

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: P545719

Luminaire Tested: **FMR-12-2-LD4-2STD-35-UNV-80-84-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: P545719  
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-35-UNV-80-84-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

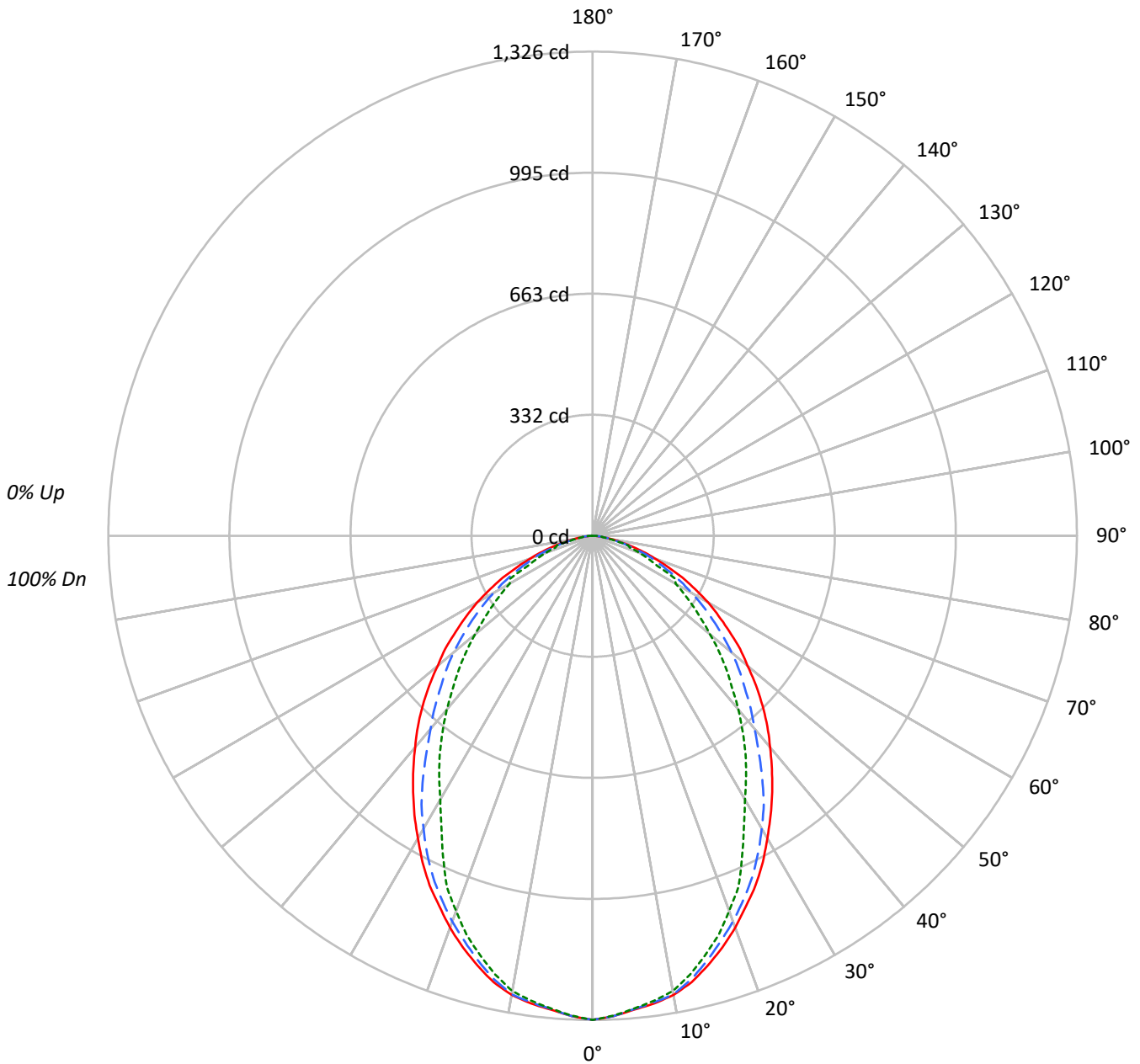
Lumens per Lamp: N/A  
Luminaire Lumens: 2603.0 lumens  
Efficiency: N/A  
Efficacy: 78.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	7136	7136	7136
5°	7039	7031	7023
10°	6978	6969	6920
15°	6790	6722	6628
20°	6541	6435	6259
25°	6271	6135	5753
30°	5944	5754	5182
35°	5630	5318	4794
40°	5309	4846	4362
45°	5005	4480	3943
50°	4634	4159	3517
55°	4286	3768	3150
60°	3927	3366	2821
65°	3455	2948	2499
70°	2847	2581	2123
75°	2262	1975	2071
80°	1522	1426	1330
85°	945	1136	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.4	4.7
10°-20°	338.7	13.0
20°-30°	469.0	18.0
30°-40°	500.0	19.2
40°-50°	456.2	17.5
50°-60°	357.4	13.7
60°-70°	232.9	8.9
70°-80°	103.2	4.0
80°-90°	22.2	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°	931.1	35.8
0°-40°	1431.2	55.0
0°-60°	2244.7	86.2
0°-90°	2603.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2603.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1326	1326	1326	1326	1326	
5°	1303	1301	1301	1300	1300	124
15°	1219	1219	1206	1194	1190	343
25°	1056	1050	1033	996	969	485
35°	857	851	809	748	730	536
45°	658	644	589	540	518	507
55°	457	443	402	354	336	410
