

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: P233155

Luminaire Tested: **FCB-24-4-LD4-50-40-UNV-EDD1**

Issue Date: 3/3/2020



**Test Information**

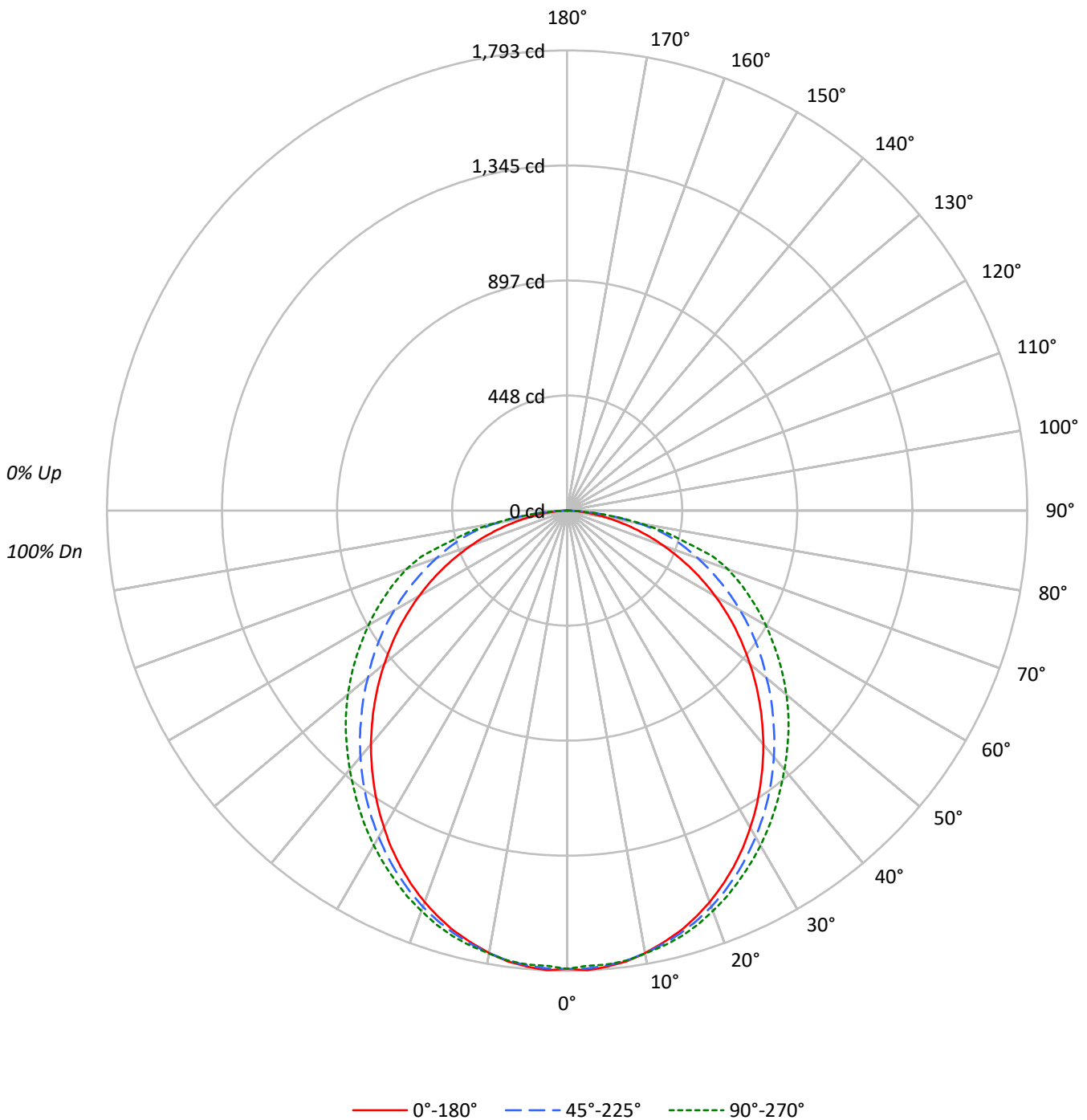
Test Method: LM-79-08  
Report Number: P233155  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-4-LD4-50-40-UNV-EDD1  
Description: FAILSAFE 2X4 FCB LED TROFFER  
OPAL DIFFUSER, NO LENS  
Light Source: (168)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5088.0 lumens  
Efficiency: N/A  
Efficacy: 125.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 40.7  
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	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	2403	2403	2403
5°	2409	2402	2398
10°	2392	2392	2394
15°	2364	2376	2393
20°	2325	2352	2377
25°	2276	2320	2359
30°	2217	2282	2341
35°	2155	2243	2324
40°	2090	2200	2313
45°	2019	2158	2320
50°	1947	2122	2334
55°	1876	2109	2358
60°	1791	2095	2405
65°	1697	2096	2485
70°	1569	2131	2618
75°	1404	2228	2491
80°	1175	2132	2281
85°	888	1641	1559



