

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: P233208

Luminaire Tested: **FCB-24-4-LD4-30-50-UNV-EDD1-WDA12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233208  
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-LD4-30-50-UNV-EDD1-WDA12  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.125 ACRYLIC LENS  
Light Source: (168)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

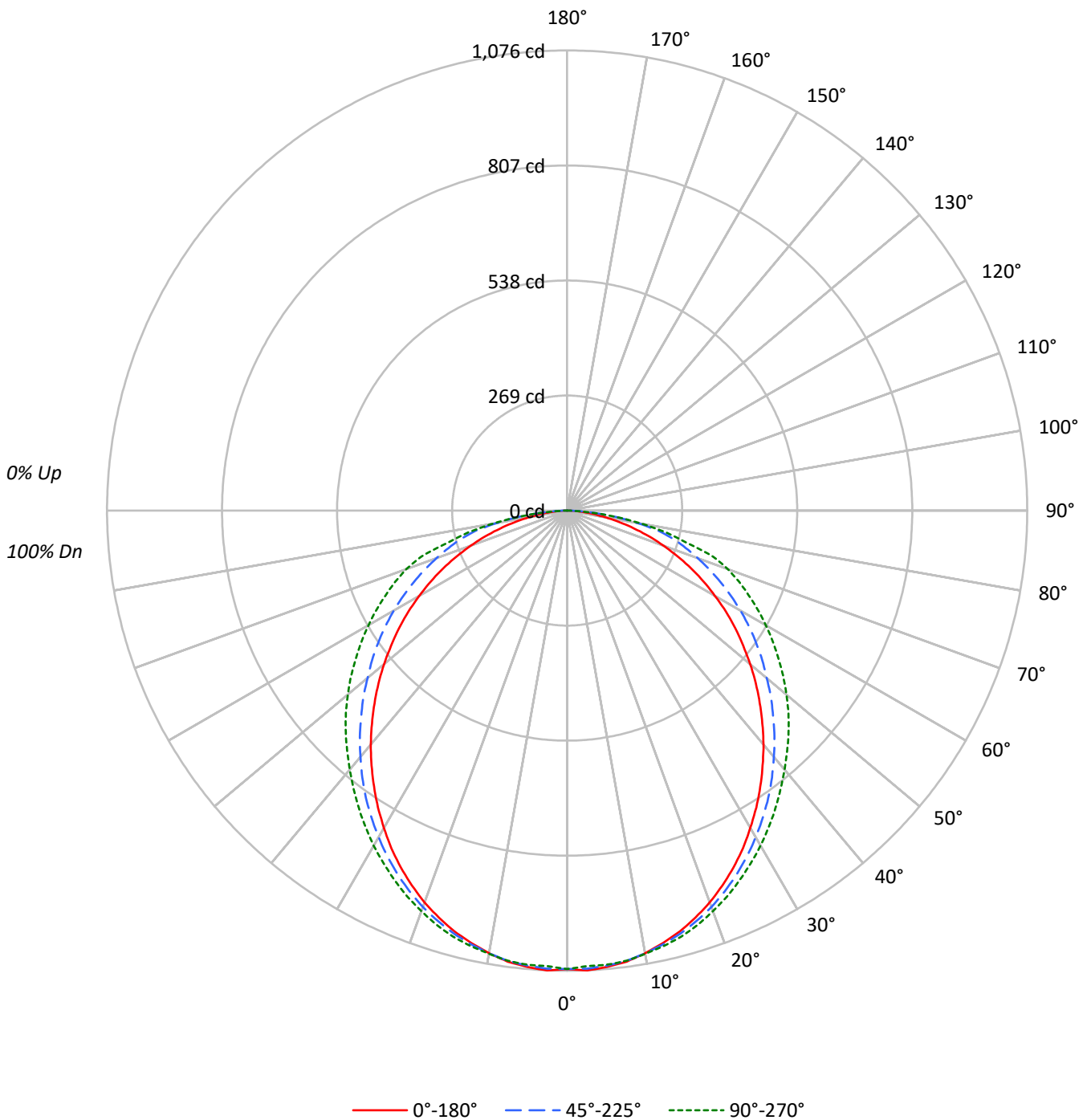
Lumens per Lamp: N/A  
Luminaire Lumens: 3055.0 lumens  
Efficiency: N/A  
Efficacy: 141.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: P233208

