

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: P545003

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-82-88-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: P545003
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-12-1-LD4-2HI-40-UNV-82-88-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

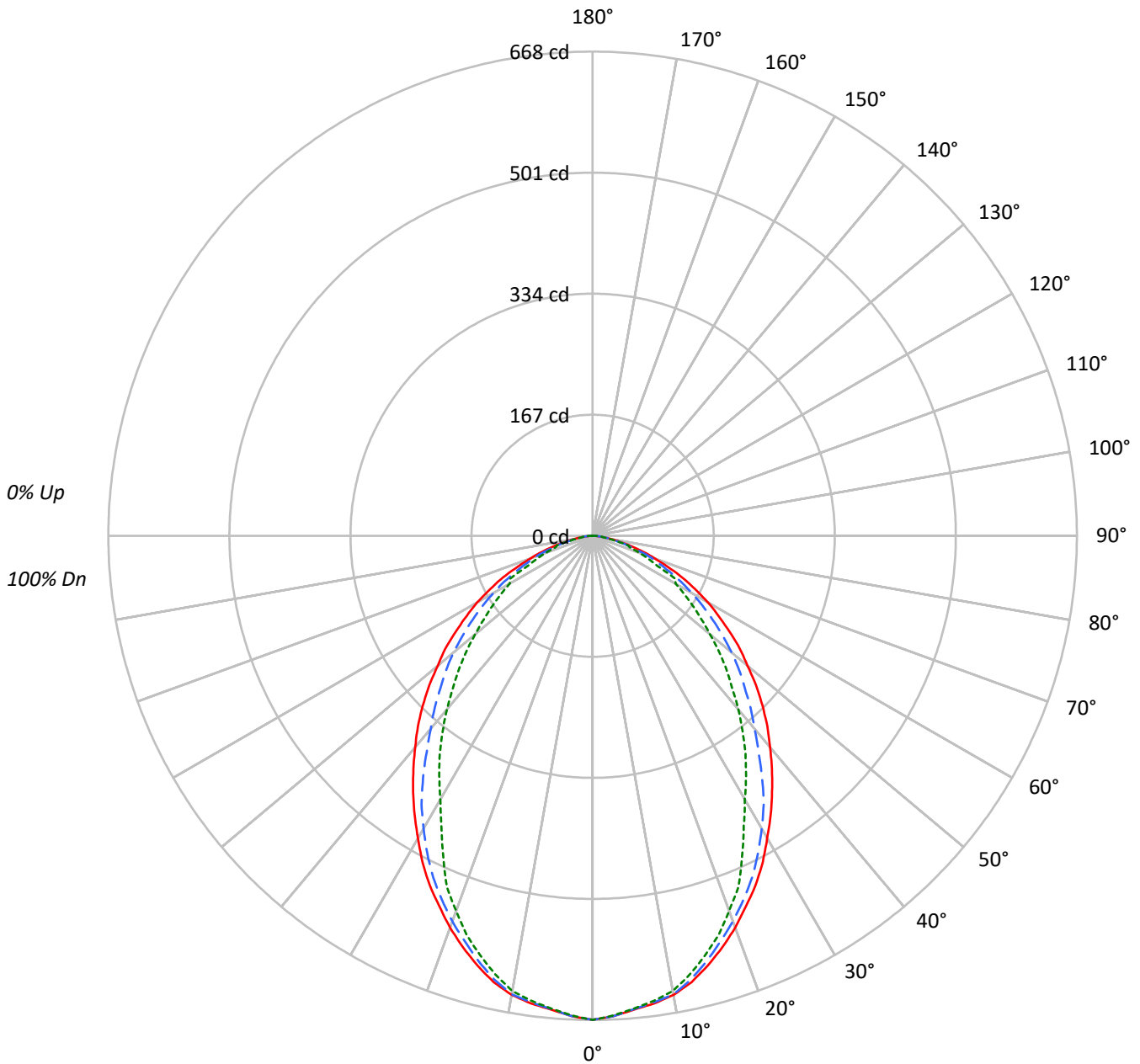
Lumens per Lamp: N/A
Luminaire Lumens: 1311.0 lumens
Efficiency: N/A
Efficacy: 60.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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

