

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: P545763

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-81-88-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P545763
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-12-2-LD4-2STD-40-UNV-81-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

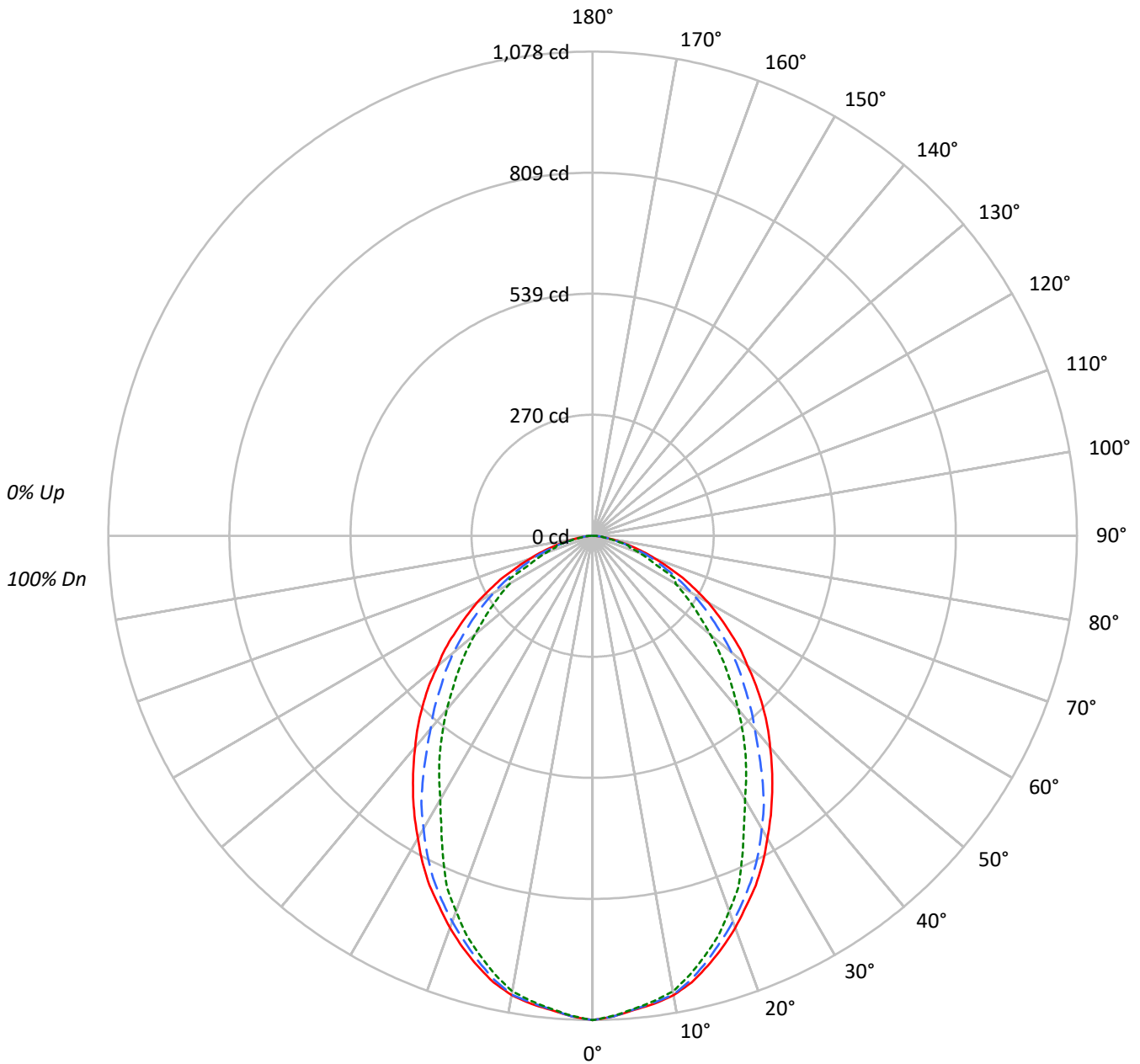
Lumens per Lamp: N/A
Luminaire Lumens: 2117.0 lumens
Efficiency: N/A
Efficacy: 63.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
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				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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5804	5804	5804
5°	5725	5718	5712
10°	5675	5668	5628
15°	5522	5467	5390
20°	5320	5234	5091
25°	5101	4990	4679
30°	4834	4680	4215
35°	4579	4324	3899
40°	4318	3941	3547
45°	4070	3643	3207
50°	3768	3382	2860
55°	3486	3065	2562
60°	3194	2737	2295
65°	2811	2397	2032
70°	2315	2099	1726
75°	1840	1607	1684
80°	1237	1159	1082
85°	772	926	1081



