

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: P545104

Luminaire Tested: **FMR-12-1-LD4-2LO-40-UNV-93-85-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: P545104
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-LD4-2LO-40-UNV-93-85-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

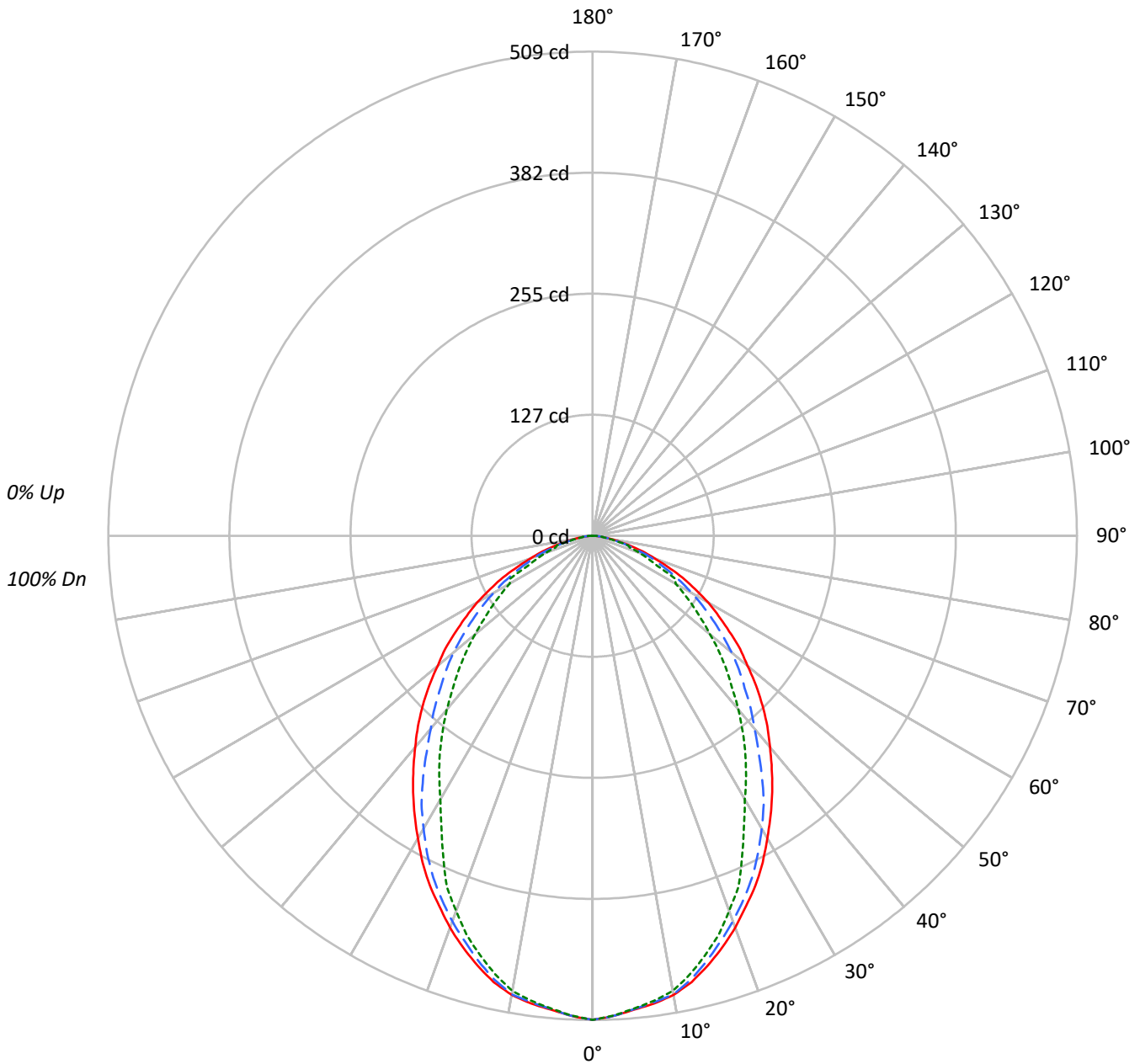
Lumens per Lamp: N/A
Luminaire Lumens: 999.0 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	5478	5478	5478
5°	5404	5397	5391
10°	5357	5350	5311
15°	5212	5159	5087
20°	5021	4939	4805
25°	4814	4709	4416
30°	4563	4416	3977
35°	4322	4081	3679
40°	4075	3719	3348
45°	3842	3439	3026
50°	3557	3192	2699
55°	3290	2892	2417
60°	3014	2583	2166
65°	2651	2262	1918
70°	2184	1980	1630
75°	1738	1518	1589
80°	1165	1091	1023
85°	729	877	1013



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.4	4.7
10°-20°	130.0	13.0
20°-30°	180.0	18.0
30°-40°	191.9	19.2
40°-50°	175.1	17.5
50°-60°	137.2	13.7
60°-70°	89.4	8.9
70°-80°	39.6	4.0
80°-90°	8.5	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°	357.4	35.8
0°-40°	549.3	55.0
0°-60°	861.5	86.2
0°-90°	999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	500	500	500	499	499	47
15°	468	468	463	458	456	131
25°	405	403	396	382	372	186
35°	329	326	311	287	280	206
45°	252	247	226	207	199	194
55°	175	170	154	136	129	157
65°	104	98	89	91	75	103
75°	42	39	36	35	38	45
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	508.9	508.9	508.9	508.9	508.9
2.5°	505.3	505.3	505.3	504.8	504.8
5°	500.1	499.5	499.5	498.9	498.9
7.5°	495.9	495.3	494.8	494.2	493.0
10°	490.1	490.1	489.5	486.5	485.9
12.5°	480.6	480.1	477.7	473.6	472.4
15°	467.7	467.7	463.0	458.3	456.5
17.5°	453.6	453.0	447.1	442.4	440.0
20°	438.3	437.1	431.2	423.6	419.5
22.5°	421.2	421.2	414.2	404.2	400.0
25°	405.3	403.0	396.5	382.4	371.8
27.5°	387.1	383.6	376.5	356.5	344.2
30°	367.1	365.3	355.3	329.4	320.0
32.5°	348.3	345.3	334.7	307.7	300.0
35°	328.9	326.5	310.6	287.1	280.0
37.5°	309.4	306.5	286.5	267.7	258.9
40°	290.0	286.5	264.7	247.7	238.3
42.5°	271.8	267.1	245.9	227.7	217.1
45°	252.4	247.1	225.9	207.1	198.8
47.5°	233.0	228.3	208.8	189.4	180.0
50°	212.4	208.3	190.6	171.2	161.2
52.5°	195.3	188.8	171.8	152.4	144.1
55°	175.3	170.0	154.1	135.9	128.8
57.5°	157.1	151.8	137.1	120.0	114.1
60°	140.0	132.4	120.0	105.3	100.6
62.5°	121.2	115.3	104.7	92.4	98.2
65°	104.1	98.2	88.8	90.6	75.3
67.5°	85.3	82.4	74.1	65.9	63.5
70°	69.4	65.9	62.9	54.1	51.8
72.5°	55.3	51.8	47.7	42.9	41.2
75°	41.8	38.8	36.5	34.7	38.2
77.5°	28.8	27.6	25.9	24.1	23.5
80°	18.8	18.2	17.6	17.1	16.5
82.5°	11.2	11.2	11.2	11.2	11.2
85°	5.9	6.5	7.1	7.6	8.2
87.5°	3.5	3.5	4.1	4.7	5.3
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)