

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: P545784

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-80-85-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: P545784  
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-80-85-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

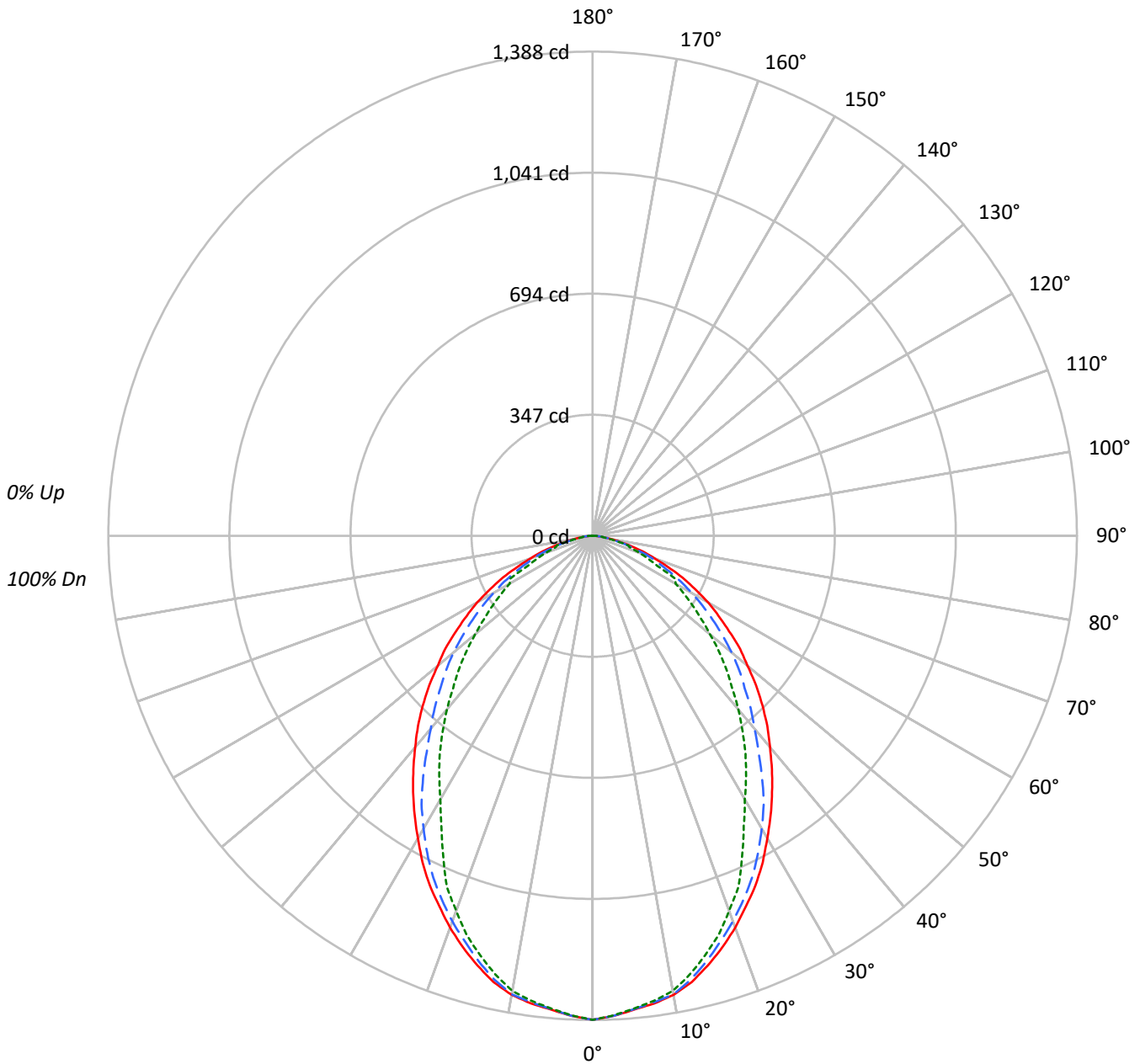
Lumens per Lamp: N/A  
Luminaire Lumens: 2724.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	7468	7468	7468
5°	7366	7358	7349
10°	7302	7294	7241
15°	7106	7034	6936
20°	6845	6734	6550
25°	6563	6421	6020
30°	6221	6021	5423
35°	5891	5565	5017
40°	5556	5072	4565
45°	5238	4689	4127
50°	4849	4351	3680
55°	4485	3944	3296
60°	4110	3522	2953
65°	3615	3084	2614
70°	2979	2700	2222
75°	2368	2069	2169
80°	1590	1491	1392
85°	988	1186	1389



