

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: P233211

Luminaire Tested: **FCB-24-4-LD4-40-40-UNV-EDD1-WDA12**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233211
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-LD4-40-40-UNV-EDD1-WDA12
Description: FAILSAFE 2X4 FCB LED TROFFER
.125 ACRYLIC LENS
Light Source: (168)4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

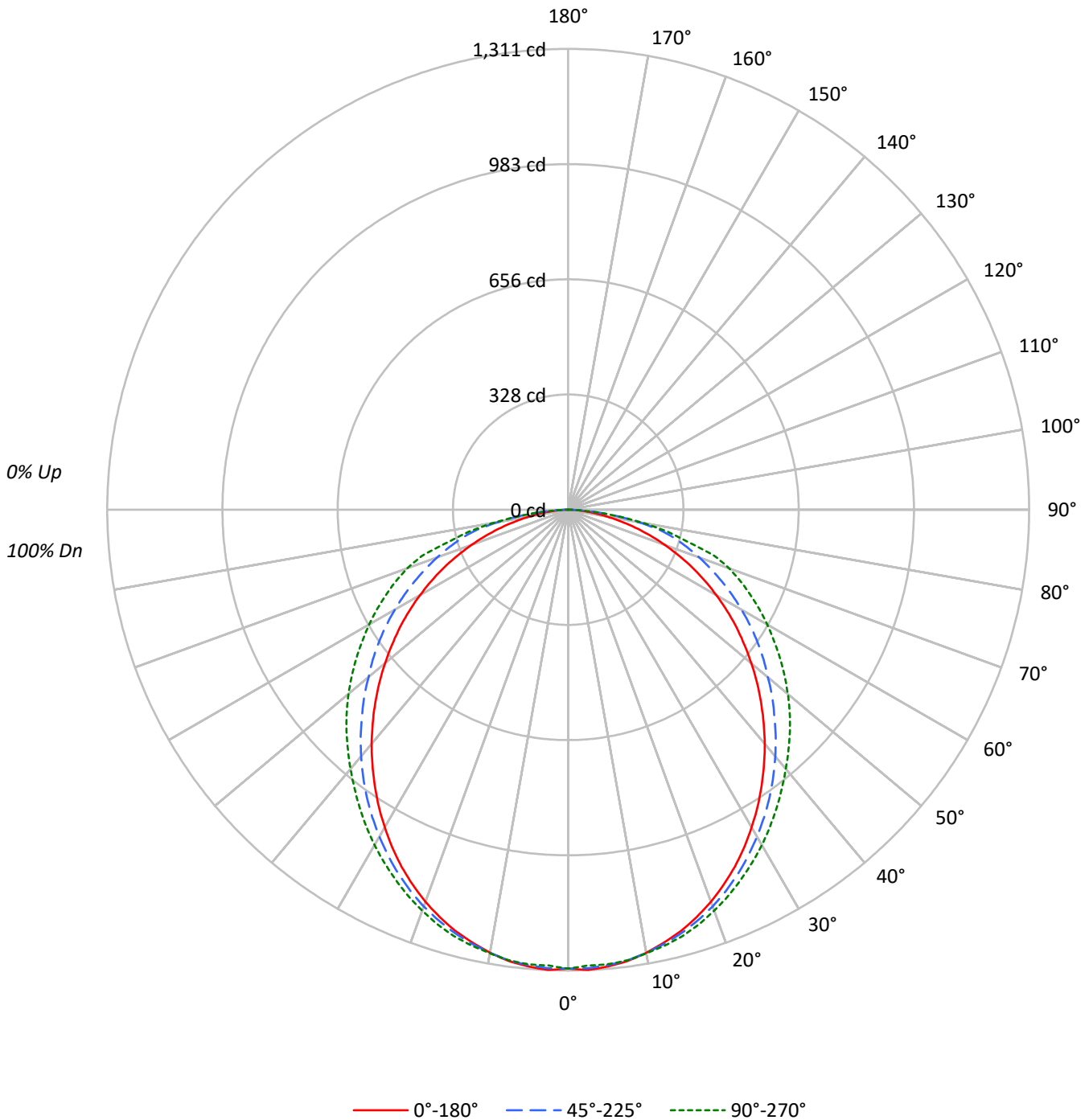
Lumens per Lamp: N/A
Luminaire Lumens: 3720.0 lumens
Efficiency: N/A
Efficacy: 128.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 29
Input Voltage (V): 120
Input Current (A_{in}): 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°	1757	1757	1757
5°	1762	1756	1753
10°	1749	1749	1751
15°	1728	1737	1749
20°	1700	1720	1738
25°	1664	1696	1724
30°	1621	1668	1712
35°	1575	1640	1699
40°	1528	1609	1691
45°	1476	1578	1697
50°	1424	1552	1706
55°	1371	1542	1724
60°	1309	1532	1758
65°	1241	1533	1817
70°	1148	1558	1914
75°	1026	1629	1821
80°	859	1559	1668
85°	648	1200	1141



