

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: P233147

Luminaire Tested: **FCB-24-4-LD4-30-40-UNV-EDD1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233147
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-LD4-30-40-UNV-EDD1
Description: FAILSAFE 2X4 FCB LED TROFFER
OPAL DIFFUSER, NO LENS
Light Source: (168)4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

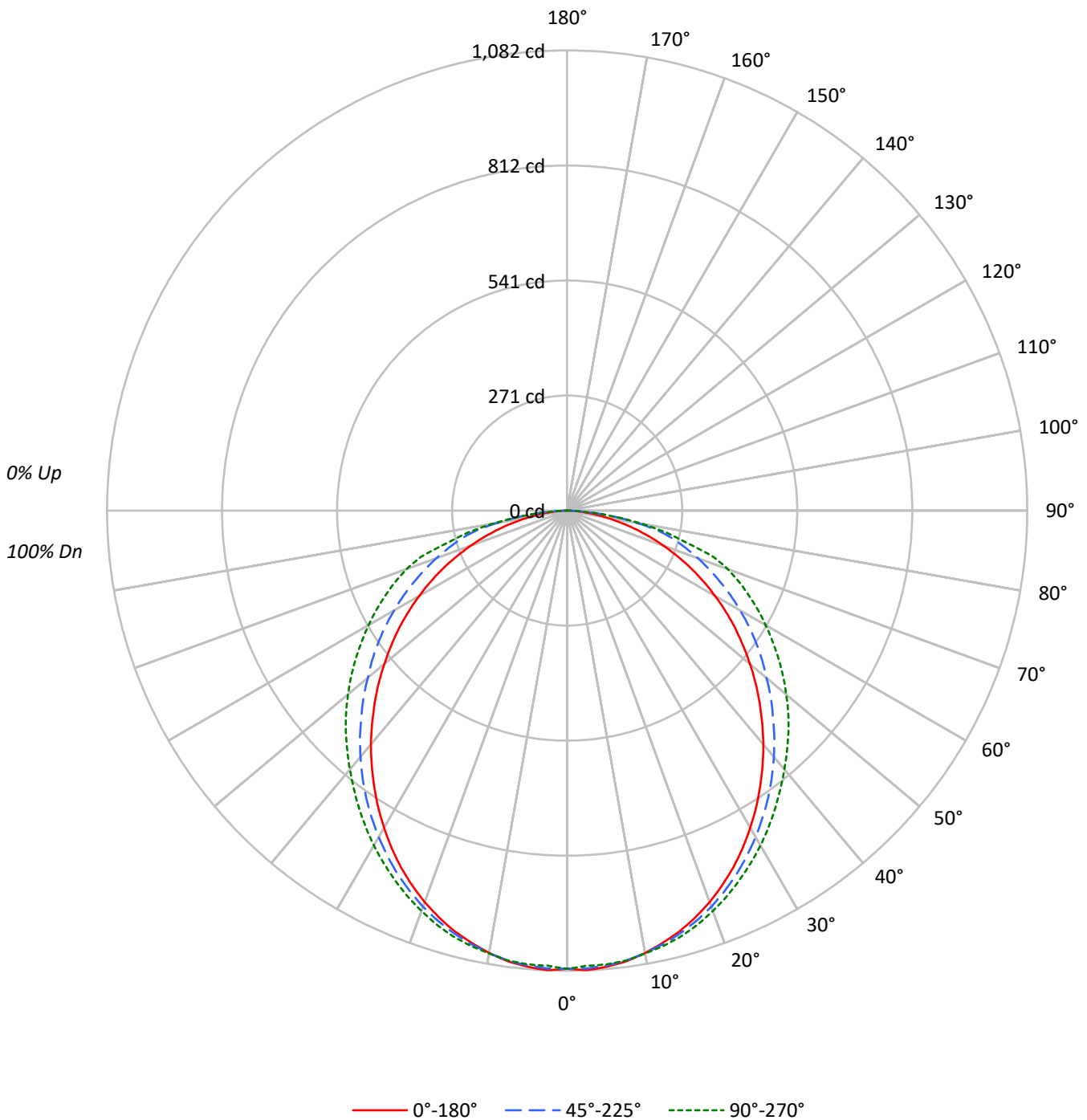
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3070.0 lumens
Efficiency: N/A
Efficacy: 142.1 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): 21.6
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: P233147
CATALOG NUMBER: FCB-24-4-LD4-30-40-UNV-EDD1

