

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: P544914

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-93-87-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: P544914
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-40-UNV-93-87-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

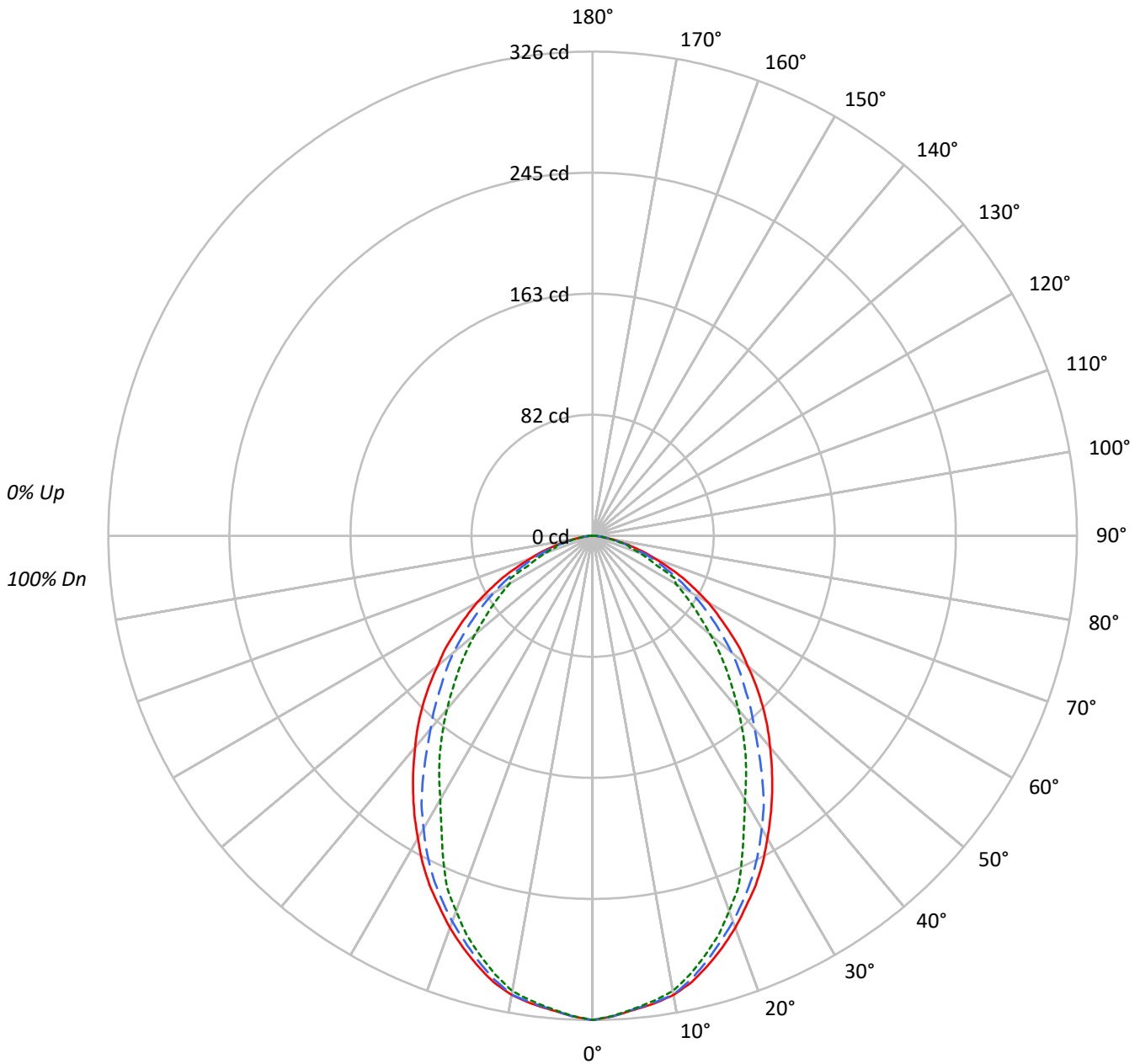
Lumens per Lamp: N/A
Luminaire Lumens: 640.0 lumens
Efficiency: N/A
Efficacy: 77.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
Input Voltage (V): NR
Input Current (A_{in}): 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°	3509	3509	3509
5°	3462	3458	3453
10°	3431	3428	3402
15°	3339	3305	3260
20°	3216	3165	3078
25°	3084	3017	2829
30°	2923	2829	2548
35°	2769	2615	2357
40°	2611	2383	2144
45°	2461	2203	1939
50°	2279	2045	1730
55°	2107	1852	1548
60°	1931	1655	1386
65°	1699	1449	1228
70°	1400	1268	1045
75°	1115	973	1019
80°	750	700	657
85°	469	556	655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.3	4.7
10°-20°	83.3	13.0
20°-30°	115.3	18.0
30°-40°	122.9	19.2
40°-50°	112.2	17.5
50°-60°	87.9	13.7
60°-70°	57.3	8.9
70°-80°	25.4	4.0
80°-90°	5.5	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°	228.9	35.8
0°-40°	351.9	55.0
0°-60°	551.9	86.2
0°-90°	640.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	640.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	326	326	326	326	326	
5°	320	320	320	320	320	30
15°	300	300	297	294	292	84
25°	260	258	254	245	238	119
35°	211	209	199	184	179	132
45°	162	158	145	133	127	125
55°	112	109	99	87	82	101
65°	67	63	57	58	48	66
75°	27	25	23	22	24	29
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	326.0	326.0	326.0	326.0	326.0
2.5°	323.7	323.7	323.7	323.4	323.4
5°	320.4	320.0	320.0	319.6	319.6
7.5°	317.7	317.3	317.0	316.6	315.8
10°	313.9	313.9	313.6	311.7	311.3
12.5°	307.9	307.5	306.0	303.4	302.6
15°	299.6	299.6	296.6	293.6	292.5
17.5°	290.6	290.2	286.4	283.4	281.9
20°	280.8	280.0	276.3	271.4	268.7
22.5°	269.9	269.9	265.3	258.9	256.3
25°	259.7	258.2	254.0	245.0	238.2
27.5°	248.0	245.7	241.2	228.4	220.5
30°	235.2	234.0	227.6	211.1	205.0
32.5°	223.1	221.2	214.4	197.1	192.2
35°	210.7	209.2	199.0	183.9	179.4
37.5°	198.2	196.4	183.5	171.5	165.8
40°	185.8	183.5	169.6	158.7	152.6
42.5°	174.1	171.1	157.5	145.9	139.1
45°	161.7	158.3	144.7	132.7	127.4
47.5°	149.2	146.2	133.8	121.4	115.3
50°	136.1	133.4	122.1	109.7	103.3
52.5°	125.1	121.0	110.1	97.6	92.3
55°	112.3	108.9	98.7	87.1	82.5
57.5°	100.6	97.2	87.8	76.9	73.1
60°	89.7	84.8	76.9	67.5	64.4
62.5°	77.6	73.9	67.1	59.2	62.9
65°	66.7	62.9	56.9	58.0	48.2
67.5°	54.6	52.8	47.5	42.2	40.7
70°	44.5	42.2	40.3	34.7	33.2
72.5°	35.4	33.2	30.5	27.5	26.4
75°	26.8	24.9	23.4	22.2	24.5
77.5°	18.5	17.7	16.6	15.5	15.1
80°	12.1	11.7	11.3	10.9	10.6
82.5°	7.2	7.2	7.2	7.2	7.2
85°	3.8	4.1	4.5	4.9	5.3
87.5°	2.3	2.3	2.6	3.0	3.4
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)