

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: P233164

Luminaire Tested: **FCB-24-4-LD4-75-50-UNV-EDD1**

Issue Date: 3/3/2020



**Test Information**

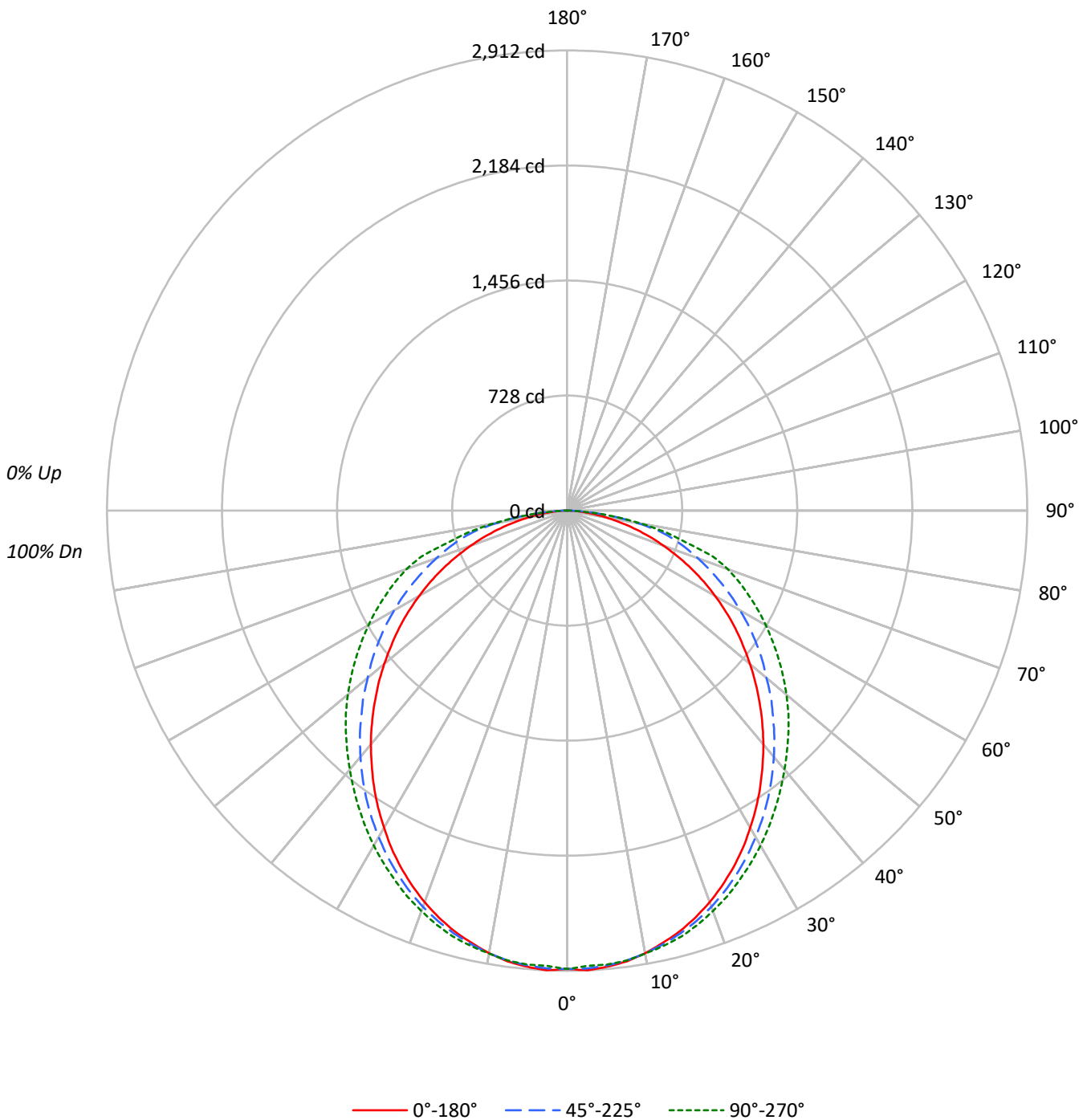
Test Method: LM-79-08  
Report Number: P233164  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-4-LD4-75-50-UNV-EDD1  
Description: FAILSAFE 2X4 FCB LED TROFFER  
OPAL DIFFUSER, NO LENS  
Light Source: (168)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8265.0 lumens  
Efficiency: N/A  
Efficacy: 119.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 69.1  
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	103	99	95	106	101	97	93	97	93	90		93	90	88		89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74		81	76	72		78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62		71	65	61		68	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52		63	57	52		61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35		47	40	35		45	39	35	32
8	60	46	38	32	58	45	37	32	44	37	31		43	36	31		42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28		40	33	28		38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26		37	30	25		36	30	25	24

