

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: P184385

Luminaire Tested: **ENW/ENC-24-4-LD1-45-40-CP125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P184385  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: ENW/ENC-24-4-LD1-45-40-CP125-UNV-EDC1  
Description: FAIL-SAFE 2X4 ENCOUNTER W/ 0.125" THICK CLEAR POLY LENS  
Light Source: 4000K LEDS  
Ballast/Driver: -

**Summary**

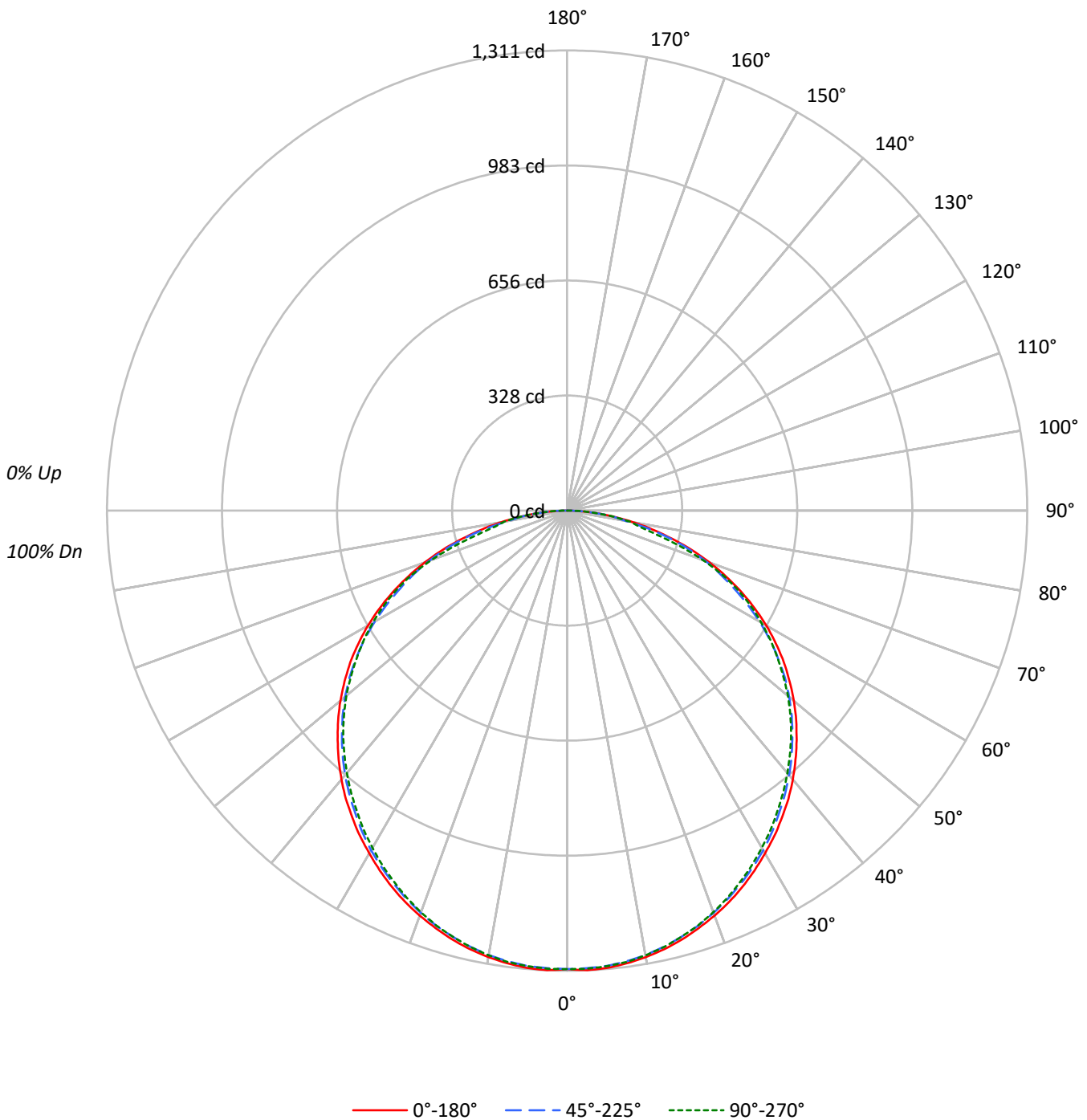
Lumens per Lamp: N/A  
Luminaire Lumens: 3971.7 lumens  
Efficiency: N/A  
Efficacy: 84.9 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.26 / 1.4  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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   | 108 | 103 | 99  | 95  | 105 | 101 | 97  | 93  | 97  | 93  | 90  | 93  | 90  | 87  | 89  | 87  | 85  | 83  |
| 2   | 98  | 89  | 82  | 76  | 95  | 88  | 81  | 75  | 84  | 78  | 74  | 81  | 76  | 72  | 78  | 74  | 70  | 68  |
| 3   | 89  | 78  | 70  | 63  | 87  | 77  | 69  | 62  | 74  | 67  | 61  | 71  | 65  | 60  | 68  | 63  | 59  | 57  |
| 4   | 81  | 69  | 60  | 53  | 79  | 68  | 59  | 53  | 65  | 58  | 52  | 63  | 56  | 51  | 61  | 55  | 51  | 48  |
| 5   | 75  | 62  | 52  | 45  | 73  | 60  | 52  | 45  | 58  | 51  | 45  | 56  | 49  | 44  | 54  | 48  | 44  | 42  |
| 6   | 69  | 55  | 46  | 40  | 67  | 54  | 46  | 39  | 52  | 45  | 39  | 51  | 44  | 39  | 49  | 43  | 38  | 36  |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 48  | 40  | 34  | 46  | 39  | 34  | 45  | 39  | 34  | 32  |
| 8   | 59  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 42  | 35  | 30  | 41  | 35  | 30  | 28  |
| 9   | 55  | 42  | 33  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 27  | 38  | 32  | 27  | 25  |
| 10  | 52  | 39  | 30  | 25  | 51  | 38  | 30  | 25  | 37  | 30  | 25  | 36  | 29  | 25  | 35  | 29  | 25  | 23  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1758 | 1758 | 1758 |
