

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: P545188

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-81-94-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: P545188
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-81-94-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

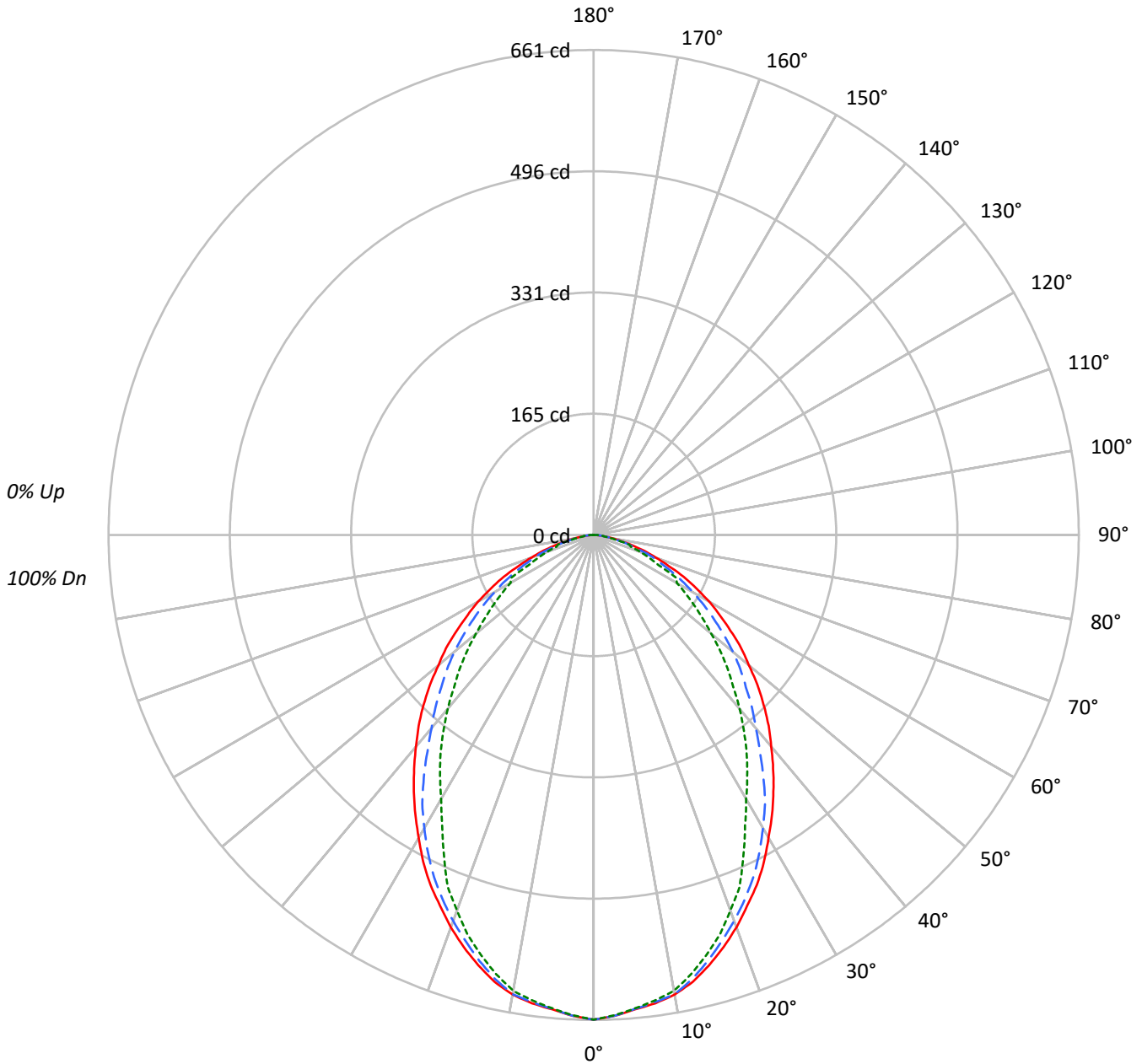
Lumens per Lamp: N/A
Luminaire Lumens: 1297.0 lumens
Efficiency: N/A
Efficacy: 78.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	7112	7112	7112
5°	7015	7007	6998
10°	6954	6946	6896
15°	6766	6698	6605
20°	6518	6413	6238
25°	6250	6114	5733
30°	5924	5734	5164
35°	5611	5299	4778
40°	5290	4829	4346
45°	4988	4465	3930
50°	4617	4145	3505
55°	4271	3755	3140
60°	3914	3354	2812
65°	3443	2937	2491
70°	2836	2571	2115
75°	2254	1971	2063
80°	1512	1420	1327
85°	939	1136	1321



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.5	4.7
10°-20°	168.8	13.0
20°-30°	233.7	18.0
30°-40°	249.2	19.2
40°-50°	227.3	17.5
50°-60°	178.1	13.7
60°-70°	116.1	8.9
70°-80°	51.4	4.0
80°-90°	11.0	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°	464.0	35.8
0°-40°	713.1	55.0
0°-60°	1118.5	86.2
0°-90°	1297.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1297.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	661	661	661	661	661	
5°	649	648	648	648	648	62
15°	607	607	601	595	593	171
25°	526	523	515	496	483	242
35°	427	424	403	373	364	267
45°	328	321	293	269	258	252
55°	228	221	200	176	167	204
65°	135	128	115	118	98	133
75°	54	50	47	45	50	58
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°	660.7	660.7	660.7	660.7	660.7
2.5°	656.1	656.1	656.1	655.3	655.3
5°	649.2	648.5	648.5	647.7	647.7
7.5°	643.9	643.1	642.3	641.6	640.1
10°	636.2	636.2	635.5	631.7	630.9
12.5°	624.0	623.2	620.2	614.8	613.3
15°	607.2	607.2	601.1	595.0	592.7
17.5°	588.9	588.1	580.5	574.4	571.3
20°	569.0	567.5	559.9	549.9	544.6
22.5°	546.9	546.9	537.7	524.7	519.4
25°	526.2	523.2	514.8	496.5	482.7
27.5°	502.6	498.0	488.8	462.9	446.8
30°	476.6	474.3	461.3	427.7	415.5
32.5°	452.2	448.3	434.6	399.5	389.5
35°	427.0	423.9	403.3	372.7	363.6
37.5°	401.8	397.9	372.0	347.5	336.1
40°	376.5	372.0	343.7	321.6	309.3
42.5°	352.9	346.8	319.3	295.6	281.8
45°	327.7	320.8	293.3	268.9	258.2
47.5°	302.5	296.3	271.1	245.9	233.7
50°	275.7	270.4	247.5	222.3	209.3
52.5°	253.6	245.2	223.0	197.8	187.1
55°	227.6	220.7	200.1	176.4	167.3
57.5°	203.9	197.1	178.0	155.8	148.2
60°	181.8	171.9	155.8	136.7	130.6
62.5°	157.3	149.7	136.0	119.9	127.6
65°	135.2	127.6	115.3	117.6	97.8
67.5°	110.7	106.9	96.2	85.5	82.5
70°	90.1	85.5	81.7	70.3	67.2
72.5°	71.8	67.2	61.9	55.8	53.5
75°	54.2	50.4	47.4	45.1	49.6
77.5°	37.4	35.9	33.6	31.3	30.6
80°	24.4	23.7	22.9	22.1	21.4
82.5°	14.5	14.5	14.5	14.5	14.5
85°	7.6	8.4	9.2	9.9	10.7
87.5°	4.6	4.6	5.3	6.1	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)