

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: P545324

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-82-94-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: P545324
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-LD4-1HI-50-UNV-82-94-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

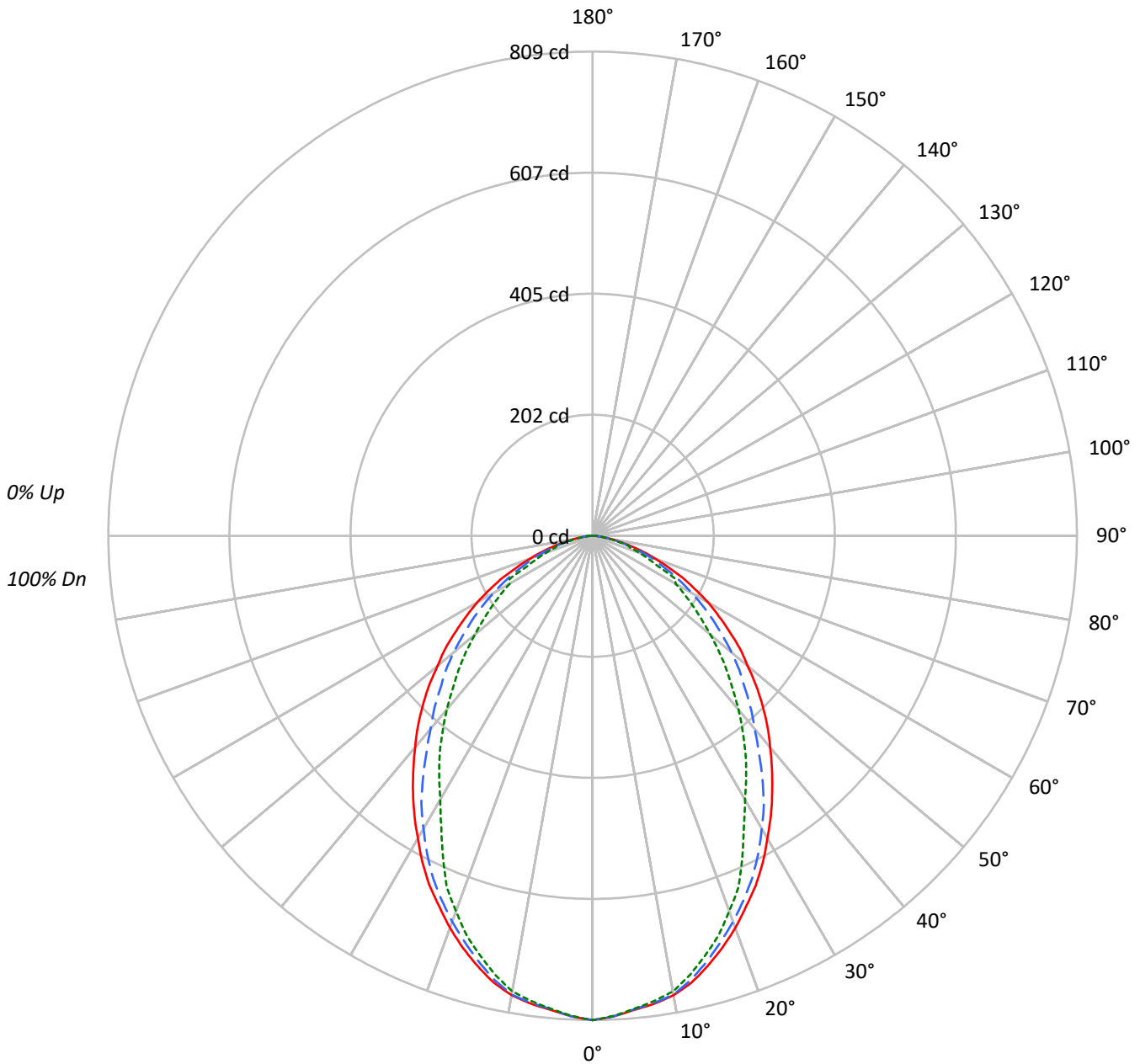
Lumens per Lamp: N/A
Luminaire Lumens: 1589.0 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	4356	4356	4356
5°	4297	4292	4287
10°	4260	4254	4224
15°	4145	4103	4046
20°	3993	3928	3821
25°	3828	3745	3512
30°	3629	3512	3163
35°	3437	3246	2926
40°	3241	2958	2663
45°	3055	2735	2407
50°	2828	2539	2147
55°	2617	2301	1923
60°	2397	2055	1722
65°	2109	1799	1526
70°	1737	1575	1295
75°	1381	1206	1264
80°	927	871	812
85°	580	692	809



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.3	4.7
10°-20°	206.8	13.0
20°-30°	286.3	18.0
30°-40°	305.2	19.2
40°-50°	278.5	17.5
50°-60°	218.2	13.7
60°-70°	142.2	8.9
70°-80°	63.0	4.0
80°-90°	13.5	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°	568.4	35.8
0°-40°	873.6	55.0
0°-60°	1370.3	86.2
0°-90°	1589.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1589.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	809	809	809	809	809	
5°	795	794	794	794	794	76
15°	744	744	736	729	726	209
25°	645	641	631	608	591	296
35°	523	519	494	457	445	327
45°	401	393	359	329	316	309
55°	279	270	245	216	205	250
65°	166	156	141	144	120	163
75°	66	62	58	55	61	71
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	809.4	809.4	809.4	809.4	809.4
2.5°	803.8	803.8	803.8	802.9	802.9
5°	795.4	794.4	794.4	793.5	793.5
7.5°	788.8	787.9	787.0	786.0	784.2
10°	779.5	779.5	778.5	773.9	772.9
12.5°	764.5	763.6	759.8	753.3	751.4
15°	743.9	743.9	736.4	728.9	726.1
17.5°	721.5	720.5	711.2	703.7	699.9
20°	697.1	695.3	685.9	673.7	667.2
22.5°	670.0	670.0	658.8	642.9	636.3
25°	644.7	641.0	630.7	608.2	591.4
27.5°	615.7	610.1	598.9	567.1	547.4
30°	583.9	581.1	565.2	524.0	509.0
32.5°	554.0	549.3	532.4	489.4	477.2
35°	523.1	519.3	494.1	456.6	445.4
37.5°	492.2	487.5	455.7	425.8	411.7
40°	461.3	455.7	421.1	393.9	379.0
42.5°	432.3	424.8	391.1	362.1	345.3
45°	401.4	393.0	359.3	329.4	316.3
47.5°	370.6	363.1	332.2	301.3	286.3
50°	337.8	331.3	303.2	272.3	256.4
52.5°	310.7	300.4	273.2	242.4	229.3
55°	278.9	270.4	245.2	216.2	204.9
57.5°	249.8	241.4	218.0	190.9	181.5
60°	222.7	210.5	190.9	167.5	160.0
62.5°	192.8	183.4	166.6	146.9	156.3
65°	165.6	156.3	141.3	144.1	119.8
67.5°	135.7	131.0	117.9	104.8	101.1
70°	110.4	104.8	100.1	86.1	82.3
72.5°	88.0	82.3	75.8	68.3	65.5
75°	66.4	61.8	58.0	55.2	60.8
77.5°	45.9	44.0	41.2	38.4	37.4
80°	29.9	29.0	28.1	27.1	26.2
82.5°	17.8	17.8	17.8	17.8	17.8
85°	9.4	10.3	11.2	12.2	13.1
87.5°	5.6	5.6	6.6	7.5	8.4
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)