| 5°  | 1763 | 1751 | 1752 |
| 10° | 1757 | 1740 | 1742 |
| 15° | 1750 | 1727 | 1728 |
| 20° | 1743 | 1713 | 1712 |
| 25° | 1735 | 1698 | 1693 |
| 30° | 1727 | 1684 | 1675 |
| 35° | 1723 | 1667 | 1658 |
| 40° | 1721 | 1655 | 1645 |
| 45° | 1716 | 1639 | 1635 |
| 50° | 1715 | 1625 | 1622 |
| 55° | 1708 | 1600 | 1600 |
| 60° | 1690 | 1560 | 1582 |
| 65° | 1653 | 1500 | 1548 |
| 70° | 1586 | 1438 | 1422 |
| 75° | 1468 | 1310 | 1149 |
| 80° | 1289 | 1004 | 1095 |
| 85° | 1001 | 785  | 810  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 123.8  | 3.1       |
| 10°-20°   | 355.2  | 8.9       |
| 20°-30°   | 540.6  | 13.6      |
| 30°-40°   | 659.8  | 16.6      |
| 40°-50°   | 702.6  | 17.7      |
| 50°-60°   | 659.4  | 16.6      |
| 60°-70°   | 527.3  | 13.3      |
| 70°-80°   | 310.4  | 7.8       |
| 80°-90°   | 92.5   | 2.3       |
| 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°    | 1019.7 | 25.7      |
| 0°-40°    | 1679.5 | 42.3      |
| 0°-60°    | 3041.5 | 76.6      |
| 0°-90°    | 3971.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3971.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1306 | 1306  | 1306 | 1306  | 1306 |      |
| 5°  | 1308 | 1304  | 1302 | 1300  | 1303 | 124  |
| 15° | 1265 | 1260  | 1257 | 1255  | 1257 | 357  |
| 25° | 1182 | 1177  | 1172 | 1165  | 1167 | 545  |
| 35° | 1067 | 1062  | 1053 | 1043  | 1045 | 668  |
| 45° | 924  | 920   | 907  | 900   | 902  | 714  |
| 55° | 754  | 746   | 734  | 728   | 731  | 673  |
| 65° | 547  | 538   | 525  | 532   | 538  | 540  |
| 75° | 309  | 303   | 302  | 272   | 262  | 327  |
| 85° | 83   | 77    | 82   | 82    | 82   | 94   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1306.4 | 1306.4 | 1306.4 | 1306.4 | 1306.4 |
| 2.5°  | 1310.7 | 1305.5 | 1304.6 | 1303.7 | 1306.4 |
| 5°    | 1308.0 | 1303.7 | 1302.1 | 1300.3 | 1302.9 |
