

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: P233039

Luminaire Tested: **FCB-12-4-LD4-25-40-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233039  
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-LD4-25-40-UNV-EDD1-WDA6  
Description: FAILSAFE 1X4 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (84)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

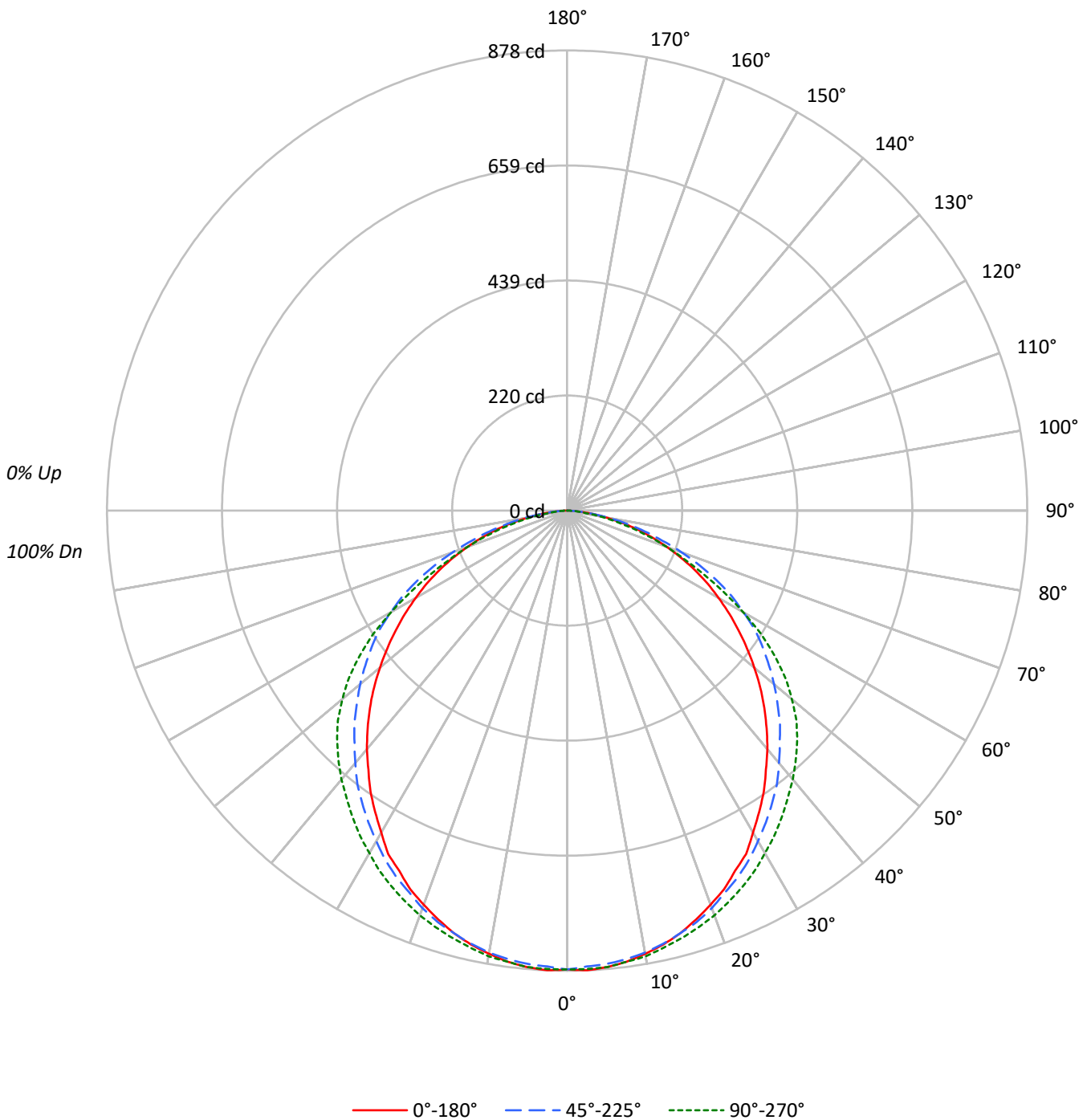
Lumens per Lamp: N/A  
Luminaire Lumens: 2426.0 lumens  
Efficiency: N/A  
Efficacy: 118.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2356	2356	2356
5°	2362	2346	2362
10°	2346	2340	2360
15°	2326	2326	2352
20°	2291	2312	2353
25°	2252	2290	2351
30°	2204	2263	2345
35°	2149	2239	2346
40°	2088	2210	2353
45°	2025	2185	2362
50°	1953	2158	2343
55°	1874	2138	2267
60°	1796	2092	2086
65°	1713	2003	1827
70°	1590	1825	1581
75°	1442	1592	1306
80°	1150	1260	964
85°	812	701	553



