

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: P233107

Luminaire Tested: **FCB-24-2-LD4-44-40-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233107  
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-LD4-44-40-UNV-EDD1-WDA6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (84)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

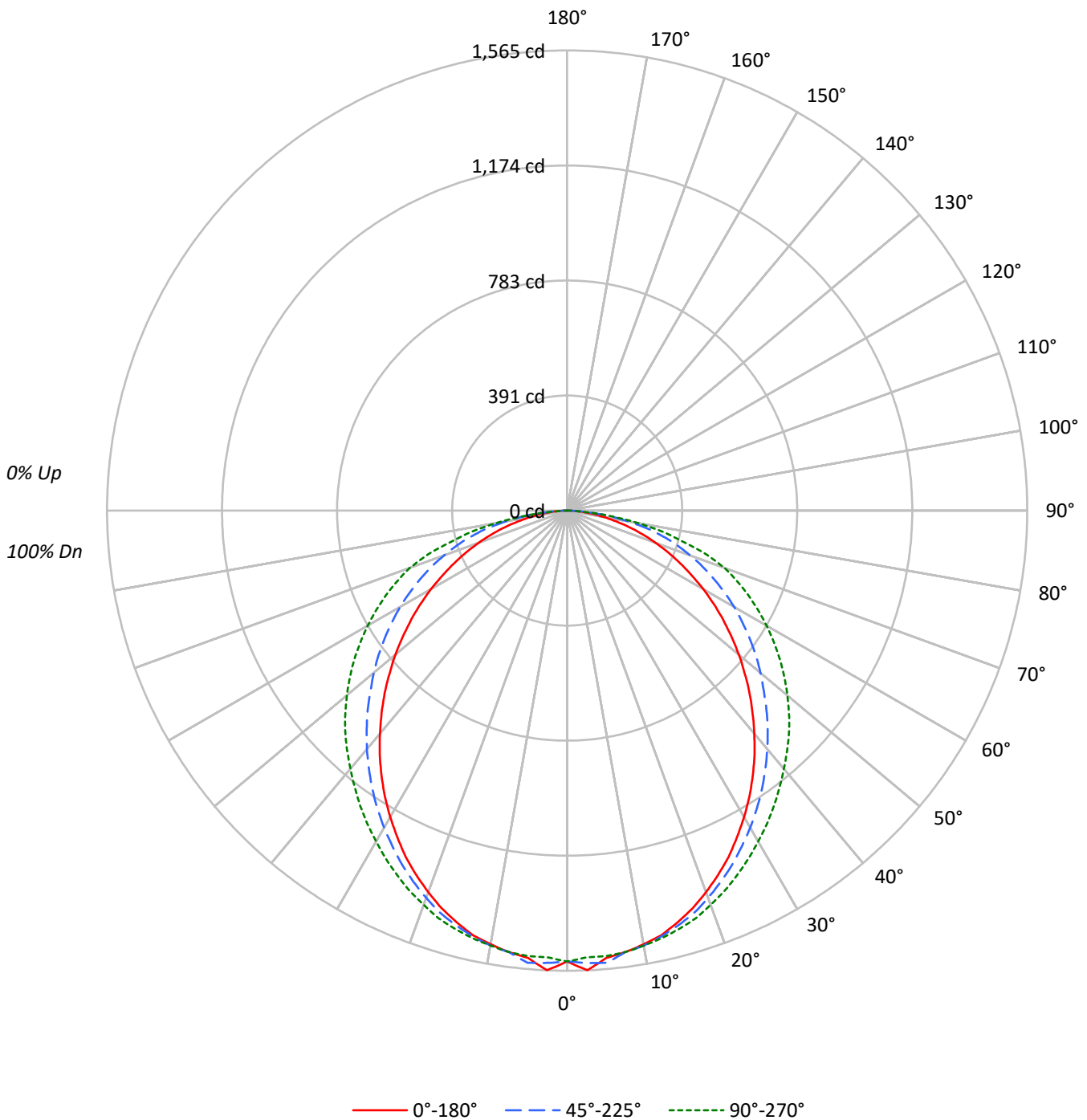
Lumens per Lamp: N/A  
Luminaire Lumens: 4296.0 lumens  
Efficiency: N/A  
Efficacy: 102.8 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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

