

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: P233187

Luminaire Tested: **FCB-24-4-LD4-30-40-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233187  
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-LD4-30-40-UNV-EDD1-WDP6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 POLYCARBONATE LENS  
Light Source: (168)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

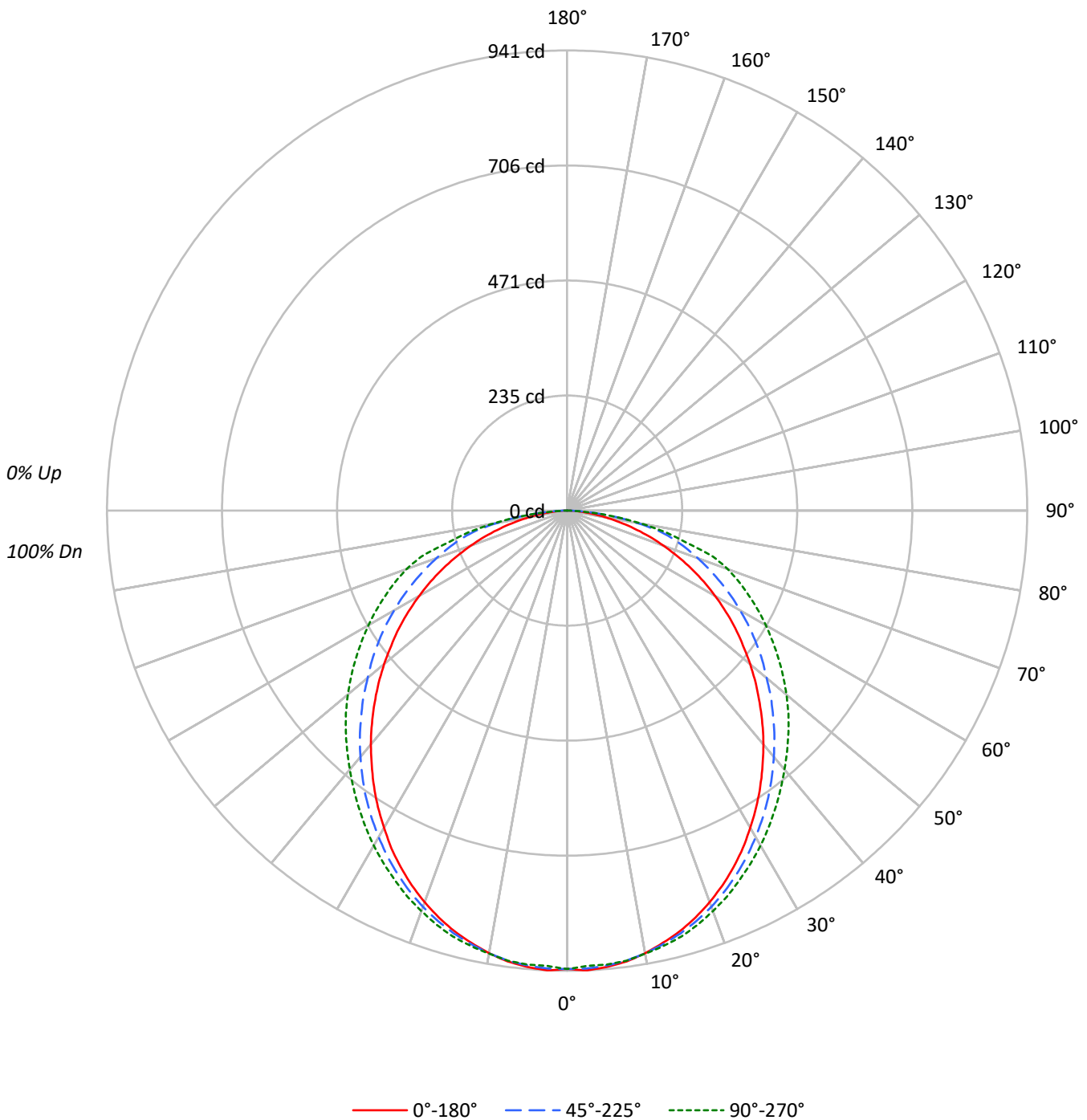
Lumens per Lamp: N/A  
Luminaire Lumens: 2671.0 lumens  
Efficiency: N/A  
Efficacy: 123.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
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

