

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: P233131

Luminaire Tested: **FCB-24-2-LD4-44-40-UNV-EDD1-WDA12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233131  
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-LD4-44-40-UNV-EDD1-WDA12  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.125 ACRYLIC LENS  
Light Source: (84)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

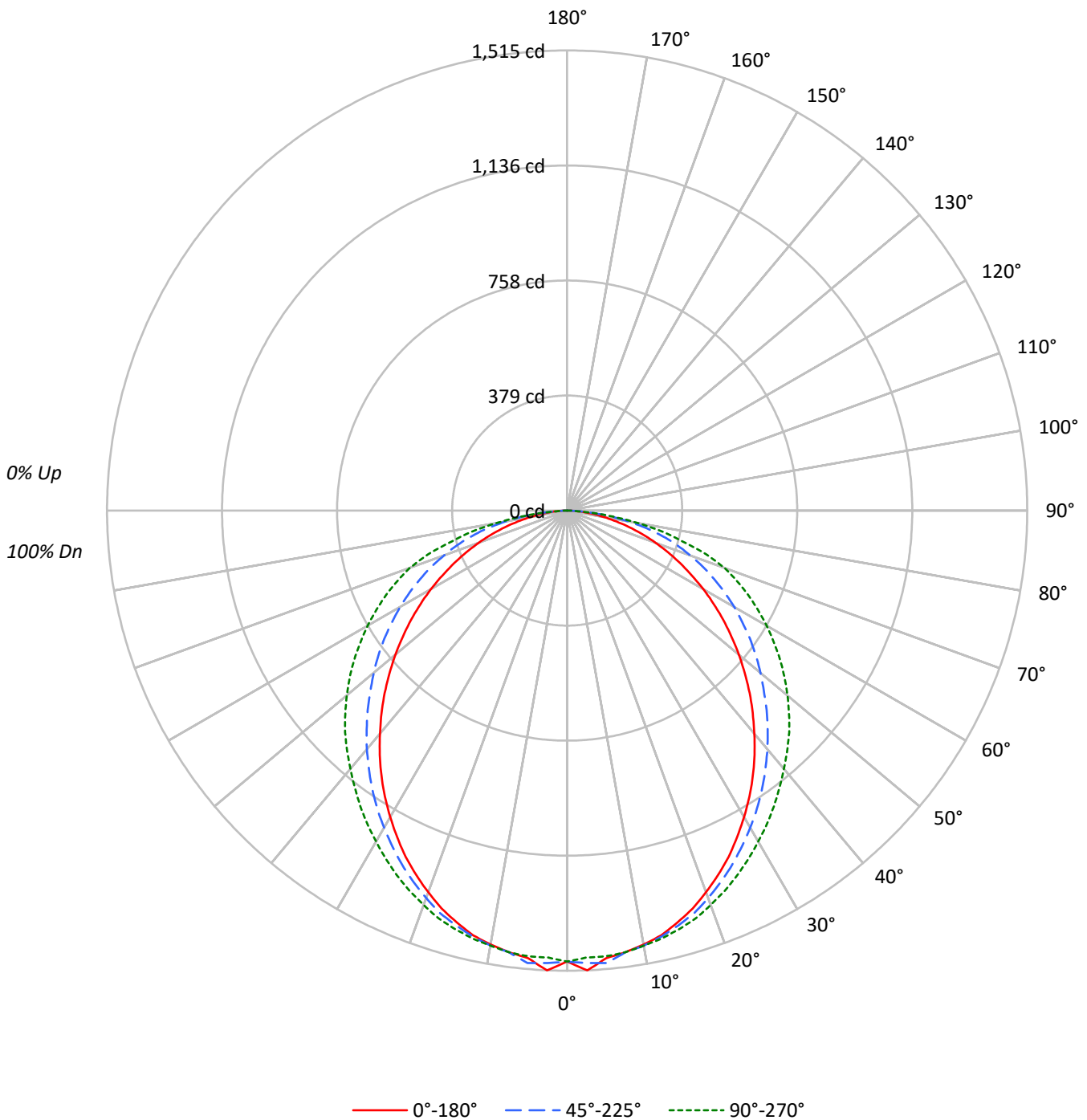
Lumens per Lamp: N/A  
Luminaire Lumens: 4160.0 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 41.8  
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°	3996	3996	3996
5°	3995	4038	3978
10°	3963	3974	3974
15°	3911	3939	3973
20°	3829	3887	3957
25°	3736	3820	3934
30°	3621	3746	3910
35°	3502	3675	3901
40°	3368	3603	3901
45°	3233	3534	3934
50°	3091	3481	3963
55°	2942	3445	4015
60°	2787	3419	4083
65°	2615	3401	4187
70°	2435	3390	4329
75°	2208	3386	4102
80°	1912	3135	3637
85°	1624	2374	2309