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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°	4126	4126	4126
5°	4125	4170	4108
10°	4093	4104	4104
15°	4039	4068	4103
20°	3954	4014	4086
25°	3858	3945	4063
30°	3739	3869	4038
35°	3617	3795	4028
40°	3478	3721	4029
45°	3339	3649	4062
50°	3192	3594	4093
55°	3038	3558	4146
60°	2878	3531	4216
65°	2700	3512	4323
70°	2515	3501	4471
75°	2281	3497	4236
80°	1974	3237	3755
85°	1677	2452	2387



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.4	3.4
10°-20°	412.0	9.6
20°-30°	612.8	14.3
30°-40°	724.8	16.9
40°-50°	745.0	17.3
50°-60°	680.7	15.8
60°-70°	544.6	12.7
70°-80°	341.7	8.0
80°-90°	89.0	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°	1170.2	27.2
0°-40°	1895.0	44.1
0°-60°	3320.7	77.3
0°-90°	4296.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4296.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1533	1533	1533	1533	1533	
5°	1527	1527	1544	1533	1521	145
15°	1450	1452	1460	1469	1473	408
25°	1299	1308	1329	1352	1368	597
35°	1101	1116	1155	1199	1226	688
45°	877	900	959	1030	1068	676
55°	648	679	758	842	884	579
65°	424	462	552	635	679	421
75°	219	261	336	386	407	233
85°	54	69	79	77	77	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1533.4	1533.4	1533.4	1533.4	1533.4
2.5°	1564.7	1558.5	1539.7	1527.1	1520.9
5°	1527.1	1527.1	1543.8	1533.4	1520.9
7.5°	1514.6	1514.6	1514.6	1545.9	1514.6
10°	1497.9	1500.0	1502.1	1514.6	1502.1
12.5°	1479.1	1479.1	1483.2	1487.4	1489.5
15°	1449.8	1451.9	1460.3	1468.6	1472.8
17.5°	1418.5	1424.8	1435.2	1445.6	1454.0
20°	1380.9	1389.2	1401.8	1418.5	1426.8
22.5°	1341.2	1349.5	1366.3	1385.1	1399.7
25°	1299.4	1307.8	1328.7	1351.6	1368.3
27.5°	1251.4	1261.8	1286.9	1318.2	1334.9
30°	1203.3	1215.8	1245.1	1280.6	1299.4
32.5°	1153.2	1167.8	1201.2	1240.9	1263.9
35°	1100.9	1115.6	1155.3	1199.1	1226.3
37.5°	1046.6	1063.3	1107.2	1157.4	1186.6
40°	990.2	1009.0	1059.2	1113.5	1146.9
42.5°	933.8	954.7	1009.0	1073.8	1107.2
45°	877.4	900.4	958.9	1029.9	1067.5
47.5°	818.9	846.1	906.7	986.0	1023.7
50°	762.5	789.7	858.6	940.1	977.7
52.5°	704.0	735.4	808.5	892.0	931.7
55°	647.6	679.0	758.3	841.9	883.7
57.5°	591.2	622.5	706.1	791.8	833.5
60°	534.8	568.2	656.0	739.5	783.4
62.5°	478.4	513.9	603.7	689.4	731.2
65°	424.1	461.7	551.5	635.1	679.0
67.5°	371.9	411.5	499.3	580.8	624.6
70°	319.6	359.3	445.0	524.4	568.2
72.5°	269.5	309.2	392.7	463.8	497.2
75°	219.4	261.1	336.3	386.5	407.4
77.5°	171.3	213.1	277.8	311.3	334.3
80°	127.4	162.9	208.9	234.0	242.3
82.5°	87.7	117.0	146.2	152.5	156.7
85°	54.3	68.9	79.4	77.3	77.3
87.5°	25.1	27.2	23.0	16.7	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)