

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: P545158

Luminaire Tested: **FMR-12-1-LD4-2STD-35-UNV-81-97-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: P545158  
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-81-97-EDD  
Description: 1X1 FMR TROFFER WITH .156 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**

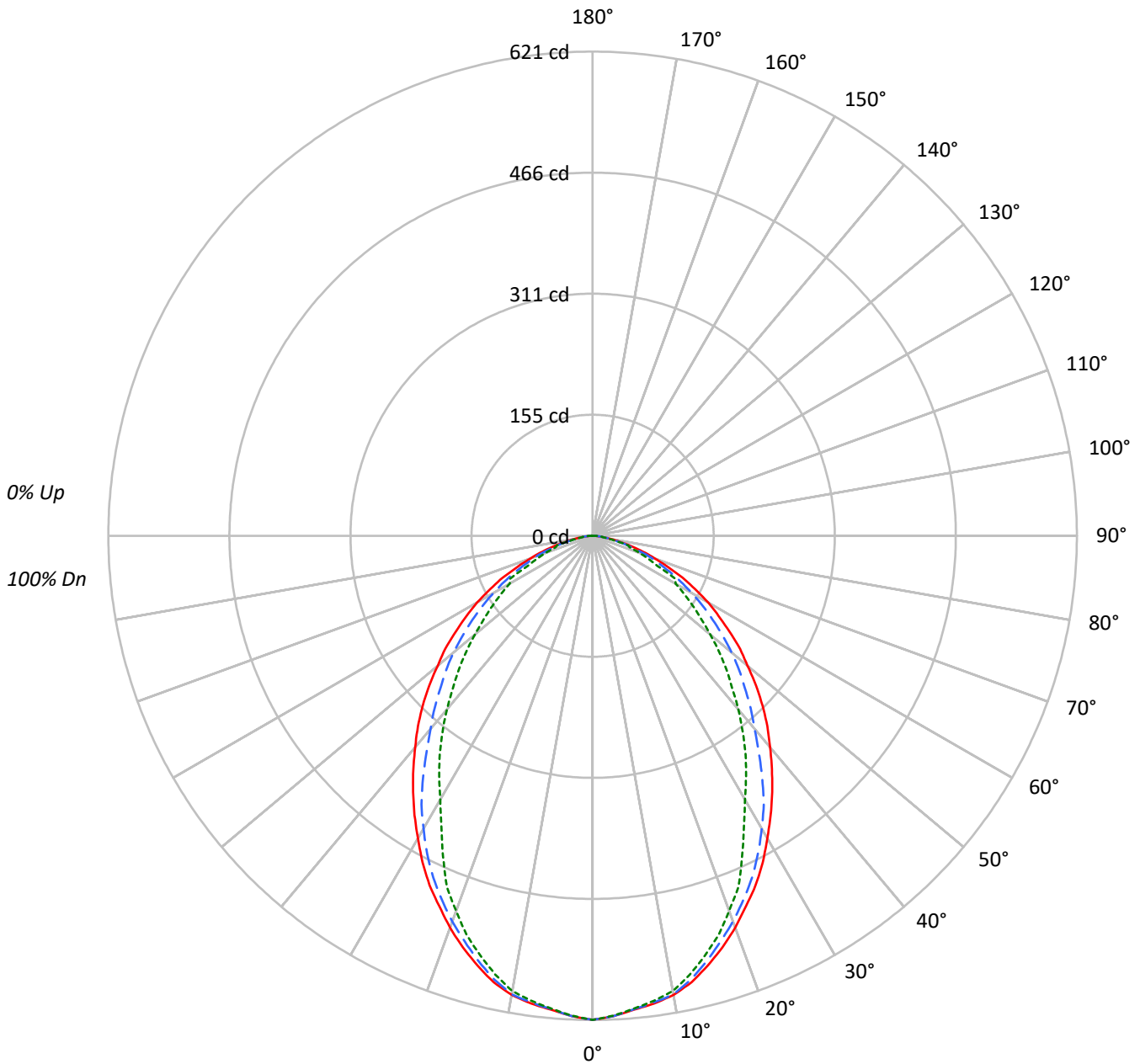
Lumens per Lamp: N/A  
Luminaire Lumens: 1219.0 lumens  
Efficiency: N/A  
Efficacy: 73.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (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°	6683	6683	6683
5°	6593	6586	6577
10°	6536	6528	6480
15°	6360	6295	6208
20°	6126	6027	5863
25°	5874	5746	5388
30°	5567	5389	4854
35°	5273	4980	4490
40°	4973	4539	4085
45°	4689	4197	3693
50°	4339	3895	3294
55°	4014	3530	2950
60°	3677	3152	2644
65°	3237	2761	2341
70°	2666	2417	1989
75°	2121	1851	1942
80°	1426	1333	1246
85°	889	1062	1235