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.2	4.7
10°-20°	354.5	13.0
20°-30°	490.8	18.0
30°-40°	523.3	19.2
40°-50°	477.4	17.5
50°-60°	374.0	13.7
60°-70°	243.7	8.9
70°-80°	108.0	4.0
80°-90°	23.2	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°	974.4	35.8
0°-40°	1497.7	55.0
0°-60°	2349.1	86.2
0°-90°	2724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2724.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1388	1388	1388	1388	1388	
5°	1364	1362	1362	1360	1360	129
15°	1275	1275	1262	1250	1245	359
25°	1105	1099	1081	1043	1014	507
35°	897	890	847	783	764	561
45°	688	674	616	565	542	530
55°	478	464	420	371	351	429
65°	284	268	242	247	205	280
75°	114	106	100	95	104	122
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1387.6	1387.6	1387.6	1387.6	1387.6
2.5°	1377.9	1377.9	1377.9	1376.3	1376.3
5°	1363.5	1361.9	1361.9	1360.3	1360.3
7.5°	1352.3	1350.7	1349.1	1347.5	1344.3
10°	1336.2	1336.2	1334.6	1326.6	1325.0
12.5°	1310.6	1309.0	1302.6	1291.3	1288.1
15°	1275.3	1275.3	1262.4	1249.6	1244.8
17.5°	1236.8	1235.2	1219.1	1206.3	1199.9
20°	1195.1	1191.9	1175.8	1155.0	1143.7
22.5°	1148.6	1148.6	1129.3	1102.0	1090.8
25°	1105.2	1098.8	1081.2	1042.7	1013.8
27.5°	1055.5	1045.9	1026.6	972.1	938.4
30°	1001.0	996.2	968.9	898.3	872.6
32.5°	949.6	941.6	912.7	839.0	818.1
35°	896.7	890.3	847.0	782.8	763.6
37.5°	843.8	835.7	781.2	729.9	705.8
40°	790.8	781.2	721.9	675.3	649.7
42.5°	741.1	728.3	670.5	620.8	591.9
45°	688.2	673.7	616.0	564.7	542.2
47.5°	635.2	622.4	569.5	516.5	490.9
50°	579.1	567.9	519.7	466.8	439.5
52.5°	532.6	514.9	468.4	415.5	393.0
55°	478.0	463.6	420.3	370.6	351.3
57.5°	428.3	413.9	373.8	327.2	311.2
60°	381.8	360.9	327.2	287.1	274.3
62.5°	330.5	314.4	285.5	251.8	267.9
65°	283.9	267.9	242.2	247.0	205.3
67.5°	232.6	224.6	202.1	179.7	173.2
70°	189.3	179.7	171.6	147.6	141.2
72.5°	150.8	141.2	129.9	117.1	112.3
75°	113.9	105.9	99.5	94.6	104.3
77.5°	78.6	75.4	70.6	65.8	64.2
80°	51.3	49.7	48.1	46.5	44.9
82.5°	30.5	30.5	30.5	30.5	30.5
85°	16.0	17.6	19.2	20.9	22.5
87.5°	9.6	9.6	11.2	12.8	14.4
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)