

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: P233181

Luminaire Tested: **FCB-24-4-LD4-75-30-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233181  
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-LD4-75-30-UNV-EDD1-WDA6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (168)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

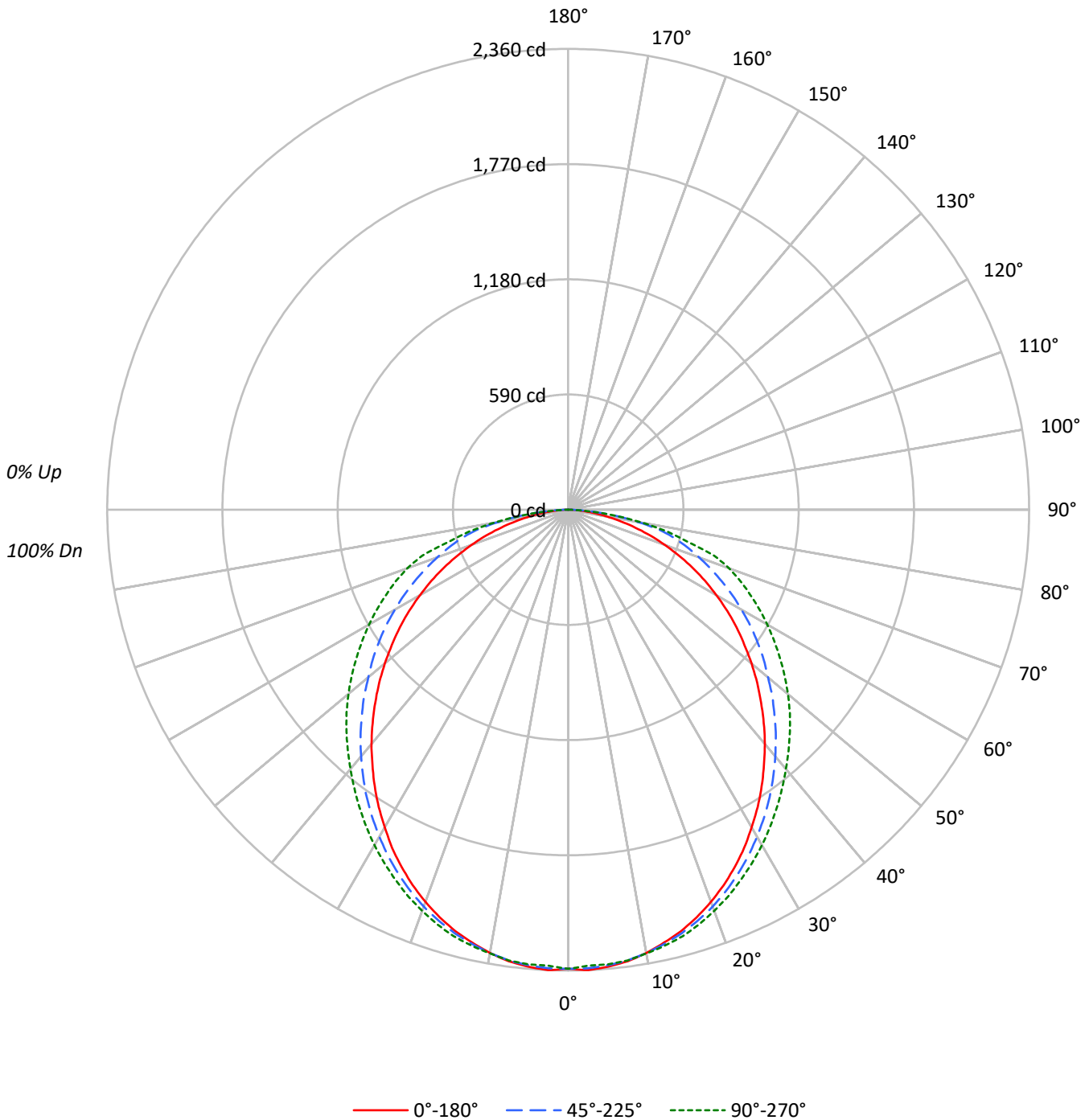
Lumens per Lamp: N/A  
Luminaire Lumens: 6699.0 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 69.1  
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°	3163	3163	3163
5°	3172	3163	3157
10°	3149	3149	3152
15°	3112	3128	3150
20°	3061	3097	3130
25°	2996	3054	3105
30°	2919	3004	3082
35°	2837	2954	3059
40°	2752	2896	3046
45°	2658	2841	3055
50°	2564	2794	3073
55°	2470	2776	3104
60°	2358	2759	3166
65°	2235	2760	3272
70°	2066	2806	3447
75°	1848	2933	3279
80°	1546	2808	3003
85°	1169	2160	2053