TEST NUMBER: P233187

CATALOG NUMBER: FCB-24-4-LD4-30-40-UNV-EDD1-WDP6

### Luminous Intensity Polar Plot





TEST NUMBER: P233187

CATALOG NUMBER: FCB-24-4-LD4-30-40-UNV-EDD1-WDP6

**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°	1261	1261	1261
5°	1265	1261	1259
10°	1256	1256	1257
15°	1241	1247	1256
20°	1220	1235	1248
25°	1195	1218	1238
30°	1164	1198	1229
35°	1131	1178	1220
40°	1097	1155	1214
45°	1060	1133	1218
50°	1022	1114	1225
55°	985	1107	1238
60°	940	1100	1262
65°	891	1101	1304
70°	824	1119	1374
75°	737	1170	1307
80°	617	1120	1198
85°	466	861	818



TEST NUMBER: P233187

CATALOG NUMBER: FCB-24-4-LD4-30-40-UNV-EDD1-WDP6

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.6	3.3
10°-20°	252.1	9.4
20°-30°	376.9	14.1
30°-40°	447.1	16.7
40°-50°	460.2	17.2
50°-60°	422.2	15.8
60°-70°	341.3	12.8
70°-80°	221.5	8.3
80°-90°	61.1	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°	717.6	26.9
0°-40°	1164.7	43.6
0°-60°	2047.0	76.6
0°-90°	2671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2671.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	937	937	937	937	937	
5°	936	930	934	933	932	89
15°	891	887	895	899	902	251
25°	805	806	820	828	834	370
35°	689	694	717	732	743	431
45°	557	566	595	624	640	430
55°	420	433	472	510	528	375
65°	280	296	346	391	410	277
75°	142	168	225	252	252	151
85°	30	51	56	54	53	37
90°	0	0	0	0	0	



TEST NUMBER: P233187

CATALOG NUMBER: FCB-24-4-LD4-30-40-UNV-EDD1-WDP6

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	937.4	937.4	937.4	937.4	937.4
2.5°	941.0	933.7	937.4	936.5	931.9
5°	936.5	930.1	933.7	932.8	931.9
7.5°	930.1	923.7	928.2	927.3	928.2
10°	919.1	913.6	919.1	920.0	920.0
12.5°	905.4	900.8	908.1	909.9	911.8
15°	890.7	887.1	895.3	899.0	901.7
17.5°	872.5	869.7	879.8	884.3	888.0
20°	852.3	851.4	862.4	867.0	871.5
22.5°	829.5	829.5	842.3	847.8	854.2
25°	804.8	805.7	820.3	827.6	834.0
27.5°	778.3	779.2	796.5	805.7	813.0
30°	749.0	752.6	770.9	782.8	791.1
32.5°	719.7	724.3	744.4	758.1	767.3
35°	688.6	694.1	717.0	732.5	742.6
37.5°	656.6	663.0	687.7	705.1	717.0
40°	624.6	631.9	657.5	677.7	691.4
42.5°	590.8	599.0	627.4	651.1	665.8
45°	556.9	566.1	595.4	623.7	640.2
47.5°	523.1	534.1	565.2	596.3	613.6
50°	488.4	499.3	532.3	567.9	585.3
52.5°	453.6	466.4	503.0	539.6	556.9
55°	419.8	432.6	471.9	510.3	527.7
57.5°	385.0	397.8	440.8	481.0	498.4
60°	349.3	364.0	408.8	449.9	469.1
62.5°	314.6	330.1	377.7	421.6	439.9
65°	279.8	296.3	345.7	391.4	409.7
67.5°	244.2	263.4	314.6	361.2	380.4
70°	209.4	230.5	284.4	331.1	349.3
72.5°	175.6	198.5	254.2	301.8	312.8
75°	141.8	168.3	225.0	251.5	251.5
77.5°	109.7	139.0	192.0	202.1	207.6
80°	79.6	111.6	144.5	156.4	154.6
82.5°	53.0	85.1	103.3	103.3	100.6
85°	30.2	51.2	55.8	54.0	53.0
87.5°	12.8	19.2	17.4	13.7	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)