

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: P545712

Luminaire Tested: **FMR-12-2-LD4-2LO-50-UNV-93-85-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: P545712
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-LD4-2LO-50-UNV-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

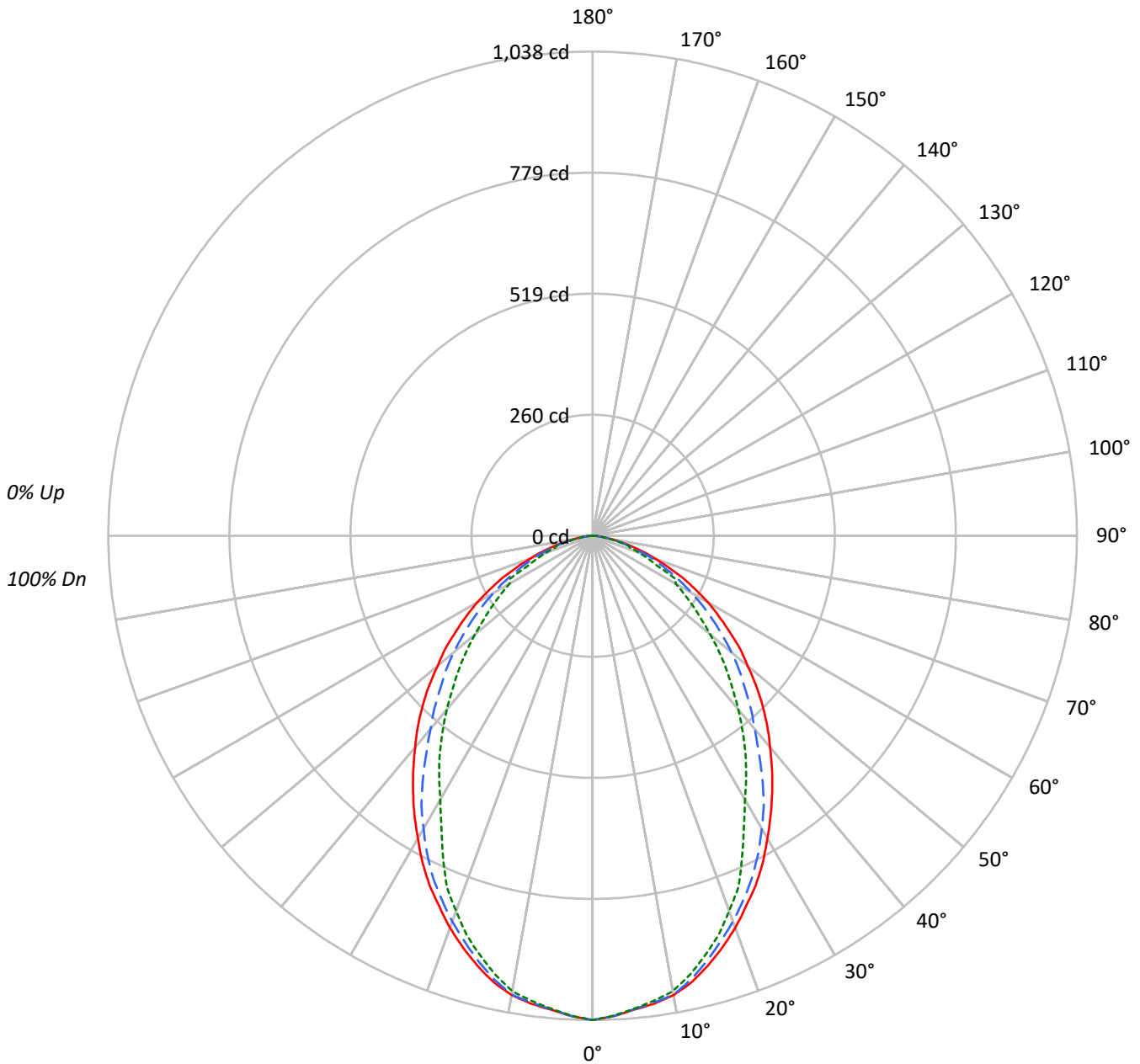
Lumens per Lamp: N/A
Luminaire Lumens: 2038.0 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	5587	5587	5587
5°	5511	5505	5498
10°	5463	5457	5417
15°	5316	5263	5189
20°	5121	5038	4901
25°	4910	4804	4504
30°	4654	4505	4057
35°	4408	4164	3754
40°	4157	3795	3415
45°	3919	3508	3088
50°	3628	3255	2753
55°	3355	2950	2466
60°	3074	2635	2209
65°	2705	2308	1956
70°	2228	2020	1662
75°	1772	1547	1622
80°	1190	1116	1041
85°	741	889	1037



