

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: P545737

Luminaire Tested: **FMR-12-2-LD4-2STD-35-UNV-82-86-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: P545737  
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-LD4-2STD-35-UNV-82-86-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

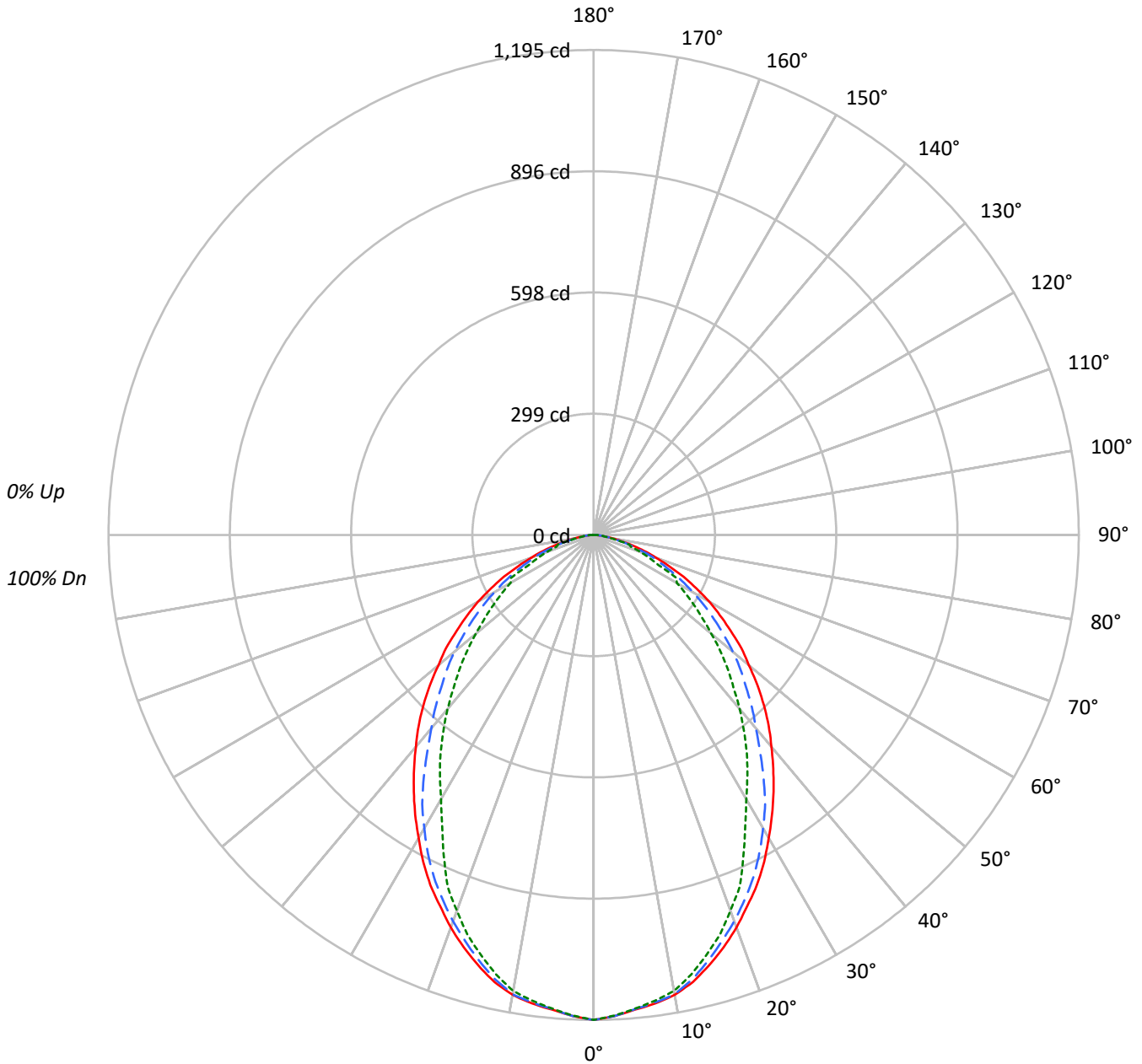
Lumens per Lamp: N/A  
Luminaire Lumens: 2346.0 lumens  
Efficiency: N/A  
Efficacy: 70.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	6431	6431	6431
5°	6344	6337	6329
10°	6289	6281	6236
15°	6120	6058	5974
20°	5895	5800	5641
25°	5653	5529	5185
30°	5358	5185	4671
35°	5074	4792	4321
40°	4785	4368	3931
45°	4511	4038	3554
50°	4176	3748	3169
55°	3863	3397	2839
60°	3539	3033	2542
65°	3114	2656	2252
70°	2565	2326	1913
75°	2040	1782	1867
80°	1370	1283	1199
85°	852	1025	1192



