

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: P545637

Luminaire Tested: **FMR-12-2-LD4-2LO-35-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: P545637
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

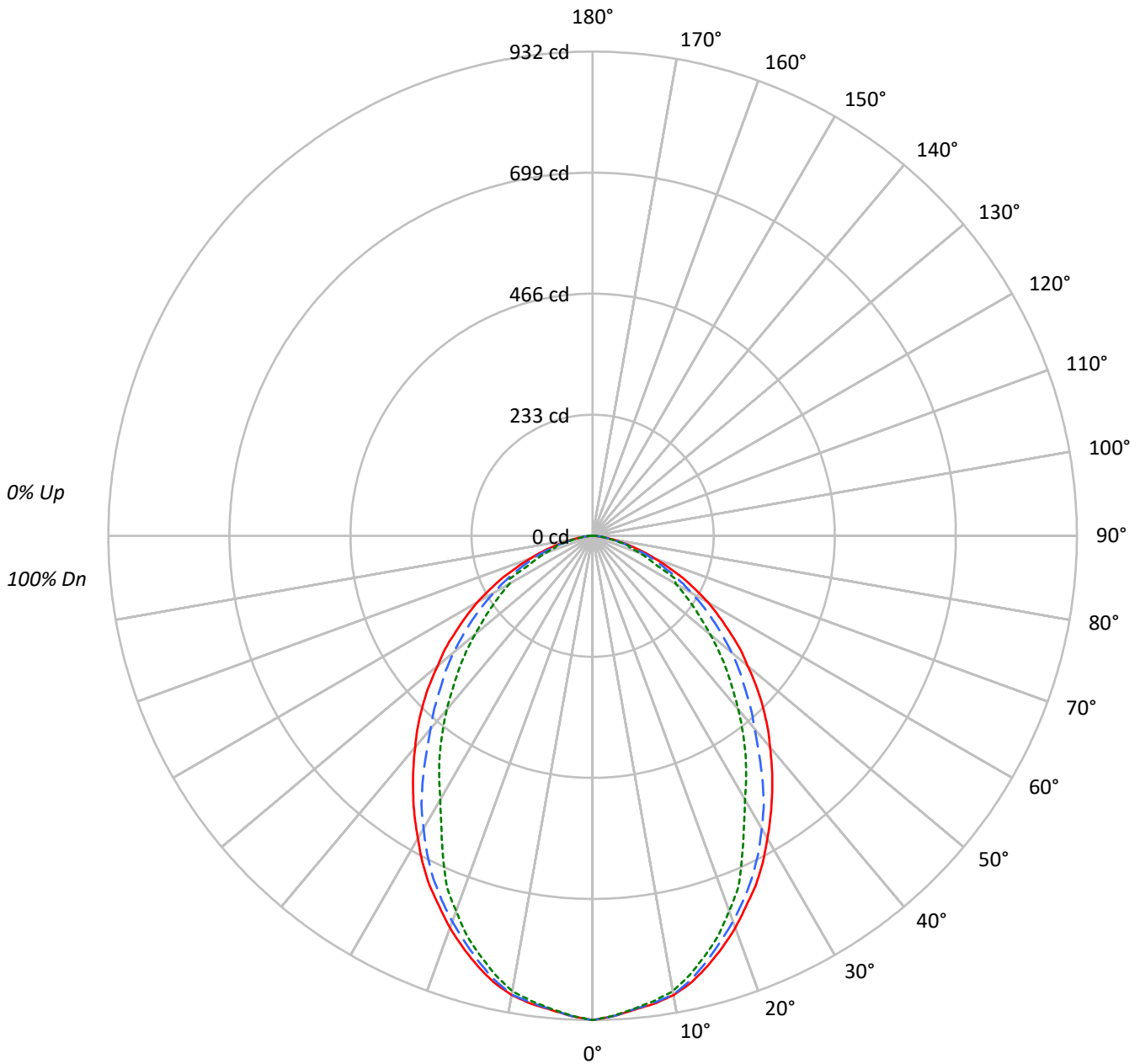
Lumens per Lamp: N/A
Luminaire Lumens: 1830.0 lumens
Efficiency: N/A
Efficacy: 78.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	5017	5017	5017
5°	4949	4943	4937
10°	4906	4900	4864
15°	4773	4725	4660
20°	4598	4524	4401
25°	4409	4313	4045
30°	4179	4045	3643
35°	3958	3738	3370
40°	3733	3407	3067
45°	3519	3150	2772
50°	3257	2924	2472
55°	3013	2649	2214
60°	2761	2366	1984
65°	2429	2072	1756
70°	2002	1814	1492
75°	1591	1389	1456
80°	1069	1001	936
85°	667	797	932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	4.7
10°-20°	238.1	13.0
20°-30°	329.7	18.0
30°-40°	351.5	19.2
40°-50°	320.7	17.5
50°-60°	251.2	13.7
60°-70°	163.8	8.9
70°-80°	72.5	4.0
80°-90°	15.6	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°	654.6	35.8
0°-40°	1006.2	55.0
0°-60°	1578.1	86.2
0°-90°	1830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	932	932	932	932	932	
5°	916	915	915	914	914	87
15°	857	857	848	840	836	241
25°	742	738	726	700	681	341
35°	602	598	569	526	513	377
45°	462	453	414	379	364	356
55°	321	311	282	249	236	288
65°	191	180	163	166	138	188
75°	76	71	67	64	70	82
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	932.2	932.2	932.2	932.2	932.2
2.5°	925.7	925.7	925.7	924.6	924.6
5°	916.0	914.9	914.9	913.9	913.9
7.5°	908.5	907.4	906.3	905.2	903.1
10°	897.7	897.7	896.6	891.2	890.1
12.5°	880.4	879.4	875.1	867.5	865.4
15°	856.7	856.7	848.1	839.5	836.3
17.5°	830.9	829.8	819.0	810.4	806.1
20°	802.9	800.7	789.9	775.9	768.4
22.5°	771.6	771.6	758.7	740.4	732.8
25°	742.5	738.2	726.3	700.5	681.1
27.5°	709.1	702.6	689.7	653.1	630.4
30°	672.5	669.2	650.9	603.5	586.2
32.5°	638.0	632.6	613.2	563.6	549.6
35°	602.4	598.1	569.0	525.9	513.0
37.5°	566.9	561.5	524.8	490.3	474.2
40°	531.3	524.8	484.9	453.7	436.5
42.5°	497.9	489.3	450.5	417.1	397.7
45°	462.3	452.6	413.8	379.3	364.2
47.5°	426.8	418.1	382.6	347.0	329.8
50°	389.0	381.5	349.2	313.6	295.3
52.5°	357.8	345.9	314.7	279.1	264.0
55°	321.1	311.4	282.3	248.9	236.0
57.5°	287.7	278.0	251.1	219.8	209.1
60°	256.5	242.5	219.8	192.9	184.3
62.5°	222.0	211.2	191.8	169.2	180.0
65°	190.7	180.0	162.7	166.0	137.9
67.5°	156.3	150.9	135.8	120.7	116.4
70°	127.2	120.7	115.3	99.1	94.8
72.5°	101.3	94.8	87.3	78.7	75.4
75°	76.5	71.1	66.8	63.6	70.0
77.5°	52.8	50.7	47.4	44.2	43.1
80°	34.5	33.4	32.3	31.3	30.2
82.5°	20.5	20.5	20.5	20.5	20.5
85°	10.8	11.9	12.9	14.0	15.1
87.5°	6.5	6.5	7.5	8.6	9.7
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)