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.4	4.7
10°-20°	275.5	13.0
20°-30°	381.4	18.0
30°-40°	406.7	19.2
40°-50°	371.0	17.5
50°-60°	290.7	13.7
60°-70°	189.4	8.9
70°-80°	83.9	4.0
80°-90°	18.0	0.9
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°	757.3	35.8
0°-40°	1163.9	55.0
0°-60°	1825.6	86.2
0°-90°	2117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2117.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1078	1078	1078	1078	1078	
5°	1060	1058	1058	1057	1057	101
15°	991	991	981	971	967	279
25°	859	854	840	810	788	394
35°	697	692	658	608	593	436
45°	535	524	479	439	421	412
55°	372	360	327	288	273	333
65°	221	208	188	192	160	217
75°	88	82	77	74	81	95
85°	12	14	15	16	18	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1078.4	1078.4	1078.4	1078.4	1078.4
2.5°	1070.9	1070.9	1070.9	1069.6	1069.6
5°	1059.7	1058.4	1058.4	1057.2	1057.2
7.5°	1050.9	1049.7	1048.5	1047.2	1044.7
10°	1038.5	1038.5	1037.2	1031.0	1029.8
12.5°	1018.5	1017.3	1012.3	1003.6	1001.1
15°	991.1	991.1	981.1	971.2	967.4
17.5°	961.2	959.9	947.5	937.5	932.5
20°	928.8	926.3	913.8	897.6	888.9
22.5°	892.6	892.6	877.7	856.5	847.7
25°	859.0	854.0	840.3	810.3	787.9
27.5°	820.3	812.8	797.9	755.5	729.3
30°	777.9	774.2	753.0	698.1	678.2
32.5°	738.0	731.8	709.4	652.0	635.8
35°	696.9	691.9	658.2	608.4	593.4
37.5°	655.7	649.5	607.1	567.2	548.5
40°	614.6	607.1	561.0	524.8	504.9
42.5°	576.0	566.0	521.1	482.5	460.0
45°	534.8	523.6	478.7	438.8	421.4
47.5°	493.7	483.7	442.6	401.4	381.5
50°	450.0	441.3	403.9	362.8	341.6
52.5°	413.9	400.2	364.0	322.9	305.4
55°	371.5	360.3	326.6	288.0	273.0
57.5°	332.9	321.6	290.5	254.3	241.9
60°	296.7	280.5	254.3	223.2	213.2
62.5°	256.8	244.3	221.9	195.7	208.2
65°	220.7	208.2	188.2	192.0	159.6
67.5°	180.8	174.5	157.1	139.6	134.6
70°	147.1	139.6	133.4	114.7	109.7
72.5°	117.2	109.7	101.0	91.0	87.3
75°	88.5	82.3	77.3	73.6	81.0
77.5°	61.1	58.6	54.9	51.1	49.9
80°	39.9	38.6	37.4	36.2	34.9
82.5°	23.7	23.7	23.7	23.7	23.7
85°	12.5	13.7	15.0	16.2	17.5
87.5°	7.5	7.5	8.7	10.0	11.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)