

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: P233102

Luminaire Tested: **FCB-24-2-LD4-34-35-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233102  
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-LD4-34-35-UNV-EDD1-WDA6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (84)3500K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

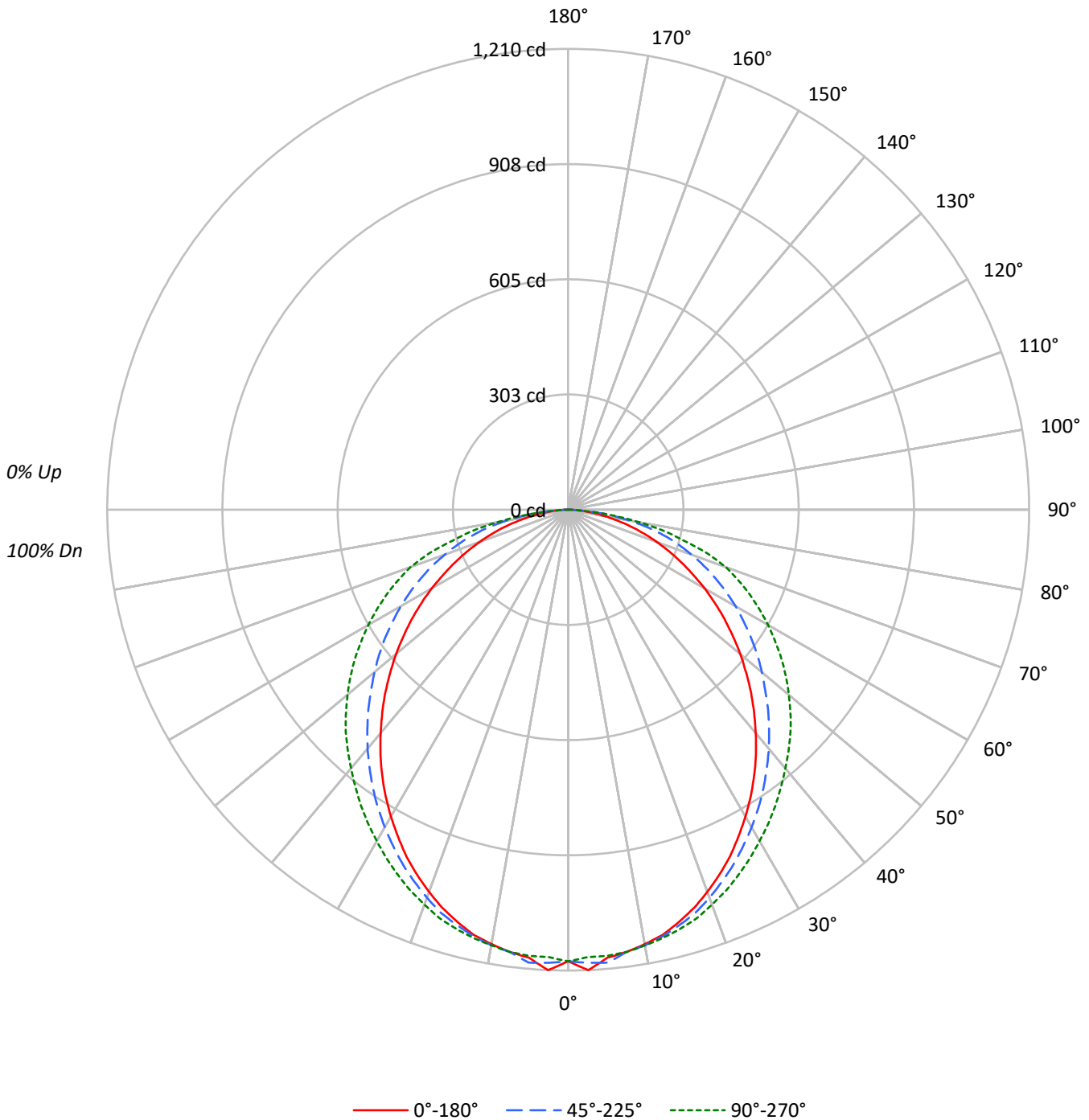
Lumens per Lamp: N/A  
Luminaire Lumens: 3322.0 lumens  
Efficiency: N/A  
Efficacy: 113.0 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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°	3191	3191	3191
5°	3190	3225	3177
10°	3165	3174	3174
15°	3123	3146	3173
20°	3058	3104	3159
25°	2983	3051	3142
30°	2891	2992	3122
35°	2797	2935	3115
40°	2690	2877	3116
45°	2582	2822	3142
50°	2468	2779	3165
55°	2350	2751	3206
60°	2226	2730	3260
65°	2088	2716	3343
70°	1945	2707	3457
75°	1763	2704	3275
80°	1526	2503	2904
85°	1297	1896	1846



