

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: P544805

Luminaire Tested: **FMR-12-1-LD4-1LO-40-UNV-81-96-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: P544805
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-LD4-1LO-40-UNV-81-96-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

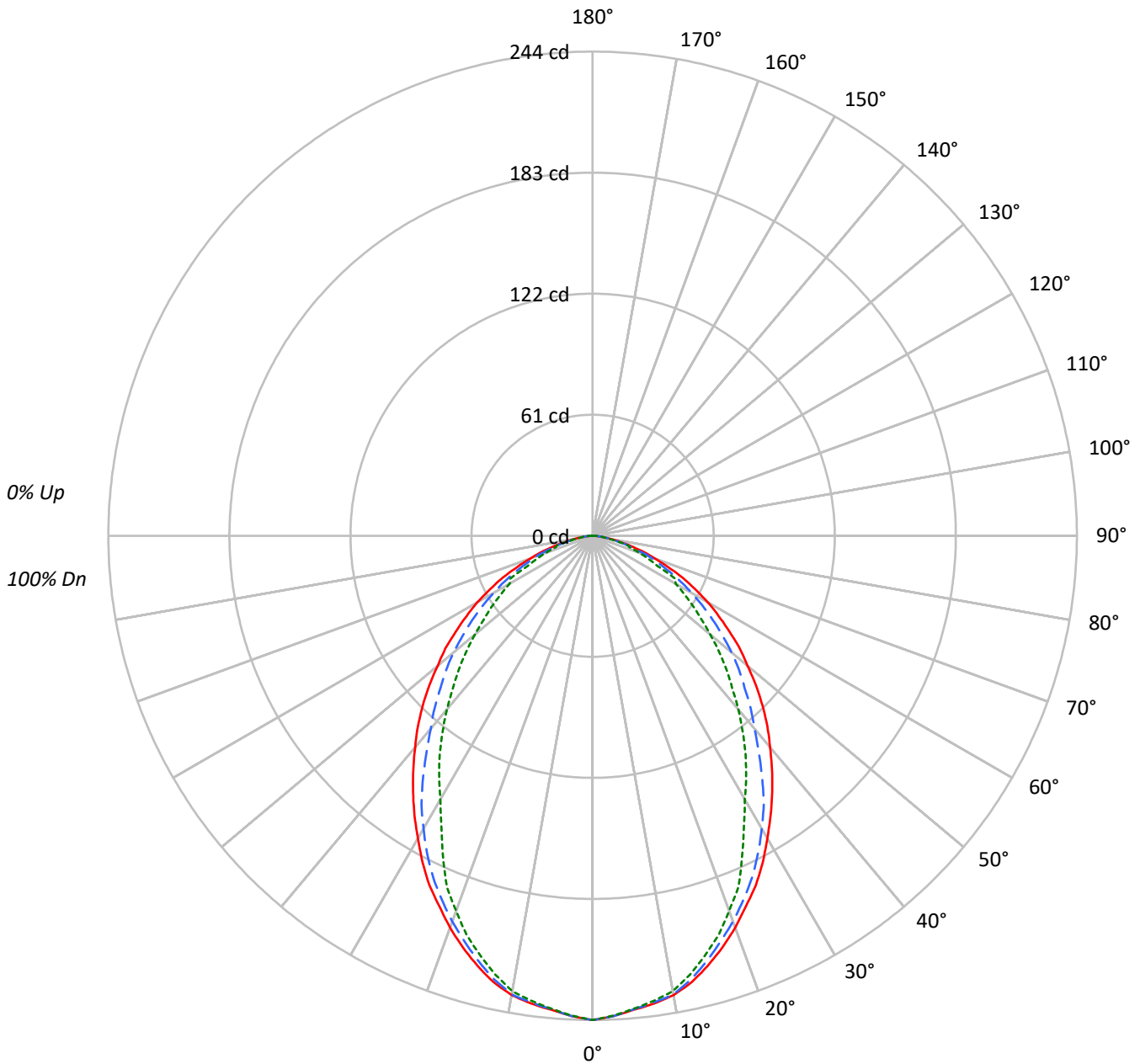
Lumens per Lamp: N/A
Luminaire Lumens: 479.0 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 5.8
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°	2626	2626	2626
5°	2591	2588	2585
10°	2569	2565	2547
15°	2500	2474	2439
20°	2407	2369	2304
25°	2309	2258	2118
30°	2188	2118	1907
35°	2072	1957	1765
40°	1955	1783	1605
45°	1842	1649	1451
50°	1705	1531	1294
55°	1578	1387	1160
60°	1445	1238	1038
65°	1271	1085	919
70°	1048	950	780
75°	832	728	761
80°	558	527	490
85°	346	420	482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.7	4.7
10°-20°	62.3	13.0
20°-30°	86.3	18.0
30°-40°	92.0	19.2
40°-50°	83.9	17.5
50°-60°	65.8	13.7
60°-70°	42.9	8.9
70°-80°	19.0	4.0
80°-90°	4.1	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°	171.3	35.8
0°-40°	263.4	55.0
0°-60°	413.1	86.2
0°-90°	479.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	479.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	244	244	244	244	244	
5°	240	240	240	239	239	23
15°	224	224	222	220	219	63
25°	194	193	190	183	178	89
35°	158	157	149	138	134	99
45°	121	118	108	99	95	93
55°	84	82	74	65	62	75
65°	50	47	43	43	36	49
75°	20	19	18	17	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	244.0	244.0	244.0	244.0	244.0
2.5°	242.3	242.3	242.3	242.0	242.0
5°	239.8	239.5	239.5	239.2	239.2
7.5°	237.8	237.5	237.2	236.9	236.4
10°	235.0	235.0	234.7	233.3	233.0
12.5°	230.5	230.2	229.0	227.1	226.5
15°	224.3	224.3	222.0	219.7	218.9
17.5°	217.5	217.2	214.4	212.1	211.0
20°	210.1	209.6	206.8	203.1	201.1
22.5°	202.0	202.0	198.6	193.8	191.8
25°	194.4	193.2	190.1	183.3	178.3
27.5°	185.6	183.9	180.5	170.9	165.0
30°	176.0	175.2	170.4	158.0	153.4
32.5°	167.0	165.6	160.5	147.5	143.9
35°	157.7	156.6	148.9	137.7	134.3
37.5°	148.4	147.0	137.4	128.3	124.1
40°	139.1	137.4	126.9	118.8	114.2
42.5°	130.3	128.1	117.9	109.2	104.1
45°	121.0	118.5	108.3	99.3	95.3
47.5°	111.7	109.4	100.1	90.8	86.3
50°	101.8	99.9	91.4	82.1	77.3
52.5°	93.6	90.5	82.4	73.1	69.1
55°	84.1	81.5	73.9	65.2	61.8
57.5°	75.3	72.8	65.7	57.5	54.7
60°	67.1	63.5	57.5	50.5	48.2
62.5°	58.1	55.3	50.2	44.3	47.1
65°	49.9	47.1	42.6	43.4	36.1
67.5°	40.9	39.5	35.5	31.6	30.5
70°	33.3	31.6	30.2	26.0	24.8
72.5°	26.5	24.8	22.8	20.6	19.7
75°	20.0	18.6	17.5	16.6	18.3
77.5°	13.8	13.3	12.4	11.6	11.3
80°	9.0	8.7	8.5	8.2	7.9
82.5°	5.4	5.4	5.4	5.4	5.4
85°	2.8	3.1	3.4	3.7	3.9
87.5°	1.7	1.7	2.0	2.3	2.5
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)