

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: P545377

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-81-86-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: P545377
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-81-86-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

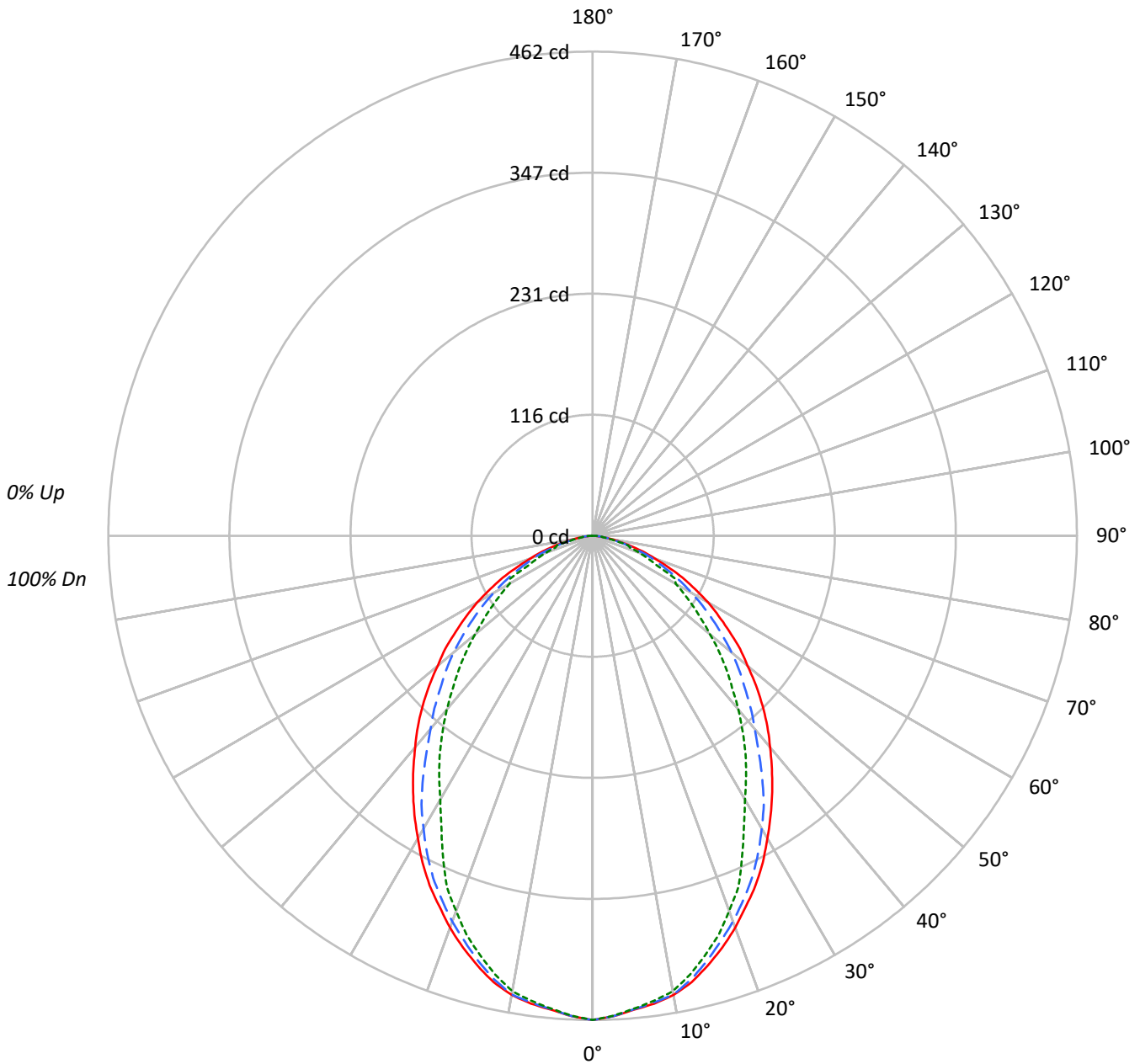
Lumens per Lamp: N/A
Luminaire Lumens: 907.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	2486	2486	2486
5°	2453	2450	2447
10°	2431	2429	2411
15°	2366	2342	2310
20°	2279	2242	2181
25°	2185	2138	2005
30°	2071	2005	1806
35°	1962	1853	1670
40°	1850	1689	1520
45°	1744	1561	1374
50°	1614	1449	1225
55°	1494	1313	1098
60°	1368	1173	983
65°	1203	1028	871
70°	991	900	740
75°	788	688	722
80°	530	496	465
85°	327	395	463



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	4.7
10°-20°	118.0	13.0
20°-30°	163.4	18.0
30°-40°	174.2	19.2
40°-50°	159.0	17.5
50°-60°	124.5	13.7
60°-70°	81.2	8.9
70°-80°	36.0	4.0
80°-90°	7.7	0.8
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°	324.4	35.8
0°-40°	498.7	55.0
0°-60°	782.2	86.2
0°-90°	907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	907.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	454	454	454	453	453	43
15°	425	425	420	416	414	119
25°	368	366	360	347	338	169
35°	299	296	282	261	254	187
45°	229	224	205	188	180	176
55°	159	154	140	123	117	143
65°	94	89	81	82	68	93
75°	38	35	33	32	35	41
85°	5	6	6	7	8	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	462.0	462.0	462.0	462.0	462.0
2.5°	458.8	458.8	458.8	458.3	458.3
5°	454.0	453.5	453.5	452.9	452.9
7.5°	450.3	449.7	449.2	448.7	447.6
10°	444.9	444.9	444.4	441.7	441.2
12.5°	436.4	435.8	433.7	430.0	428.9
15°	424.6	424.6	420.4	416.1	414.5
17.5°	411.8	411.3	405.9	401.7	399.5
20°	397.9	396.9	391.5	384.6	380.8
22.5°	382.4	382.4	376.0	366.9	363.2
25°	368.0	365.9	360.0	347.2	337.6
27.5°	351.5	348.2	341.8	323.7	312.5
30°	333.3	331.7	322.6	299.1	290.6
32.5°	316.2	313.5	303.9	279.3	272.4
35°	298.6	296.4	282.0	260.7	254.2
37.5°	280.9	278.3	260.1	243.0	235.0
40°	263.3	260.1	240.4	224.9	216.3
42.5°	246.8	242.5	223.3	206.7	197.1
45°	229.1	224.3	205.1	188.0	180.5
47.5°	211.5	207.2	189.6	172.0	163.4
50°	192.8	189.1	173.1	155.4	146.3
52.5°	177.3	171.5	156.0	138.3	130.9
55°	159.2	154.4	139.9	123.4	117.0
57.5°	142.6	137.8	124.4	109.0	103.6
60°	127.1	120.2	109.0	95.6	91.3
62.5°	110.0	104.7	95.1	83.9	89.2
65°	94.5	89.2	80.7	82.3	68.4
67.5°	77.4	74.8	67.3	59.8	57.7
70°	63.0	59.8	57.2	49.1	47.0
72.5°	50.2	47.0	43.3	39.0	37.4
75°	37.9	35.3	33.1	31.5	34.7
77.5°	26.2	25.1	23.5	21.9	21.4
80°	17.1	16.6	16.0	15.5	15.0
82.5°	10.1	10.1	10.1	10.1	10.1
85°	5.3	5.9	6.4	6.9	7.5
87.5°	3.2	3.2	3.7	4.3	4.8
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)