65°	271	256	232	236	196	267
75°	109	101	95	90	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1325.9	1325.9	1325.9	1325.9	1325.9
2.5°	1316.7	1316.7	1316.7	1315.2	1315.2
5°	1302.9	1301.4	1301.4	1299.9	1299.9
7.5°	1292.2	1290.7	1289.1	1287.6	1284.5
10°	1276.9	1276.9	1275.3	1267.7	1266.2
12.5°	1252.4	1250.8	1244.7	1234.0	1230.9
15°	1218.6	1218.6	1206.4	1194.1	1189.5
17.5°	1181.8	1180.3	1165.0	1152.7	1146.6
20°	1142.0	1138.9	1123.6	1103.7	1092.9
22.5°	1097.5	1097.5	1079.1	1053.1	1042.4
25°	1056.1	1050.0	1033.2	996.4	968.8
27.5°	1008.6	999.4	981.0	928.9	896.7
30°	956.5	951.9	925.9	858.4	833.9
32.5°	907.5	899.8	872.2	801.7	781.8
35°	856.9	850.7	809.4	748.0	729.6
37.5°	806.3	798.6	746.5	697.5	674.5
40°	755.7	746.5	689.8	645.3	620.8
42.5°	708.2	695.9	640.7	593.2	565.6
45°	657.6	643.8	588.6	539.6	518.1
47.5°	607.0	594.8	544.2	493.6	469.1
50°	553.4	542.6	496.7	446.1	420.0
52.5°	508.9	492.1	447.6	397.0	375.6
55°	456.8	443.0	401.6	354.1	335.7
57.5°	409.3	395.5	357.2	312.7	297.4
60°	364.8	344.9	312.7	274.4	262.1
62.5°	315.8	300.4	272.9	240.7	256.0
65°	271.3	256.0	231.5	236.1	196.2
67.5°	222.3	214.6	193.1	171.7	165.6
70°	180.9	171.7	164.0	141.0	134.9
72.5°	144.1	134.9	124.2	111.9	107.3
75°	108.8	101.2	95.0	90.4	99.6
77.5°	75.1	72.0	67.4	62.8	61.3
80°	49.1	47.5	46.0	44.5	42.9
82.5°	29.1	29.1	29.1	29.1	29.1
85°	15.3	16.9	18.4	19.9	21.5
87.5°	9.2	9.2	10.7	12.3	13.8
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)