

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: P233200

Luminaire Tested: **FCB-24-4-LD4-60-50-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233200  
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-WDP6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 POLYCARBONATE LENS  
Light Source: (168)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

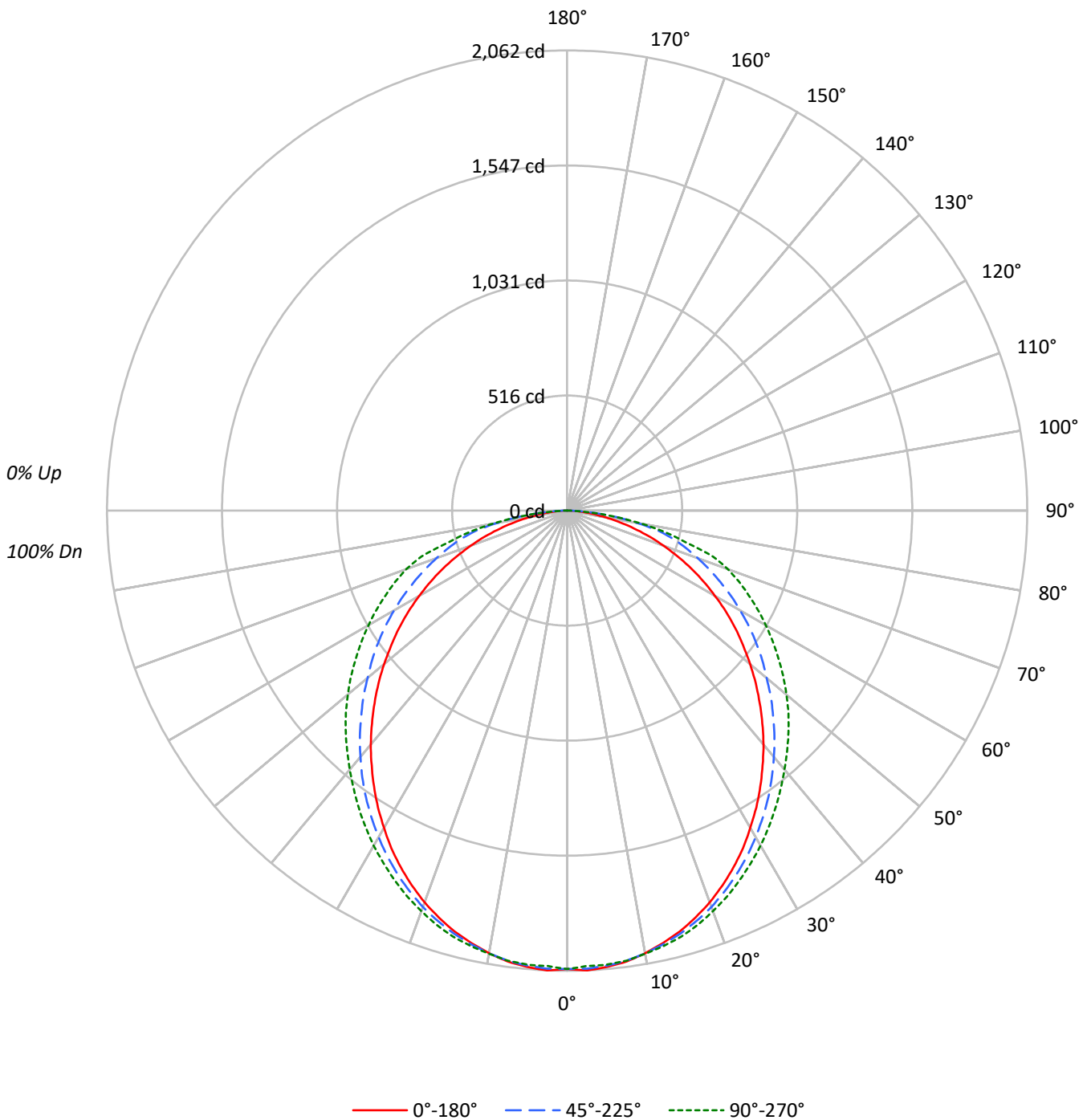
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5854.0 lumens  
Efficiency: N/A  
Efficacy: 112.1 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°	2764	2764	2764
5°	2772	2764	2759
10°	2752	2752	2755
15°	2719	2733	2753
20°	2675	2706	2735
25°	2619	2669	2714
30°	2550	2625	2694
35°	2479	2581	2673
40°	2405	2531	2661
45°	2323	2483	2670
50°	2240	2442	2685
55°	2158	2426	2713
60°	2060	2411	2767
65°	1953	2412	2859
70°	1806	2452	3012
75°	1615	2563	2865
80°	1351	2454	2624
85°	1020	1888	1795



