

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: P545137

Luminaire Tested: **FMR-12-1-LD4-2LO-50-UNV-93-86-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: P545137
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-LD4-2LO-50-UNV-93-86-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

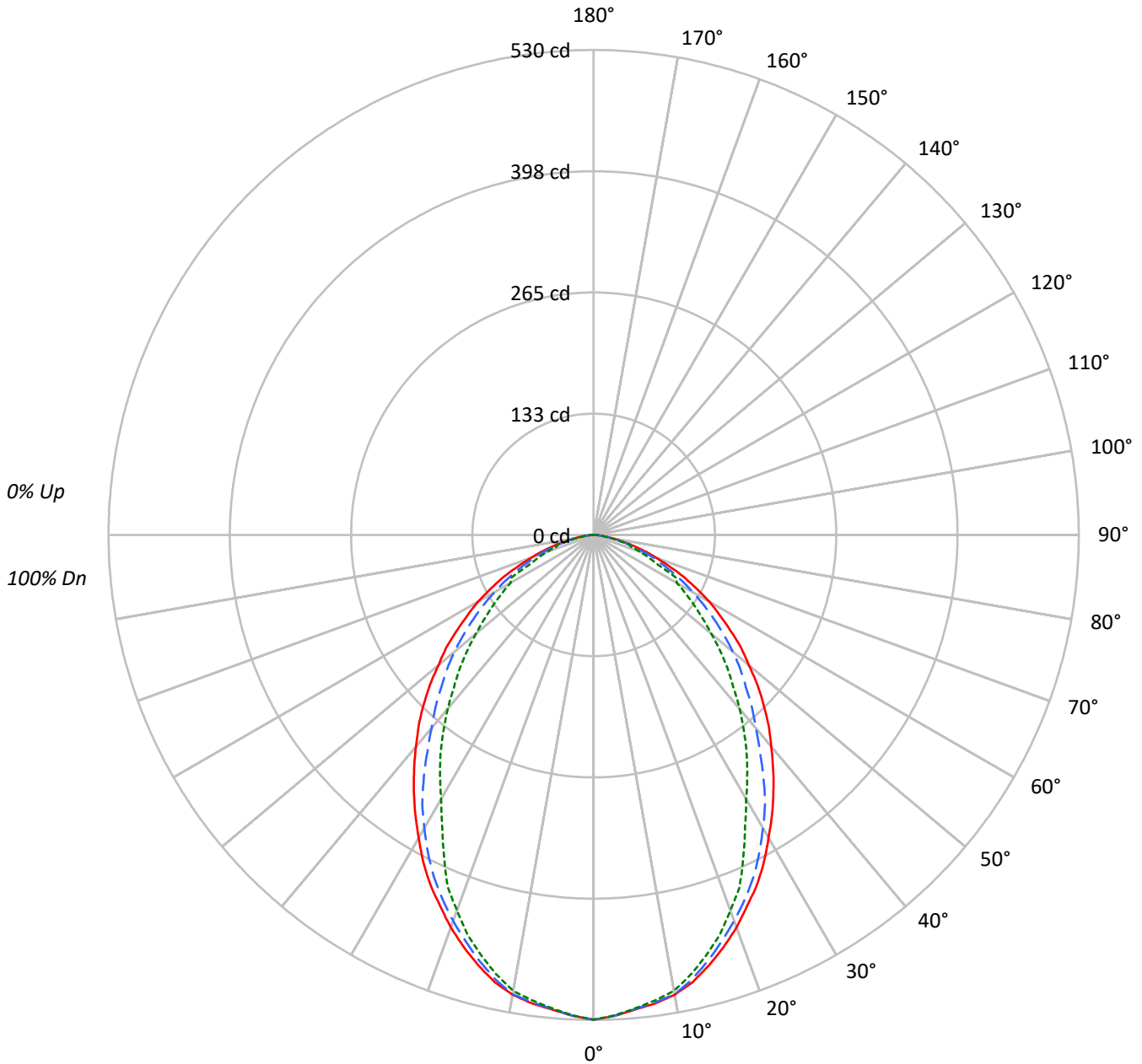
Lumens per Lamp: N/A
Luminaire Lumens: 1040.0 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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				20				
RC	80				70				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	100	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5703	5703	5703
5°	5625	5619	5612
10°	5576	5570	5529
15°	5426	5371	5297
20°	5227	5142	5002
25°	5012	4903	4597
30°	4750	4598	4141
35°	4499	4250	3830
40°	4242	3873	3485
45°	3999	3580	3151
50°	3702	3322	2810
55°	3425	3012	2517
60°	3139	2689	2254
65°	2761	2356	1997
70°	2275	2061	1696
75°	1809	1580	1655
80°	1215	1141	1060
85°	753	902	1062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	4.7
10°-20°	135.3	13.0
20°-30°	187.4	18.0
30°-40°	199.8	19.2
40°-50°	182.3	17.5
50°-60°	142.8	13.7
60°-70°	93.1	8.9
70°-80°	41.2	4.0
80°-90°	8.8	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°	372.0	35.8
0°-40°	571.8	55.0
0°-60°	896.9	86.2
0°-90°	1040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	530	530	530	530	530	
5°	521	520	520	519	519	49
15°	487	487	482	477	475	137
25°	422	420	413	398	387	194
35°	342	340	323	299	292	214
45°	263	257	235	216	207	202
55°	182	177	160	142	134	164
65°	108	102	92	94	78	107
75°	44	40	38	36	40	47
85°	6	7	7	8	9	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	529.8	529.8	529.8	529.8	529.8
2.5°	526.1	526.1	526.1	525.5	525.5
5°	520.6	520.0	520.0	519.4	519.4
7.5°	516.3	515.7	515.1	514.5	513.2
10°	510.2	510.2	509.6	506.5	505.9
12.5°	500.4	499.8	497.3	493.0	491.8
15°	486.9	486.9	482.0	477.1	475.3
17.5°	472.2	471.6	465.5	460.6	458.1
20°	456.3	455.0	448.9	441.0	436.7
22.5°	438.5	438.5	431.2	420.7	416.5
25°	422.0	419.5	412.8	398.1	387.1
27.5°	403.0	399.3	392.0	371.1	358.3
30°	382.2	380.3	369.9	343.0	333.2
32.5°	362.6	359.5	348.5	320.3	312.3
35°	342.4	339.9	323.4	298.9	291.5
37.5°	322.1	319.1	298.3	278.7	269.5
40°	301.9	298.3	275.6	257.8	248.0
42.5°	282.9	278.0	256.0	237.0	226.0
45°	262.7	257.2	235.2	215.6	207.0
47.5°	242.5	237.6	217.4	197.2	187.4
50°	221.1	216.8	198.4	178.2	167.8
52.5°	203.3	196.6	178.8	158.6	150.0
55°	182.5	177.0	160.5	141.5	134.1
57.5°	163.5	158.0	142.7	124.9	118.8
60°	145.8	137.8	124.9	109.6	104.7
62.5°	126.2	120.0	109.0	96.2	102.3
65°	108.4	102.3	92.5	94.3	78.4
67.5°	88.8	85.7	77.2	68.6	66.1
70°	72.3	68.6	65.5	56.3	53.9
72.5°	57.6	53.9	49.6	44.7	42.9
75°	43.5	40.4	38.0	36.1	39.8
77.5°	30.0	28.8	26.9	25.1	24.5
80°	19.6	19.0	18.4	17.8	17.1
82.5°	11.6	11.6	11.6	11.6	11.6
85°	6.1	6.7	7.3	8.0	8.6
87.5°	3.7	3.7	4.3	4.9	5.5
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)