

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: P233106

Luminaire Tested: **FCB-24-2-LD4-44-35-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233106  
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-LD4-44-35-UNV-EDD1-WDA6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (84)3500K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

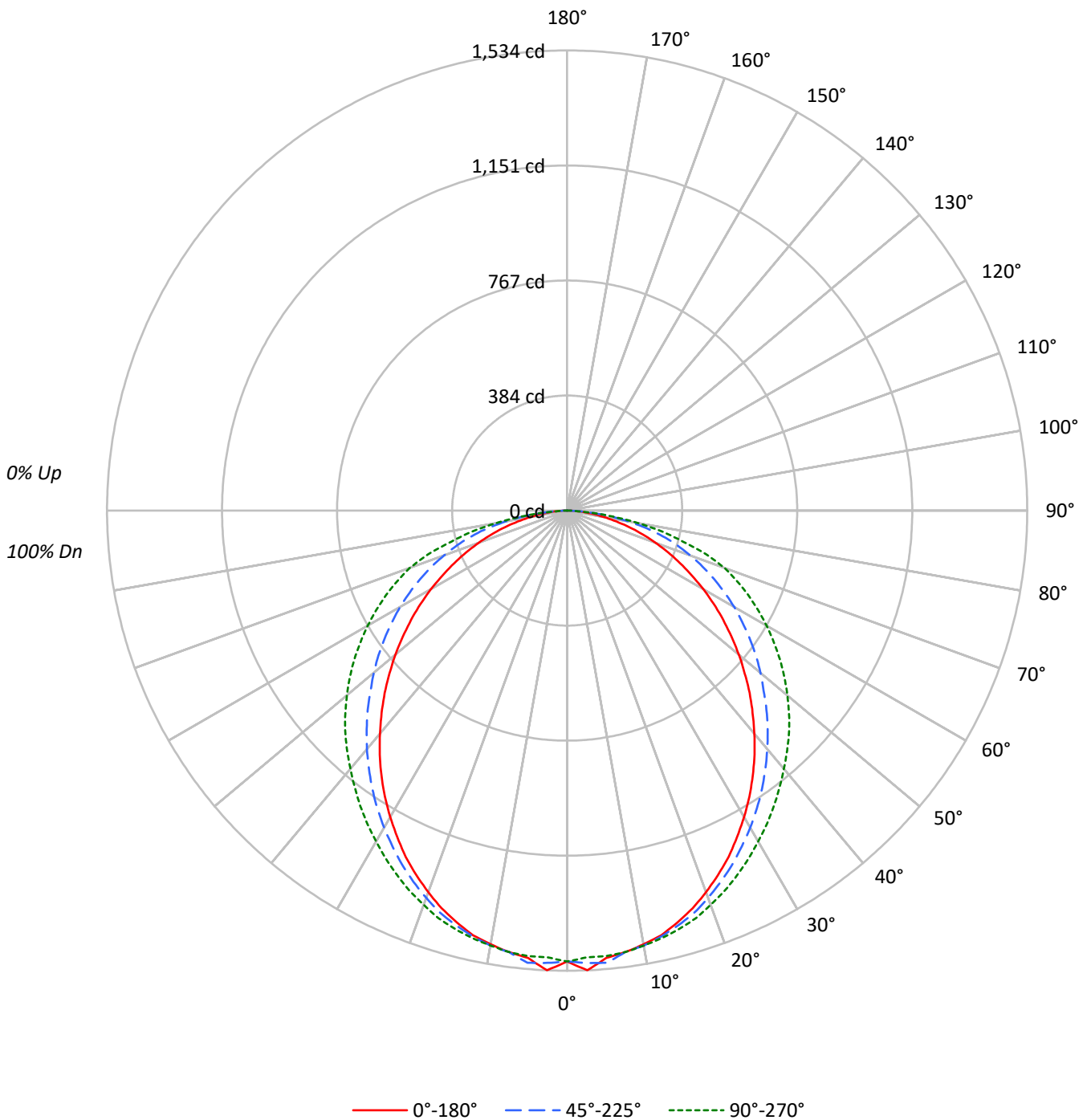
Lumens per Lamp: N/A  
Luminaire Lumens: 4211.0 lumens  
Efficiency: N/A  
Efficacy: 100.7 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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

