

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: P734181

Luminaire Tested: **24FCZ2-35-B2750-W2D-CP375-2700K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P734181  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P272053)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 1/5/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-35-B2750-W2D-CP375-2700K  
Description: 2X4 3500 LUMEN SEALED CRUZE TROFFER WITH BIO UP LEDS AT 2700K CCT  
AND RIBBED LENS, WITH, CP375 BOTTOM LENS  
  
Light Source: -  
Ballast/Driver: -

**Summary**

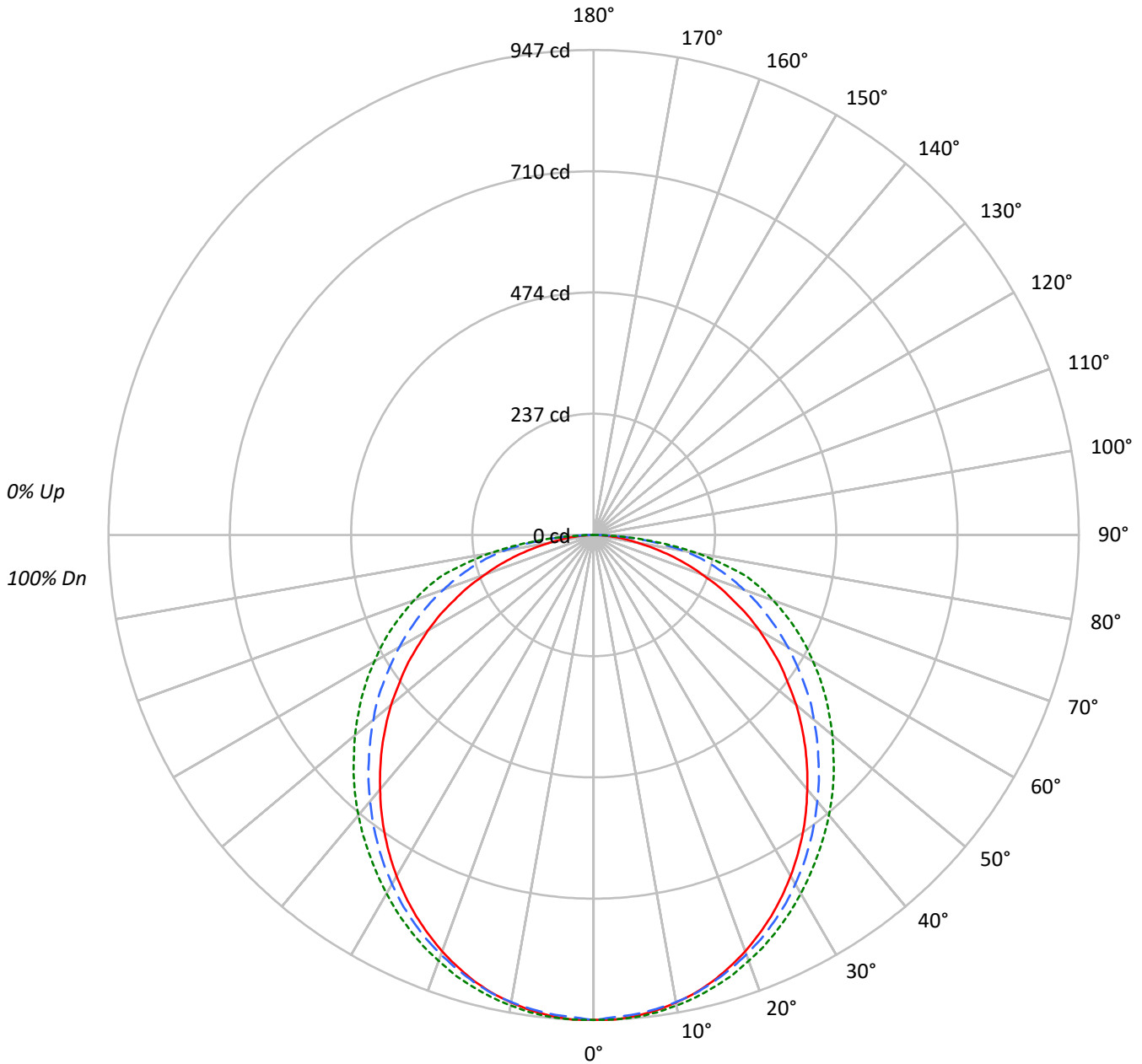
Lumens per Lamp: N/A  
Luminaire Lumens: 2821.0 lumens  
Efficiency: N/A  
Efficacy: 100.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 28  
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 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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 | 0 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 108 | 103 | 98  | 94  | 105 | 100 | 96  | 92  | 96  | 93  | 89  | 92  | 89  | 87  | 89  | 86  | 84  | 82  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 80  | 75  | 83  | 78  | 73  | 80  | 75  | 71  | 77  | 73  | 70  | 67  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 89  | 78  | 69  | 62  | 86  | 76  | 68  | 62  | 73  | 66  | 61  | 70  | 64  | 60  | 68  | 63  | 58  | 56  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 81  | 69  | 59  | 52  | 79  | 67  | 59  | 52  | 65  | 57  | 51  | 62  | 56  | 51  | 60  | 55  | 50  | 48  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 74  | 61  | 52  | 45  | 72  | 60  | 51  | 45  | 58  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 43  | 41  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 69  | 55  | 46  | 39  | 67  | 54  | 45  | 39  | 52  | 44  | 39  | 50  | 44  | 38  | 49  | 43  | 38  | 36  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 40  | 34  | 47  | 40  | 34  | 46  | 39  | 34  | 45  | 38  | 34  | 32  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 59  | 45  | 37  | 31  | 58  | 45  | 36  | 31  | 43  | 36  | 30  | 42  | 35  | 30  | 41  | 35  | 30  | 28  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 55  | 42  | 33  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 27  | 39  | 32  | 27  | 38  | 32  | 27  | 25  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 52  | 38  | 30  | 25  | 51  | 38  | 30  | 25  | 37  | 30  | 25  | 36  | 29  | 25  | 35  | 29  | 25  | 23  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1337 | 1337 | 1337 |
| 5°  | 1336 | 1331 | 1339 |
| 10° | 1329 | 1328 | 1337 |
| 15° | 1318 | 1321 | 1334 |
| 20° | 1300 | 1309 | 1329 |
| 25° | 1278 | 1298 | 1324 |
| 30° | 1254 | 1283 | 1318 |
| 35° | 1226 | 1267 | 1314 |
| 40° | 1195 | 1251 | 1317 |
| 45° | 1165 | 1238 | 1323 |
| 50° | 1133 | 1232 | 1335 |
| 55° | 1098 | 1230 | 1360 |
| 60° | 1055 | 1236 | 1395 |
| 65° | 1000 | 1254 | 1456 |
| 70° | 928  | 1286 | 1539 |
| 75° | 847  | 1350 | 1668 |
| 80° | 697  | 1453 | 1669 |
| 85° | 533  | 1341 | 1433 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 89.6   | 3.2       |
| 10°-20°   | 255.7  | 9.1       |
| 20°-30°   | 384.8  | 13.6      |
| 30°-40°   | 461.2  | 16.3      |
| 40°-50°   | 480.6  | 17.0      |
| 50°-60°   | 447.1  | 15.9      |
| 60°-70°   | 368.3  | 13.1      |
| 70°-80°   | 250.8  | 8.9       |
| 80°-90°   | 82.8   | 2.9       |
| 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°    | 730.2  | 25.9      |
| 0°-40°    | 1191.4 | 42.2      |
| 0°-60°    | 2119.1 | 75.1      |
| 0°-90°    | 2821.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2821.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 947 | 947   | 947 | 947   | 947 |      |
| 5°  | 943 | 943   | 940 | 944   | 945 | 90   |
| 15° | 902 | 903   | 904 | 912   | 913 | 254  |
| 25° | 821 | 825   | 833 | 847   | 850 | 378  |
| 35° | 712 | 720   | 735 | 755   | 763 | 445  |
| 45° | 584 | 596   | 620 | 652   | 663 | 450  |
| 55° | 446 | 461   | 500 | 540   | 553 | 398  |
| 65° | 299 | 325   | 376 | 420   | 436 | 297  |
| 75° | 155 | 190   | 248 | 292   | 306 | 164  |