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.2	4.7
10°-20°	305.3	13.0
20°-30°	422.7	18.0
30°-40°	450.7	19.2
40°-50°	411.1	17.5
50°-60°	322.1	13.7
60°-70°	209.9	8.9
70°-80°	93.0	4.0
80°-90°	20.0	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°	839.2	35.8
0°-40°	1289.9	55.0
0°-60°	2023.1	86.2
0°-90°	2346.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2346.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1195	1195	1195	1195	1195	
5°	1174	1173	1173	1172	1172	111
15°	1098	1098	1087	1076	1072	309
25°	952	946	931	898	873	437
35°	772	767	729	674	658	483
45°	593	580	530	486	467	457
55°	412	399	362	319	303	369
65°	244	231	209	213	177	241
75°	98	91	86	82	90	105
85°	14	15	17	18	19	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1195.0	1195.0	1195.0	1195.0	1195.0
2.5°	1186.7	1186.7	1186.7	1185.4	1185.4
5°	1174.3	1172.9	1172.9	1171.5	1171.5
7.5°	1164.6	1163.2	1161.9	1160.5	1157.7
10°	1150.8	1150.8	1149.4	1142.5	1141.1
12.5°	1128.7	1127.3	1121.8	1112.1	1109.4
15°	1098.3	1098.3	1087.3	1076.2	1072.1
17.5°	1065.2	1063.8	1050.0	1038.9	1033.4
20°	1029.2	1026.5	1012.7	994.7	985.0
22.5°	989.2	989.2	972.6	949.1	939.4
25°	951.9	946.3	931.1	898.0	873.1
27.5°	909.0	900.8	884.2	837.2	808.2
30°	862.1	857.9	834.4	773.7	751.6
32.5°	817.9	811.0	786.1	722.5	704.6
35°	772.3	766.7	729.4	674.2	657.6
37.5°	726.7	719.8	672.8	628.6	607.9
40°	681.1	672.8	621.7	581.6	559.5
42.5°	638.3	627.2	577.5	534.7	509.8
45°	592.7	580.2	530.5	486.3	467.0
47.5°	547.1	536.0	490.4	444.9	422.7
50°	498.7	489.1	447.6	402.0	378.5
52.5°	458.7	443.5	403.4	357.8	338.5
55°	411.7	399.3	362.0	319.1	302.6
57.5°	368.9	356.4	321.9	281.8	268.0
60°	328.8	310.8	281.8	247.3	236.2
62.5°	284.6	270.8	245.9	216.9	230.7
65°	244.5	230.7	208.6	212.8	176.8
67.5°	200.3	193.4	174.1	154.7	149.2
70°	163.0	154.7	147.8	127.1	121.6
72.5°	129.9	121.6	111.9	100.9	96.7
75°	98.1	91.2	85.7	81.5	89.8
77.5°	67.7	64.9	60.8	56.6	55.3
80°	44.2	42.8	41.4	40.1	38.7
82.5°	26.2	26.2	26.2	26.2	26.2
85°	13.8	15.2	16.6	18.0	19.3
87.5°	8.3	8.3	9.7	11.1	12.4
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)