

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: P544714

Luminaire Tested: **FMR-12-1-LD4-1HI-40-UNV-82-87-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: P544714
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-LD4-1HI-40-UNV-82-87-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC 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

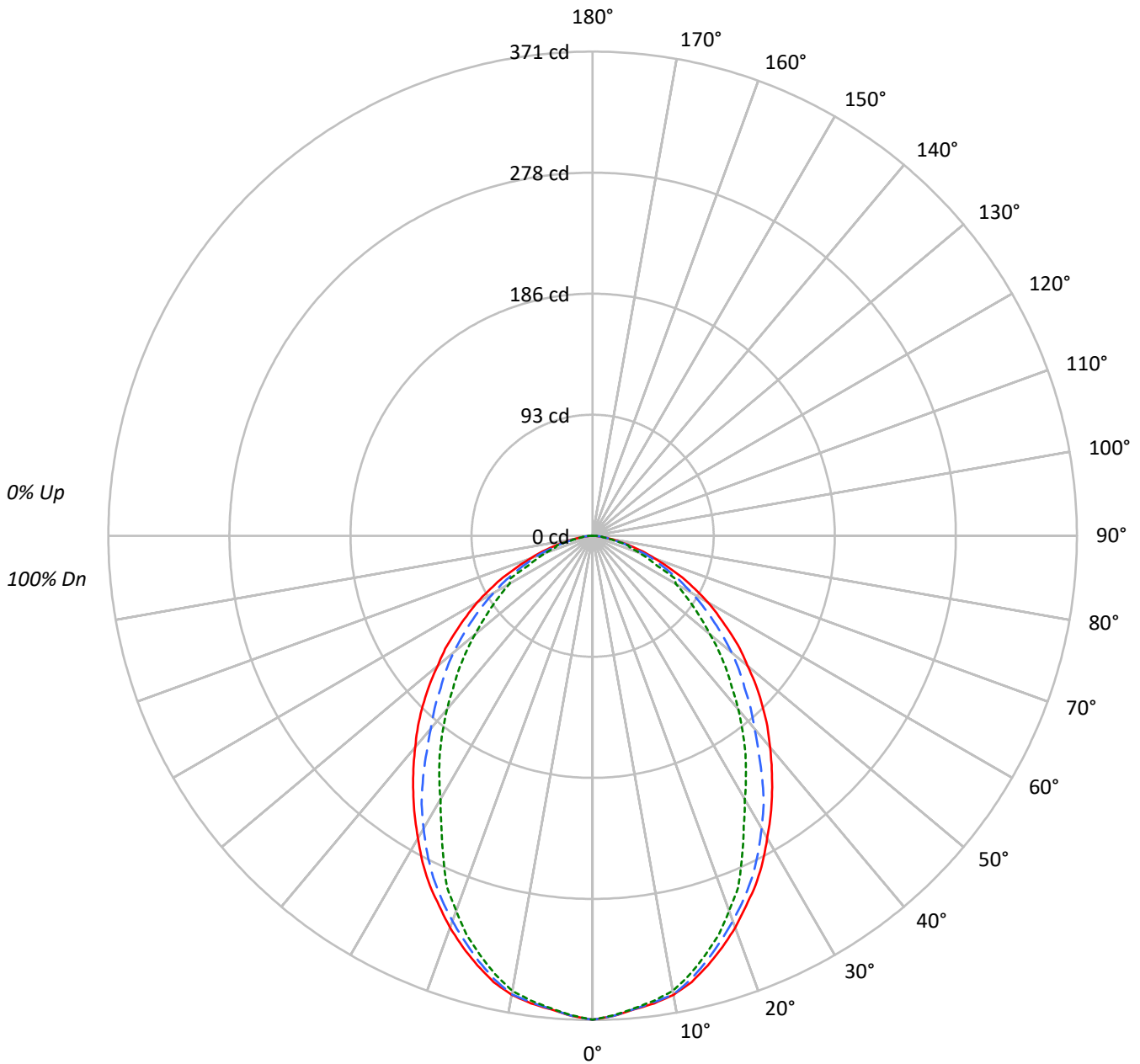
Lumens per Lamp: N/A
Luminaire Lumens: 728.0 lumens
Efficiency: N/A
Efficacy: 67.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 10.8
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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3991	3991	3991
5°	3937	3933	3928
10°	3903	3899	3870
15°	3798	3760	3707
20°	3659	3599	3502
25°	3508	3432	3217
30°	3325	3218	2898
35°	3148	2975	2682
40°	2970	2710	2439
45°	2799	2506	2206
50°	2592	2326	1968
55°	2398	2107	1762
60°	2196	1884	1578
65°	1933	1648	1398
70°	1592	1445	1186
75°	1264	1106	1160
80°	849	800	744
85°	531	630	741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	4.7
10°-20°	94.7	13.0
20°-30°	131.2	18.0
30°-40°	139.9	19.2
40°-50°	127.6	17.5
50°-60°	100.0	13.7
60°-70°	65.1	8.9
70°-80°	28.9	4.0
80°-90°	6.2	0.8
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°	260.4	35.8
0°-40°	400.3	55.0
0°-60°	627.8	86.2
0°-90°	728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	371	371	371	371	371	
5°	364	364	364	364	364	35
15°	341	341	337	334	333	96
25°	295	294	289	279	271	136
35°	240	238	226	209	204	150
45°	184	180	165	151	145	142
55°	128	124	112	99	94	115
65°	76	72	65	66	55	75
75°	30	28	27	25	28	33
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	370.8	370.8	370.8	370.8	370.8
2.5°	368.3	368.3	368.3	367.8	367.8
5°	364.4	364.0	364.0	363.5	363.5
7.5°	361.4	361.0	360.5	360.1	359.3
10°	357.1	357.1	356.7	354.5	354.1
12.5°	350.3	349.8	348.1	345.1	344.3
15°	340.8	340.8	337.4	334.0	332.7
17.5°	330.5	330.1	325.8	322.4	320.7
20°	319.4	318.5	314.2	308.7	305.7
22.5°	307.0	307.0	301.8	294.5	291.5
25°	295.4	293.7	289.0	278.7	270.9
27.5°	282.1	279.5	274.4	259.8	250.8
30°	267.5	266.2	258.9	240.1	233.2
32.5°	253.8	251.7	243.9	224.2	218.6
35°	239.6	237.9	226.4	209.2	204.1
37.5°	225.5	223.4	208.8	195.1	188.6
40°	211.4	208.8	192.9	180.5	173.6
42.5°	198.1	194.6	179.2	165.9	158.2
45°	183.9	180.1	164.6	150.9	144.9
47.5°	169.8	166.3	152.2	138.0	131.2
50°	154.8	151.8	138.9	124.8	117.5
52.5°	142.3	137.6	125.2	111.0	105.0
55°	127.8	123.9	112.3	99.0	93.9
57.5°	114.5	110.6	99.9	87.5	83.2
60°	102.0	96.5	87.5	76.7	73.3
62.5°	88.3	84.0	76.3	67.3	71.6
65°	75.9	71.6	64.7	66.0	54.9
67.5°	62.2	60.0	54.0	48.0	46.3
70°	50.6	48.0	45.9	39.4	37.7
72.5°	40.3	37.7	34.7	31.3	30.0
75°	30.4	28.3	26.6	25.3	27.9
77.5°	21.0	20.1	18.9	17.6	17.1
80°	13.7	13.3	12.9	12.4	12.0
82.5°	8.1	8.1	8.1	8.1	8.1
85°	4.3	4.7	5.1	5.6	6.0
87.5°	2.6	2.6	3.0	3.4	3.9
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)