

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: P233197

Luminaire Tested: **FCB-24-4-LD4-60-30-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233197  
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-WDP6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 POLYCARBONATE LENS  
Light Source: (168)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

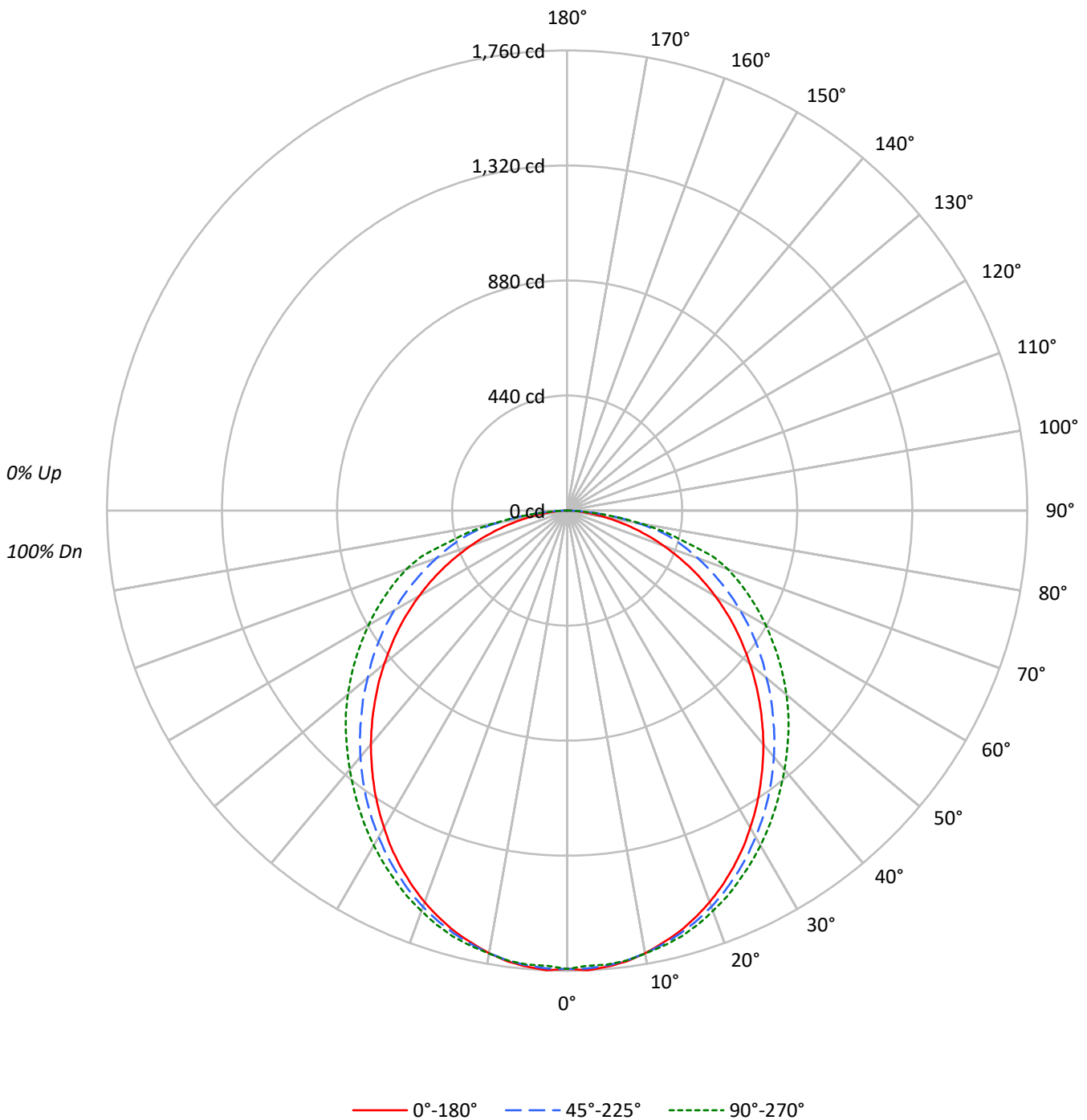
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4995.0 lumens  
Efficiency: N/A  
Efficacy: 95.7 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°	2359	2359	2359
5°	2365	2358	2354
10°	2348	2348	2351
15°	2320	2332	2349
20°	2282	2309	2334
25°	2234	2277	2316
30°	2176	2240	2298
35°	2115	2202	2281
40°	2052	2160	2271
45°	1982	2119	2278
50°	1912	2084	2291
55°	1841	2070	2315
60°	1758	2057	2361
65°	1666	2058	2439
70°	1541	2092	2570
75°	1378	2187	2445
80°	1153	2094	2239
85°	871	1610	1531



