

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: P233236

Luminaire Tested: **FCB-24-4-LD4-50-50-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233236
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-LD4-50-50-UNV-EDD1-WDP12
Description: FAILSAFE 2X4 FCB LED TROFFER
.125 POLYCARBONATE LENS
Light Source: (168)5000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

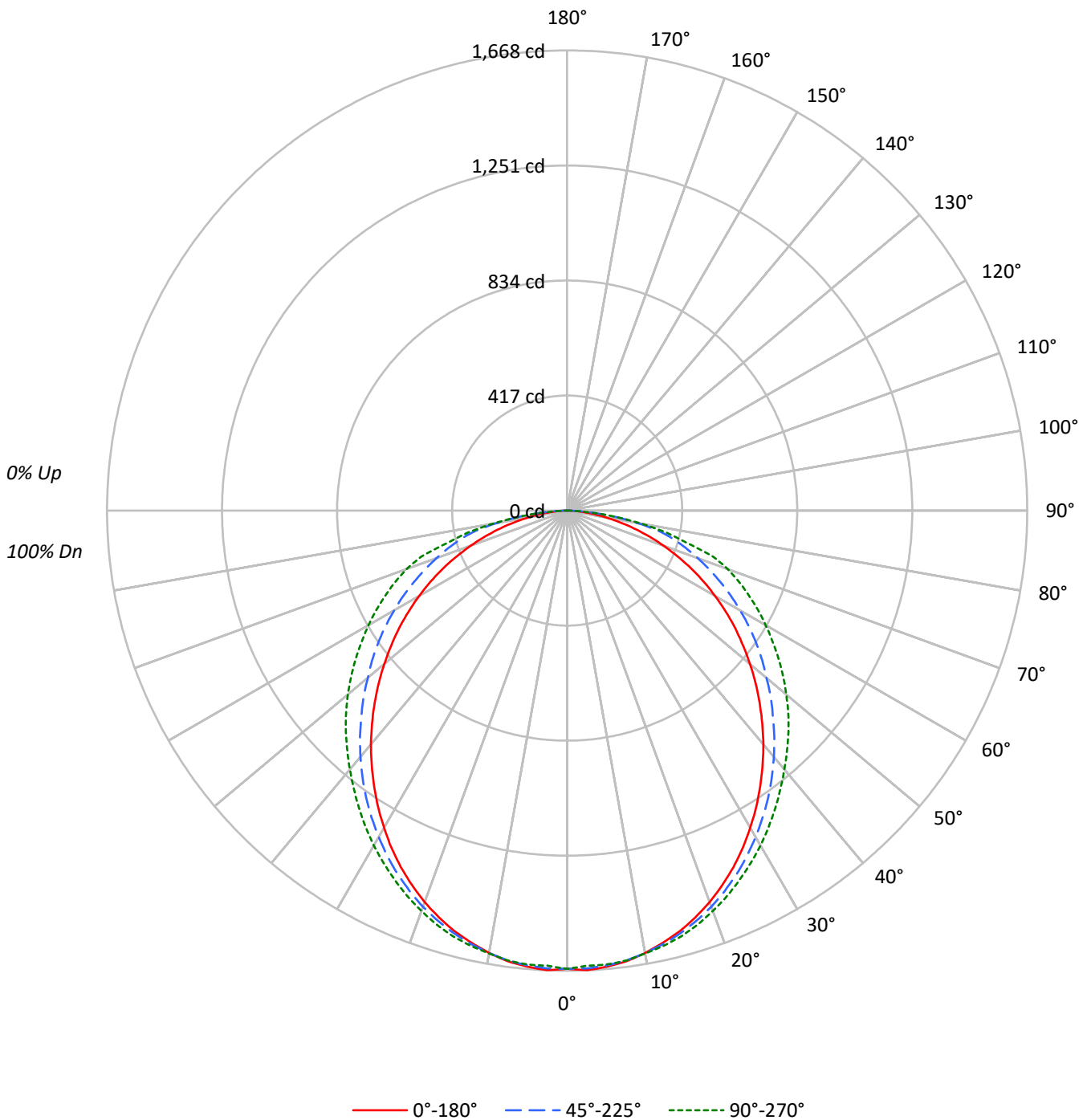
Lumens per Lamp: N/A
Luminaire Lumens: 4733.0 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	2235	2235	2235
5°	2241	2235	2230
10°	2225	2225	2227
15°	2199	2210	2226
20°	2163	2188	2211
25°	2117	2158	2194
30°	2062	2122	2178
35°	2004	2087	2161
40°	1944	2047	2152
45°	1878	2007	2159
50°	1811	1974	2171
55°	1745	1962	2193
60°	1666	1949	2237
65°	1579	1950	2311
70°	1460	1983	2435
75°	1306	2072	2316
80°	1093	1984	2122
85°	826	1527	1451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.0	3.3
10°-20°	446.7	9.4
20°-30°	667.8	14.1
30°-40°	792.3	16.7
40°-50°	815.5	17.2
50°-60°	748.1	15.8
60°-70°	604.9	12.8
70°-80°	392.5	8.3
80°-90°	108.2	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°	1271.5	26.9
0°-40°	2063.8	43.6
0°-60°	3627.4	76.6
0°-90°	4733.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4733.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1661	1661	1661	1661	1661	
5°	1659	1648	1655	1653	1651	157
15°	1578	1572	1586	1593	1598	445
25°	1426	1428	1454	1467	1478	656
35°	1220	1230	1270	1298	1316	763
45°	987	1003	1055	1105	1134	762
55°	744	766	836	904	935	664
