

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: P233180

Luminaire Tested: **FCB-24-4-LD4-60-50-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233180  
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-LD4-60-50-UNV-EDD1-WDA6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (168)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

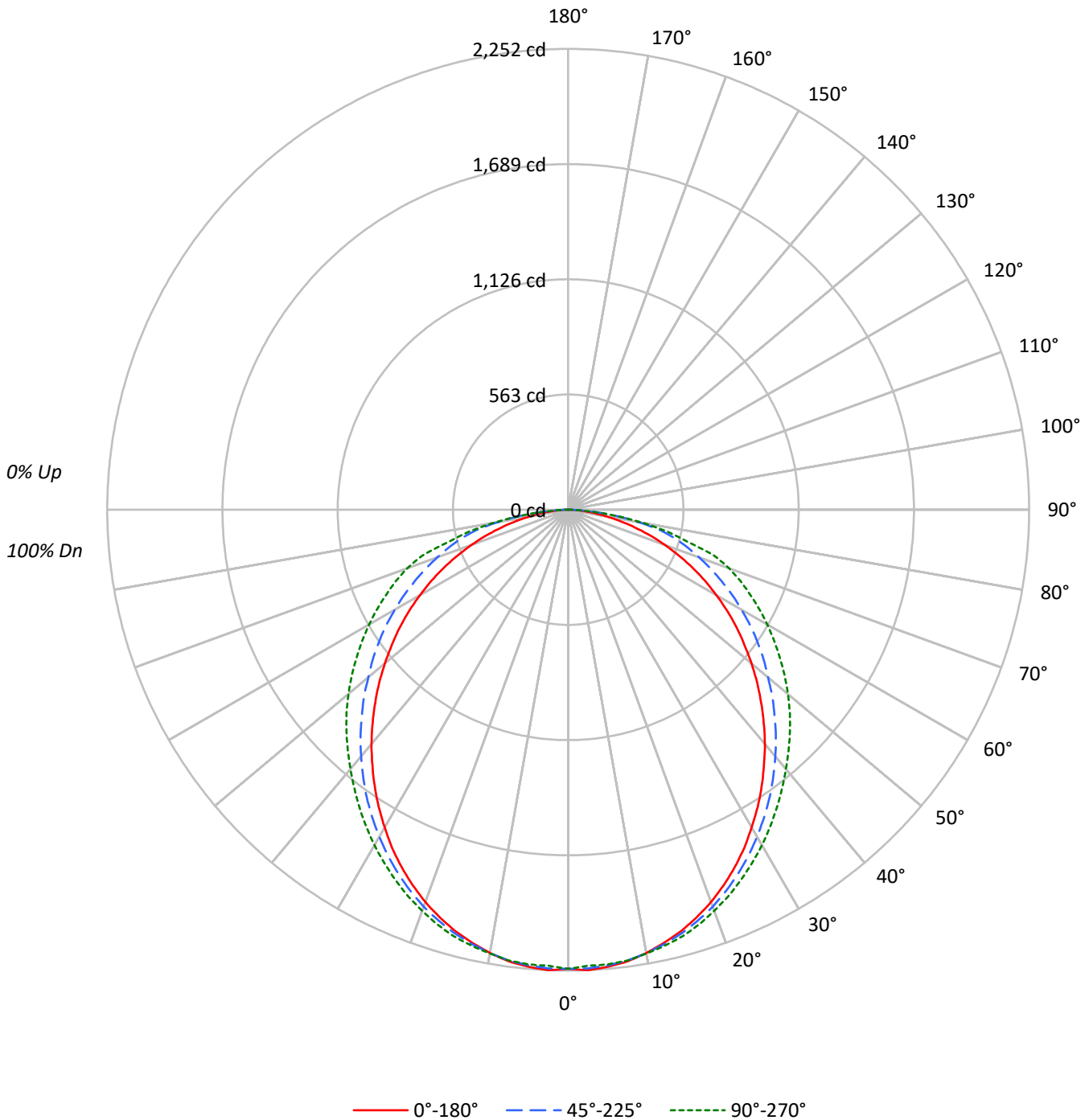
Lumens per Lamp: N/A  
Luminaire Lumens: 6393.0 lumens  
Efficiency: N/A  
Efficacy: 122.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 52.2  
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°	3019	3019	3019
5°	3027	3019	3013
10°	3005	3005	3008
15°	2970	2985	3006
20°	2921	2955	2987
25°	2860	2915	2964
30°	2785	2867	2942
35°	2707	2819	2919
40°	2626	2764	2907
45°	2536	2712	2915
50°	2447	2667	2932
55°	2357	2650	2963
60°	2250	2633	3022
65°	2132	2634	3122
70°	1972	2678	3290
75°	1764	2799	3129
80°	1475	2679	2866
85°	1115	2061	1961



