

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: P545638

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-81-97-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: P545638
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-LD4-2LO-35-UNV-81-97-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

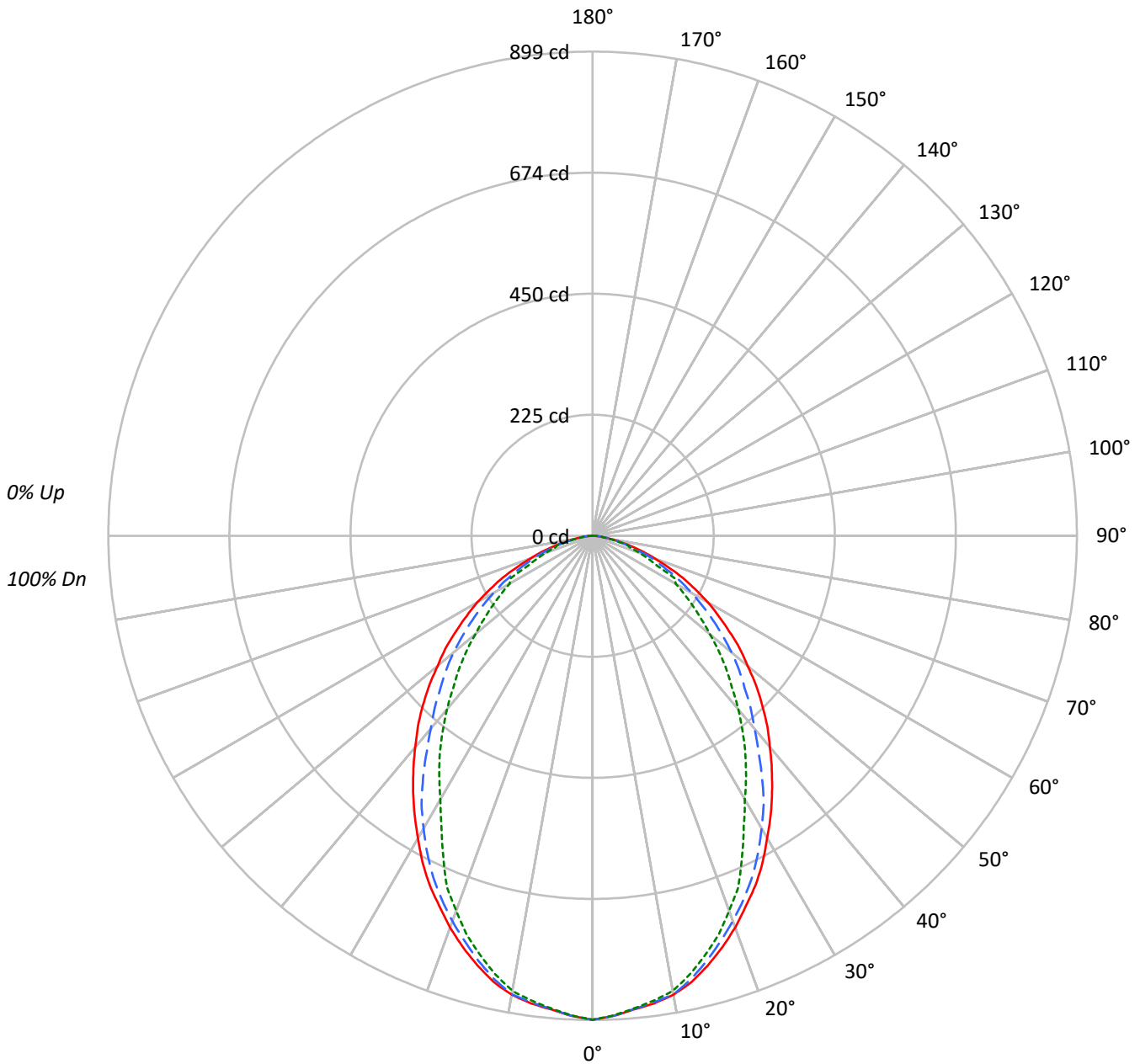
Lumens per Lamp: N/A
Luminaire Lumens: 1764.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	4836	4836	4836
5°	4770	4764	4759
10°	4729	4723	4689
15°	4601	4555	4491
20°	4432	4361	4242
25°	4250	4157	3899
30°	4028	3899	3512
35°	3815	3604	3249
40°	3598	3284	2956
45°	3392	3036	2672
50°	3140	2818	2383
55°	2905	2554	2135
60°	2661	2281	1912
65°	2342	1998	1694
70°	1929	1750	1438
75°	1535	1339	1404
80°	1029	967	902
85°	642	772	895



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	4.7
10°-20°	229.6	13.0
20°-30°	317.8	18.0
30°-40°	338.9	19.2
40°-50°	309.2	17.5
50°-60°	242.2	13.7
60°-70°	157.9	8.9
70°-80°	69.9	4.0
80°-90°	15.0	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°	631.0	35.8
0°-40°	969.9	55.0
0°-60°	1521.2	86.2
0°-90°	1764.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1764.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	899	899	899	899	899	
5°	883	882	882	881	881	84
15°	826	826	818	809	806	232
25°	716	712	700	675	656	329
35°	581	576	548	507	494	363
45°	446	436	399	366	351	343
55°	310	300	272	240	228	278
65°	184	174	157	160	133	181
75°	74	69	64	61	68	79
85°	10	11	12	14	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	898.6	898.6	898.6	898.6	898.6
2.5°	892.3	892.3	892.3	891.3	891.3
5°	883.0	881.9	881.9	880.9	880.9
7.5°	875.7	874.7	873.6	872.6	870.5
10°	865.3	865.3	864.3	859.1	858.0
12.5°	848.7	847.7	843.5	836.2	834.2
15°	825.8	825.8	817.5	809.2	806.1
17.5°	800.9	799.9	789.5	781.2	777.0
20°	773.9	771.8	761.4	747.9	740.7
22.5°	743.8	743.8	731.3	713.7	706.4
25°	715.7	711.6	700.1	675.2	656.5
27.5°	683.5	677.3	664.8	629.5	607.7
30°	648.2	645.1	627.4	581.7	565.1
32.5°	615.0	609.8	591.1	543.3	529.8
35°	580.7	576.5	548.5	506.9	494.5
37.5°	546.4	541.2	505.9	472.7	457.1
40°	512.1	505.9	467.5	437.3	420.7
42.5°	479.9	471.6	434.2	402.0	383.3
45°	445.6	436.3	398.9	365.7	351.1
47.5°	411.4	403.1	368.8	334.5	317.9
50°	375.0	367.7	336.6	302.3	284.6
52.5°	344.9	333.5	303.3	269.0	254.5
55°	309.6	300.2	272.2	240.0	227.5
57.5°	277.4	268.0	242.0	211.9	201.5
60°	247.2	233.7	211.9	185.9	177.6
62.5°	214.0	203.6	184.9	163.1	173.5
65°	183.9	173.5	156.9	160.0	133.0
67.5°	150.6	145.4	130.9	116.3	112.2
70°	122.6	116.3	111.2	95.6	91.4
72.5°	97.6	91.4	84.1	75.8	72.7
75°	73.8	68.6	64.4	61.3	67.5
77.5°	50.9	48.8	45.7	42.6	41.6
80°	33.2	32.2	31.2	30.1	29.1
82.5°	19.7	19.7	19.7	19.7	19.7
85°	10.4	11.4	12.5	13.5	14.5
87.5°	6.2	6.2	7.3	8.3	9.3
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)