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

	0°	45°	90°
0°	3903	3903	3903
5°	3914	3902	3895
10°	3886	3886	3889
15°	3839	3859	3887
20°	3776	3821	3861
25°	3697	3768	3831
30°	3601	3706	3803
35°	3500	3644	3774
40°	3395	3574	3758
45°	3279	3505	3769
50°	3163	3448	3791
55°	3047	3425	3830
60°	2909	3404	3906
65°	2757	3406	4036
70°	2549	3462	4253
75°	2280	3619	4046
80°	1908	3464	3705
85°	1442	2665	2533



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.1	3.3
10°-20°	780.1	9.4
20°-30°	1166.2	14.1
30°-40°	1383.5	16.7
40°-50°	1424.0	17.2
50°-60°	1306.3	15.8
60°-70°	1056.2	12.8
70°-80°	685.5	8.3
80°-90°	189.0	2.3
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°	2220.4	26.9
0°-40°	3603.9	43.6
0°-60°	6334.3	76.6
0°-90°	8265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8265.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2901	2901	2901	2901	2901	
5°	2898	2878	2889	2886	2884	275
15°	2756	2745	2770	2782	2790	776
25°	2490	2493	2538	2561	2581	1146
35°	2131	2148	2219	2267	2298	1333
45°	1723	1752	1842	1930	1981	1330
55°	1299	1338	1460	1579	1633	1160
65°	866	917	1070	1211	1268	856
75°	439	521	696	778	778	466
85°	93	158	173	167	164	114
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2900.6	2900.6	2900.6	2900.6	2900.6
2.5°	2911.9	2889.3	2900.6	2897.8	2883.6
5°	2897.8	2877.9	2889.3	2886.4	2883.6
7.5°	2877.9	2858.1	2872.3	2869.5	2872.3
10°	2844.0	2827.0	2844.0	2846.8	2846.8
12.5°	2801.5	2787.4	2810.0	2815.7	2821.3
15°	2756.3	2744.9	2770.4	2781.7	2790.2
17.5°	2699.7	2691.2	2722.3	2736.5	2747.8
20°	2637.4	2634.6	2668.5	2682.7	2696.8
22.5°	2566.7	2566.7	2606.3	2623.3	2643.1
25°	2490.3	2493.1	2538.4	2561.0	2580.8
27.5°	2408.2	2411.0	2464.8	2493.1	2515.7
30°	2317.6	2329.0	2385.6	2422.3	2447.8
32.5°	2227.1	2241.2	2303.5	2345.9	2374.2
35°	2130.9	2147.8	2218.6	2266.7	2297.8
37.5°	2031.8	2051.6	2128.0	2181.8	2218.6
40°	1932.8	1955.4	2034.7	2096.9	2139.4
42.5°	1828.1	1853.5	1941.3	2014.8	2060.1
45°	1723.4	1751.7	1842.2	1930.0	1980.9
47.5°	1618.7	1652.6	1748.8	1845.1	1898.8
50°	1511.1	1545.1	1647.0	1757.3	1811.1
52.5°	1403.6	1443.2	1556.4	1669.6	1723.4
55°	1298.9	1338.5	1460.2	1579.1	1632.8
57.5°	1191.4	1231.0	1364.0	1488.5	1542.3
60°	1081.0	1126.3	1264.9	1392.3	1451.7
62.5°	973.5	1021.6	1168.7	1304.6	1361.2
65°	865.9	916.9	1069.7	1211.2	1267.8
67.5°	755.6	815.0	973.5	1117.8	1177.2
70°	648.0	713.1	880.1	1024.4	1081.0
72.5°	543.3	614.1	786.7	933.8	967.8
75°	438.6	520.7	696.1	778.2	778.2
77.5°	339.6	430.1	594.3	625.4	642.4
80°	246.2	345.2	447.1	483.9	478.2
82.5°	164.1	263.2	319.8	319.8	311.3
85°	93.4	158.5	172.6	167.0	164.1
87.5°	39.6	59.4	53.8	42.4	36.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)