

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: P233076

Luminaire Tested: **FCB-12-4-LD4-25-50-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233076  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35573)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-12-4-LD4-25-50-UNV-EDD1-WDP12  
Description: FAILSAFE 1X4 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (84)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

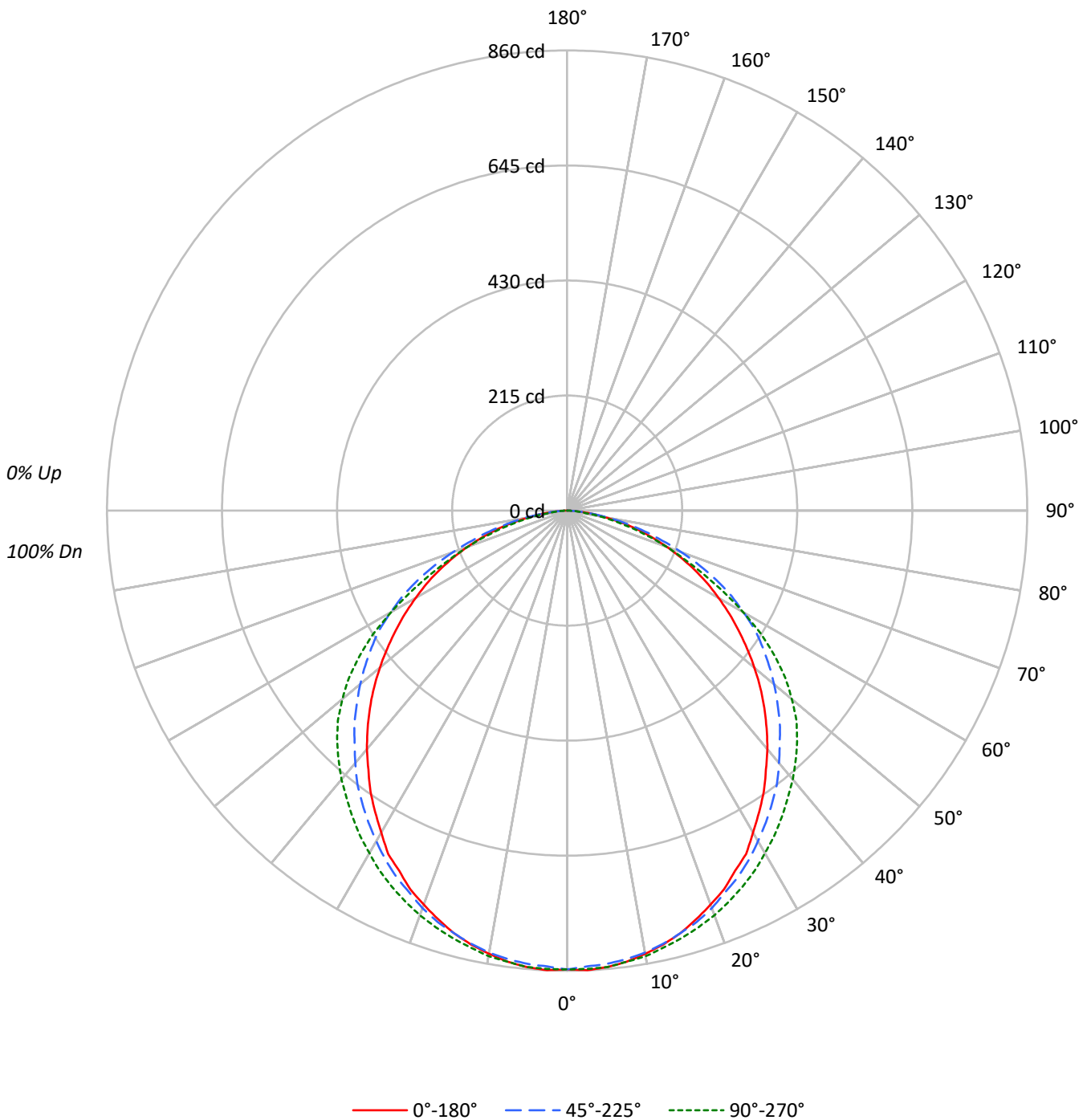
Lumens per Lamp: N/A  
Luminaire Lumens: 2376.0 lumens  
Efficiency: N/A  
Efficacy: 115.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 20.5  
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	46	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	34
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	29	42	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	37	31	26	25

