

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: P233116

Luminaire Tested: **FCB-24-2-LD4-34-50-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233116  
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-LD4-34-50-UNV-EDD1-WDP6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 POLYCARBONATE LENS  
Light Source: (84)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

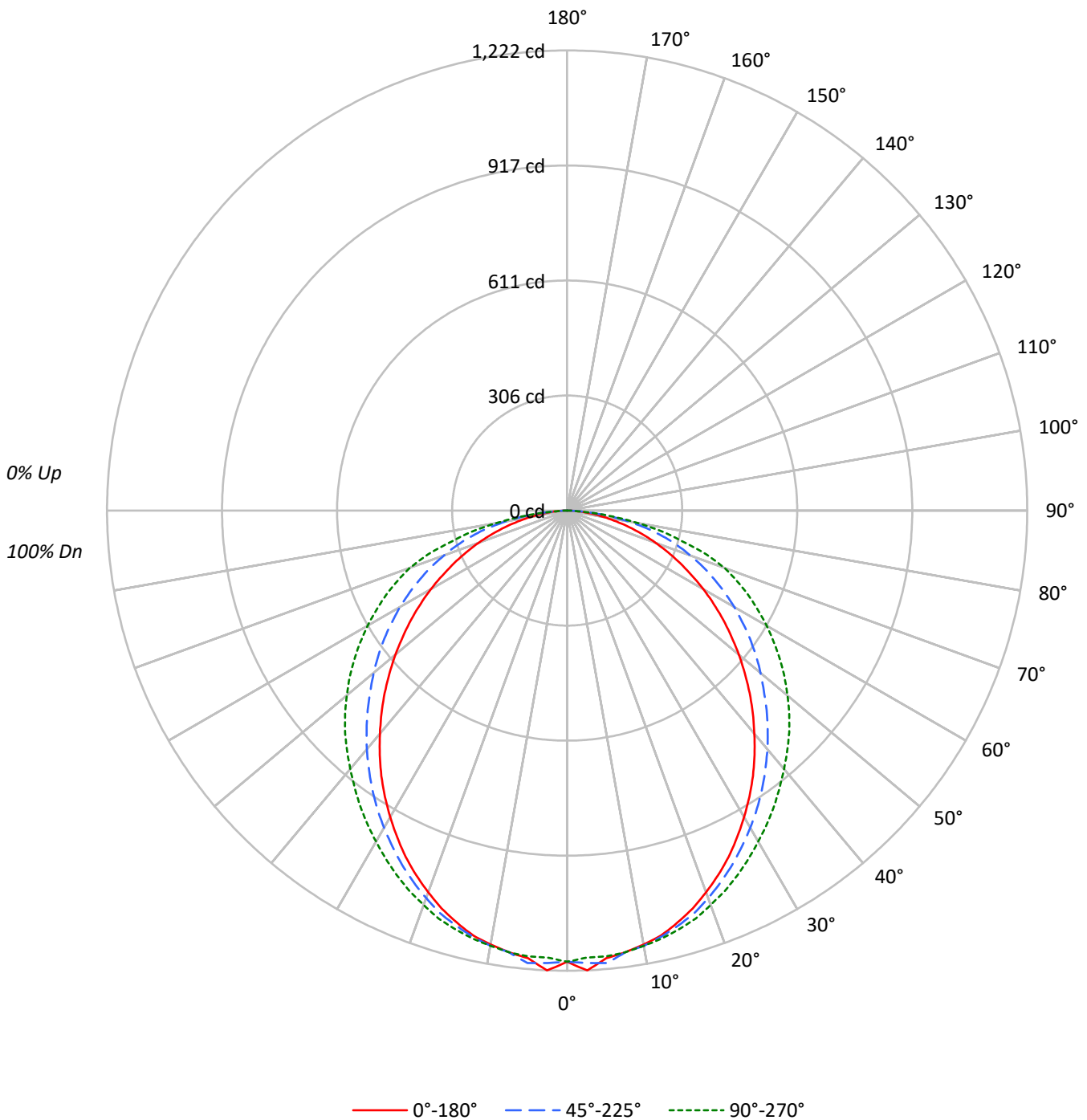
Lumens per Lamp: N/A  
Luminaire Lumens: 3356.0 lumens  
Efficiency: N/A  
Efficacy: 114.2 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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°	3224	3224	3224
5°	3223	3258	3209
10°	3197	3206	3206
15°	3155	3178	3205
20°	3089	3136	3192
25°	3014	3082	3174
30°	2921	3022	3154
35°	2825	2965	3147
40°	2718	2907	3147
45°	2608	2851	3174
50°	2494	2808	3198
55°	2373	2779	3239
60°	2249	2758	3294
65°	2110	2743	3377
70°	1965	2735	3493
75°	1782	2731	3308
80°	1543	2529	2934
85°	1309	1914	1865



