

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: P233033

Luminaire Tested: **FCB-12-4-LD4-44-30-UNV-EDD1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233033
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35573)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FCB-12-4-LD4-44-30-UNV-EDD1
Description: FAILSAFE 1X4 FCB LED TROFFER
OPAL DIFFUSER, NO LENS
Light Source: (84)3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

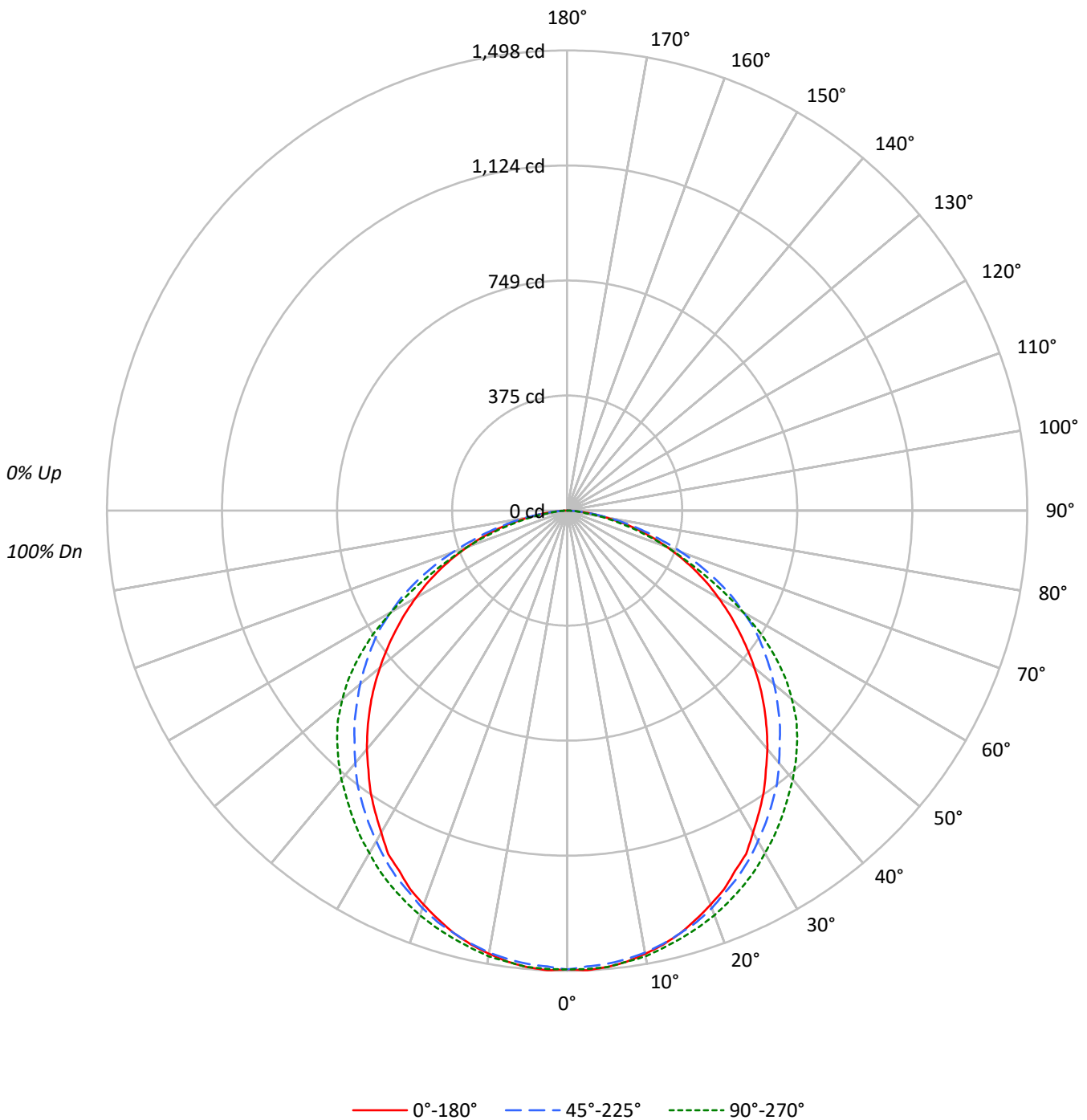
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4139.0 lumens
Efficiency: N/A
Efficacy: 100.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	46	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	34
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	29	42	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4019	4019	4019
5°	4029	4002	4029
10°	4003	3992	4026
15°	3968	3968	4013
20°	3909	3944	4014
25°	3841	3908	4011
30°	3760	3861	4001
35°	3667	3821	4002
40°	3562	3770	4014
45°	3456	3727	4030
50°	3332	3682	3998
55°	3197	3647	3868
60°	3064	3569	3558
65°	2923	3417	3118
70°	2713	3115	2697
75°	2461	2716	2228
80°	1960	2151	1644
85°	1386	1198	945



