

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: P545455

Luminaire Tested: **FMR-12-2-LD4-1STD-35-UNV-93-84-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: P545455  
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-LD4-1STD-35-UNV-93-84-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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**

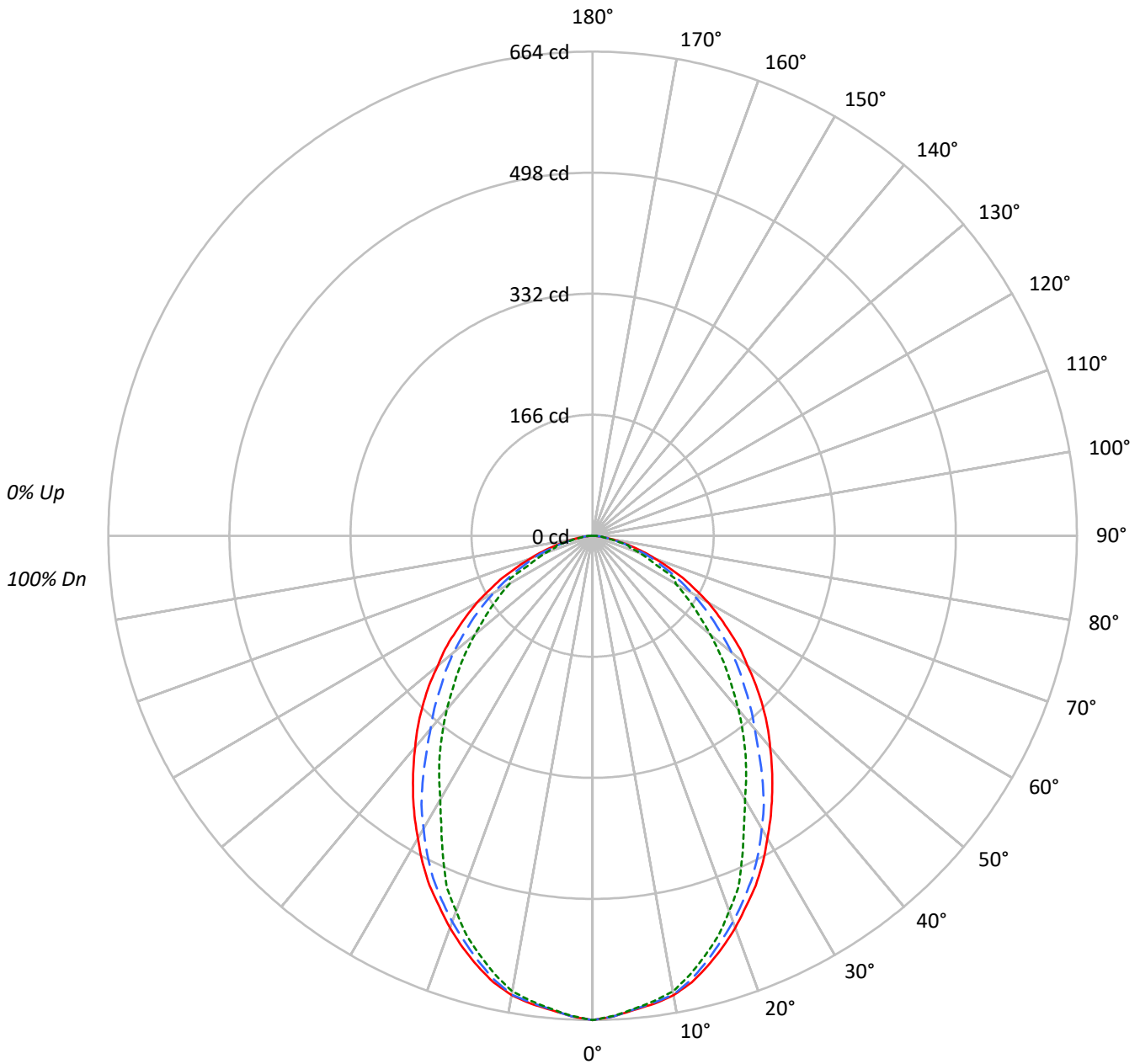
Lumens per Lamp: N/A  
Luminaire Lumens: 1304.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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°	3575	3575	3575
5°	3526	3522	3518
10°	3496	3492	3466
15°	3402	3367	3320
20°	3277	3224	3136
25°	3142	3074	2882
30°	2978	2882	2596
35°	2821	2664	2401
40°	2660	2428	2185
45°	2507	2245	1976
50°	2321	2083	1762
55°	2147	1888	1578
60°	1968	1687	1413
65°	1731	1477	1252
70°	1426	1293	1064
75°	1133	990	1038
80°	762	713	666
85°	475	568	667



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.8	4.7
10°-20°	169.7	13.0
20°-30°	234.9	18.0
30°-40°	250.5	19.2
40°-50°	228.5	17.5
50°-60°	179.0	13.7
60°-70°	116.7	8.9
70°-80°	51.7	4.0
80°-90°	11.1	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°	466.5	35.8
0°-40°	717.0	55.0
0°-60°	1124.5	86.2
0°-90°	1304.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1304.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	653	652	652	651	651	62
15°	610	610	604	598	596	172
25°	529	526	518	499	485	243
35°	429	426	406	375	366	268
45°	329	322	295	270	260	254
55°	229	222	201	177	168	205
65°	136	128	116	118	98	134
75°	54	51	48	45	50	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	664.2	664.2	664.2	664.2	664.2
2.5°	659.6	659.6	659.6	658.9	658.9
5°	652.7	652.0	652.0	651.2	651.2
7.5°	647.3	646.6	645.8	645.0	643.5
10°	639.7	639.7	638.9	635.1	634.3
12.5°	627.4	626.6	623.5	618.2	616.6
15°	610.5	610.5	604.3	598.2	595.9
17.5°	592.1	591.3	583.6	577.5	574.4
20°	572.1	570.6	562.9	552.9	547.5
22.5°	549.8	549.8	540.6	527.6	522.2
25°	529.1	526.0	517.6	499.1	485.3
27.5°	505.3	500.7	491.5	465.4	449.2
30°	479.2	476.9	463.8	430.0	417.7
32.5°	454.6	450.8	436.9	401.6	391.6
35°	429.3	426.2	405.5	374.7	365.5
37.5°	403.9	400.1	374.0	349.4	337.9
40°	378.6	374.0	345.6	323.3	311.0
42.5°	354.8	348.6	321.0	297.2	283.4
45°	329.4	322.5	294.9	270.3	259.6
47.5°	304.1	297.9	272.6	247.3	235.0
50°	277.2	271.8	248.8	223.5	210.4
52.5°	254.9	246.5	224.2	198.9	188.1
55°	228.8	221.9	201.2	177.4	168.2
57.5°	205.0	198.1	178.9	156.7	149.0
60°	182.8	172.8	156.7	137.5	131.3
62.5°	158.2	150.5	136.7	120.6	128.2
65°	135.9	128.2	116.0	118.3	98.3
67.5°	111.3	107.5	96.8	86.0	82.9
70°	90.6	86.0	82.2	70.6	67.6
72.5°	72.2	67.6	62.2	56.1	53.8
75°	54.5	50.7	47.6	45.3	49.9
77.5°	37.6	36.1	33.8	31.5	30.7
80°	24.6	23.8	23.0	22.3	21.5
82.5°	14.6	14.6	14.6	14.6	14.6
85°	7.7	8.4	9.2	10.0	10.8
87.5°	4.6	4.6	5.4	6.1	6.9
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)