

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: P233030

Luminaire Tested: **FCB-12-4-LD4-35-35-UNV-EDD1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233030  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35573)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-12-4-LD4-35-35-UNV-EDD1  
Description: FAILSAFE 1X4 FCB LED TROFFER  
OPAL DIFFUSER, NO LENS  
Light Source: (84)3500K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

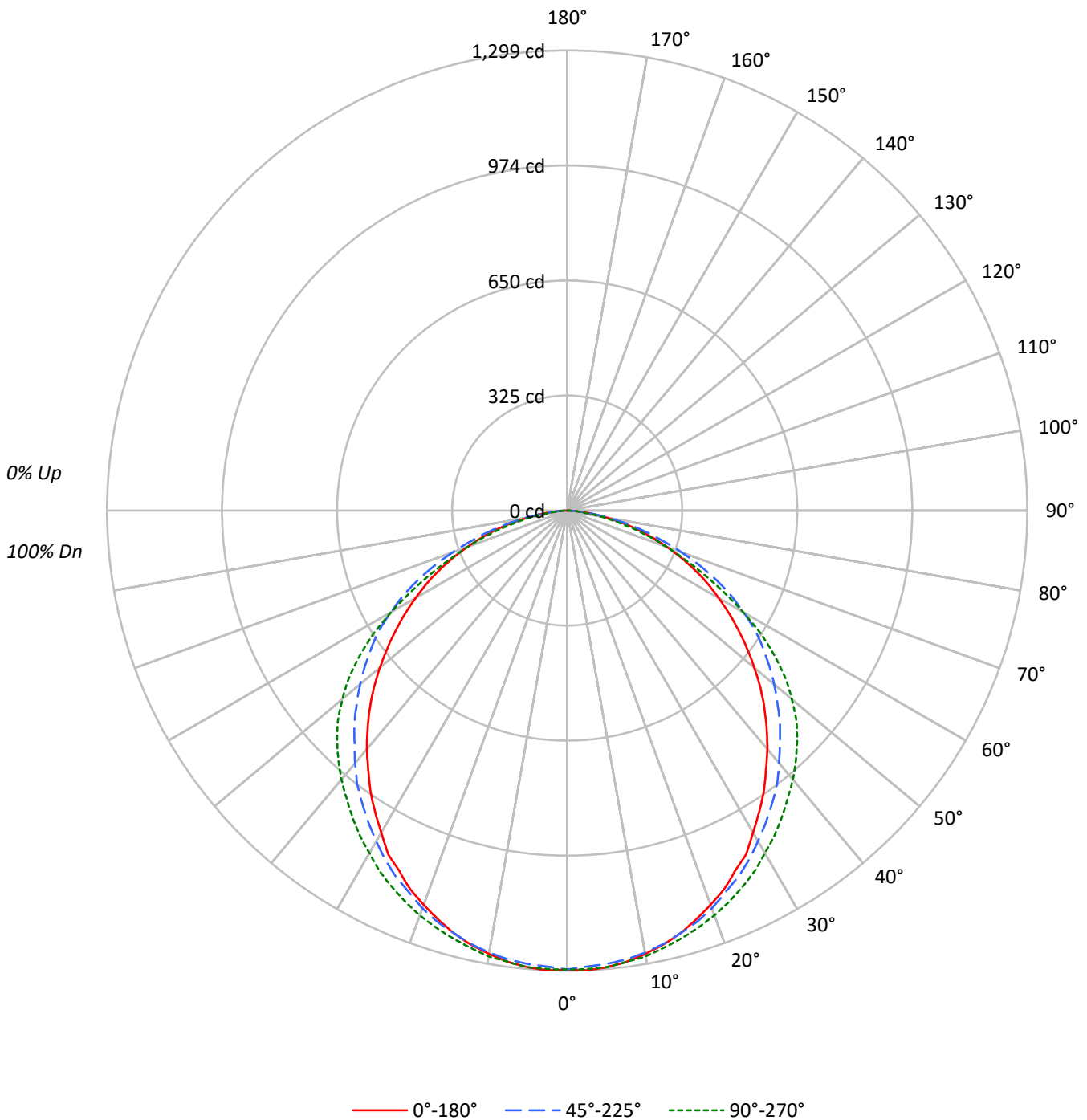
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3590.0 lumens  
Efficiency: N/A  
Efficacy: 114.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31.5  
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	46	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	34
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	29	42	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	37	31	26	25