| 7.5°  | 1301.2 | 1296.9 | 1295.1 | 1294.3 | 1296.9 |
| 10°   | 1291.7 | 1286.5 | 1285.7 | 1284.0 | 1286.5 |
| 12.5° | 1279.7 | 1275.4 | 1272.8 | 1271.1 | 1273.6 |
| 15°   | 1265.0 | 1259.9 | 1257.3 | 1254.8 | 1257.3 |
| 17.5° | 1247.0 | 1242.7 | 1240.1 | 1237.6 | 1239.2 |
| 20°   | 1228.1 | 1222.9 | 1219.5 | 1214.3 | 1217.7 |
| 22.5° | 1206.6 | 1201.4 | 1197.1 | 1191.1 | 1193.7 |
| 25°   | 1182.5 | 1177.4 | 1172.2 | 1165.3 | 1167.0 |
| 27.5° | 1155.9 | 1151.6 | 1145.5 | 1137.8 | 1139.5 |
| 30°   | 1127.4 | 1124.0 | 1117.2 | 1108.6 | 1109.4 |
| 32.5° | 1099.1 | 1094.8 | 1086.2 | 1076.7 | 1078.5 |
| 35°   | 1067.2 | 1062.1 | 1052.7 | 1043.2 | 1044.9 |
| 37.5° | 1035.5 | 1028.5 | 1019.1 | 1008.8 | 1011.3 |
| 40°   | 1000.2 | 995.9  | 983.9  | 975.3  | 976.1  |
| 42.5° | 963.2  | 958.9  | 946.8  | 939.1  | 940.0  |
| 45°   | 924.5  | 920.2  | 907.3  | 900.4  | 902.2  |
| 47.5° | 885.0  | 880.7  | 867.8  | 860.8  | 862.6  |
| 50°   | 843.6  | 838.5  | 825.6  | 818.7  | 821.3  |
| 52.5° | 799.0  | 793.8  | 781.8  | 775.7  | 776.6  |
| 55°   | 754.2  | 746.5  | 733.6  | 728.4  | 731.0  |
| 57.5° | 705.2  | 698.3  | 685.4  | 681.1  | 687.2  |
| 60°   | 655.3  | 646.7  | 632.9  | 632.9  | 639.0  |
| 62.5° | 602.0  | 593.4  | 578.8  | 584.0  | 590.8  |
| 65°   | 546.9  | 538.3  | 524.6  | 532.4  | 538.3  |
| 67.5° | 489.4  | 480.8  | 472.2  | 476.5  | 479.9  |
| 70°   | 430.8  | 421.4  | 418.8  | 414.5  | 411.1  |
| 72.5° | 371.5  | 362.0  | 362.0  | 346.6  | 336.2  |
| 75°   | 308.8  | 302.7  | 301.8  | 271.7  | 262.3  |
| 77.5° | 249.4  | 248.6  | 234.8  | 209.9  | 209.9  |
| 80°   | 190.0  | 194.3  | 168.5  | 176.3  | 181.4  |
| 82.5° | 135.0  | 135.9  | 129.8  | 129.8  | 131.6  |
| 85°   | 83.4   | 77.4   | 81.7   | 81.7   | 82.5   |
| 87.5° | 31.8   | 35.2   | 36.1   | 37.9   | 39.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)