

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: P233230

Luminaire Tested: **FCB-24-4-LD4-40-35-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233230  
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-LD4-40-35-UNV-EDD1-WDP12  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (168)3500K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

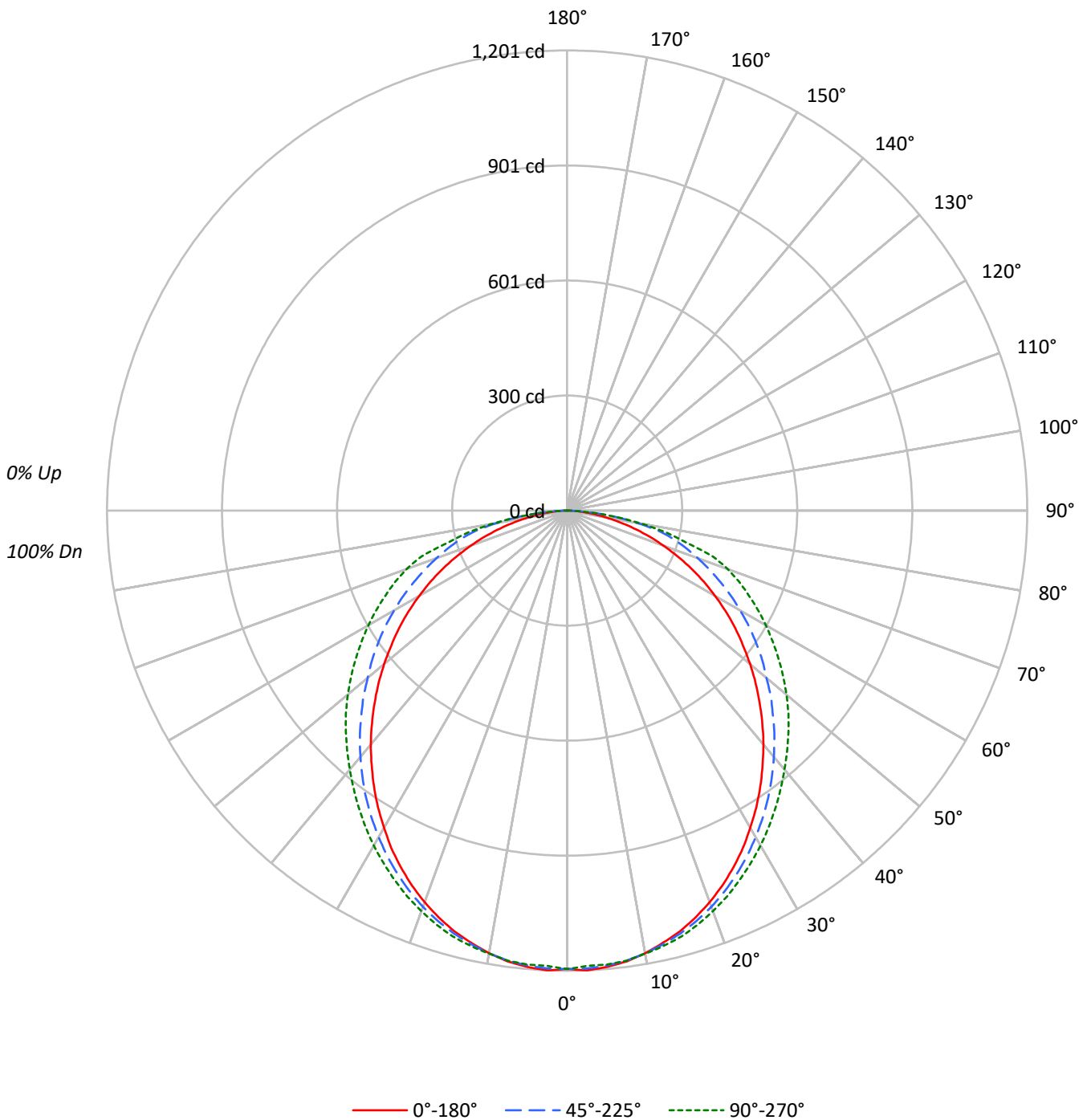
Lumens per Lamp: N/A  
Luminaire Lumens: 3409.0 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	1610	1610	1610
5°	1614	1610	1606
10°	1603	1603	1604
15°	1584	1592	1603
20°	1558	1576	1593
25°	1525	1554	1580
30°	1485	1529	1569
35°	1444	1503	1557
40°	1400	1474	1550
45°	1353	1446	1555
50°	1305	1422	1564
55°	1257	1413	1580
60°	1200	1404	1611
65°	1137	1405	1665
70°	1052	1428	1754
75°	940	1493	1669
80°	786	1429	1529
85°	594	1099	1045



