

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: P545463

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-80-84-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: P545463
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-LD4-1STD-40-UNV-80-84-EDD
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

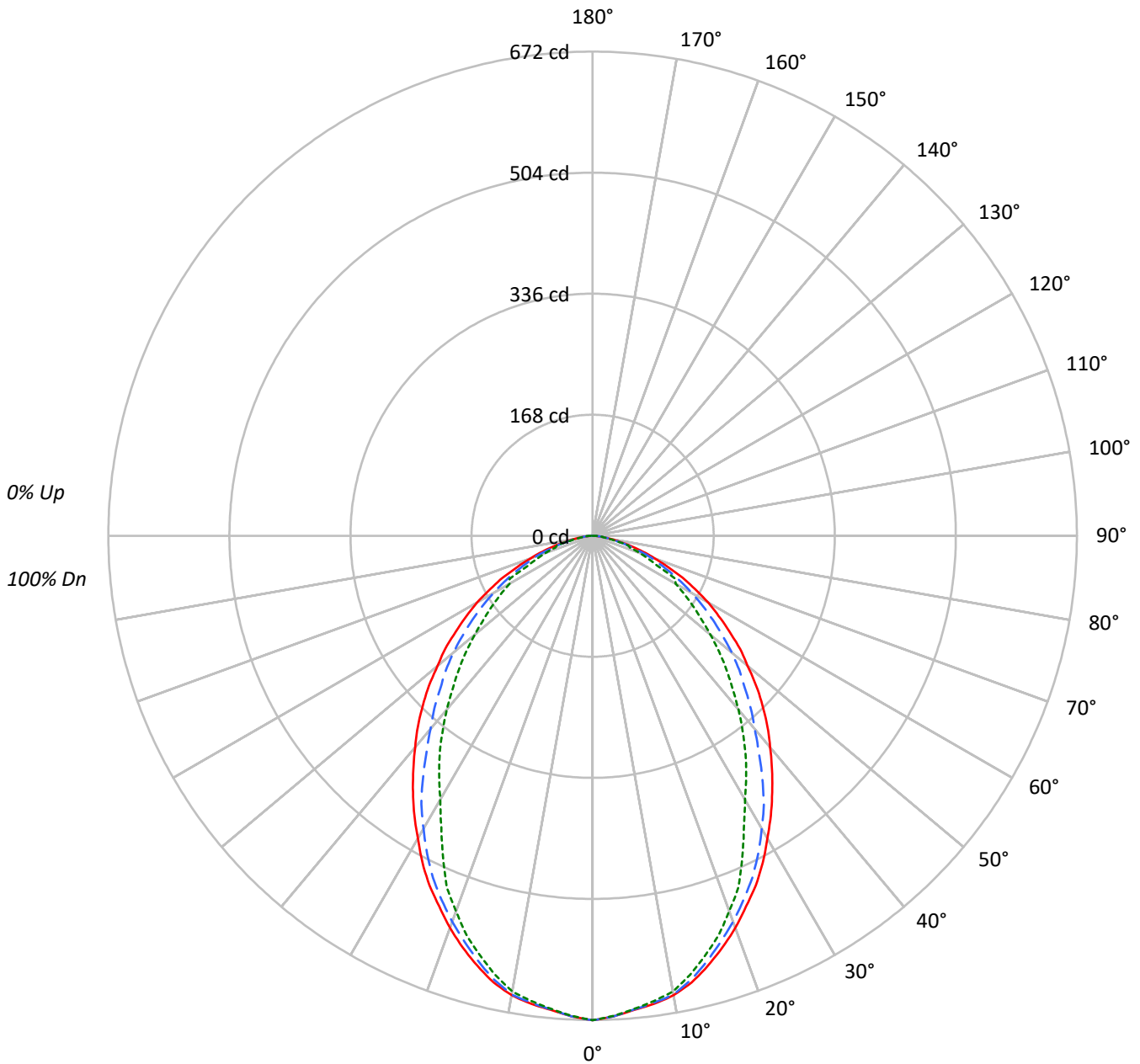
Lumens per Lamp: N/A
Luminaire Lumens: 1320.0 lumens
Efficiency: N/A
Efficacy: 79.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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				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°	3619	3619	3619
5°	3569	3566	3561
10°	3539	3534	3509
15°	3443	3409	3361
20°	3317	3263	3174
25°	3181	3111	2918
30°	3015	2918	2628
35°	2855	2696	2431
40°	2692	2458	2212
45°	2538	2272	1999
50°	2349	2109	1783
55°	2173	1911	1597
60°	1991	1707	1431
65°	1752	1495	1267
70°	1443	1309	1076
75°	1148	1002	1050
80°	772	722	676
85°	482	574	673



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.6	4.7
10°-20°	171.8	13.0
20°-30°	237.8	18.0
30°-40°	253.6	19.2
40°-50°	231.3	17.5
50°-60°	181.2	13.7
60°-70°	118.1	8.9
70°-80°	52.3	4.0
80°-90°	11.2	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°	472.2	35.8
0°-40°	725.8	55.0
0°-60°	1138.3	86.2
0°-90°	1320.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1320.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	672	672	672	672	672	
5°	661	660	660	659	659	63
15°	618	618	612	606	603	174
25°	536	532	524	505	491	246
35°	434	431	410	379	370	272
45°	334	326	298	274	263	257
55°	232	225	204	180	170	208
65°	138	130	117	120	100	136
75°	55	51	48	46	50	59
85°	8	9	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°	672.4	672.4	672.4	672.4	672.4
2.5°	667.7	667.7	667.7	666.9	666.9
5°	660.7	660.0	660.0	659.2	659.2
7.5°	655.3	654.5	653.7	653.0	651.4
10°	647.5	647.5	646.7	642.9	642.1
12.5°	635.1	634.3	631.2	625.8	624.2
15°	618.0	618.0	611.8	605.5	603.2
17.5°	599.3	598.5	590.8	584.6	581.4
20°	579.1	577.6	569.8	559.7	554.2
22.5°	556.6	556.6	547.2	534.0	528.6
25°	535.6	532.5	523.9	505.3	491.3
27.5°	511.5	506.8	497.5	471.1	454.7
30°	485.1	482.7	469.5	435.3	422.9
32.5°	460.2	456.3	442.3	406.5	396.4
35°	434.5	431.4	410.4	379.3	370.0
37.5°	408.9	405.0	378.6	353.7	342.0
40°	383.2	378.6	349.8	327.3	314.8
42.5°	359.1	352.9	324.9	300.8	286.8
45°	333.5	326.5	298.5	273.6	262.7
47.5°	307.8	301.6	276.0	250.3	237.9
50°	280.6	275.2	251.9	226.2	213.0
52.5°	258.1	249.5	227.0	201.3	190.4
55°	231.6	224.6	203.7	179.6	170.2
57.5°	207.5	200.6	181.1	158.6	150.8
60°	185.0	174.9	158.6	139.1	132.9
62.5°	160.1	152.4	138.4	122.0	129.8
65°	137.6	129.8	117.4	119.7	99.5
67.5°	112.7	108.8	97.9	87.1	84.0
70°	91.7	87.1	83.2	71.5	68.4
72.5°	73.1	68.4	63.0	56.7	54.4
75°	55.2	51.3	48.2	45.9	50.5
77.5°	38.1	36.5	34.2	31.9	31.1
80°	24.9	24.1	23.3	22.5	21.8
82.5°	14.8	14.8	14.8	14.8	14.8
85°	7.8	8.6	9.3	10.1	10.9
87.5°	4.7	4.7	5.4	6.2	7.0
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)