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.6	4.7
10°-20°	265.2	13.0
20°-30°	367.2	18.0
30°-40°	391.5	19.2
40°-50°	357.2	17.5
50°-60°	279.8	13.7
60°-70°	182.3	8.9
70°-80°	80.8	4.0
80°-90°	17.3	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°	729.0	35.8
0°-40°	1120.5	55.0
0°-60°	1757.5	86.2
0°-90°	2038.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2038.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1038	1038	1038	1038	1038	
5°	1020	1019	1019	1018	1018	97
15°	954	954	944	935	931	268
25°	827	822	809	780	758	380
35°	671	666	634	586	571	419
45°	515	504	461	422	406	397
55°	358	347	314	277	263	321
65°	212	200	181	185	154	209
75°	85	79	74	71	78	91
85°	12	13	14	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1038.1	1038.1	1038.1	1038.1	1038.1
2.5°	1030.9	1030.9	1030.9	1029.7	1029.7
5°	1020.1	1018.9	1018.9	1017.7	1017.7
7.5°	1011.7	1010.5	1009.3	1008.1	1005.7
10°	999.7	999.7	998.5	992.5	991.3
12.5°	980.5	979.3	974.5	966.1	963.7
15°	954.1	954.1	944.5	934.9	931.3
17.5°	925.3	924.1	912.1	902.5	897.7
20°	894.1	891.7	879.7	864.1	855.7
22.5°	859.3	859.3	844.9	824.5	816.1
25°	826.9	822.1	808.9	780.1	758.5
27.5°	789.7	782.5	768.1	727.3	702.1
30°	748.9	745.3	724.9	672.1	652.9
32.5°	710.5	704.5	682.9	627.7	612.1
35°	670.9	666.1	633.7	585.7	571.3
37.5°	631.3	625.3	584.5	546.1	528.1
40°	591.7	584.5	540.1	505.3	486.1
42.5°	554.5	544.9	501.7	464.5	442.9
45°	514.9	504.1	460.9	422.5	405.7
47.5°	475.3	465.7	426.1	386.4	367.2
50°	433.3	424.9	388.8	349.2	328.8
52.5°	398.4	385.2	350.4	310.8	294.0
55°	357.6	346.8	314.4	277.2	262.8
57.5°	320.4	309.6	279.6	244.8	232.8
60°	285.6	270.0	244.8	214.8	205.2
62.5°	247.2	235.2	213.6	188.4	200.4
65°	212.4	200.4	181.2	184.8	153.6
67.5°	174.0	168.0	151.2	134.4	129.6
70°	141.6	134.4	128.4	110.4	105.6
72.5°	112.8	105.6	97.2	87.6	84.0
75°	85.2	79.2	74.4	70.8	78.0
77.5°	58.8	56.4	52.8	49.2	48.0
80°	38.4	37.2	36.0	34.8	33.6
82.5°	22.8	22.8	22.8	22.8	22.8
85°	12.0	13.2	14.4	15.6	16.8
87.5°	7.2	7.2	8.4	9.6	10.8
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)