

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: P233120

Luminaire Tested: **FCB-24-2-LD4-44-50-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233120  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-2-LD4-44-50-UNV-EDD1-WDP6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 POLYCARBONATE LENS  
Light Source: (84)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

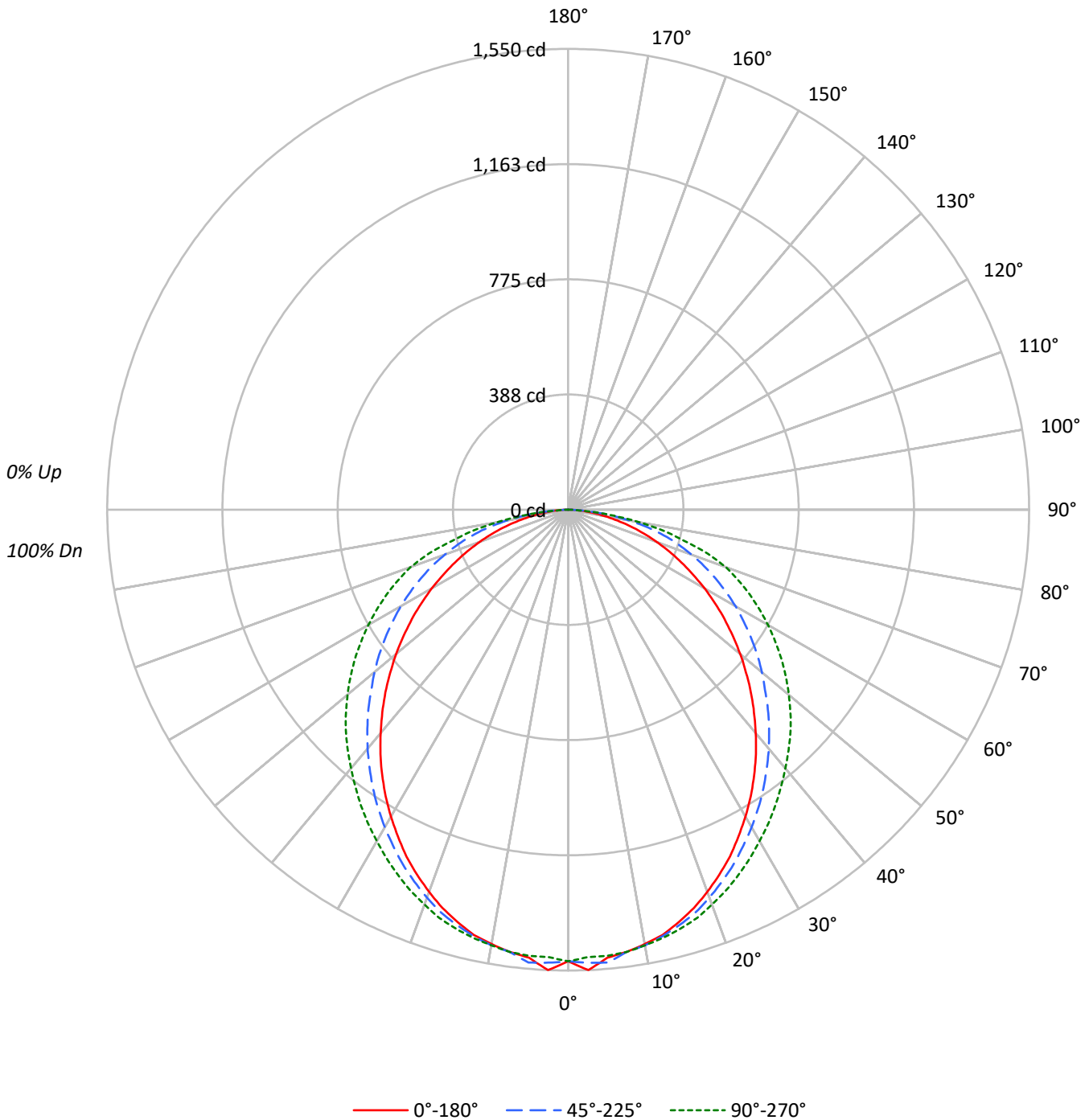
Lumens per Lamp: N/A  
Luminaire Lumens: 4255.0 lumens  
Efficiency: N/A  
Efficacy: 101.8 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 41.8  
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: P233120

