

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: P545513

Luminaire Tested: **FMR-12-2-LD4-1STD-50-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: P545513
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-82-86-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

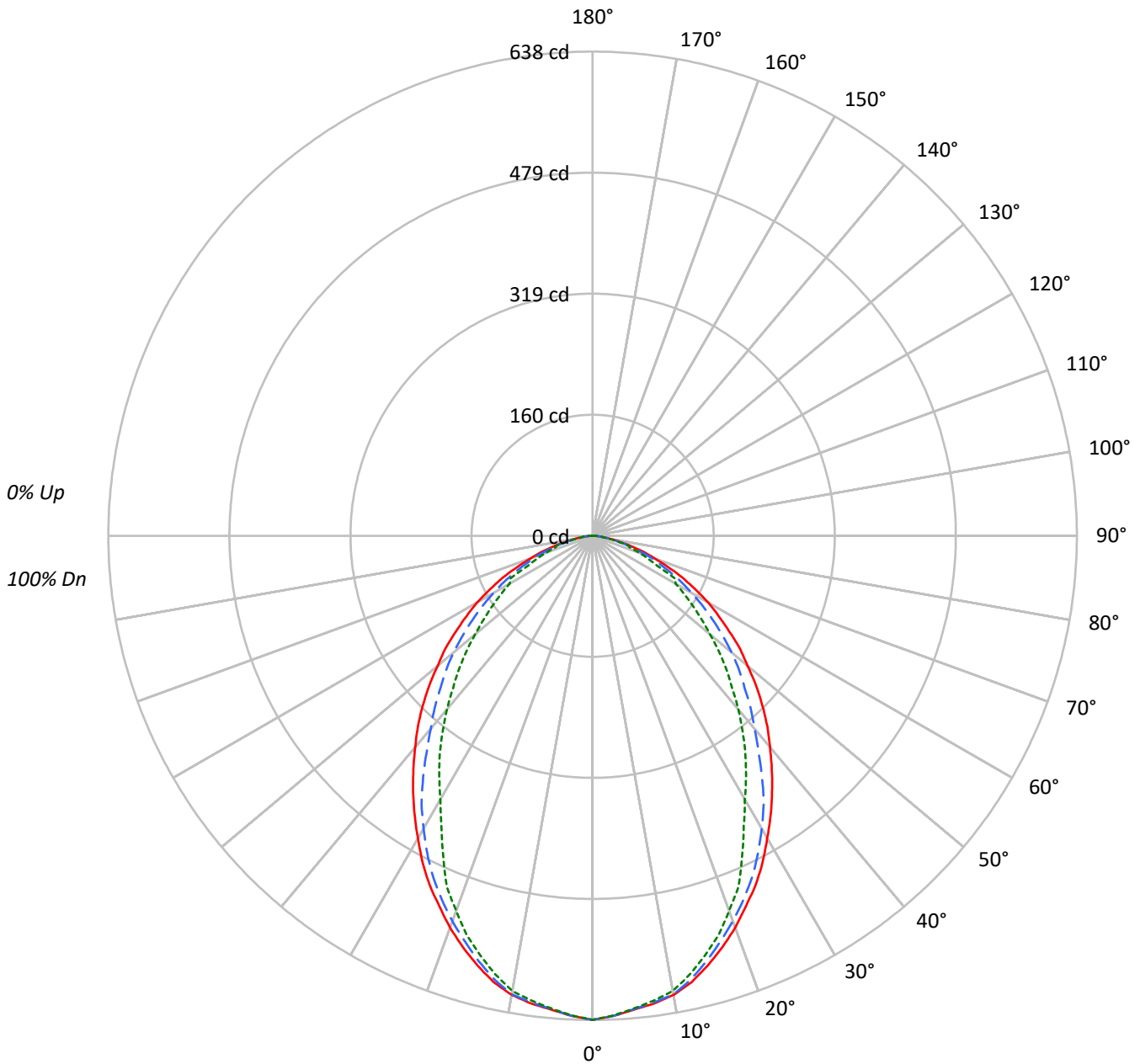
Lumens per Lamp: N/A
Luminaire Lumens: 1252.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	3433	3433	3433
5°	3386	3382	3378
10°	3357	3352	3328
15°	3266	3233	3188
20°	3146	3095	3011
25°	3017	2951	2767
30°	2859	2767	2493
35°	2708	2558	2305
40°	2554	2331	2098
45°	2407	2155	1897
50°	2229	2000	1691
55°	2061	1813	1515
60°	1889	1619	1357
65°	1662	1417	1202
70°	1369	1242	1021
75°	1088	950	996
80°	731	685	638
85°	457	543	636



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.4	4.7
10°-20°	162.9	13.0
20°-30°	225.6	18.0
30°-40°	240.5	19.2
40°-50°	219.4	17.5
50°-60°	171.9	13.7
60°-70°	112.0	8.9
70°-80°	49.6	4.0
80°-90°	10.7	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°	447.8	35.8
0°-40°	688.4	55.0
0°-60°	1079.7	86.2
0°-90°	1252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1252.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	638	638	638	638	638	
5°	627	626	626	625	625	59
15°	586	586	580	574	572	165
25°	508	505	497	479	466	233
35°	412	409	389	360	351	258
45°	316	310	283	260	249	244
55°	220	213	193	170	162	197
65°	130	123	111	114	94	129
75°	52	49	46	44	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	637.8	637.8	637.8	637.8	637.8
2.5°	633.3	633.3	633.3	632.6	632.6
5°	626.7	626.0	626.0	625.2	625.2
7.5°	621.5	620.8	620.1	619.3	617.8
10°	614.2	614.2	613.4	609.7	609.0
12.5°	602.4	601.6	598.7	593.5	592.0
15°	586.1	586.1	580.2	574.3	572.1
17.5°	568.4	567.7	560.3	554.4	551.5
20°	549.3	547.8	540.4	530.8	525.7
22.5°	527.9	527.9	519.0	506.5	501.4
25°	508.0	505.0	496.9	479.2	466.0
27.5°	485.1	480.7	471.9	446.8	431.3
30°	460.1	457.9	445.3	412.9	401.1
32.5°	436.5	432.8	419.5	385.6	376.0
35°	412.1	409.2	389.3	359.8	350.9
37.5°	387.8	384.1	359.1	335.5	324.4
40°	363.5	359.1	331.8	310.4	298.6
42.5°	340.6	334.7	308.2	285.3	272.1
45°	316.3	309.7	283.1	259.5	249.2
47.5°	292.0	286.1	261.7	237.4	225.6
50°	266.2	261.0	238.9	214.6	202.0
52.5°	244.8	236.7	215.3	191.0	180.6
55°	219.7	213.1	193.2	170.3	161.5
57.5°	196.9	190.2	171.8	150.4	143.0
60°	175.5	165.9	150.4	132.0	126.1
62.5°	151.9	144.5	131.2	115.8	123.1
65°	130.5	123.1	111.3	113.5	94.4
67.5°	106.9	103.2	92.9	82.6	79.6
70°	87.0	82.6	78.9	67.8	64.9
72.5°	69.3	64.9	59.7	53.8	51.6
75°	52.3	48.7	45.7	43.5	47.9
77.5°	36.1	34.7	32.4	30.2	29.5
80°	23.6	22.9	22.1	21.4	20.6
82.5°	14.0	14.0	14.0	14.0	14.0
85°	7.4	8.1	8.8	9.6	10.3
87.5°	4.4	4.4	5.2	5.9	6.6
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)