

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: P545407

Luminaire Tested: **FMR-12-2-LD4-1LO-50-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: P545407
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-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

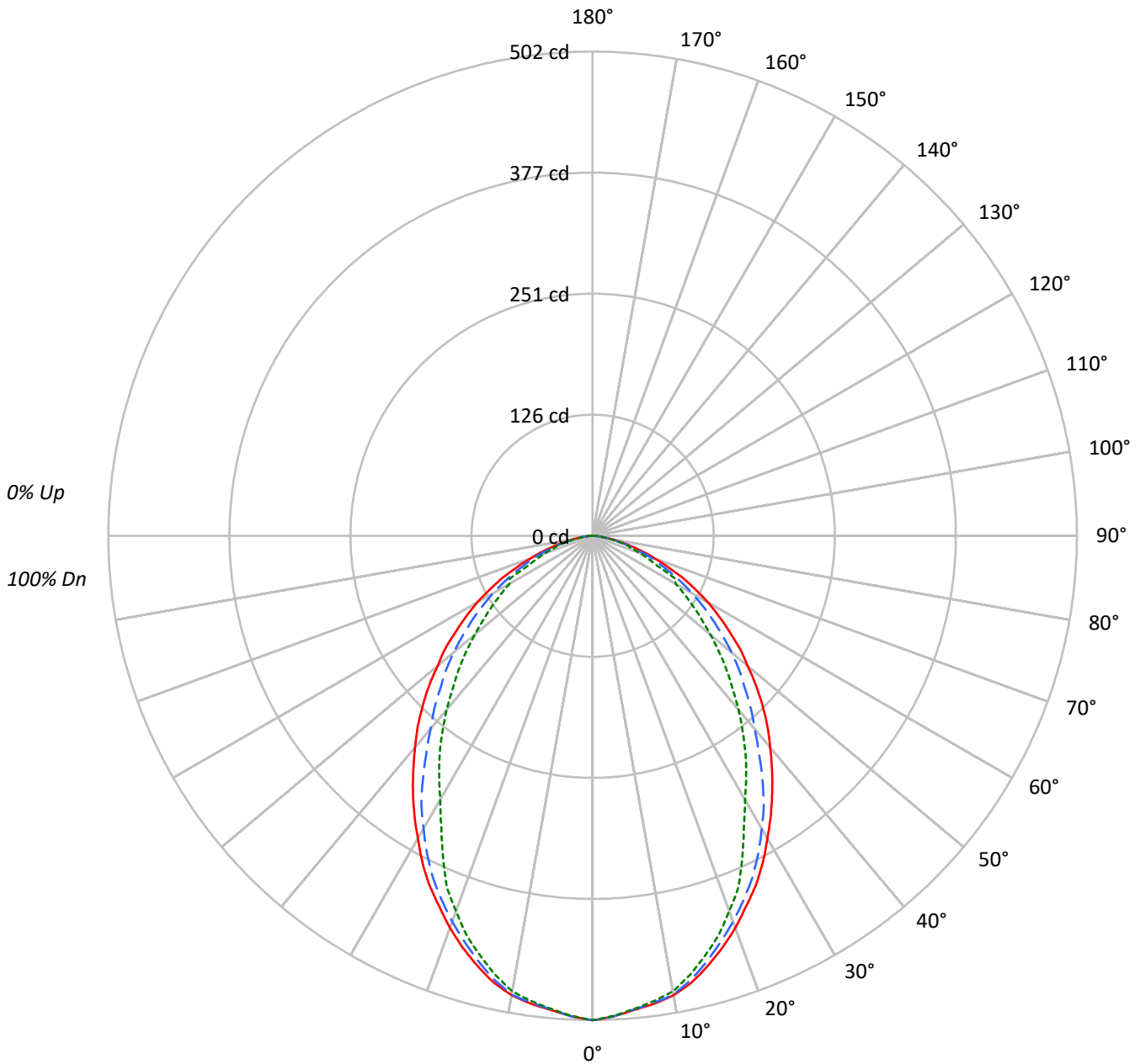
Lumens per Lamp: N/A
Luminaire Lumens: 986.0 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): NR
Input Current (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°	2703	2703	2703
5°	2666	2663	2660
10°	2643	2640	2621
15°	2572	2546	2511
20°	2478	2438	2371
25°	2376	2324	2179
30°	2252	2179	1963
35°	2133	2014	1816
40°	2011	1836	1652
45°	1896	1697	1494
50°	1755	1575	1332
55°	1623	1427	1194
60°	1488	1276	1069
65°	1309	1117	946
70°	1078	977	804
75°	857	749	784
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°	128.3	13.0
20°-30°	177.6	18.0
30°-40°	189.4	19.2
40°-50°	172.8	17.5
50°-60°	135.4	13.7
60°-70°	88.2	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°	352.7	35.8
0°-40°	542.1	55.0
0°-60°	850.3	86.2
0°-90°	986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	986.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	502	502	502	502	502	
5°	494	493	493	492	492	47
15°	462	462	457	452	451	130
25°	400	398	391	377	367	184
35°	325	322	307	283	276	203
45°	249	244	223	204	196	192
55°	173	168	152	134	127	155
65°	103	97	88	89	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°	502.3	502.3	502.3	502.3	502.3
2.5°	498.8	498.8	498.8	498.2	498.2
5°	493.5	493.0	493.0	492.4	492.4
7.5°	489.5	488.9	488.3	487.7	486.6
10°	483.7	483.7	483.1	480.2	479.6
12.5°	474.4	473.8	471.5	467.4	466.3
15°	461.6	461.6	457.0	452.3	450.6
17.5°	447.7	447.1	441.3	436.6	434.3
20°	432.6	431.4	425.6	418.1	414.0
22.5°	415.7	415.7	408.8	398.9	394.8
25°	400.1	397.7	391.4	377.4	367.0
27.5°	382.1	378.6	371.6	351.9	339.7
30°	362.3	360.6	350.7	325.2	315.9
32.5°	343.7	340.8	330.4	303.7	296.1
35°	324.6	322.3	306.6	283.4	276.4
37.5°	305.4	302.5	282.8	264.2	255.5
40°	286.3	282.8	261.3	244.5	235.2
42.5°	268.3	263.6	242.7	224.7	214.3
45°	249.1	243.9	223.0	204.4	196.3
47.5°	229.9	225.3	206.1	187.0	177.7
50°	209.6	205.5	188.1	169.0	159.1
52.5°	192.8	186.4	169.5	150.4	142.3
55°	173.0	167.8	152.1	134.1	127.2
57.5°	155.0	149.8	135.3	118.5	112.6
60°	138.2	130.6	118.5	103.9	99.3
62.5°	119.6	113.8	103.4	91.2	97.0
65°	102.8	97.0	87.7	89.4	74.3
67.5°	84.2	81.3	73.2	65.0	62.7
70°	68.5	65.0	62.1	53.4	51.1
72.5°	54.6	51.1	47.0	42.4	40.6
75°	41.2	38.3	36.0	34.3	37.7
77.5°	28.5	27.3	25.5	23.8	23.2
80°	18.6	18.0	17.4	16.8	16.3
82.5°	11.0	11.0	11.0	11.0	11.0
85°	5.8	6.4	7.0	7.5	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)