

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: P545509

Luminaire Tested: **FMR-12-2-LD4-1STD-50-UNV-81-96-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: P545509
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-12-2-LD4-1STD-50-UNV-81-96-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

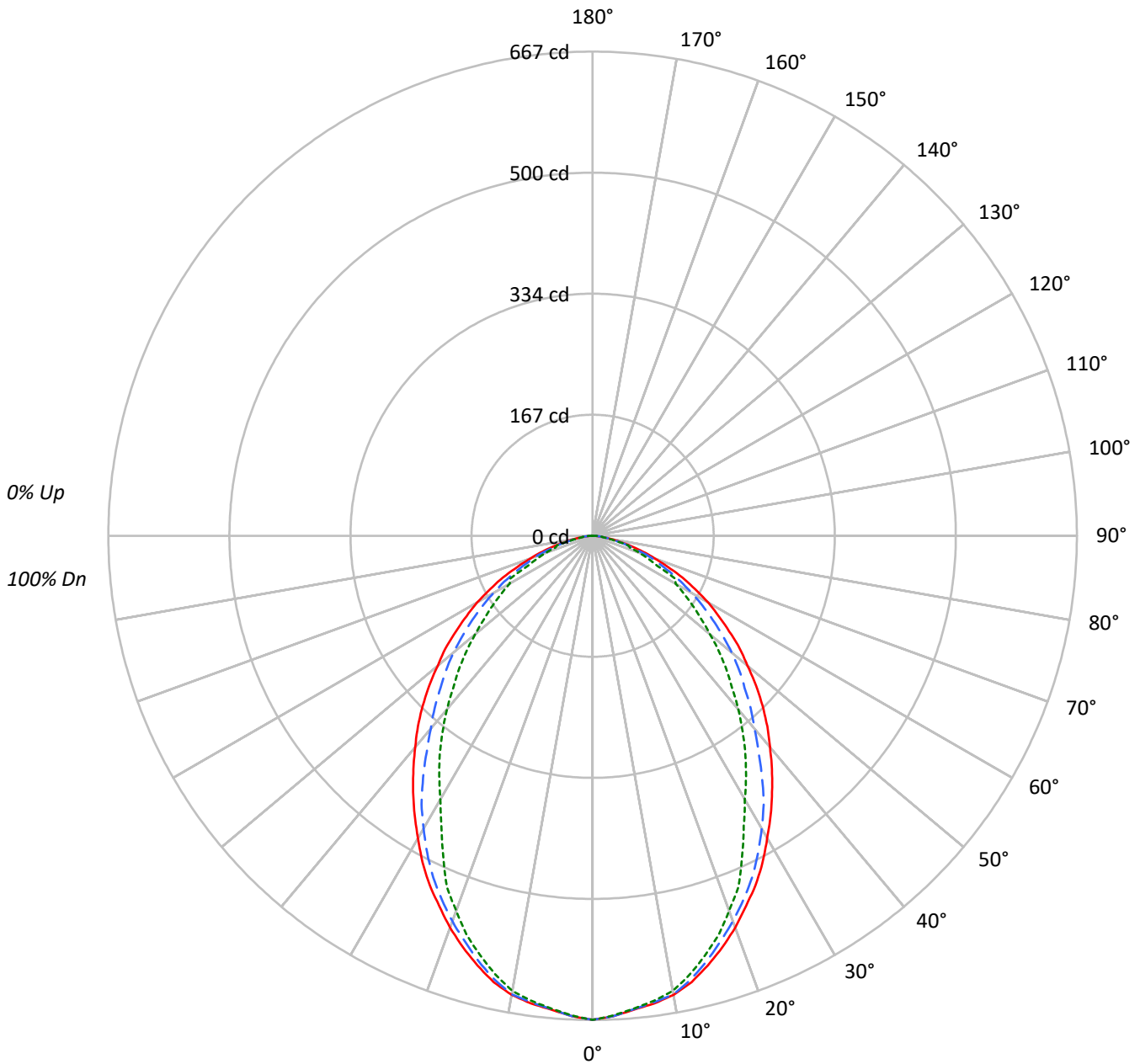
Lumens per Lamp: N/A
Luminaire Lumens: 1309.0 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	3589	3589	3589
5°	3540	3536	3532
10°	3509	3505	3480
15°	3414	3380	3333
20°	3289	3236	3148
25°	3154	3086	2893
30°	2989	2893	2606
35°	2831	2674	2411
40°	2670	2437	2193
45°	2517	2253	1983
50°	2330	2092	1768
55°	2155	1895	1584
60°	1975	1693	1419
65°	1737	1482	1257
70°	1432	1298	1067
75°	1137	994	1042
80°	766	716	669
85°	475	574	667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.1	4.7
10°-20°	170.3	13.0
20°-30°	235.8	18.0
30°-40°	251.5	19.2
40°-50°	229.4	17.5
50°-60°	179.7	13.7
60°-70°	117.1	8.9
70°-80°	51.9	4.0
80°-90°	11.1	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°	468.2	35.8
0°-40°	719.7	55.0
0°-60°	1128.8	86.2
0°-90°	1309.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1309.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	667	667	667	667	667	
5°	655	654	654	654	654	62
15°	613	613	607	600	598	172
25°	531	528	520	501	487	244
35°	431	428	407	376	367	269
45°	331	324	296	271	260	255
55°	230	223	202	178	169	206
65°	136	129	116	119	99	134
75°	55	51	48	46	50	59
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	666.8	666.8	666.8	666.8	666.8
2.5°	662.2	662.2	662.2	661.4	661.4
5°	655.2	654.5	654.5	653.7	653.7
7.5°	649.8	649.1	648.3	647.5	646.0
10°	642.1	642.1	641.3	637.5	636.7
12.5°	629.8	629.0	625.9	620.5	619.0
15°	612.8	612.8	606.7	600.5	598.2
17.5°	594.3	593.6	585.8	579.7	576.6
20°	574.3	572.7	565.0	555.0	549.6
22.5°	551.9	551.9	542.7	529.6	524.2
25°	531.1	528.0	519.6	501.1	487.2
27.5°	507.2	502.6	493.3	467.1	450.9
30°	481.0	478.7	465.6	431.7	419.3
32.5°	456.3	452.5	438.6	403.2	393.1
35°	430.9	427.8	407.0	376.2	366.9
37.5°	405.5	401.6	375.4	350.7	339.2
40°	380.0	375.4	346.9	324.5	312.2
42.5°	356.1	350.0	322.2	298.3	284.4
45°	330.7	323.8	296.0	271.3	260.5
47.5°	305.3	299.1	273.7	248.2	235.9
50°	278.3	272.9	249.8	224.3	211.2
52.5°	255.9	247.4	225.1	199.7	188.9
55°	229.7	222.8	202.0	178.1	168.8
57.5°	205.8	198.9	179.6	157.3	149.5
60°	183.5	173.4	157.3	138.0	131.8
62.5°	158.8	151.1	137.2	121.0	128.7
65°	136.4	128.7	116.4	118.7	98.7
67.5°	111.8	107.9	97.1	86.3	83.3
70°	91.0	86.3	82.5	70.9	67.8
72.5°	72.5	67.8	62.4	56.3	54.0
75°	54.7	50.9	47.8	45.5	50.1
77.5°	37.8	36.2	33.9	31.6	30.8
80°	24.7	23.9	23.1	22.4	21.6
82.5°	14.6	14.6	14.6	14.6	14.6
85°	7.7	8.5	9.3	10.0	10.8
87.5°	4.6	4.6	5.4	6.2	6.9
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)