

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: P233237

Luminaire Tested: **FCB-24-4-LD4-60-30-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233237  
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-WDP12  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (168)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

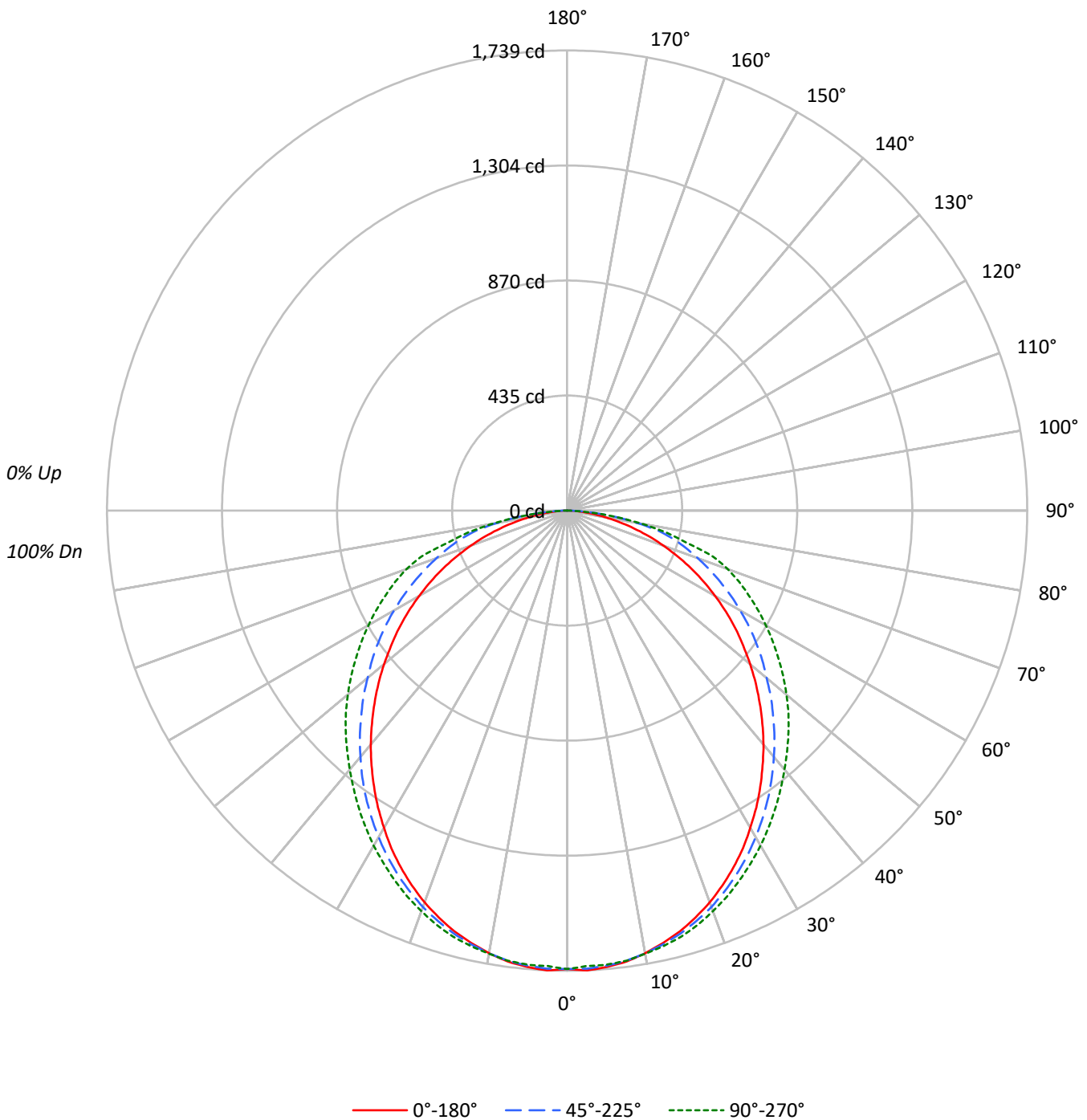
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4937.0 lumens  
Efficiency: N/A  
Efficacy: 94.6 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°	2331	2331	2331
5°	2338	2331	2326
10°	2321	2321	2323
15°	2293	2305	2322
20°	2256	2282	2307
25°	2208	2251	2289
30°	2151	2214	2272
35°	2091	2177	2255
40°	2028	2135	2245
45°	1959	2094	2252
50°	1890	2059	2264
55°	1820	2046	2288
60°	1738	2033	2334
65°	1647	2034	2411
70°	1523	2068	2540
75°	1362	2162	2417
80°	1140	2070	2214
85°	861	1592	1513



