

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: P545193

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-82-86-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: P545193
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-LD4-2STD-40-UNV-82-86-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

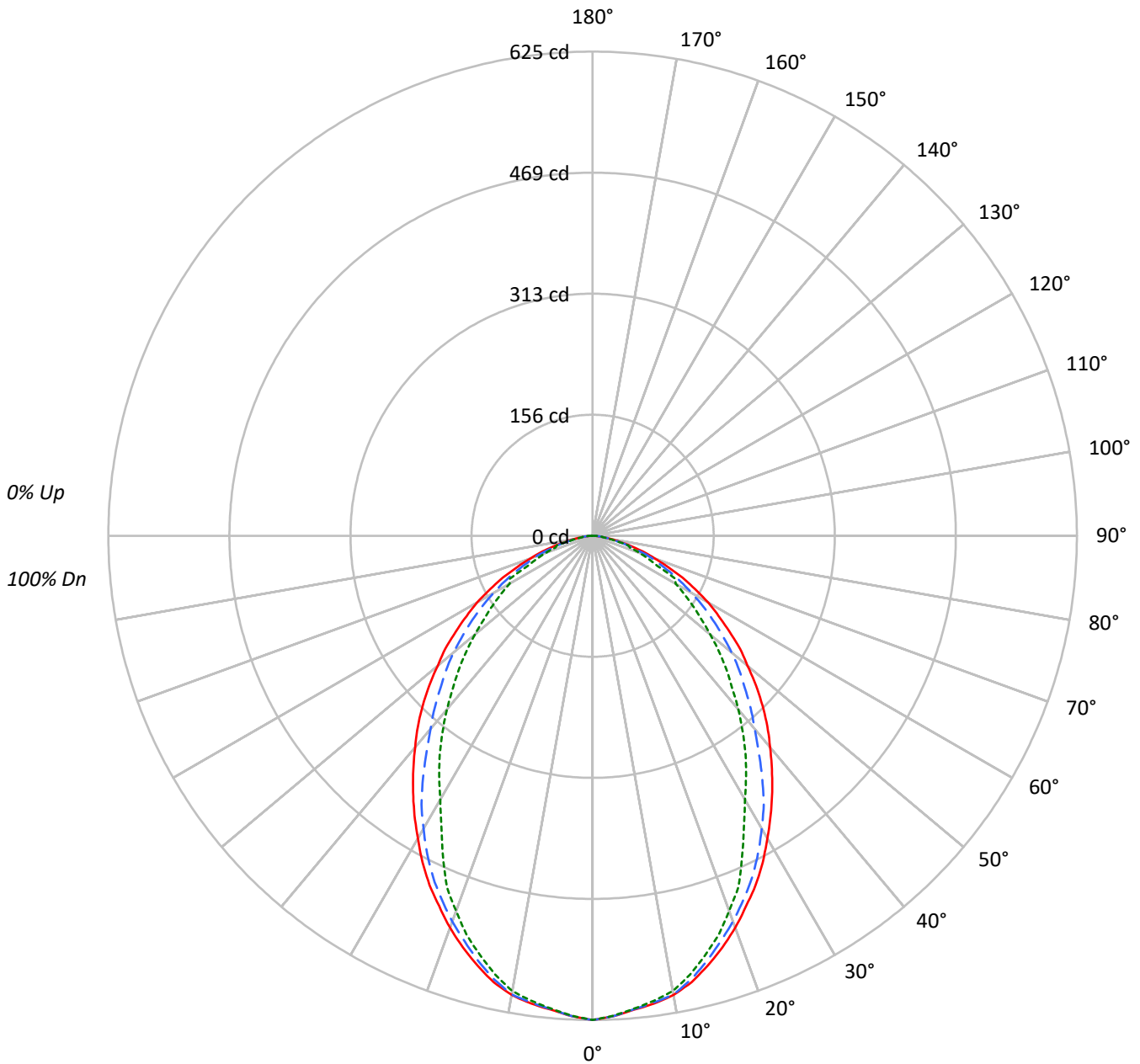
Lumens per Lamp: N/A
Luminaire Lumens: 1227.0 lumens
Efficiency: N/A
Efficacy: 73.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	6727	6727	6727
5°	6636	6629	6620
10°	6579	6571	6523
15°	6401	6337	6248
20°	6166	6066	5901
25°	5912	5784	5424
30°	5604	5424	4886
35°	5307	5013	4519
40°	5005	4569	4111
45°	4719	4224	3717
50°	4367	3920	3316
55°	4040	3552	2969
60°	3703	3173	2661
65°	3258	2779	2356
70°	2685	2433	2002
75°	2133	1863	1955
80°	1432	1345	1252
85°	889	1074	1247



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.2	4.7
10°-20°	159.7	13.0
20°-30°	221.1	18.0
30°-40°	235.7	19.2
40°-50°	215.0	17.5
50°-60°	168.5	13.7
60°-70°	109.8	8.9
70°-80°	48.6	4.0
80°-90°	10.4	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°	438.9	35.8
0°-40°	674.6	55.0
0°-60°	1058.1	86.2
0°-90°	1227.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1227.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	625	625	625	625	625	
5°	614	614	614	613	613	58
15°	574	574	569	563	561	161
25°	498	495	487	470	457	229
35°	404	401	382	353	344	253
45°	310	304	278	254	244	239
55°	215	209	189	167	158	193
65°	128	121	109	111	92	126
75°	51	48	45	43	47	55
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	625.0	625.0	625.0	625.0	625.0
2.5°	620.7	620.7	620.7	620.0	620.0
5°	614.2	613.5	613.5	612.7	612.7
7.5°	609.1	608.4	607.7	607.0	605.5
10°	601.9	601.9	601.2	597.6	596.8
12.5°	590.3	589.6	586.7	581.7	580.2
15°	574.4	574.4	568.7	562.9	560.7
17.5°	557.1	556.4	549.1	543.4	540.5
20°	538.3	536.9	529.6	520.2	515.2
22.5°	517.4	517.4	508.7	496.4	491.3
25°	497.8	495.0	487.0	469.7	456.7
27.5°	475.4	471.1	462.4	437.9	422.7
30°	450.9	448.7	436.4	404.6	393.1
32.5°	427.8	424.1	411.1	377.9	368.5
35°	403.9	401.0	381.5	352.6	343.9
37.5°	380.1	376.5	351.9	328.8	317.9
40°	356.2	351.9	325.2	304.2	292.6
42.5°	333.8	328.0	302.0	279.6	266.6
45°	310.0	303.5	277.5	254.3	244.2
47.5°	286.1	280.4	256.5	232.7	221.1
50°	260.8	255.8	234.1	210.3	198.0
52.5°	239.9	231.9	211.0	187.1	177.0
55°	215.3	208.8	189.3	166.9	158.2
57.5°	192.9	186.4	168.4	147.4	140.2
60°	172.0	162.6	147.4	129.3	123.6
62.5°	148.8	141.6	128.6	113.4	120.7
65°	127.9	120.7	109.1	111.3	92.5
67.5°	104.8	101.2	91.0	80.9	78.0
70°	85.3	80.9	77.3	66.5	63.6
72.5°	67.9	63.6	58.5	52.7	50.6
75°	51.3	47.7	44.8	42.6	47.0
77.5°	35.4	34.0	31.8	29.6	28.9
80°	23.1	22.4	21.7	21.0	20.2
82.5°	13.7	13.7	13.7	13.7	13.7
85°	7.2	7.9	8.7	9.4	10.1
87.5°	4.3	4.3	5.1	5.8	6.5
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)