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.7	3.3
10°-20°	480.2	9.4
20°-30°	717.9	14.1
30°-40°	851.7	16.7
40°-50°	876.6	17.2
50°-60°	804.2	15.8
60°-70°	650.2	12.8
70°-80°	422.0	8.3
80°-90°	116.4	2.3
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°	1366.9	26.9
0°-40°	2218.6	43.6
0°-60°	3899.4	76.6
0°-90°	5088.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5088.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1786	1786	1786	1786	1786	
5°	1784	1772	1779	1777	1775	169
15°	1697	1690	1706	1712	1718	478
25°	1533	1535	1563	1577	1589	706
35°	1312	1322	1366	1395	1415	820
45°	1061	1078	1134	1188	1220	819
55°	800	824	899	972	1005	714
65°	533	564	658	746	780	527
75°	270	320	428	479	479	287
85°	58	98	106	103	101	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1785.6	1785.6	1785.6	1785.6	1785.6
2.5°	1792.6	1778.7	1785.6	1783.9	1775.2
5°	1783.9	1771.7	1778.7	1776.9	1775.2
7.5°	1771.7	1759.5	1768.2	1766.5	1768.2
10°	1750.8	1740.3	1750.8	1752.5	1752.5
12.5°	1724.7	1715.9	1729.9	1733.4	1736.8
15°	1696.8	1689.8	1705.5	1712.5	1717.7
17.5°	1661.9	1656.7	1675.9	1684.6	1691.6
20°	1623.6	1621.9	1642.8	1651.5	1660.2
22.5°	1580.1	1580.1	1604.4	1614.9	1627.1
25°	1533.0	1534.8	1562.6	1576.6	1588.8
27.5°	1482.5	1484.2	1517.3	1534.8	1548.7
30°	1426.8	1433.7	1468.6	1491.2	1506.9
32.5°	1371.0	1379.7	1418.0	1444.2	1461.6
35°	1311.8	1322.2	1365.8	1395.4	1414.6
37.5°	1250.8	1263.0	1310.0	1343.1	1365.8
40°	1189.8	1203.8	1252.5	1290.9	1317.0
42.5°	1125.4	1141.1	1195.1	1240.4	1268.2
45°	1060.9	1078.3	1134.1	1188.1	1219.5
47.5°	996.5	1017.4	1076.6	1135.8	1168.9
50°	930.3	951.2	1013.9	1081.8	1114.9
52.5°	864.1	888.5	958.1	1027.8	1060.9
55°	799.6	824.0	898.9	972.1	1005.2
57.5°	733.4	757.8	839.7	916.3	949.4
60°	665.5	693.3	778.7	857.1	893.7
62.5°	599.3	628.9	719.5	803.1	837.9
65°	533.1	564.4	658.5	745.6	780.4
67.5°	465.1	501.7	599.3	688.1	724.7
70°	398.9	439.0	541.8	630.6	665.5
72.5°	334.5	378.0	484.3	574.9	595.8
75°	270.0	320.5	428.5	479.1	479.1
77.5°	209.0	264.8	365.8	385.0	395.5
80°	151.6	212.5	275.2	297.9	294.4
82.5°	101.0	162.0	196.9	196.9	191.6
85°	57.5	97.6	106.3	102.8	101.0
87.5°	24.4	36.6	33.1	26.1	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)