

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: P545150

Luminaire Tested: **FMR-12-1-LD4-2STD-35-UNV-80-97-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: P545150  
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-LD4-2STD-35-UNV-80-97-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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**

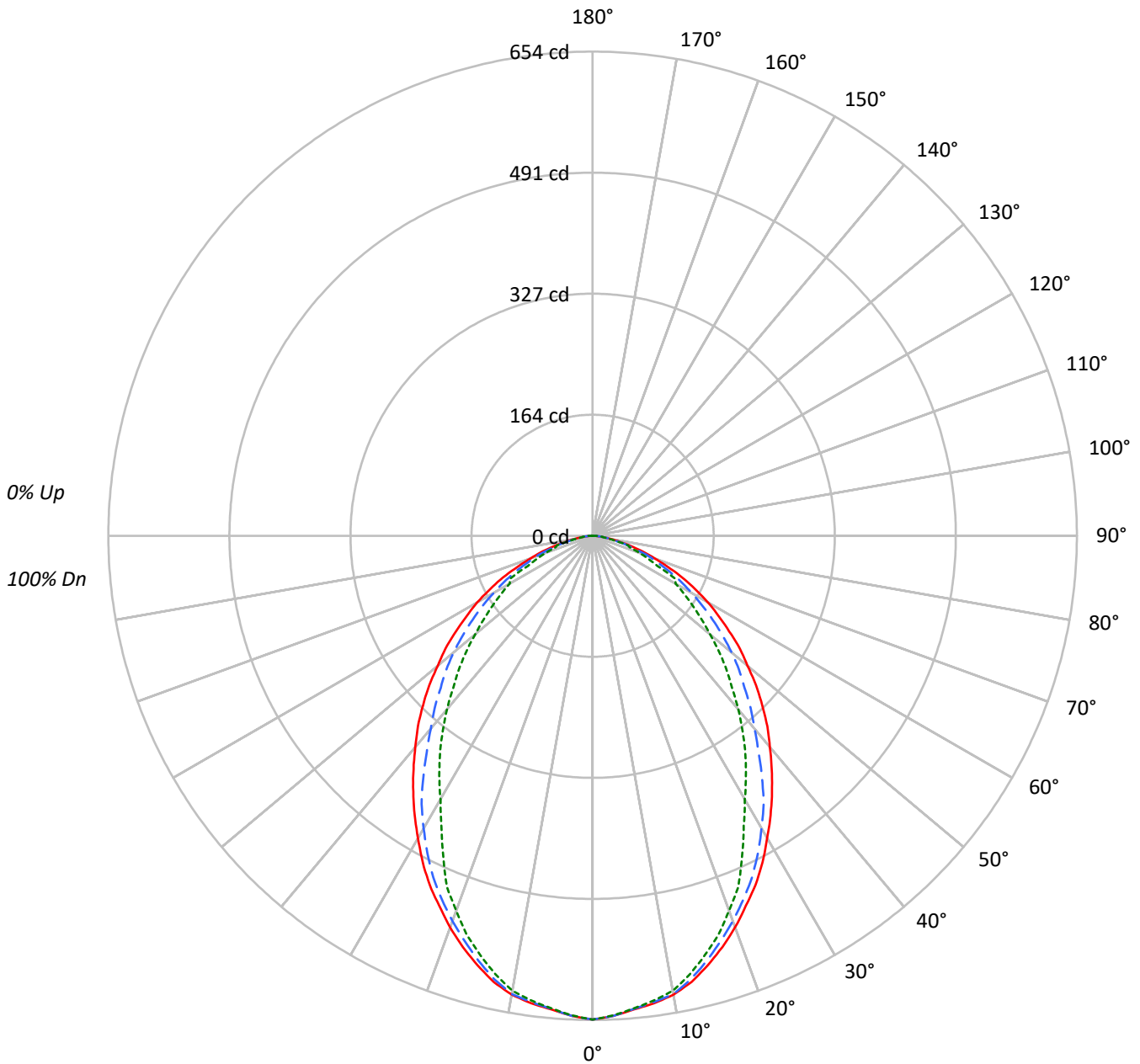
Lumens per Lamp: N/A  
Luminaire Lumens: 1283.0 lumens  
Efficiency: N/A  
Efficacy: 77.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	7034	7034	7034
5°	6939	6931	6923
10°	6879	6871	6821
15°	6694	6626	6534
20°	6448	6344	6171
25°	6183	6048	5671
30°	5860	5671	5108
35°	5549	5242	4725
40°	5234	4777	4300
45°	4934	4416	3888
50°	4568	4099	3466
55°	4226	3716	3106
60°	3871	3317	2781
65°	3405	2906	2463
70°	2807	2543	2093
75°	2229	1946	2042
80°	1500	1407	1314
85°	939	1124	1309



