

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: P233136

Luminaire Tested: **FCB-24-2-LD4-24-50-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233136  
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-LD4-24-50-UNV-EDD1-WDP12  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (84)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

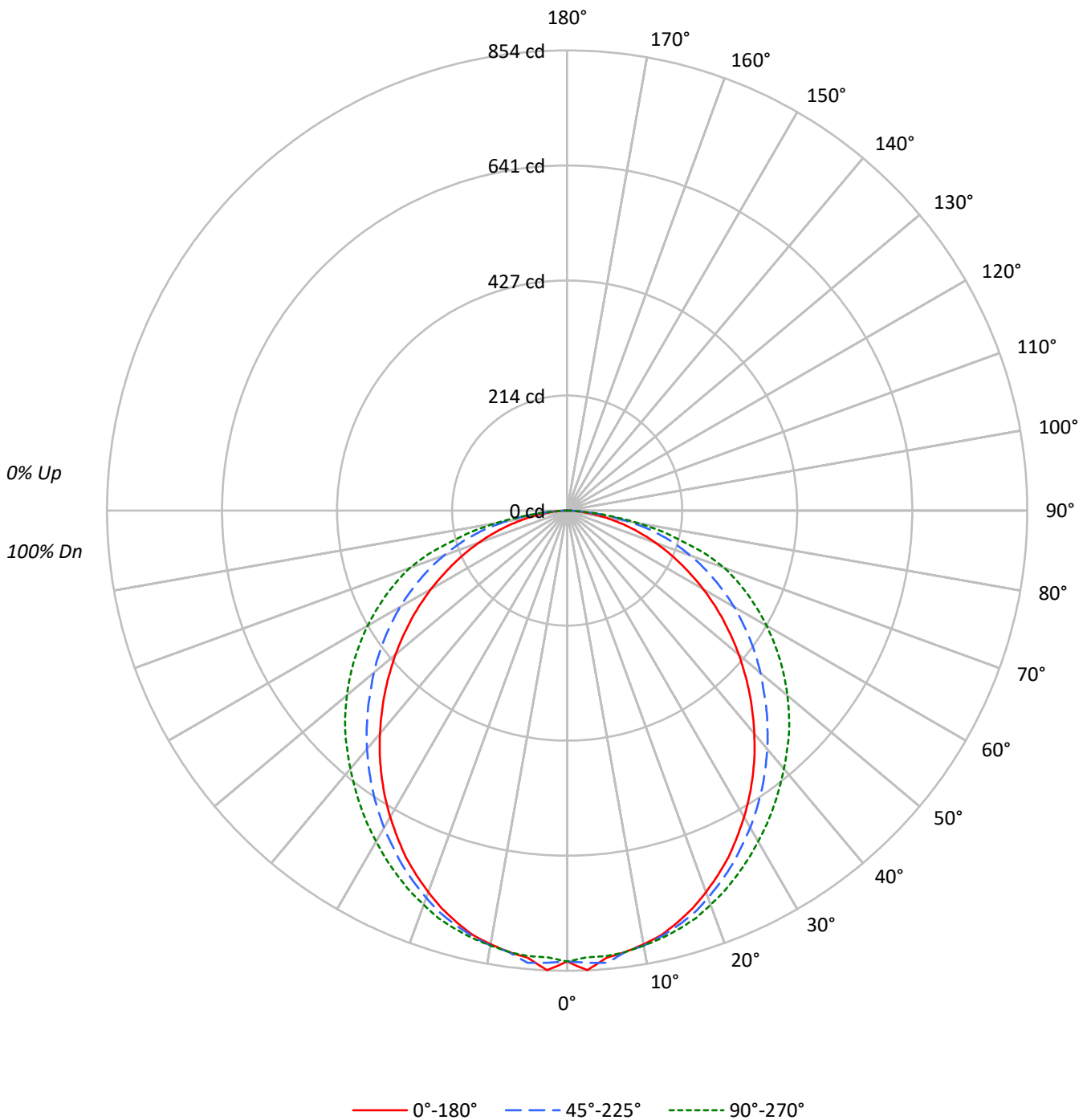
Lumens per Lamp: N/A  
Luminaire Lumens: 2344.0 lumens  
Efficiency: N/A  
Efficacy: 119.6 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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°	2252	2252	2252
5°	2251	2276	2242
10°	2233	2240	2240
15°	2204	2220	2239
20°	2157	2190	2229
25°	2105	2152	2217
30°	2040	2111	2203
35°	1973	2071	2198
40°	1898	2030	2198
45°	1822	1991	2217
50°	1742	1961	2233
55°	1658	1941	2262
60°	1570	1926	2300
65°	1473	1916	2359
70°	1372	1910	2439
75°	1245	1908	2311
80°	1077	1767	2049
85°	914	1337	1303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.4	3.4
10°-20°	224.8	9.6
20°-30°	334.4	14.3
30°-40°	395.5	16.9
40°-50°	406.5	17.3
50°-60°	371.4	15.8
60°-70°	297.1	12.7
70°-80°	186.5	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°	638.5	27.2
0°-40°	1034.0	44.1
0°-60°	1811.8	77.3
0°-90°	2344.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2344.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	837	837	837	837	837	
5°	833	833	842	837	830	79
15°	791	792	797	801	804	223
25°	709	714	725	738	747	326
35°	601	609	630	654	669	375
45°	479	491	523	562	582	369
55°	353	370	414	459	482	316
65°	231	252	301	346	370	230
75°	120	142	184	211	222	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°	836.7	836.7	836.7	836.7	836.7
2.5°	853.8	850.3	840.1	833.2	829.8
5°	833.2	833.2	842.4	836.7	829.8
7.5°	826.4	826.4	826.4	843.5	826.4
10°	817.3	818.4	819.6	826.4	819.6
12.5°	807.0	807.0	809.3	811.6	812.7
15°	791.1	792.2	796.8	801.3	803.6
17.5°	774.0	777.4	783.1	788.8	793.3
20°	753.4	758.0	764.8	774.0	778.5
22.5°	731.8	736.3	745.5	755.7	763.7
25°	709.0	713.5	724.9	737.5	746.6
27.5°	682.8	688.5	702.1	719.2	728.4
30°	656.6	663.4	679.4	698.7	709.0
32.5°	629.2	637.2	655.4	677.1	689.6
35°	600.7	608.7	630.3	654.3	669.1
37.5°	571.1	580.2	604.1	631.5	647.4
40°	540.3	550.5	577.9	607.5	625.8
42.5°	509.5	520.9	550.5	585.9	604.1
45°	478.7	491.3	523.2	561.9	582.5
47.5°	446.8	461.6	494.7	538.0	558.5
50°	416.0	430.9	468.5	512.9	533.5
52.5°	384.1	401.2	441.1	486.7	508.4
55°	353.4	370.5	413.8	459.4	482.2
57.5°	322.6	339.7	385.3	432.0	454.8
60°	291.8	310.0	357.9	403.5	427.4
62.5°	261.0	280.4	329.4	376.2	398.9
65°	231.4	251.9	300.9	346.5	370.5
67.5°	202.9	224.6	272.4	316.9	340.8
70°	174.4	196.1	242.8	286.1	310.0
72.5°	147.0	168.7	214.3	253.0	271.3
75°	119.7	142.5	183.5	210.9	222.3
77.5°	93.5	116.3	151.6	169.8	182.4
80°	69.5	88.9	114.0	127.7	132.2
82.5°	47.9	63.8	79.8	83.2	85.5
85°	29.6	37.6	43.3	42.2	42.2
87.5°	13.7	14.8	12.5	9.1	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)