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	194.1	3.3
10°-20°	552.5	9.4
20°-30°	826.0	14.1
30°-40°	979.9	16.7
40°-50°	1008.6	17.2
50°-60°	925.3	15.8
60°-70°	748.1	12.8
70°-80°	485.5	8.3
80°-90°	133.9	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°	1572.7	26.9
0°-40°	2552.6	43.6
0°-60°	4486.5	76.6
0°-90°	5854.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5854.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2054	2054	2054	2054	2054	
5°	2052	2038	2046	2044	2042	195
15°	1952	1944	1962	1970	1976	550
25°	1764	1766	1798	1814	1828	812
35°	1509	1521	1571	1606	1628	944
45°	1221	1241	1305	1367	1403	942
55°	920	948	1034	1118	1156	822
65°	613	649	758	858	898	606
75°	311	369	493	551	551	330
85°	66	112	122	118	116	81
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2054.4	2054.4	2054.4	2054.4	2054.4
2.5°	2062.5	2046.4	2054.4	2052.4	2042.4
5°	2052.4	2038.4	2046.4	2044.4	2042.4
7.5°	2038.4	2024.4	2034.4	2032.4	2034.4
10°	2014.4	2002.3	2014.4	2016.4	2016.4
12.5°	1984.3	1974.3	1990.3	1994.3	1998.3
15°	1952.2	1944.2	1962.2	1970.3	1976.3
17.5°	1912.1	1906.1	1928.2	1938.2	1946.2
20°	1868.0	1866.0	1890.1	1900.1	1910.1
22.5°	1817.9	1817.9	1846.0	1858.0	1872.1
25°	1763.8	1765.8	1797.9	1813.9	1828.0
27.5°	1705.7	1707.7	1745.8	1765.8	1781.9
30°	1641.6	1649.6	1689.7	1715.7	1733.8
32.5°	1577.4	1587.4	1631.5	1661.6	1681.6
35°	1509.3	1521.3	1571.4	1605.5	1627.5
37.5°	1439.1	1453.1	1507.3	1545.3	1571.4
40°	1369.0	1385.0	1441.1	1485.2	1515.3
42.5°	1294.8	1312.8	1375.0	1427.1	1459.2
45°	1220.6	1240.7	1304.8	1367.0	1403.0
47.5°	1146.5	1170.5	1238.7	1306.8	1344.9
50°	1070.3	1094.4	1166.5	1244.7	1282.8
52.5°	994.2	1022.2	1102.4	1182.6	1220.6
55°	920.0	948.1	1034.2	1118.4	1156.5
57.5°	843.8	871.9	966.1	1054.3	1092.4
60°	765.7	797.7	895.9	986.1	1028.2
62.5°	689.5	723.6	827.8	924.0	964.1
65°	613.3	649.4	757.6	857.9	897.9
67.5°	535.2	577.3	689.5	791.7	833.8
70°	459.0	505.1	623.4	725.6	765.7
72.5°	384.8	434.9	557.2	661.4	685.5
75°	310.7	368.8	493.1	551.2	551.2
77.5°	240.5	304.7	420.9	443.0	455.0
80°	174.4	244.5	316.7	342.7	338.7
82.5°	116.3	186.4	226.5	226.5	220.5
85°	66.1	112.2	122.3	118.3	116.3
87.5°	28.1	42.1	38.1	30.1	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)