

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: P233091

Luminaire Tested: **FCB-24-2-LD4-34-40-UNV-EDD1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233091  
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-LD4-34-40-UNV-EDD1  
Description: FAILSAFE 2X2 FCB LED TROFFER  
OPAL DIFFUSER, NO LENS  
Light Source: (84)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

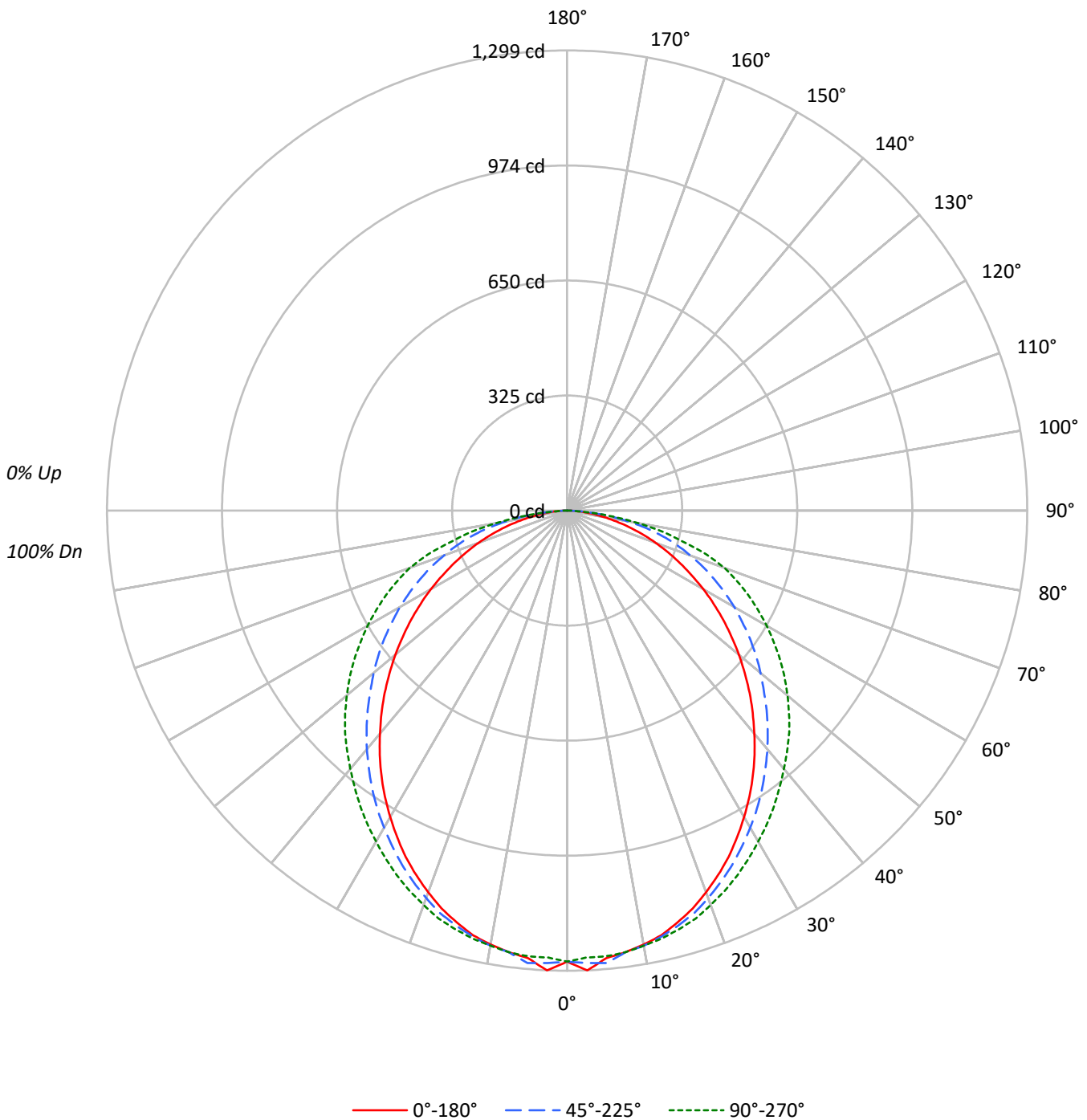
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3567.0 lumens  
Efficiency: N/A  
Efficacy: 121.3 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): 29.4  
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°	3426	3426	3426
5°	3425	3463	3411
10°	3398	3408	3408
15°	3354	3378	3407
20°	3283	3333	3393
25°	3203	3276	3374
30°	3104	3212	3352
35°	3003	3151	3345
40°	2888	3089	3345
45°	2772	3030	3373
50°	2650	2984	3399
55°	2523	2954	3442
60°	2390	2932	3501
65°	2242	2916	3589
70°	2088	2907	3712
75°	1893	2904	3516
80°	1640	2689	3118
85°	1392	2035	1982