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.1	3.3
10°-20°	321.8	9.4
20°-30°	481.0	14.1
30°-40°	570.6	16.7
40°-50°	587.3	17.2
50°-60°	538.8	15.8
60°-70°	435.7	12.8
70°-80°	282.7	8.3
80°-90°	78.0	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°	915.8	26.9
0°-40°	1486.5	43.6
0°-60°	2612.6	76.6
0°-90°	3409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3409.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1195	1187	1192	1190	1189	113
15°	1137	1132	1143	1147	1151	320
25°	1027	1028	1047	1056	1064	473
35°	879	886	915	935	948	550
45°	711	722	760	796	817	549
55°	536	552	602	651	674	479
65°	357	378	441	500	523	353
75°	181	215	287	321	321	192
85°	38	65	71	69	68	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1196.4	1196.4	1196.4	1196.4	1196.4
2.5°	1201.1	1191.7	1196.4	1195.2	1189.4
5°	1195.2	1187.0	1191.7	1190.5	1189.4
7.5°	1187.0	1178.9	1184.7	1183.5	1184.7
10°	1173.0	1166.0	1173.0	1174.2	1174.2
12.5°	1155.5	1149.7	1159.0	1161.4	1163.7
15°	1136.9	1132.2	1142.7	1147.4	1150.9
17.5°	1113.5	1110.0	1122.8	1128.7	1133.4
20°	1087.8	1086.7	1100.7	1106.5	1112.3
22.5°	1058.7	1058.7	1075.0	1082.0	1090.2
25°	1027.1	1028.3	1047.0	1056.3	1064.5
27.5°	993.3	994.5	1016.6	1028.3	1037.6
30°	955.9	960.6	984.0	999.1	1009.6
32.5°	918.6	924.4	950.1	967.6	979.3
35°	878.9	885.9	915.1	934.9	947.8
37.5°	838.1	846.2	877.7	899.9	915.1
40°	797.2	806.5	839.2	864.9	882.4
42.5°	754.0	764.5	800.7	831.0	849.7
45°	710.8	722.5	759.8	796.0	817.0
47.5°	667.6	681.6	721.3	761.0	783.2
50°	623.3	637.3	679.3	724.8	747.0
52.5°	578.9	595.3	642.0	688.6	710.8
55°	535.7	552.1	602.3	651.3	673.5
57.5°	491.4	507.7	562.6	613.9	636.1
60°	445.9	464.5	521.7	574.3	598.8
62.5°	401.5	421.4	482.1	538.1	561.4
65°	357.2	378.2	441.2	499.6	522.9
67.5°	311.6	336.2	401.5	461.0	485.6
70°	267.3	294.1	363.0	422.5	445.9
72.5°	224.1	253.3	324.5	385.2	399.2
75°	180.9	214.8	287.1	321.0	321.0
77.5°	140.1	177.4	245.1	258.0	265.0
80°	101.5	142.4	184.4	199.6	197.3
82.5°	67.7	108.5	131.9	131.9	128.4
85°	38.5	65.4	71.2	68.9	67.7
87.5°	16.3	24.5	22.2	17.5	15.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)