CATALOG NUMBER: FCB-24-4-LD4-30-50-UNV-EDD1-WDA12

### Luminous Intensity Polar Plot





TEST NUMBER: P233208

CATALOG NUMBER: FCB-24-4-LD4-30-50-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°	1442	1442	1442
5°	1447	1442	1440
10°	1436	1436	1438
15°	1419	1426	1437
20°	1396	1412	1427
25°	1367	1393	1416
30°	1331	1370	1406
35°	1294	1347	1395
40°	1255	1321	1389
45°	1212	1296	1393
50°	1169	1274	1401
55°	1126	1266	1416
60°	1075	1258	1444
65°	1019	1259	1492
70°	942	1280	1572
75°	843	1338	1495
80°	705	1281	1370
85°	533	985	937



TEST NUMBER: P233208

CATALOG NUMBER: FCB-24-4-LD4-30-50-UNV-EDD1-WDA12

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.3	3.3
10°-20°	288.4	9.4
20°-30°	431.1	14.1
30°-40°	511.4	16.7
40°-50°	526.4	17.2
50°-60°	482.9	15.8
60°-70°	390.4	12.8
70°-80°	253.4	8.3
80°-90°	69.9	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°	820.7	26.9
0°-40°	1332.1	43.6
0°-60°	2341.4	76.6
0°-90°	3055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3055.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1072	1072	1072	1072	1072	
5°	1071	1064	1068	1067	1066	102
15°	1019	1015	1024	1028	1031	287
25°	920	922	938	947	954	424
35°	788	794	820	838	849	493
45°	637	648	681	713	732	492
55°	480	495	540	584	604	429
65°	320	339	395	448	469	316
75°	162	192	257	288	288	172
85°	34	59	64	62	61	42
90°	0	0	0	0	0	



TEST NUMBER: P233208

CATALOG NUMBER: FCB-24-4-LD4-30-50-UNV-EDD1-WDA12

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1072.1	1072.1	1072.1	1072.1	1072.1
2.5°	1076.3	1068.0	1072.1	1071.1	1065.9
5°	1071.1	1063.8	1068.0	1066.9	1065.9
7.5°	1063.8	1056.5	1061.7	1060.6	1061.7
10°	1051.2	1045.0	1051.2	1052.3	1052.3
12.5°	1035.5	1030.3	1038.7	1040.8	1042.9
15°	1018.8	1014.6	1024.0	1028.2	1031.4
17.5°	997.9	994.7	1006.2	1011.5	1015.7
20°	974.9	973.8	986.4	991.6	996.8
22.5°	948.7	948.7	963.4	969.6	977.0
25°	920.5	921.5	938.3	946.6	953.9
27.5°	890.1	891.2	911.1	921.5	929.9
30°	856.7	860.9	881.8	895.4	904.8
32.5°	823.2	828.4	851.4	867.1	877.6
35°	787.6	793.9	820.1	837.8	849.3
37.5°	751.0	758.3	786.6	806.5	820.1
40°	714.4	722.8	752.1	775.1	790.8
42.5°	675.7	685.1	717.6	744.7	761.5
45°	637.0	647.5	680.9	713.4	732.2
47.5°	598.3	610.9	646.4	682.0	701.9
50°	558.6	571.1	608.8	649.6	669.4
52.5°	518.8	533.5	575.3	617.1	637.0
55°	480.1	494.8	539.7	583.7	603.5
57.5°	440.4	455.0	504.2	550.2	570.1
60°	399.6	416.3	467.6	514.6	536.6
62.5°	359.8	377.6	432.0	482.2	503.1
65°	320.1	338.9	395.4	447.7	468.6
67.5°	279.3	301.2	359.8	413.2	435.1
70°	239.5	263.6	325.3	378.7	399.6
72.5°	200.8	227.0	290.8	345.2	357.7
75°	162.1	192.5	257.3	287.6	287.6
77.5°	125.5	159.0	219.7	231.2	237.4
80°	91.0	127.6	165.3	178.9	176.8
82.5°	60.7	97.3	118.2	118.2	115.1
85°	34.5	58.6	63.8	61.7	60.7
87.5°	14.6	22.0	19.9	15.7	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)