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.6	3.4
10°-20°	321.8	9.6
20°-30°	478.7	14.3
30°-40°	566.2	16.9
40°-50°	582.0	17.3
50°-60°	531.8	15.8
60°-70°	425.4	12.7
70°-80°	267.0	8.0
80°-90°	69.5	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°	914.2	27.2
0°-40°	1480.4	44.1
0°-60°	2594.1	77.3
0°-90°	3356.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3356.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1198	1198	1198	1198	1198	
5°	1193	1193	1206	1198	1188	113
15°	1133	1134	1141	1147	1150	319
25°	1015	1022	1038	1056	1069	467
35°	860	872	902	937	958	537
45°	685	703	749	805	834	528
55°	506	530	592	658	690	453
65°	331	361	431	496	530	329
75°	171	204	263	302	318	182
85°	42	54	62	60	60	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1197.9	1197.9	1197.9	1197.9	1197.9
2.5°	1222.3	1217.5	1202.8	1193.0	1188.1
5°	1193.0	1193.0	1206.0	1197.9	1188.1
7.5°	1183.2	1183.2	1183.2	1207.7	1183.2
10°	1170.1	1171.8	1173.4	1183.2	1173.4
12.5°	1155.4	1155.4	1158.7	1162.0	1163.6
15°	1132.6	1134.2	1140.8	1147.3	1150.5
17.5°	1108.1	1113.0	1121.2	1129.3	1135.9
20°	1078.7	1085.3	1095.1	1108.1	1114.6
22.5°	1047.7	1054.3	1067.3	1082.0	1093.4
25°	1015.1	1021.6	1037.9	1055.9	1068.9
27.5°	977.6	985.7	1005.3	1029.8	1042.8
30°	940.0	949.8	972.7	1000.4	1015.1
32.5°	900.9	912.3	938.4	969.4	987.3
35°	860.1	871.5	902.5	936.8	958.0
37.5°	817.6	830.7	864.9	904.1	927.0
40°	773.6	788.2	827.4	869.8	896.0
42.5°	729.5	745.8	788.2	838.8	864.9
45°	685.4	703.4	749.1	804.6	833.9
47.5°	639.7	660.9	708.3	770.3	799.7
50°	595.7	616.9	670.7	734.4	763.8
52.5°	550.0	574.5	631.6	696.9	727.9
55°	505.9	530.4	592.4	657.7	690.3
57.5°	461.8	486.3	551.6	618.5	651.2
60°	417.8	443.9	512.4	577.7	612.0
62.5°	373.7	401.5	471.6	538.6	571.2
65°	331.3	360.7	430.8	496.1	530.4
67.5°	290.5	321.5	390.0	453.7	488.0
70°	249.7	280.7	347.6	409.6	443.9
72.5°	210.5	241.5	306.8	362.3	388.4
75°	171.4	204.0	262.7	301.9	318.2
77.5°	133.8	166.5	217.1	243.2	261.1
80°	99.6	127.3	163.2	182.8	189.3
82.5°	68.5	91.4	114.2	119.1	122.4
85°	42.4	53.9	62.0	60.4	60.4
87.5°	19.6	21.2	18.0	13.1	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)