

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: P545788

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-80-94-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: P545788  
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-50-UNV-80-94-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

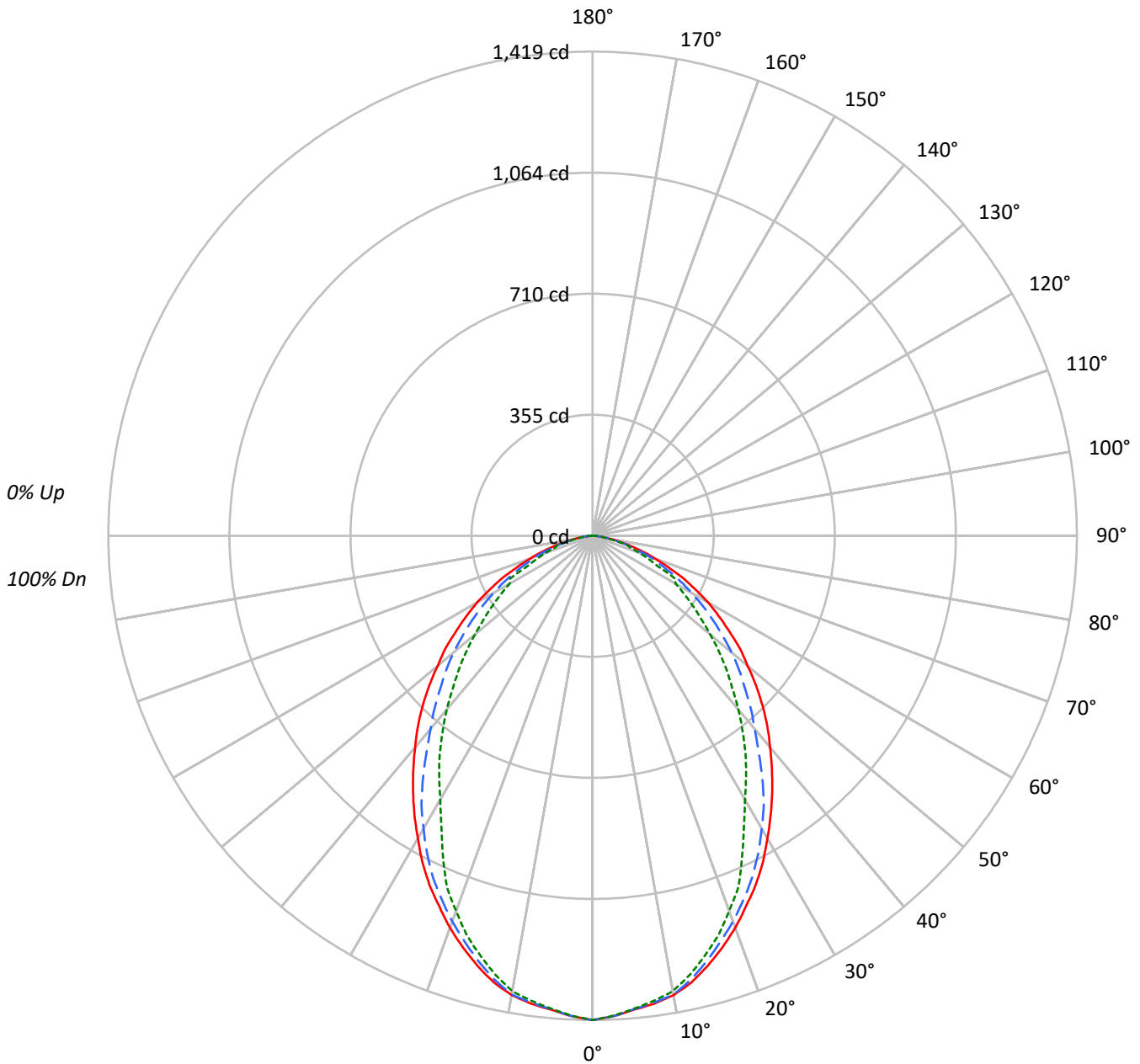
Lumens per Lamp: N/A  
Luminaire Lumens: 2786.0 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	7638	7638	7638
5°	7534	7525	7517
10°	7469	7460	7406
15°	7267	7194	7093
20°	7001	6888	6700
25°	6713	6567	6157
30°	6362	6158	5546
35°	6025	5692	5131
40°	5682	5187	4669
45°	5357	4795	4220
50°	4959	4451	3764
55°	4587	4033	3371
60°	4203	3603	3019
65°	3698	3154	2674
70°	3046	2762	2272
75°	2423	2115	2217
80°	1627	1525	1423
85°	1013	1216	1420



