

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: P544868

Luminaire Tested: **FMR-12-1-LD4-1STD-35-UNV-81-94-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: P544868  
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-81-94-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

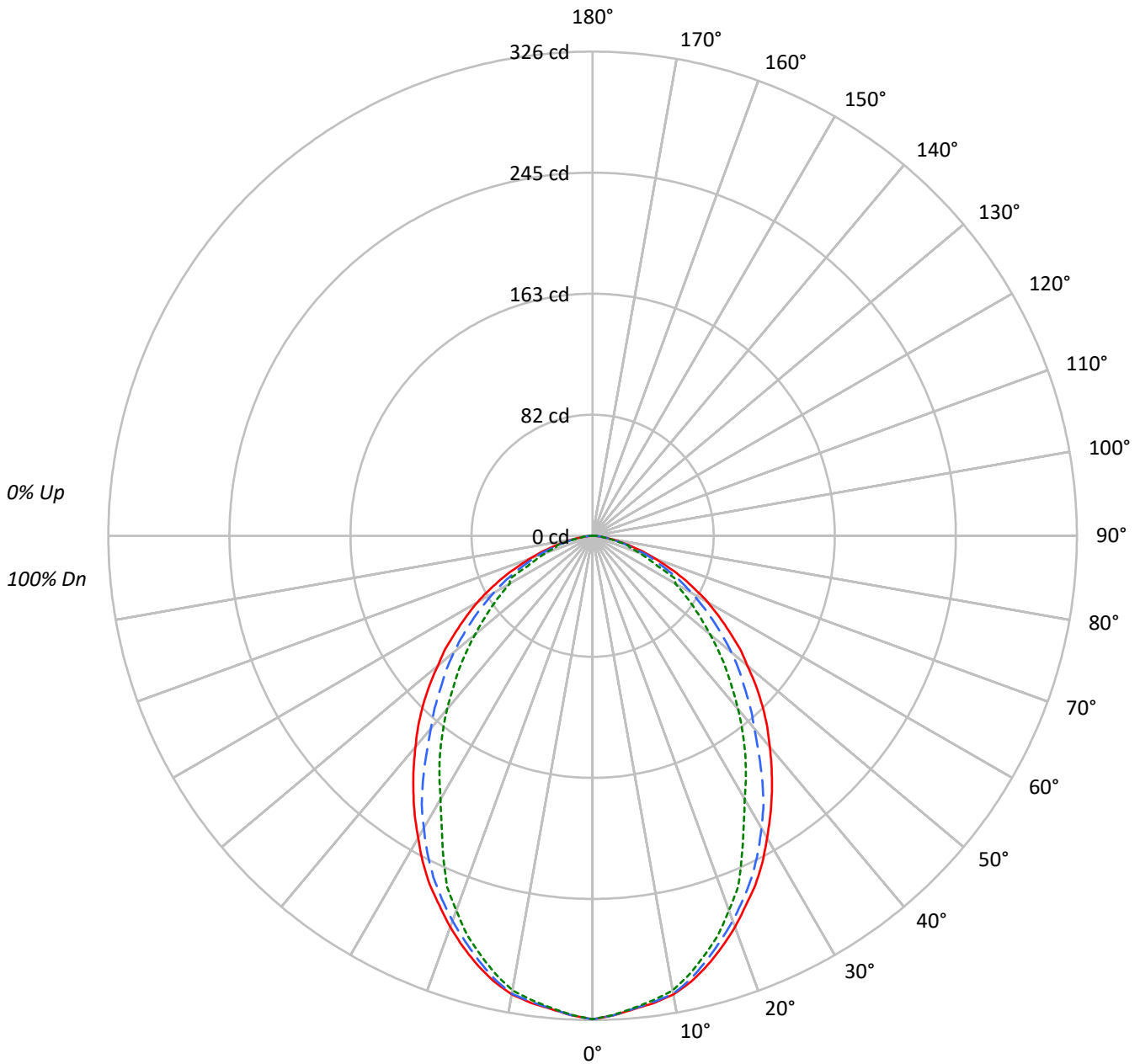
Lumens per Lamp: N/A  
Luminaire Lumens: 639.0 lumens  
Efficiency: N/A  
Efficacy: 77.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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			100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30																

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3504	3504	3504
5°	3457	3452	3448
10°	3427	3422	3397
15°	3334	3300	3254
20°	3211	3159	3073
25°	3080	3012	2824
30°	2918	2825	2544
35°	2765	2611	2353
40°	2607	2379	2141
45°	2457	2200	1936
50°	2274	2041	1726
55°	2104	1850	1546
60°	1929	1653	1384
65°	1696	1447	1228
70°	1397	1268	1042
75°	1110	969	1019
80°	744	700	651
85°	469	556	655



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.3	4.7
10°-20°	83.2	13.0
20°-30°	115.1	18.0
30°-40°	122.8	19.2
40°-50°	112.0	17.5
50°-60°	87.7	13.7
60°-70°	57.2	8.9
70°-80°	25.3	4.0
80°-90°	5.4	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°	228.6	35.8
0°-40°	351.3	55.0
0°-60°	551.0	86.2
0°-90°	639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	639.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	326	326	326	326	326	
5°	320	320	320	319	319	30
15°	299	299	296	293	292	84
25°	259	258	254	245	238	119
35°	210	209	199	184	179	132
45°	161	158	144	132	127	124
55°	112	109	99	87	82	101
65°	67	63	57	58	48	66
75°	27	25	23	22	24	29
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°	325.5	325.5	325.5	325.5	325.5
2.5°	323.2	323.2	323.2	322.9	322.9
5°	319.9	319.5	319.5	319.1	319.1
7.5°	317.2	316.8	316.5	316.1	315.3
10°	313.5	313.5	313.1	311.2	310.8
12.5°	307.4	307.1	305.6	302.9	302.2
15°	299.2	299.2	296.1	293.1	292.0
17.5°	290.1	289.7	286.0	283.0	281.5
20°	280.3	279.6	275.8	270.9	268.3
22.5°	269.4	269.4	264.9	258.5	255.9
25°	259.3	257.8	253.6	244.6	237.8
27.5°	247.6	245.3	240.8	228.0	220.1
30°	234.8	233.7	227.3	210.7	204.7
32.5°	222.8	220.9	214.1	196.8	191.9
35°	210.4	208.8	198.7	183.6	179.1
37.5°	197.9	196.1	183.3	171.2	165.6
40°	185.5	183.3	169.3	158.4	152.4
42.5°	173.8	170.8	157.3	145.6	138.9
45°	161.4	158.0	144.5	132.5	127.2
47.5°	149.0	146.0	133.6	121.2	115.1
50°	135.8	133.2	121.9	109.5	103.1
52.5°	124.9	120.8	109.9	97.5	92.2
55°	112.1	108.8	98.6	86.9	82.4
57.5°	100.5	97.1	87.7	76.8	73.0
60°	89.6	84.7	76.8	67.4	64.3
62.5°	77.5	73.8	67.0	59.1	62.8
65°	66.6	62.8	56.8	57.9	48.2
67.5°	54.6	52.7	47.4	42.1	40.6
70°	44.4	42.1	40.3	34.6	33.1
72.5°	35.4	33.1	30.5	27.5	26.3
75°	26.7	24.8	23.3	22.2	24.5
77.5°	18.4	17.7	16.6	15.4	15.1
80°	12.0	11.7	11.3	10.9	10.5
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.8	4.1	4.5	4.9	5.3
87.5°	2.3	2.3	2.6	3.0	3.4
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)