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.7	3.3
10°-20°	471.5	9.4
20°-30°	704.8	14.1
30°-40°	836.1	16.7
40°-50°	860.6	17.2
50°-60°	789.5	15.8
60°-70°	638.3	12.8
70°-80°	414.3	8.3
80°-90°	114.2	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°	1341.9	26.9
0°-40°	2178.1	43.6
0°-60°	3828.2	76.6
0°-90°	4995.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4995.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1753	1753	1753	1753	1753	
5°	1751	1739	1746	1744	1743	166
15°	1666	1659	1674	1681	1686	469
25°	1505	1507	1534	1548	1560	693
35°	1288	1298	1341	1370	1389	805
45°	1042	1059	1113	1166	1197	804
55°	785	809	882	954	987	701
65°	523	554	646	732	766	517
75°	265	315	421	470	470	282
85°	56	96	104	101	99	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1753.0	1753.0	1753.0	1753.0	1753.0
2.5°	1759.8	1746.1	1753.0	1751.3	1742.7
5°	1751.3	1739.3	1746.1	1744.4	1742.7
7.5°	1739.3	1727.3	1735.9	1734.2	1735.9
10°	1718.8	1708.5	1718.8	1720.5	1720.5
12.5°	1693.1	1684.6	1698.3	1701.7	1705.1
15°	1665.8	1658.9	1674.3	1681.2	1686.3
17.5°	1631.6	1626.4	1645.2	1653.8	1660.6
20°	1593.9	1592.2	1612.7	1621.3	1629.8
22.5°	1551.2	1551.2	1575.1	1585.4	1597.4
25°	1505.0	1506.7	1534.1	1547.8	1559.7
27.5°	1455.4	1457.1	1489.6	1506.7	1520.4
30°	1400.7	1407.5	1441.7	1464.0	1479.3
32.5°	1346.0	1354.5	1392.1	1417.8	1434.9
35°	1287.8	1298.1	1340.8	1369.9	1388.7
37.5°	1227.9	1239.9	1286.1	1318.6	1340.8
40°	1168.1	1181.8	1229.7	1267.3	1292.9
42.5°	1104.8	1120.2	1173.2	1217.7	1245.0
45°	1041.5	1058.6	1113.4	1166.4	1197.2
47.5°	978.3	998.8	1056.9	1115.1	1147.6
50°	913.3	933.8	995.4	1062.1	1094.5
52.5°	848.3	872.2	940.6	1009.0	1041.5
55°	785.0	808.9	882.5	954.3	986.8
57.5°	720.0	743.9	824.3	899.6	932.1
60°	653.3	680.7	764.5	841.4	877.3
62.5°	588.3	617.4	706.3	788.4	822.6
65°	523.3	554.1	646.5	732.0	766.2
67.5°	456.6	492.5	588.3	675.5	711.5
70°	391.6	431.0	531.9	619.1	653.3
72.5°	328.4	371.1	475.4	564.4	584.9
75°	265.1	314.7	420.7	470.3	470.3
77.5°	205.2	260.0	359.1	378.0	388.2
80°	148.8	208.6	270.2	292.4	289.0
82.5°	99.2	159.1	193.3	193.3	188.1
85°	56.4	95.8	104.3	100.9	99.2
87.5°	23.9	35.9	32.5	25.7	22.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)