

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: P233238

Luminaire Tested: **FCB-24-4-LD4-60-35-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233238  
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-LD4-60-35-UNV-EDD1-WDP12  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (168)3500K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

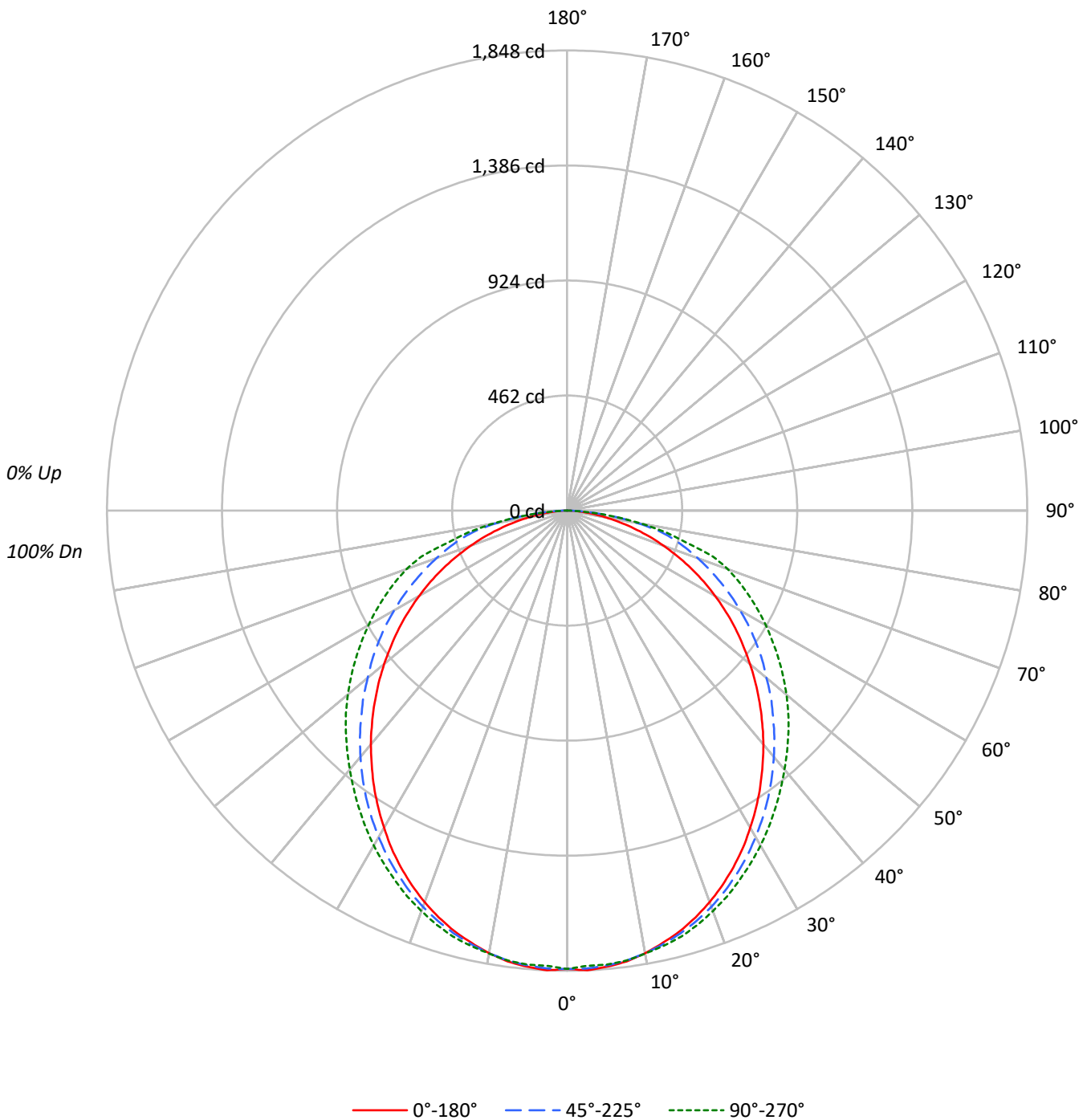
Lumens per Lamp: N/A  
Luminaire Lumens: 5245.0 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P233238

