

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: P233215

Luminaire Tested: **FCB-24-4-LD4-50-40-UNV-EDD1-WDA12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233215  
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-WDA12  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.125 ACRYLIC LENS  
Light Source: (168)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

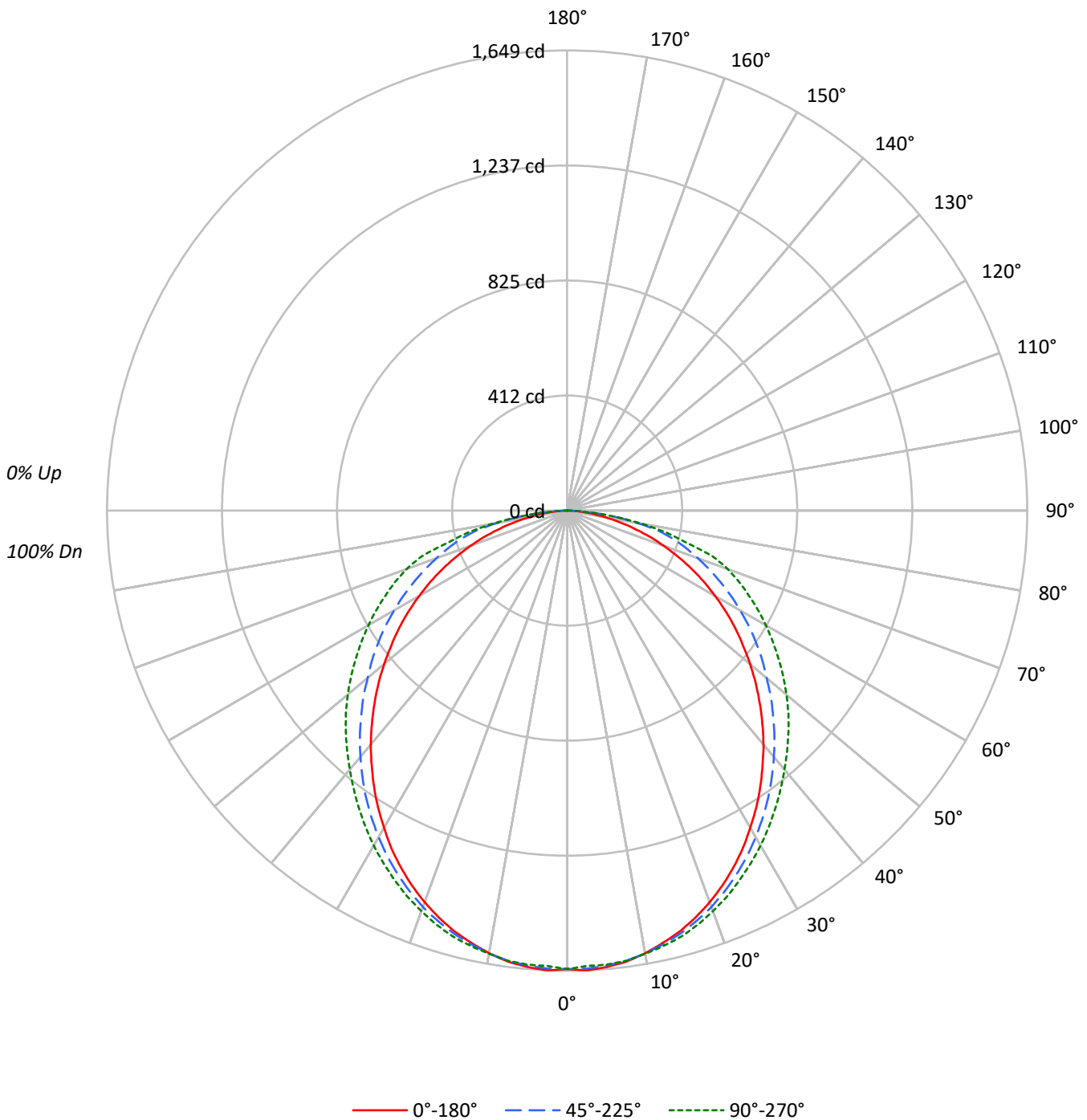
Lumens per Lamp: N/A  
Luminaire Lumens: 4681.0 lumens  
Efficiency: N/A  
Efficacy: 115.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P233215