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.8	4.7
10°-20°	158.6	13.0
20°-30°	219.6	18.0
30°-40°	234.2	19.2
40°-50°	213.6	17.5
50°-60°	167.4	13.7
60°-70°	109.1	8.9
70°-80°	48.3	4.0
80°-90°	10.4	0.8
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°	436.0	35.8
0°-40°	670.2	55.0
0°-60°	1051.2	86.2
0°-90°	1219.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1219.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	621	621	621	621	621	
5°	610	610	610	609	609	58
15°	571	571	565	559	557	160
25°	495	492	484	467	454	227
35°	401	398	379	350	342	251
45°	308	302	276	253	243	237
55°	214	208	188	166	157	192
65°	127	120	108	110	92	125
75°	51	47	44	42	47	55
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	620.9	620.9	620.9	620.9	620.9
2.5°	616.6	616.6	616.6	615.9	615.9
5°	610.2	609.5	609.5	608.7	608.7
7.5°	605.1	604.4	603.7	603.0	601.6
10°	598.0	598.0	597.3	593.7	592.9
12.5°	586.5	585.8	582.9	577.9	576.4
15°	570.7	570.7	564.9	559.2	557.1
17.5°	553.5	552.7	545.6	539.8	537.0
20°	534.8	533.4	526.2	516.9	511.8
22.5°	514.0	514.0	505.4	493.2	488.1
25°	494.6	491.7	483.8	466.6	453.7
27.5°	472.3	468.0	459.4	435.0	419.9
30°	447.9	445.8	433.6	402.0	390.5
32.5°	425.0	421.4	408.5	375.4	366.1
35°	401.3	398.4	379.0	350.3	341.7
37.5°	377.6	374.0	349.6	326.6	315.9
40°	353.9	349.6	323.0	302.2	290.7
42.5°	331.6	325.9	300.1	277.8	264.9
45°	308.0	301.5	275.7	252.7	242.6
47.5°	284.3	278.5	254.8	231.1	219.7
50°	259.1	254.1	232.6	208.9	196.7
52.5°	238.3	230.4	209.6	185.9	175.9
55°	213.9	207.5	188.1	165.8	157.2
57.5°	191.7	185.2	167.3	146.4	139.3
60°	170.8	161.5	146.4	128.5	122.8
62.5°	147.9	140.7	127.8	112.7	119.9
65°	127.1	119.9	108.4	110.5	91.9
67.5°	104.1	100.5	90.4	80.4	77.5
70°	84.7	80.4	76.8	66.0	63.2
72.5°	67.5	63.2	58.1	52.4	50.2
75°	51.0	47.4	44.5	42.4	46.7
77.5°	35.2	33.7	31.6	29.4	28.7
80°	23.0	22.3	21.5	20.8	20.1
82.5°	13.6	13.6	13.6	13.6	13.6
85°	7.2	7.9	8.6	9.3	10.0
87.5°	4.3	4.3	5.0	5.7	6.5
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)