

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: P233175

Luminaire Tested: **FCB-24-4-LD4-50-40-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233175  
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-WDA6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (168)4000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

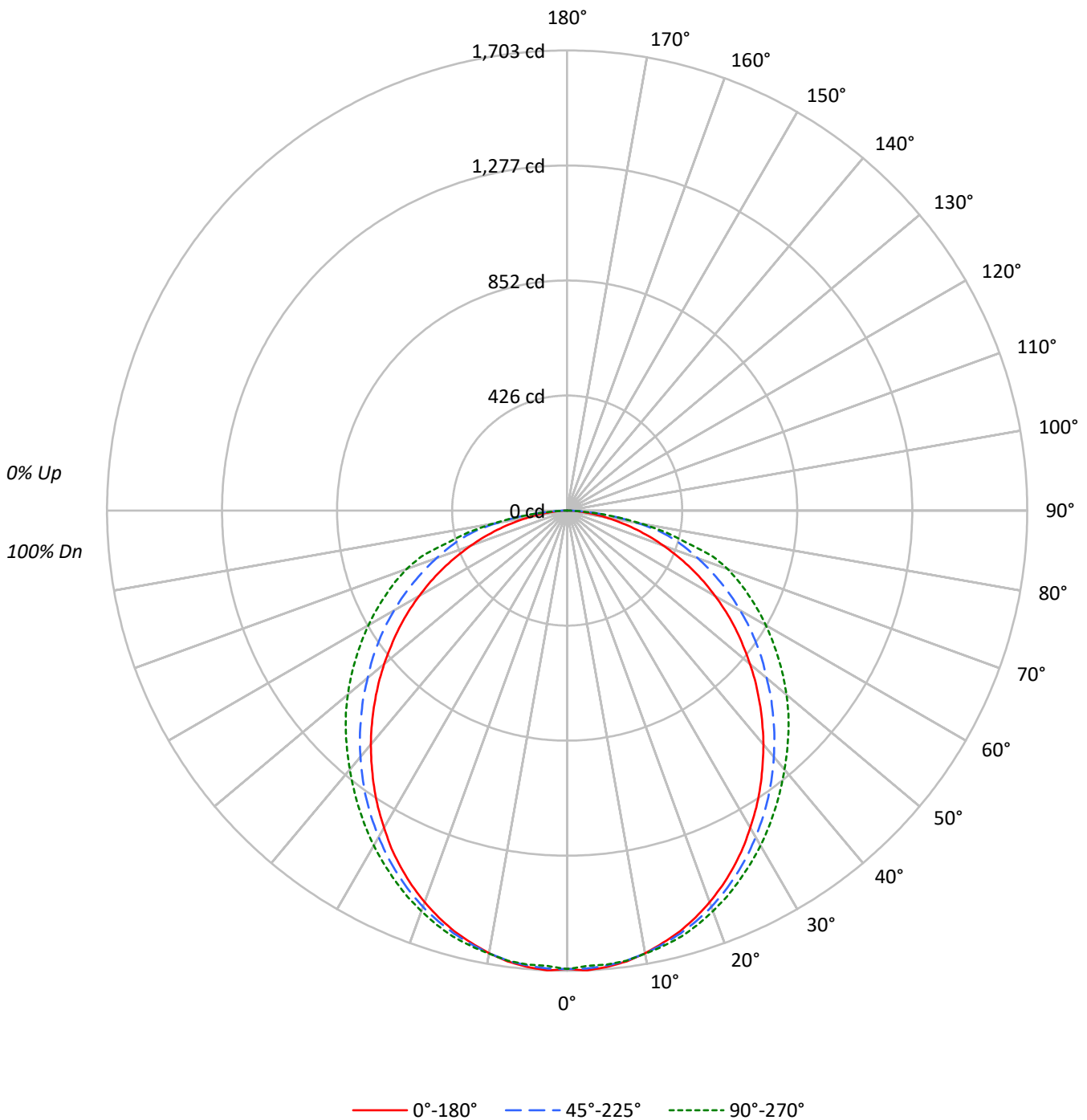
Lumens per Lamp: N/A  
Luminaire Lumens: 4834.0 lumens  
Efficiency: N/A  
Efficacy: 118.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	2283	2283	2283
5°	2289	2282	2278
10°	2273	2273	2275
15°	2246	2257	2273
20°	2209	2235	2258
25°	2162	2204	2241
30°	2106	2168	2224
35°	2047	2131	2207
40°	1985	2090	2198
45°	1918	2050	2205
50°	1850	2016	2217
55°	1782	2003	2240
60°	1702	1991	2285
65°	1613	1992	2361
70°	1491	2025	2487
75°	1333	2117	2366
80°	1116	2026	2167
85°	843	1559	1482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.3	3.3
10°-20°	456.3	9.4
20°-30°	682.1	14.1
30°-40°	809.2	16.7
40°-50°	832.9	17.2
50°-60°	764.0	15.8
60°-70°	617.8	12.8
70°-80°	400.9	8.3
80°-90°	110.5	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°	1298.7	26.9
0°-40°	2107.9	43.6
0°-60°	3704.8	76.6
0°-90°	4834.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4834.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1696	1696	1696	1696	1696	
5°	1695	1683	1690	1688	1687	161
15°	1612	1606	1620	1627	1632	454
25°	1456	1458	1485	1498	1510	670
35°	1246	1256	1298	1326	1344	779
45°	1008	1024	1078	1129	1159	778
55°	760	783	854	924	955	679
