

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: P233235

Luminaire Tested: **FCB-24-4-LD4-50-40-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233235  
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-LD4-50-40-UNV-EDD1-WDP12  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (168)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

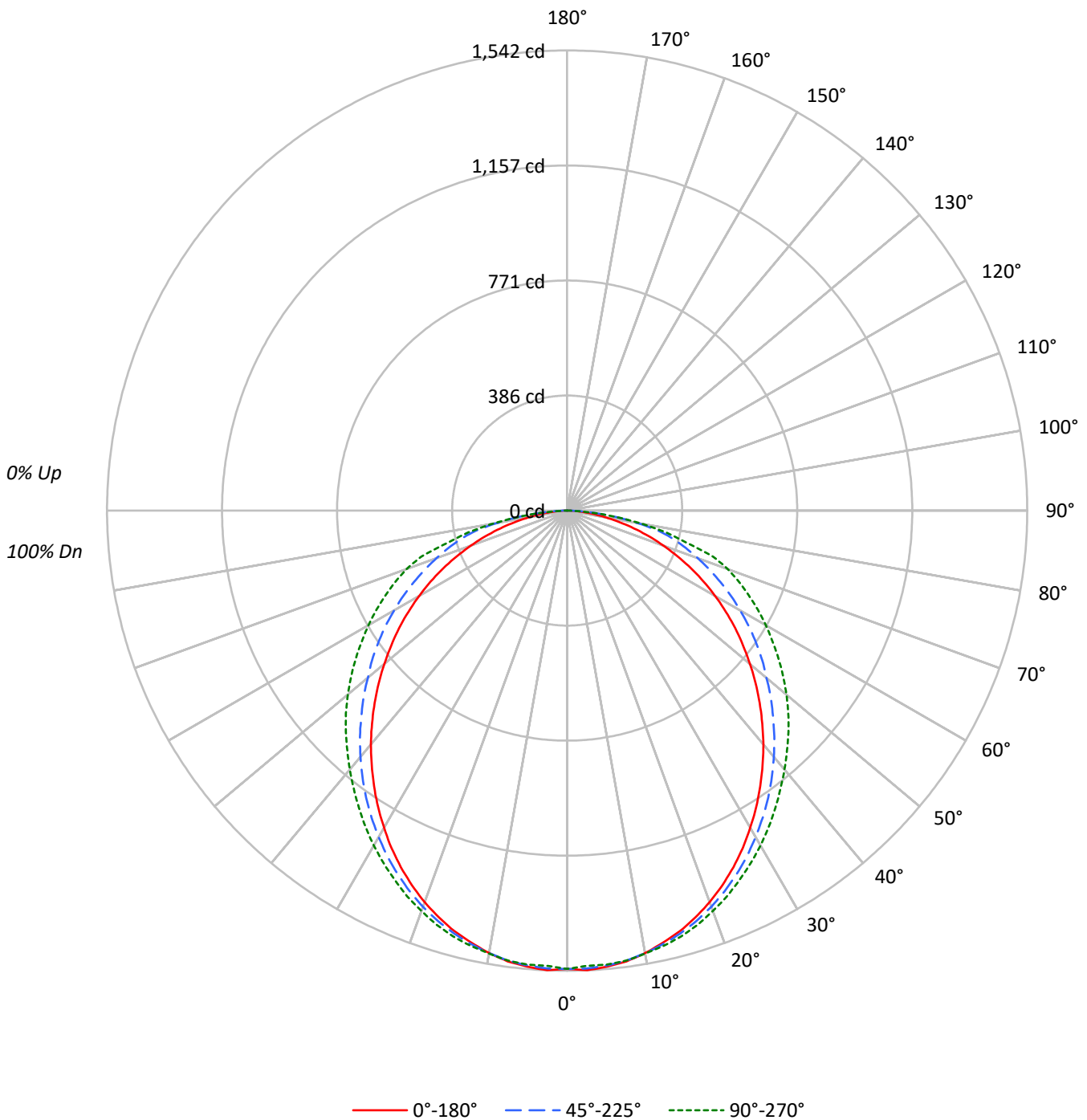
Lumens per Lamp: N/A  
Luminaire Lumens: 4376.0 lumens  
Efficiency: N/A  
Efficacy: 107.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 40.7  
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°	2066	2066	2066
5°	2072	2066	2062
10°	2057	2057	2059
15°	2033	2043	2058
20°	1999	2023	2045
25°	1957	1995	2029
30°	1906	1962	2014
35°	1853	1929	1998
40°	1797	1892	1989
45°	1736	1856	1996
50°	1675	1825	2007
55°	1613	1814	2028
60°	1540	1802	2068
65°	1460	1803	2137
70°	1350	1833	2251
75°	1207	1916	2142
80°	1010	1834	1962
85°	763	1411	1342