| 85° | 33  | 64    | 83  | 88    | 88  | 41   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 947.2 | 947.2 | 947.2 | 947.2 | 947.2 |
| 2.5°  | 947.2 | 947.2 | 942.4 | 947.2 | 947.2 |
| 5°    | 943.3 | 943.3 | 939.6 | 944.3 | 945.3 |
| 7.5°  | 936.7 | 937.8 | 934.0 | 939.6 | 940.6 |
| 10°   | 927.3 | 928.3 | 926.4 | 932.1 | 933.0 |
| 12.5° | 916.1 | 917.0 | 917.0 | 923.6 | 924.6 |
| 15°   | 901.9 | 902.9 | 903.8 | 912.3 | 913.3 |
| 17.5° | 884.1 | 886.9 | 888.7 | 899.2 | 901.0 |
| 20°   | 865.3 | 868.1 | 871.8 | 883.1 | 885.0 |
| 22.5° | 843.6 | 847.3 | 853.9 | 866.2 | 869.0 |
| 25°   | 821.0 | 824.7 | 833.3 | 847.3 | 850.2 |
| 27.5° | 795.6 | 801.3 | 811.6 | 826.7 | 830.4 |
| 30°   | 769.3 | 774.8 | 787.1 | 803.1 | 808.7 |
| 32.5° | 741.0 | 748.5 | 762.6 | 780.5 | 786.2 |
| 35°   | 711.7 | 720.2 | 735.3 | 755.1 | 762.6 |
| 37.5° | 680.7 | 690.2 | 708.0 | 729.7 | 739.1 |
| 40°   | 648.7 | 660.0 | 678.8 | 704.2 | 714.6 |
| 42.5° | 616.6 | 627.1 | 650.6 | 677.9 | 689.1 |
| 45°   | 583.7 | 596.0 | 620.5 | 651.5 | 662.8 |
| 47.5° | 549.8 | 562.0 | 591.2 | 624.2 | 634.6 |
| 50°   | 516.0 | 528.2 | 561.1 | 596.0 | 608.2 |
| 52.5° | 479.2 | 495.2 | 532.9 | 567.7 | 580.0 |
| 55°   | 446.3 | 461.3 | 500.0 | 539.5 | 552.6 |
| 57.5° | 408.6 | 426.4 | 468.9 | 510.3 | 524.4 |
| 60°   | 373.8 | 392.6 | 437.8 | 480.1 | 494.3 |
| 62.5° | 338.0 | 358.7 | 406.7 | 450.0 | 466.0 |
| 65°   | 299.3 | 324.8 | 375.6 | 419.9 | 435.9 |
| 67.5° | 264.5 | 291.0 | 344.6 | 389.8 | 403.9 |
| 70°   | 225.0 | 257.0 | 311.6 | 356.9 | 372.9 |
| 72.5° | 191.1 | 223.1 | 280.5 | 324.8 | 340.8 |
| 75°   | 155.3 | 190.2 | 247.6 | 291.9 | 305.9 |
| 77.5° | 119.6 | 158.2 | 215.6 | 249.5 | 254.2 |
| 80°   | 85.7  | 126.2 | 178.8 | 198.7 | 205.3 |
| 82.5° | 60.3  | 97.0  | 131.9 | 145.0 | 148.8 |
| 85°   | 32.9  | 64.0  | 82.8  | 88.5  | 88.5  |
| 87.5° | 14.1  | 27.3  | 32.9  | 33.9  | 34.8  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



Report Generated By 670246072 / DESKTOP-50001EG







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)