

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: P545531

Luminaire Tested: **FMR-12-2-LD4-2HI-35-UNV-80-88-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: P545531  
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-LD4-2HI-35-UNV-80-88-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

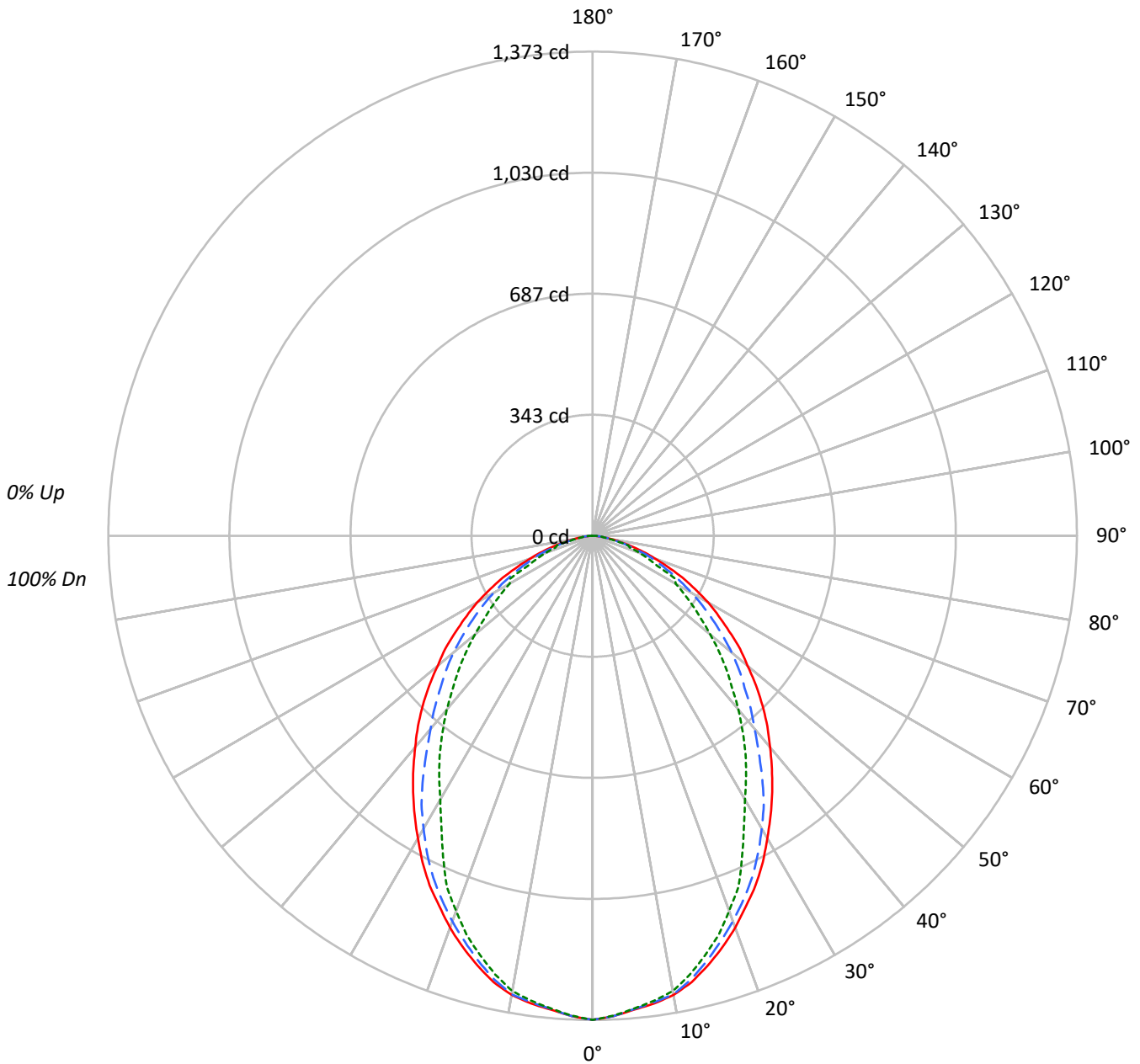
Lumens per Lamp: N/A  
Luminaire Lumens: 2695.0 lumens  
Efficiency: N/A  
Efficacy: 62.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	7388	7388	7388
5°	7288	7279	7271
10°	7225	7216	7164
15°	7030	6959	6862
20°	6772	6663	6481
25°	6494	6352	5956
30°	6154	5957	5366
35°	5829	5506	4963
40°	5497	5018	4516
45°	5182	4638	4083
50°	4797	4305	3641
55°	4437	3902	3262
60°	4066	3485	2921
65°	3577	3051	2586
70°	2947	2672	2198
75°	2344	2046	2146
80°	1574	1475	1376
85°	982	1173	1371