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.1	3.3
10°-20°	413.0	9.4
20°-30°	617.5	14.1
30°-40°	732.5	16.7
40°-50°	753.9	17.2
50°-60°	691.7	15.8
60°-70°	559.2	12.8
70°-80°	362.9	8.3
80°-90°	100.1	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°	1175.6	26.9
0°-40°	1908.2	43.6
0°-60°	3353.8	76.6
0°-90°	4376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4376.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1536	1536	1536	1536	1536	
5°	1534	1524	1530	1528	1527	146
15°	1459	1453	1467	1473	1477	411
25°	1318	1320	1344	1356	1366	607
35°	1128	1137	1175	1200	1217	706
45°	912	927	975	1022	1049	704
55°	688	709	773	836	864	614
65°	458	485	566	641	671	453
75°	232	276	369	412	412	247
85°	49	84	91	88	87	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1535.7	1535.7	1535.7	1535.7	1535.7
2.5°	1541.7	1529.8	1535.7	1534.3	1526.8
5°	1534.3	1523.8	1529.8	1528.3	1526.8
7.5°	1523.8	1513.3	1520.8	1519.3	1520.8
10°	1505.8	1496.8	1505.8	1507.3	1507.3
12.5°	1483.3	1475.8	1487.8	1490.8	1493.8
15°	1459.3	1453.3	1466.8	1472.8	1477.3
17.5°	1429.4	1424.9	1441.4	1448.8	1454.8
20°	1396.4	1394.9	1412.9	1420.4	1427.9
22.5°	1359.0	1359.0	1379.9	1388.9	1399.4
25°	1318.5	1320.0	1344.0	1356.0	1366.4
27.5°	1275.0	1276.5	1305.0	1320.0	1332.0
30°	1227.1	1233.1	1263.1	1282.5	1296.0
32.5°	1179.2	1186.6	1219.6	1242.1	1257.1
35°	1128.2	1137.2	1174.7	1200.1	1216.6
37.5°	1075.8	1086.3	1126.7	1155.2	1174.7
40°	1023.3	1035.3	1077.3	1110.2	1132.7
42.5°	967.9	981.4	1027.8	1066.8	1090.8
45°	912.5	927.4	975.4	1021.8	1048.8
47.5°	857.0	875.0	925.9	976.9	1005.4
50°	800.1	818.1	872.0	930.4	958.9
52.5°	743.2	764.1	824.1	884.0	912.5
55°	687.7	708.7	773.1	836.0	864.5
57.5°	630.8	651.8	722.2	788.1	816.6
60°	572.3	596.3	669.7	737.2	768.6
62.5°	515.4	540.9	618.8	690.7	720.7
65°	458.5	485.4	566.4	641.3	671.2
67.5°	400.0	431.5	515.4	591.8	623.3
70°	343.1	377.6	466.0	542.4	572.3
72.5°	287.7	325.1	416.5	494.4	512.4
75°	232.2	275.7	368.6	412.0	412.0
77.5°	179.8	227.7	314.6	331.1	340.1
80°	130.4	182.8	236.7	256.2	253.2
82.5°	86.9	139.3	169.3	169.3	164.8
85°	49.4	83.9	91.4	88.4	86.9
87.5°	21.0	31.5	28.5	22.5	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)