

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: P544812

Luminaire Tested: **FMR-12-1-LD4-1LO-40-UNV-82-94-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: P544812
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-82-94-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

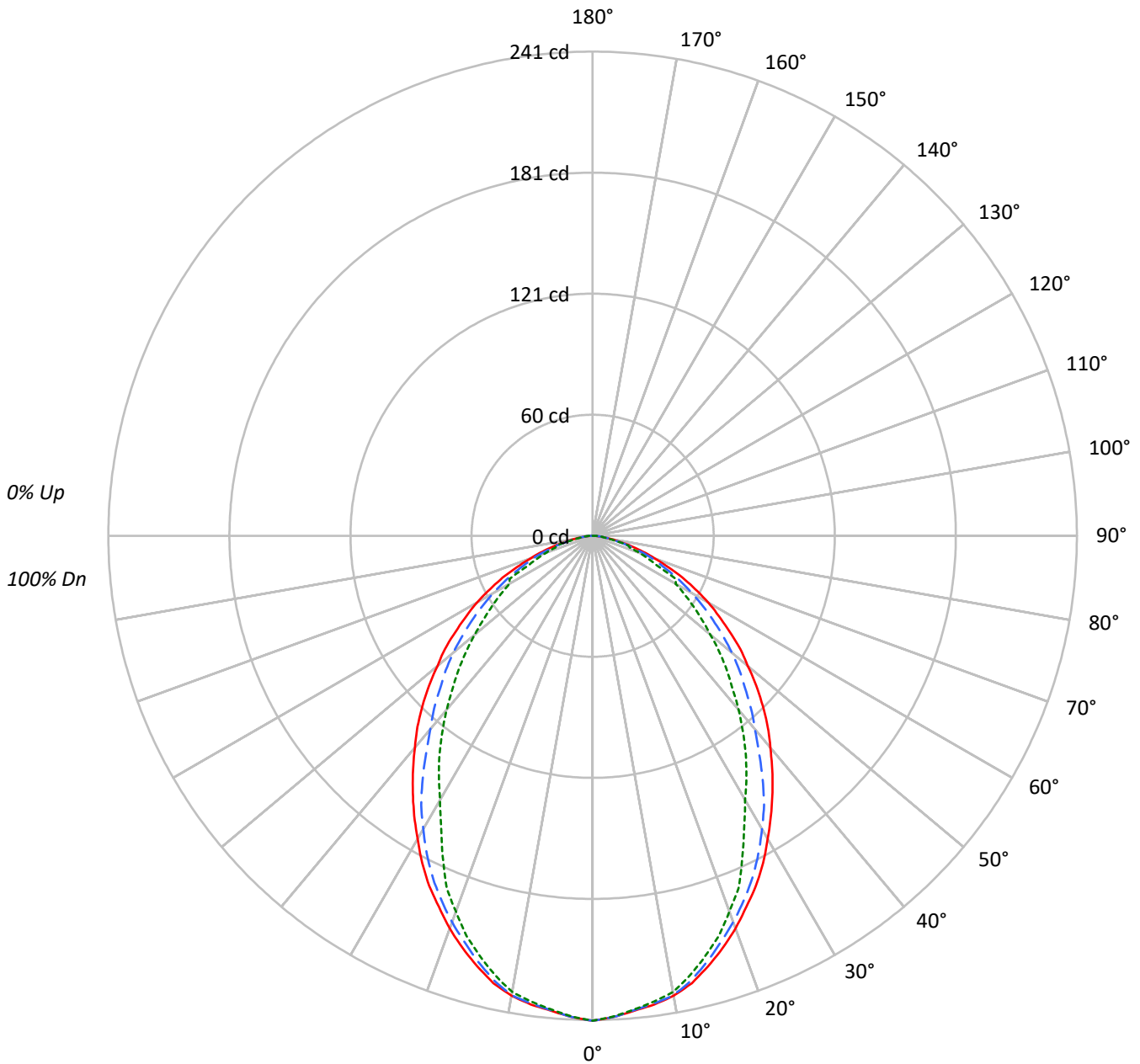
Lumens per Lamp: N/A
Luminaire Lumens: 474.0 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 5.8
Input Voltage (V): NR
Input Current (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°	2598	2598	2598
5°	2564	2561	2558
10°	2541	2538	2520
15°	2473	2448	2414
20°	2383	2344	2279
25°	2284	2234	2095
30°	2165	2096	1887
35°	2050	1937	1746
40°	1933	1765	1588
45°	1822	1632	1435
50°	1688	1514	1281
55°	1561	1372	1147
60°	1429	1225	1027
65°	1258	1072	909
70°	1035	941	774
75°	823	719	753
80°	552	521	483
85°	346	408	482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.5	4.7
10°-20°	61.7	13.0
20°-30°	85.4	18.0
30°-40°	91.1	19.2
40°-50°	83.1	17.5
50°-60°	65.1	13.7
60°-70°	42.4	8.9
70°-80°	18.8	4.0
80°-90°	4.0	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°	169.6	35.8
0°-40°	260.6	55.0
0°-60°	408.7	86.2
0°-90°	474.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	474.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	241	241	241	241	241	
5°	237	237	237	237	237	23
15°	222	222	220	217	217	62
25°	192	191	188	181	176	88
35°	156	155	147	136	133	98
45°	120	117	107	98	94	92
55°	83	81	73	64	61	75
65°	49	47	42	43	36	49
75°	20	18	17	16	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°	241.4	241.4	241.4	241.4	241.4
2.5°	239.8	239.8	239.8	239.5	239.5
5°	237.3	237.0	237.0	236.7	236.7
7.5°	235.3	235.0	234.8	234.5	233.9
10°	232.5	232.5	232.2	230.8	230.6
12.5°	228.1	227.8	226.7	224.7	224.1
15°	221.9	221.9	219.7	217.4	216.6
17.5°	215.2	214.9	212.1	209.9	208.8
20°	208.0	207.4	204.6	201.0	199.0
22.5°	199.9	199.9	196.5	191.8	189.8
25°	192.3	191.2	188.1	181.4	176.4
27.5°	183.7	182.0	178.6	169.2	163.3
30°	174.2	173.3	168.6	156.3	151.8
32.5°	165.2	163.9	158.8	146.0	142.4
35°	156.0	154.9	147.4	136.2	132.9
37.5°	146.8	145.4	135.9	127.0	122.8
40°	137.6	135.9	125.6	117.5	113.0
42.5°	129.0	126.7	116.7	108.0	103.0
45°	119.7	117.2	107.2	98.3	94.3
47.5°	110.5	108.3	99.1	89.9	85.4
50°	100.8	98.8	90.4	81.2	76.5
52.5°	92.7	89.6	81.5	72.3	68.4
55°	83.2	80.7	73.1	64.5	61.1
57.5°	74.5	72.0	65.0	56.9	54.2
60°	66.4	62.8	56.9	50.0	47.7
62.5°	57.5	54.7	49.7	43.8	46.6
65°	49.4	46.6	42.1	43.0	35.7
67.5°	40.5	39.1	35.2	31.3	30.1
70°	32.9	31.3	29.9	25.7	24.6
72.5°	26.2	24.6	22.6	20.4	19.5
75°	19.8	18.4	17.3	16.5	18.1
77.5°	13.7	13.1	12.3	11.4	11.2
80°	8.9	8.7	8.4	8.1	7.8
82.5°	5.3	5.3	5.3	5.3	5.3
85°	2.8	3.1	3.3	3.6	3.9
87.5°	1.7	1.7	2.0	2.2	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)