

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: P233177

Luminaire Tested: **FCB-24-4-LD4-60-30-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233177  
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-LD4-60-30-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**

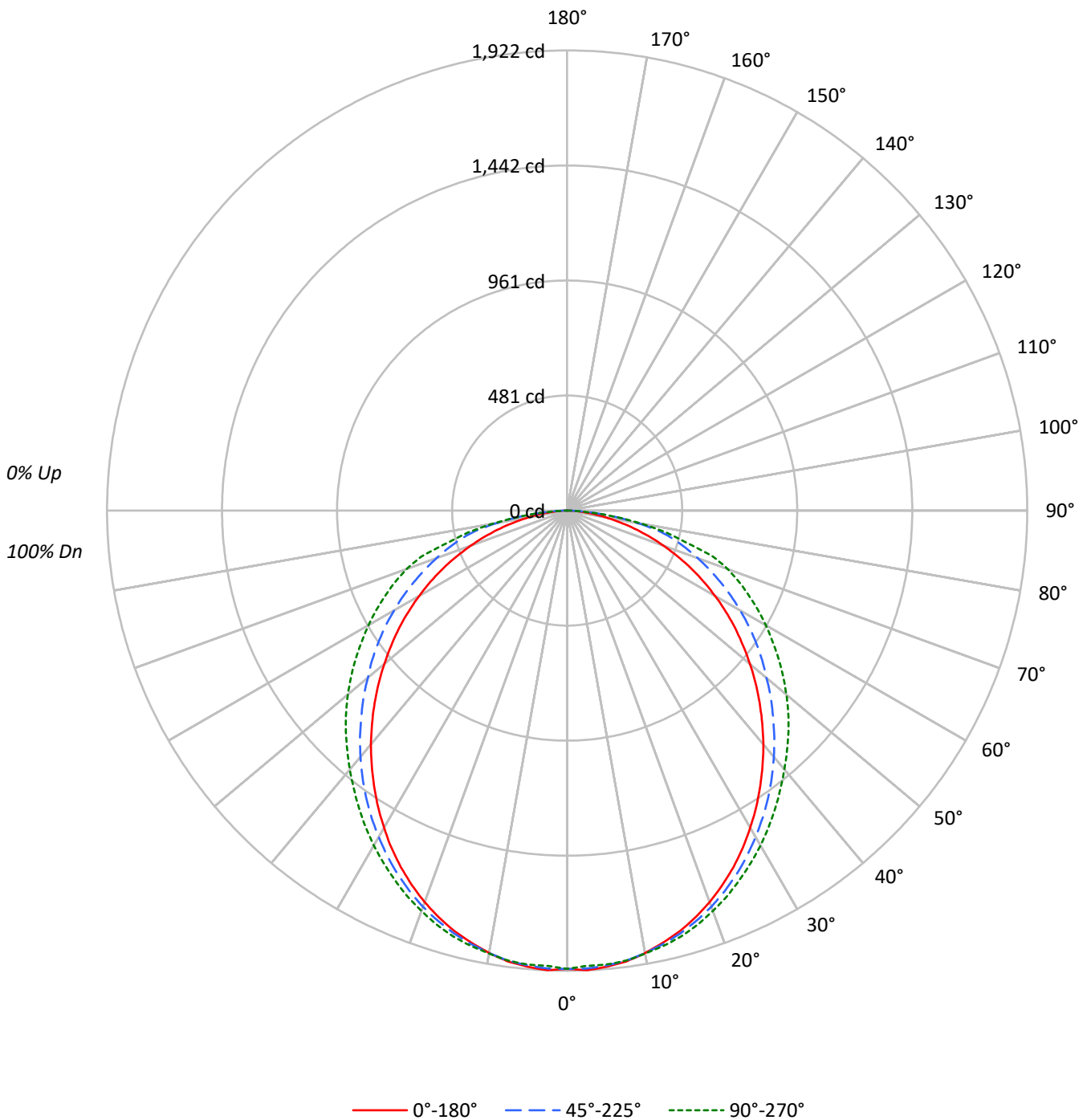
Lumens per Lamp: N/A  
Luminaire Lumens: 5454.0 lumens  
Efficiency: N/A  
Efficacy: 104.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 52.2  
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°	2575	2575	2575
5°	2583	2575	2570
10°	2564	2564	2567
15°	2534	2547	2565
20°	2492	2521	2548
25°	2440	2487	2528
30°	2376	2446	2510
35°	2310	2405	2491
40°	2240	2358	2480
45°	2164	2313	2487
50°	2087	2275	2502
55°	2011	2260	2528
60°	1919	2246	2578
65°	1819	2247	2663
70°	1682	2285	2806
75°	1504	2388	2669
80°	1259	2286	2445
85°	951	1758	1672



