

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: P544881

Luminaire Tested: **FMR-12-1-LD4-1STD-35-UNV-93-86-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: P544881
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-LD4-1STD-35-UNV-93-86-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

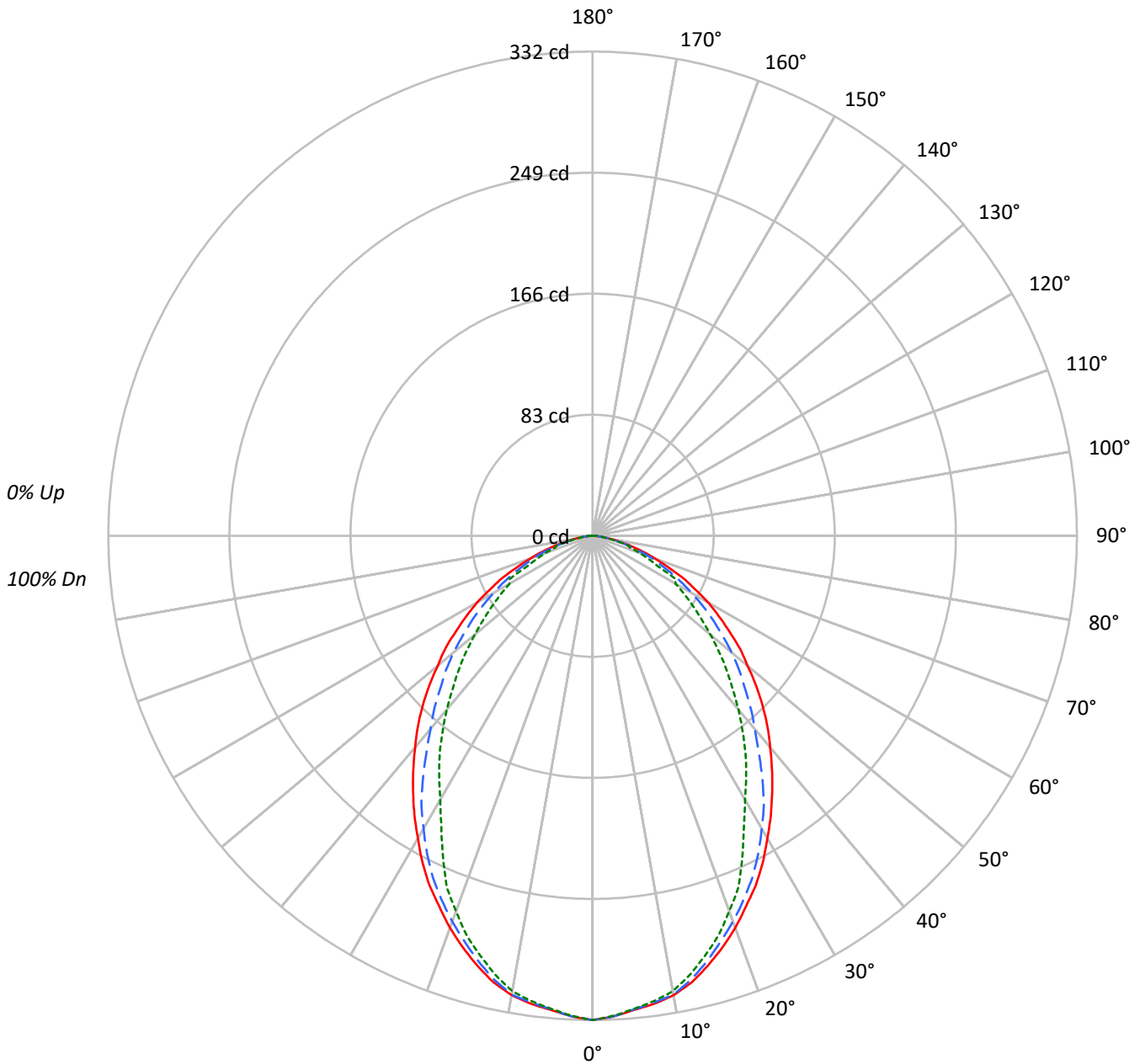
Lumens per Lamp: N/A
Luminaire Lumens: 652.0 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
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°	3575	3575	3575
5°	3527	3522	3518
10°	3495	3491	3466
15°	3401	3368	3320
20°	3276	3223	3136
25°	3141	3074	2882
30°	2978	2882	2596
35°	2820	2664	2402
40°	2660	2428	2185
45°	2507	2244	1976
50°	2321	2083	1762
55°	2147	1888	1578
60°	1968	1686	1414
65°	1732	1477	1251
70°	1426	1293	1064
75°	1135	990	1040
80°	762	713	669
85°	469	568	667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.9	4.7
10°-20°	84.8	13.0
20°-30°	117.5	18.0
30°-40°	125.3	19.2
40°-50°	114.3	17.5
50°-60°	89.5	13.7
60°-70°	58.3	8.9
70°-80°	25.8	4.0
80°-90°	5.6	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°	233.2	35.8
0°-40°	358.5	55.0
0°-60°	562.3	86.2
0°-90°	652.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	652.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	332	332	332	332	332	
5°	326	326	326	326	326	31
15°	305	305	302	299	298	86
25°	264	263	259	250	243	121
35°	215	213	203	187	183	134
45°	165	161	147	135	130	127
55°	114	111	101	89	84	103
65°	68	64	58	59	49	67
75°	27	25	24	23	25	29
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	332.1	332.1	332.1	332.1	332.1
2.5°	329.8	329.8	329.8	329.4	329.4
5°	326.4	326.0	326.0	325.6	325.6
7.5°	323.7	323.3	322.9	322.5	321.8
10°	319.8	319.8	319.4	317.5	317.1
12.5°	313.7	313.3	311.8	309.1	308.3
15°	305.2	305.2	302.2	299.1	297.9
17.5°	296.0	295.6	291.8	288.7	287.2
20°	286.0	285.3	281.4	276.4	273.8
22.5°	274.9	274.9	270.3	263.8	261.1
25°	264.5	263.0	258.8	249.6	242.7
27.5°	252.6	250.3	245.7	232.7	224.6
30°	239.6	238.4	231.9	215.0	208.9
32.5°	227.3	225.4	218.5	200.8	195.8
35°	214.6	213.1	202.7	187.4	182.8
37.5°	202.0	200.0	187.0	174.7	168.9
40°	189.3	187.0	172.8	161.6	155.5
42.5°	177.4	174.3	160.5	148.6	141.7
45°	164.7	161.3	147.4	135.2	129.8
47.5°	152.0	149.0	136.3	123.6	117.5
50°	138.6	135.9	124.4	111.7	105.2
52.5°	127.5	123.2	112.1	99.4	94.1
55°	114.4	111.0	100.6	88.7	84.1
57.5°	102.5	99.1	89.5	78.3	74.5
60°	91.4	86.4	78.3	68.7	65.7
62.5°	79.1	75.3	68.3	60.3	64.1
65°	68.0	64.1	58.0	59.1	49.1
67.5°	55.7	53.8	48.4	43.0	41.5
70°	45.3	43.0	41.1	35.3	33.8
72.5°	36.1	33.8	31.1	28.0	26.9
75°	27.3	25.3	23.8	22.7	25.0
77.5°	18.8	18.0	16.9	15.7	15.4
80°	12.3	11.9	11.5	11.1	10.8
82.5°	7.3	7.3	7.3	7.3	7.3
85°	3.8	4.2	4.6	5.0	5.4
87.5°	2.3	2.3	2.7	3.1	3.5
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)