

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: P233229

Luminaire Tested: **FCB-24-4-LD4-40-30-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233229  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-4-LD4-40-30-UNV-EDD1-WDP12  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (168)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

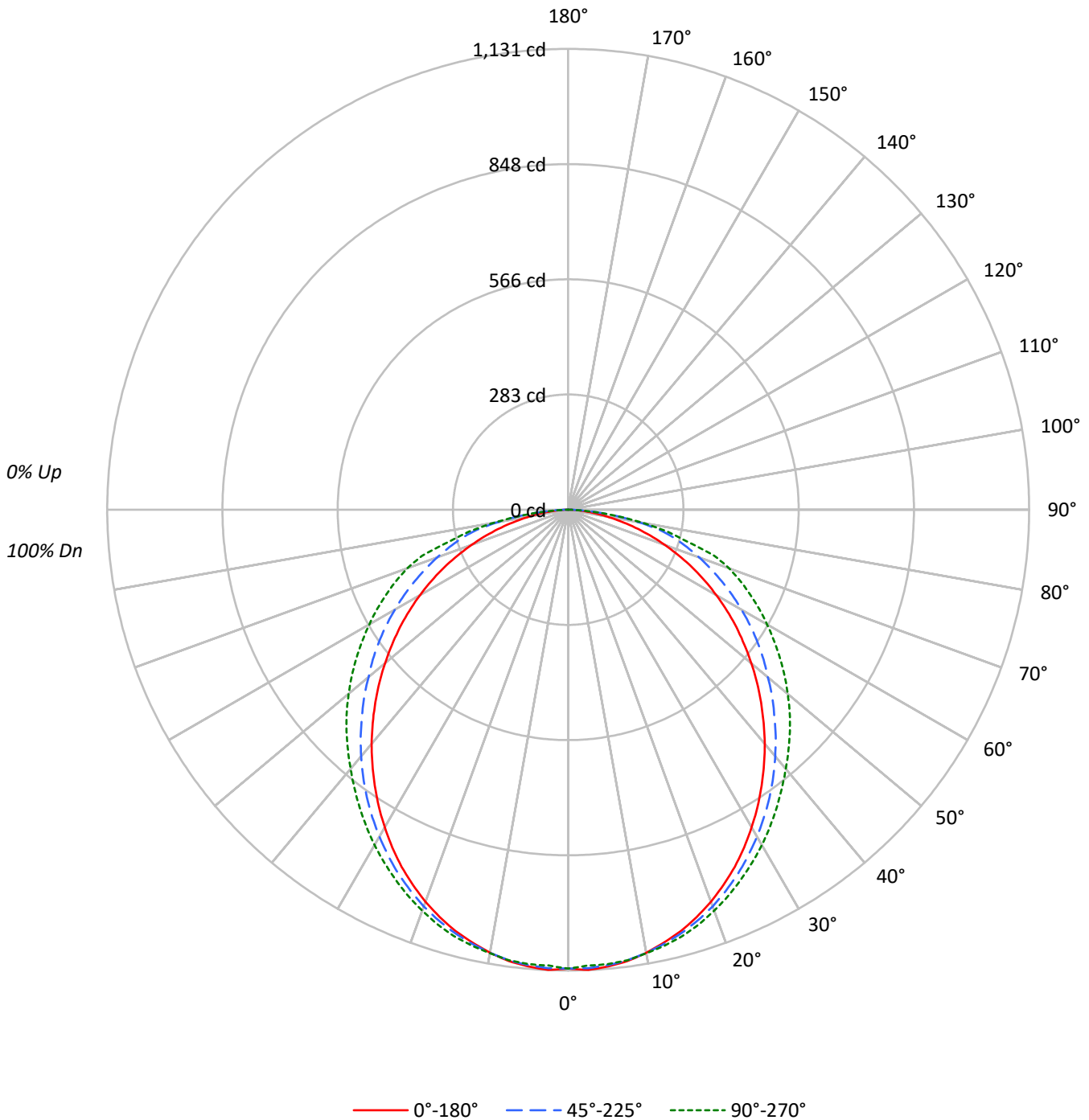
Lumens per Lamp: N/A  
Luminaire Lumens: 3209.0 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 29  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1515	1515	1515
5°	1520	1515	1512
10°	1509	1509	1510
15°	1491	1498	1509
20°	1466	1484	1499
25°	1435	1463	1488
30°	1398	1439	1477
35°	1359	1415	1465
40°	1318	1388	1459
45°	1273	1361	1463
50°	1228	1339	1472
55°	1183	1330	1487
60°	1129	1322	1517
65°	1070	1322	1567
70°	990	1344	1651
75°	885	1405	1570
80°	741	1345	1439
85°	560	1034	983