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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	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°	4045	4045	4045
5°	4044	4088	4027
10°	4012	4023	4023
15°	3959	3988	4022
20°	3876	3935	4005
25°	3782	3867	3983
30°	3665	3792	3958
35°	3545	3720	3949
40°	3410	3647	3949
45°	3273	3577	3982
50°	3129	3523	4012
55°	2978	3487	4064
60°	2821	3461	4133
65°	2647	3442	4238
70°	2465	3432	4382
75°	2235	3428	4152
80°	1936	3174	3680
85°	1643	2402	2340



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.6	3.4
10°-20°	403.8	9.6
20°-30°	600.7	14.3
30°-40°	710.5	16.9
40°-50°	730.2	17.3
50°-60°	667.2	15.8
60°-70°	533.8	12.7
70°-80°	335.0	8.0
80°-90°	87.2	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°	1147.1	27.2
0°-40°	1857.5	44.1
0°-60°	3255.0	77.3
0°-90°	4211.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4211.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1503	1503	1503	1503	1503	
5°	1497	1497	1513	1503	1491	142
15°	1421	1423	1431	1440	1444	400
25°	1274	1282	1302	1325	1341	586
35°	1079	1094	1132	1175	1202	674
45°	860	883	940	1010	1046	663
55°	635	666	743	825	866	568
65°	416	453	541	622	666	413
75°	215	256	330	379	399	228
85°	53	68	78	76	76	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1503.0	1503.0	1503.0	1503.0	1503.0
2.5°	1533.8	1527.6	1509.2	1496.9	1490.8
5°	1496.9	1496.9	1513.3	1503.0	1490.8
7.5°	1484.6	1484.6	1484.6	1515.3	1484.6
10°	1468.2	1470.3	1472.3	1484.6	1472.3
12.5°	1449.8	1449.8	1453.9	1458.0	1460.0
15°	1421.1	1423.2	1431.4	1439.6	1443.7
17.5°	1390.4	1396.6	1406.8	1417.0	1425.2
20°	1353.6	1361.8	1374.0	1390.4	1398.6
22.5°	1314.7	1322.8	1339.2	1357.7	1372.0
25°	1273.7	1281.9	1302.4	1324.9	1341.3
27.5°	1226.6	1236.8	1261.4	1292.1	1308.5
30°	1179.5	1191.8	1220.5	1255.3	1273.7
32.5°	1130.4	1144.7	1177.5	1216.4	1238.9
35°	1079.2	1093.5	1132.4	1175.4	1202.0
37.5°	1025.9	1042.3	1085.3	1134.5	1163.1
40°	970.6	989.1	1038.2	1091.5	1124.2
42.5°	915.3	935.8	989.1	1052.5	1085.3
45°	860.1	882.6	939.9	1009.5	1046.4
47.5°	802.7	829.3	888.7	966.5	1003.4
50°	747.4	774.0	841.6	921.5	958.3
52.5°	690.1	720.8	792.5	874.4	913.3
55°	634.8	665.5	743.3	825.2	866.2
57.5°	579.5	610.2	692.1	776.1	817.1
60°	524.2	557.0	643.0	724.9	767.9
62.5°	468.9	503.7	591.8	675.8	716.7
65°	415.7	452.6	540.6	622.5	665.5
67.5°	364.5	403.4	489.4	569.3	612.3
70°	313.3	352.2	436.2	514.0	557.0
72.5°	264.2	303.1	385.0	454.6	487.4
75°	215.0	256.0	329.7	378.8	399.3
77.5°	167.9	208.9	272.4	305.1	327.6
80°	124.9	159.7	204.8	229.3	237.5
82.5°	86.0	114.7	143.3	149.5	153.6
85°	53.2	67.6	77.8	75.8	75.8
87.5°	24.6	26.6	22.5	16.4	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)