

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: P545081

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-80-86-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: P545081
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-12-1-LD4-2LO-40-UNV-80-86-EDD
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

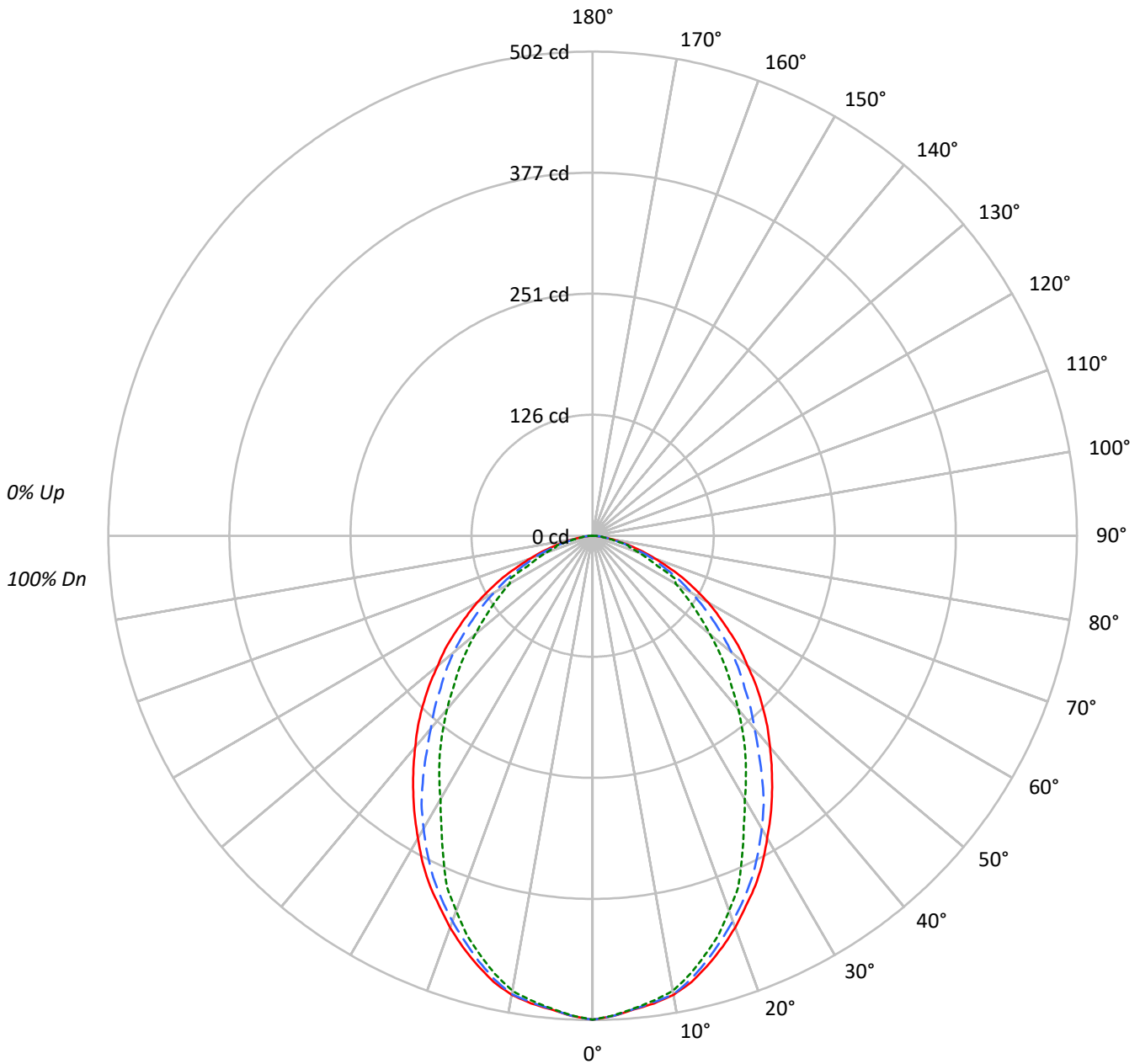
Lumens per Lamp: N/A
Luminaire Lumens: 985.0 lumens
Efficiency: N/A
Efficacy: 84.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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									
RC	80									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																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5400	5400	5400
5°	5327	5321	5315
10°	5281	5275	5237
15°	5138	5087	5016
20°	4950	4871	4738
25°	4747	4644	4354
30°	4499	4355	3921
35°	4260	4025	3628
40°	4019	3667	3301
45°	3787	3390	2985
50°	3507	3147	2661
55°	3245	2852	2383
60°	2973	2547	2136
65°	2616	2231	1890
70°	2153	1954	1605
75°	1713	1497	1568
80°	1153	1079	1004
85°	716	865	1000



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.7	4.7
10°-20°	128.2	13.0
20°-30°	177.5	18.0
30°-40°	189.2	19.2
40°-50°	172.6	17.5
50°-60°	135.2	13.7
60°-70°	88.1	8.9
70°-80°	39.0	4.0
80°-90°	8.4	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°	352.3	35.8
0°-40°	541.6	55.0
0°-60°	849.4	86.2
0°-90°	985.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	985.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	502	502	502	502	502	
5°	493	492	492	492	492	47
15°	461	461	456	452	450	130
25°	400	397	391	377	367	183
35°	324	322	306	283	276	203
45°	249	244	223	204	196	192
55°	173	168	152	134	127	155
65°	103	97	88	89	74	101
75°	41	38	36	34	38	44
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	501.7	501.7	501.7	501.7	501.7
2.5°	498.3	498.3	498.3	497.7	497.7
5°	493.0	492.5	492.5	491.9	491.9
7.5°	489.0	488.4	487.8	487.2	486.1
10°	483.2	483.2	482.6	479.7	479.1
12.5°	473.9	473.3	471.0	466.9	465.8
15°	461.1	461.1	456.5	451.9	450.1
17.5°	447.2	446.6	440.8	436.2	433.9
20°	432.1	431.0	425.2	417.6	413.6
22.5°	415.3	415.3	408.4	398.5	394.4
25°	399.7	397.3	391.0	377.0	366.6
27.5°	381.7	378.2	371.2	351.5	339.3
30°	362.0	360.2	350.4	324.8	315.5
32.5°	343.4	340.5	330.1	303.4	295.8
35°	324.2	321.9	306.3	283.1	276.1
37.5°	305.1	302.2	282.5	263.9	255.2
40°	286.0	282.5	261.0	244.2	234.9
42.5°	268.0	263.3	242.5	224.5	214.0
45°	248.8	243.6	222.7	204.2	196.1
47.5°	229.7	225.1	205.9	186.8	177.5
50°	209.4	205.3	187.9	168.8	158.9
52.5°	192.6	186.2	169.4	150.2	142.1
55°	172.9	167.6	152.0	134.0	127.0
57.5°	154.9	149.7	135.2	118.3	112.5
60°	138.1	130.5	118.3	103.8	99.2
62.5°	119.5	113.7	103.2	91.1	96.9
65°	102.7	96.9	87.6	89.3	74.2
67.5°	84.1	81.2	73.1	65.0	62.6
70°	68.4	65.0	62.1	53.4	51.0
72.5°	54.5	51.0	47.0	42.3	40.6
75°	41.2	38.3	36.0	34.2	37.7
77.5°	28.4	27.3	25.5	23.8	23.2
80°	18.6	18.0	17.4	16.8	16.2
82.5°	11.0	11.0	11.0	11.0	11.0
85°	5.8	6.4	7.0	7.5	8.1
87.5°	3.5	3.5	4.1	4.6	5.2
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)