CATALOG NUMBER: FCB-24-4-LD4-50-40-UNV-EDD1-WDA12

### Luminous Intensity Polar Plot





TEST NUMBER: P233215

CATALOG NUMBER: FCB-24-4-LD4-50-40-UNV-EDD1-WDA12

**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°	2210	2210	2210
5°	2217	2210	2206
10°	2201	2201	2203
15°	2174	2186	2201
20°	2139	2164	2187
25°	2094	2134	2170
30°	2039	2099	2154
35°	1982	2064	2138
40°	1923	2024	2128
45°	1857	1985	2135
50°	1792	1953	2147
55°	1726	1940	2169
60°	1647	1928	2213
65°	1561	1929	2286
70°	1444	1961	2408
75°	1291	2050	2291
80°	1080	1962	2099
85°	817	1510	1436



TEST NUMBER: P233215

CATALOG NUMBER: FCB-24-4-LD4-50-40-UNV-EDD1-WDA12

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.2	3.3
10°-20°	441.8	9.4
20°-30°	660.5	14.1
30°-40°	783.6	16.7
40°-50°	806.5	17.2
50°-60°	739.9	15.8
60°-70°	598.2	12.8
70°-80°	388.2	8.3
80°-90°	107.1	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°	1257.6	26.9
0°-40°	2041.1	43.6
0°-60°	3587.5	76.6
0°-90°	4681.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4681.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1643	1643	1643	1643	1643	
5°	1641	1630	1636	1635	1633	156
15°	1561	1555	1569	1576	1580	440
25°	1410	1412	1438	1450	1462	649
35°	1207	1216	1256	1284	1301	755
45°	976	992	1043	1093	1122	753
55°	736	758	827	894	925	657
65°	490	519	606	686	718	485
75°	248	295	394	441	441	264
85°	53	90	98	95	93	65
90°	0	0	0	0	0	



TEST NUMBER: P233215

CATALOG NUMBER: FCB-24-4-LD4-50-40-UNV-EDD1-WDA12

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1642.8	1642.8	1642.8	1642.8	1642.8
2.5°	1649.2	1636.4	1642.8	1641.2	1633.2
5°	1641.2	1630.0	1636.4	1634.8	1633.2
7.5°	1630.0	1618.7	1626.8	1625.2	1626.8
10°	1610.7	1601.1	1610.7	1612.3	1612.3
12.5°	1586.7	1578.7	1591.5	1594.7	1597.9
15°	1561.0	1554.6	1569.1	1575.5	1580.3
17.5°	1529.0	1524.2	1541.8	1549.8	1556.2
20°	1493.7	1492.1	1511.4	1519.4	1527.4
22.5°	1453.7	1453.7	1476.1	1485.7	1496.9
25°	1410.4	1412.0	1437.6	1450.5	1461.7
27.5°	1363.9	1365.5	1396.0	1412.0	1424.8
30°	1312.6	1319.0	1351.1	1371.9	1386.4
32.5°	1261.3	1269.4	1304.6	1328.7	1344.7
35°	1206.8	1216.5	1256.5	1283.8	1301.4
37.5°	1150.8	1162.0	1205.2	1235.7	1256.5
40°	1094.7	1107.5	1152.4	1187.6	1211.7
42.5°	1035.4	1049.8	1099.5	1141.1	1166.8
45°	976.1	992.1	1043.4	1093.1	1121.9
47.5°	916.8	936.0	990.5	1045.0	1075.4
50°	855.9	875.1	932.8	995.3	1025.7
52.5°	794.9	817.4	881.5	945.6	976.1
55°	735.6	758.1	827.0	894.3	924.8
57.5°	674.7	697.2	772.5	843.0	873.5
60°	612.2	637.9	716.4	788.5	822.2
62.5°	551.3	578.6	661.9	738.9	770.9
65°	490.4	519.3	605.8	686.0	718.0
67.5°	427.9	461.6	551.3	633.1	666.7
70°	367.0	403.9	498.4	580.2	612.2
72.5°	307.7	347.8	445.6	528.9	548.1
75°	248.4	294.9	394.3	440.7	440.7
77.5°	192.3	243.6	336.6	354.2	363.8
80°	139.4	195.5	253.2	274.1	270.9
82.5°	93.0	149.1	181.1	181.1	176.3
85°	52.9	89.8	97.8	94.6	93.0
87.5°	22.4	33.7	30.5	24.0	20.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)