

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: P233092

Luminaire Tested: **FCB-24-2-LD4-34-50-UNV-EDD1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233092  
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-LD4-34-50-UNV-EDD1  
Description: FAILSAFE 2X2 FCB LED TROFFER  
OPAL DIFFUSER, NO LENS  
Light Source: (84)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

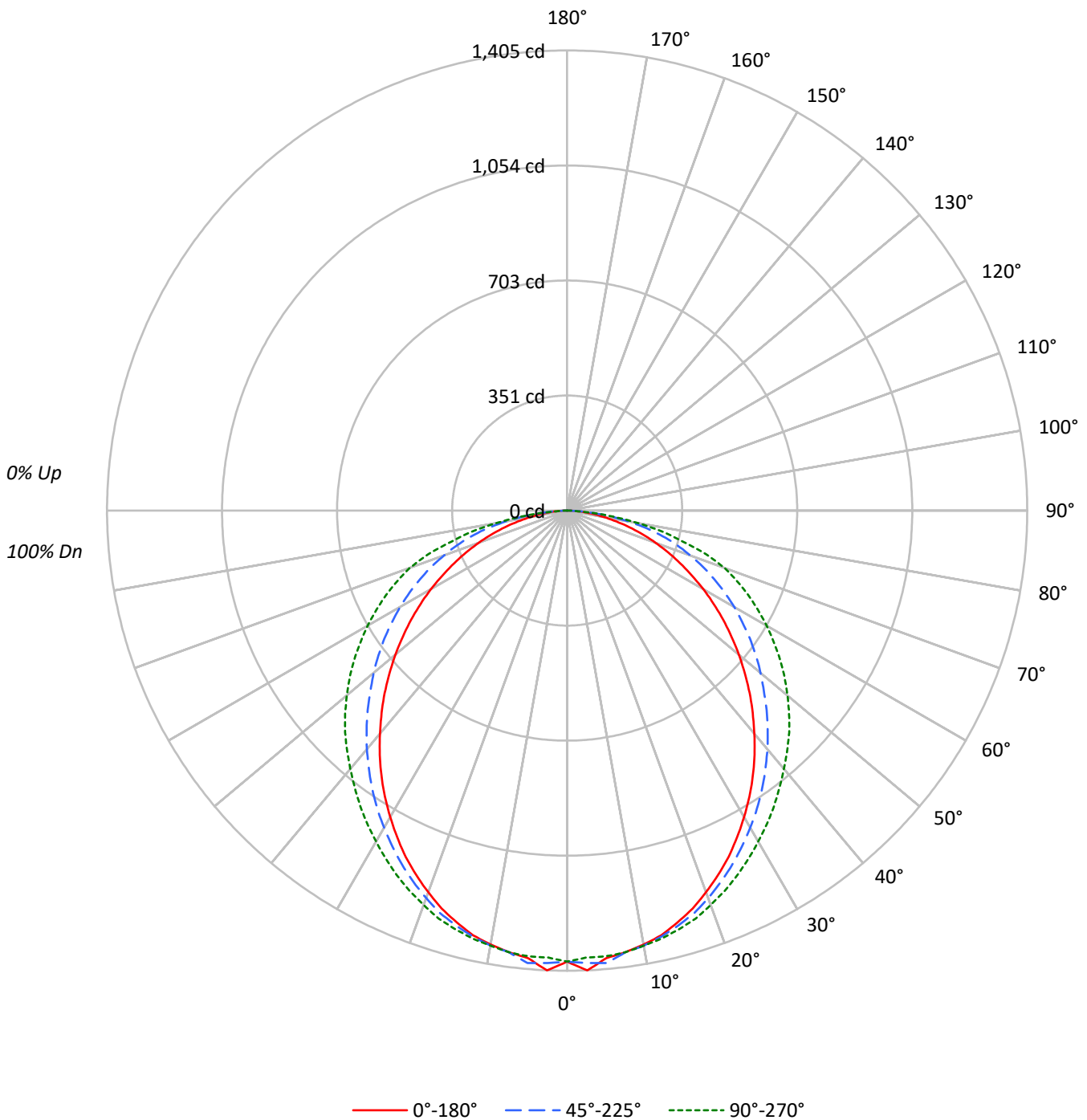
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3858.0 lumens  
Efficiency: N/A  
Efficacy: 131.2 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): 29.4  
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°	3706	3706	3706
5°	3705	3745	3689
10°	3676	3686	3686
15°	3627	3653	3685
20°	3551	3605	3670
25°	3465	3543	3649
30°	3358	3474	3626
35°	3248	3408	3618
40°	3124	3341	3618
45°	2999	3277	3648
50°	2867	3228	3676
55°	2729	3195	3723
60°	2585	3171	3786
65°	2425	3154	3882
70°	2258	3144	4015
75°	2048	3141	3803
80°	1773	2907	3372
85°	1507	2201	2143



