

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: P544869

Luminaire Tested: **FMR-12-1-LD4-1STD-35-UNV-81-96-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: P544869  
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-LD4-1STD-35-UNV-81-96-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC 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**

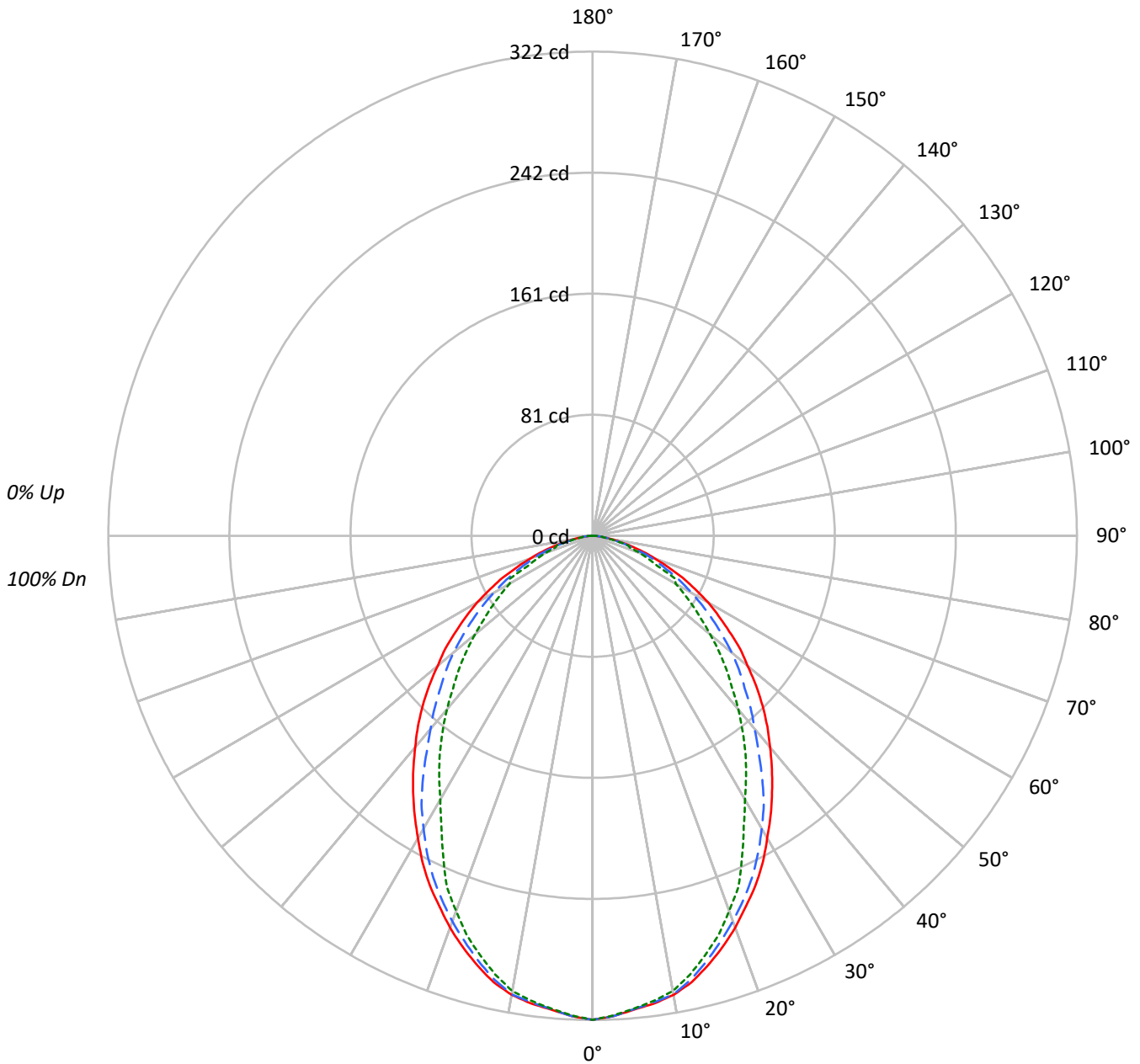
Lumens per Lamp: N/A  
Luminaire Lumens: 632.0 lumens  
Efficiency: N/A  
Efficacy: 76.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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°	3465	3465	3465
5°	3418	3414	3410
10°	3388	3385	3360
15°	3297	3264	3218
20°	3176	3125	3040
25°	3045	2979	2793
30°	2886	2794	2517
35°	2733	2582	2328
40°	2578	2354	2118
45°	2431	2175	1915
50°	2251	2020	1708
55°	2081	1830	1529
60°	1907	1634	1369
65°	1678	1431	1212
70°	1382	1253	1032
75°	1098	961	1006
80°	738	694	645
85°	457	556	642



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.0	4.7
10°-20°	82.2	13.0
20°-30°	113.9	18.0
30°-40°	121.4	19.2
40°-50°	110.8	17.5
50°-60°	86.8	13.7
60°-70°	56.5	8.9
70°-80°	25.1	4.0
80°-90°	5.4	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°	226.1	35.8
0°-40°	347.5	55.0
0°-60°	545.0	86.2
0°-90°	632.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	632.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	322	322	322	322	322	
5°	316	316	316	316	316	30
15°	296	296	293	290	289	83
25°	256	255	251	242	235	118
35°	208	207	196	182	177	130
45°	160	156	143	131	126	123
55°	111	108	98	86	82	99
65°	66	62	56	57	48	65
75°	26	25	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	321.9	321.9	321.9	321.9	321.9
2.5°	319.7	319.7	319.7	319.3	319.3
5°	316.3	316.0	316.0	315.6	315.6
7.5°	313.7	313.4	313.0	312.6	311.9
10°	310.0	310.0	309.7	307.8	307.4
12.5°	304.1	303.7	302.2	299.6	298.9
15°	295.9	295.9	292.9	289.9	288.8
17.5°	286.9	286.6	282.9	279.9	278.4
20°	277.3	276.5	272.8	268.0	265.4
22.5°	266.5	266.5	262.0	255.7	253.1
25°	256.4	254.9	250.8	241.9	235.2
27.5°	244.9	242.7	238.2	225.5	217.7
30°	232.2	231.1	224.8	208.4	202.5
32.5°	220.3	218.5	211.8	194.6	189.8
35°	208.0	206.6	196.5	181.6	177.2
37.5°	195.8	193.9	181.2	169.3	163.8
40°	183.5	181.2	167.5	156.7	150.7
42.5°	171.9	169.0	155.6	144.0	137.3
45°	159.7	156.3	142.9	131.0	125.8
47.5°	147.4	144.4	132.1	119.8	113.9
50°	134.4	131.8	120.6	108.3	102.0
52.5°	123.6	119.5	108.7	96.4	91.2
55°	110.9	107.6	97.5	86.0	81.5
57.5°	99.4	96.0	86.7	75.9	72.2
60°	88.6	83.7	75.9	66.6	63.6
62.5°	76.7	72.9	66.2	58.4	62.2
65°	65.9	62.2	56.2	57.3	47.6
67.5°	54.0	52.1	46.9	41.7	40.2
70°	43.9	41.7	39.8	34.2	32.8
72.5°	35.0	32.8	30.1	27.2	26.1
75°	26.4	24.6	23.1	22.0	24.2
77.5°	18.2	17.5	16.4	15.3	14.9
80°	11.9	11.5	11.2	10.8	10.4
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.7	4.1	4.5	4.8	5.2
87.5°	2.2	2.2	2.6	3.0	3.3
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)