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.8	3.4
10°-20°	236.6	9.8
20°-30°	356.8	14.7
30°-40°	427.7	17.6
40°-50°	443.8	18.3
50°-60°	400.3	16.5
60°-70°	292.0	12.0
70°-80°	153.2	6.3
80°-90°	32.7	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°	676.3	27.9
0°-40°	1104.0	45.5
0°-60°	1948.1	80.3
0°-90°	2426.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2426.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	876	876	876	876	876	
5°	874	872	868	874	874	83
15°	835	835	835	844	844	235
25°	758	762	771	788	792	350
35°	654	661	682	707	714	409
45°	532	543	574	609	621	410
55°	400	414	456	486	483	358
65°	269	285	314	303	287	266
75°	139	158	153	133	126	145
85°	26	32	23	19	18	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	875.5	875.5	875.5	875.5	875.5
2.5°	877.9	875.5	870.7	875.5	875.5
5°	874.3	871.9	868.3	874.3	874.3
7.5°	868.3	865.9	863.5	869.5	868.3
10°	858.7	857.5	856.3	863.5	863.5
12.5°	848.0	848.0	846.8	855.1	853.9
15°	834.8	834.8	834.8	844.4	844.4
17.5°	818.1	820.5	822.9	833.6	833.6
20°	800.1	802.5	807.3	820.5	821.7
22.5°	782.2	783.4	788.2	803.7	807.3
25°	758.3	761.9	771.4	788.2	791.8
27.5°	739.1	740.3	751.1	770.2	775.0
30°	709.2	717.6	728.4	749.9	754.7
32.5°	681.7	688.9	705.6	728.4	735.5
35°	654.2	661.4	681.7	706.8	714.0
37.5°	623.1	633.9	657.8	682.9	691.3
40°	594.4	604.0	629.1	660.2	669.8
42.5°	563.3	572.9	600.4	635.1	645.8
45°	532.2	543.0	574.1	608.8	620.7
47.5°	499.9	511.9	544.2	582.5	593.2
50°	466.4	479.6	515.5	554.9	559.7
52.5°	433.0	447.3	485.6	520.3	525.0
55°	399.5	413.8	455.7	485.6	483.2
57.5°	367.2	382.7	425.8	441.3	438.9
60°	333.7	350.4	388.7	395.9	387.5
62.5°	302.6	318.1	354.0	348.0	337.3
65°	269.1	284.6	314.5	302.6	287.0
67.5°	235.6	254.7	273.9	253.6	241.6
70°	202.1	223.7	232.0	211.7	200.9
72.5°	169.8	192.6	190.2	169.8	162.7
75°	138.7	157.9	153.1	132.8	125.6
77.5°	105.2	126.8	116.0	99.3	93.3
80°	74.2	93.3	81.3	67.0	62.2
82.5°	49.0	62.2	50.2	39.5	35.9
85°	26.3	32.3	22.7	19.1	17.9
87.5°	10.8	9.6	8.4	8.4	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)