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.6	3.4
10°-20°	370.0	9.6
20°-30°	550.3	14.3
30°-40°	650.9	16.9
40°-50°	669.0	17.3
50°-60°	611.3	15.8
60°-70°	489.0	12.7
70°-80°	306.9	8.0
80°-90°	79.9	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°	1050.9	27.2
0°-40°	1701.8	44.1
0°-60°	2982.1	77.3
0°-90°	3858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3858.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1377	1377	1377	1377	1377	
5°	1371	1371	1386	1377	1366	130
15°	1302	1304	1311	1319	1323	367
25°	1167	1174	1193	1214	1229	537
35°	989	1002	1038	1077	1101	618
45°	788	809	861	925	959	608
55°	582	610	681	756	794	520
65°	381	415	495	570	610	378
75°	197	234	302	347	366	209
85°	49	62	71	69	69	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1377.1	1377.1	1377.1	1377.1	1377.1
2.5°	1405.2	1399.6	1382.7	1371.4	1365.8
5°	1371.4	1371.4	1386.4	1377.1	1365.8
7.5°	1360.2	1360.2	1360.2	1388.3	1360.2
10°	1345.2	1347.0	1348.9	1360.2	1348.9
12.5°	1328.3	1328.3	1332.0	1335.8	1337.7
15°	1302.0	1303.9	1311.4	1318.9	1322.6
17.5°	1273.9	1279.5	1288.9	1298.3	1305.8
20°	1240.1	1247.6	1258.9	1273.9	1281.4
22.5°	1204.4	1212.0	1227.0	1243.8	1257.0
25°	1166.9	1174.4	1193.2	1213.8	1228.8
27.5°	1123.8	1133.2	1155.7	1183.8	1198.8
30°	1080.6	1091.9	1118.1	1150.0	1166.9
32.5°	1035.6	1048.7	1078.8	1114.4	1135.0
35°	988.7	1001.8	1037.5	1076.9	1101.3
37.5°	939.9	954.9	994.3	1039.4	1065.6
40°	889.3	906.2	951.2	1000.0	1030.0
42.5°	838.6	857.4	906.2	964.3	994.3
45°	788.0	808.6	861.1	924.9	958.7
47.5°	735.4	759.8	814.2	885.5	919.3
50°	684.8	709.2	771.1	844.2	878.0
52.5°	632.2	660.4	726.0	801.1	836.7
55°	581.6	609.7	681.0	756.1	793.6
57.5°	530.9	559.1	634.1	711.0	748.6
60°	480.3	510.3	589.1	664.1	703.5
62.5°	429.6	461.5	542.2	619.1	656.6
65°	380.8	414.6	495.3	570.3	609.7
67.5°	333.9	369.6	448.4	521.6	561.0
70°	287.0	322.7	399.6	470.9	510.3
72.5°	242.0	277.7	352.7	416.5	446.5
75°	197.0	234.5	302.1	347.1	365.8
77.5°	153.8	191.4	249.5	279.5	300.2
80°	114.4	146.3	187.6	210.1	217.6
82.5°	78.8	105.1	131.3	137.0	140.7
85°	48.8	61.9	71.3	69.4	69.4
87.5°	22.5	24.4	20.6	15.0	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)