

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: P545912

Luminaire Tested: **FMR-12-4-LD4-1LO-35-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: P545912
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-12-4-LD4-1LO-35-UNV-80-85-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

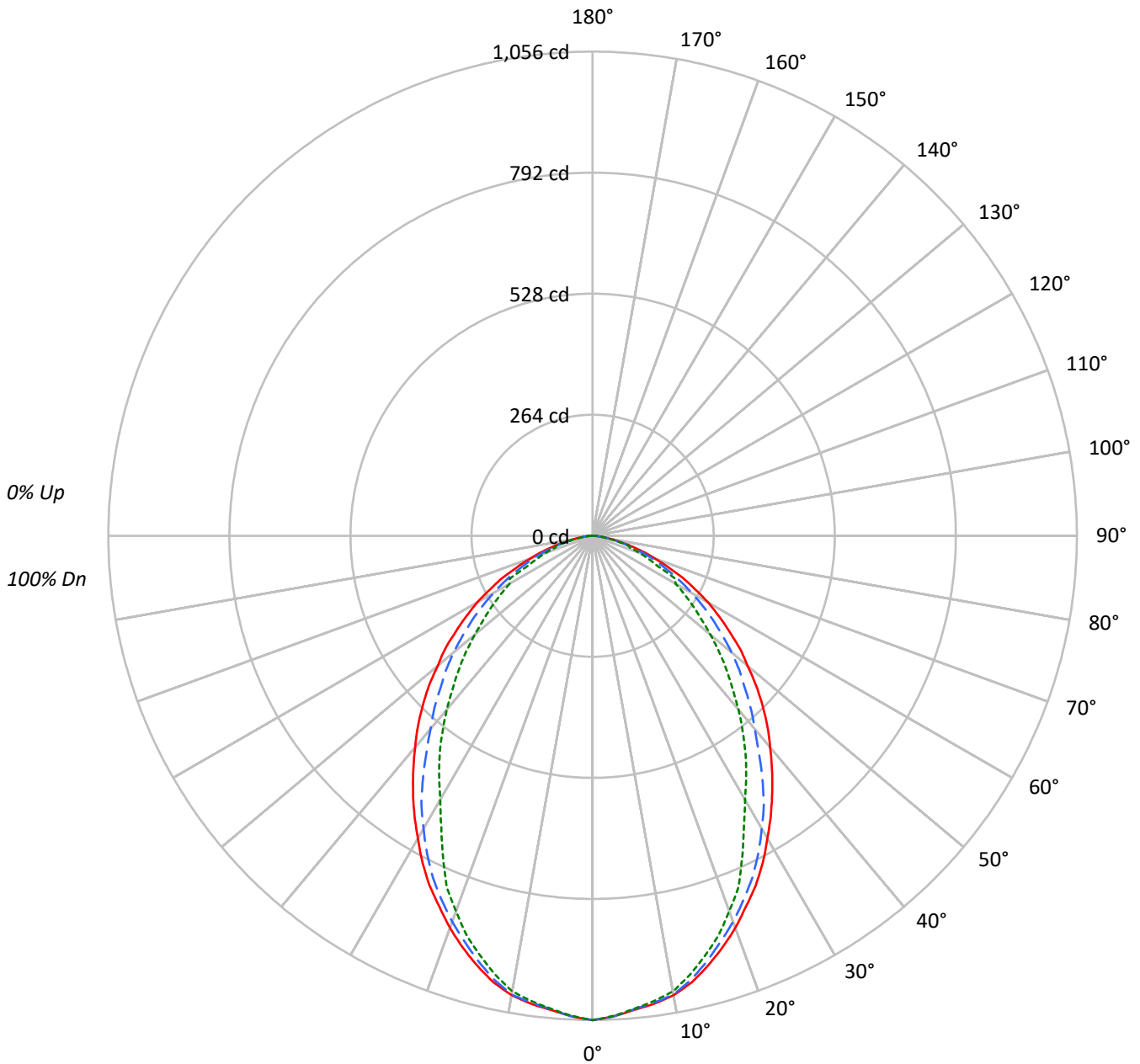
Lumens per Lamp: N/A
Luminaire Lumens: 2074.0 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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					20					
RC	80					70					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°	2843	2843	2843
5°	2804	2801	2798
10°	2780	2777	2757
15°	2705	2678	2640
20°	2606	2564	2494
25°	2499	2444	2292
30°	2368	2292	2064
35°	2243	2119	1910
40°	2115	1931	1737
45°	1994	1785	1571
50°	1846	1657	1401
55°	1708	1501	1255
60°	1565	1341	1124
65°	1377	1174	995
70°	1134	1028	846
75°	901	787	826
80°	606	567	530
85°	377	454	528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.3	4.7
10°-20°	269.9	13.0
20°-30°	373.7	18.0
30°-40°	398.4	19.2
40°-50°	363.5	17.5
50°-60°	284.8	13.7
60°-70°	185.6	8.9
70°-80°	82.2	4.0
80°-90°	17.6	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°	741.9	35.8
0°-40°	1140.3	55.0
0°-60°	1788.5	86.2
0°-90°	2074.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2074.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1038	1037	1037	1036	1036	99
15°	971	971	961	951	948	273
25°	842	837	823	794	772	386
35°	683	678	645	596	581	427
45°	524	513	469	430	413	404
55°	364	353	320	282	268	326
65°	216	204	184	188	156	213
75°	87	81	76	72	79	93
85°	12	13	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1056.5	1056.5	1056.5	1056.5	1056.5
2.5°	1049.1	1049.1	1049.1	1047.9	1047.9
5°	1038.1	1036.9	1036.9	1035.7	1035.7
7.5°	1029.6	1028.4	1027.2	1025.9	1023.5
10°	1017.4	1017.4	1016.2	1010.1	1008.8
12.5°	997.8	996.6	991.7	983.2	980.7
15°	971.0	971.0	961.2	951.4	947.8
17.5°	941.7	940.4	928.2	918.5	913.6
20°	909.9	907.5	895.2	879.4	870.8
22.5°	874.5	874.5	859.8	839.1	830.5
25°	841.5	836.6	823.2	793.9	771.9
27.5°	803.6	796.3	781.7	740.1	714.5
30°	762.1	758.5	737.7	684.0	664.4
32.5°	723.0	716.9	694.9	638.8	622.9
35°	682.7	677.8	644.9	596.0	581.4
37.5°	642.4	636.3	594.8	555.7	537.4
40°	602.1	594.8	549.6	514.2	494.6
42.5°	564.3	554.5	510.5	472.7	450.7
45°	524.0	513.0	469.0	429.9	412.8
47.5°	483.7	473.9	433.6	393.3	373.7
50°	440.9	432.4	395.7	355.4	334.6
52.5°	405.5	392.1	356.6	316.3	299.2
55°	364.0	353.0	320.0	282.1	267.5
57.5°	326.1	315.1	284.6	249.2	236.9
60°	290.7	274.8	249.2	218.6	208.9
62.5°	251.6	239.4	217.4	191.8	204.0
65°	216.2	204.0	184.4	188.1	156.3
67.5°	177.1	171.0	153.9	136.8	131.9
70°	144.1	136.8	130.7	112.4	107.5
72.5°	114.8	107.5	98.9	89.2	85.5
75°	86.7	80.6	75.7	72.1	79.4
77.5°	59.8	57.4	53.7	50.1	48.9
80°	39.1	37.9	36.6	35.4	34.2
82.5°	23.2	23.2	23.2	23.2	23.2
85°	12.2	13.4	14.7	15.9	17.1
87.5°	7.3	7.3	8.5	9.8	11.0
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)