

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: FAIL-SAFE

Report Number: P395238

Luminaire Tested: **4FSN6-SL1-CP250-L8SCT3-3500K-HI**

Issue Date: 5/5/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P395238
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1901-099-13)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 5/5/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4FSN6-SL1-CP250-L8SCT3-3500K-HI
Description: 4FT FSN LINEAR LED FIXTURE WITH HIGH LUMEN SETTING, 3500K LEDS AND CP250 LENS CONFIGURATION

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3838.0 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.24 / 1.37
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')
CIE Type: Direct

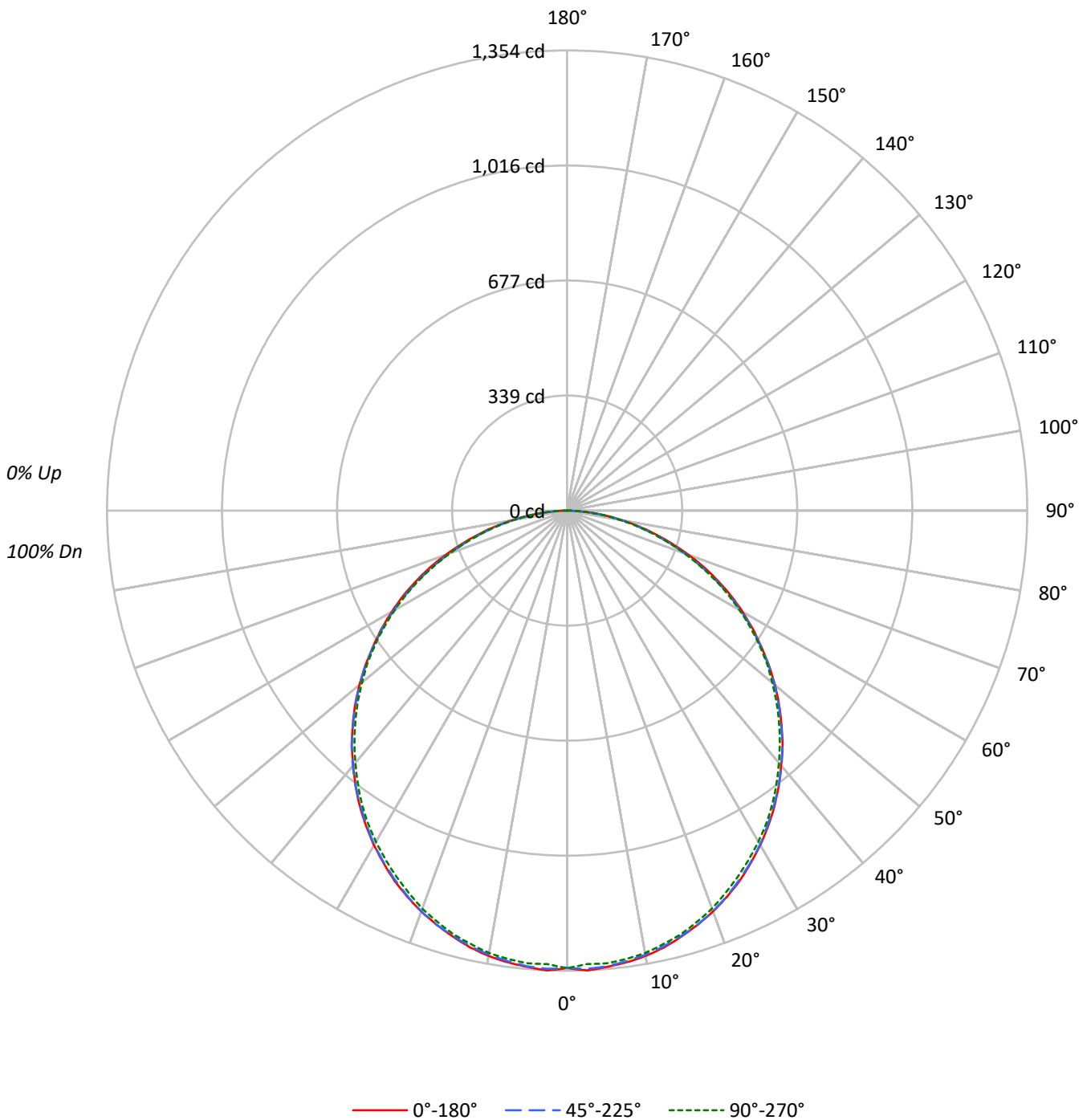
Input Watts (W): 36.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | | | | | 100 | | | |
| 1 | 109 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 90 | 87 | 85 | 83 | | | | | 83 | | | |
| 2 | 99 | 90 | 83 | 78 | 96 | 88 | 82 | 77 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 | | | | | 69 | | | |
| 3 | 90 | 79 | 71 | 64 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | 58 | | | |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 62 | 56 | 52 | 50 | | | | | 50 | | | |
| 5 | 76 | 63 | 53 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 50 | 45 | 43 | | | | | 43 | | | |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 37 | | | | | 37 | | | |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 40 | 35 | 46 | 40 | 35 | 33 | | | | | 33 | | | |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 31 | 29 | | | | | 29 | | | |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 26 | | | | | 26 | | | |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 | | | | | 24 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7244 | 7244 | 7244 |
| 5° | 7281 | 7272 | 7225 |
| 10° | 7272 | 7253 | 7225 |
| 15° | 7232 | 7223 | 7194 |
| 20° | 7189 | 7189 | 7140 |
| 25° | 7138 | 7118 | 7057 |
| 30° | 7066 | 7055 | 6992 |
| 35° | 6987 | 6964 | 6919 |
| 40° | 6882 | 6894 | 6809 |
| 45° | 6791 | 6778 | 6712 |
| 50° | 6682 | 6667 | 6595 |
| 55° | 6540 | 6523 | 6475 |
| 60° | 6414 | 6359 | 6303 |
| 65° | 6238 | 6128 | 6085 |
| 70° | 5954 | 5794 | 5767 |
| 75° | 5592 | 5413 | 5377 |
| 80° | 5095 | 4990 | 4881 |
| 85° | 4440 | 4230 | 4125 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 127.4 | 3.3 |
| 10°-20° | 364.5 | 9.5 |
| 20°-30° | 549.9 | 14.3 |
| 30°-40° | 660.4 | 17.2 |
| 40°-50° | 684.0 | 17.8 |
| 50°-60° | 619.7 | 16.1 |
| 60°-70° | 475.6 | 12.4 |
| 70°-80° | 277.2 | 7.2 |
| 80°-90° | 79.1 | 2.1 |
| 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° | 1041.9 | 27.1 |
| 0°-40° | 1702.3 | 44.4 |
| 0°-60° | 3006.0 | 78.3 |
| 0°-90° | 3838.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3838.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1346 | 1346 | 1346 | 1346 | 1346 | |
| 5° | 1348 | 1337 | 1346 | 1337 | 1337 | 128 |
| 15° | 1298 | 1288 | 1296 | 1290 | 1291 | 366 |
| 25° | 1202 | 1192 | 1199 | 1187 | 1188 | 554 |
| 35° | 1063 | 1057 | 1060 | 1048 | 1053 | 665 |
| 45° | 892 | 890 | 890 | 878 | 882 | 688 |
| 55° | 697 | 699 | 695 | 685 | 690 | 624 |
| 65° | 490 | 485 | 481 | 476 | 478 | 485 |
| 75° | 269 | 265 | 260 | 257 | 259 | 285 |
| 85° | 72 | 72 | 68 | 65 | 67 | 82 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P395238