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.8	4.7
10°-20°	350.7	13.0
20°-30°	485.5	18.0
30°-40°	517.7	19.2
40°-50°	472.3	17.5
50°-60°	370.0	13.7
60°-70°	241.2	8.9
70°-80°	106.8	4.0
80°-90°	22.9	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°	964.0	35.8
0°-40°	1481.7	55.0
0°-60°	2324.1	86.2
0°-90°	2695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2695.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1373	1373	1373	1373	1373	
5°	1349	1347	1347	1346	1346	128
15°	1262	1262	1249	1236	1232	355
25°	1094	1087	1070	1032	1003	502
35°	887	881	838	774	755	555
45°	681	667	609	559	536	524
55°	473	459	416	367	348	424
65°	281	265	240	244	203	277
75°	113	105	98	94	103	121
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1372.8	1372.8	1372.8	1372.8	1372.8
2.5°	1363.3	1363.3	1363.3	1361.7	1361.7
5°	1349.0	1347.4	1347.4	1345.8	1345.8
7.5°	1337.9	1336.3	1334.7	1333.1	1329.9
10°	1322.0	1322.0	1320.4	1312.5	1310.9
12.5°	1296.6	1295.0	1288.7	1277.6	1274.4
15°	1261.7	1261.7	1249.0	1236.3	1231.5
17.5°	1223.6	1222.0	1206.2	1193.5	1187.1
20°	1182.4	1179.2	1163.3	1142.7	1131.6
22.5°	1136.3	1136.3	1117.3	1090.3	1079.2
25°	1093.5	1087.1	1069.7	1031.6	1003.0
27.5°	1044.3	1034.8	1015.7	961.8	928.4
30°	990.3	985.6	958.6	888.7	863.4
32.5°	939.5	931.6	903.0	830.0	809.4
35°	887.2	880.8	838.0	774.5	755.4
37.5°	834.8	826.9	772.9	722.1	698.3
40°	782.4	772.9	714.2	668.1	642.8
42.5°	733.2	720.5	663.4	614.2	585.6
45°	680.8	666.6	609.4	558.6	536.4
47.5°	628.5	615.8	563.4	511.0	485.6
50°	572.9	561.8	514.2	461.8	434.9
52.5°	526.9	509.4	463.4	411.0	388.8
55°	472.9	458.7	415.8	366.6	347.6
57.5°	423.7	409.5	369.8	323.8	307.9
60°	377.7	357.1	323.8	284.1	271.4
62.5°	326.9	311.1	282.5	249.2	265.0
65°	280.9	265.0	239.6	244.4	203.1
67.5°	230.1	222.2	200.0	177.7	171.4
70°	187.3	177.7	169.8	146.0	139.7
72.5°	149.2	139.7	128.6	115.9	111.1
75°	112.7	104.7	98.4	93.6	103.2
77.5°	77.8	74.6	69.8	65.1	63.5
80°	50.8	49.2	47.6	46.0	44.4
82.5°	30.2	30.2	30.2	30.2	30.2
85°	15.9	17.5	19.0	20.6	22.2
87.5°	9.5	9.5	11.1	12.7	14.3
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)