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.9	3.3
10°-20°	514.8	9.4
20°-30°	769.6	14.1
30°-40°	913.0	16.7
40°-50°	939.7	17.2
50°-60°	862.0	15.8
60°-70°	697.0	12.8
70°-80°	452.3	8.3
80°-90°	124.7	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°	1465.2	26.9
0°-40°	2378.2	43.6
0°-60°	4179.9	76.6
0°-90°	5454.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5454.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1914	1914	1914	1914	1914	
5°	1912	1899	1907	1905	1903	181
15°	1819	1811	1828	1836	1841	512
25°	1643	1645	1675	1690	1703	756
35°	1406	1417	1464	1496	1516	879
45°	1137	1156	1216	1274	1307	878
55°	857	883	964	1042	1078	766
65°	571	605	706	799	837	565
75°	289	344	459	514	514	308
85°	62	105	114	110	108	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1914.1	1914.1	1914.1	1914.1	1914.1
2.5°	1921.5	1906.6	1914.1	1912.2	1902.9
5°	1912.2	1899.1	1906.6	1904.7	1902.9
7.5°	1899.1	1886.1	1895.4	1893.5	1895.4
10°	1876.7	1865.5	1876.7	1878.6	1878.6
12.5°	1848.7	1839.4	1854.3	1858.0	1861.8
15°	1818.8	1811.4	1828.2	1835.6	1841.2
17.5°	1781.5	1775.9	1796.4	1805.8	1813.2
20°	1740.4	1738.5	1760.9	1770.3	1779.6
22.5°	1693.7	1693.7	1719.9	1731.1	1744.1
25°	1643.3	1645.2	1675.0	1690.0	1703.1
27.5°	1589.1	1591.0	1626.5	1645.2	1660.1
30°	1529.4	1536.9	1574.2	1598.5	1615.3
32.5°	1469.6	1479.0	1520.1	1548.1	1566.7
35°	1406.1	1417.3	1464.0	1495.8	1516.3
37.5°	1340.8	1353.9	1404.3	1439.8	1464.0
40°	1275.4	1290.4	1342.7	1383.7	1411.7
42.5°	1206.3	1223.1	1281.0	1329.6	1359.5
45°	1137.2	1155.9	1215.7	1273.6	1307.2
47.5°	1068.1	1090.6	1154.0	1217.5	1253.0
50°	997.2	1019.6	1086.8	1159.6	1195.1
52.5°	926.2	952.4	1027.1	1101.8	1137.2
55°	857.1	883.3	963.6	1042.0	1077.5
57.5°	786.2	812.3	900.1	982.2	1017.7
60°	713.3	743.2	834.7	918.8	958.0
62.5°	642.4	674.1	771.2	860.9	898.2
65°	571.4	605.0	705.9	799.2	836.6
67.5°	498.6	537.8	642.4	737.6	776.8
70°	427.6	470.6	580.8	676.0	713.3
72.5°	358.5	405.2	519.1	616.2	638.6
75°	289.4	343.6	459.4	513.5	513.5
77.5°	224.1	283.8	392.2	412.7	423.9
80°	162.5	227.8	295.0	319.3	315.6
82.5°	108.3	173.7	211.0	211.0	205.4
85°	61.6	104.6	113.9	110.2	108.3
87.5°	26.1	39.2	35.5	28.0	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)