

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: P233141

Luminaire Tested: **FCB-24-2-LD4-44-30-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233141  
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-LD4-44-30-UNV-EDD1-WDP12  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (84)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

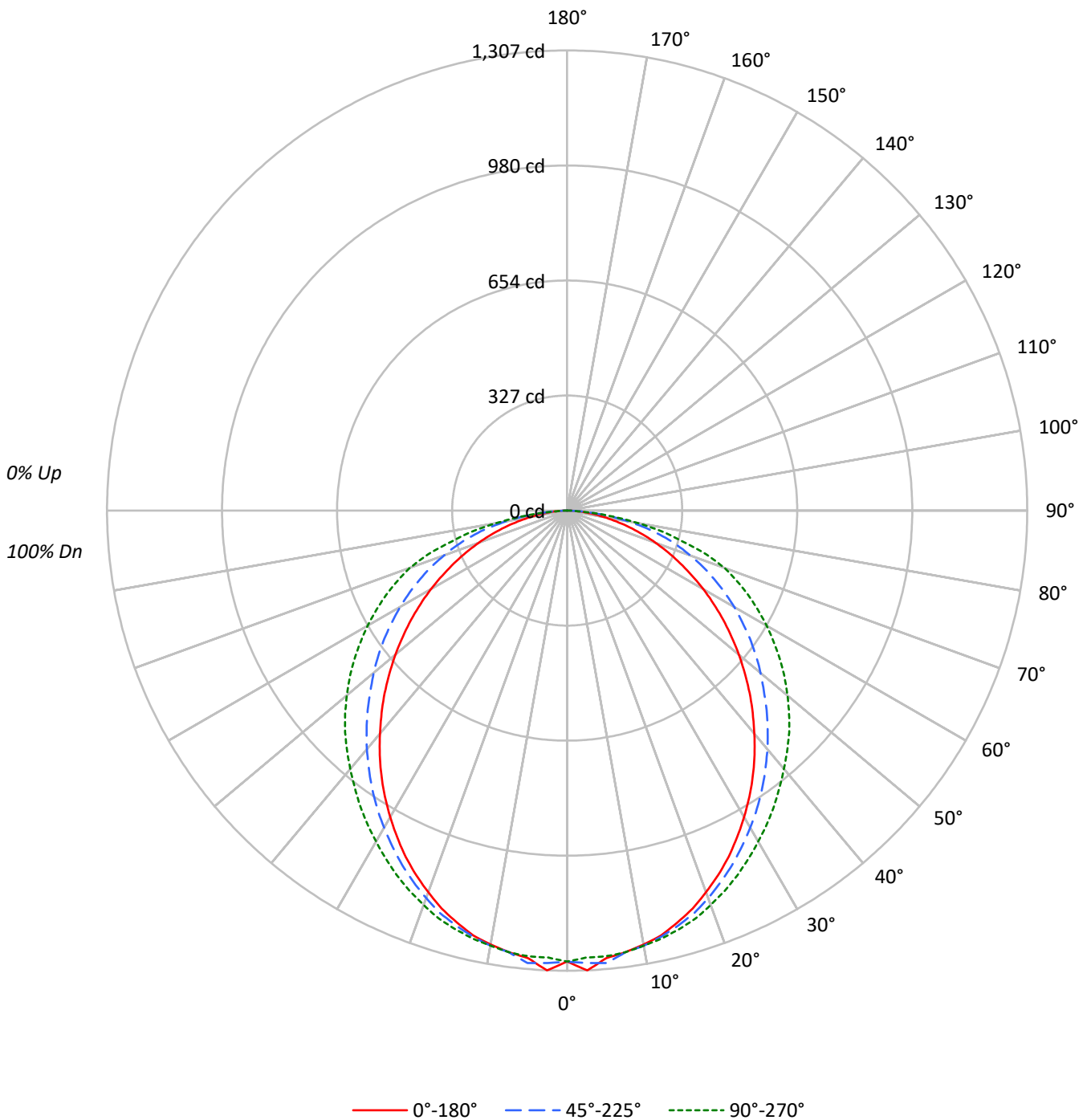
Lumens per Lamp: N/A  
Luminaire Lumens: 3589.0 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 41.8  
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°	3447	3447	3447
5°	3446	3484	3432
10°	3419	3429	3429
15°	3374	3399	3428
20°	3304	3354	3414
25°	3223	3296	3394
30°	3124	3232	3373
35°	3022	3170	3366
40°	2906	3108	3366
45°	2790	3049	3394
50°	2667	3003	3419
55°	2538	2972	3464
60°	2405	2949	3522
65°	2256	2934	3612
70°	2101	2924	3735
75°	1906	2922	3538
80°	1650	2704	3138
85°	1402	2047	1995