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.4	3.3
10°-20°	351.1	9.4
20°-30°	524.9	14.1
30°-40°	622.7	16.7
40°-50°	640.9	17.2
50°-60°	588.0	15.8
60°-70°	475.4	12.8
70°-80°	308.5	8.3
80°-90°	85.1	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°	999.4	26.9
0°-40°	1622.1	43.6
0°-60°	2851.0	76.6
0°-90°	3720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3720.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1306	1306	1306	1306	1306	
5°	1304	1295	1300	1299	1298	124
15°	1241	1236	1247	1252	1256	349
25°	1121	1122	1142	1153	1162	516
35°	959	967	999	1020	1034	600
45°	776	788	829	869	892	599
55°	585	602	657	711	735	522
65°	390	413	482	545	571	385
75°	197	234	313	350	350	210
85°	42	71	78	75	74	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1305.5	1305.5	1305.5	1305.5	1305.5
2.5°	1310.6	1300.4	1305.5	1304.3	1297.9
5°	1304.3	1295.3	1300.4	1299.2	1297.9
7.5°	1295.3	1286.4	1292.8	1291.5	1292.8
10°	1280.1	1272.4	1280.1	1281.3	1281.3
12.5°	1260.9	1254.6	1264.8	1267.3	1269.9
15°	1240.6	1235.5	1246.9	1252.0	1255.9
17.5°	1215.1	1211.3	1225.3	1231.7	1236.7
20°	1187.1	1185.8	1201.1	1207.5	1213.8
22.5°	1155.2	1155.2	1173.1	1180.7	1189.6
25°	1120.8	1122.1	1142.5	1152.7	1161.6
27.5°	1083.9	1085.2	1109.4	1122.1	1132.3
30°	1043.1	1048.2	1073.7	1090.3	1101.7
32.5°	1002.4	1008.8	1036.8	1055.9	1068.6
35°	959.1	966.7	998.6	1020.2	1034.2
37.5°	914.5	923.4	957.8	982.0	998.6
40°	869.9	880.1	915.8	943.8	962.9
42.5°	822.8	834.3	873.7	906.9	927.2
45°	775.7	788.4	829.2	868.7	891.6
47.5°	728.5	743.8	787.1	830.4	854.6
50°	680.1	695.4	741.3	791.0	815.2
52.5°	631.7	649.6	700.5	751.5	775.7
55°	584.6	602.5	657.2	710.7	734.9
57.5°	536.2	554.1	613.9	670.0	694.2
60°	486.5	506.9	569.3	626.7	653.4
62.5°	438.1	459.8	526.0	587.2	612.6
65°	389.7	412.7	481.5	545.1	570.6
67.5°	340.1	366.8	438.1	503.1	529.9
70°	291.7	321.0	396.1	461.1	486.5
72.5°	244.5	276.4	354.1	420.3	435.6
75°	197.4	234.4	313.3	350.3	350.3
77.5°	152.8	193.6	267.5	281.5	289.1
80°	110.8	155.4	201.2	217.8	215.3
82.5°	73.9	118.5	143.9	143.9	140.1
85°	42.0	71.3	77.7	75.1	73.9
87.5°	17.8	26.7	24.2	19.1	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)