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.8	3.4
10°-20°	342.1	9.6
20°-30°	508.8	14.3
30°-40°	601.8	16.9
40°-50°	618.5	17.3
50°-60°	565.2	15.8
60°-70°	452.1	12.7
70°-80°	283.8	8.0
80°-90°	73.9	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°	971.6	27.2
0°-40°	1573.4	44.1
0°-60°	2757.2	77.3
0°-90°	3567.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3567.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1273	1273	1273	1273	1273	
5°	1268	1268	1282	1273	1263	121
15°	1204	1206	1212	1219	1223	339
25°	1079	1086	1103	1122	1136	496
35°	914	926	959	996	1018	571
45°	728	748	796	855	886	562
55°	538	564	630	699	734	481
65°	352	383	458	527	564	349
75°	182	217	279	321	338	193
85°	45	57	66	64	64	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1273.2	1273.2	1273.2	1273.2	1273.2
2.5°	1299.2	1294.0	1278.4	1268.0	1262.8
5°	1268.0	1268.0	1281.9	1273.2	1262.8
7.5°	1257.6	1257.6	1257.6	1283.6	1257.6
10°	1243.7	1245.4	1247.2	1257.6	1247.2
12.5°	1228.1	1228.1	1231.6	1235.0	1236.8
15°	1203.8	1205.5	1212.5	1219.4	1222.9
17.5°	1177.8	1183.0	1191.7	1200.3	1207.3
20°	1146.6	1153.5	1163.9	1177.8	1184.7
22.5°	1113.6	1120.5	1134.4	1150.0	1162.2
25°	1078.9	1085.8	1103.2	1122.3	1136.2
27.5°	1039.0	1047.7	1068.5	1094.5	1108.4
30°	999.1	1009.5	1033.8	1063.3	1078.9
32.5°	957.5	969.6	997.4	1030.3	1049.4
35°	914.1	926.3	959.2	995.6	1018.2
37.5°	869.0	882.9	919.3	961.0	985.2
40°	822.2	837.8	879.4	924.5	952.3
42.5°	775.4	792.7	837.8	891.6	919.3
45°	728.5	747.6	796.2	855.1	886.4
47.5°	680.0	702.5	752.8	818.7	849.9
50°	633.1	655.7	712.9	780.6	811.8
52.5°	584.6	610.6	671.3	740.7	773.6
55°	537.7	563.7	629.7	699.0	733.7
57.5°	490.9	516.9	586.3	657.4	692.1
60°	444.1	471.8	544.7	614.0	650.5
62.5°	397.2	426.7	501.3	572.4	607.1
65°	352.1	383.3	457.9	527.3	563.7
67.5°	308.8	341.7	414.6	482.2	518.6
70°	265.4	298.3	369.5	435.4	471.8
72.5°	223.8	256.7	326.1	385.1	412.8
75°	182.1	216.8	279.3	320.9	338.2
77.5°	142.2	176.9	230.7	258.5	277.5
80°	105.8	135.3	173.5	194.3	201.2
82.5°	72.9	97.1	121.4	126.6	130.1
85°	45.1	57.2	65.9	64.2	64.2
87.5°	20.8	22.5	19.1	13.9	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)