

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: P233171

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233171  
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-LD4-40-40-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**

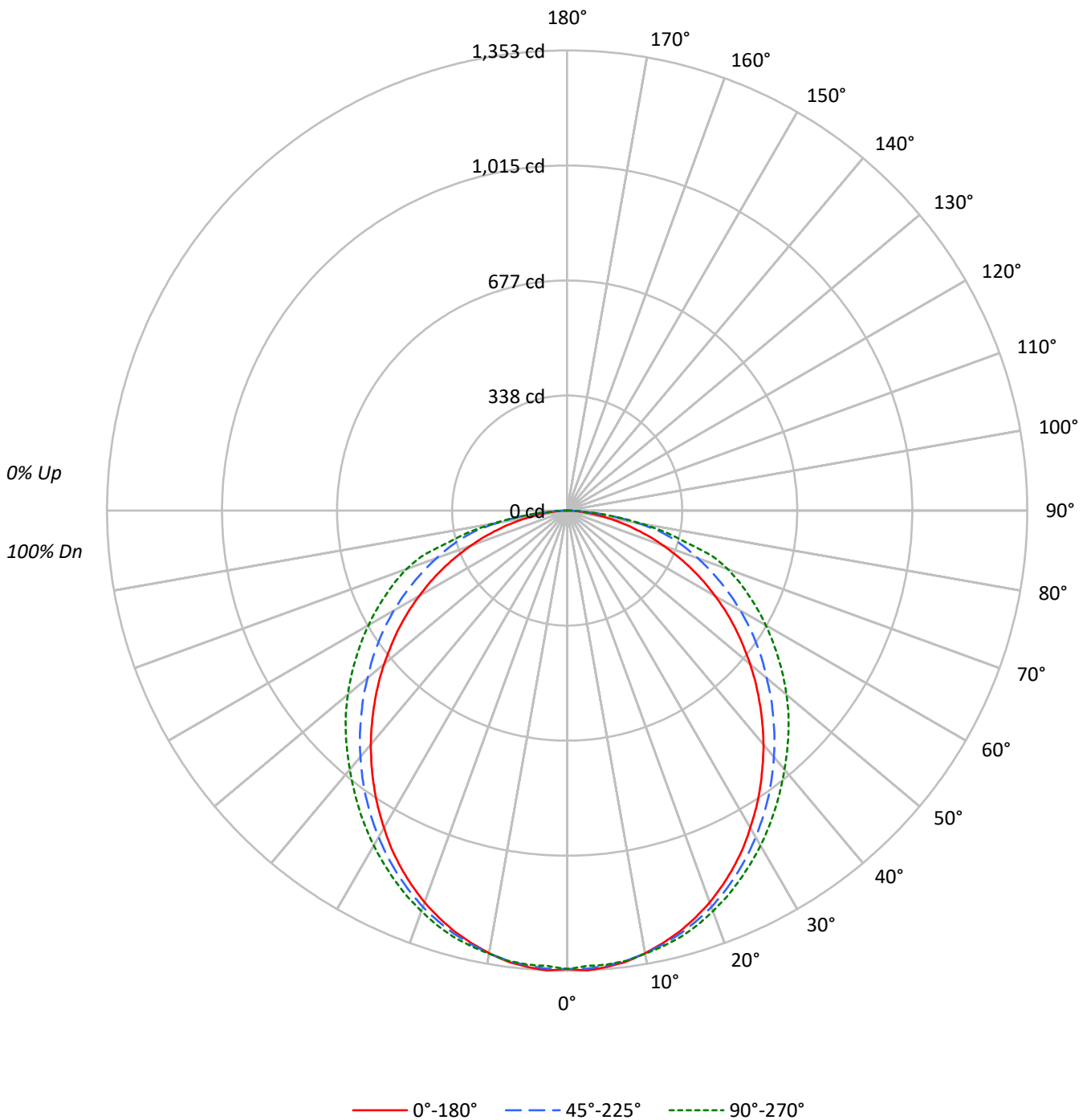
Lumens per Lamp: N/A  
Luminaire Lumens: 3841.0 lumens  
Efficiency: N/A  
Efficacy: 132.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 29  
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°	1814	1814	1814
5°	1819	1813	1810
10°	1806	1806	1808
15°	1784	1793	1806
20°	1755	1776	1795
25°	1718	1751	1781
30°	1673	1722	1767
35°	1627	1693	1754
40°	1578	1661	1746
45°	1524	1629	1752
50°	1470	1602	1762
55°	1416	1592	1780
60°	1352	1582	1816
65°	1281	1583	1876
70°	1185	1609	1976
75°	1059	1682	1880
80°	886	1610	1722
85°	670	1238	1178