CATALOG NUMBER: FCB-24-4-LD4-60-35-UNV-EDD1-WDP12

### Luminous Intensity Polar Plot





TEST NUMBER: P233238

CATALOG NUMBER: FCB-24-4-LD4-60-35-UNV-EDD1-WDP12

**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°	2477	2477	2477
5°	2484	2476	2472
10°	2466	2466	2468
15°	2436	2449	2467
20°	2396	2425	2450
25°	2346	2392	2431
30°	2285	2352	2413
35°	2221	2313	2395
40°	2154	2268	2385
45°	2081	2225	2392
50°	2007	2188	2406
55°	1934	2174	2431
60°	1846	2160	2479
65°	1749	2161	2561
70°	1618	2197	2699
75°	1447	2297	2568
80°	1210	2198	2352
85°	915	1690	1609



TEST NUMBER: P233238

CATALOG NUMBER: FCB-24-4-LD4-60-35-UNV-EDD1-WDP12

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	173.9	3.3
10°-20°	495.1	9.4
20°-30°	740.1	14.1
30°-40°	878.0	16.7
40°-50°	903.7	17.2
50°-60°	829.0	15.8
60°-70°	670.3	12.8
70°-80°	435.0	8.3
80°-90°	119.9	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°	1409.1	26.9
0°-40°	2287.1	43.6
0°-60°	4019.7	76.6
0°-90°	5245.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5245.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1841	1841	1841	1841	1841	
5°	1839	1826	1834	1832	1830	174
15°	1749	1742	1758	1765	1771	493
25°	1580	1582	1611	1625	1638	727
35°	1352	1363	1408	1438	1458	846
45°	1094	1112	1169	1225	1257	844
55°	824	849	927	1002	1036	736
65°	550	582	679	769	804	543
75°	278	330	442	494	494	296
85°	59	101	110	106	104	73
90°	0	0	0	0	0	



TEST NUMBER: P233238

CATALOG NUMBER: FCB-24-4-LD4-60-35-UNV-EDD1-WDP12

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1840.7	1840.7	1840.7	1840.7	1840.7
2.5°	1847.9	1833.5	1840.7	1838.9	1829.9
5°	1838.9	1826.4	1833.5	1831.7	1829.9
7.5°	1826.4	1813.8	1822.8	1821.0	1822.8
10°	1804.8	1794.0	1804.8	1806.6	1806.6
12.5°	1777.9	1768.9	1783.3	1786.8	1790.4
15°	1749.1	1742.0	1758.1	1765.3	1770.7
17.5°	1713.2	1707.8	1727.6	1736.6	1743.7
20°	1673.7	1671.9	1693.5	1702.4	1711.4
22.5°	1628.8	1628.8	1654.0	1664.7	1677.3
25°	1580.3	1582.1	1610.9	1625.2	1637.8
27.5°	1528.2	1530.0	1564.2	1582.1	1596.5
30°	1470.8	1478.0	1513.9	1537.2	1553.4
32.5°	1413.3	1422.3	1461.8	1488.7	1506.7
35°	1352.3	1363.0	1407.9	1438.5	1458.2
37.5°	1289.4	1302.0	1350.5	1384.6	1407.9
40°	1226.5	1240.9	1291.2	1330.7	1357.6
42.5°	1160.1	1176.3	1231.9	1278.6	1307.4
45°	1093.7	1111.6	1169.1	1224.8	1257.1
47.5°	1027.2	1048.8	1109.8	1170.9	1205.0
50°	959.0	980.5	1045.2	1115.2	1149.3
52.5°	890.7	915.9	987.7	1059.5	1093.7
55°	824.3	849.4	926.6	1002.1	1036.2
57.5°	756.0	781.2	865.6	944.6	978.7
60°	686.0	714.7	802.7	883.5	921.3
62.5°	617.8	648.3	741.7	827.9	863.8
65°	549.5	581.8	678.8	768.6	804.5
67.5°	479.5	517.2	617.8	709.4	747.1
70°	411.2	452.5	558.5	650.1	686.0
72.5°	344.8	389.7	499.2	592.6	614.2
75°	278.4	330.4	441.8	493.9	493.9
77.5°	215.5	273.0	377.1	396.9	407.7
80°	156.2	219.1	283.7	307.1	303.5
82.5°	104.2	167.0	202.9	202.9	197.5
85°	59.3	100.6	109.5	106.0	104.2
87.5°	25.1	37.7	34.1	26.9	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)