

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: P545437

Luminaire Tested: **FMR-12-2-LD4-1STD-35-UNV-80-96-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: P545437  
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-35-UNV-80-96-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

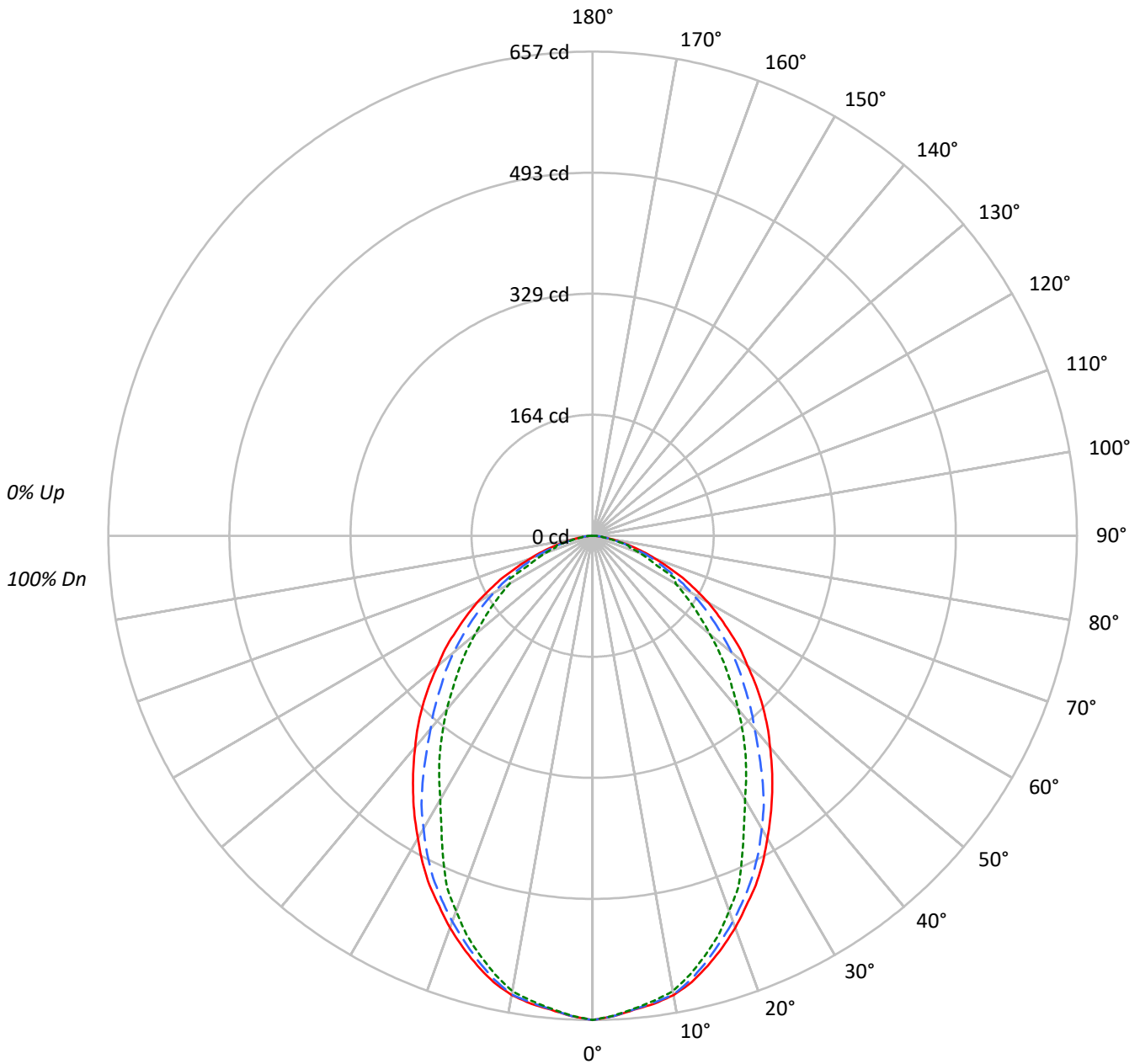
Lumens per Lamp: N/A  
Luminaire Lumens: 1290.0 lumens  
Efficiency: N/A  
Efficacy: 77.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (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°	3536	3536	3536
5°	3488	3485	3480
10°	3458	3454	3429
15°	3365	3331	3285
20°	3241	3189	3102
25°	3108	3040	2851
30°	2946	2851	2568
35°	2790	2635	2376
40°	2631	2401	2162
45°	2481	2220	1955
50°	2296	2061	1742
55°	2124	1867	1561
60°	1946	1668	1398
65°	1713	1461	1238
70°	1410	1279	1053
75°	1121	979	1027
80°	753	707	660
85°	469	562	655



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.2	4.7
10°-20°	167.9	13.0
20°-30°	232.4	18.0
30°-40°	247.8	19.2
40°-50°	226.1	17.5
50°-60°	177.1	13.7
60°-70°	115.4	8.9
70°-80°	51.1	4.0
80°-90°	11.0	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°	461.4	35.8
0°-40°	709.3	55.0
0°-60°	1112.4	86.2
0°-90°	1290.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1290.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	657	657	657	657	657	
5°	646	645	645	644	644	61
15°	604	604	598	592	590	170
25°	523	520	512	494	480	240
35°	425	422	401	371	362	265
45°	326	319	292	267	257	251
55°	226	220	199	176	166	203
65°	134	127	115	117	97	133
75°	54	50	47	45	49	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	657.1	657.1	657.1	657.1	657.1
2.5°	652.6	652.6	652.6	651.8	651.8
5°	645.7	645.0	645.0	644.2	644.2
7.5°	640.4	639.6	638.9	638.1	636.6
10°	632.8	632.8	632.0	628.2	627.5
12.5°	620.6	619.9	616.8	611.5	610.0
15°	603.9	603.9	597.9	591.8	589.5
17.5°	585.7	584.9	577.3	571.3	568.2
20°	565.9	564.4	556.8	547.0	541.6
22.5°	543.9	543.9	534.8	521.9	516.6
25°	523.4	520.4	512.0	493.8	480.1
27.5°	499.9	495.3	486.2	460.4	444.4
30°	474.0	471.8	458.8	425.4	413.3
32.5°	449.7	445.9	432.2	397.3	387.4
35°	424.7	421.6	401.1	370.7	361.6
37.5°	399.6	395.8	370.0	345.6	334.3
40°	374.5	370.0	341.8	319.8	307.7
42.5°	351.0	344.9	317.5	294.0	280.3
45°	325.9	319.1	291.7	267.4	256.8
47.5°	300.8	294.7	269.7	244.6	232.5
50°	274.2	268.9	246.1	221.1	208.1
52.5°	252.2	243.9	221.8	196.8	186.1
55°	226.4	219.5	199.0	175.5	166.4
57.5°	202.8	196.0	177.0	155.0	147.4
60°	180.8	170.9	155.0	136.0	129.9
62.5°	156.5	148.9	135.2	119.3	126.9
65°	134.5	126.9	114.7	117.0	97.2
67.5°	110.2	106.4	95.7	85.1	82.0
70°	89.6	85.1	81.3	69.9	66.9
72.5°	71.4	66.9	61.5	55.5	53.2
75°	53.9	50.1	47.1	44.8	49.4
77.5°	37.2	35.7	33.4	31.1	30.4
80°	24.3	23.5	22.8	22.0	21.3
82.5°	14.4	14.4	14.4	14.4	14.4
85°	7.6	8.4	9.1	9.9	10.6
87.5°	4.6	4.6	5.3	6.1	6.8
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)