

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: P233032

Luminaire Tested: **FCB-12-4-LD4-35-50-UNV-EDD1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233032  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35573)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-12-4-LD4-35-50-UNV-EDD1  
Description: FAILSAFE 1X4 FCB LED TROFFER  
OPAL DIFFUSER, NO LENS  
Light Source: (84)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

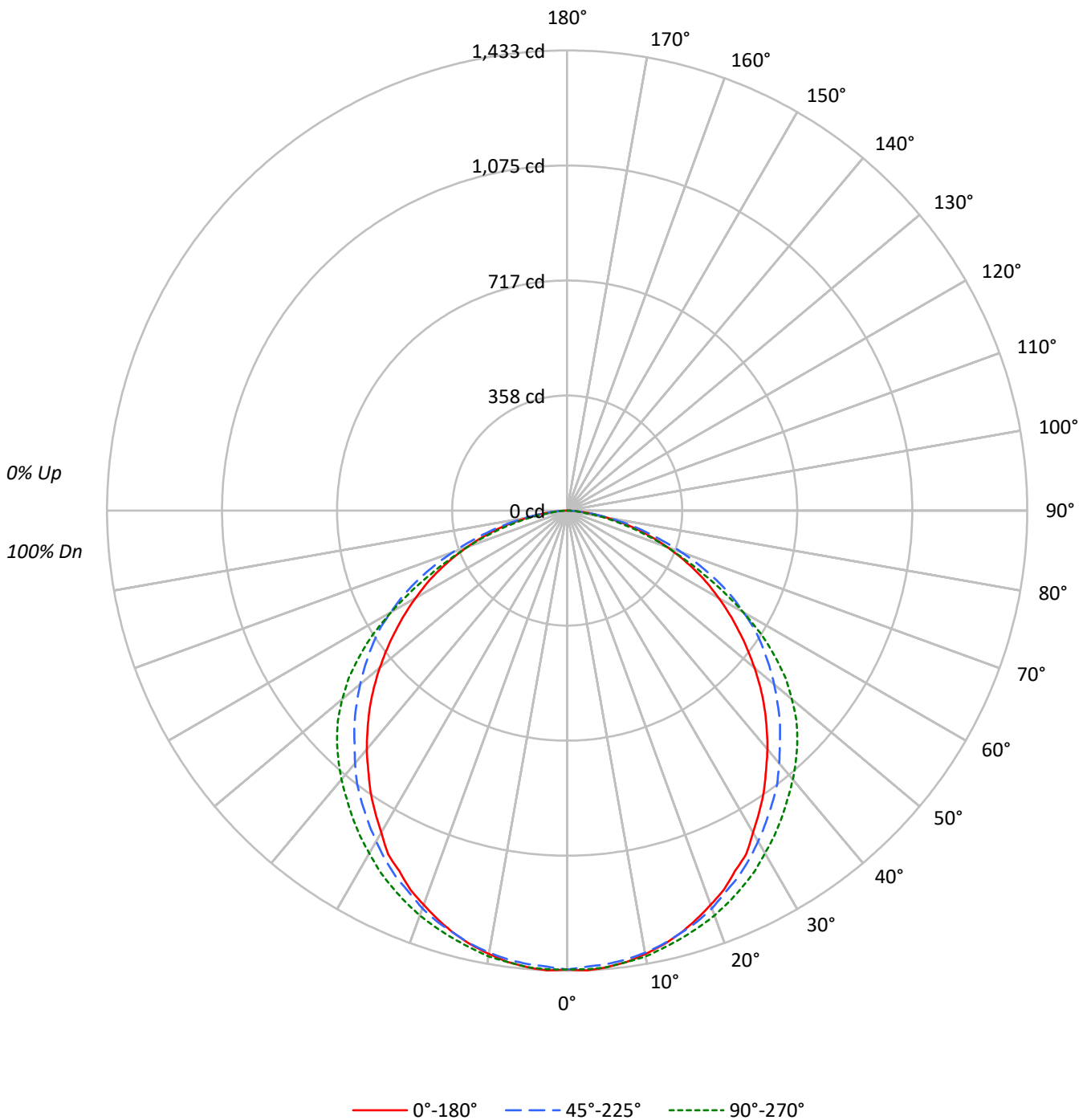
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3961.0 lumens  
Efficiency: N/A  
Efficacy: 125.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31.5  
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

