

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: P233103

Luminaire Tested: **FCB-24-2-LD4-34-40-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233103  
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-WDA6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (84)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

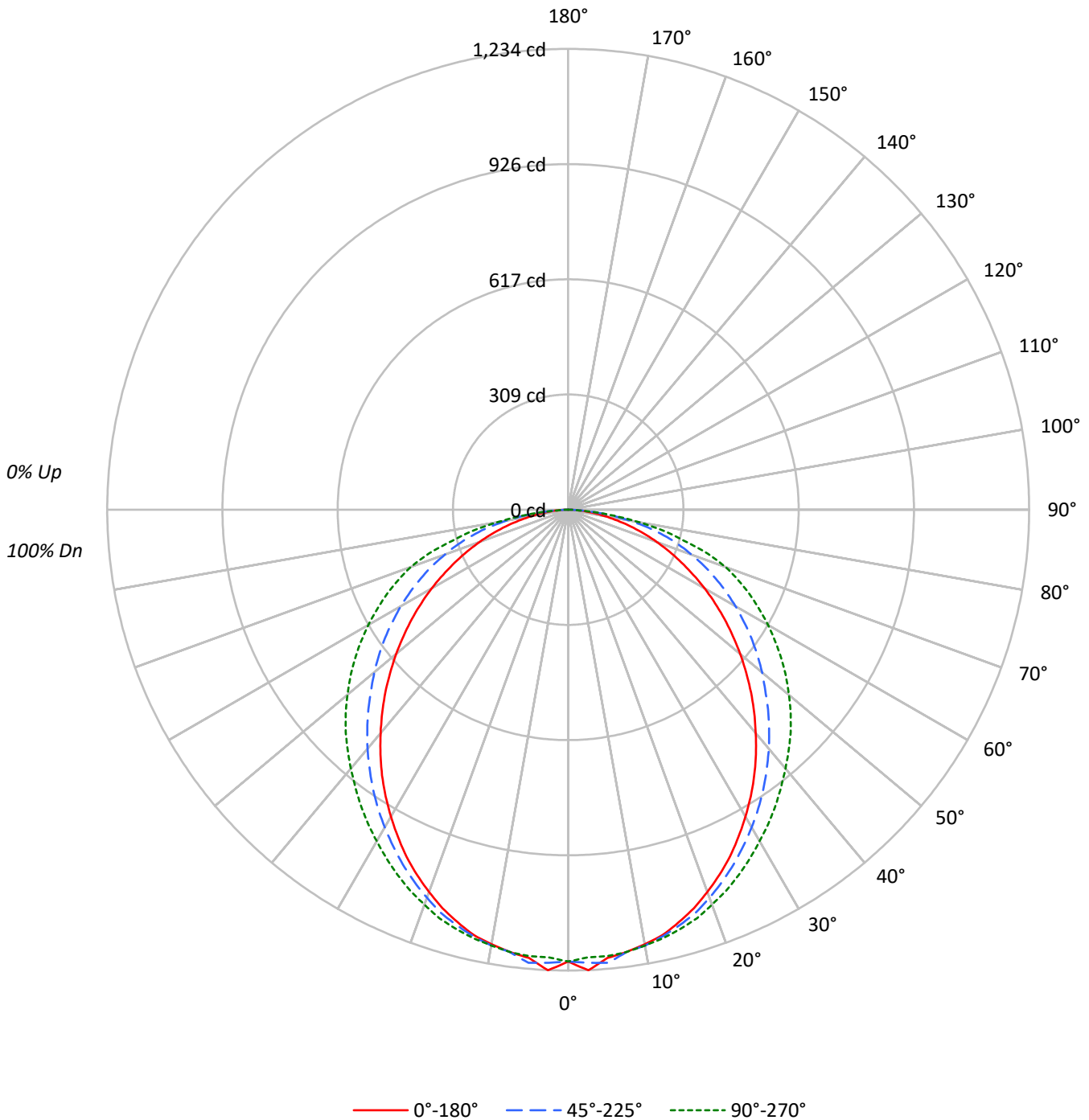
Lumens per Lamp: N/A  
Luminaire Lumens: 3389.0 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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°	3255	3255	3255
5°	3254	3290	3241
10°	3229	3238	3238
15°	3186	3209	3237
20°	3119	3167	3223
25°	3044	3112	3205
30°	2950	3052	3185
35°	2853	2994	3178
40°	2744	2935	3178
45°	2634	2879	3205
50°	2518	2835	3229
55°	2397	2807	3270
60°	2271	2785	3326
65°	2130	2770	3410
70°	1983	2762	3527
75°	1799	2758	3342
80°	1557	2554	2963
85°	1321	1933	1883



