

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: P545660

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-80-94-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: P545660  
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-LD4-2LO-40-UNV-80-94-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

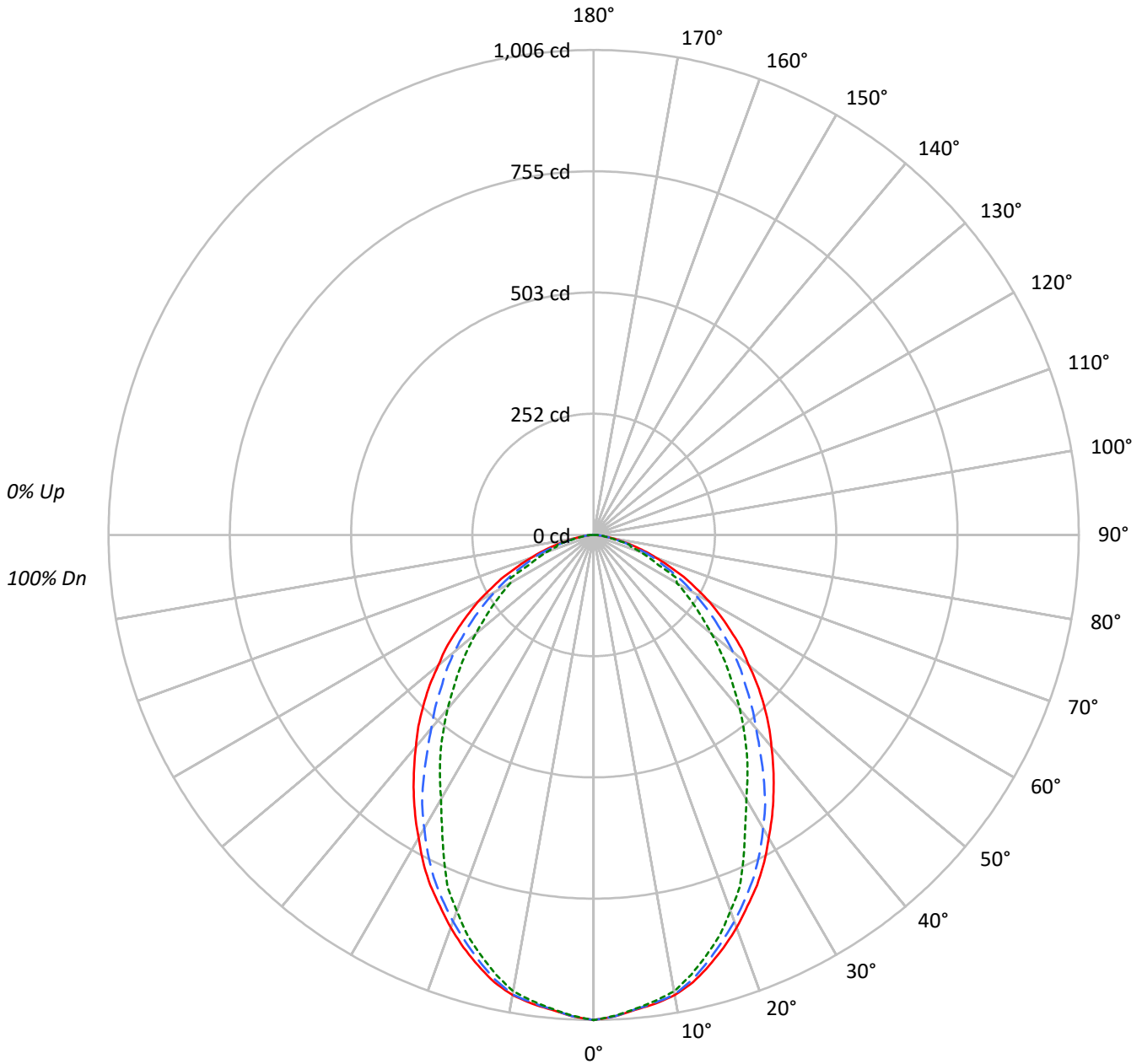
Lumens per Lamp: N/A  
Luminaire Lumens: 1976.0 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	5417	5417	5417
5°	5344	5337	5331
10°	5297	5291	5253
15°	5154	5103	5031
20°	4965	4885	4752
25°	4761	4657	4367
30°	4512	4368	3934
35°	4274	4037	3639
40°	4031	3679	3311
45°	3800	3401	2993
50°	3517	3157	2669
55°	3254	2861	2391
60°	2981	2555	2142
65°	2623	2238	1896
70°	2161	1959	1611
75°	1718	1499	1572
80°	1153	1082	1010
85°	716	865	1007



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.7	4.7
10°-20°	257.1	13.0
20°-30°	356.0	18.0
30°-40°	379.6	19.2
40°-50°	346.3	17.5
50°-60°	271.3	13.7
60°-70°	176.8	8.9
70°-80°	78.3	4.0
80°-90°	16.8	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°	706.8	35.8
0°-40°	1086.4	55.0
0°-60°	1704.0	86.2
0°-90°	1976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1976.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	989	988	988	987	987	94
15°	925	925	916	906	903	260
25°	802	797	784	756	735	368
35°	650	646	614	568	554	407
45°	499	489	447	410	393	385
55°	347	336	305	269	255	311
65°	206	194	176	179	149	203
75°	83	77	72	69	76	89
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1006.5	1006.5	1006.5	1006.5	1006.5
2.5°	999.6	999.6	999.6	998.4	998.4
5°	989.1	987.9	987.9	986.8	986.8
7.5°	980.9	979.8	978.6	977.5	975.1
10°	969.3	969.3	968.1	962.3	961.2
12.5°	950.7	949.5	944.9	936.7	934.4
15°	925.1	925.1	915.8	906.5	903.0
17.5°	897.2	896.0	884.4	875.1	870.4
20°	866.9	864.6	852.9	837.8	829.7
22.5°	833.2	833.2	819.2	799.4	791.3
25°	801.7	797.1	784.3	756.4	735.4
27.5°	765.7	758.7	744.7	705.2	680.7
30°	726.1	722.6	702.8	651.6	633.0
32.5°	688.9	683.1	662.1	608.6	593.5
35°	650.5	645.8	614.4	567.9	553.9
37.5°	612.1	606.3	566.7	529.5	512.0
40°	573.7	566.7	523.6	489.9	471.3
42.5°	537.6	528.3	486.4	450.3	429.4
45°	499.2	488.7	446.8	409.6	393.3
47.5°	460.8	451.5	413.1	374.7	356.1
50°	420.1	411.9	377.0	338.6	318.8
52.5°	386.3	373.5	339.8	301.4	285.1
55°	346.8	336.3	304.9	268.8	254.8
57.5°	310.7	300.2	271.1	237.4	225.7
60°	276.9	261.8	237.4	208.3	199.0
62.5°	239.7	228.1	207.1	182.7	194.3
65°	206.0	194.3	175.7	179.2	148.9
67.5°	168.7	162.9	146.6	130.3	125.7
70°	137.3	130.3	124.5	107.1	102.4
72.5°	109.4	102.4	94.3	84.9	81.5
75°	82.6	76.8	72.1	68.7	75.6
77.5°	57.0	54.7	51.2	47.7	46.5
80°	37.2	36.1	34.9	33.7	32.6
82.5°	22.1	22.1	22.1	22.1	22.1
85°	11.6	12.8	14.0	15.1	16.3
87.5°	7.0	7.0	8.1	9.3	10.5
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)