

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: P545495

Luminaire Tested: **FMR-12-2-LD4-1STD-50-UNV-80-84-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: P545495  
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-LD4-1STD-50-UNV-80-84-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

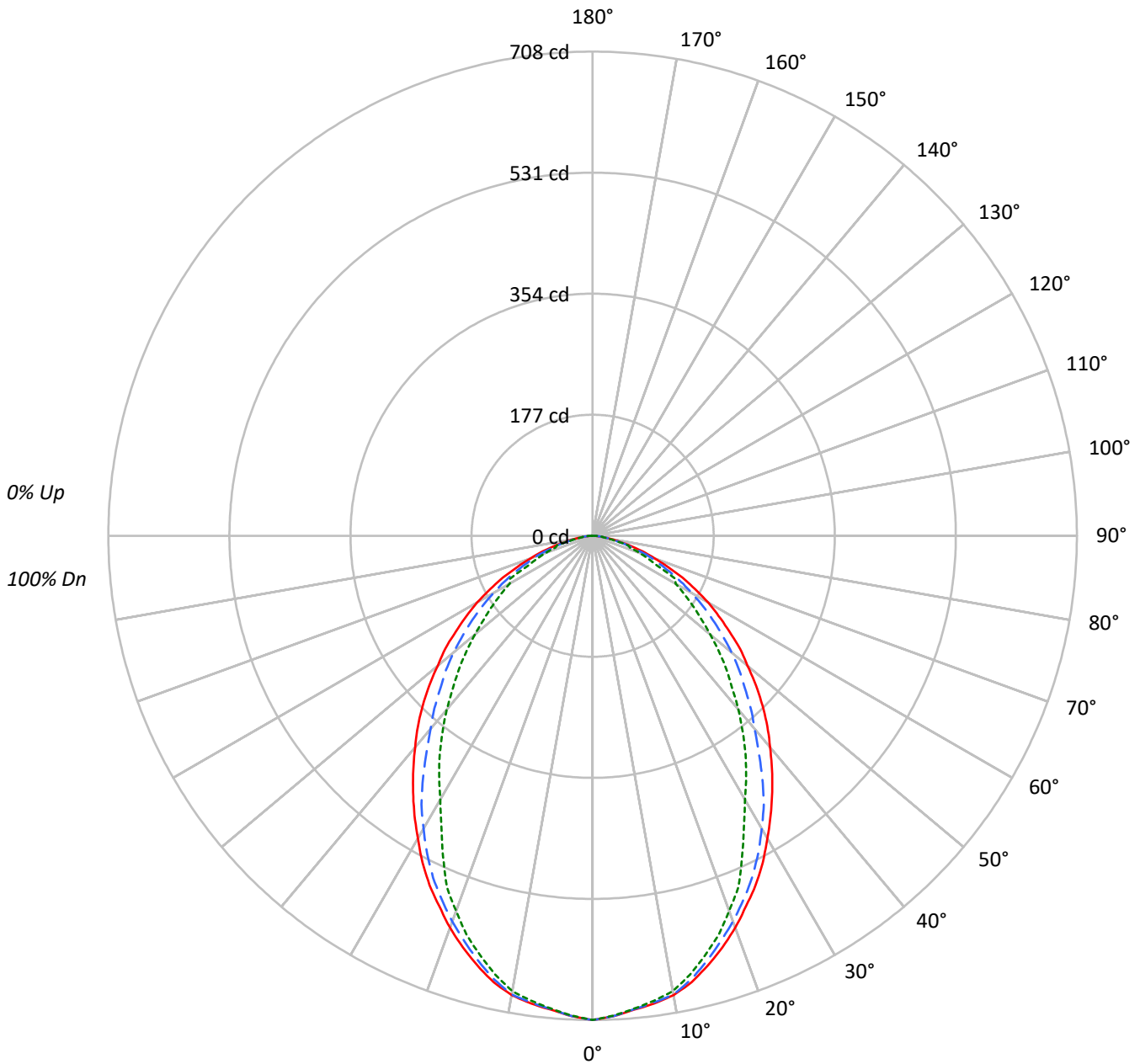
Lumens per Lamp: N/A  
Luminaire Lumens: 1390.0 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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°	3810	3810	3810
5°	3759	3755	3750
10°	3727	3722	3695
15°	3626	3589	3539
20°	3493	3436	3342
25°	3349	3276	3072
30°	3174	3072	2767
35°	3007	2840	2560
40°	2835	2588	2329
45°	2673	2392	2106
50°	2474	2220	1878
55°	2289	2013	1682
60°	2097	1798	1507
65°	1845	1574	1335
70°	1520	1378	1133
75°	1208	1056	1106
80°	812	762	710
85°	506	605	710



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.9	4.7
10°-20°	180.9	13.0
20°-30°	250.4	18.0
30°-40°	267.0	19.2
40°-50°	243.6	17.5
50°-60°	190.9	13.7
60°-70°	124.4	8.9
70°-80°	55.1	4.0
80°-90°	11.8	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°	497.2	35.8
0°-40°	764.2	55.0
0°-60°	1198.7	86.2
0°-90°	1390.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1390.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	696	695	695	694	694	66
15°	651	651	644	638	635	183
25°	564	561	552	532	517	259
35°	458	454	432	400	390	286
45°	351	344	314	288	277	270
55°	244	237	214	189	179	219
65°	145	137	124	126	105	143
75°	58	54	51	48	53	62
85°	8	9	10	11	12	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	708.0	708.0	708.0	708.0	708.0
2.5°	703.1	703.1	703.1	702.3	702.3
5°	695.8	695.0	695.0	694.1	694.1
7.5°	690.0	689.2	688.4	687.6	685.9
10°	681.9	681.9	681.0	676.9	676.1
12.5°	668.8	667.9	664.7	658.9	657.3
15°	650.7	650.7	644.2	637.7	635.2
17.5°	631.1	630.3	622.1	615.6	612.3
20°	609.8	608.2	600.0	589.4	583.6
22.5°	586.1	586.1	576.3	562.3	556.6
25°	564.0	560.7	551.7	532.1	517.3
27.5°	538.6	533.7	523.9	496.0	478.9
30°	510.8	508.3	494.4	458.4	445.3
32.5°	484.6	480.5	465.8	428.1	417.5
35°	457.6	454.3	432.2	399.5	389.6
37.5°	430.6	426.5	398.6	372.4	360.2
40°	403.5	398.6	368.3	344.6	331.5
42.5°	378.2	371.6	342.2	316.8	302.0
45°	351.2	343.8	314.3	288.1	276.7
47.5°	324.1	317.6	290.6	263.6	250.5
50°	295.5	289.8	265.2	238.2	224.3
52.5°	271.8	262.8	239.0	212.0	200.5
55°	243.9	236.6	214.5	189.1	179.3
57.5°	218.6	211.2	190.7	167.0	158.8
60°	194.8	184.2	167.0	146.5	140.0
62.5°	168.6	160.4	145.7	128.5	136.7
65°	144.9	136.7	123.6	126.1	104.8
67.5°	118.7	114.6	103.1	91.7	88.4
70°	96.6	91.7	87.6	75.3	72.0
72.5°	76.9	72.0	66.3	59.8	57.3
75°	58.1	54.0	50.8	48.3	53.2
77.5°	40.1	38.5	36.0	33.6	32.7
80°	26.2	25.4	24.6	23.7	22.9
82.5°	15.6	15.6	15.6	15.6	15.6
85°	8.2	9.0	9.8	10.6	11.5
87.5°	4.9	4.9	5.7	6.5	7.4
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)