

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: P545490

Luminaire Tested: **FMR-12-2-LD4-1STD-40-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: P545490
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

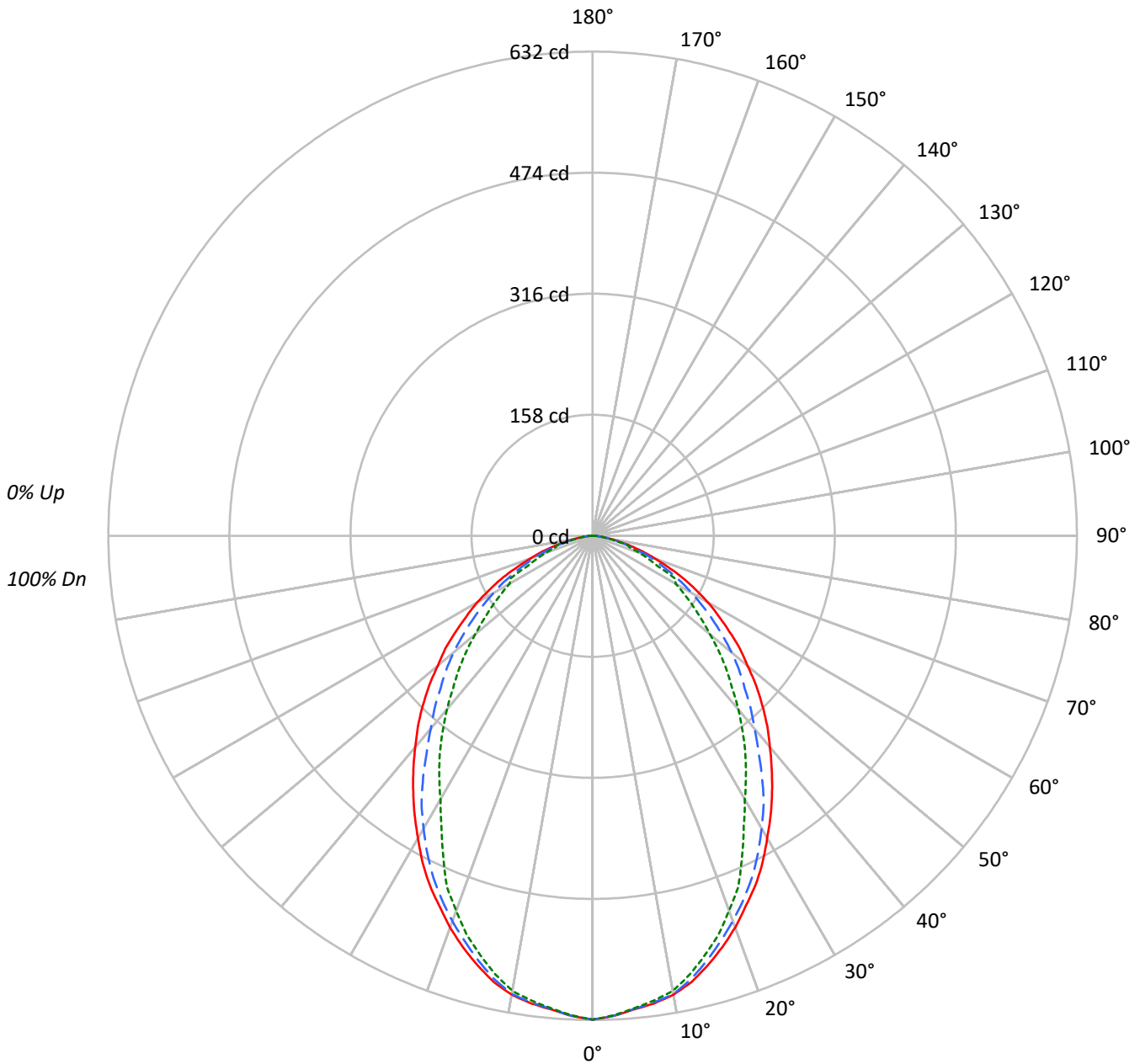
Lumens per Lamp: N/A
Luminaire Lumens: 1240.0 lumens
Efficiency: N/A
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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									
RC	80									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																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3399	3399	3399
5°	3353	3350	3345
10°	3324	3320	3296
15°	3234	3202	3157
20°	3116	3066	2982
25°	2988	2923	2741
30°	2832	2741	2468
35°	2682	2533	2284
40°	2529	2309	2077
45°	2385	2134	1878
50°	2207	1981	1675
55°	2042	1795	1500
60°	1871	1604	1344
65°	1645	1405	1191
70°	1356	1229	1012
75°	1077	942	988
80°	725	679	632
85°	451	543	630



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.8	4.7
10°-20°	161.4	13.0
20°-30°	223.4	18.0
30°-40°	238.2	19.2
40°-50°	217.3	17.5
50°-60°	170.2	13.7
60°-70°	111.0	8.9
70°-80°	49.2	4.0
80°-90°	10.6	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°	443.6	35.8
0°-40°	681.8	55.0
0°-60°	1069.3	86.2
0°-90°	1240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	632	632	632	632	632	
5°	621	620	620	619	619	59
15°	580	580	575	569	567	163
25°	503	500	492	475	462	231
35°	408	405	386	356	348	255
45°	313	307	280	257	247	241
55°	218	211	191	169	160	195
65°	129	122	110	112	94	127
75°	52	48	45	43	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	631.6	631.6	631.6	631.6	631.6
2.5°	627.3	627.3	627.3	626.5	626.5
5°	620.7	620.0	620.0	619.2	619.2
7.5°	615.6	614.8	614.1	613.4	611.9
10°	608.3	608.3	607.5	603.9	603.2
12.5°	596.6	595.9	592.9	587.8	586.4
15°	580.5	580.5	574.7	568.8	566.6
17.5°	563.0	562.3	555.0	549.1	546.2
20°	544.0	542.6	535.3	525.8	520.6
22.5°	522.8	522.8	514.1	501.7	496.5
25°	503.1	500.2	492.2	474.6	461.5
27.5°	480.5	476.1	467.3	442.5	427.2
30°	455.7	453.5	441.1	408.9	397.2
32.5°	432.3	428.6	415.5	381.9	372.4
35°	408.2	405.3	385.6	356.3	347.6
37.5°	384.1	380.4	355.6	332.2	321.3
40°	360.0	355.6	328.6	307.4	295.7
42.5°	337.4	331.5	305.2	282.6	269.5
45°	313.3	306.7	280.4	257.0	246.8
47.5°	289.2	283.3	259.2	235.1	223.4
50°	263.6	258.5	236.6	212.5	200.1
52.5°	242.4	234.4	213.2	189.1	178.9
55°	217.6	211.0	191.3	168.7	159.9
57.5°	195.0	188.4	170.1	149.0	141.7
60°	173.8	164.3	149.0	130.7	124.9
62.5°	150.4	143.1	130.0	114.6	121.9
65°	129.2	121.9	110.3	112.5	93.5
67.5°	105.9	102.2	92.0	81.8	78.9
70°	86.2	81.8	78.1	67.2	64.3
72.5°	68.6	64.3	59.1	53.3	51.1
75°	51.8	48.2	45.3	43.1	47.5
77.5°	35.8	34.3	32.1	29.9	29.2
80°	23.4	22.6	21.9	21.2	20.4
82.5°	13.9	13.9	13.9	13.9	13.9
85°	7.3	8.0	8.8	9.5	10.2
87.5°	4.4	4.4	5.1	5.8	6.6
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)