65°	496	525	613	694	726	490
75°	251	298	399	446	446	267
85°	54	91	99	96	94	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1661.0	1661.0	1661.0	1661.0	1661.0
2.5°	1667.5	1654.6	1661.0	1659.4	1651.3
5°	1659.4	1648.1	1654.6	1652.9	1651.3
7.5°	1648.1	1636.7	1644.8	1643.2	1644.8
10°	1628.6	1618.9	1628.6	1630.2	1630.2
12.5°	1604.3	1596.2	1609.2	1612.4	1615.7
15°	1578.4	1571.9	1586.5	1593.0	1597.8
17.5°	1546.0	1541.1	1558.9	1567.0	1573.5
20°	1510.3	1508.7	1528.2	1536.3	1544.4
22.5°	1469.8	1469.8	1492.5	1502.2	1513.6
25°	1426.1	1427.7	1453.6	1466.6	1477.9
27.5°	1379.1	1380.7	1411.5	1427.7	1440.6
30°	1327.2	1333.7	1366.1	1387.2	1401.8
32.5°	1275.4	1283.5	1319.1	1343.4	1359.6
35°	1220.3	1230.0	1270.5	1298.0	1315.9
37.5°	1163.5	1174.9	1218.6	1249.4	1270.5
40°	1106.8	1119.8	1165.2	1200.8	1225.1
42.5°	1046.9	1061.4	1111.7	1153.8	1179.7
45°	986.9	1003.1	1055.0	1105.2	1134.4
47.5°	926.9	946.4	1001.5	1056.6	1087.4
50°	865.4	884.8	943.1	1006.3	1037.1
52.5°	803.8	826.5	891.3	956.1	986.9
55°	743.8	766.5	836.2	904.3	935.0
57.5°	682.2	704.9	781.1	852.4	883.2
60°	619.0	645.0	724.4	797.3	831.3
62.5°	557.5	585.0	669.3	747.1	779.5
65°	495.9	525.0	612.6	693.6	726.0
67.5°	432.7	466.7	557.5	640.1	674.1
70°	371.1	408.4	504.0	586.6	619.0
72.5°	311.1	351.7	450.5	534.8	554.2
75°	251.2	298.2	398.6	445.6	445.6
77.5°	194.5	246.3	340.3	358.1	367.9
80°	141.0	197.7	256.0	277.1	273.9
82.5°	94.0	150.7	183.1	183.1	178.3
85°	53.5	90.7	98.9	95.6	94.0
87.5°	22.7	34.0	30.8	24.3	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)