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	222.2	3.3
10°-20°	632.3	9.4
20°-30°	945.3	14.1
30°-40°	1121.4	16.7
40°-50°	1154.2	17.2
50°-60°	1058.8	15.8
60°-70°	856.1	12.8
70°-80°	555.6	8.3
80°-90°	153.2	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°	1799.7	26.9
0°-40°	2921.1	43.6
0°-60°	5134.1	76.6
0°-90°	6699.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6699.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2351	2351	2351	2351	2351	
5°	2349	2333	2342	2340	2337	223
15°	2234	2225	2246	2255	2262	629
25°	2018	2021	2057	2076	2092	929
35°	1727	1741	1798	1837	1862	1080
45°	1397	1420	1493	1564	1606	1078
55°	1053	1085	1184	1280	1323	941
65°	702	743	867	982	1028	694
75°	356	422	564	631	631	378
85°	76	128	140	135	133	93
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2351.0	2351.0	2351.0	2351.0	2351.0
2.5°	2360.2	2341.8	2351.0	2348.7	2337.2
5°	2348.7	2332.7	2341.8	2339.5	2337.2
7.5°	2332.7	2316.6	2328.1	2325.8	2328.1
10°	2305.1	2291.4	2305.1	2307.4	2307.4
12.5°	2270.7	2259.3	2277.6	2282.2	2286.8
15°	2234.0	2224.8	2245.5	2254.7	2261.5
17.5°	2188.2	2181.3	2206.5	2218.0	2227.1
20°	2137.7	2135.4	2162.9	2174.4	2185.9
22.5°	2080.3	2080.3	2112.5	2126.2	2142.3
25°	2018.4	2020.7	2057.4	2075.8	2091.8
27.5°	1951.9	1954.2	1997.8	2020.7	2039.1
30°	1878.5	1887.7	1933.6	1963.4	1984.0
32.5°	1805.1	1816.6	1867.0	1901.4	1924.4
35°	1727.1	1740.9	1798.2	1837.2	1862.5
37.5°	1646.8	1662.9	1724.8	1768.4	1798.2
40°	1566.6	1584.9	1649.1	1699.6	1734.0
42.5°	1481.7	1502.3	1573.5	1633.1	1669.8
45°	1396.8	1419.8	1493.2	1564.3	1605.6
47.5°	1312.0	1339.5	1417.5	1495.5	1539.0
50°	1224.8	1252.3	1334.9	1424.4	1467.9
52.5°	1137.7	1169.8	1261.5	1353.3	1396.8
55°	1052.8	1084.9	1183.5	1279.9	1323.4
57.5°	965.6	997.7	1105.5	1206.5	1250.0
60°	876.2	912.9	1025.3	1128.5	1176.6
62.5°	789.0	828.0	947.3	1057.4	1103.3
65°	701.9	743.1	867.0	981.7	1027.6
67.5°	612.4	660.6	789.0	906.0	954.2
70°	525.2	578.0	713.3	830.3	876.2
72.5°	440.4	497.7	637.6	756.9	784.4
75°	355.5	422.0	564.2	630.8	630.8
77.5°	275.2	348.6	481.7	506.9	520.7
80°	199.5	279.8	362.4	392.2	387.6
82.5°	133.0	213.3	259.2	259.2	252.3
85°	75.7	128.4	139.9	135.3	133.0
87.5°	32.1	48.2	43.6	34.4	29.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)