

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: P545764

Luminaire Tested: **FMR-12-2-LD4-2STD-40-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: P545764  
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-40-UNV-81-94-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

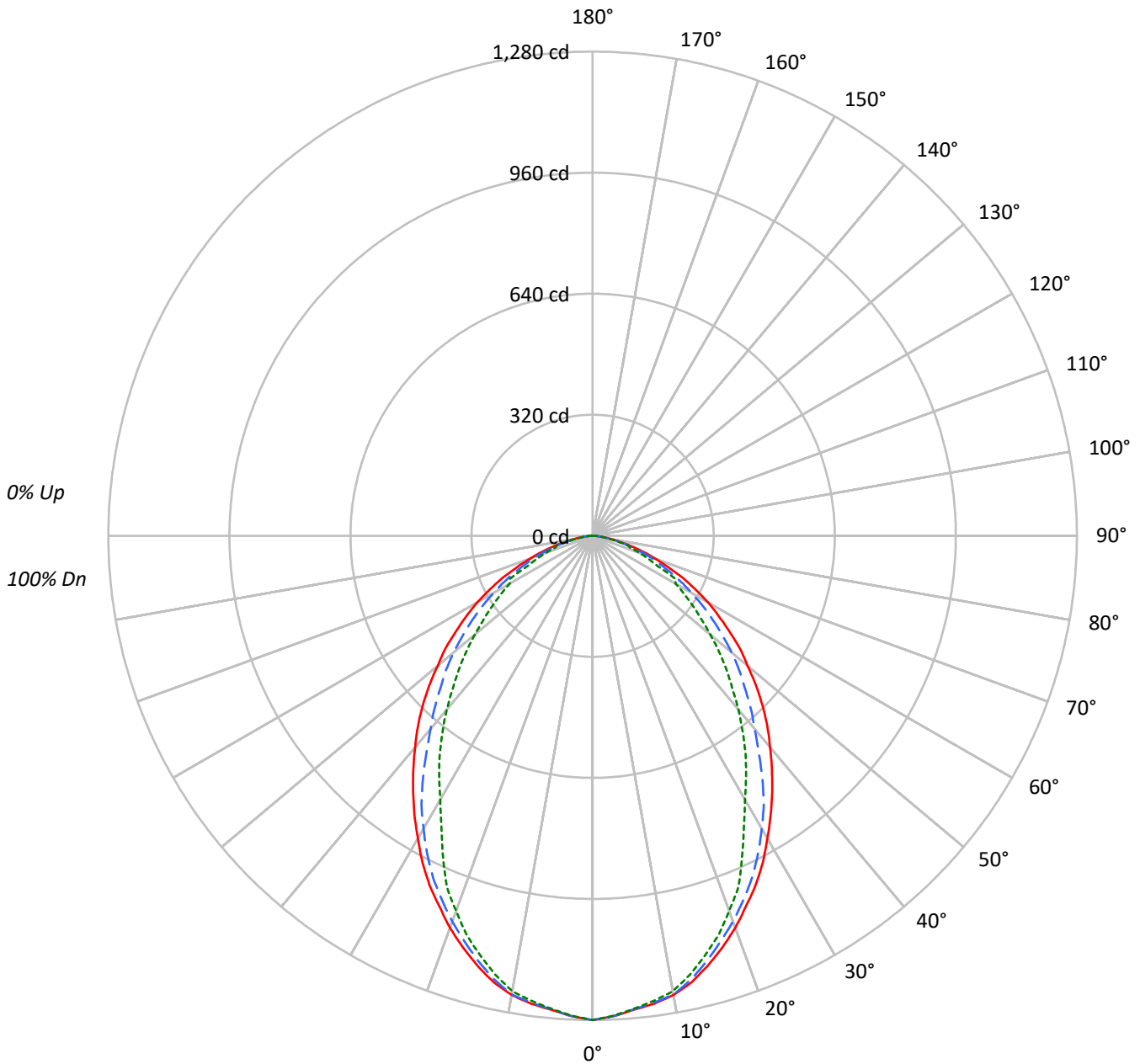
Lumens per Lamp: N/A  
Luminaire Lumens: 2513.0 lumens  
Efficiency: N/A  
Efficacy: 75.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	6889	6889	6889
5°	6796	6788	6780
10°	6737	6729	6680
15°	6555	6489	6399
20°	6314	6212	6043
25°	6055	5923	5554
30°	5739	5555	5003
35°	5435	5134	4628
40°	5126	4678	4210
45°	4832	4325	3807
50°	4473	4015	3395
55°	4138	3638	3041
60°	3791	3250	2724
65°	3335	2846	2412
70°	2747	2491	2049
75°	2185	1909	2000
80°	1469	1376	1283
85°	914	1099	1278



