

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: P233233

Luminaire Tested: **FCB-24-4-LD4-50-30-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233233
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-LD4-50-30-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

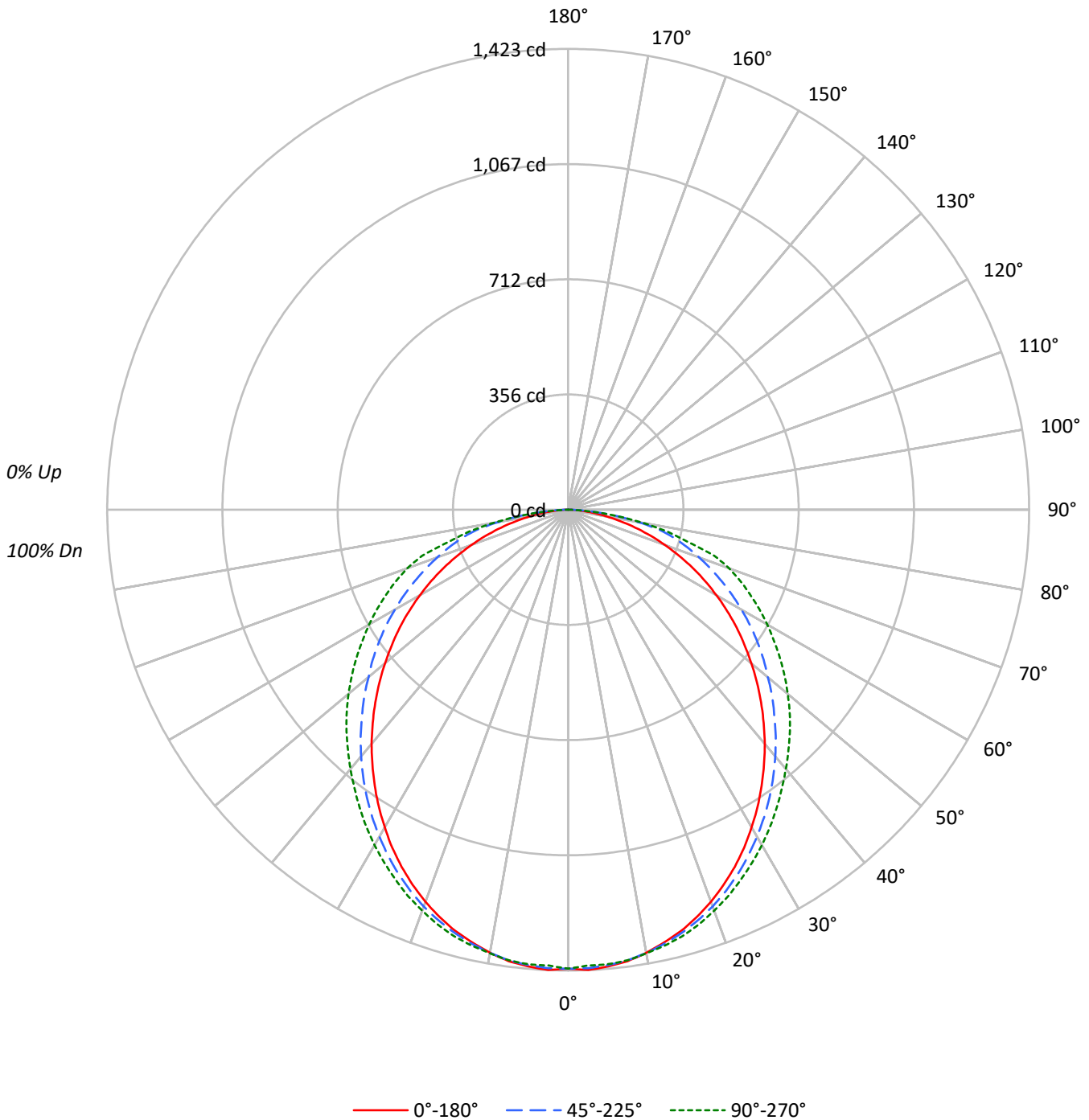
Lumens per Lamp: N/A
Luminaire Lumens: 4038.0 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1907	1907	1907
5°	1912	1907	1903
10°	1898	1898	1900
15°	1876	1885	1899
20°	1845	1867	1887
25°	1806	1841	1872
30°	1759	1811	1858
35°	1710	1780	1844
40°	1659	1746	1836
45°	1602	1713	1842
50°	1545	1684	1852
55°	1489	1673	1871
60°	1421	1663	1909
65°	1347	1664	1972
70°	1245	1692	2078
75°	1114	1768	1976
80°	932	1692	1811
85°	704	1301	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.9	3.3
10°-20°	381.1	9.4
20°-30°	569.8	14.1
30°-40°	675.9	16.7
40°-50°	695.7	17.2
50°-60°	638.2	15.8
60°-70°	516.0	12.8
70°-80°	334.9	8.3
80°-90°	92.3	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°	1084.8	26.9
0°-40°	1760.8	43.6
0°-60°	3094.7	76.6
0°-90°	4038.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4038.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1417	1417	1417	1417	1417	
5°	1416	1406	1412	1410	1409	134
15°	1347	1341	1354	1359	1363	379
25°	1217	1218	1240	1251	1261	560
35°	1041	1049	1084	1107	1123	651
45°	842	856	900	943	968	650
55°	635	654	713	772	798	567
65°	423	448	523	592	619	418
75°	214	254	340	380	380	228