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.3	3.4
10°-20°	403.7	9.8
20°-30°	608.7	14.7
30°-40°	729.7	17.6
40°-50°	757.2	18.3
50°-60°	683.0	16.5
60°-70°	498.2	12.0
70°-80°	261.4	6.3
80°-90°	55.8	1.3
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°	1153.8	27.9
0°-40°	1883.5	45.5
0°-60°	3323.6	80.3
0°-90°	4139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4139.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1492	1488	1481	1492	1492	142
15°	1424	1424	1424	1441	1441	401
25°	1294	1300	1316	1345	1351	597
35°	1116	1128	1163	1206	1218	697
45°	908	926	979	1039	1059	700
55°	682	706	777	828	824	610
65°	459	486	537	516	490	454
75°	237	269	261	226	214	248
85°	45	55	39	33	31	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1493.6	1493.6	1493.6	1493.6	1493.6
2.5°	1497.7	1493.6	1485.5	1493.6	1493.6
5°	1491.6	1487.5	1481.4	1491.6	1491.6
7.5°	1481.4	1477.3	1473.2	1483.4	1481.4
10°	1465.1	1463.0	1461.0	1473.2	1473.2
12.5°	1446.7	1446.7	1444.7	1459.0	1456.9
15°	1424.3	1424.3	1424.3	1440.6	1440.6
17.5°	1395.7	1399.8	1403.9	1422.2	1422.2
20°	1365.1	1369.2	1377.3	1399.8	1401.8
22.5°	1334.5	1336.5	1344.7	1371.2	1377.3
25°	1293.7	1299.8	1316.1	1344.7	1350.8
27.5°	1261.0	1263.1	1281.4	1314.1	1322.2
30°	1210.0	1224.3	1242.7	1279.4	1287.6
32.5°	1163.1	1175.3	1203.9	1242.7	1254.9
35°	1116.2	1128.4	1163.1	1205.9	1218.2
37.5°	1063.1	1081.5	1122.3	1165.1	1179.4
40°	1014.1	1030.5	1073.3	1126.4	1142.7
42.5°	961.1	977.4	1024.3	1083.5	1101.9
45°	908.0	926.4	979.4	1038.6	1059.0
47.5°	852.9	873.3	928.4	993.7	1012.1
50°	795.8	818.2	879.5	946.8	955.0
52.5°	738.7	763.1	828.4	887.6	895.8
55°	681.5	706.0	777.4	828.4	824.4
57.5°	626.4	653.0	726.4	752.9	748.9
60°	569.3	597.9	663.2	675.4	661.1
62.5°	516.2	542.8	604.0	593.8	575.4
65°	459.1	485.6	536.7	516.2	489.7
67.5°	402.0	434.6	467.3	432.6	412.2
70°	344.8	381.6	395.9	361.2	342.8
72.5°	289.8	328.5	324.4	289.8	277.5
75°	236.7	269.3	261.2	226.5	214.3
77.5°	179.6	216.3	197.9	169.4	159.2
80°	126.5	159.2	138.8	114.3	106.1
82.5°	83.7	106.1	85.7	67.3	61.2
85°	44.9	55.1	38.8	32.6	30.6
87.5°	18.4	16.3	14.3	14.3	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)