

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: P233098

Luminaire Tested: **FCB-24-2-LD4-24-35-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233098  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-2-LD4-24-35-UNV-EDD1-WDA6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (84)3500K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

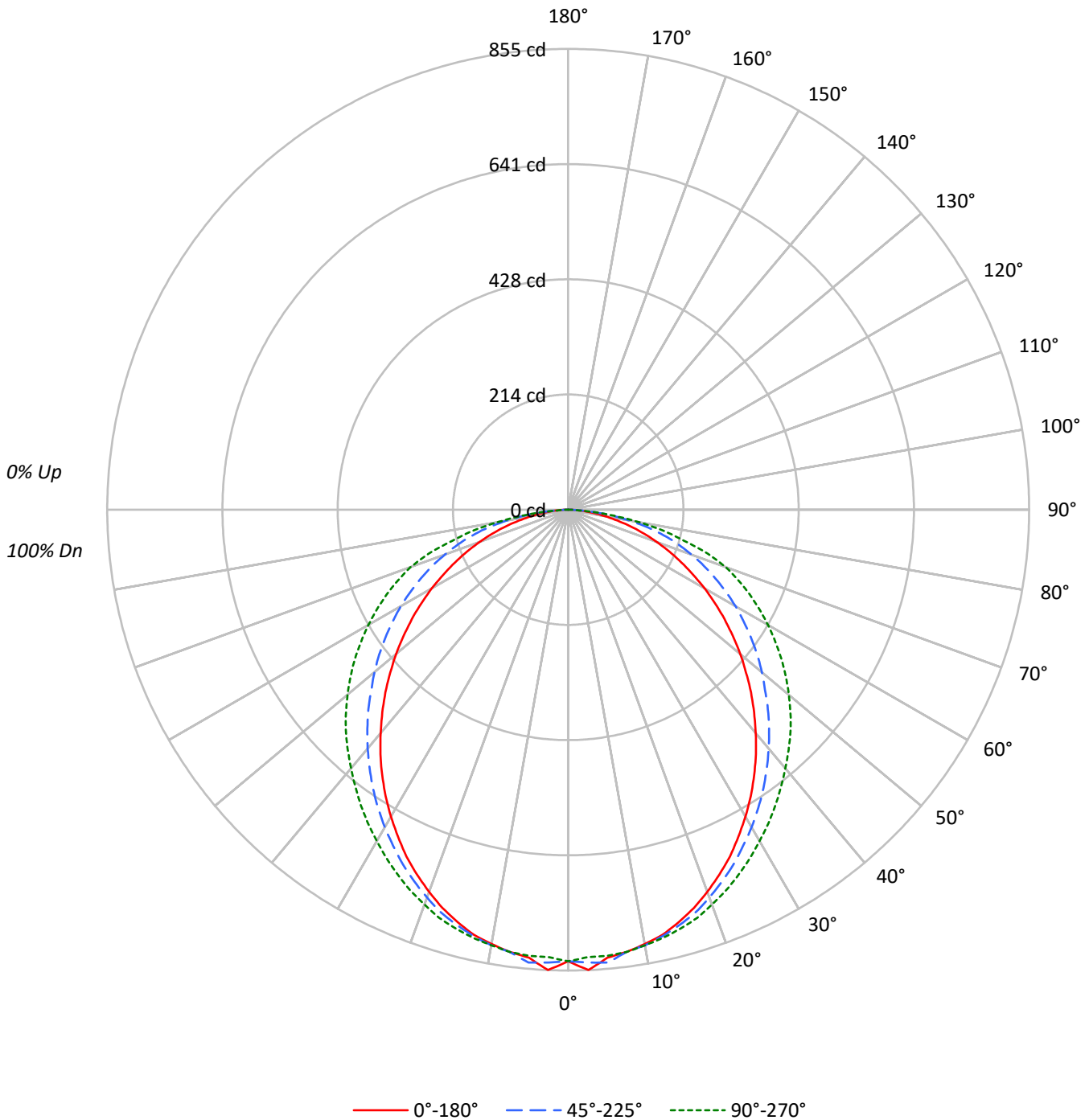
Lumens per Lamp: N/A  
Luminaire Lumens: 2347.0 lumens  
Efficiency: N/A  
Efficacy: 119.7 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.6  
Input Voltage (V): 120  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2254	2254	2254
5°	2254	2278	2244
10°	2236	2242	2242
15°	2207	2223	2242
20°	2160	2193	2232
25°	2108	2155	2220
30°	2043	2114	2206
35°	1976	2073	2201
40°	1900	2033	2201
45°	1824	1994	2219
50°	1744	1964	2236
55°	1660	1944	2265
60°	1573	1929	2303
65°	1475	1918	2362
70°	1374	1913	2442
75°	1246	1911	2314
80°	1079	1768	2052
85°	917	1340	1303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.5	3.4
10°-20°	225.1	9.6
20°-30°	334.8	14.3
30°-40°	396.0	16.9
40°-50°	407.0	17.3
50°-60°	371.9	15.8
60°-70°	297.5	12.7
70°-80°	186.7	8.0
80°-90°	48.6	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°	639.3	27.2
0°-40°	1035.3	44.1
0°-60°	1814.2	77.3
0°-90°	2347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2347.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	834	834	843	838	831	79
15°	792	793	798	802	805	223
25°	710	714	726	738	748	326
