

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: P545198

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-82-97-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: P545198
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-82-97-EDD
Description: 1X1 FMR TROFFER WITH .187 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

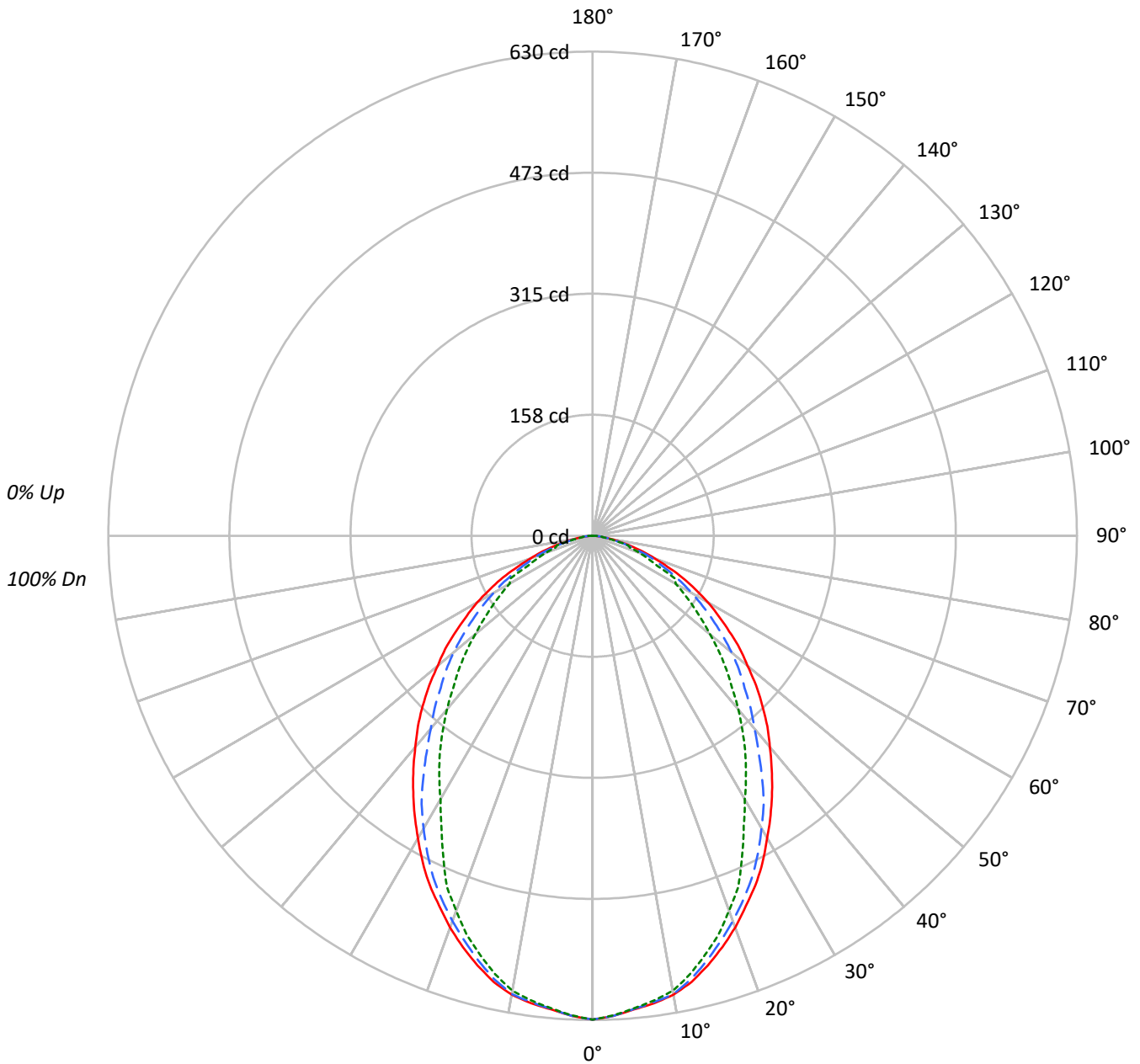
Lumens per Lamp: N/A
Luminaire Lumens: 1236.0 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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									
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°	6777	6777	6777
5°	6685	6678	6669
10°	6627	6619	6571
15°	6449	6383	6294
20°	6212	6111	5945
25°	5956	5827	5463
30°	5645	5464	4922
35°	5347	5050	4553
40°	5042	4602	4142
45°	4754	4255	3745
50°	4401	3949	3339
55°	4070	3579	2991
60°	3729	3197	2680
65°	3280	2799	2374
70°	2703	2452	2017
75°	2150	1876	1967
80°	1444	1351	1265
85°	902	1074	1260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	4.7
10°-20°	160.8	13.0
20°-30°	222.7	18.0
30°-40°	237.4	19.2
40°-50°	216.6	17.5
50°-60°	169.7	13.7
60°-70°	110.6	8.9
70°-80°	49.0	4.0
80°-90°	10.5	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°	442.1	35.8
0°-40°	679.6	55.0
0°-60°	1065.9	86.2
0°-90°	1236.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1236.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	630	630	630	630	630	
5°	619	618	618	617	617	59
15°	579	579	573	567	565	163
25°	502	499	491	473	460	230
35°	407	404	384	355	346	254
45°	312	306	280	256	246	241
55°	217	210	191	168	159	195
65°	129	122	110	112	93	127
75°	52	48	45	43	47	55
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°	629.6	629.6	629.6	629.6	629.6
2.5°	625.2	625.2	625.2	624.5	624.5
5°	618.7	618.0	618.0	617.2	617.2
7.5°	613.6	612.9	612.1	611.4	609.9
10°	606.3	606.3	605.6	601.9	601.2
12.5°	594.7	593.9	591.0	585.9	584.5
15°	578.7	578.7	572.8	567.0	564.8
17.5°	561.2	560.5	553.2	547.4	544.4
20°	542.3	540.8	533.5	524.1	519.0
22.5°	521.2	521.2	512.4	500.0	494.9
25°	501.5	498.6	490.6	473.1	460.0
27.5°	478.9	474.6	465.8	441.1	425.8
30°	454.2	452.0	439.6	407.6	396.0
32.5°	430.9	427.3	414.2	380.7	371.2
35°	406.9	404.0	384.3	355.2	346.5
37.5°	382.9	379.2	354.5	331.2	320.3
40°	358.8	354.5	327.5	306.4	294.8
42.5°	336.3	330.5	304.2	281.7	268.6
45°	312.3	305.7	279.5	256.2	246.0
47.5°	288.2	282.4	258.4	234.4	222.7
50°	262.8	257.7	235.8	211.8	199.4
52.5°	241.7	233.6	212.5	188.5	178.3
55°	216.9	210.4	190.7	168.1	159.4
57.5°	194.3	187.8	169.6	148.5	141.2
60°	173.2	163.8	148.5	130.3	124.5
62.5°	149.9	142.7	129.6	114.3	121.6
65°	128.8	121.6	109.9	112.1	93.2
67.5°	105.5	101.9	91.7	81.5	78.6
70°	85.9	81.5	77.9	67.0	64.1
72.5°	68.4	64.1	59.0	53.1	51.0
75°	51.7	48.0	45.1	42.9	47.3
77.5°	35.7	34.2	32.0	29.8	29.1
80°	23.3	22.6	21.8	21.1	20.4
82.5°	13.8	13.8	13.8	13.8	13.8
85°	7.3	8.0	8.7	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)