

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: P545162

Luminaire Tested: **FMR-12-1-LD4-2STD-35-UNV-82-87-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: P545162
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-35-UNV-82-87-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

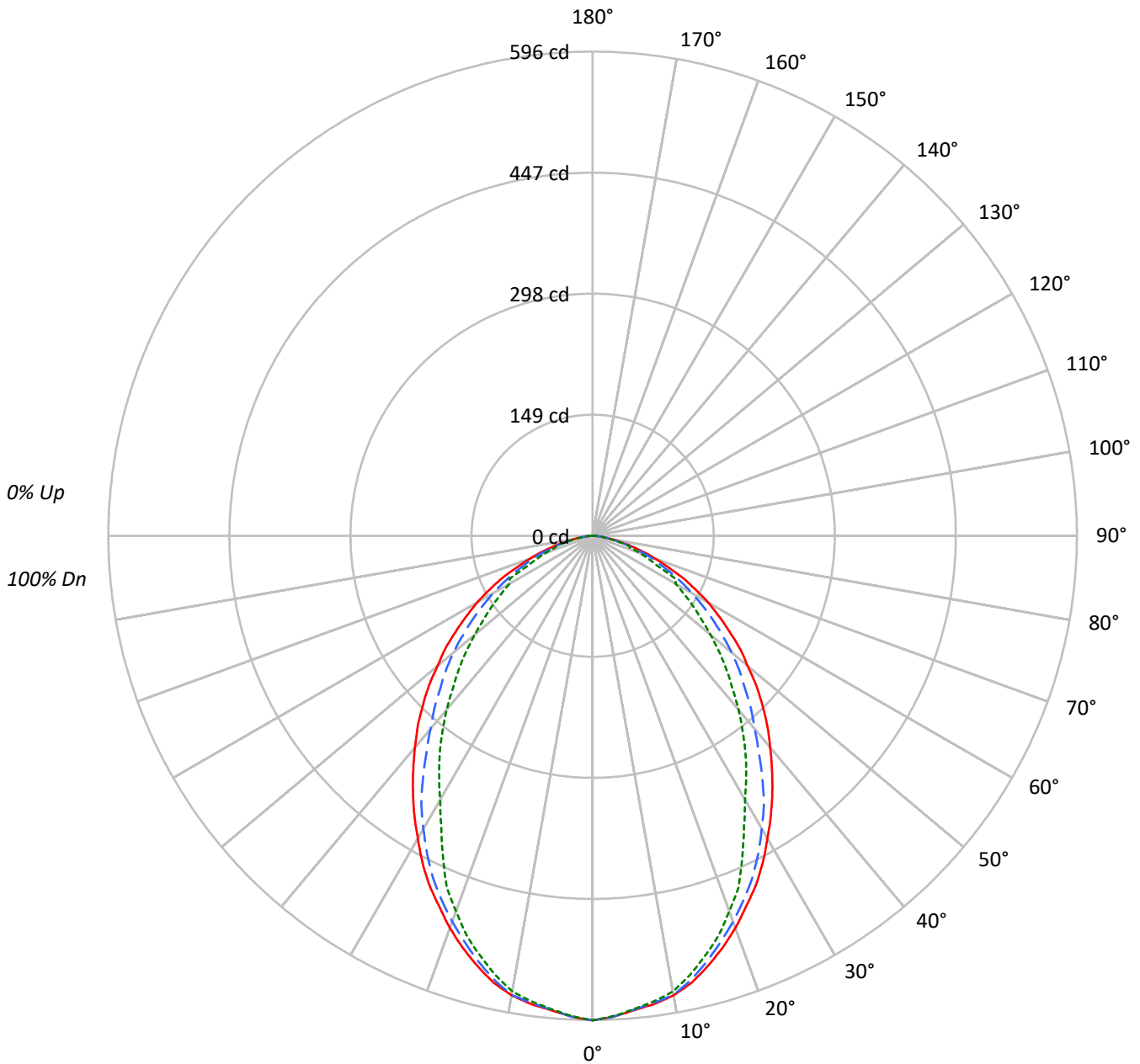
Lumens per Lamp: N/A
Luminaire Lumens: 1171.0 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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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°	6421	6421	6421
5°	6333	6326	6319
10°	6278	6271	6226
15°	6109	6048	5963
20°	5884	5790	5632
25°	5643	5520	5176
30°	5348	5177	4662
35°	5066	4784	4313
40°	4777	4360	3925
45°	4503	4031	3548
50°	4168	3741	3163
55°	3856	3391	2834
60°	3533	3029	2538
65°	3110	2651	2249
70°	2562	2323	1910
75°	2038	1780	1863
80°	1370	1283	1196
85°	852	1025	1198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.5	4.7
10°-20°	152.4	13.0
20°-30°	211.0	18.0
30°-40°	225.0	19.2
40°-50°	205.2	17.5
50°-60°	160.8	13.7
60°-70°	104.8	8.9
70°-80°	46.4	4.0
80°-90°	10.0	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°	418.9	35.8
0°-40°	643.8	55.0
0°-60°	1009.8	86.2
0°-90°	1171.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1171.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	596	596	596	596	596	
5°	586	586	586	585	585	56
15°	548	548	543	537	535	154
25°	475	472	465	448	436	218
35°	386	383	364	336	328	241
45°	296	290	265	243	233	228
55°	206	199	181	159	151	184
65°	122	115	104	106	88	120
75°	49	46	43	41	45	52
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	596.5	596.5	596.5	596.5	596.5
2.5°	592.4	592.4	592.4	591.7	591.7
5°	586.1	585.5	585.5	584.8	584.8
7.5°	581.3	580.6	579.9	579.3	577.9
10°	574.4	574.4	573.7	570.3	569.6
12.5°	563.4	562.7	559.9	555.1	553.7
15°	548.2	548.2	542.7	537.2	535.1
17.5°	531.7	531.0	524.1	518.6	515.8
20°	513.7	512.4	505.5	496.5	491.7
22.5°	493.7	493.7	485.5	473.7	468.9
25°	475.1	472.4	464.8	448.2	435.8
27.5°	453.7	449.6	441.3	417.9	403.4
30°	430.3	428.2	416.5	386.2	375.1
32.5°	408.2	404.8	392.4	360.7	351.7
35°	385.5	382.7	364.1	336.5	328.2
37.5°	362.7	359.3	335.8	313.8	303.4
40°	340.0	335.8	310.3	290.3	279.3
42.5°	318.6	313.1	288.2	266.9	254.5
45°	295.8	289.6	264.8	242.7	233.1
47.5°	273.1	267.6	244.8	222.0	211.0
50°	248.9	244.1	223.4	200.7	188.9
52.5°	228.9	221.4	201.4	178.6	168.9
55°	205.5	199.3	180.7	159.3	151.0
57.5°	184.1	177.9	160.7	140.7	133.8
60°	164.1	155.2	140.7	123.4	117.9
62.5°	142.1	135.2	122.7	108.3	115.2
65°	122.1	115.2	104.1	106.2	88.3
67.5°	100.0	96.5	86.9	77.2	74.5
70°	81.4	77.2	73.8	63.4	60.7
72.5°	64.8	60.7	55.9	50.3	48.3
75°	49.0	45.5	42.8	40.7	44.8
77.5°	33.8	32.4	30.3	28.3	27.6
80°	22.1	21.4	20.7	20.0	19.3
82.5°	13.1	13.1	13.1	13.1	13.1
85°	6.9	7.6	8.3	9.0	9.7
87.5°	4.1	4.1	4.8	5.5	6.2
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)