

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: P545458

Luminaire Tested: **FMR-12-2-LD4-1STD-35-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: P545458
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-12-2-LD4-1STD-35-UNV-93-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

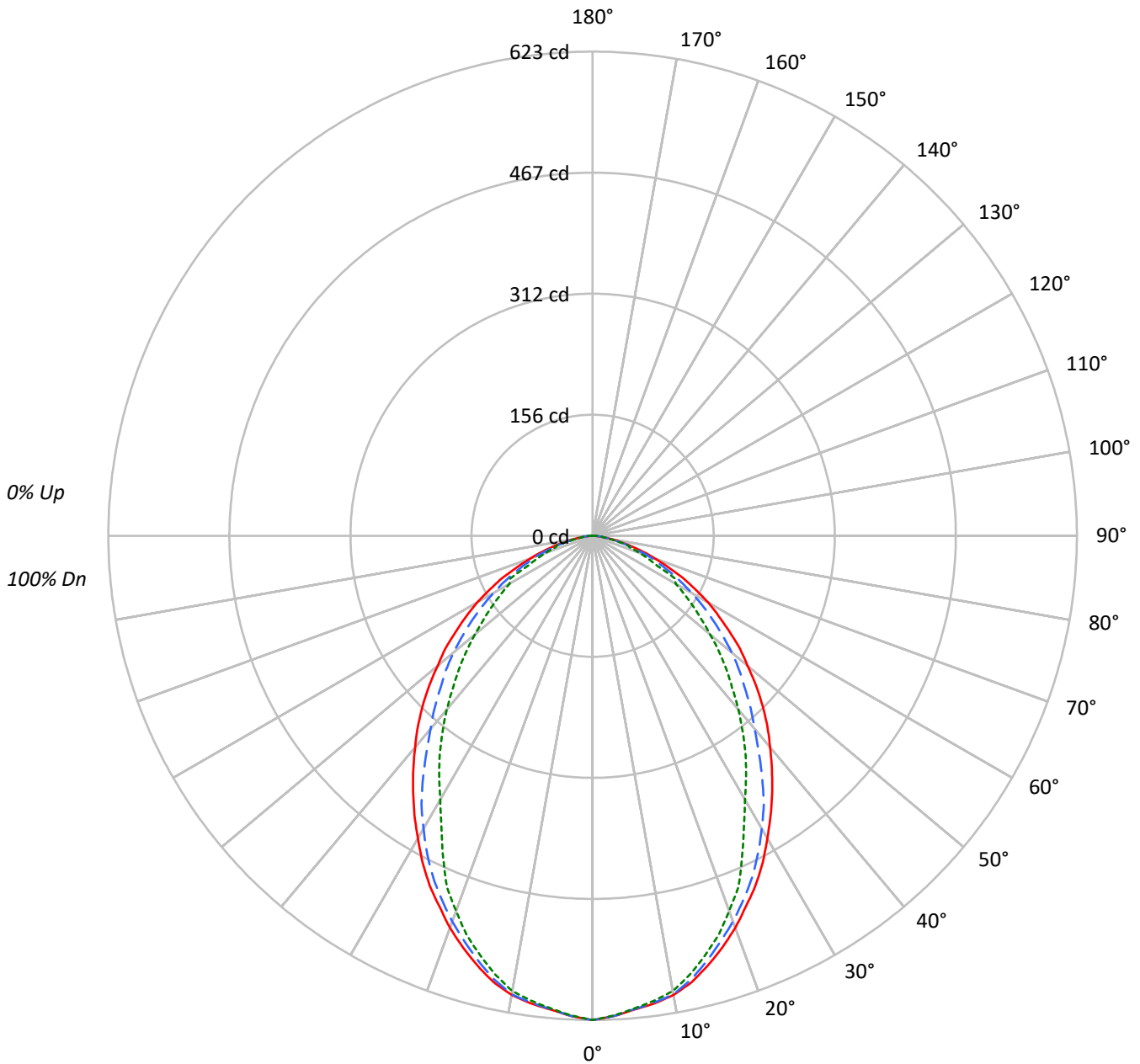
Lumens per Lamp: N/A
Luminaire Lumens: 1223.0 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	3353	3353	3353
5°	3307	3304	3299
10°	3278	3275	3251
15°	3190	3158	3114
20°	3073	3023	2941
25°	2947	2882	2703
30°	2793	2703	2435
35°	2645	2499	2252
40°	2495	2277	2049
45°	2352	2105	1853
50°	2177	1953	1652
55°	2014	1771	1480
60°	1845	1581	1326
65°	1624	1386	1174
70°	1338	1213	998
75°	1063	930	973
80°	713	669	626
85°	445	531	624



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.0	4.7
10°-20°	159.2	13.0
20°-30°	220.3	18.0
30°-40°	234.9	19.2
40°-50°	214.3	17.5
50°-60°	167.9	13.7
60°-70°	109.4	8.9
70°-80°	48.5	4.0
80°-90°	10.4	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°	437.5	35.8
0°-40°	672.4	55.0
0°-60°	1054.7	86.2
0°-90°	1223.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1223.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	623	623	623	623	623	
5°	612	612	612	611	611	58
15°	573	573	567	561	559	161
25°	496	493	485	468	455	228
35°	403	400	380	352	343	252
45°	309	302	277	254	243	238
55°	215	208	189	166	158	192
65°	128	120	109	111	92	126
75°	51	48	45	42	47	55
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	623.0	623.0	623.0	623.0	623.0
2.5°	618.7	618.7	618.7	617.9	617.9
5°	612.2	611.5	611.5	610.7	610.7
7.5°	607.1	606.4	605.7	605.0	603.5
10°	599.9	599.9	599.2	595.6	594.9
12.5°	588.4	587.7	584.8	579.8	578.3
15°	572.6	572.6	566.8	561.0	558.9
17.5°	555.3	554.6	547.4	541.6	538.7
20°	536.6	535.1	527.9	518.5	513.5
22.5°	515.7	515.7	507.0	494.8	489.7
25°	496.2	493.3	485.4	468.1	455.2
27.5°	473.9	469.6	460.9	436.4	421.3
30°	449.4	447.2	435.0	403.3	391.8
32.5°	426.4	422.8	409.8	376.7	367.3
35°	402.6	399.7	380.3	351.5	342.8
37.5°	378.8	375.2	350.7	327.7	316.9
40°	355.1	350.7	324.1	303.2	291.7
42.5°	332.7	327.0	301.0	278.7	265.8
45°	309.0	302.5	276.6	253.5	243.4
47.5°	285.2	279.4	255.7	231.9	220.4
50°	260.0	255.0	233.3	209.6	197.3
52.5°	239.1	231.2	210.3	186.5	176.5
55°	214.6	208.1	188.7	166.4	157.7
57.5°	192.3	185.8	167.8	146.9	139.7
60°	171.4	162.0	146.9	128.9	123.2
62.5°	148.4	141.2	128.2	113.1	120.3
65°	127.5	120.3	108.8	110.9	92.2
67.5°	104.4	100.8	90.7	80.7	77.8
70°	85.0	80.7	77.1	66.3	63.4
72.5°	67.7	63.4	58.3	52.6	50.4
75°	51.1	47.5	44.7	42.5	46.8
77.5°	35.3	33.8	31.7	29.5	28.8
80°	23.0	22.3	21.6	20.9	20.2
82.5°	13.7	13.7	13.7	13.7	13.7
85°	7.2	7.9	8.6	9.4	10.1
87.5°	4.3	4.3	5.0	5.8	6.5
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)