

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: P545195

Luminaire Tested: **FMR-12-1-LD4-2STD-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: P545195
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-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

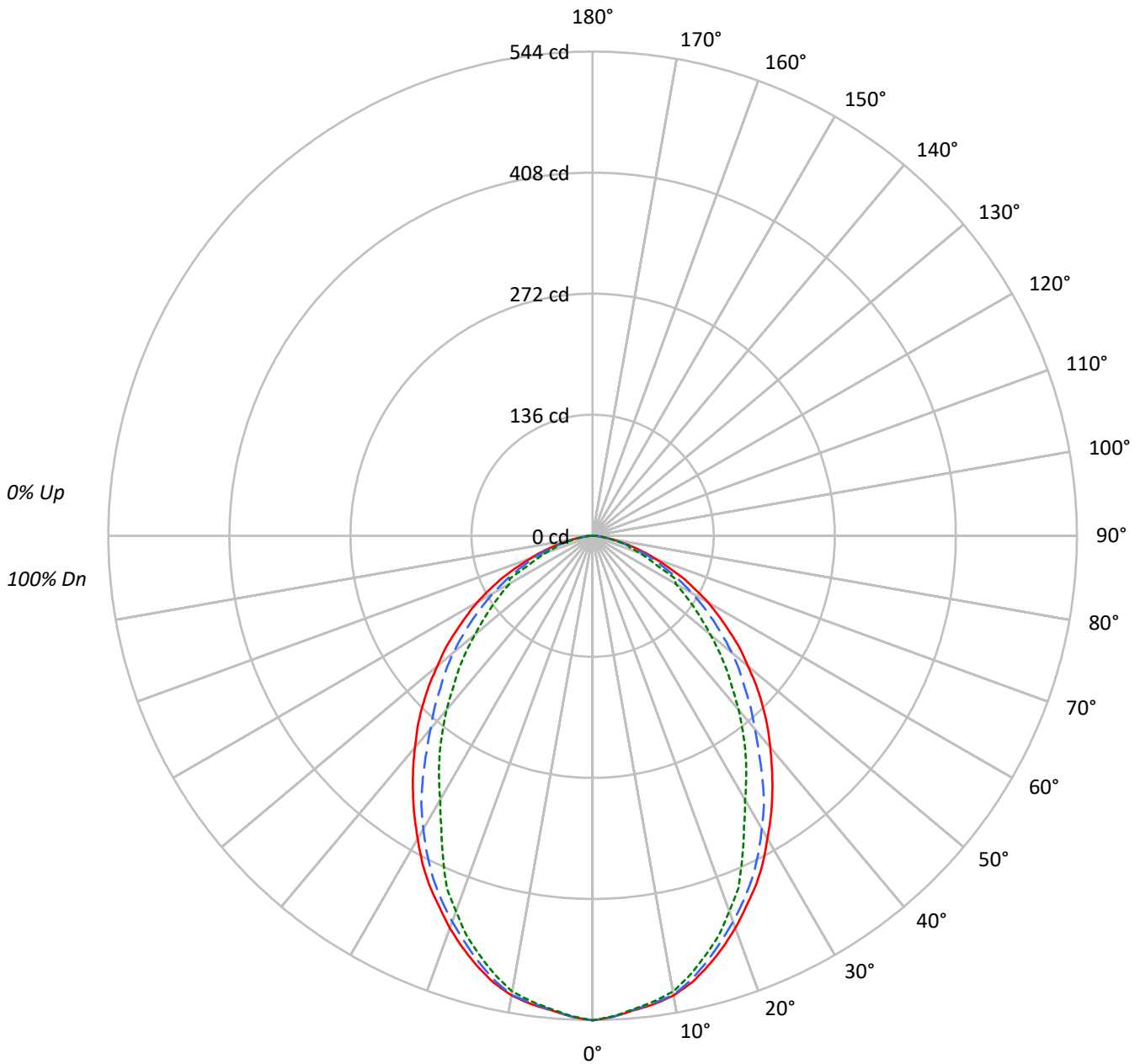
Lumens per Lamp: N/A
Luminaire Lumens: 1069.0 lumens
Efficiency: N/A
Efficacy: 64.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	5861	5861	5861
5°	5782	5775	5768
10°	5732	5725	5684
15°	5577	5521	5444
20°	5372	5285	5141
25°	5151	5039	4726
30°	4882	4726	4257
35°	4624	4368	3938
40°	4362	3981	3583
45°	4112	3679	3239
50°	3806	3416	2889
55°	3521	3095	2588
60°	3225	2764	2316
65°	2837	2422	2053
70°	2338	2121	1744
75°	1859	1622	1701
80°	1246	1172	1091
85°	778	939	1087



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.7	4.7
10°-20°	139.1	13.0
20°-30°	192.6	18.0
30°-40°	205.4	19.2
40°-50°	187.3	17.5
50°-60°	146.8	13.7
60°-70°	95.7	8.9
70°-80°	42.4	4.0
80°-90°	9.1	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°	382.4	35.8
0°-40°	587.7	55.0
0°-60°	921.9	86.2
0°-90°	1069.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1069.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	544	544	544	544	544	
5°	535	534	534	534	534	51
15°	500	500	495	490	488	141
25°	434	431	424	409	398	199
35°	352	349	332	307	300	220
45°	270	264	242	222	213	208
55°	188	182	165	145	138	168
65°	111	105	95	97	81	110
75°	45	42	39	37	41	48
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	544.5	544.5	544.5	544.5	544.5
2.5°	540.8	540.8	540.8	540.1	540.1
5°	535.1	534.5	534.5	533.8	533.8
7.5°	530.7	530.1	529.4	528.8	527.5
10°	524.4	524.4	523.8	520.6	520.0
12.5°	514.3	513.7	511.2	506.8	505.5
15°	500.5	500.5	495.4	490.4	488.5
17.5°	485.4	484.7	478.4	473.4	470.9
20°	469.0	467.7	461.4	453.3	448.8
22.5°	450.7	450.7	443.2	432.5	428.1
25°	433.7	431.2	424.3	409.2	397.9
27.5°	414.2	410.4	402.9	381.5	368.3
30°	392.8	390.9	380.2	352.5	342.5
32.5°	372.7	369.5	358.2	329.2	321.1
35°	351.9	349.4	332.4	307.2	299.7
37.5°	331.1	328.0	306.6	286.4	277.0
40°	310.4	306.6	283.3	265.0	255.0
42.5°	290.8	285.8	263.1	243.6	232.3
45°	270.1	264.4	241.7	221.6	212.8
47.5°	249.3	244.3	223.5	202.7	192.6
50°	227.3	222.8	204.0	183.2	172.5
52.5°	209.0	202.1	183.8	163.0	154.2
55°	187.6	181.9	164.9	145.4	137.9
57.5°	168.1	162.4	146.7	128.4	122.1
60°	149.8	141.6	128.4	112.7	107.6
62.5°	129.7	123.4	112.1	98.8	105.1
65°	111.4	105.1	95.1	96.9	80.6
67.5°	91.3	88.1	79.3	70.5	68.0
70°	74.3	70.5	67.4	57.9	55.4
72.5°	59.2	55.4	51.0	46.0	44.1
75°	44.7	41.5	39.0	37.1	40.9
77.5°	30.8	29.6	27.7	25.8	25.2
80°	20.1	19.5	18.9	18.3	17.6
82.5°	12.0	12.0	12.0	12.0	12.0
85°	6.3	6.9	7.6	8.2	8.8
87.5°	3.8	3.8	4.4	5.0	5.7
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)