

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: P545391

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-93-84-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: P545391
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-40-UNV-93-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

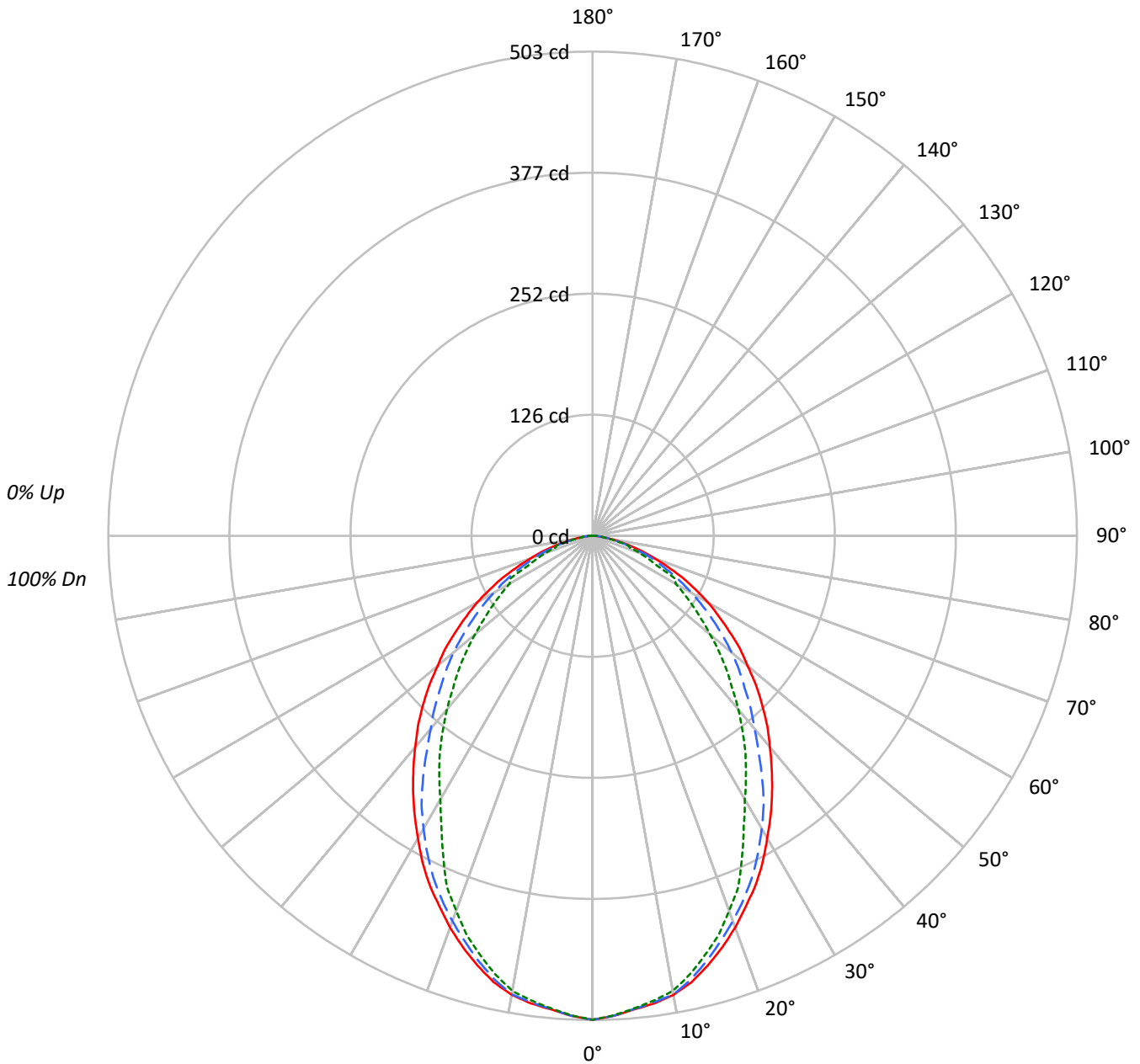
Lumens per Lamp: N/A
Luminaire Lumens: 987.0 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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	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°	2706	2706	2706
5°	2669	2666	2663
10°	2646	2643	2624
15°	2575	2549	2513
20°	2480	2440	2373
25°	2378	2326	2181
30°	2254	2182	1965
35°	2135	2016	1818
40°	2013	1838	1654
45°	1897	1699	1496
50°	1757	1577	1334
55°	1625	1429	1194
60°	1489	1277	1070
65°	1310	1118	947
70°	1079	979	804
75°	859	749	786
80°	576	539	505
85°	358	432	500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.8	4.7
10°-20°	128.4	13.0
20°-30°	177.8	18.0
30°-40°	189.6	19.2
40°-50°	173.0	17.5
50°-60°	135.5	13.7
60°-70°	88.3	8.9
70°-80°	39.1	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°	353.1	35.8
0°-40°	542.7	55.0
0°-60°	851.2	86.2
0°-90°	987.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	987.0	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	457	453	451	130
25°	400	398	392	378	367	184
35°	325	323	307	284	277	203
45°	249	244	223	205	196	192
55°	173	168	152	134	127	155
65°	103	97	88	90	74	101
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°	502.8	502.8	502.8	502.8	502.8
2.5°	499.3	499.3	499.3	498.7	498.7
5°	494.0	493.5	493.5	492.9	492.9
7.5°	490.0	489.4	488.8	488.2	487.1
10°	484.2	484.2	483.6	480.7	480.1
12.5°	474.9	474.3	472.0	467.9	466.7
15°	462.1	462.1	457.4	452.8	451.0
17.5°	448.1	447.5	441.7	437.1	434.8
20°	433.0	431.9	426.0	418.5	414.4
22.5°	416.2	416.2	409.2	399.3	395.2
25°	400.5	398.1	391.7	377.8	367.3
27.5°	382.4	379.0	372.0	352.2	340.0
30°	362.7	360.9	351.1	325.5	316.2
32.5°	344.1	341.2	330.7	304.0	296.4
35°	324.9	322.6	306.9	283.6	276.7
37.5°	305.7	302.8	283.1	264.5	255.7
40°	286.5	283.1	261.6	244.7	235.4
42.5°	268.5	263.9	243.0	224.9	214.5
45°	249.3	244.1	223.2	204.6	196.5
47.5°	230.2	225.5	206.3	187.2	177.9
50°	209.8	205.8	188.3	169.1	159.3
52.5°	193.0	186.6	169.7	150.5	142.4
55°	173.2	168.0	152.3	134.3	127.3
57.5°	155.2	150.0	135.4	118.6	112.8
60°	138.3	130.8	118.6	104.0	99.4
62.5°	119.7	113.9	103.5	91.3	97.1
65°	102.9	97.1	87.8	89.5	74.4
67.5°	84.3	81.4	73.2	65.1	62.8
70°	68.6	65.1	62.2	53.5	51.1
72.5°	54.6	51.1	47.1	42.4	40.7
75°	41.3	38.4	36.0	34.3	37.8
77.5°	28.5	27.3	25.6	23.8	23.2
80°	18.6	18.0	17.4	16.9	16.3
82.5°	11.0	11.0	11.0	11.0	11.0
85°	5.8	6.4	7.0	7.6	8.1
87.5°	3.5	3.5	4.1	4.6	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)