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.7	3.3
10°-20°	466.0	9.4
20°-30°	696.6	14.1
30°-40°	826.4	16.7
40°-50°	850.6	17.2
50°-60°	780.3	15.8
60°-70°	630.9	12.8
70°-80°	409.5	8.3
80°-90°	112.9	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°	1326.3	26.9
0°-40°	2152.8	43.6
0°-60°	3783.7	76.6
0°-90°	4937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4937.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1733	1733	1733	1733	1733	
5°	1731	1719	1726	1724	1722	164
15°	1646	1640	1655	1662	1667	464
25°	1488	1489	1516	1530	1542	685
35°	1273	1283	1325	1354	1373	796
45°	1029	1046	1100	1153	1183	794
55°	776	800	872	943	975	693
65°	517	548	639	724	757	511
75°	262	311	416	465	465	278
85°	56	95	103	100	98	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1732.6	1732.6	1732.6	1732.6	1732.6
2.5°	1739.4	1725.9	1732.6	1730.9	1722.5
5°	1730.9	1719.1	1725.9	1724.2	1722.5
7.5°	1719.1	1707.3	1715.7	1714.0	1715.7
10°	1698.8	1688.7	1698.8	1700.5	1700.5
12.5°	1673.5	1665.0	1678.5	1681.9	1685.3
15°	1646.4	1639.7	1654.9	1661.6	1666.7
17.5°	1612.6	1607.5	1626.1	1634.6	1641.4
20°	1575.4	1573.7	1594.0	1602.5	1610.9
22.5°	1533.2	1533.2	1556.8	1567.0	1578.8
25°	1487.5	1489.2	1516.3	1529.8	1541.6
27.5°	1438.5	1440.2	1472.3	1489.2	1502.7
30°	1384.4	1391.2	1425.0	1447.0	1462.2
32.5°	1330.3	1338.8	1376.0	1401.3	1418.2
35°	1272.8	1283.0	1325.3	1354.0	1372.6
37.5°	1213.7	1225.5	1271.2	1303.3	1325.3
40°	1154.5	1168.0	1215.4	1252.6	1277.9
42.5°	1092.0	1107.2	1159.6	1203.5	1230.6
45°	1029.4	1046.3	1100.4	1152.8	1183.3
47.5°	966.9	987.2	1044.6	1102.1	1134.2
50°	902.7	922.9	983.8	1049.7	1081.8
52.5°	838.4	862.1	929.7	997.3	1029.4
55°	775.9	799.5	872.2	943.2	975.3
57.5°	711.6	735.3	814.8	889.1	921.3
60°	645.7	672.8	755.6	831.7	867.2
62.5°	581.5	610.2	698.1	779.3	813.1
65°	517.3	547.7	639.0	723.5	757.3
67.5°	451.3	486.8	581.5	667.7	703.2
70°	387.1	426.0	525.7	611.9	645.7
72.5°	324.6	366.8	469.9	557.8	578.1
75°	262.0	311.0	415.8	464.9	464.9
77.5°	202.8	256.9	355.0	373.6	383.7
80°	147.1	206.2	267.1	289.1	285.7
82.5°	98.0	157.2	191.0	191.0	185.9
85°	55.8	94.7	103.1	99.7	98.0
87.5°	23.7	35.5	32.1	25.4	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)