

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: P544800

Luminaire Tested: **FMR-12-1-LD4-1LO-40-UNV-81-85-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: P544800
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-81-85-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC 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

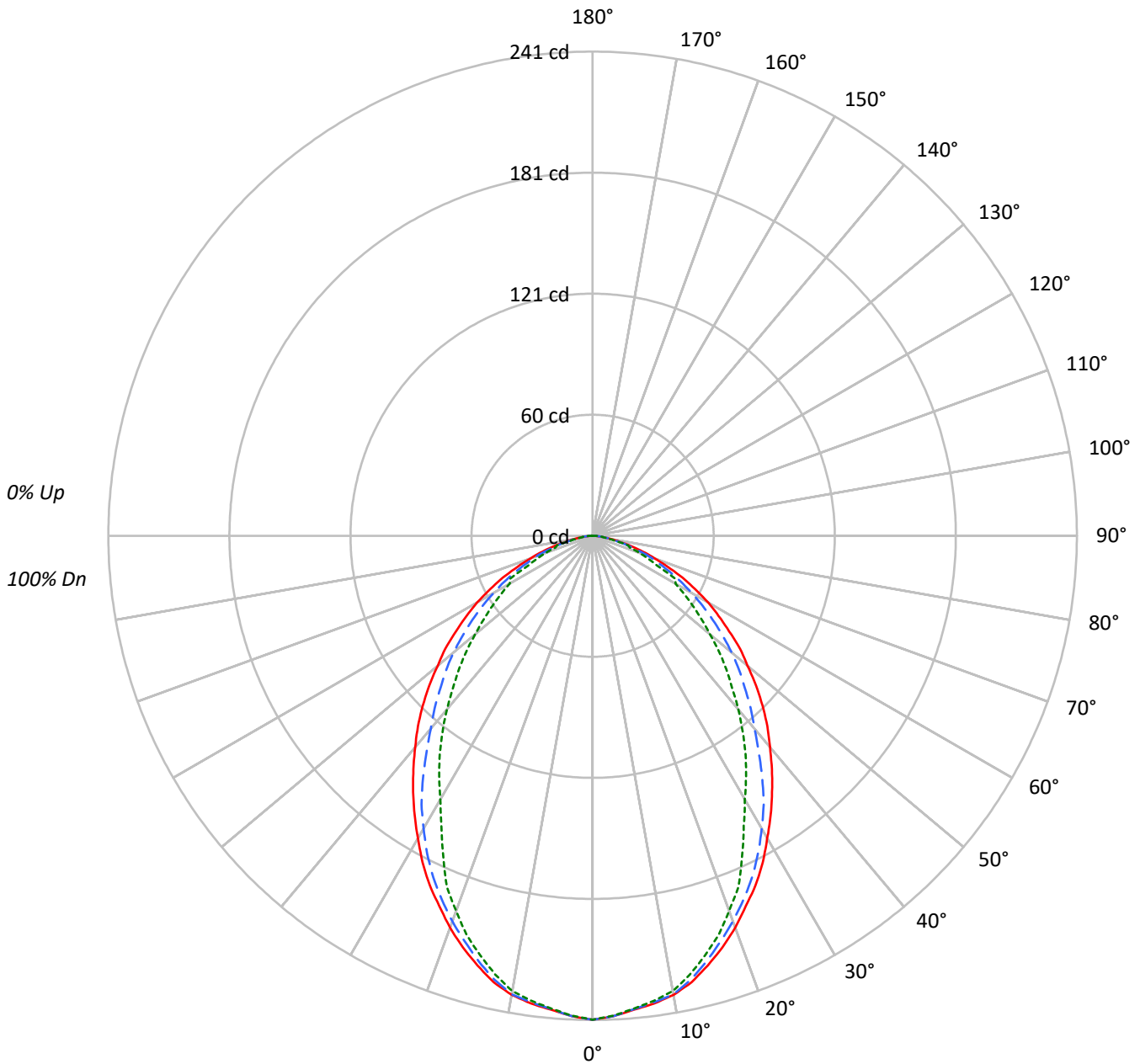
Lumens per Lamp: N/A
Luminaire Lumens: 473.0 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 5.8
Input Voltage (V): NR
Input Current (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°	2593	2593	2593
5°	2559	2555	2552
10°	2536	2532	2515
15°	2467	2443	2408
20°	2377	2339	2275
25°	2279	2229	2090
30°	2160	2091	1883
35°	2046	1933	1742
40°	1929	1761	1585
45°	1819	1629	1432
50°	1685	1510	1278
55°	1558	1370	1145
60°	1427	1223	1025
65°	1256	1072	909
70°	1035	938	771
75°	823	719	753
80°	552	521	483
85°	346	408	482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.4	4.7
10°-20°	61.6	13.0
20°-30°	85.2	18.0
30°-40°	90.9	19.2
40°-50°	82.9	17.5
50°-60°	64.9	13.7
60°-70°	42.3	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°	169.2	35.8
0°-40°	260.1	55.0
0°-60°	407.9	86.2
0°-90°	473.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	473.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	241	241	241	241	241	
5°	237	236	236	236	236	22
15°	221	221	219	217	216	62
25°	192	191	188	181	176	88
35°	156	155	147	136	133	97
45°	120	117	107	98	94	92
55°	83	80	73	64	61	74
65°	49	46	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°	240.9	240.9	240.9	240.9	240.9
2.5°	239.3	239.3	239.3	239.0	239.0
5°	236.8	236.5	236.5	236.2	236.2
7.5°	234.8	234.5	234.3	234.0	233.4
10°	232.0	232.0	231.7	230.4	230.1
12.5°	227.6	227.3	226.2	224.2	223.7
15°	221.4	221.4	219.2	217.0	216.1
17.5°	214.8	214.5	211.7	209.5	208.4
20°	207.5	207.0	204.2	200.6	198.6
22.5°	199.4	199.4	196.1	191.4	189.4
25°	191.9	190.8	187.7	181.1	176.0
27.5°	183.3	181.6	178.3	168.8	162.9
30°	173.8	173.0	168.2	156.0	151.5
32.5°	164.9	163.5	158.5	145.7	142.1
35°	155.7	154.6	147.1	135.9	132.6
37.5°	146.5	145.1	135.7	126.7	122.6
40°	137.3	135.7	125.3	117.3	112.8
42.5°	128.7	126.5	116.4	107.8	102.8
45°	119.5	117.0	107.0	98.0	94.1
47.5°	110.3	108.1	98.9	89.7	85.2
50°	100.6	98.6	90.2	81.1	76.3
52.5°	92.5	89.4	81.3	72.1	68.2
55°	83.0	80.5	73.0	64.3	61.0
57.5°	74.4	71.9	64.9	56.8	54.0
60°	66.3	62.7	56.8	49.9	47.6
62.5°	57.4	54.6	49.6	43.7	46.5
65°	49.3	46.5	42.1	42.9	35.7
67.5°	40.4	39.0	35.1	31.2	30.1
70°	32.9	31.2	29.8	25.6	24.5
72.5°	26.2	24.5	22.6	20.3	19.5
75°	19.8	18.4	17.3	16.4	18.1
77.5°	13.6	13.1	12.3	11.4	11.1
80°	8.9	8.6	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	1.9	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)