

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: P545680

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-93-85-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: P545680
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-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

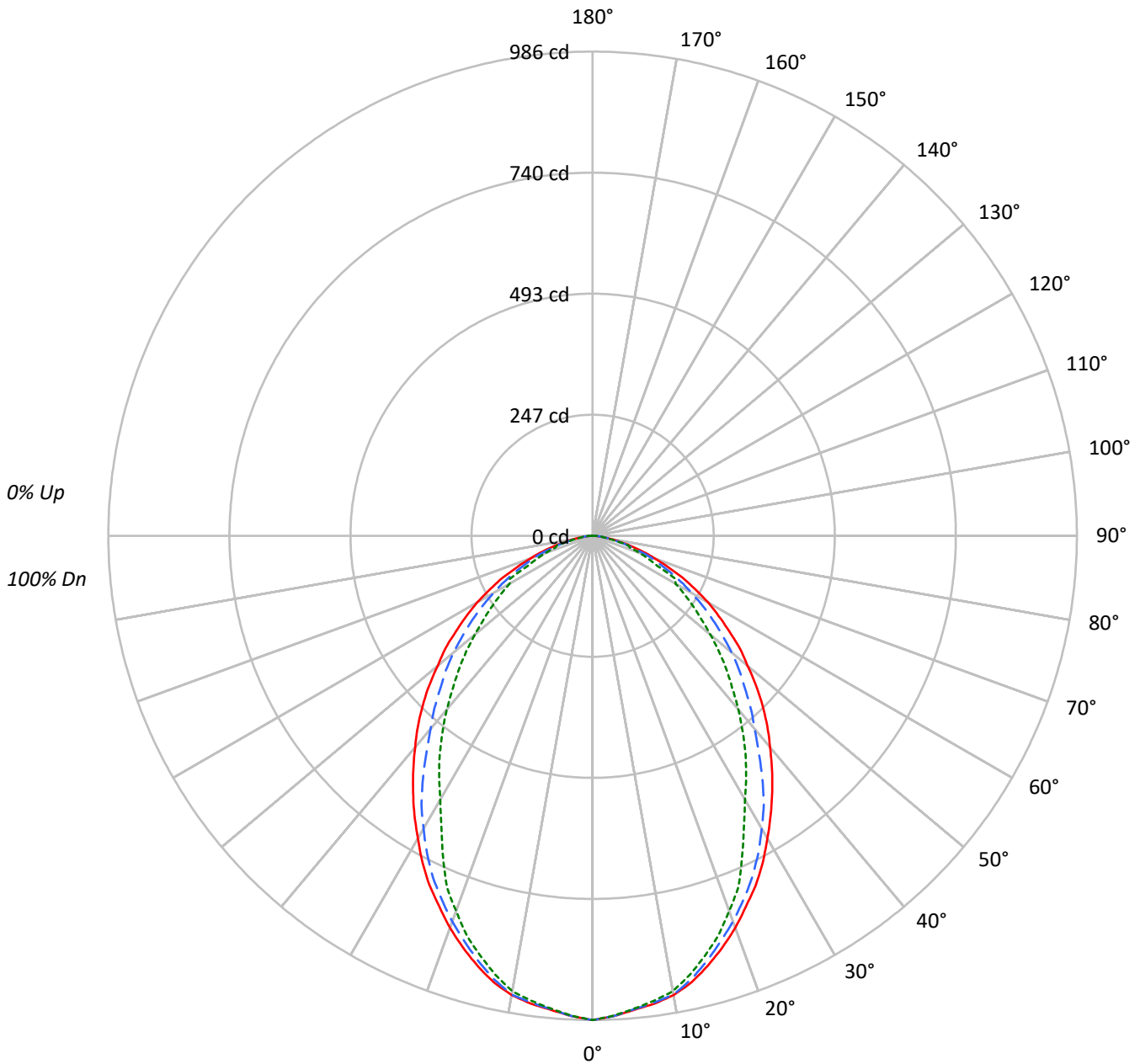
Lumens per Lamp: N/A
Luminaire Lumens: 1936.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	5308	5308	5308
5°	5236	5229	5223
10°	5190	5184	5146
15°	5050	4999	4929
20°	4865	4786	4656
25°	4665	4563	4279
30°	4421	4279	3854
35°	4187	3955	3566
40°	3949	3604	3244
45°	3723	3332	2933
50°	3446	3093	2616
55°	3187	2803	2343
60°	2920	2504	2099
65°	2570	2193	1858
70°	2116	1920	1578
75°	1682	1470	1541
80°	1131	1060	989
85°	704	846	988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	4.7
10°-20°	251.9	13.0
20°-30°	348.8	18.0
30°-40°	371.9	19.2
40°-50°	339.3	17.5
50°-60°	265.8	13.7
60°-70°	173.2	8.9
70°-80°	76.7	4.0
80°-90°	16.5	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°	692.5	35.8
0°-40°	1064.4	55.0
0°-60°	1669.5	86.2
0°-90°	1936.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1936.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	986	986	986	986	986	
5°	969	968	968	967	967	92
15°	906	906	897	888	885	255
25°	786	781	768	741	720	361
35°	637	633	602	556	543	398
45°	489	479	438	401	385	377
55°	340	330	299	263	250	305
65°	202	190	172	176	146	199
75°	81	75	71	67	74	87
85°	11	12	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°	986.2	986.2	986.2	986.2	986.2
2.5°	979.3	979.3	979.3	978.2	978.2
5°	969.1	967.9	967.9	966.8	966.8
7.5°	961.1	960.0	958.8	957.7	955.4
10°	949.7	949.7	948.5	942.8	941.7
12.5°	931.4	930.3	925.7	917.8	915.5
15°	906.4	906.4	897.2	888.1	884.7
17.5°	879.0	877.9	866.5	857.3	852.8
20°	849.4	847.1	835.7	820.9	812.9
22.5°	816.3	816.3	802.6	783.2	775.3
25°	785.5	781.0	768.4	741.1	720.5
27.5°	750.2	743.3	729.7	690.9	666.9
30°	711.4	708.0	688.6	638.4	620.2
32.5°	674.9	669.2	648.7	596.3	581.4
35°	637.3	632.7	602.0	556.4	542.7
37.5°	599.7	594.0	555.2	518.7	501.6
40°	562.1	555.2	513.0	480.0	461.7
42.5°	526.7	517.6	476.6	441.2	420.7
45°	489.1	478.8	437.8	401.3	385.3
47.5°	451.5	442.4	404.7	367.1	348.9
50°	411.6	403.6	369.4	331.8	312.4
52.5°	378.5	366.0	332.9	295.3	279.3
55°	339.7	329.5	298.7	263.4	249.7
57.5°	304.4	294.1	265.6	232.6	221.2
60°	271.3	256.5	232.6	204.1	195.0
62.5°	234.9	223.5	202.9	179.0	190.4
65°	201.8	190.4	172.2	175.6	145.9
67.5°	165.3	159.6	143.7	127.7	123.1
70°	134.5	127.7	122.0	104.9	100.3
72.5°	107.2	100.3	92.3	83.2	79.8
75°	80.9	75.2	70.7	67.3	74.1
77.5°	55.9	53.6	50.2	46.7	45.6
80°	36.5	35.3	34.2	33.1	31.9
82.5°	21.7	21.7	21.7	21.7	21.7
85°	11.4	12.5	13.7	14.8	16.0
87.5°	6.8	6.8	8.0	9.1	10.3
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)