

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: P734322

Luminaire Tested: **24FCZ2-35HE-HRP-B2750-W2D-CP187-3000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P734322
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P295011)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 1/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35HE-HRP-B2750-W2D-CP187-3000K
Description: 2X4 3500 LUMEN SEALED CRUZE TROFFER WITH BIO UP LEDS AT 3000K CCT
AND HRP LENS, WITH, CP187 BOTTOM LENS

Light Source: -
Ballast/Driver: -

Summary

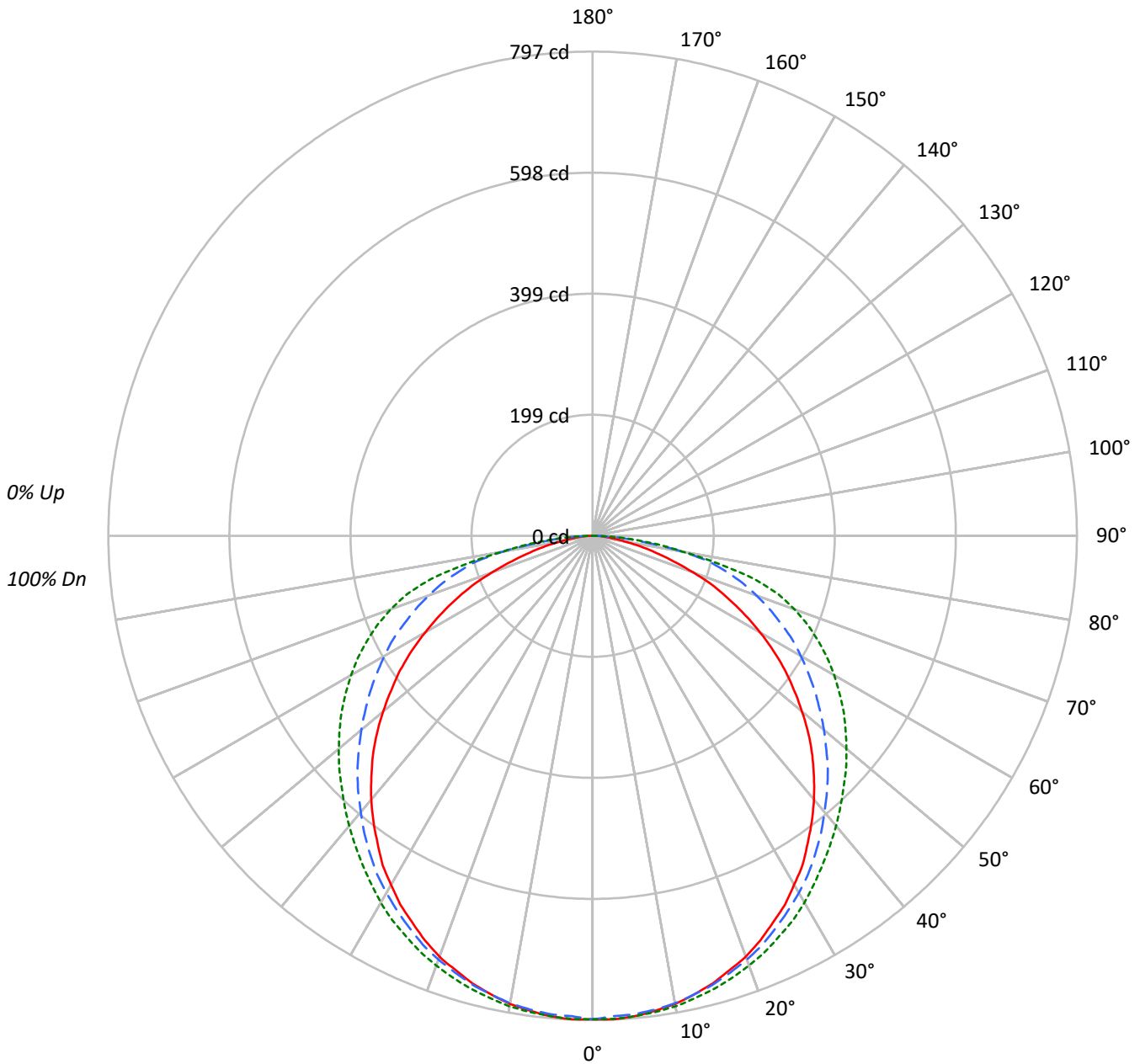
Lumens per Lamp: N/A
Luminaire Lumens: 2453.0 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): 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