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.5	3.4
10°-20°	318.6	9.6
20°-30°	473.9	14.3
30°-40°	560.5	16.9
40°-50°	576.1	17.3
50°-60°	526.4	15.8
60°-70°	421.1	12.7
70°-80°	264.3	8.0
80°-90°	68.8	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°	904.9	27.2
0°-40°	1465.4	44.1
0°-60°	2567.8	77.3
0°-90°	3322.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3322.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1186	1186	1186	1186	1186	
5°	1181	1181	1194	1186	1176	112
15°	1121	1123	1129	1136	1139	316
25°	1005	1011	1027	1045	1058	462
35°	851	863	893	927	948	532
45°	678	696	742	796	826	523
55°	501	525	586	651	683	448
65°	328	357	426	491	525	325
75°	170	202	260	299	315	180
85°	42	53	61	60	60	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1185.7	1185.7	1185.7	1185.7	1185.7
2.5°	1210.0	1205.1	1190.6	1180.9	1176.0
5°	1180.9	1180.9	1193.8	1185.7	1176.0
7.5°	1171.2	1171.2	1171.2	1195.4	1171.2
10°	1158.3	1159.9	1161.5	1171.2	1161.5
12.5°	1143.7	1143.7	1147.0	1150.2	1151.8
15°	1121.1	1122.7	1129.2	1135.7	1138.9
17.5°	1096.9	1101.7	1109.8	1117.9	1124.3
20°	1067.8	1074.3	1084.0	1096.9	1103.3
22.5°	1037.1	1043.6	1056.5	1071.0	1082.3
25°	1004.8	1011.3	1027.4	1045.2	1058.1
27.5°	967.6	975.7	995.1	1019.3	1032.3
30°	930.5	940.2	962.8	990.3	1004.8
32.5°	891.7	903.0	928.9	959.6	977.3
35°	851.3	862.6	893.3	927.3	948.3
37.5°	809.3	822.3	856.2	895.0	917.6
40°	765.7	780.3	819.0	861.0	886.9
42.5°	722.1	738.3	780.3	830.3	856.2
45°	678.5	696.3	741.5	796.4	825.5
47.5°	633.3	654.3	701.1	762.5	791.6
50°	589.6	610.6	663.9	726.9	756.0
52.5°	544.4	568.6	625.2	689.8	720.5
55°	500.8	525.0	586.4	651.0	683.3
57.5°	457.2	481.4	546.0	612.3	644.6
60°	413.6	439.4	507.2	571.9	605.8
62.5°	369.9	397.4	466.9	533.1	565.4
65°	327.9	357.0	426.5	491.1	525.0
67.5°	287.5	318.2	386.1	449.1	483.0
70°	247.2	277.9	344.1	405.5	439.4
72.5°	208.4	239.1	303.7	358.6	384.5
75°	169.6	201.9	260.1	298.9	315.0
77.5°	132.5	164.8	214.9	240.7	258.5
80°	98.5	126.0	161.5	180.9	187.4
82.5°	67.8	90.5	113.1	117.9	121.2
85°	42.0	53.3	61.4	59.8	59.8
87.5°	19.4	21.0	17.8	12.9	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)