TEST NUMBER: P545003

CATALOG NUMBER: FMR-12-1-LD4-2HI-40-UNV-82-88-EDD

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°	7188	7188	7188
5°	7090	7083	7074
10°	7029	7020	6970
15°	6840	6771	6676
20°	6589	6482	6306
25°	6317	6179	5795
30°	5987	5796	5220
35°	5671	5356	4829
40°	5348	4881	4394
45°	5042	4513	3972
50°	4667	4188	3542
55°	4318	3796	3173
60°	3955	3391	2842
65°	3479	2970	2516
70°	2867	2600	2137
75°	2279	1992	2088
80°	1531	1438	1339
85°	951	1149	1334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.2	4.7
10°-20°	170.6	13.0
20°-30°	236.2	18.0
30°-40°	251.8	19.2
40°-50°	229.8	17.5
50°-60°	180.0	13.7
60°-70°	117.3	8.9
70°-80°	52.0	4.0
80°-90°	11.2	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°	469.0	35.8
0°-40°	720.8	55.0
0°-60°	1130.6	86.2
0°-90°	1311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1311.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	668	668	668	668	668	
5°	656	656	656	655	655	62
15°	614	614	608	601	599	173
25°	532	529	520	502	488	244
35°	432	428	408	377	368	270
45°	331	324	296	272	261	255
55°	230	223	202	178	169	206
65°	137	129	117	119	99	135
75°	55	51	48	46	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	667.8	667.8	667.8	667.8	667.8
2.5°	663.2	663.2	663.2	662.4	662.4
5°	656.2	655.5	655.5	654.7	654.7
7.5°	650.8	650.0	649.3	648.5	647.0
10°	643.1	643.1	642.3	638.5	637.7
12.5°	630.7	630.0	626.9	621.5	619.9
15°	613.8	613.8	607.6	601.4	599.1
17.5°	595.2	594.5	586.7	580.6	577.5
20°	575.2	573.6	565.9	555.9	550.5
22.5°	552.8	552.8	543.5	530.4	525.0
25°	531.9	528.8	520.3	501.8	487.9
27.5°	508.0	503.4	494.1	467.9	451.6
30°	481.7	479.4	466.3	432.3	420.0
32.5°	457.0	453.2	439.3	403.8	393.7
35°	431.6	428.5	407.6	376.8	367.5
37.5°	406.1	402.2	376.0	351.3	339.7
40°	380.6	376.0	347.4	325.0	312.7
42.5°	356.7	350.5	322.7	298.8	284.9
45°	331.2	324.3	296.5	271.8	260.9
47.5°	305.7	299.5	274.1	248.6	236.2
50°	278.7	273.3	250.1	224.7	211.5
52.5°	256.3	247.8	225.4	200.0	189.1
55°	230.1	223.1	202.3	178.3	169.1
57.5°	206.1	199.2	179.9	157.5	149.8
60°	183.7	173.7	157.5	138.2	132.0
62.5°	159.0	151.3	137.4	121.2	128.9
65°	136.6	128.9	116.6	118.9	98.8
67.5°	111.9	108.1	97.3	86.5	83.4
70°	91.1	86.5	82.6	71.0	67.9
72.5°	72.6	67.9	62.5	56.4	54.0
75°	54.8	51.0	47.9	45.5	50.2
77.5°	37.8	36.3	34.0	31.7	30.9
80°	24.7	23.9	23.2	22.4	21.6
82.5°	14.7	14.7	14.7	14.7	14.7
85°	7.7	8.5	9.3	10.0	10.8
87.5°	4.6	4.6	5.4	6.2	6.9
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)