

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: P233146

Luminaire Tested: **FCB-24-4-LD4-30-35-UNV-EDD1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233146  
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-LD4-30-35-UNV-EDD1  
Description: FAILSAFE 2X4 FCB LED TROFFER  
OPAL DIFFUSER, NO LENS  
Light Source: (168)3500K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

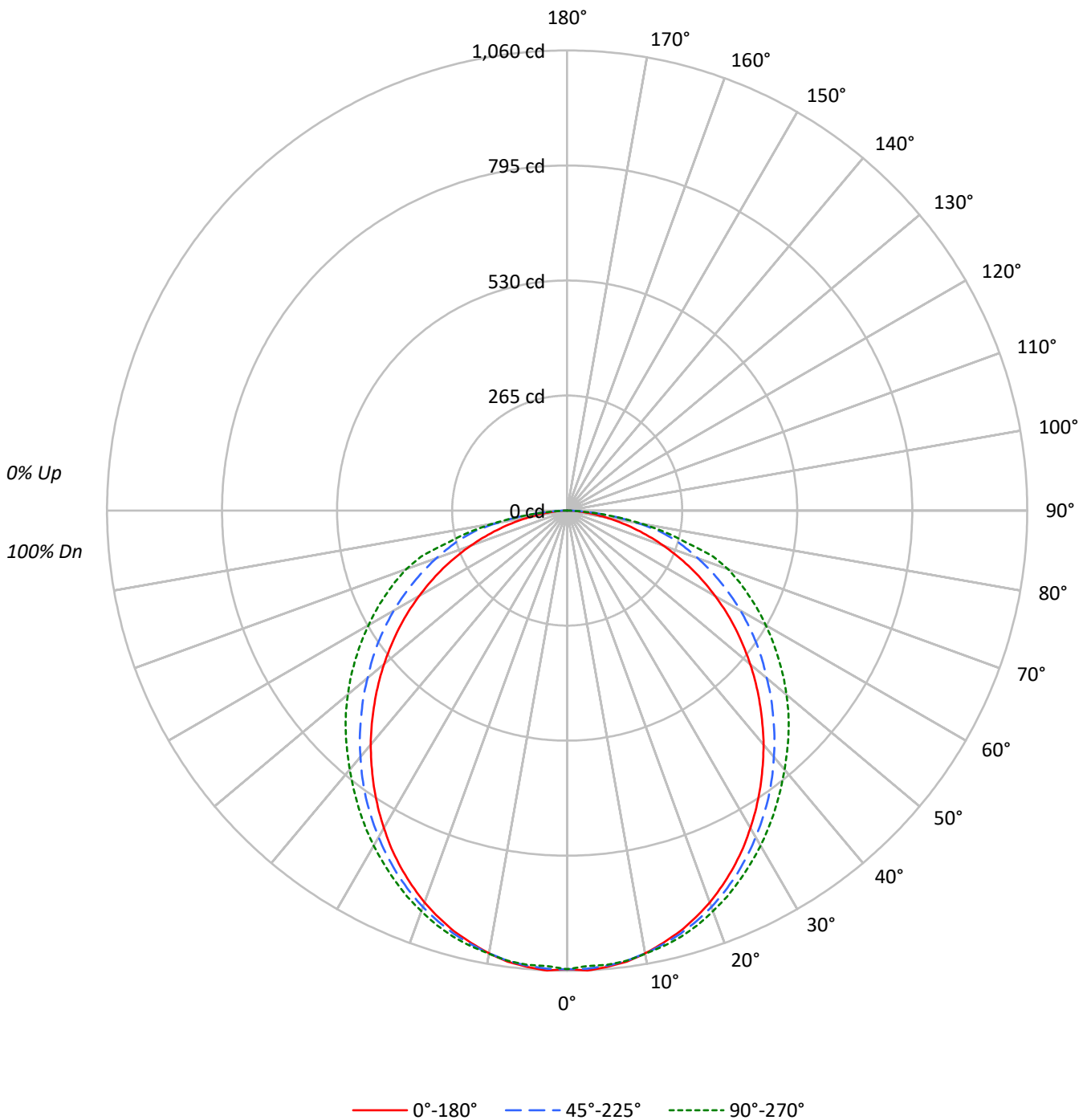
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3010.0 lumens  
Efficiency: N/A  
Efficacy: 139.4 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 (A<sub>in</sub>): 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°	1421	1421	1421
5°	1425	1421	1418
10°	1415	1415	1417
15°	1398	1405	1416
20°	1375	1391	1406
25°	1346	1372	1395
30°	1311	1350	1385
35°	1275	1327	1374
40°	1236	1302	1368
45°	1194	1277	1373
50°	1152	1256	1381
55°	1110	1247	1395
60°	1059	1240	1423
65°	1004	1240	1470
70°	928	1261	1549
75°	830	1318	1473
80°	695	1261	1350
85°	525	971	923



