

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: P545668

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-81-94-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: P545668
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-40-UNV-81-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

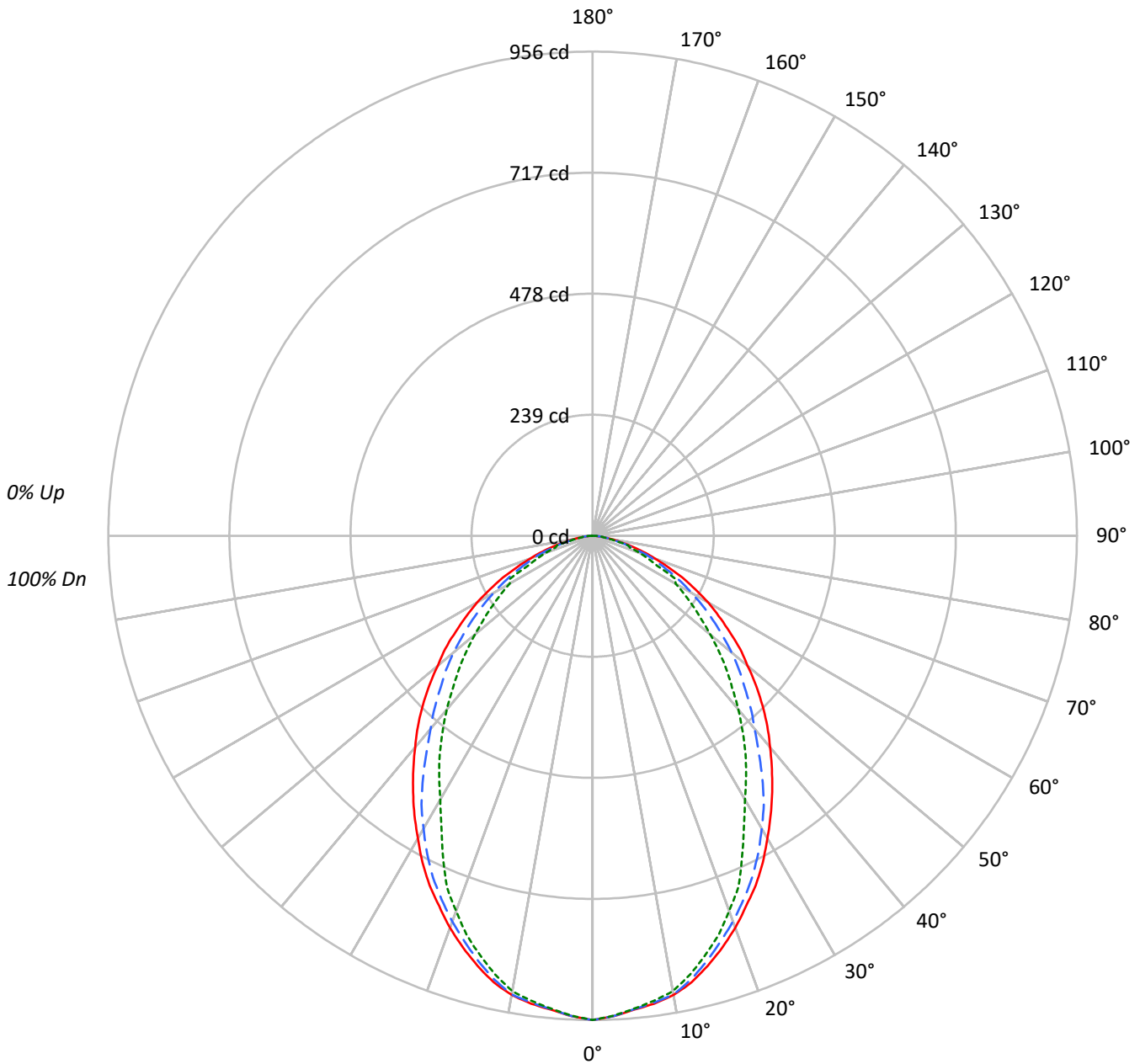
Lumens per Lamp: N/A
Luminaire Lumens: 1877.0 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	5146	5146	5146
5°	5076	5070	5064
10°	5032	5026	4990
15°	4896	4847	4779
20°	4716	4640	4514
25°	4523	4424	4149
30°	4286	4149	3737
35°	4060	3834	3457
40°	3828	3495	3145
45°	3609	3231	2844
50°	3341	2998	2536
55°	3091	2717	2272
60°	2832	2427	2034
65°	2491	2125	1802
70°	2052	1862	1531
75°	1632	1424	1493
80°	1097	1029	958
85°	685	821	957



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	4.7
10°-20°	244.3	13.0
20°-30°	338.2	18.0
30°-40°	360.6	19.2
40°-50°	329.0	17.5
50°-60°	257.7	13.7
60°-70°	168.0	8.9
70°-80°	74.4	4.0
80°-90°	16.0	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°	671.4	35.8
0°-40°	1032.0	55.0
0°-60°	1618.6	86.2
0°-90°	1877.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1877.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	956	956	956	956	956	
5°	940	938	938	937	937	89
15°	879	879	870	861	858	247
25°	762	757	745	718	699	350
35°	618	614	584	539	526	386
45°	474	464	424	389	374	365
55°	329	319	290	255	242	295
65°	196	185	167	170	142	193
75°	78	73	68	65	72	84
85°	11	12	13	14	16	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	956.1	956.1	956.1	956.1	956.1
2.5°	949.5	949.5	949.5	948.4	948.4
5°	939.5	938.4	938.4	937.3	937.3
7.5°	931.8	930.7	929.6	928.5	926.3
10°	920.7	920.7	919.6	914.1	913.0
12.5°	903.1	902.0	897.5	889.8	887.6
15°	878.7	878.7	869.9	861.1	857.7
17.5°	852.2	851.1	840.1	831.2	826.8
20°	823.5	821.3	810.2	795.8	788.1
22.5°	791.4	791.4	778.2	759.4	751.6
25°	761.6	757.2	745.0	718.5	698.6
27.5°	727.3	720.7	707.4	669.8	646.6
30°	689.7	686.4	667.6	619.0	601.3
32.5°	654.4	648.8	628.9	578.1	563.7
35°	617.9	613.5	583.6	539.4	526.1
37.5°	581.4	575.9	538.3	502.9	486.3
40°	544.9	538.3	497.4	465.3	447.7
42.5°	510.7	501.8	462.0	427.8	407.9
45°	474.2	464.2	424.5	389.1	373.6
47.5°	437.7	428.9	392.4	355.9	338.2
50°	399.0	391.3	358.1	321.7	302.9
52.5°	367.0	354.8	322.8	286.3	270.8
55°	329.4	319.4	289.6	255.3	242.1
57.5°	295.1	285.2	257.5	225.5	214.4
60°	263.1	248.7	225.5	197.9	189.0
62.5°	227.7	216.6	196.8	173.5	184.6
65°	195.6	184.6	166.9	170.2	141.5
67.5°	160.3	154.7	139.3	123.8	119.4
70°	130.4	123.8	118.3	101.7	97.3
72.5°	103.9	97.3	89.5	80.7	77.4
75°	78.5	73.0	68.5	65.2	71.8
77.5°	54.2	52.0	48.6	45.3	44.2
80°	35.4	34.3	33.2	32.1	30.9
82.5°	21.0	21.0	21.0	21.0	21.0
85°	11.1	12.2	13.3	14.4	15.5
87.5°	6.6	6.6	7.7	8.8	9.9
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)