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.8	4.7
10°-20°	167.0	13.0
20°-30°	231.1	18.0
30°-40°	246.5	19.2
40°-50°	224.8	17.5
50°-60°	176.1	13.7
60°-70°	114.8	8.9
70°-80°	50.9	4.0
80°-90°	10.9	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°	458.9	35.8
0°-40°	705.4	55.0
0°-60°	1106.4	86.2
0°-90°	1283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1283.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	654	654	654	654	654	
5°	642	642	642	641	641	61
15°	601	601	595	589	586	169
25°	521	518	509	491	478	239
35°	422	419	399	369	360	264
45°	324	317	290	266	255	250
55°	225	218	198	174	166	202
65°	134	126	114	116	97	132
75°	54	50	47	45	49	57
85°	8	8	9	10	11	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	653.5	653.5	653.5	653.5	653.5
2.5°	649.0	649.0	649.0	648.3	648.3
5°	642.2	641.5	641.5	640.7	640.7
7.5°	636.9	636.2	635.4	634.7	633.1
10°	629.4	629.4	628.6	624.8	624.1
12.5°	617.3	616.5	613.5	608.2	606.7
15°	600.7	600.7	594.6	588.6	586.3
17.5°	582.5	581.8	574.2	568.2	565.1
20°	562.9	561.4	553.8	544.0	538.7
22.5°	541.0	541.0	531.9	519.1	513.8
25°	520.6	517.5	509.2	491.1	477.5
27.5°	497.1	492.6	483.5	457.9	442.0
30°	471.5	469.2	456.3	423.1	411.0
32.5°	447.3	443.5	429.9	395.1	385.3
35°	422.3	419.3	398.9	368.7	359.6
37.5°	397.4	393.6	367.9	343.8	332.4
40°	372.5	367.9	340.0	318.1	306.0
42.5°	349.1	343.0	315.8	292.4	278.8
45°	324.1	317.3	290.1	266.0	255.4
47.5°	299.2	293.1	268.2	243.3	231.2
50°	272.8	267.5	244.8	219.9	207.0
52.5°	250.8	242.5	220.6	195.7	185.1
55°	225.2	218.4	198.0	174.5	165.5
57.5°	201.7	194.9	176.0	154.1	146.6
60°	179.8	170.0	154.1	135.2	129.2
62.5°	155.6	148.1	134.5	118.6	126.2
65°	133.7	126.2	114.1	116.4	96.7
67.5°	109.6	105.8	95.2	84.6	81.6
70°	89.2	84.6	80.8	69.5	66.5
72.5°	71.0	66.5	61.2	55.2	52.9
75°	53.6	49.9	46.8	44.6	49.1
77.5°	37.0	35.5	33.2	31.0	30.2
80°	24.2	23.4	22.7	21.9	21.2
82.5°	14.4	14.4	14.4	14.4	14.4
85°	7.6	8.3	9.1	9.8	10.6
87.5°	4.5	4.5	5.3	6.0	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)