

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: P545202

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-93-87-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: P545202
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-LD4-2STD-40-UNV-93-87-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

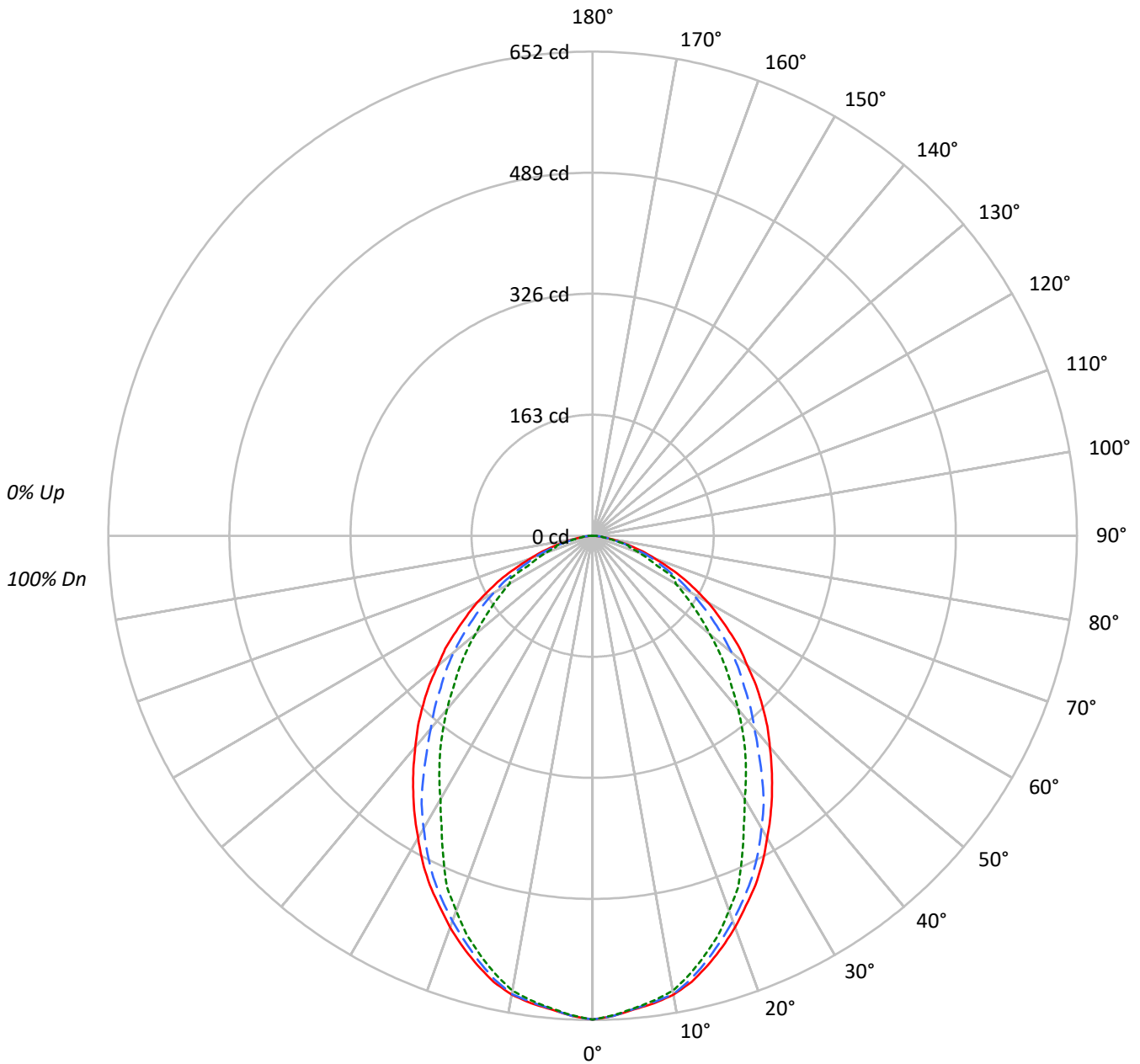
Lumens per Lamp: N/A
Luminaire Lumens: 1279.0 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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: P545202

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-93-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545202

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-93-87-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7013	7013	7013
5°	6917	6910	6901
10°	6857	6850	6800
15°	6673	6606	6513
20°	6427	6324	6151
25°	6163	6029	5653
30°	5842	5654	5092
35°	5532	5226	4711
40°	5217	4762	4286
45°	4918	4402	3876
50°	4553	4086	3456
55°	4211	3703	3095
60°	3860	3307	2773
65°	3395	2896	2455
70°	2798	2537	2087
75°	2225	1942	2038
80°	1494	1401	1308
85°	926	1112	1297



TEST NUMBER: P545202

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-93-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	4.7
10°-20°	166.4	13.0
20°-30°	230.4	18.0
30°-40°	245.7	19.2
40°-50°	224.1	17.5
50°-60°	175.6	13.7
60°-70°	114.5	8.9
70°-80°	50.7	4.0
80°-90°	10.9	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°	457.5	35.8
0°-40°	703.2	55.0
0°-60°	1102.9	86.2
0°-90°	1279.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1279.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	652	652	652	652	652	
5°	640	640	640	639	639	61
15°	599	599	593	587	584	168
25°	519	516	508	490	476	238
35°	421	418	398	368	358	263
45°	323	316	289	265	255	249
55°	224	218	197	174	165	201
65°	133	126	114	116	96	131
75°	54	50	47	44	49	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



TEST NUMBER: P545202

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-93-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	651.5	651.5	651.5	651.5	651.5
2.5°	647.0	647.0	647.0	646.2	646.2
5°	640.2	639.5	639.5	638.7	638.7
7.5°	634.9	634.2	633.4	632.7	631.2
10°	627.4	627.4	626.7	622.9	622.1
12.5°	615.4	614.6	611.6	606.3	604.8
15°	598.8	598.8	592.8	586.7	584.5
17.5°	580.7	580.0	572.4	566.4	563.4
20°	561.1	559.6	552.1	542.3	537.0
22.5°	539.3	539.3	530.2	517.4	512.2
25°	518.9	515.9	507.6	489.6	476.0
27.5°	495.6	491.1	482.0	456.4	440.6
30°	470.0	467.7	454.9	421.8	409.7
32.5°	445.9	442.1	428.6	393.9	384.1
35°	421.0	418.0	397.7	367.6	358.5
37.5°	396.2	392.4	366.8	342.7	331.4
40°	371.3	366.8	338.9	317.1	305.0
42.5°	348.0	341.9	314.8	291.5	277.9
45°	323.1	316.3	289.2	265.1	254.6
47.5°	298.3	292.2	267.4	242.5	230.5
50°	271.9	266.6	244.0	219.2	206.4
52.5°	250.1	241.8	219.9	195.1	184.5
55°	224.4	217.7	197.3	174.0	164.9
57.5°	201.1	194.3	175.5	153.6	146.1
60°	179.3	169.5	153.6	134.8	128.8
62.5°	155.2	147.6	134.1	118.3	125.8
65°	133.3	125.8	113.7	116.0	96.4
67.5°	109.2	105.4	94.9	84.4	81.3
70°	88.9	84.4	80.6	69.3	66.3
72.5°	70.8	66.3	61.0	55.0	52.7
75°	53.5	49.7	46.7	44.4	49.0
77.5°	36.9	35.4	33.1	30.9	30.1
80°	24.1	23.3	22.6	21.8	21.1
82.5°	14.3	14.3	14.3	14.3	14.3
85°	7.5	8.3	9.0	9.8	10.5
87.5°	4.5	4.5	5.3	6.0	6.8
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)