

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: P545105

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-93-86-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: P545105
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-93-86-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

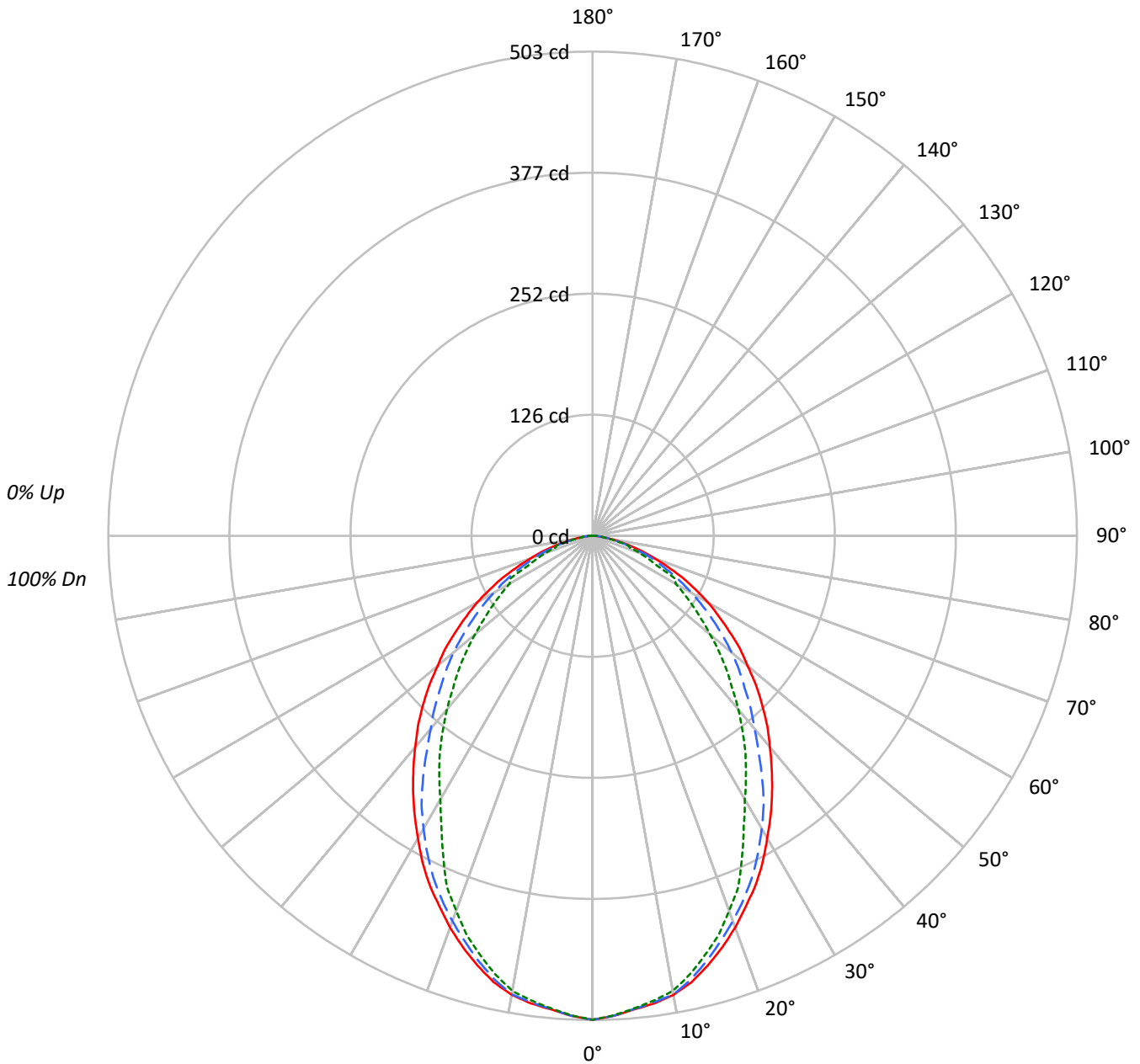
Lumens per Lamp: N/A
Luminaire Lumens: 987.0 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	5412	5412	5412
5°	5338	5332	5326
10°	5292	5286	5247
15°	5149	5097	5026
20°	4960	4880	4747
25°	4757	4652	4362
30°	4508	4364	3930
35°	4269	4033	3636
40°	4026	3676	3308
45°	3795	3398	2991
50°	3513	3153	2668
55°	3250	2858	2389
60°	2977	2553	2140
65°	2621	2236	1895
70°	2159	1958	1608
75°	1718	1497	1572
80°	1153	1079	1010
85°	716	865	1000



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.8	4.7
10°-20°	128.4	13.0
20°-30°	177.8	18.0
30°-40°	189.6	19.2
40°-50°	173.0	17.5
50°-60°	135.5	13.7
60°-70°	88.3	8.9
70°-80°	39.1	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°	353.1	35.8
0°-40°	542.7	55.0
0°-60°	851.2	86.2
0°-90°	987.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	987.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	494	494	494	493	493	47
15°	462	462	457	453	451	130
25°	400	398	392	378	367	184
35°	325	323	307	284	277	203
45°	249	244	223	205	196	192
55°	173	168	152	134	127	155
65°	103	97	88	90	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°	502.8	502.8	502.8	502.8	502.8
2.5°	499.3	499.3	499.3	498.7	498.7
5°	494.0	493.5	493.5	492.9	492.9
7.5°	490.0	489.4	488.8	488.2	487.1
10°	484.2	484.2	483.6	480.7	480.1
12.5°	474.9	474.3	472.0	467.9	466.7
15°	462.1	462.1	457.4	452.8	451.0
17.5°	448.1	447.5	441.7	437.1	434.8
20°	433.0	431.9	426.0	418.5	414.4
22.5°	416.2	416.2	409.2	399.3	395.2
25°	400.5	398.1	391.7	377.8	367.3
27.5°	382.4	379.0	372.0	352.2	340.0
30°	362.7	360.9	351.1	325.5	316.2
32.5°	344.1	341.2	330.7	304.0	296.4
35°	324.9	322.6	306.9	283.6	276.7
37.5°	305.7	302.8	283.1	264.5	255.7
40°	286.5	283.1	261.6	244.7	235.4
42.5°	268.5	263.9	243.0	224.9	214.5
45°	249.3	244.1	223.2	204.6	196.5
47.5°	230.2	225.5	206.3	187.2	177.9
50°	209.8	205.8	188.3	169.1	159.3
52.5°	193.0	186.6	169.7	150.5	142.4
55°	173.2	168.0	152.3	134.3	127.3
57.5°	155.2	150.0	135.4	118.6	112.8
60°	138.3	130.8	118.6	104.0	99.4
62.5°	119.7	113.9	103.5	91.3	97.1
65°	102.9	97.1	87.8	89.5	74.4
67.5°	84.3	81.4	73.2	65.1	62.8
70°	68.6	65.1	62.2	53.5	51.1
72.5°	54.6	51.1	47.1	42.4	40.7
75°	41.3	38.4	36.0	34.3	37.8
77.5°	28.5	27.3	25.6	23.8	23.2
80°	18.6	18.0	17.4	16.9	16.3
82.5°	11.0	11.0	11.0	11.0	11.0
85°	5.8	6.4	7.0	7.6	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)