

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: P545199

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-93-84-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: P545199
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-93-84-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

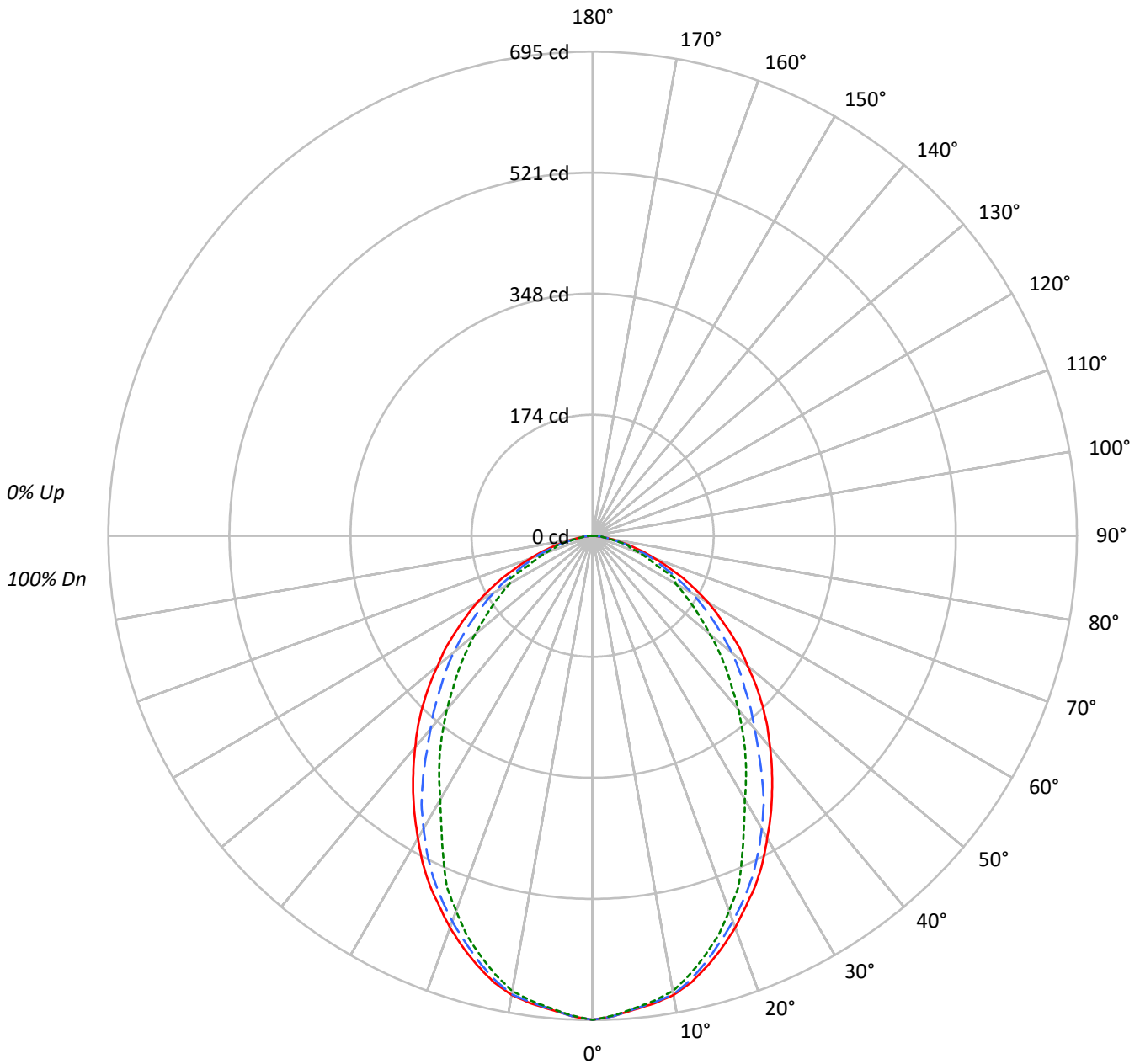
Lumens per Lamp: N/A
Luminaire Lumens: 1364.0 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	7479	7479	7479
5°	7378	7369	7359
10°	7313	7304	7252
15°	7116	7045	6946
20°	6855	6745	6560
25°	6573	6430	6029
30°	6229	6031	5432
35°	5900	5573	5024
40°	5564	5080	4571
45°	5246	4695	4133
50°	4856	4359	3686
55°	4493	3948	3301
60°	4116	3528	2958
65°	3622	3089	2618
70°	2984	2703	2225
75°	2371	2071	2171
80°	1593	1494	1395
85°	988	1186	1383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	4.7
10°-20°	177.5	13.0
20°-30°	245.7	18.0
30°-40°	262.0	19.2
40°-50°	239.1	17.5
50°-60°	187.3	13.7
60°-70°	122.1	8.9
70°-80°	54.1	4.0
80°-90°	11.6	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°	487.9	35.8
0°-40°	749.9	55.0
0°-60°	1176.3	86.2
0°-90°	1364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	683	682	682	681	681	65
15°	639	639	632	626	623	180
25°	553	550	541	522	508	254
35°	449	446	424	392	382	281
45°	345	337	308	283	272	265
55°	239	232	210	186	176	215
65°	142	134	121	124	103	140
75°	57	53	50	47	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	694.8	694.8	694.8	694.8	694.8
2.5°	690.0	690.0	690.0	689.2	689.2
5°	682.8	682.0	682.0	681.1	681.1
7.5°	677.1	676.3	675.5	674.7	673.1
10°	669.1	669.1	668.3	664.3	663.5
12.5°	656.2	655.4	652.2	646.6	645.0
15°	638.6	638.6	632.2	625.7	623.3
17.5°	619.3	618.5	610.5	604.0	600.8
20°	598.4	596.8	588.8	578.3	572.7
22.5°	575.1	575.1	565.5	551.8	546.2
25°	553.4	550.2	541.4	522.1	507.6
27.5°	528.5	523.7	514.1	486.8	469.9
30°	501.2	498.8	485.2	449.8	437.0
32.5°	475.5	471.5	457.0	420.1	409.7
35°	449.0	445.8	424.1	392.0	382.3
37.5°	422.5	418.5	391.2	365.5	353.4
40°	396.0	391.2	361.5	338.2	325.3
42.5°	371.1	364.7	335.8	310.9	296.4
45°	344.6	337.4	308.4	282.7	271.5
47.5°	318.1	311.7	285.2	258.6	245.8
50°	290.0	284.3	260.3	233.7	220.1
52.5°	266.7	257.8	234.5	208.0	196.8
55°	239.4	232.1	210.4	185.5	175.9
57.5°	214.5	207.2	187.2	163.9	155.8
60°	191.2	180.7	163.9	143.8	137.4
62.5°	165.5	157.4	143.0	126.1	134.1
65°	142.2	134.1	121.3	123.7	102.8
67.5°	116.5	112.5	101.2	90.0	86.8
70°	94.8	90.0	85.9	73.9	70.7
72.5°	75.5	70.7	65.1	58.6	56.2
75°	57.0	53.0	49.8	47.4	52.2
77.5°	39.4	37.8	35.3	32.9	32.1
80°	25.7	24.9	24.1	23.3	22.5
82.5°	15.3	15.3	15.3	15.3	15.3
85°	8.0	8.8	9.6	10.4	11.2
87.5°	4.8	4.8	5.6	6.4	7.2
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)