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.5	3.4
10°-20°	344.2	9.6
20°-30°	512.0	14.3
30°-40°	605.5	16.9
40°-50°	622.4	17.3
50°-60°	568.7	15.8
60°-70°	454.9	12.7
70°-80°	285.5	8.0
80°-90°	74.4	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°	977.6	27.2
0°-40°	1583.1	44.1
0°-60°	2774.2	77.3
0°-90°	3589.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3589.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1276	1276	1290	1281	1271	121
15°	1211	1213	1220	1227	1230	341
25°	1086	1092	1110	1129	1143	499
35°	920	932	965	1002	1024	575
45°	733	752	801	860	892	565
55°	541	567	634	703	738	484
65°	354	386	461	531	567	352
75°	183	218	281	323	340	195
85°	45	58	66	65	65	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1281.0	1281.0	1281.0	1281.0	1281.0
2.5°	1307.2	1302.0	1286.3	1275.8	1270.6
5°	1275.8	1275.8	1289.8	1281.0	1270.6
7.5°	1265.3	1265.3	1265.3	1291.5	1265.3
10°	1251.4	1253.1	1254.9	1265.3	1254.9
12.5°	1235.7	1235.7	1239.1	1242.6	1244.4
15°	1211.2	1213.0	1220.0	1226.9	1230.4
17.5°	1185.0	1190.3	1199.0	1207.7	1214.7
20°	1153.6	1160.6	1171.1	1185.0	1192.0
22.5°	1120.5	1127.5	1141.4	1157.1	1169.3
25°	1085.6	1092.5	1110.0	1129.2	1143.2
27.5°	1045.4	1054.1	1075.1	1101.3	1115.2
30°	1005.3	1015.8	1040.2	1069.9	1085.6
32.5°	963.4	975.6	1003.5	1036.7	1055.9
35°	919.8	932.0	965.1	1001.8	1024.5
37.5°	874.4	888.3	925.0	966.9	991.3
40°	827.3	843.0	884.9	930.2	958.2
42.5°	780.1	797.6	843.0	897.1	925.0
45°	733.0	752.2	801.1	860.4	891.8
47.5°	684.1	706.8	757.5	823.8	855.2
50°	637.0	659.7	717.3	785.4	816.8
52.5°	588.2	614.3	675.4	745.2	778.4
55°	541.0	567.2	633.5	703.3	738.3
57.5°	493.9	520.1	589.9	661.5	696.4
60°	446.8	474.7	548.0	617.8	654.5
62.5°	399.7	429.3	504.4	575.9	610.8
65°	354.3	385.7	460.8	530.6	567.2
67.5°	310.7	343.8	417.1	485.2	521.8
70°	267.0	300.2	371.7	438.1	474.7
72.5°	225.1	258.3	328.1	387.5	415.4
75°	183.3	218.2	281.0	322.9	340.3
77.5°	143.1	178.0	232.1	260.0	279.2
80°	106.5	136.1	174.5	195.5	202.5
82.5°	73.3	97.7	122.2	127.4	130.9
85°	45.4	57.6	66.3	64.6	64.6
87.5°	20.9	22.7	19.2	14.0	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)