

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: P545010

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-93-87-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: P545010
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-LD4-2HI-40-UNV-93-87-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

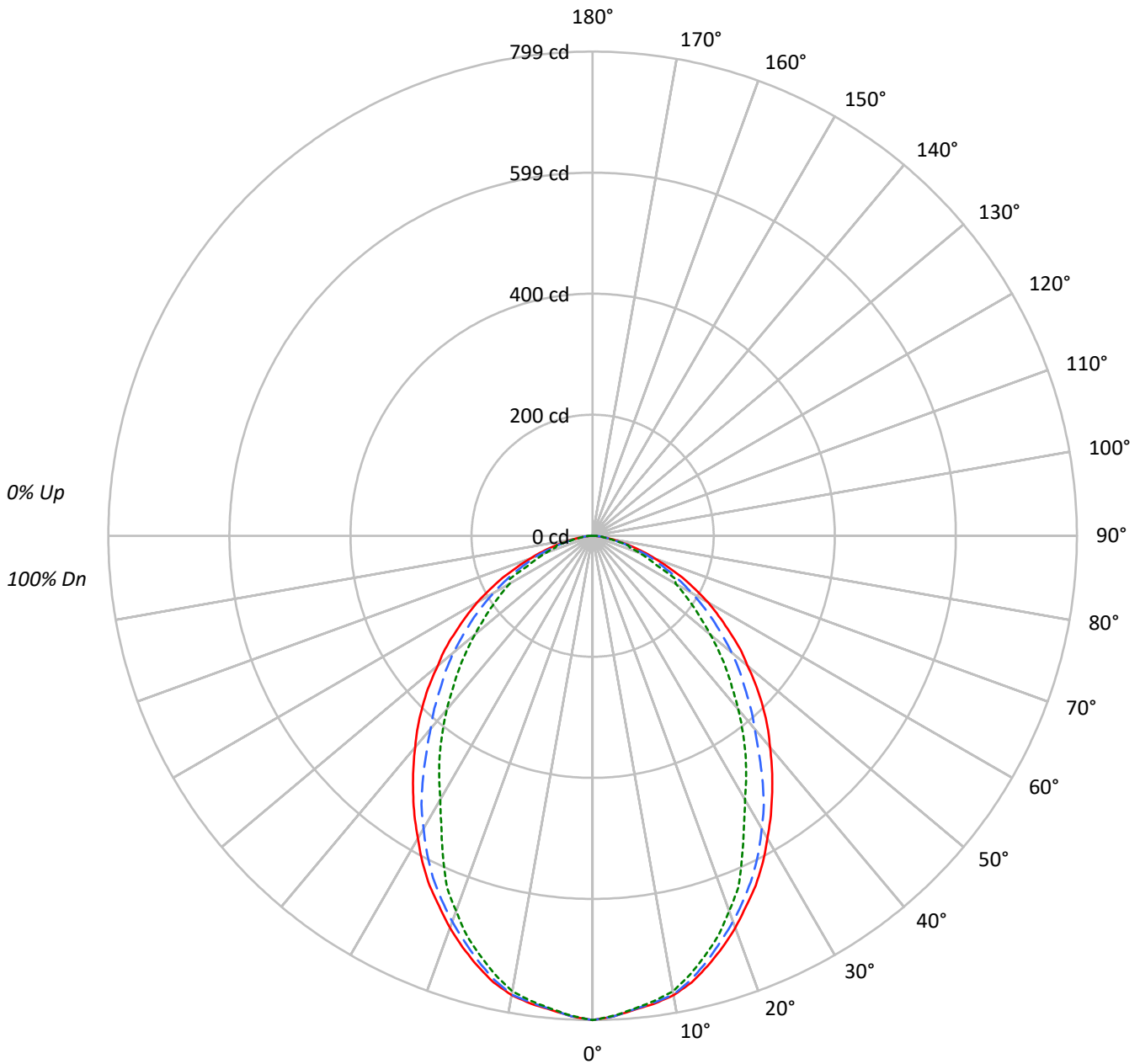
Lumens per Lamp: N/A
Luminaire Lumens: 1569.0 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P545010

CATALOG NUMBER: FMR-12-1-LD4-2HI-40-UNV-93-87-EDD

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°	8603	8603	8603
5°	8486	8475	8466
10°	8413	8402	8342
15°	8186	8104	7990
20°	7885	7758	7546
25°	7561	7397	6935
30°	7167	6937	6247
35°	6787	6411	5779
40°	6400	5843	5258
45°	6034	5401	4754
50°	5586	5014	4240
55°	5166	4543	3796
60°	4734	4058	3401
65°	4164	3553	3013
70°	3430	3113	2559
75°	2728	2383	2499
80°	1835	1717	1605
85°	1136	1371	1593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.4	4.7
10°-20°	204.2	13.0
20°-30°	282.7	18.0
30°-40°	301.4	19.2
40°-50°	275.0	17.5
50°-60°	215.4	13.7
60°-70°	140.4	8.9
70°-80°	62.2	4.0
80°-90°	13.4	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°	561.3	35.8
0°-40°	862.7	55.0
0°-60°	1353.1	86.2
0°-90°	1569.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1569.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	799	799	799	799	799	
5°	785	784	784	784	784	75
15°	735	735	727	720	717	207
25°	637	633	623	601	584	292
35°	516	513	488	451	440	323
45°	396	388	355	325	312	305
55°	275	267	242	213	202	247
65°	164	154	140	142	118	161
75°	66	61	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	799.2	799.2	799.2	799.2	799.2
2.5°	793.7	793.7	793.7	792.8	792.8
5°	785.4	784.4	784.4	783.5	783.5
7.5°	778.9	778.0	777.1	776.1	774.3
10°	769.7	769.7	768.7	764.1	763.2
12.5°	754.9	754.0	750.3	743.8	741.9
15°	734.6	734.6	727.2	719.8	717.0
17.5°	712.4	711.5	702.2	694.8	691.1
20°	688.4	686.5	677.3	665.3	658.8
22.5°	661.6	661.6	650.5	634.8	628.3
25°	636.6	632.9	622.8	600.6	583.9
27.5°	608.0	602.4	591.3	559.9	540.5
30°	576.6	573.8	558.1	517.4	502.6
32.5°	547.0	542.4	525.7	483.2	471.2
35°	516.5	512.8	487.9	450.9	439.8
37.5°	486.0	481.4	450.0	420.4	406.5
40°	455.5	450.0	415.8	389.0	374.2
42.5°	426.9	419.5	386.2	357.6	340.9
45°	396.4	388.1	354.8	325.2	312.3
47.5°	365.9	358.5	328.0	297.5	282.7
50°	333.6	327.1	299.4	268.9	253.2
52.5°	306.8	296.6	269.8	239.3	226.4
55°	275.3	267.0	242.1	213.4	202.3
57.5°	246.7	238.4	215.3	188.5	179.2
60°	219.9	207.9	188.5	165.4	158.0
62.5°	190.3	181.1	164.5	145.1	154.3
65°	163.5	154.3	139.5	142.3	118.3
67.5°	134.0	129.4	116.4	103.5	99.8
70°	109.0	103.5	98.9	85.0	81.3
72.5°	86.9	81.3	74.8	67.4	64.7
75°	65.6	61.0	57.3	54.5	60.1
77.5°	45.3	43.4	40.7	37.9	37.0
80°	29.6	28.6	27.7	26.8	25.9
82.5°	17.6	17.6	17.6	17.6	17.6
85°	9.2	10.2	11.1	12.0	12.9
87.5°	5.5	5.5	6.5	7.4	8.3
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)