TEST NUMBER: P734322

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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 | | | | | | | | |
| 1 | 108 | 103 | 98 | 94 | 105 | 101 | 96 | 93 | 96 | 93 | 90 | 92 | 90 | 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 | 59 | 68 | 63 | 58 | 56 | | | | | | | | |
| 4 | 81 | 68 | 59 | 52 | 79 | 67 | 59 | 52 | 65 | 57 | 51 | 62 | 56 | 50 | 60 | 54 | 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 | 38 | 50 | 43 | 38 | 49 | 42 | 38 | 36 | | | | | | | | |
| 7 | 63 | 50 | 41 | 34 | 62 | 49 | 40 | 34 | 47 | 39 | 34 | 46 | 39 | 34 | 44 | 38 | 33 | 31 | | | | | | | | |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 28 | | | | | | | | |
| 9 | 55 | 41 | 33 | 27 | 54 | 41 | 33 | 27 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 25 | | | | | | | | |
| 10 | 52 | 38 | 30 | 25 | 50 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 24 | 35 | 29 | 24 | 23 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1123 | 1123 | 1123 |
| 5° | 1125 | 1120 | 1125 |
| 10° | 1122 | 1120 | 1127 |
| 15° | 1115 | 1118 | 1128 |
| 20° | 1108 | 1115 | 1130 |
| 25° | 1094 | 1110 | 1132 |
| 30° | 1081 | 1106 | 1136 |
| 35° | 1063 | 1101 | 1138 |
| 40° | 1044 | 1094 | 1148 |
| 45° | 1021 | 1093 | 1166 |
| 50° | 988 | 1091 | 1197 |
| 55° | 952 | 1099 | 1241 |
| 60° | 899 | 1116 | 1296 |
| 65° | 830 | 1142 | 1368 |
| 70° | 725 | 1182 | 1458 |
| 75° | 588 | 1243 | 1506 |
| 80° | 433 | 1219 | 1219 |
| 85° | 334 | 899 | 1014 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.4 | 3.1 |
| 10°-20° | 216.5 | 8.8 |
| 20°-30° | 329.6 | 13.4 |
| 30°-40° | 400.2 | 16.3 |
| 40°-50° | 422.8 | 17.2 |
| 50°-60° | 399.0 | 16.3 |
| 60°-70° | 331.7 | 13.5 |
| 70°-80° | 218.3 | 8.9 |
| 80°-90° | 59.5 | 2.4 |
| 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° | 621.5 | 25.3 |
| 0°-40° | 1021.7 | 41.7 |
| 0°-60° | 1843.5 | 75.2 |
| 0°-90° | 2453.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2453.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 796 | 796 | 796 | 796 | 796 | |
| 5° | 794 | 794 | 791 | 794 | 794 | 75 |
| 15° | 763 | 764 | 765 | 772 | 772 | 215 |
| 25° | 702 | 706 | 713 | 725 | 727 | 324 |
| 35° | 617 | 624 | 639 | 655 | 660 | 386 |
| 45° | 511 | 522 | 547 | 574 | 584 | 394 |
| 55° | 387 | 404 | 447 | 489 | 504 | 345 |
| 65° | 248 | 277 | 342 | 392 | 410 | 246 |
| 75° | 108 | 157 | 228 | 270 | 276 | 116 |
| 85° | 21 | 45 | 56 | 62 | 63 | 25 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 795.9 | 795.9 | 795.9 | 795.9 | 795.9 |
| 2.5° | 796.9 | 795.9 | 791.7 | 795.9 | 795.9 |
| 5° | 793.9 | 793.9 | 790.7 | 793.9 | 793.9 |
| 7.5° | 788.7 | 788.7 | 786.6 | 790.7 | 790.7 |
| 10° | 782.6 | 782.6 | 781.4 | 786.6 | 786.6 |
| 12.5° | 773.3 | 774.3 | 773.3 | 779.4 | 779.4 |
| 15° | 763.0 | 764.0 | 765.0 | 772.3 | 772.3 |
| 17.5° | 749.7 | 751.7 | 753.7 | 762.0 | 763.0 |
| 20° | 737.4 | 738.4 | 742.4 | 751.7 | 752.7 |
| 22.5° | 720.9 | 724.0 | 729.1 | 738.4 | 741.4 |
| 25° | 702.4 | 706.5 | 712.7 | 725.0 | 727.1 |
| 27.5° | 684.9 | 688.1 | 696.2 | 709.5 | 713.7 |
| 30° | 663.4 | 668.5 | 678.8 | 692.1 | 697.2 |
| 32.5° | 642.9 | 648.0 | 660.3 | 674.8 | 678.8 |
| 35° | 617.2 | 624.3 | 638.8 | 655.2 | 660.3 |
| 37.5° | 592.6 | 599.7 | 617.2 | 635.6 | 641.9 |
| 40° | 566.8 | 575.1 | 593.6 | 615.2 | 623.3 |
| 42.5° | 539.1 | 550.4 | 571.0 | 594.6 | 603.9 |
| 45° | 511.4 | 521.7 | 547.4 | 574.0 | 584.3 |
| 47.5° | 481.6 | 493.9 | 521.7 | 553.5 | 565.8 |
| 50° | 449.8 | 465.2 | 497.1 | 532.0 | 545.3 |
| 52.5° | 418.0 | 435.4 | 471.3 | 510.4 | 524.8 |
| 55° | 387.1 | 403.6 | 446.7 | 488.8 | 504.2 |
| 57.5° | 353.3 | 373.8 | 421.0 | 466.2 | 481.6 |
| 60° | 318.4 | 341.0 | 395.4 | 442.6 | 459.0 |
| 62.5° | 283.5 | 309.1 | 370.7 | 418.0 | 435.4 |
| 65° | 248.5 | 277.2 | 342.0 | 392.3 | 409.7 |
| 67.5° | 214.6 | 246.5 | 315.2 | 365.6 | 383.0 |
| 70° | 175.6 | 215.6 | 286.5 | 335.8 | 353.3 |
| 72.5° | 139.7 | 185.9 | 258.8 | 305.1 | 320.4 |
| 75° | 107.8 | 157.1 | 228.0 | 270.1 | 276.2 |
| 77.5° | 79.1 | 128.4 | 196.1 | 210.6 | 211.6 |
| 80° | 53.3 | 102.7 | 150.0 | 147.8 | 150.0 |
| 82.5° | 34.9 | 77.0 | 94.5 | 105.8 | 106.8 |
| 85° | 20.6 | 45.2 | 55.5 | 61.6 | 62.6 |
| 87.5° | 10.3 | 15.4 | 19.6 | 20.6 | 22.6 |
| 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)