

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: P544899

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-81-88-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: P544899
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-81-88-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

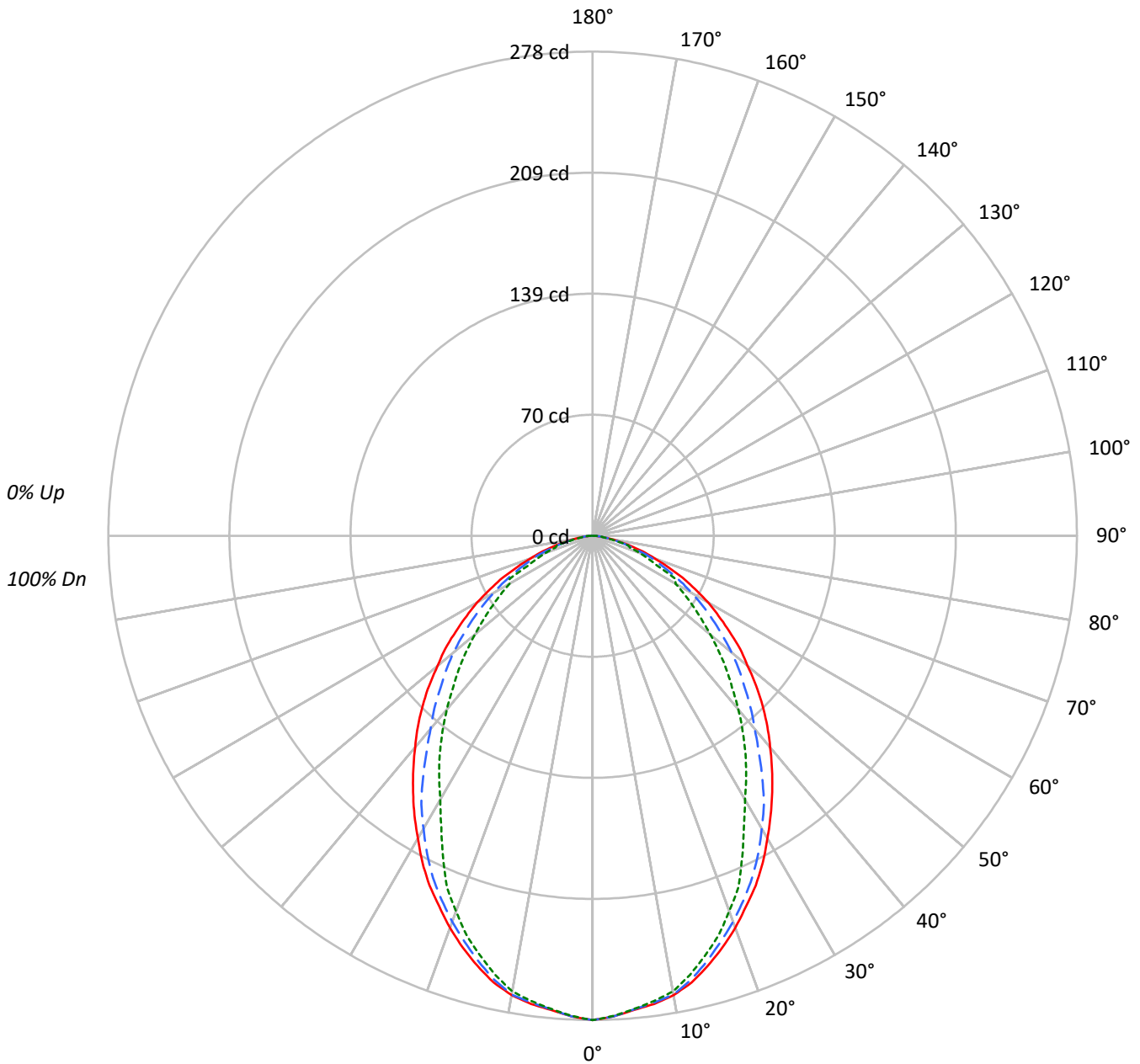
Lumens per Lamp: N/A
Luminaire Lumens: 546.0 lumens
Efficiency: N/A
Efficacy: 65.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
Input Voltage (V): NR
Input Current (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°	2993	2993	2993
5°	2953	2950	2947
10°	2927	2924	2903
15°	2848	2819	2780
20°	2743	2700	2627
25°	2631	2574	2413
30°	2493	2414	2174
35°	2361	2231	2010
40°	2227	2033	1829
45°	2099	1880	1655
50°	1944	1745	1475
55°	1798	1580	1321
60°	1647	1412	1184
65°	1449	1238	1049
70°	1193	1083	891
75°	948	828	869
80°	638	595	558
85°	395	482	556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.9	4.7
10°-20°	71.1	13.0
20°-30°	98.4	18.0
30°-40°	104.9	19.2
40°-50°	95.7	17.5
50°-60°	75.0	13.7
60°-70°	48.9	8.9
70°-80°	21.6	4.0
80°-90°	4.6	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°	195.3	35.8
0°-40°	300.2	55.0
0°-60°	470.8	86.2
0°-90°	546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	546.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	278	278	278	278	278	
5°	273	273	273	273	273	26
15°	256	256	253	250	250	72
25°	222	220	217	209	203	102
35°	180	178	170	157	153	112
45°	138	135	124	113	109	106
55°	96	93	84	74	70	86
65°	57	54	49	50	41	56
75°	23	21	20	19	21	24
85°	3	4	4	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	278.1	278.1	278.1	278.1	278.1
2.5°	276.2	276.2	276.2	275.9	275.9
5°	273.3	273.0	273.0	272.7	272.7
7.5°	271.1	270.7	270.4	270.1	269.4
10°	267.8	267.8	267.5	265.9	265.6
12.5°	262.7	262.4	261.1	258.8	258.2
15°	255.6	255.6	253.0	250.5	249.5
17.5°	247.9	247.6	244.4	241.8	240.5
20°	239.5	238.9	235.7	231.5	229.3
22.5°	230.2	230.2	226.4	220.9	218.6
25°	221.5	220.2	216.7	209.0	203.2
27.5°	211.6	209.6	205.8	194.8	188.1
30°	200.6	199.7	194.2	180.1	174.9
32.5°	190.3	188.7	183.0	168.2	164.0
35°	179.7	178.5	169.8	156.9	153.0
37.5°	169.1	167.5	156.6	146.3	141.5
40°	158.5	156.6	144.7	135.4	130.2
42.5°	148.5	146.0	134.4	124.4	118.6
45°	137.9	135.0	123.5	113.2	108.7
47.5°	127.3	124.8	114.1	103.5	98.4
50°	116.1	113.8	104.2	93.6	88.1
52.5°	106.7	103.2	93.9	83.3	78.8
55°	95.8	92.9	84.2	74.3	70.4
57.5°	85.8	83.0	74.9	65.6	62.4
60°	76.5	72.3	65.6	57.6	55.0
62.5°	66.2	63.0	57.2	50.5	53.7
65°	56.9	53.7	48.6	49.5	41.2
67.5°	46.6	45.0	40.5	36.0	34.7
70°	37.9	36.0	34.4	29.6	28.3
72.5°	30.2	28.3	26.0	23.5	22.5
75°	22.8	21.2	19.9	19.0	20.9
77.5°	15.8	15.1	14.1	13.2	12.9
80°	10.3	10.0	9.6	9.3	9.0
82.5°	6.1	6.1	6.1	6.1	6.1
85°	3.2	3.5	3.9	4.2	4.5
87.5°	1.9	1.9	2.3	2.6	2.9
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)