

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: P544710

Luminaire Tested: **FMR-12-1-LD4-1HI-40-UNV-81-97-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: P544710
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-LD4-1HI-40-UNV-81-97-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

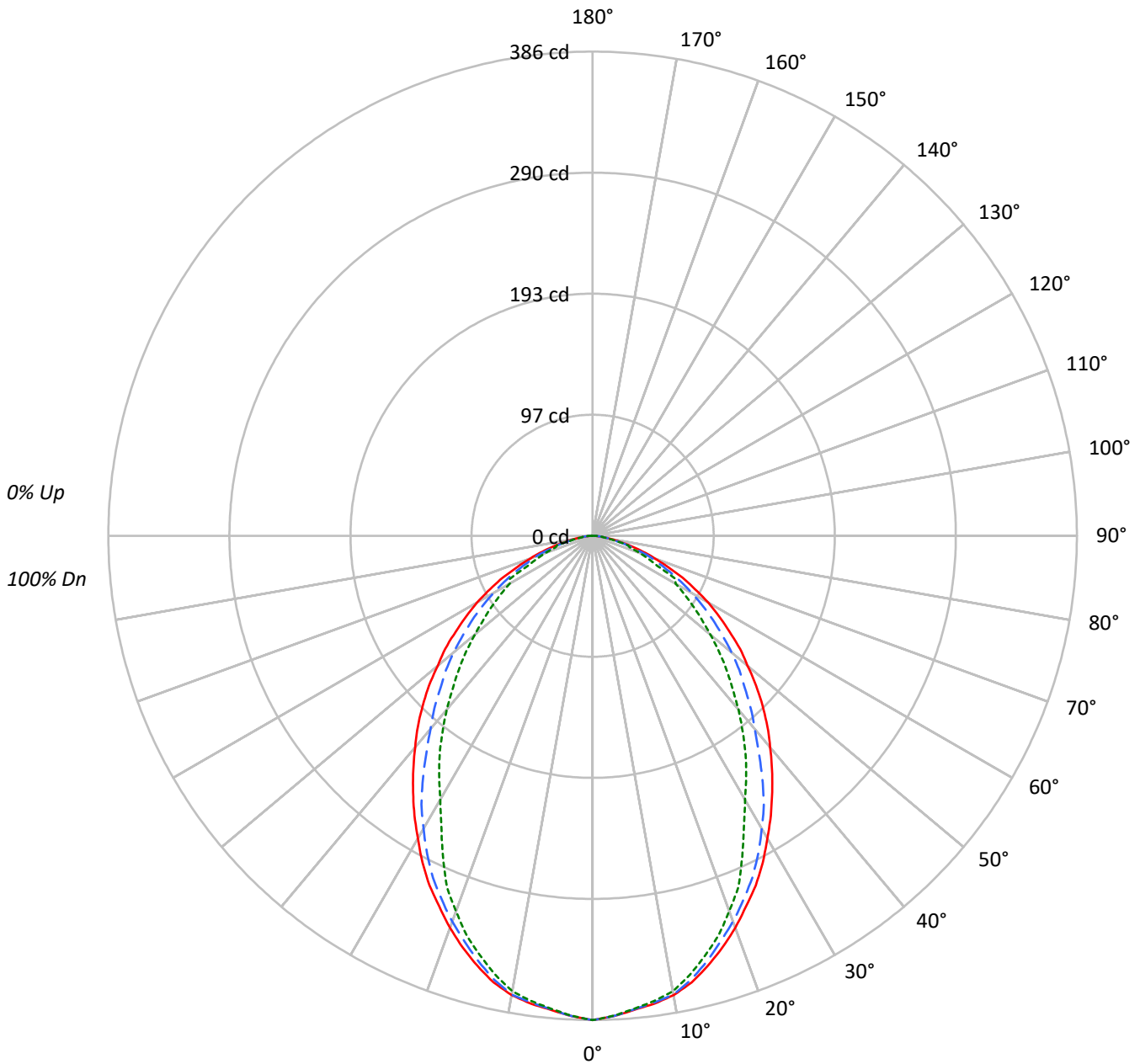
Lumens per Lamp: N/A
Luminaire Lumens: 758.0 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 10.8
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				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°	4156	4156	4156
5°	4099	4095	4090
10°	4064	4059	4030
15°	3955	3915	3860
20°	3809	3748	3646
25°	3653	3574	3350
30°	3462	3351	3018
35°	3279	3097	2792
40°	3093	2823	2540
45°	2915	2609	2297
50°	2698	2421	2048
55°	2496	2196	1835
60°	2286	1961	1643
65°	2012	1717	1454
70°	1659	1504	1237
75°	1318	1152	1206
80°	886	831	775
85°	556	667	766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.9	4.7
10°-20°	98.6	13.0
20°-30°	136.6	18.0
30°-40°	145.6	19.2
40°-50°	132.8	17.5
50°-60°	104.1	13.7
60°-70°	67.8	8.9
70°-80°	30.1	4.0
80°-90°	6.5	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°	271.1	35.8
0°-40°	416.8	55.0
0°-60°	653.7	86.2
0°-90°	758.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	758.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	386	386	386	386	386	
5°	379	379	379	378	378	36
15°	355	355	351	348	346	100
25°	308	306	301	290	282	141
35°	250	248	236	218	212	156
45°	192	188	171	157	151	148
55°	133	129	117	103	98	119
65°	79	74	67	69	57	78
75°	32	30	28	26	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	386.1	386.1	386.1	386.1	386.1
2.5°	383.4	383.4	383.4	383.0	383.0
5°	379.4	379.0	379.0	378.5	378.5
7.5°	376.3	375.8	375.4	375.0	374.1
10°	371.8	371.8	371.4	369.2	368.7
12.5°	364.7	364.2	362.5	359.3	358.4
15°	354.9	354.9	351.3	347.7	346.4
17.5°	344.2	343.7	339.2	335.7	333.9
20°	332.5	331.7	327.2	321.4	318.3
22.5°	319.6	319.6	314.2	306.7	303.5
25°	307.6	305.8	300.9	290.1	282.1
27.5°	293.7	291.0	285.7	270.5	261.1
30°	278.5	277.2	269.6	250.0	242.8
32.5°	264.3	262.0	254.0	233.5	227.7
35°	249.5	247.7	235.7	217.8	212.5
37.5°	234.8	232.6	217.4	203.1	196.4
40°	220.1	217.4	200.9	187.9	180.8
42.5°	206.2	202.7	186.6	172.7	164.7
45°	191.5	187.5	171.4	157.1	150.9
47.5°	176.8	173.2	158.5	143.7	136.6
50°	161.1	158.0	144.6	129.9	122.3
52.5°	148.2	143.3	130.3	115.6	109.4
55°	133.0	129.0	117.0	103.1	97.8
57.5°	119.2	115.2	104.0	91.1	86.6
60°	106.2	100.4	91.1	79.9	76.3
62.5°	92.0	87.5	79.5	70.1	74.5
65°	79.0	74.5	67.4	68.7	57.1
67.5°	64.7	62.5	56.2	50.0	48.2
70°	52.7	50.0	47.8	41.1	39.3
72.5°	42.0	39.3	36.2	32.6	31.2
75°	31.7	29.5	27.7	26.3	29.0
77.5°	21.9	21.0	19.6	18.3	17.9
80°	14.3	13.8	13.4	12.9	12.5
82.5°	8.5	8.5	8.5	8.5	8.5
85°	4.5	4.9	5.4	5.8	6.2
87.5°	2.7	2.7	3.1	3.6	4.0
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)