

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: P734152

Luminaire Tested: **24FCZ2-30HE-SQR-B2750-W2D-CP250-3000K**

Issue Date: 1/5/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P734152  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P388488)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 1/5/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30HE-SQR-B2750-W2D-CP250-3000K  
Description: 2X4 3000 LUMEN SEALED CRUZE TROFFER WITH BIO UP LEDS AT 3000K CCT  
AND SQR LENS, WITH, CP250 BOTTOM LENS

Light Source: -  
Ballast/Driver: -

**Summary**

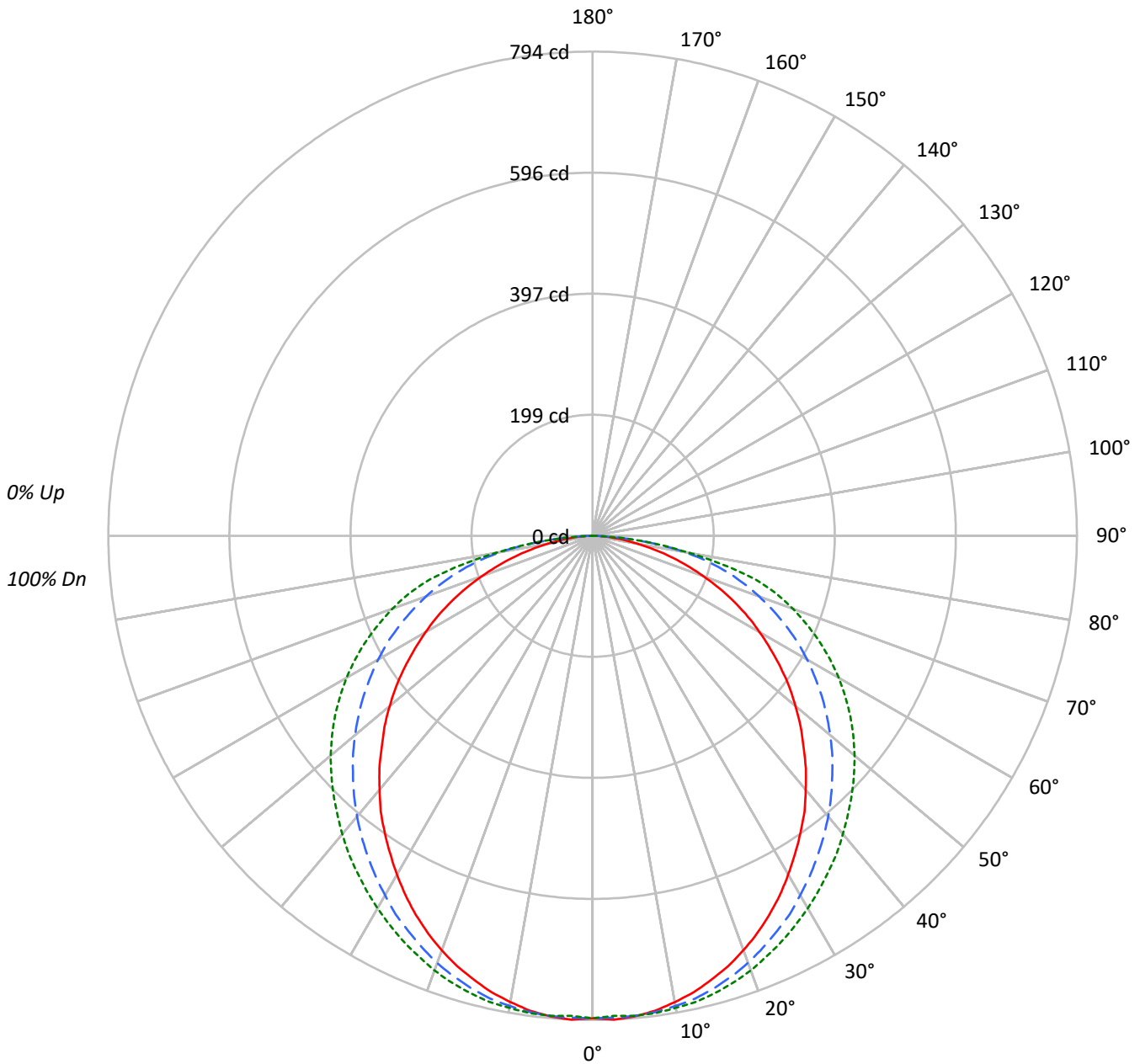
Lumens per Lamp: N/A  
Luminaire Lumens: 2475.0 lumens  
Efficiency: N/A  
Efficacy: 112.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 22  
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  | 81  | 75  | 95  | 87  | 80  | 74  | 83  | 78  | 73  | 80  | 75  | 71  | 77  | 73  | 69  | 67  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 89  | 77  | 69  | 62  | 86  | 76  | 68  | 61  | 73  | 66  | 60  | 70  | 64  | 59  | 67  | 62  | 58  | 56  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 81  | 68  | 59  | 52  | 78  | 67  | 58  | 52  | 64  | 57  | 51  | 62  | 55  | 50  | 60  | 54  | 49  | 47  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 74  | 61  | 51  | 44  | 72  | 60  | 51  | 44  | 57  | 50  | 44  | 55  | 49  | 43  | 54  | 48  | 43  | 41  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 68  | 55  | 45  | 39  | 66  | 54  | 45  | 38  | 52  | 44  | 38  | 50  | 43  | 38  | 48  | 42  | 37  | 35  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 63  | 49  | 40  | 34  | 62  | 49  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 33  | 44  | 38  | 33  | 31  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 59  | 45  | 36  | 30  | 57  | 44  | 36  | 30  | 43  | 35  | 30  | 42  | 35  | 30  | 40  | 34  | 30  | 28  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 55  | 41  | 33  | 27  | 54  | 41  | 33  | 27  | 39  | 32  | 27  | 38  | 32  | 27  | 37  | 31  | 27  | 25  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 52  | 38  | 30  | 25  | 50  | 37  | 30  | 24  | 36  | 29  | 24  | 36  | 29  | 24  | 35  | 29  | 24  | 22  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1117 | 1117 | 1117 |
| 5°  | 1121 | 1120 | 1120 |
| 10° | 1113 | 1122 | 1127 |
| 15° | 1101 | 1123 | 1134 |
| 20° | 1086 | 1120 | 1139 |
| 25° | 1068 | 1114 | 1143 |
| 30° | 1045 | 1109 | 1150 |
| 35° | 1024 | 1107 | 1160 |
| 40° | 1001 | 1107 | 1176 |
| 45° | 975  | 1109 | 1199 |
| 50° | 953  | 1116 | 1231 |
| 55° | 925  | 1128 | 1269 |
| 60° | 893  | 1147 | 1315 |
| 65° | 854  | 1168 | 1370 |
| 70° | 792  | 1198 | 1440 |
| 75° | 718  | 1239 | 1507 |
| 80° | 605  | 1242 | 1295 |
| 85° | 463  | 939  | 939  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 75.1   | 3.0       |
| 10°-20°   | 216.1  | 8.7       |
| 20°-30°   | 328.2  | 13.3      |
| 30°-40°   | 399.2  | 16.1      |
| 40°-50°   | 425.0  | 17.2      |
| 50°-60°   | 404.8  | 16.4      |
| 60°-70°   | 338.5  | 13.7      |
| 70°-80°   | 225.7  | 9.1       |
| 80°-90°   | 62.4   | 2.5       |
| 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°    | 619.3  | 25.0      |
| 0°-40°    | 1018.5 | 41.2      |
| 0°-60°    | 1848.4 | 74.7      |
| 0°-90°    | 2475.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2475.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 791 | 791   | 791 | 791   | 791 |      |
| 5°  | 791 | 786   | 790 | 790   | 790 | 75   |
| 15° | 754 | 755   | 768 | 774   | 776 | 213  |
| 25° | 686 | 695   | 715 | 727   | 734 | 316  |
| 35° | 594 | 611   | 642 | 664   | 673 | 372  |
| 45° | 489 | 515   | 556 | 587   | 601 | 378  |
| 55° | 376 | 409   | 458 | 499   | 516 | 336  |
| 65° | 256 | 293   | 350 | 393   | 410 | 253  |
| 75° | 132 | 173   | 227 | 266   | 276 | 139  |
| 85° | 29  | 53    | 58  | 57    | 58  | 35   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P734152

