

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: P233037

Luminaire Tested: **FCB-12-4-LD4-25-30-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233037  
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-LD4-25-30-UNV-EDD1-WDA6  
Description: FAILSAFE 1X4 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (84)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

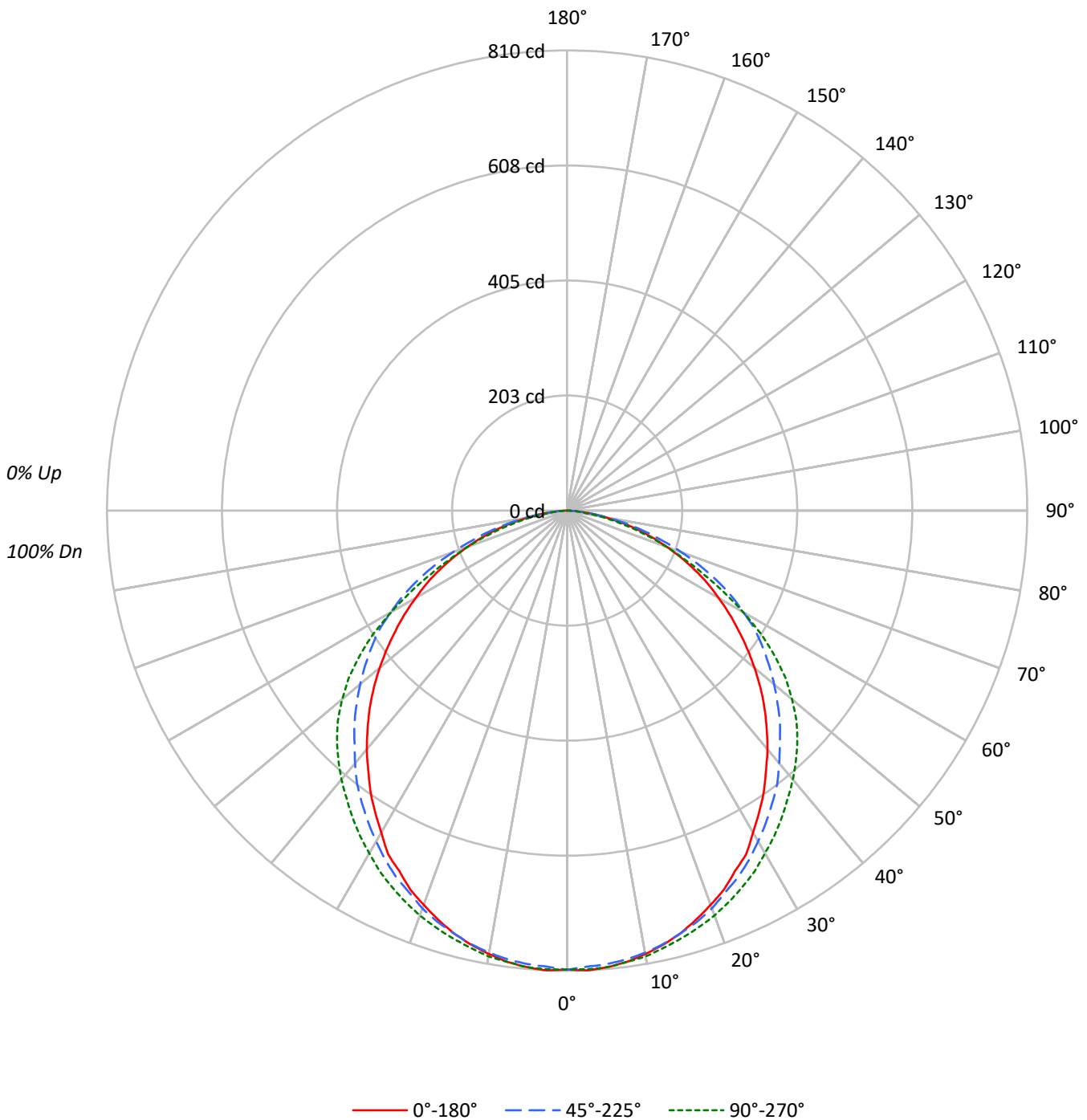
Lumens per Lamp: N/A  
Luminaire Lumens: 2239.0 lumens  
Efficiency: N/A  
Efficacy: 109.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2174	2174	2174
5°	2180	2165	2180
10°	2165	2159	2178
15°	2147	2147	2171
20°	2115	2134	2172
25°	2078	2114	2170
30°	2034	2089	2164
35°	1984	2067	2165
40°	1927	2040	2171
45°	1869	2016	2180
50°	1802	1991	2163
55°	1730	1973	2092
60°	1658	1931	1925
65°	1582	1848	1687
70°	1467	1685	1459
75°	1331	1469	1205
80°	1060	1164	890
85°	750	648	513