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

	0°	45°	90°
0°	2307	2307	2307
5°	2313	2297	2313
10°	2298	2292	2311
15°	2278	2278	2304
20°	2244	2264	2304
25°	2205	2243	2302
30°	2158	2217	2297
35°	2105	2193	2297
40°	2045	2164	2304
45°	1984	2140	2313
50°	1912	2114	2295
55°	1835	2094	2220
60°	1759	2049	2042
65°	1678	1962	1790
70°	1558	1788	1548
75°	1413	1559	1279
80°	1125	1235	944
85°	797	689	543



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.1	3.4
10°-20°	231.8	9.8
20°-30°	349.4	14.7
30°-40°	418.9	17.6
40°-50°	434.7	18.3
50°-60°	392.1	16.5
60°-70°	286.0	12.0
70°-80°	150.0	6.3
80°-90°	32.0	1.3
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°	662.3	27.9
0°-40°	1081.2	45.5
0°-60°	1907.9	80.3
0°-90°	2376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2376.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	856	854	850	856	856	81
15°	818	818	818	827	827	230
25°	743	746	756	772	775	343
35°	641	648	668	692	699	400
45°	521	532	562	596	608	402
55°	391	405	446	476	473	350
65°	264	279	308	296	281	261
75°	136	155	150	130	123	142
85°	26	32	22	19	18	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	857.4	857.4	857.4	857.4	857.4
2.5°	859.8	857.4	852.7	857.4	857.4
5°	856.3	853.9	850.4	856.3	856.3
7.5°	850.4	848.1	845.7	851.6	850.4
10°	841.0	839.9	838.7	845.7	845.7
12.5°	830.5	830.5	829.3	837.5	836.3
15°	817.6	817.6	817.6	827.0	827.0
17.5°	801.2	803.5	805.9	816.4	816.4
20°	783.6	786.0	790.7	803.5	804.7
22.5°	766.1	767.2	771.9	787.1	790.7
25°	742.6	746.2	755.5	771.9	775.4
27.5°	723.9	725.1	735.6	754.4	759.0
30°	694.6	702.8	713.4	734.4	739.1
32.5°	667.7	674.7	691.1	713.4	720.4
35°	640.7	647.8	667.7	692.3	699.3
37.5°	610.3	620.8	644.2	668.8	677.0
40°	582.2	591.5	616.1	646.6	656.0
42.5°	551.7	561.1	588.0	622.0	632.5
45°	521.3	531.8	562.2	596.2	607.9
47.5°	489.6	501.3	533.0	570.4	581.0
50°	456.8	469.7	504.9	543.5	548.2
52.5°	424.0	438.1	475.6	509.5	514.2
55°	391.2	405.3	446.3	475.6	473.2
57.5°	359.6	374.8	417.0	432.2	429.9
60°	326.8	343.2	380.7	387.7	379.5
62.5°	296.4	311.6	346.7	340.9	330.3
65°	263.6	278.8	308.1	296.4	281.1
67.5°	230.8	249.5	268.2	248.3	236.6
70°	198.0	219.0	227.2	207.3	196.8
72.5°	166.3	188.6	186.2	166.3	159.3
75°	135.9	154.6	149.9	130.0	123.0
77.5°	103.1	124.2	113.6	97.2	91.4
80°	72.6	91.4	79.7	65.6	60.9
82.5°	48.0	60.9	49.2	38.7	35.1
85°	25.8	31.6	22.3	18.7	17.6
87.5°	10.5	9.4	8.2	8.2	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)