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	212.0	3.3
10°-20°	603.4	9.4
20°-30°	902.1	14.1
30°-40°	1070.2	16.7
40°-50°	1101.5	17.2
50°-60°	1010.4	15.8
60°-70°	817.0	12.8
70°-80°	530.2	8.3
80°-90°	146.2	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°	1717.5	26.9
0°-40°	2787.7	43.6
0°-60°	4899.6	76.6
0°-90°	6393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6393.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2244	2244	2244	2244	2244	
5°	2241	2226	2235	2233	2230	213
15°	2132	2123	2143	2152	2158	601
25°	1926	1928	1963	1981	1996	887
35°	1648	1661	1716	1753	1777	1031
45°	1333	1355	1425	1493	1532	1029
55°	1005	1035	1130	1221	1263	898
65°	670	709	827	937	981	662
75°	339	403	538	602	602	361
85°	72	123	134	129	127	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2243.6	2243.6	2243.6	2243.6	2243.6
2.5°	2252.4	2234.9	2243.6	2241.4	2230.5
5°	2241.4	2226.1	2234.9	2232.7	2230.5
7.5°	2226.1	2210.8	2221.7	2219.5	2221.7
10°	2199.8	2186.7	2199.8	2202.0	2202.0
12.5°	2167.0	2156.1	2173.6	2177.9	2182.3
15°	2132.0	2123.2	2142.9	2151.7	2158.2
17.5°	2088.2	2081.6	2105.7	2116.7	2125.4
20°	2040.0	2037.9	2064.1	2075.1	2086.0
22.5°	1985.3	1985.3	2016.0	2029.1	2044.4
25°	1926.2	1928.4	1963.4	1980.9	1996.3
27.5°	1862.7	1864.9	1906.5	1928.4	1945.9
30°	1792.7	1801.5	1845.2	1873.7	1893.4
32.5°	1722.7	1733.6	1781.8	1814.6	1836.5
35°	1648.2	1661.4	1716.1	1753.3	1777.4
37.5°	1571.6	1586.9	1646.0	1687.6	1716.1
40°	1495.0	1512.5	1573.8	1622.0	1654.8
42.5°	1414.0	1433.7	1501.6	1558.5	1593.5
45°	1333.0	1354.9	1425.0	1492.8	1532.2
47.5°	1252.0	1278.3	1352.7	1427.2	1468.7
50°	1168.9	1195.1	1273.9	1359.3	1400.9
52.5°	1085.7	1116.3	1203.9	1291.4	1333.0
55°	1004.7	1035.3	1129.5	1221.4	1263.0
57.5°	921.5	952.2	1055.0	1151.4	1192.9
60°	836.2	871.2	978.4	1076.9	1122.9
62.5°	753.0	790.2	904.0	1009.1	1052.9
65°	669.8	709.2	827.4	936.8	980.6
67.5°	584.4	630.4	753.0	864.6	910.6
70°	501.3	551.6	680.7	792.4	836.2
72.5°	420.3	475.0	608.5	722.3	748.6
75°	339.3	402.8	538.5	601.9	601.9
77.5°	262.7	332.7	459.7	483.7	496.9
80°	190.4	267.0	345.8	374.3	369.9
82.5°	127.0	203.6	247.3	247.3	240.8
85°	72.2	122.6	133.5	129.1	127.0
87.5°	30.6	46.0	41.6	32.8	28.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)