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

	0°	45°	90°
0°	3486	3486	3486
5°	3495	3471	3495
10°	3472	3463	3492
15°	3442	3442	3481
20°	3391	3421	3482
25°	3332	3390	3479
30°	3261	3349	3470
35°	3180	3314	3471
40°	3090	3270	3482
45°	2997	3233	3496
50°	2889	3193	3468
55°	2773	3164	3354
60°	2658	3096	3086
65°	2535	2964	2705
70°	2353	2702	2339
75°	2135	2355	1932
80°	1700	1864	1426
85°	1201	1037	818



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.6	3.4
10°-20°	350.2	9.8
20°-30°	528.0	14.7
30°-40°	632.9	17.6
40°-50°	656.8	18.3
50°-60°	592.4	16.5
60°-70°	432.1	12.0
70°-80°	226.7	6.3
80°-90°	48.3	1.3
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°	1000.8	27.9
0°-40°	1633.6	45.5
0°-60°	2882.8	80.3
0°-90°	3590.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3590.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1296	1296	1296	1296	1296	
5°	1294	1290	1285	1294	1294	123
15°	1235	1235	1235	1250	1250	348
25°	1122	1127	1142	1166	1172	518
35°	968	979	1009	1046	1057	605
45°	788	804	850	901	919	607
55°	591	612	674	719	715	529
65°	398	421	466	448	425	394
75°	205	234	226	196	186	215
85°	39	48	34	28	26	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1295.5	1295.5	1295.5	1295.5	1295.5
2.5°	1299.1	1295.5	1288.5	1295.5	1295.5
5°	1293.8	1290.2	1284.9	1293.8	1293.8
7.5°	1284.9	1281.4	1277.8	1286.7	1284.9
10°	1270.8	1269.0	1267.2	1277.8	1277.8
12.5°	1254.8	1254.8	1253.1	1265.4	1263.7
15°	1235.4	1235.4	1235.4	1249.5	1249.5
17.5°	1210.6	1214.1	1217.7	1233.6	1233.6
20°	1184.0	1187.6	1194.6	1214.1	1215.9
22.5°	1157.5	1159.3	1166.3	1189.3	1194.6
25°	1122.1	1127.4	1141.6	1166.3	1171.6
27.5°	1093.8	1095.5	1111.5	1139.8	1146.9
30°	1049.5	1061.9	1077.8	1109.7	1116.8
32.5°	1008.8	1019.4	1044.2	1077.8	1088.5
35°	968.1	978.7	1008.8	1046.0	1056.6
37.5°	922.1	938.0	973.4	1010.6	1023.0
40°	879.6	893.8	930.9	977.0	991.1
42.5°	833.6	847.8	888.5	939.8	955.7
45°	787.6	803.5	849.5	900.9	918.6
47.5°	739.8	757.5	805.3	861.9	877.8
50°	690.2	709.7	762.8	821.2	828.3
52.5°	640.7	661.9	718.6	769.9	777.0
55°	591.1	612.4	674.3	718.6	715.0
57.5°	543.3	566.4	630.1	653.1	649.5
60°	493.8	518.6	575.2	585.8	573.4
62.5°	447.8	470.8	523.9	515.0	499.1
65°	398.2	421.2	465.5	447.8	424.8
67.5°	348.7	377.0	405.3	375.2	357.5
70°	299.1	331.0	343.4	313.3	297.3
72.5°	251.3	284.9	281.4	251.3	240.7
75°	205.3	233.6	226.5	196.5	185.8
77.5°	155.7	187.6	171.7	146.9	138.0
80°	109.7	138.0	120.3	99.1	92.0
82.5°	72.6	92.0	74.3	58.4	53.1
85°	38.9	47.8	33.6	28.3	26.5
87.5°	15.9	14.2	12.4	12.4	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)