

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: P545663

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-81-84-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: P545663
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-LD4-2LO-40-UNV-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

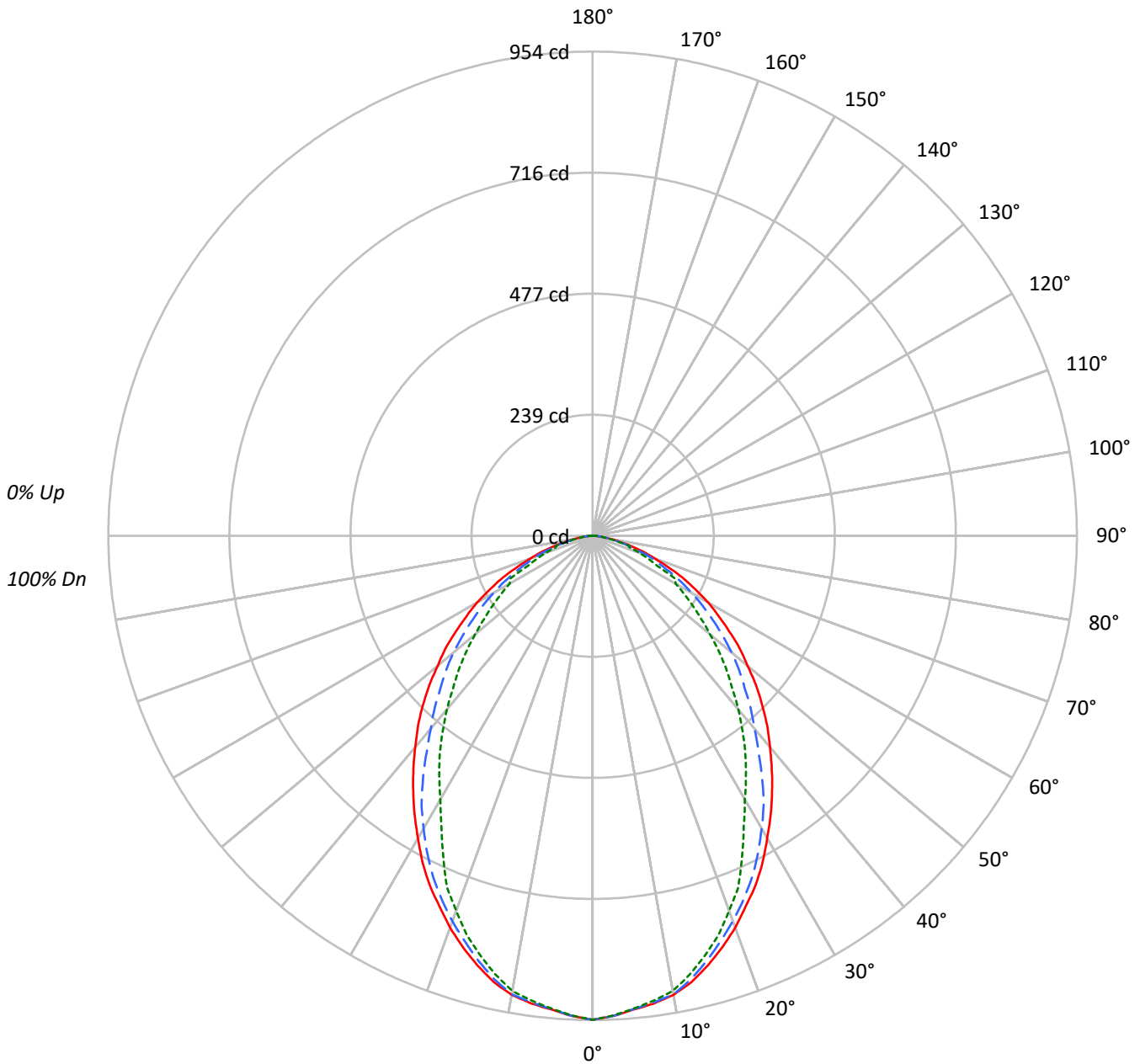
Lumens per Lamp: N/A
Luminaire Lumens: 1872.0 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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									
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°	5132	5132	5132
5°	5062	5056	5050
10°	5018	5012	4976
15°	4883	4834	4767
20°	4704	4628	4502
25°	4511	4412	4137
30°	4275	4138	3727
35°	4049	3824	3447
40°	3818	3485	3137
45°	3599	3222	2836
50°	3332	2991	2529
55°	3082	2710	2265
60°	2824	2421	2029
65°	2485	2120	1797
70°	2047	1857	1526
75°	1628	1420	1491
80°	1094	1026	958
85°	679	815	951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	4.7
10°-20°	243.6	13.0
20°-30°	337.3	18.0
30°-40°	359.6	19.2
40°-50°	328.1	17.5
50°-60°	257.0	13.7
60°-70°	167.5	8.9
70°-80°	74.2	4.0
80°-90°	15.9	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°	669.6	35.8
0°-40°	1029.2	55.0
0°-60°	1614.3	86.2
0°-90°	1872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1872.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	937	936	936	935	935	89
15°	876	876	868	859	856	246
25°	760	755	743	717	697	349
35°	616	612	582	538	525	385
45°	473	463	423	388	373	364
55°	328	319	289	255	241	295
65°	195	184	166	170	141	192
75°	78	73	68	65	72	84
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	953.6	953.6	953.6	953.6	953.6
2.5°	947.0	947.0	947.0	945.9	945.9
5°	937.0	935.9	935.9	934.8	934.8
7.5°	929.3	928.2	927.1	926.0	923.8
10°	918.3	918.3	917.2	911.7	910.6
12.5°	900.7	899.6	895.1	887.4	885.2
15°	876.4	876.4	867.6	858.8	855.5
17.5°	849.9	848.8	837.8	829.0	824.6
20°	821.3	819.1	808.1	793.7	786.0
22.5°	789.3	789.3	776.1	757.3	749.6
25°	759.6	755.1	743.0	716.6	696.7
27.5°	725.4	718.8	705.5	668.1	644.9
30°	687.9	684.6	665.8	617.3	599.7
32.5°	652.6	647.1	627.3	576.6	562.2
35°	616.2	611.8	582.1	538.0	524.7
37.5°	579.9	574.3	536.9	501.6	485.1
40°	543.5	536.9	496.1	464.1	446.5
42.5°	509.3	500.5	460.8	426.6	406.8
45°	472.9	463.0	423.3	388.0	372.6
47.5°	436.5	427.7	391.4	355.0	337.3
50°	398.0	390.2	357.2	320.8	302.1
52.5°	366.0	353.9	321.9	285.5	270.1
55°	328.5	318.6	288.8	254.7	241.4
57.5°	294.3	284.4	256.9	224.9	213.9
60°	262.4	248.0	224.9	197.3	188.5
62.5°	227.1	216.1	196.2	173.1	184.1
65°	195.1	184.1	166.5	169.8	141.1
67.5°	159.8	154.3	138.9	123.5	119.1
70°	130.1	123.5	118.0	101.4	97.0
72.5°	103.6	97.0	89.3	80.5	77.2
75°	78.3	72.8	68.3	65.0	71.7
77.5°	54.0	51.8	48.5	45.2	44.1
80°	35.3	34.2	33.1	32.0	30.9
82.5°	20.9	20.9	20.9	20.9	20.9
85°	11.0	12.1	13.2	14.3	15.4
87.5°	6.6	6.6	7.7	8.8	9.9
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)