

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: P545685

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-93-96-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: P545685
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-93-96-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

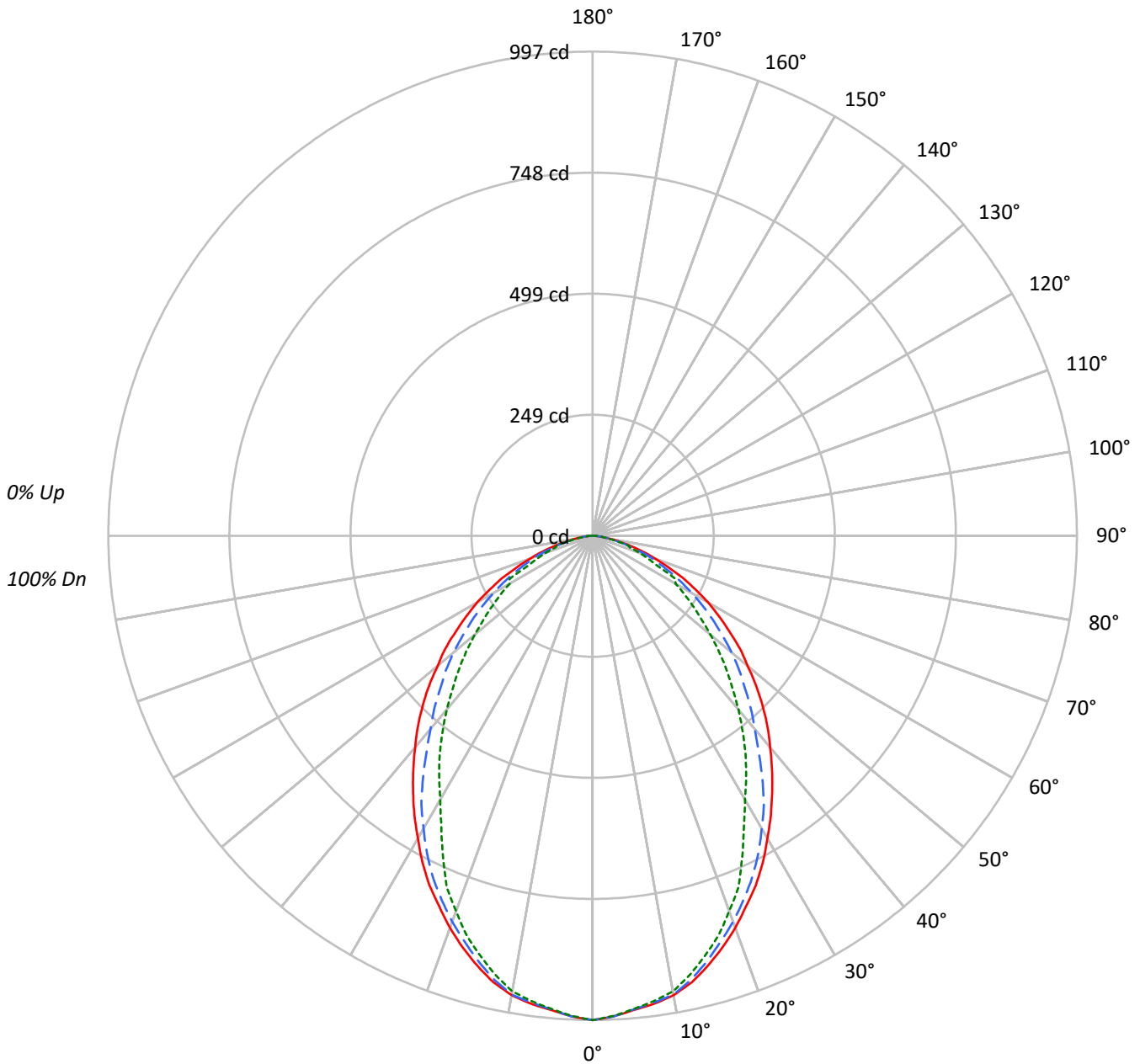
Lumens per Lamp: N/A
Luminaire Lumens: 1958.0 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): 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°	5368	5368	5368
5°	5295	5289	5283
10°	5249	5243	5205
15°	5108	5056	4986
20°	4920	4841	4708
25°	4717	4615	4327
30°	4471	4328	3898
35°	4234	4000	3606
40°	3993	3646	3281
45°	3765	3370	2966
50°	3485	3128	2645
55°	3224	2835	2369
60°	2954	2532	2123
65°	2599	2217	1880
70°	2142	1942	1597
75°	1703	1487	1557
80°	1144	1072	1001
85°	710	852	994



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.8	4.7
10°-20°	254.8	13.0
20°-30°	352.7	18.0
30°-40°	376.1	19.2
40°-50°	343.1	17.5
50°-60°	268.8	13.7
60°-70°	175.2	8.9
70°-80°	77.6	4.0
80°-90°	16.7	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°	700.4	35.8
0°-40°	1076.5	55.0
0°-60°	1688.5	86.2
0°-90°	1958.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1958.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	980	979	979	978	978	93
15°	917	917	907	898	895	258
25°	794	790	777	750	729	365
35°	644	640	609	563	549	403
45°	495	484	443	406	390	381
55°	344	333	302	266	252	308
65°	204	193	174	178	148	201
75°	82	76	72	68	75	88
85°	12	13	14	15	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	997.4	997.4	997.4	997.4	997.4
2.5°	990.5	990.5	990.5	989.3	989.3
5°	980.1	978.9	978.9	977.8	977.8
7.5°	972.0	970.9	969.7	968.6	966.2
10°	960.5	960.5	959.3	953.6	952.4
12.5°	942.0	940.9	936.3	928.2	925.9
15°	916.7	916.7	907.4	898.2	894.8
17.5°	889.0	887.8	876.3	867.1	862.5
20°	859.0	856.7	845.2	830.2	822.1
22.5°	825.6	825.6	811.7	792.1	784.1
25°	794.4	789.8	777.1	749.5	728.7
27.5°	758.7	751.8	737.9	698.7	674.5
30°	719.5	716.0	696.4	645.7	627.3
32.5°	682.6	676.8	656.1	603.0	588.1
35°	644.5	639.9	608.8	562.7	548.8
37.5°	606.5	600.7	561.5	524.6	507.3
40°	568.4	561.5	518.9	485.4	467.0
42.5°	532.7	523.5	482.0	446.2	425.5
45°	494.7	484.3	442.8	405.9	389.7
47.5°	456.6	447.4	409.3	371.3	352.8
50°	416.2	408.2	373.6	335.5	315.9
52.5°	382.8	370.1	336.7	298.6	282.5
55°	343.6	333.2	302.1	266.4	252.5
57.5°	307.9	297.5	268.7	235.2	223.7
60°	274.4	259.4	235.2	206.4	197.2
62.5°	237.5	226.0	205.2	181.0	192.6
65°	204.1	192.6	174.1	177.6	147.6
67.5°	167.2	161.4	145.3	129.1	124.5
70°	136.1	129.1	123.4	106.1	101.5
72.5°	108.4	101.5	93.4	84.2	80.7
75°	81.9	76.1	71.5	68.0	74.9
77.5°	56.5	54.2	50.7	47.3	46.1
80°	36.9	35.7	34.6	33.4	32.3
82.5°	21.9	21.9	21.9	21.9	21.9
85°	11.5	12.7	13.8	15.0	16.1
87.5°	6.9	6.9	8.1	9.2	10.4
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)