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.5	3.4
10°-20°	218.4	9.8
20°-30°	329.3	14.7
30°-40°	394.7	17.6
40°-50°	409.6	18.3
50°-60°	369.5	16.5
60°-70°	269.5	12.0
70°-80°	141.4	6.3
80°-90°	30.2	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°	624.2	27.9
0°-40°	1018.9	45.5
0°-60°	1797.9	80.3
0°-90°	2239.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2239.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	808	808	808	808	808	
5°	807	805	801	807	807	77
15°	770	770	770	779	779	217
25°	700	703	712	727	731	323
35°	604	610	629	652	659	377
45°	491	501	530	562	573	379
55°	369	382	421	448	446	330
65°	248	263	290	279	265	246
75°	128	146	141	122	116	134
85°	24	30	21	18	17	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	808.0	808.0	808.0	808.0	808.0
2.5°	810.2	808.0	803.6	808.0	808.0
5°	806.9	804.7	801.4	806.9	806.9
7.5°	801.4	799.2	797.0	802.5	801.4
10°	792.5	791.4	790.3	797.0	797.0
12.5°	782.6	782.6	781.5	789.2	788.1
15°	770.5	770.5	770.5	779.3	779.3
17.5°	755.0	757.2	759.4	769.4	769.4
20°	738.5	740.7	745.1	757.2	758.3
22.5°	721.9	723.0	727.4	741.8	745.1
25°	699.8	703.1	712.0	727.4	730.7
27.5°	682.2	683.3	693.2	710.9	715.3
30°	654.6	662.3	672.2	692.1	696.5
32.5°	629.2	635.8	651.3	672.2	678.8
35°	603.8	610.4	629.2	652.4	659.0
37.5°	575.1	585.0	607.1	630.3	638.0
40°	548.6	557.4	580.6	609.3	618.1
42.5°	519.9	528.7	554.1	586.1	596.1
45°	491.2	501.1	529.8	561.8	572.9
47.5°	461.4	472.4	502.2	537.6	547.5
50°	430.5	442.6	475.7	512.2	516.6
52.5°	399.6	412.8	448.1	480.2	484.6
55°	368.7	381.9	420.6	448.1	445.9
57.5°	338.9	353.2	393.0	407.3	405.1
60°	308.0	323.4	358.7	365.4	357.6
62.5°	279.3	293.6	326.7	321.2	311.3
65°	248.4	262.7	290.3	279.3	264.9
67.5°	217.5	235.1	252.8	234.0	223.0
70°	186.5	206.4	214.1	195.4	185.4
72.5°	156.7	177.7	175.5	156.7	150.1
75°	128.0	145.7	141.3	122.5	115.9
77.5°	97.1	117.0	107.1	91.6	86.1
80°	68.4	86.1	75.1	61.8	57.4
82.5°	45.3	57.4	46.4	36.4	33.1
85°	24.3	29.8	21.0	17.7	16.6
87.5°	9.9	8.8	7.7	7.7	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)