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.7	3.4
10°-20°	325.0	9.6
20°-30°	483.4	14.3
30°-40°	571.8	16.9
40°-50°	587.7	17.3
50°-60°	537.0	15.8
60°-70°	429.6	12.7
70°-80°	269.6	8.0
80°-90°	70.2	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°	923.2	27.2
0°-40°	1494.9	44.1
0°-60°	2619.6	77.3
0°-90°	3389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3389.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1210	1210	1210	1210	1210	
5°	1205	1205	1218	1210	1200	115
15°	1144	1145	1152	1159	1162	322
25°	1025	1032	1048	1066	1080	471
35°	868	880	911	946	967	543
45°	692	710	756	812	842	534
55°	511	536	598	664	697	457
65°	334	364	435	501	536	332
75°	173	206	265	305	321	184
85°	43	54	63	61	61	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1209.6	1209.6	1209.6	1209.6	1209.6
2.5°	1234.4	1229.4	1214.6	1204.7	1199.8
5°	1204.7	1204.7	1217.9	1209.6	1199.8
7.5°	1194.8	1194.8	1194.8	1219.5	1194.8
10°	1181.6	1183.3	1184.9	1194.8	1184.9
12.5°	1166.8	1166.8	1170.1	1173.4	1175.0
15°	1143.7	1145.4	1152.0	1158.6	1161.9
17.5°	1119.0	1124.0	1132.2	1140.4	1147.0
20°	1089.3	1095.9	1105.8	1119.0	1125.6
22.5°	1058.0	1064.6	1077.8	1092.6	1104.2
25°	1025.1	1031.7	1048.1	1066.3	1079.5
27.5°	987.2	995.4	1015.2	1039.9	1053.1
30°	949.3	959.1	982.2	1010.2	1025.1
32.5°	909.7	921.2	947.6	978.9	997.1
35°	868.5	880.0	911.4	946.0	967.4
37.5°	825.7	838.8	873.5	913.0	936.1
40°	781.2	796.0	835.5	878.4	904.8
42.5°	736.7	753.1	796.0	847.1	873.5
45°	692.2	710.3	756.4	812.5	842.1
47.5°	646.0	667.4	715.2	777.9	807.5
50°	601.5	623.0	677.3	741.6	771.3
52.5°	555.4	580.1	637.8	703.7	735.0
55°	510.9	535.6	598.2	664.2	697.1
57.5°	466.4	491.1	557.0	624.6	657.6
60°	421.9	448.3	517.5	583.4	618.0
62.5°	377.4	405.4	476.3	543.8	576.8
65°	334.5	364.2	435.1	501.0	535.6
67.5°	293.3	324.7	393.9	458.2	492.8
70°	252.1	283.5	351.0	413.7	448.3
72.5°	212.6	243.9	309.8	365.9	392.2
75°	173.0	206.0	265.3	304.9	321.4
77.5°	135.1	168.1	219.2	245.6	263.7
80°	100.5	128.5	164.8	184.6	191.2
82.5°	69.2	92.3	115.4	120.3	123.6
85°	42.8	54.4	62.6	61.0	61.0
87.5°	19.8	21.4	18.1	13.2	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)