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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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	46	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	34
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	29	42	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	37	31	26	25

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

	0°	45°	90°
0°	3846	3846	3846
5°	3856	3830	3856
10°	3831	3821	3853
15°	3797	3797	3841
20°	3741	3775	3842
25°	3676	3740	3838
30°	3598	3695	3829
35°	3509	3657	3830
40°	3409	3608	3841
45°	3307	3567	3857
50°	3188	3523	3826
55°	3060	3491	3701
60°	2932	3415	3405
65°	2798	3270	2984
70°	2596	2980	2581
75°	2355	2599	2131
80°	1877	2058	1573
85°	1328	1145	905



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.3	3.4
10°-20°	386.4	9.8
20°-30°	582.6	14.7
30°-40°	698.3	17.6
40°-50°	724.7	18.3
50°-60°	653.6	16.5
60°-70°	476.8	12.0
70°-80°	250.2	6.3
80°-90°	53.4	1.3
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°	1104.2	27.9
0°-40°	1802.5	45.5
0°-60°	3180.7	80.3
0°-90°	3961.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3961.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1429	1429	1429	1429	1429	
5°	1428	1424	1418	1428	1428	135
15°	1363	1363	1363	1379	1379	384
25°	1238	1244	1260	1287	1293	571
35°	1068	1080	1113	1154	1166	667
45°	869	886	937	994	1014	670
55°	652	676	744	793	789	584
65°	439	465	514	494	469	434
75°	226	258	250	217	205	238
85°	43	53	37	31	29	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1429.4	1429.4	1429.4	1429.4	1429.4
2.5°	1433.3	1429.4	1421.6	1429.4	1429.4
5°	1427.5	1423.6	1417.7	1427.5	1427.5
7.5°	1417.7	1413.8	1409.9	1419.6	1417.7
10°	1402.1	1400.1	1398.2	1409.9	1409.9
12.5°	1384.5	1384.5	1382.5	1396.2	1394.3
15°	1363.0	1363.0	1363.0	1378.6	1378.6
17.5°	1335.7	1339.6	1343.5	1361.1	1361.1
20°	1306.4	1310.3	1318.1	1339.6	1341.5
22.5°	1277.1	1279.1	1286.9	1312.2	1318.1
25°	1238.0	1243.9	1259.5	1286.9	1292.7
27.5°	1206.8	1208.8	1226.3	1257.6	1265.4
30°	1158.0	1171.6	1189.2	1224.4	1232.2
32.5°	1113.1	1124.8	1152.1	1189.2	1200.9
35°	1068.2	1079.9	1113.1	1154.1	1165.8
37.5°	1017.4	1035.0	1074.0	1115.0	1128.7
40°	970.5	986.1	1027.1	1077.9	1093.5
42.5°	919.7	935.4	980.3	1036.9	1054.5
45°	869.0	886.5	937.3	993.9	1013.5
47.5°	816.2	835.8	888.5	951.0	968.6
50°	761.6	783.1	841.6	906.1	913.9
52.5°	706.9	730.3	792.8	849.4	857.3
55°	652.2	675.7	744.0	792.8	788.9
57.5°	599.5	624.9	695.2	720.6	716.7
60°	544.8	572.2	634.6	646.4	632.7
62.5°	494.0	519.4	578.0	568.3	550.7
65°	439.4	464.8	513.6	494.0	468.7
67.5°	384.7	415.9	447.2	414.0	394.5
70°	330.0	365.2	378.8	345.6	328.1
72.5°	277.3	314.4	310.5	277.3	265.6
75°	226.5	257.8	250.0	216.8	205.0
77.5°	171.8	207.0	189.4	162.1	152.3
80°	121.1	152.3	132.8	109.4	101.5
82.5°	80.1	101.5	82.0	64.4	58.6
85°	43.0	52.7	37.1	31.2	29.3
87.5°	17.6	15.6	13.7	13.7	11.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)