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.2	4.7
10°-20°	327.0	13.0
20°-30°	452.7	18.0
30°-40°	482.7	19.2
40°-50°	440.4	17.5
50°-60°	345.0	13.7
60°-70°	224.9	8.9
70°-80°	99.6	4.0
80°-90°	21.4	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°	898.9	35.8
0°-40°	1381.7	55.0
0°-60°	2167.1	86.2
0°-90°	2513.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2513.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1280	1280	1280	1280	1280	
5°	1258	1256	1256	1255	1255	119
15°	1176	1176	1165	1153	1148	331
25°	1020	1014	997	962	935	468
35°	827	821	781	722	704	517
45°	635	622	568	521	500	489
55°	441	428	388	342	324	396
65°	262	247	224	228	189	258
75°	105	98	92	87	96	113
85°	15	16	18	19	21	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1280.1	1280.1	1280.1	1280.1	1280.1
2.5°	1271.2	1271.2	1271.2	1269.7	1269.7
5°	1257.9	1256.4	1256.4	1254.9	1254.9
7.5°	1247.5	1246.1	1244.6	1243.1	1240.1
10°	1232.7	1232.7	1231.3	1223.9	1222.4
12.5°	1209.1	1207.6	1201.7	1191.3	1188.3
15°	1176.5	1176.5	1164.7	1152.8	1148.4
17.5°	1141.0	1139.5	1124.7	1112.9	1106.9
20°	1102.5	1099.5	1084.7	1065.5	1055.1
22.5°	1059.6	1059.6	1041.8	1016.7	1006.3
25°	1019.6	1013.7	997.4	961.9	935.3
27.5°	973.8	964.9	947.1	896.8	865.7
30°	923.4	919.0	893.8	828.7	805.0
32.5°	876.1	868.7	842.0	774.0	754.7
35°	827.2	821.3	781.4	722.2	704.4
37.5°	778.4	771.0	720.7	673.3	651.1
40°	729.6	720.7	665.9	623.0	599.3
42.5°	683.7	671.9	618.6	572.7	546.1
45°	634.9	621.5	568.3	520.9	500.2
47.5°	586.0	574.2	525.4	476.5	452.8
50°	534.2	523.9	479.5	430.6	405.5
52.5°	491.3	475.0	432.1	383.3	362.6
55°	441.0	427.7	387.7	341.9	324.1
57.5°	395.1	381.8	344.8	301.9	287.1
60°	352.2	333.0	301.9	264.9	253.1
62.5°	304.9	290.1	263.4	232.3	247.1
65°	261.9	247.1	223.5	227.9	189.4
67.5°	214.6	207.2	186.5	165.7	159.8
70°	174.6	165.7	158.3	136.1	130.2
72.5°	139.1	130.2	119.9	108.0	103.6
75°	105.1	97.7	91.8	87.3	96.2
77.5°	72.5	69.6	65.1	60.7	59.2
80°	47.4	45.9	44.4	42.9	41.4
82.5°	28.1	28.1	28.1	28.1	28.1
85°	14.8	16.3	17.8	19.2	20.7
87.5°	8.9	8.9	10.4	11.8	13.3
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)