85°	46	77	84	82	80	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1417.1	1417.1	1417.1	1417.1	1417.1
2.5°	1422.7	1411.6	1417.1	1415.7	1408.8
5°	1415.7	1406.1	1411.6	1410.2	1408.8
7.5°	1406.1	1396.4	1403.3	1401.9	1403.3
10°	1389.5	1381.2	1389.5	1390.9	1390.9
12.5°	1368.7	1361.8	1372.9	1375.7	1378.4
15°	1346.6	1341.1	1353.5	1359.1	1363.2
17.5°	1319.0	1314.8	1330.0	1336.9	1342.5
20°	1288.5	1287.2	1303.8	1310.7	1317.6
22.5°	1254.0	1254.0	1273.3	1281.6	1291.3
25°	1216.7	1218.0	1240.2	1251.2	1260.9
27.5°	1176.6	1177.9	1204.2	1218.0	1229.1
30°	1132.3	1137.9	1165.5	1183.5	1195.9
32.5°	1088.1	1095.0	1125.4	1146.1	1160.0
35°	1041.1	1049.4	1083.9	1107.4	1122.6
37.5°	992.7	1002.4	1039.7	1066.0	1083.9
40°	944.3	955.4	994.1	1024.5	1045.2
42.5°	893.1	905.6	948.4	984.4	1006.5
45°	842.0	855.8	900.0	942.9	967.8
47.5°	790.8	807.4	854.4	901.4	927.7
50°	738.3	754.9	804.7	858.6	884.8
52.5°	685.8	705.1	760.4	815.7	842.0
55°	634.6	654.0	713.4	771.5	797.7
57.5°	582.1	601.4	666.4	727.2	753.5
60°	528.1	550.3	618.0	680.2	709.3
62.5°	475.6	499.1	571.0	637.4	665.0
65°	423.1	448.0	522.6	591.7	619.4
67.5°	369.1	398.2	475.6	546.1	575.1
70°	316.6	348.4	430.0	500.5	528.1
72.5°	265.5	300.0	384.4	456.2	472.8
75°	214.3	254.4	340.1	380.2	380.2
77.5°	165.9	210.1	290.3	305.5	313.8
80°	120.3	168.7	218.4	236.4	233.7
82.5°	80.2	128.6	156.2	156.2	152.1
85°	45.6	77.4	84.3	81.6	80.2
87.5°	19.4	29.0	26.3	20.7	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)