65°	506	536	626	708	742	501
75°	256	304	407	455	455	273
85°	55	93	101	98	96	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1696.5	1696.5	1696.5	1696.5	1696.5
2.5°	1703.1	1689.9	1696.5	1694.8	1686.6
5°	1694.8	1683.2	1689.9	1688.2	1686.6
7.5°	1683.2	1671.7	1679.9	1678.3	1679.9
10°	1663.4	1653.4	1663.4	1665.0	1665.0
12.5°	1638.6	1630.3	1643.5	1646.8	1650.1
15°	1612.1	1605.5	1620.3	1627.0	1631.9
17.5°	1579.0	1574.0	1592.2	1600.5	1607.1
20°	1542.6	1540.9	1560.8	1569.0	1577.3
22.5°	1501.2	1501.2	1524.4	1534.3	1545.9
25°	1456.5	1458.1	1484.6	1497.9	1509.5
27.5°	1408.5	1410.1	1441.6	1458.1	1471.4
30°	1355.5	1362.2	1395.3	1416.8	1431.7
32.5°	1302.6	1310.8	1347.3	1372.1	1388.6
35°	1246.3	1256.2	1297.6	1325.7	1343.9
37.5°	1188.4	1200.0	1244.6	1276.1	1297.6
40°	1130.4	1143.7	1190.0	1226.4	1251.3
42.5°	1069.2	1084.1	1135.4	1178.4	1204.9
45°	1008.0	1024.5	1077.5	1128.8	1158.6
47.5°	946.7	966.6	1022.9	1079.1	1110.6
50°	883.8	903.7	963.3	1027.8	1059.3
52.5°	820.9	844.1	910.3	976.5	1008.0
55°	759.7	782.9	854.0	923.5	955.0
57.5°	696.8	720.0	797.8	870.6	902.0
60°	632.3	658.7	739.8	814.3	849.1
62.5°	569.4	597.5	683.6	763.0	796.1
65°	506.5	536.3	625.6	708.4	741.5
67.5°	441.9	476.7	569.4	653.8	688.5
70°	379.0	417.1	514.7	599.1	632.3
72.5°	317.8	359.2	460.1	546.2	566.0
75°	256.5	304.5	407.2	455.2	455.2
77.5°	198.6	251.6	347.6	365.8	375.7
80°	144.0	201.9	261.5	283.0	279.7
82.5°	96.0	153.9	187.0	187.0	182.1
85°	54.6	92.7	101.0	97.7	96.0
87.5°	23.2	34.8	31.4	24.8	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)