

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: P233051

Luminaire Tested: **FCB-12-4-LD4-25-40-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233051  
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-WDP6  
Description: FAILSAFE 1X4 FCB LED TROFFER  
.060 POLYCARBONATE LENS  
Light Source: (84)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

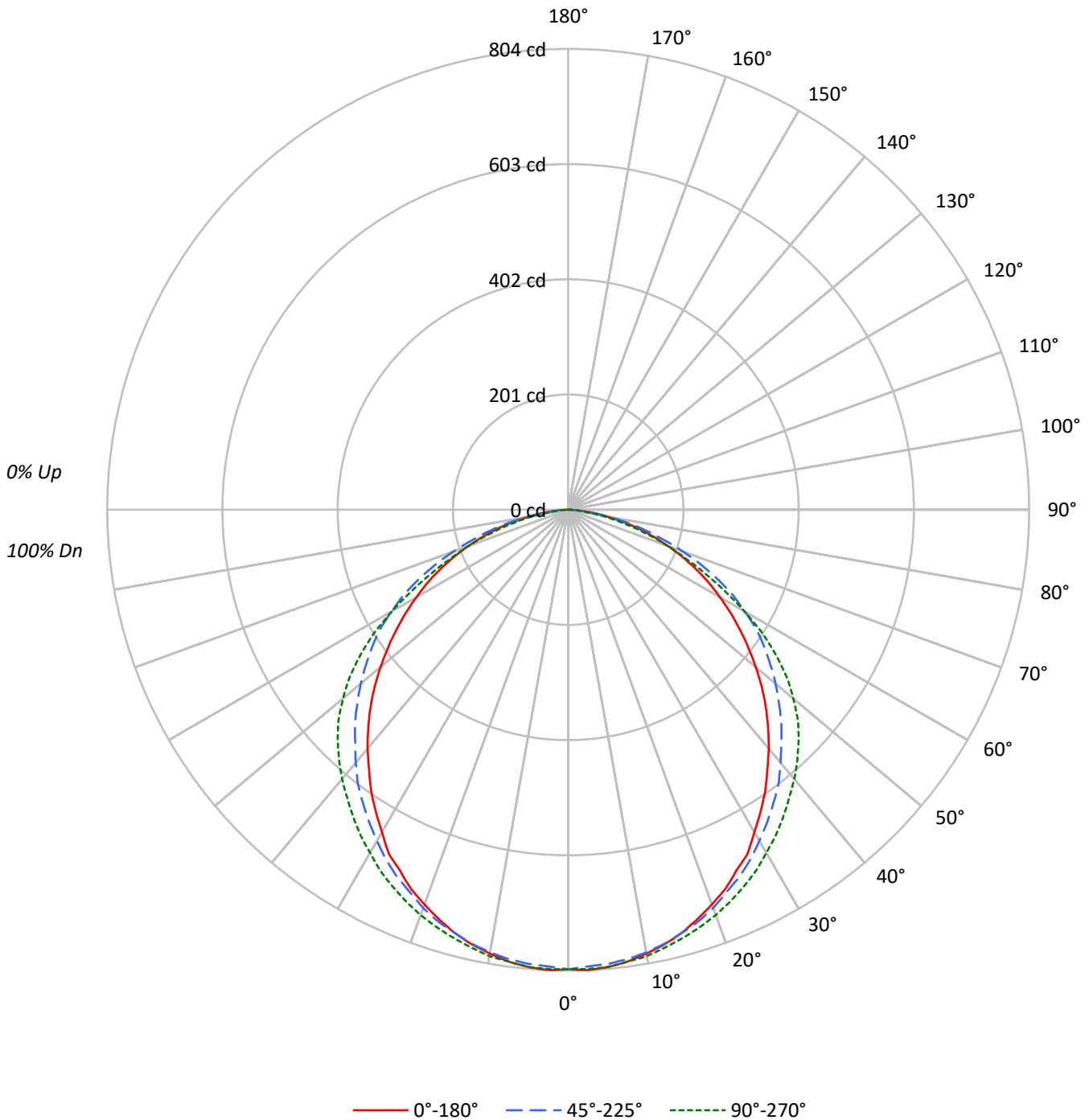
Lumens per Lamp: N/A  
Luminaire Lumens: 2222.0 lumens  
Efficiency: N/A  
Efficacy: 108.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2158	2158	2158
5°	2163	2148	2163
10°	2149	2143	2161
15°	2130	2130	2155
20°	2099	2117	2155
25°	2062	2098	2153
30°	2018	2073	2148
35°	1968	2051	2148
40°	1912	2024	2155
45°	1855	2001	2163
50°	1788	1976	2146
55°	1717	1958	2076
60°	1645	1916	1910
65°	1570	1834	1674
70°	1456	1672	1448
75°	1321	1458	1196
80°	1052	1155	883
85°	744	642	506



