10266 | 10051 | 9959 |
| 35° | 10009 | 9782 | 9652 |
| 40° | 9743 | 9477 | 9303 |
| 45° | 9465 | 9176 | 9001 |
| 50° | 9157 | 8908 | 8632 |
| 55° | 8825 | 8562 | 8283 |
| 60° | 8491 | 8173 | 7924 |
| 65° | 8117 | 7803 | 7488 |
| 70° | 7697 | 7308 | 7024 |
| 75° | 7056 | 6712 | 6541 |
| 80° | 6281 | 6025 | 5872 |
| 85° | 5493 | 5289 | 5187 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 129.2 | 3.7 |
| 10°-20° | 363.9 | 10.3 |
| 20°-30° | 535.5 | 15.2 |
| 30°-40° | 622.5 | 17.7 |
| 40°-50° | 622.4 | 17.7 |
| 50°-60° | 544.4 | 15.5 |
| 60°-70° | 404.2 | 11.5 |
| 70°-80° | 229.3 | 6.5 |
| 80°-90° | 65.7 | 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° | 1028.6 | 29.2 |
| 0°-40° | 1651.1 | 46.9 |
| 0°-60° | 2817.9 | 80.1 |
| 0°-90° | 3517.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3517.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1370 | 1370 | 1370 | 1370 | 1370 | |
| 5° | 1369 | 1365 | 1353 | 1365 | 1363 | 130 |
| 15° | 1303 | 1299 | 1282 | 1289 | 1286 | 367 |
| 25° | 1180 | 1173 | 1157 | 1158 | 1154 | 543 |
| 35° | 1016 | 1008 | 993 | 985 | 979 | 635 |
| 45° | 829 | 821 | 804 | 792 | 788 | 639 |
| 55° | 627 | 624 | 608 | 595 | 588 | 562 |
| 65° | 425 | 419 | 408 | 398 | 392 | 420 |
| 75° | 226 | 221 | 215 | 211 | 210 | 240 |
| 85° | 59 | 59 | 57 | 57 | 56 | 68 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P334188

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1370.3 | 1370.3 | 1370.3 | 1370.3 | 1370.3 |
| 2.5° | 1374.7 | 1371.4 | 1359.3 | 1370.3 | 1369.2 |
| 5° | 1369.2 | 1364.8 | 1352.7 | 1364.8 | 1362.6 |
| 7.5° | 1359.3 | 1354.9 | 1341.7 | 1351.6 | 1350.5 |
| 10° | 1345.0 | 1340.6 | 1326.4 | 1335.2 | 1333.0 |
| 12.5° | 1326.4 | 1322.0 | 1306.6 | 1316.5 | 1313.2 |
| 15° | 1303.3 | 1298.9 | 1282.5 | 1289.0 | 1285.7 |
| 17.5° | 1277.0 | 1271.5 | 1256.1 | 1260.5 | 1258.3 |
| 20° | 1247.3 | 1241.8 | 1225.4 | 1228.6 | 1226.5 |
| 22.5° | 1215.5 | 1207.8 | 1191.3 | 1197.9 | 1193.5 |
| 25° | 1180.3 | 1172.7 | 1157.3 | 1158.4 | 1154.0 |
| 27.5° | 1140.8 | 1133.1 | 1118.9 | 1116.7 | 1111.2 |
| 30° | 1101.3 | 1092.5 | 1078.2 | 1073.8 | 1068.3 |
| 32.5° | 1059.6 | 1051.9 | 1036.5 | 1031.0 | 1025.5 |
| 35° | 1015.6 | 1008.0 | 992.6 | 984.9 | 979.4 |
| 37.5° | 969.5 | 962.9 | 946.5 | 938.8 | 931.1 |
| 40° | 924.5 | 915.7 | 899.3 | 888.3 | 882.8 |
| 42.5° | 876.2 | 871.8 | 853.1 | 840.0 | 836.7 |
| 45° | 829.0 | 821.3 | 803.7 | 791.6 | 788.4 |
| 47.5° | 779.6 | 774.1 | 757.6 | 744.4 | 735.7 |
| 50° | 729.1 | 724.7 | 709.3 | 693.9 | 687.3 |
| 52.5° | 679.7 | 674.2 | 657.7 | 644.5 | 635.7 |
| 55° | 627.0 | 623.7 | 608.3 | 595.1 | 588.5 |
| 57.5° | 577.5 | 574.2 | 558.9 | 545.7 | 539.1 |
| 60° | 525.9 | 520.4 | 506.2 | 496.3 | 490.8 |
| 62.5° | 475.4 | 471.0 | 455.7 | 446.9 | 441.4 |
| 65° | 424.9 | 419.4 | 408.5 | 397.5 | 392.0 |
| 67.5° | 373.3 | 368.9 | 357.9 | 347.0 | 345.9 |
| 70° | 326.1 | 318.4 | 309.6 | 300.8 | 297.6 |
| 72.5° | 275.6 | 267.9 | 261.3 | 254.7 | 251.4 |
| 75° | 226.2 | 220.7 | 215.2 | 210.8 | 209.7 |
| 77.5° | 177.9 | 175.7 | 170.2 | 169.1 | 165.8 |
| 80° | 135.1 | 131.8 | 129.6 | 127.4 | 126.3 |
| 82.5° | 93.3 | 92.2 | 92.2 | 91.1 | 90.0 |
| 85° | 59.3 | 59.3 | 57.1 | 57.1 | 56.0 |
| 87.5° | 28.5 | 27.4 | 26.4 | 26.4 | 26.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)