

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: P545412

Luminaire Tested: **FMR-12-2-LD4-1LO-50-UNV-81-94-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: P545412
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-LD4-1LO-50-UNV-81-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

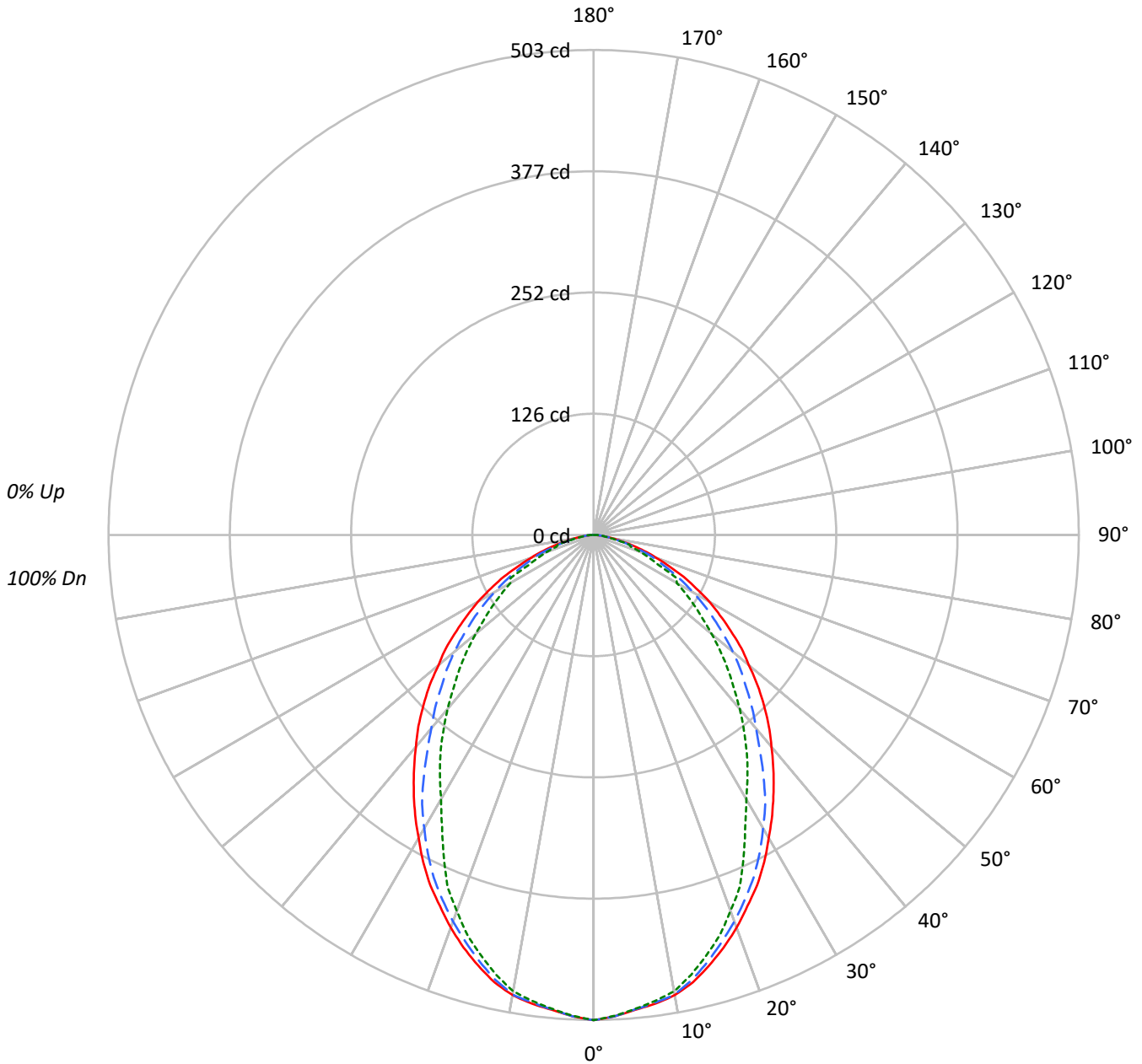
Lumens per Lamp: N/A
Luminaire Lumens: 988.0 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	47	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°	2709	2709	2709
5°	2672	2669	2666
10°	2649	2646	2626
15°	2577	2551	2516
20°	2483	2443	2376
25°	2381	2328	2184
30°	2257	2184	1967
35°	2137	2018	1819
40°	2015	1839	1655
45°	1900	1700	1497
50°	1758	1578	1335
55°	1627	1430	1195
60°	1491	1278	1071
65°	1312	1119	949
70°	1081	980	806
75°	859	751	786
80°	576	542	505
85°	358	432	500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.8	4.7
10°-20°	128.6	13.0
20°-30°	178.0	18.0
30°-40°	189.8	19.2
40°-50°	173.1	17.5
50°-60°	135.6	13.7
60°-70°	88.4	8.9
70°-80°	39.2	4.0
80°-90°	8.4	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°	353.4	35.8
0°-40°	543.2	55.0
0°-60°	852.0	86.2
0°-90°	988.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	988.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	494	494	494	493	493	47
15°	462	462	458	453	452	130
25°	401	398	392	378	368	184
35°	325	323	307	284	277	203
45°	250	244	223	205	197	192
55°	173	168	152	134	127	156
65°	103	97	88	90	74	102
75°	41	38	36	34	38	44
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	503.3	503.3	503.3	503.3	503.3
2.5°	499.8	499.8	499.8	499.2	499.2
5°	494.5	494.0	494.0	493.4	493.4
7.5°	490.5	489.9	489.3	488.7	487.6
10°	484.7	484.7	484.1	481.2	480.6
12.5°	475.3	474.8	472.4	468.4	467.2
15°	462.5	462.5	457.9	453.2	451.5
17.5°	448.6	448.0	442.2	437.5	435.2
20°	433.5	432.3	426.5	418.9	414.8
22.5°	416.6	416.6	409.6	399.7	395.6
25°	400.9	398.5	392.1	378.2	367.7
27.5°	382.8	379.3	372.4	352.6	340.4
30°	363.1	361.3	351.4	325.8	316.5
32.5°	344.4	341.5	331.1	304.3	296.7
35°	325.2	322.9	307.2	283.9	276.9
37.5°	306.0	303.1	283.3	264.7	256.0
40°	286.8	283.3	261.8	244.9	235.6
42.5°	268.8	264.1	243.2	225.2	214.7
45°	249.6	244.4	223.4	204.8	196.7
47.5°	230.4	225.7	206.5	187.3	178.0
50°	210.0	206.0	188.5	169.3	159.4
52.5°	193.2	186.8	169.9	150.7	142.5
55°	173.4	168.1	152.4	134.4	127.4
57.5°	155.3	150.1	135.6	118.7	112.9
60°	138.5	130.9	118.7	104.1	99.5
62.5°	119.9	114.0	103.6	91.3	97.2
65°	103.0	97.2	87.9	89.6	74.5
67.5°	84.4	81.5	73.3	65.2	62.8
70°	68.7	65.2	62.3	53.5	51.2
72.5°	54.7	51.2	47.1	42.5	40.7
75°	41.3	38.4	36.1	34.3	37.8
77.5°	28.5	27.3	25.6	23.9	23.3
80°	18.6	18.0	17.5	16.9	16.3
82.5°	11.1	11.1	11.1	11.1	11.1
85°	5.8	6.4	7.0	7.6	8.1
87.5°	3.5	3.5	4.1	4.7	5.2
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)