

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: P233097

Luminaire Tested: **FCB-24-2-LD4-24-30-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233097  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-2-LD4-24-30-UNV-EDD1-WDA6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (84)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

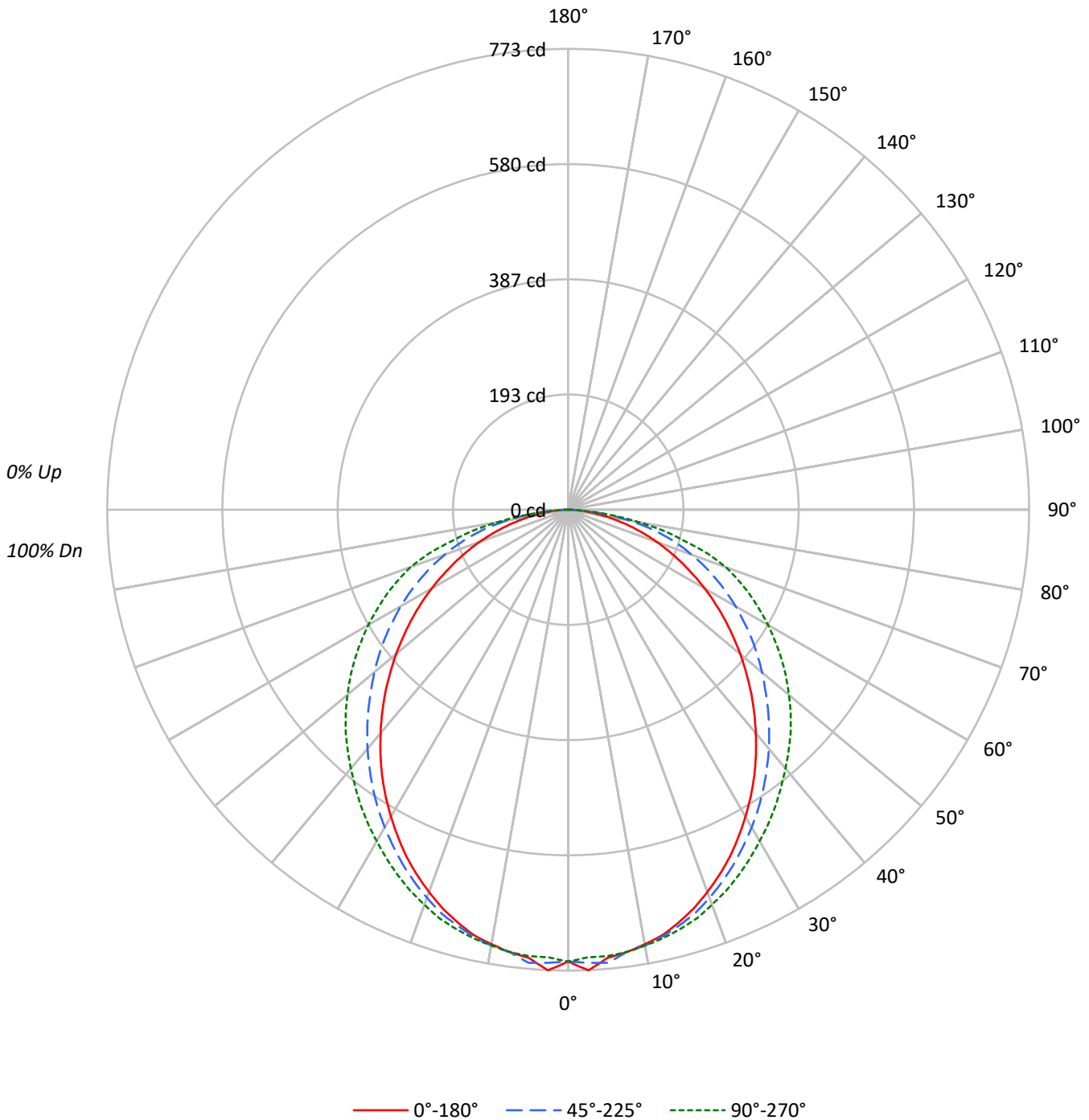
Lumens per Lamp: N/A  
Luminaire Lumens: 2123.0 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.6  
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

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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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2039	2039	2039
5°	2039	2061	2030
10°	2023	2028	2028
15°	1996	2010	2028
20°	1954	1984	2019
25°	1907	1950	2008
30°	1848	1912	1995
35°	1787	1875	1991
40°	1719	1839	1991
45°	1650	1803	2007
50°	1577	1776	2023
55°	1501	1758	2049
60°	1422	1745	2083
65°	1335	1735	2136
70°	1243	1730	2209
75°	1127	1728	2093
80°	976	1599	1857
85°	827	1210	1179



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.9	3.4
10°-20°	203.6	9.6
20°-30°	302.8	14.3
30°-40°	358.2	16.9
40°-50°	368.2	17.3
50°-60°	336.4	15.8
60°-70°	269.1	12.7
70°-80°	168.9	8.0
80°-90°	44.0	2.1
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°	578.3	27.2
0°-40°	936.5	44.1
0°-60°	1641.0	77.3
0°-90°	2123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2123.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	755	755	763	758	752	72
15°	716	718	722	726	728	202
25°	642	646	657	668	676	295
35°	544	551	571	593	606	340
45°	434	445	474	509	528	334
55°	320	336	375	416	437	286
65°	210	228	272	314	336	208
75°	108	129	166	191	201	115
85°	27	34	39	38	38	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	757.8	757.8	757.8	757.8	757.8
2.5°	773.3	770.2	760.9	754.7	751.6
5°	754.7	754.7	762.9	757.8	751.6
7.5°	748.5	748.5	748.5	764.0	748.5
10°	740.2	741.3	742.3	748.5	742.3
12.5°	730.9	730.9	733.0	735.1	736.1
15°	716.5	717.5	721.6	725.8	727.8
17.5°	701.0	704.1	709.2	714.4	718.5
20°	682.4	686.5	692.7	701.0	705.1
22.5°	662.8	666.9	675.2	684.5	691.7
25°	642.1	646.3	656.6	668.0	676.2
27.5°	618.4	623.6	635.9	651.4	659.7
30°	594.7	600.8	615.3	632.9	642.1
32.5°	569.9	577.1	593.6	613.2	624.6
35°	544.1	551.3	570.9	592.6	606.0
37.5°	517.2	525.5	547.2	571.9	586.4
40°	489.4	498.6	523.4	550.3	566.8
42.5°	461.5	471.8	498.6	530.6	547.2
45°	433.6	445.0	473.9	509.0	527.5
47.5°	404.7	418.1	448.1	487.3	505.9
50°	376.8	390.2	424.3	464.6	483.2
52.5°	347.9	363.4	399.5	440.8	460.4
55°	320.0	335.5	374.8	416.1	436.7
57.5°	292.2	307.7	348.9	391.3	411.9
60°	264.3	280.8	324.2	365.5	387.1
62.5°	236.4	254.0	298.4	340.7	361.3
65°	209.6	228.2	272.5	313.8	335.5
67.5°	183.8	203.4	246.7	287.0	308.7
70°	158.0	177.6	219.9	259.1	280.8
72.5°	133.2	152.8	194.1	229.2	245.7
75°	108.4	129.0	166.2	191.0	201.3
77.5°	84.7	105.3	137.3	153.8	165.2
80°	63.0	80.5	103.2	115.6	119.8
82.5°	43.4	57.8	72.3	75.4	77.4
85°	26.8	34.1	39.2	38.2	38.2
87.5°	12.4	13.4	11.4	8.3	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)