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.8	3.3
10°-20°	284.1	9.4
20°-30°	424.7	14.1
30°-40°	503.9	16.7
40°-50°	518.6	17.2
50°-60°	475.7	15.8
60°-70°	384.7	12.8
70°-80°	249.6	8.3
80°-90°	68.8	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°	808.6	26.9
0°-40°	1312.5	43.6
0°-60°	2306.9	76.6
0°-90°	3010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3010.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1055	1048	1052	1051	1050	100
15°	1004	1000	1009	1013	1016	283
25°	907	908	924	933	940	417
35°	776	782	808	826	837	485
45°	628	638	671	703	721	484
55°	473	488	532	575	595	423
65°	315	334	390	441	462	312
75°	160	190	254	283	283	170
85°	34	58	63	61	60	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1056.4	1056.4	1056.4	1056.4	1056.4
2.5°	1060.5	1052.2	1056.4	1055.3	1050.2
5°	1055.3	1048.1	1052.2	1051.2	1050.2
7.5°	1048.1	1040.9	1046.0	1045.0	1046.0
10°	1035.7	1029.6	1035.7	1036.8	1036.8
12.5°	1020.3	1015.1	1023.4	1025.4	1027.5
15°	1003.8	999.7	1008.9	1013.1	1016.2
17.5°	983.2	980.1	991.4	996.6	1000.7
20°	960.5	959.5	971.8	977.0	982.2
22.5°	934.7	934.7	949.2	955.4	962.6
25°	906.9	907.9	924.4	932.7	939.9
27.5°	877.0	878.1	897.6	907.9	916.2
30°	844.1	848.2	868.8	882.2	891.5
32.5°	811.1	816.2	838.9	854.4	864.7
35°	776.0	782.2	808.0	825.5	836.8
37.5°	740.0	747.2	775.0	794.6	808.0
40°	703.9	712.1	741.0	763.7	779.1
42.5°	665.8	675.0	707.0	733.8	750.3
45°	627.6	637.9	670.9	702.9	721.4
47.5°	589.5	601.9	636.9	671.9	691.5
50°	550.3	562.7	599.8	640.0	659.6
52.5°	511.2	525.6	566.8	608.0	627.6
55°	473.0	487.5	531.8	575.1	594.6
57.5°	433.9	448.3	496.7	542.1	561.7
60°	393.7	410.2	460.7	507.0	528.7
62.5°	354.5	372.0	425.6	475.1	495.7
65°	315.4	333.9	389.6	441.1	461.7
67.5°	275.2	296.8	354.5	407.1	428.7
70°	236.0	259.7	320.5	373.1	393.7
72.5°	197.9	223.6	286.5	340.1	352.5
75°	159.7	189.6	253.5	283.4	283.4
77.5°	123.7	156.6	216.4	227.8	233.9
80°	89.7	125.7	162.8	176.2	174.2
82.5°	59.8	95.8	116.5	116.5	113.4
85°	34.0	57.7	62.9	60.8	59.8
87.5°	14.4	21.6	19.6	15.5	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)