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 791.1 | 791.1 | 791.1 | 791.1 | 791.1 |
| 2.5°  | 794.4 | 788.6 | 791.1 | 791.1 | 787.9 |
| 5°    | 791.1 | 786.2 | 790.3 | 790.3 | 790.3 |
| 7.5°  | 785.5 | 781.3 | 787.9 | 789.5 | 789.5 |
| 10°   | 776.4 | 774.8 | 783.0 | 785.5 | 786.2 |
| 12.5° | 766.7 | 765.8 | 777.3 | 780.5 | 783.0 |
| 15°   | 753.5 | 755.2 | 768.3 | 774.0 | 776.4 |
| 17.5° | 739.7 | 742.9 | 757.6 | 765.8 | 768.3 |
| 20°   | 723.3 | 728.2 | 745.4 | 753.5 | 758.5 |
| 22.5° | 705.4 | 712.7 | 730.7 | 740.4 | 746.2 |
| 25°   | 685.7 | 694.6 | 715.1 | 727.4 | 733.9 |
| 27.5° | 664.5 | 676.0 | 699.6 | 713.4 | 720.0 |
| 30°   | 641.5 | 654.6 | 680.8 | 697.2 | 705.4 |
| 32.5° | 617.9 | 633.4 | 662.0 | 680.0 | 689.8 |
| 35°   | 594.2 | 611.4 | 642.4 | 663.6 | 673.4 |
| 37.5° | 570.5 | 587.6 | 622.0 | 644.8 | 657.2 |
| 40°   | 543.5 | 563.9 | 600.8 | 626.0 | 638.4 |
| 42.5° | 517.4 | 539.4 | 578.7 | 606.4 | 619.6 |
| 45°   | 488.7 | 514.9 | 555.7 | 586.8 | 600.8 |
| 47.5° | 462.6 | 488.7 | 532.9 | 565.6 | 581.1 |
| 50°   | 434.0 | 461.7 | 508.3 | 544.4 | 560.7 |
| 52.5° | 406.2 | 434.8 | 483.8 | 522.3 | 538.6 |
| 55°   | 376.0 | 408.6 | 458.5 | 498.6 | 515.7 |
| 57.5° | 345.7 | 380.9 | 432.3 | 474.0 | 491.2 |
| 60°   | 316.3 | 352.2 | 406.2 | 447.9 | 465.9 |
| 62.5° | 286.9 | 322.8 | 379.2 | 421.7 | 438.9 |
| 65°   | 255.8 | 293.4 | 349.8 | 393.1 | 410.3 |
| 67.5° | 224.8 | 263.9 | 320.3 | 363.7 | 380.0 |
| 70°   | 192.0 | 233.8 | 290.2 | 332.7 | 349.0 |
| 72.5° | 161.9 | 203.5 | 259.1 | 300.8 | 316.3 |
| 75°   | 131.6 | 173.2 | 227.2 | 265.6 | 276.3 |
| 77.5° | 102.2 | 143.8 | 192.0 | 217.4 | 219.9 |
| 80°   | 74.4  | 113.6 | 152.8 | 160.2 | 159.3 |
| 82.5° | 49.8  | 85.0  | 105.5 | 106.2 | 108.7 |
| 85°   | 28.6  | 53.1  | 58.0  | 57.2  | 58.0  |
| 87.5° | 11.5  | 18.8  | 16.4  | 12.2  | 12.2  |
| 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)