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°	1450	1450	1450
5°	1454	1449	1447
10°	1443	1443	1445
15°	1426	1433	1444
20°	1403	1419	1434
25°	1373	1400	1423
30°	1338	1377	1413
35°	1300	1354	1402
40°	1261	1327	1396
45°	1218	1302	1400
50°	1175	1281	1408
55°	1132	1272	1423
60°	1080	1264	1451
65°	1024	1265	1499
70°	947	1286	1579
75°	847	1344	1503
80°	708	1287	1376
85°	536	990	942



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.8	3.3
10°-20°	289.8	9.4
20°-30°	433.2	14.1
30°-40°	513.9	16.7
40°-50°	528.9	17.2
50°-60°	485.2	15.8
60°-70°	392.3	12.8
70°-80°	254.6	8.3
80°-90°	70.2	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°	824.8	26.9
0°-40°	1338.7	43.6
0°-60°	2352.8	76.6
0°-90°	3070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1077	1077	1077	1077	1077	
5°	1076	1069	1073	1072	1071	102
15°	1024	1020	1029	1033	1036	288
25°	925	926	943	951	959	426
35°	792	798	824	842	854	495
45°	640	651	684	717	736	494
55°	482	497	542	586	606	431
65°	322	341	397	450	471	318
75°	163	193	259	289	289	173
85°	35	59	64	62	61	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1077.4	1077.4	1077.4	1077.4	1077.4
2.5°	1081.6	1073.2	1077.4	1076.4	1071.1
5°	1076.4	1069.0	1073.2	1072.2	1071.1
7.5°	1069.0	1061.6	1066.9	1065.8	1066.9
10°	1056.4	1050.1	1056.4	1057.4	1057.4
12.5°	1040.6	1035.4	1043.8	1045.9	1048.0
15°	1023.8	1019.6	1029.1	1033.3	1036.4
17.5°	1002.8	999.6	1011.2	1016.4	1020.6
20°	979.7	978.6	991.2	996.5	1001.7
22.5°	953.4	953.4	968.1	974.4	981.8
25°	925.0	926.0	942.9	951.3	958.6
27.5°	894.5	895.6	915.5	926.0	934.5
30°	860.9	865.1	886.1	899.8	909.2
32.5°	827.2	832.5	855.6	871.4	881.9
35°	791.5	797.8	824.1	842.0	853.5
37.5°	754.7	762.1	790.5	810.4	824.1
40°	717.9	726.3	755.8	778.9	794.7
42.5°	679.0	688.5	721.1	748.4	765.2
45°	640.1	650.7	684.3	716.9	735.8
47.5°	601.2	613.9	649.6	685.3	705.3
50°	561.3	573.9	611.8	652.8	672.7
52.5°	521.4	536.1	578.1	620.2	640.1
55°	482.5	497.2	542.4	586.5	606.5
57.5°	442.5	457.2	506.6	552.9	572.9
60°	401.5	418.4	469.9	517.2	539.2
62.5°	361.6	379.5	434.1	484.6	505.6
65°	321.6	340.6	397.3	449.9	470.9
67.5°	280.7	302.7	361.6	415.2	437.3
70°	240.7	264.9	326.9	380.5	401.5
72.5°	201.8	228.1	292.2	346.9	359.5
75°	162.9	193.4	258.6	289.1	289.1
77.5°	126.1	159.8	220.7	232.3	238.6
80°	91.4	128.2	166.1	179.7	177.6
82.5°	61.0	97.8	118.8	118.8	115.6
85°	34.7	58.9	64.1	62.0	61.0
87.5°	14.7	22.1	20.0	15.8	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)