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.8	3.4
10°-20°	398.9	9.6
20°-30°	593.4	14.3
30°-40°	701.8	16.9
40°-50°	721.4	17.3
50°-60°	659.2	15.8
60°-70°	527.3	12.7
70°-80°	330.9	8.0
80°-90°	86.2	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°	1133.2	27.2
0°-40°	1835.0	44.1
0°-60°	3215.6	77.3
0°-90°	4160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4160.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1485	1485	1485	1485	1485	
5°	1479	1479	1495	1485	1473	141
15°	1404	1406	1414	1422	1426	395
25°	1258	1266	1287	1309	1325	579
35°	1066	1080	1119	1161	1188	666
45°	850	872	928	997	1034	655
55°	627	658	734	815	856	561
65°	411	447	534	615	658	408
75°	212	253	326	374	394	226
85°	53	67	77	75	75	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1484.8	1484.8	1484.8	1484.8	1484.8
2.5°	1515.2	1509.1	1490.9	1478.8	1472.7
5°	1478.8	1478.8	1495.0	1484.8	1472.7
7.5°	1466.6	1466.6	1466.6	1497.0	1466.6
10°	1450.5	1452.5	1454.5	1466.6	1454.5
12.5°	1432.2	1432.2	1436.3	1440.3	1442.4
15°	1403.9	1405.9	1414.0	1422.1	1426.2
17.5°	1373.6	1379.7	1389.8	1399.9	1408.0
20°	1337.2	1345.3	1357.4	1373.6	1381.7
22.5°	1298.7	1306.8	1323.0	1341.2	1355.4
25°	1258.3	1266.4	1286.6	1308.8	1325.0
27.5°	1211.7	1221.9	1246.1	1276.5	1292.7
30°	1165.2	1177.4	1205.7	1240.1	1258.3
32.5°	1116.7	1130.8	1163.2	1201.6	1223.9
35°	1066.1	1080.3	1118.7	1161.2	1187.5
37.5°	1013.5	1029.7	1072.2	1120.7	1149.0
40°	958.9	977.1	1025.6	1078.2	1110.6
42.5°	904.3	924.5	977.1	1039.8	1072.2
45°	849.6	871.9	928.5	997.3	1033.7
47.5°	793.0	819.3	878.0	954.8	991.2
50°	738.4	764.7	831.4	910.3	946.7
52.5°	681.7	712.1	782.9	863.8	902.2
55°	627.1	657.5	734.3	815.2	855.7
57.5°	572.5	602.8	683.8	766.7	807.2
60°	517.9	550.2	635.2	716.1	758.6
62.5°	463.3	497.6	584.6	667.6	708.0
65°	410.7	447.1	534.1	615.0	657.5
67.5°	360.1	398.5	483.5	562.4	604.9
70°	309.5	347.9	430.9	507.8	550.2
72.5°	261.0	299.4	380.3	449.1	481.5
75°	212.4	252.9	325.7	374.2	394.5
77.5°	165.9	206.3	269.1	301.4	323.7
80°	123.4	157.8	202.3	226.6	234.7
82.5°	85.0	113.3	141.6	147.7	151.7
85°	52.6	66.8	76.9	74.8	74.8
87.5°	24.3	26.3	22.3	16.2	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)