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.4	3.3
10°-20°	302.9	9.4
20°-30°	452.8	14.1
30°-40°	537.2	16.7
40°-50°	552.9	17.2
50°-60°	507.2	15.8
60°-70°	410.1	12.8
70°-80°	266.1	8.3
80°-90°	73.4	2.3
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°	862.1	26.9
0°-40°	1399.3	43.6
0°-60°	2459.4	76.6
0°-90°	3209.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3209.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1126	1126	1126	1126	1126	
5°	1125	1117	1122	1121	1120	107
15°	1070	1066	1076	1080	1083	301
25°	967	968	986	994	1002	445
35°	827	834	861	880	892	517
45°	669	680	715	749	769	516
55°	504	520	567	613	634	451
65°	336	356	415	470	492	332
75°	170	202	270	302	302	181
85°	36	62	67	65	64	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1126.2	1126.2	1126.2	1126.2	1126.2
2.5°	1130.6	1121.8	1126.2	1125.1	1119.6
5°	1125.1	1117.4	1121.8	1120.7	1119.6
7.5°	1117.4	1109.7	1115.2	1114.1	1115.2
10°	1104.2	1097.6	1104.2	1105.3	1105.3
12.5°	1087.7	1082.2	1091.0	1093.2	1095.4
15°	1070.2	1065.8	1075.7	1080.0	1083.3
17.5°	1048.2	1044.9	1057.0	1062.5	1066.9
20°	1024.0	1022.9	1036.1	1041.6	1047.1
22.5°	996.5	996.5	1011.9	1018.5	1026.2
25°	966.9	968.0	985.6	994.3	1002.0
27.5°	935.0	936.1	957.0	968.0	976.8
30°	899.9	904.2	926.2	940.5	950.4
32.5°	864.7	870.2	894.4	910.8	921.8
35°	827.3	833.9	861.4	880.1	892.2
37.5°	788.9	796.6	826.2	847.1	861.4
40°	750.4	759.2	790.0	814.2	830.6
42.5°	709.8	719.7	753.7	782.3	799.9
45°	669.1	680.1	715.3	749.3	769.1
47.5°	628.5	641.7	679.0	716.4	737.2
50°	586.7	599.9	639.5	682.3	703.2
52.5°	545.0	560.3	604.3	648.2	669.1
55°	504.3	519.7	566.9	613.1	634.0
57.5°	462.6	477.9	529.6	577.9	598.8
60°	419.7	437.3	491.1	540.6	563.6
62.5°	378.0	396.6	453.8	506.5	528.5
65°	336.2	356.0	415.3	470.3	492.2
67.5°	293.4	316.4	378.0	434.0	457.1
70°	251.6	276.9	341.7	397.7	419.7
72.5°	211.0	238.4	305.4	362.6	375.8
75°	170.3	202.2	270.3	302.1	302.1
77.5°	131.8	167.0	230.7	242.8	249.4
80°	95.6	134.0	173.6	187.9	185.7
82.5°	63.7	102.2	124.2	124.2	120.9
85°	36.3	61.5	67.0	64.8	63.7
87.5°	15.4	23.1	20.9	16.5	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)