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.9	3.4
10°-20°	216.7	9.8
20°-30°	326.8	14.7
30°-40°	391.7	17.6
40°-50°	406.5	18.3
50°-60°	366.6	16.5
60°-70°	267.4	12.0
70°-80°	140.3	6.3
80°-90°	29.9	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°	619.4	27.9
0°-40°	1011.1	45.5
0°-60°	1784.3	80.3
0°-90°	2222.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2222.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	802	802	802	802	802	
5°	801	799	795	801	801	76
15°	765	765	765	773	773	215
25°	694	698	707	722	725	320
35°	599	606	624	647	654	374
45°	488	497	526	558	568	376
55°	366	379	417	445	443	328
65°	246	261	288	277	263	244
75°	127	145	140	122	115	133
85°	24	30	21	18	16	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	801.9	801.9	801.9	801.9	801.9
2.5°	804.0	801.9	797.5	801.9	801.9
5°	800.8	798.6	795.3	800.8	800.8
7.5°	795.3	793.1	790.9	796.4	795.3
10°	786.5	785.4	784.3	790.9	790.9
12.5°	776.7	776.7	775.6	783.2	782.1
15°	764.6	764.6	764.6	773.4	773.4
17.5°	749.3	751.5	753.7	763.5	763.5
20°	732.8	735.0	739.4	751.5	752.6
22.5°	716.4	717.5	721.9	736.1	739.4
25°	694.5	697.8	706.6	721.9	725.2
27.5°	677.0	678.1	687.9	705.5	709.8
30°	649.6	657.3	667.1	686.8	691.2
32.5°	624.4	631.0	646.3	667.1	673.7
35°	599.2	605.8	624.4	647.4	654.0
37.5°	570.7	580.6	602.5	625.5	633.2
40°	544.4	553.2	576.2	604.7	613.4
42.5°	515.9	524.7	549.9	581.7	591.5
45°	487.5	497.3	525.8	557.6	568.5
47.5°	457.9	468.8	498.4	533.5	543.3
50°	427.2	439.3	472.1	508.3	512.7
52.5°	396.5	409.7	444.7	476.5	480.9
55°	365.9	379.0	417.4	444.7	442.6
57.5°	336.3	350.5	390.0	404.2	402.0
60°	305.6	321.0	356.0	362.6	354.9
62.5°	277.1	291.4	324.2	318.8	308.9
65°	246.5	260.7	288.1	277.1	262.9
67.5°	215.8	233.3	250.9	232.2	221.3
70°	185.1	204.8	212.5	193.9	184.0
72.5°	155.6	176.4	174.2	155.6	149.0
75°	127.1	144.6	140.2	121.6	115.0
77.5°	96.4	116.1	106.3	90.9	85.4
80°	67.9	85.4	74.5	61.3	57.0
82.5°	44.9	57.0	46.0	36.1	32.9
85°	24.1	29.6	20.8	17.5	16.4
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)