

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: P545163

Luminaire Tested: **FMR-12-1-LD4-2STD-35-UNV-82-88-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: P545163
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-35-UNV-82-88-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

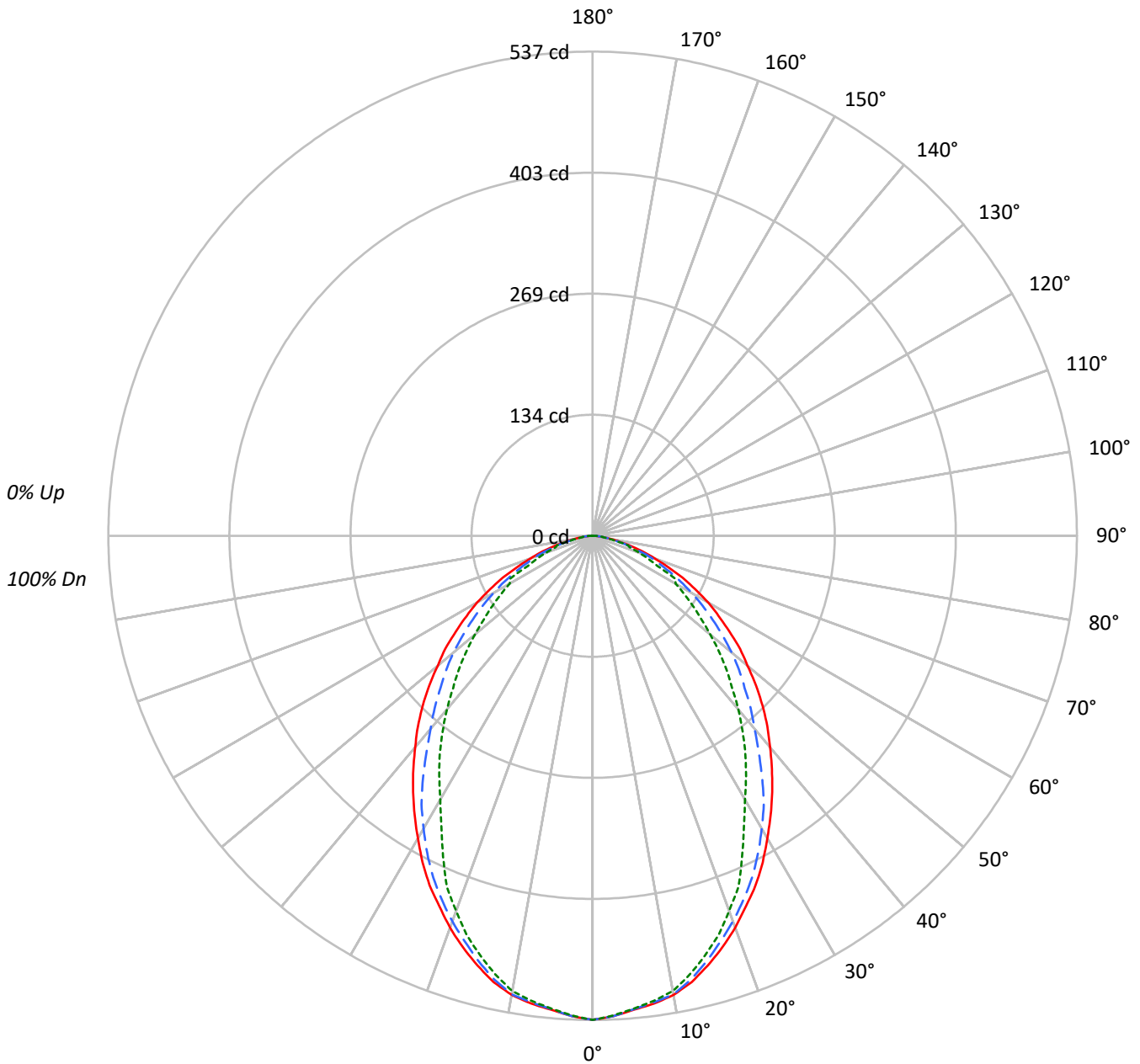
Lumens per Lamp: N/A
Luminaire Lumens: 1054.0 lumens
Efficiency: N/A
Efficacy: 63.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	5779	5779	5779
5°	5701	5694	5687
10°	5651	5644	5604
15°	5498	5444	5368
20°	5297	5212	5069
25°	5080	4968	4659
30°	4814	4660	4197
35°	4560	4306	3882
40°	4300	3925	3532
45°	4054	3628	3194
50°	3753	3368	2848
55°	3472	3051	2550
60°	3180	2725	2284
65°	2799	2387	2022
70°	2304	2090	1718
75°	1834	1601	1676
80°	1234	1153	1079
85°	766	914	1074



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.0	4.7
10°-20°	137.2	13.0
20°-30°	189.9	18.0
30°-40°	202.5	19.2
40°-50°	184.7	17.5
50°-60°	144.7	13.7
60°-70°	94.3	8.9
70°-80°	41.8	4.0
80°-90°	9.0	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°	377.0	35.8
0°-40°	579.5	55.0
0°-60°	908.9	86.2
0°-90°	1054.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1054.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	537	537	537	537	537	
5°	528	527	527	526	526	50
15°	493	493	488	484	482	139
25°	428	425	418	403	392	196
35°	347	344	328	303	295	217
45°	266	261	238	218	210	205
55°	185	179	163	143	136	166
65°	110	104	94	96	79	108
75°	44	41	38	37	40	47
85°	6	7	7	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	536.9	536.9	536.9	536.9	536.9
2.5°	533.2	533.2	533.2	532.5	532.5
5°	527.6	527.0	527.0	526.3	526.3
7.5°	523.2	522.6	522.0	521.4	520.1
10°	517.0	517.0	516.4	513.3	512.7
12.5°	507.1	506.5	504.0	499.7	498.4
15°	493.4	493.4	488.5	483.5	481.7
17.5°	478.5	477.9	471.7	466.8	464.3
20°	462.4	461.2	455.0	446.9	442.5
22.5°	444.4	444.4	437.0	426.4	422.1
25°	427.7	425.2	418.3	403.4	392.3
27.5°	408.4	404.7	397.2	376.1	363.1
30°	387.3	385.4	374.9	347.6	337.7
32.5°	367.4	364.3	353.2	324.6	316.5
35°	347.0	344.5	327.7	302.9	295.4
37.5°	326.5	323.4	302.3	282.4	273.1
40°	306.0	302.3	279.3	261.3	251.4
42.5°	286.8	281.8	259.4	240.2	229.0
45°	266.3	260.7	238.3	218.5	209.8
47.5°	245.8	240.8	220.3	199.9	189.9
50°	224.1	219.7	201.1	180.6	170.1
52.5°	206.1	199.2	181.2	160.8	152.1
55°	185.0	179.4	162.6	143.4	135.9
57.5°	165.7	160.1	144.6	126.6	120.4
60°	147.7	139.7	126.6	111.1	106.1
62.5°	127.9	121.7	110.5	97.4	103.7
65°	109.9	103.7	93.7	95.6	79.4
67.5°	90.0	86.9	78.2	69.5	67.0
70°	73.2	69.5	66.4	57.1	54.6
72.5°	58.3	54.6	50.3	45.3	43.4
75°	44.1	41.0	38.5	36.6	40.3
77.5°	30.4	29.2	27.3	25.4	24.8
80°	19.9	19.2	18.6	18.0	17.4
82.5°	11.8	11.8	11.8	11.8	11.8
85°	6.2	6.8	7.4	8.1	8.7
87.5°	3.7	3.7	4.3	5.0	5.6
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)