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.4	3.3
10°-20°	362.5	9.4
20°-30°	542.0	14.1
30°-40°	643.0	16.7
40°-50°	661.8	17.2
50°-60°	607.1	15.8
60°-70°	490.9	12.8
70°-80°	318.6	8.3
80°-90°	87.8	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°	1031.9	26.9
0°-40°	1674.9	43.6
0°-60°	2943.7	76.6
0°-90°	3841.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3841.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1348	1348	1348	1348	1348	
5°	1347	1338	1343	1341	1340	128
15°	1281	1276	1288	1293	1297	361
25°	1157	1159	1180	1190	1199	533
35°	990	998	1031	1053	1068	619
45°	801	814	856	897	921	618
55°	604	622	679	734	759	539
65°	402	426	497	563	589	398
75°	204	242	324	362	362	217
85°	43	74	80	78	76	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1348.0	1348.0	1348.0	1348.0	1348.0
2.5°	1353.3	1342.7	1348.0	1346.7	1340.1
5°	1346.7	1337.5	1342.7	1341.4	1340.1
7.5°	1337.5	1328.3	1334.8	1333.5	1334.8
10°	1321.7	1313.8	1321.7	1323.0	1323.0
12.5°	1302.0	1295.4	1305.9	1308.5	1311.2
15°	1280.9	1275.7	1287.5	1292.8	1296.7
17.5°	1254.6	1250.7	1265.1	1271.7	1277.0
20°	1225.7	1224.4	1240.2	1246.7	1253.3
22.5°	1192.8	1192.8	1211.2	1219.1	1228.3
25°	1157.3	1158.6	1179.7	1190.2	1199.4
27.5°	1119.2	1120.5	1145.5	1158.6	1169.1
30°	1077.1	1082.3	1108.6	1125.7	1137.6
32.5°	1035.0	1041.6	1070.5	1090.2	1103.4
35°	990.3	998.2	1031.0	1053.4	1067.9
37.5°	944.3	953.5	989.0	1014.0	1031.0
40°	898.2	908.7	945.6	974.5	994.2
42.5°	849.6	861.4	902.2	936.4	957.4
45°	800.9	814.1	856.1	896.9	920.6
47.5°	752.2	768.0	812.7	857.5	882.4
50°	702.3	718.1	765.4	816.7	841.7
52.5°	652.3	670.7	723.3	775.9	800.9
55°	603.6	622.0	678.6	733.8	758.8
57.5°	553.7	572.1	633.9	691.7	716.7
60°	502.4	523.4	587.9	647.0	674.7
62.5°	452.4	474.8	543.1	606.3	632.6
65°	402.4	426.1	497.1	562.9	589.2
67.5°	351.1	378.8	452.4	519.5	547.1
70°	301.2	331.4	409.0	476.1	502.4
72.5°	252.5	285.4	365.6	434.0	449.8
75°	203.8	242.0	323.5	361.7	361.7
77.5°	157.8	199.9	276.2	290.6	298.5
80°	114.4	160.4	207.8	224.9	222.3
82.5°	76.3	122.3	148.6	148.6	144.7
85°	43.4	73.6	80.2	77.6	76.3
87.5°	18.4	27.6	25.0	19.7	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)