CATALOG NUMBER: FCB-24-2-LD4-44-50-UNV-EDD1-WDP6

### Luminous Intensity Polar Plot





TEST NUMBER: P233120

CATALOG NUMBER: FCB-24-2-LD4-44-50-UNV-EDD1-WDP6

**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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4087	4087	4087
5°	4086	4130	4069
10°	4054	4065	4065
15°	4001	4029	4064
20°	3917	3976	4047
25°	3821	3907	4024
30°	3703	3832	3999
35°	3582	3759	3990
40°	3445	3685	3991
45°	3307	3614	4024
50°	3162	3560	4054
55°	3009	3524	4106
60°	2851	3497	4176
65°	2674	3479	4282
70°	2491	3467	4428
75°	2259	3463	4195
80°	1956	3206	3719
85°	1661	2427	2365



TEST NUMBER: P233120

CATALOG NUMBER: FCB-24-2-LD4-44-50-UNV-EDD1-WDP6

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.1	3.4
10°-20°	408.0	9.6
20°-30°	607.0	14.3
30°-40°	717.9	16.9
40°-50°	737.8	17.3
50°-60°	674.2	15.8
60°-70°	539.4	12.7
70°-80°	338.5	8.0
80°-90°	88.2	2.1
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°	1159.0	27.2
0°-40°	1876.9	44.1
0°-60°	3289.0	77.3
0°-90°	4255.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4255.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1519	1519	1519	1519	1519	
5°	1512	1512	1529	1519	1506	144
15°	1436	1438	1446	1455	1459	404
25°	1287	1295	1316	1339	1355	592
35°	1090	1105	1144	1188	1215	681
45°	869	892	950	1020	1057	670
55°	641	672	751	834	875	574
65°	420	457	546	629	672	417
75°	217	259	333	383	404	231
85°	54	68	79	77	77	62
90°	0	0	0	0	0	



TEST NUMBER: P233120

CATALOG NUMBER: FCB-24-2-LD4-44-50-UNV-EDD1-WDP6

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1518.8	1518.8	1518.8	1518.8	1518.8
2.5°	1549.8	1543.6	1525.0	1512.5	1506.3
5°	1512.5	1512.5	1529.1	1518.8	1506.3
7.5°	1500.1	1500.1	1500.1	1531.2	1500.1
10°	1483.6	1485.6	1487.7	1500.1	1487.7
12.5°	1465.0	1465.0	1469.1	1473.2	1475.3
15°	1436.0	1438.1	1446.3	1454.6	1458.7
17.5°	1404.9	1411.2	1421.5	1431.8	1440.1
20°	1367.7	1376.0	1388.4	1404.9	1413.2
22.5°	1328.4	1336.7	1353.2	1371.8	1386.3
25°	1287.0	1295.3	1316.0	1338.7	1355.3
27.5°	1239.4	1249.8	1274.6	1305.6	1322.2
30°	1191.8	1204.2	1233.2	1268.4	1287.0
32.5°	1142.2	1156.7	1189.8	1229.1	1251.8
35°	1090.4	1104.9	1144.2	1187.7	1214.6
37.5°	1036.6	1053.2	1096.6	1146.3	1175.3
40°	980.8	999.4	1049.1	1102.9	1136.0
42.5°	924.9	945.6	999.4	1063.5	1096.6
45°	869.0	891.8	949.7	1020.1	1057.3
47.5°	811.1	838.0	898.0	976.6	1013.9
50°	755.2	782.1	850.4	931.1	968.4
52.5°	697.3	728.3	800.8	883.5	922.8
55°	641.4	672.5	751.1	833.9	875.2
57.5°	585.6	616.6	699.4	784.2	825.6
60°	529.7	562.8	649.7	732.5	775.9
62.5°	473.8	509.0	598.0	682.8	724.2
65°	420.0	457.3	546.3	629.0	672.5
67.5°	368.3	407.6	494.5	575.2	618.7
70°	316.6	355.9	440.7	519.4	562.8
72.5°	266.9	306.2	389.0	459.4	492.5
75°	217.3	258.6	333.1	382.8	403.5
77.5°	169.7	211.1	275.2	308.3	331.1
80°	126.2	161.4	206.9	231.7	240.0
82.5°	86.9	115.9	144.8	151.0	155.2
85°	53.8	68.3	78.6	76.6	76.6
87.5°	24.8	26.9	22.8	16.6	10.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)