

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: P544974

Luminaire Tested: **FMR-12-1-LD4-2HI-35-UNV-82-97-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: P544974  
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-LD4-2HI-35-UNV-82-97-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

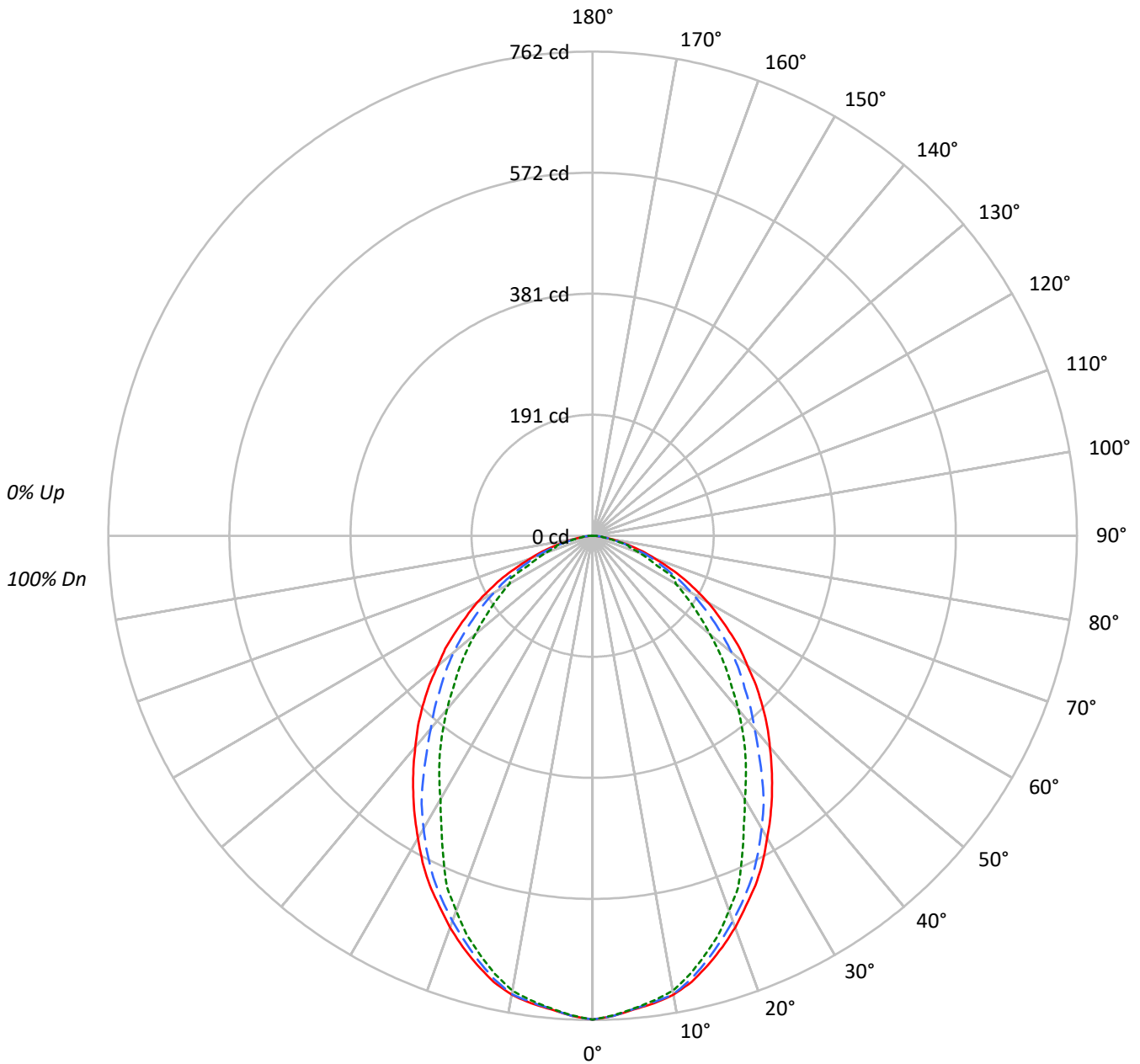
Lumens per Lamp: N/A  
Luminaire Lumens: 1495.0 lumens  
Efficiency: N/A  
Efficacy: 69.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
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°	8197	8197	8197
5°	8085	8076	8067
10°	8016	8006	7948
15°	7799	7721	7613
20°	7513	7392	7190
25°	7204	7048	6608
30°	6829	6610	5952
35°	6466	6108	5507
40°	6098	5567	5011
45°	5750	5147	4530
50°	5322	4776	4039
55°	4924	4329	3618
60°	4510	3866	3240
65°	3968	3385	2870
70°	3270	2965	2439
75°	2599	2271	2379
80°	1748	1636	1531
85°	1087	1309	1519



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.9	4.7
10°-20°	194.5	13.0
20°-30°	269.3	18.0
30°-40°	287.2	19.2
40°-50°	262.0	17.5
50°-60°	205.3	13.7
60°-70°	133.8	8.9
70°-80°	59.3	4.0
80°-90°	12.7	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°	534.8	35.8
0°-40°	822.0	55.0
0°-60°	1289.2	86.2
0°-90°	1495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1495.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	748	747	747	747	747	71
15°	700	700	693	686	683	197
25°	607	603	593	572	556	278
35°	492	489	465	430	419	308
45°	378	370	338	310	298	291
55°	262	254	231	203	193	235
65°	156	147	133	136	113	154
75°	62	58	55	52	57	67
85°	9	10	11	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	761.5	761.5	761.5	761.5	761.5
2.5°	756.3	756.3	756.3	755.4	755.4
5°	748.3	747.4	747.4	746.6	746.6
7.5°	742.2	741.3	740.4	739.5	737.8
10°	733.4	733.4	732.5	728.1	727.2
12.5°	719.3	718.4	714.9	708.7	706.9
15°	699.9	699.9	692.9	685.8	683.2
17.5°	678.8	677.9	669.1	662.0	658.5
20°	655.9	654.1	645.3	633.9	627.7
22.5°	630.4	630.4	619.8	604.8	598.7
25°	606.6	603.1	593.4	572.3	556.4
27.5°	579.3	574.0	563.4	533.5	515.0
30°	549.4	546.7	531.8	493.0	478.9
32.5°	521.2	516.8	500.9	460.4	449.0
35°	492.1	488.6	464.8	429.6	419.1
37.5°	463.1	458.7	428.7	400.6	387.4
40°	434.0	428.7	396.2	370.6	356.6
42.5°	406.7	399.7	368.0	340.7	324.9
45°	377.7	369.8	338.1	309.9	297.6
47.5°	348.6	341.6	312.5	283.5	269.4
50°	317.8	311.7	285.2	256.2	241.2
52.5°	292.3	282.6	257.1	228.0	215.7
55°	262.4	254.4	230.7	203.4	192.8
57.5°	235.1	227.1	205.1	179.6	170.8
60°	209.5	198.1	179.6	157.6	150.5
62.5°	181.4	172.6	156.7	138.2	147.0
65°	155.8	147.0	132.9	135.6	112.7
67.5°	127.7	123.3	110.9	98.6	95.1
70°	103.9	98.6	94.2	81.0	77.5
72.5°	82.8	77.5	71.3	64.3	61.6
75°	62.5	58.1	54.6	51.9	57.2
77.5°	43.1	41.4	38.7	36.1	35.2
80°	28.2	27.3	26.4	25.5	24.7
82.5°	16.7	16.7	16.7	16.7	16.7
85°	8.8	9.7	10.6	11.4	12.3
87.5°	5.3	5.3	6.2	7.0	7.9
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)