CATALOG NUMBER: 4FSN6-SL1-CP250-L8SCT3-3500K-HI

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1346.0 | 1346.0 | 1346.0 | 1346.0 | 1346.0 |
| 2.5° | 1354.5 | 1342.5 | 1349.4 | 1342.5 | 1335.7 |
| 5° | 1347.7 | 1337.4 | 1346.0 | 1337.4 | 1337.4 |
| 7.5° | 1340.8 | 1330.6 | 1337.4 | 1328.8 | 1330.6 |
| 10° | 1330.6 | 1320.3 | 1327.1 | 1320.3 | 1322.0 |
| 12.5° | 1316.9 | 1304.9 | 1313.4 | 1306.6 | 1306.6 |
| 15° | 1298.0 | 1287.7 | 1296.3 | 1289.5 | 1291.2 |
| 17.5° | 1277.5 | 1267.2 | 1277.5 | 1268.9 | 1268.9 |
| 20° | 1255.2 | 1244.9 | 1255.2 | 1244.9 | 1246.6 |
| 22.5° | 1229.5 | 1221.0 | 1227.8 | 1215.8 | 1217.5 |
| 25° | 1202.1 | 1191.8 | 1198.7 | 1186.7 | 1188.4 |
| 27.5° | 1169.6 | 1161.0 | 1167.9 | 1155.9 | 1157.6 |
| 30° | 1137.0 | 1128.5 | 1135.3 | 1121.6 | 1125.1 |
| 32.5° | 1101.1 | 1092.5 | 1097.7 | 1087.4 | 1090.8 |
| 35° | 1063.4 | 1056.6 | 1060.0 | 1048.0 | 1053.1 |
| 37.5° | 1022.3 | 1017.2 | 1022.3 | 1008.6 | 1012.0 |
| 40° | 979.5 | 976.1 | 981.2 | 967.5 | 969.2 |
| 42.5° | 938.4 | 933.3 | 938.4 | 924.7 | 926.4 |
| 45° | 892.2 | 890.5 | 890.5 | 878.5 | 881.9 |
| 47.5° | 845.9 | 844.2 | 844.2 | 832.2 | 835.7 |
| 50° | 798.0 | 798.0 | 796.3 | 784.3 | 787.7 |
| 52.5° | 748.3 | 748.3 | 746.6 | 736.3 | 741.5 |
| 55° | 697.0 | 698.7 | 695.2 | 685.0 | 690.1 |
| 57.5° | 647.3 | 647.3 | 643.9 | 635.3 | 638.7 |
| 60° | 595.9 | 594.2 | 590.8 | 582.2 | 585.6 |
| 62.5° | 544.6 | 541.1 | 536.0 | 529.1 | 532.6 |
| 65° | 489.8 | 484.6 | 481.2 | 476.1 | 477.8 |
| 67.5° | 436.7 | 429.8 | 424.7 | 417.8 | 421.3 |
| 70° | 378.4 | 373.3 | 368.2 | 363.0 | 366.5 |
| 72.5° | 323.6 | 318.5 | 313.4 | 309.9 | 311.7 |
| 75° | 268.9 | 265.4 | 260.3 | 256.9 | 258.6 |
| 77.5° | 217.5 | 212.3 | 210.6 | 205.5 | 207.2 |
| 80° | 164.4 | 162.7 | 161.0 | 155.8 | 157.5 |
| 82.5° | 116.4 | 116.4 | 113.0 | 109.6 | 111.3 |
| 85° | 71.9 | 71.9 | 68.5 | 65.1 | 66.8 |
| 87.5° | 30.8 | 29.1 | 29.1 | 27.4 | 27.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)