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.1	4.7
10°-20°	362.6	13.0
20°-30°	501.9	18.0
30°-40°	535.2	19.2
40°-50°	488.3	17.5
50°-60°	382.5	13.7
60°-70°	249.3	8.9
70°-80°	110.5	4.0
80°-90°	23.7	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°	996.6	35.8
0°-40°	1531.8	55.0
0°-60°	2402.5	86.2
0°-90°	2786.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2786.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1419	1419	1419	1419	1419	
5°	1394	1393	1393	1391	1391	132
15°	1304	1304	1291	1278	1273	367
25°	1130	1124	1106	1066	1037	519
35°	917	911	866	801	781	573
45°	704	689	630	578	554	542
55°	489	474	430	379	359	439
65°	290	274	248	253	210	286
75°	116	108	102	97	107	125
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1419.2	1419.2	1419.2	1419.2	1419.2
2.5°	1409.3	1409.3	1409.3	1407.7	1407.7
5°	1394.5	1392.9	1392.9	1391.3	1391.3
7.5°	1383.1	1381.4	1379.8	1378.1	1374.9
10°	1366.7	1366.7	1365.0	1356.8	1355.2
12.5°	1340.4	1338.8	1332.2	1320.7	1317.4
15°	1304.3	1304.3	1291.2	1278.1	1273.1
17.5°	1264.9	1263.3	1246.9	1233.8	1227.2
20°	1222.3	1219.0	1202.6	1181.3	1169.8
22.5°	1174.7	1174.7	1155.0	1127.1	1115.6
25°	1130.4	1123.8	1105.8	1066.4	1036.9
27.5°	1079.5	1069.7	1050.0	994.2	959.8
30°	1023.8	1018.8	990.9	918.8	892.5
32.5°	971.3	963.1	933.5	858.1	836.7
35°	917.1	910.6	866.3	800.6	780.9
37.5°	863.0	854.8	799.0	746.5	721.9
40°	808.8	799.0	738.3	690.7	664.5
42.5°	758.0	744.8	685.8	634.9	605.4
45°	703.8	689.1	630.0	577.5	554.5
47.5°	649.7	636.6	582.4	528.3	502.0
50°	592.3	580.8	531.6	477.4	449.5
52.5°	544.7	526.6	479.1	424.9	402.0
55°	488.9	474.1	429.8	379.0	359.3
57.5°	438.1	423.3	382.3	334.7	318.3
60°	390.5	369.1	334.7	293.7	280.5
62.5°	338.0	321.6	292.0	257.6	274.0
65°	290.4	274.0	247.7	252.7	210.0
67.5°	237.9	229.7	206.7	183.8	177.2
70°	193.6	183.8	175.5	150.9	144.4
72.5°	154.2	144.4	132.9	119.8	114.8
75°	116.5	108.3	101.7	96.8	106.6
77.5°	80.4	77.1	72.2	67.3	65.6
80°	52.5	50.9	49.2	47.6	45.9
82.5°	31.2	31.2	31.2	31.2	31.2
85°	16.4	18.0	19.7	21.3	23.0
87.5°	9.8	9.8	11.5	13.1	14.8
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)