

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: P544904

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-82-85-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: P544904
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-82-85-EDD
Description: 1X1 FMR TROFFER WITH .187 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

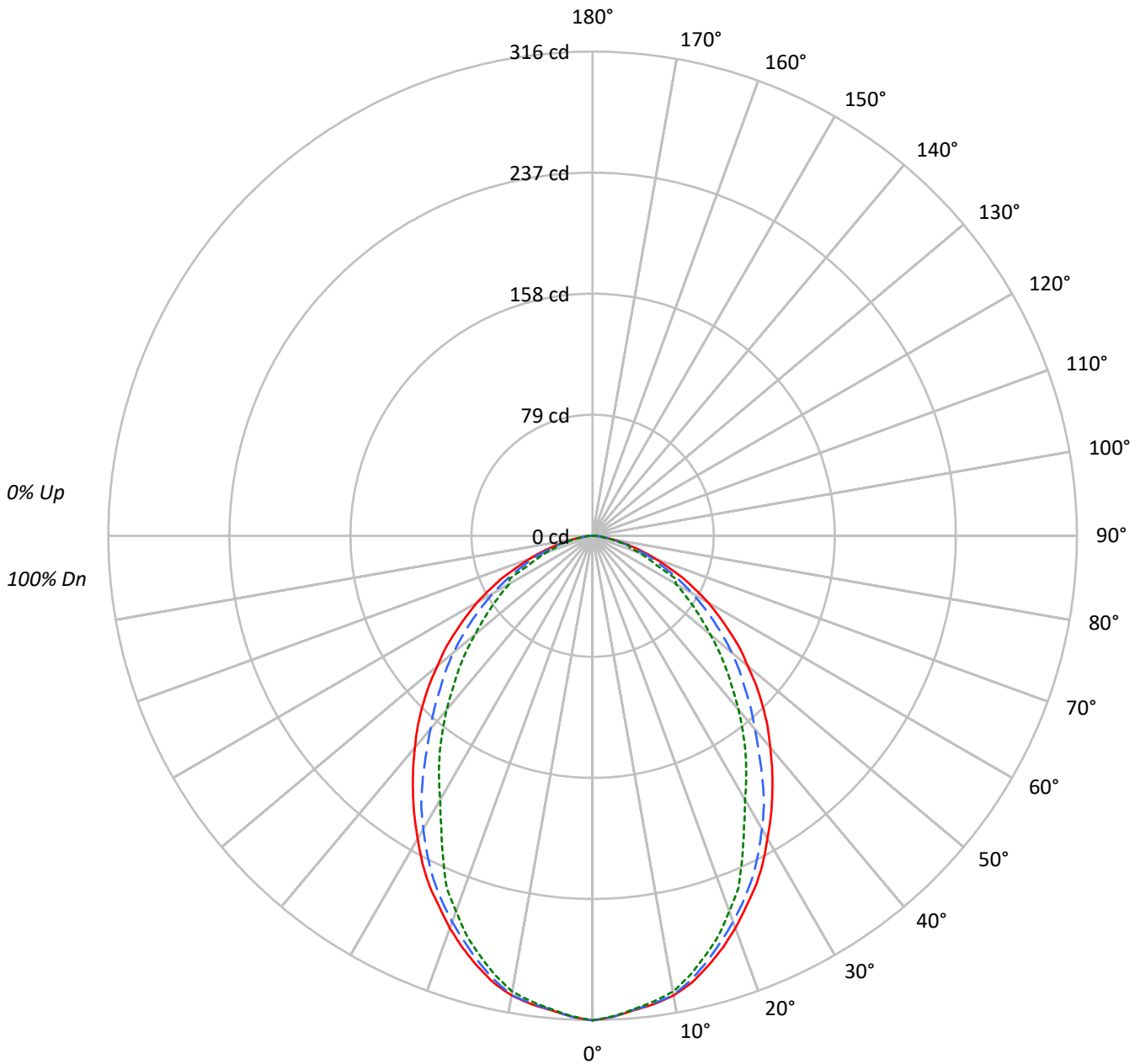
Lumens per Lamp: N/A
Luminaire Lumens: 621.0 lumens
Efficiency: N/A
Efficacy: 74.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P544904

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-85-EDD

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°	3405	3405	3405
5°	3358	3355	3351
10°	3329	3326	3302
15°	3239	3207	3163
20°	3120	3071	2986
25°	2993	2928	2745
30°	2836	2746	2472
35°	2686	2537	2288
40°	2533	2313	2081
45°	2388	2137	1881
50°	2210	1984	1678
55°	2046	1798	1503
60°	1873	1606	1345
65°	1648	1406	1192
70°	1360	1231	1013
75°	1081	944	990
80°	725	682	632
85°	457	543	630



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.4	4.7
10°-20°	80.8	13.0
20°-30°	111.9	18.0
30°-40°	119.3	19.2
40°-50°	108.8	17.5
50°-60°	85.3	13.7
60°-70°	55.6	8.9
70°-80°	24.6	4.0
80°-90°	5.3	0.8
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°	222.1	35.8
0°-40°	341.4	55.0
0°-60°	535.5	86.2
0°-90°	621.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	621.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	316	316	316	316	316	
5°	311	310	310	310	310	30
15°	291	291	288	285	284	82
25°	252	250	246	238	231	116
35°	204	203	193	178	174	128
45°	157	154	140	129	124	121
55°	109	106	96	84	80	98
65°	65	61	55	56	47	64
75°	26	24	23	22	24	28
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°	316.3	316.3	316.3	316.3	316.3
2.5°	314.1	314.1	314.1	313.8	313.8
5°	310.8	310.5	310.5	310.1	310.1
7.5°	308.3	307.9	307.6	307.2	306.5
10°	304.6	304.6	304.3	302.4	302.1
12.5°	298.8	298.4	296.9	294.4	293.7
15°	290.7	290.7	287.8	284.9	283.8
17.5°	282.0	281.6	277.9	275.0	273.5
20°	272.4	271.7	268.1	263.3	260.7
22.5°	261.8	261.8	257.5	251.2	248.7
25°	252.0	250.5	246.5	237.7	231.1
27.5°	240.6	238.4	234.0	221.6	213.9
30°	228.2	227.1	220.9	204.8	198.9
32.5°	216.5	214.7	208.1	191.3	186.5
35°	204.4	203.0	193.1	178.5	174.1
37.5°	192.4	190.5	178.1	166.4	160.9
40°	180.3	178.1	164.6	154.0	148.1
42.5°	169.0	166.0	152.9	141.5	134.9
45°	156.9	153.6	140.4	128.7	123.6
47.5°	144.8	141.9	129.8	117.8	111.9
50°	132.0	129.5	118.5	106.4	100.2
52.5°	121.4	117.4	106.8	94.7	89.6
55°	109.0	105.7	95.8	84.5	80.1
57.5°	97.6	94.4	85.2	74.6	70.9
60°	87.0	82.3	74.6	65.5	62.5
62.5°	75.3	71.7	65.1	57.4	61.1
65°	64.7	61.1	55.2	56.3	46.8
67.5°	53.0	51.2	46.1	41.0	39.5
70°	43.2	41.0	39.1	33.6	32.2
72.5°	34.4	32.2	29.6	26.7	25.6
75°	26.0	24.1	22.7	21.6	23.8
77.5°	17.9	17.2	16.1	15.0	14.6
80°	11.7	11.3	11.0	10.6	10.2
82.5°	6.9	6.9	6.9	6.9	6.9
85°	3.7	4.0	4.4	4.8	5.1
87.5°	2.2	2.2	2.6	2.9	3.3
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)