35°	602	610	631	655	670	376
45°	479	492	524	563	583	370
55°	354	371	414	460	483	316
65°	232	252	301	347	371	230
75°	120	143	184	211	223	127
85°	30	38	43	42	42	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	837.7	837.7	837.7	837.7	837.7
2.5°	854.8	851.4	841.1	834.3	830.9
5°	834.3	834.3	843.4	837.7	830.9
7.5°	827.5	827.5	827.5	844.6	827.5
10°	818.3	819.5	820.6	827.5	820.6
12.5°	808.0	808.0	810.3	812.6	813.8
15°	792.1	793.2	797.8	802.3	804.6
17.5°	775.0	778.4	784.1	789.8	794.4
20°	754.4	759.0	765.8	775.0	779.5
22.5°	732.7	737.3	746.4	756.7	764.7
25°	709.9	714.5	725.9	738.4	747.6
27.5°	683.6	689.4	703.0	720.2	729.3
30°	657.4	664.2	680.2	699.6	709.9
32.5°	630.0	638.0	656.3	677.9	690.5
35°	601.5	609.5	631.1	655.1	670.0
37.5°	571.8	580.9	604.9	632.3	648.3
40°	541.0	551.3	578.6	608.3	626.6
42.5°	510.2	521.6	551.3	586.6	604.9
45°	479.4	491.9	523.9	562.7	583.2
47.5°	447.4	462.2	495.3	538.7	559.2
50°	416.6	431.4	469.1	513.6	534.1
52.5°	384.6	401.7	441.7	487.3	509.0
55°	353.8	370.9	414.3	459.9	482.8
57.5°	323.0	340.1	385.8	432.6	455.4
60°	292.2	310.4	358.4	404.0	428.0
62.5°	261.4	280.8	329.8	376.6	399.5
65°	231.7	252.2	301.3	347.0	370.9
67.5°	203.2	224.8	272.8	317.3	341.3
70°	174.6	196.3	243.1	286.5	310.4
72.5°	147.2	168.9	214.6	253.4	271.6
75°	119.8	142.7	183.8	211.1	222.6
77.5°	93.6	116.4	151.8	170.1	182.6
80°	69.6	89.0	114.1	127.8	132.4
82.5°	47.9	63.9	79.9	83.3	85.6
85°	29.7	37.7	43.4	42.2	42.2
87.5°	13.7	14.8	12.6	9.1	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)