

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: P544990

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-80-97-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: P544990  
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-80-97-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

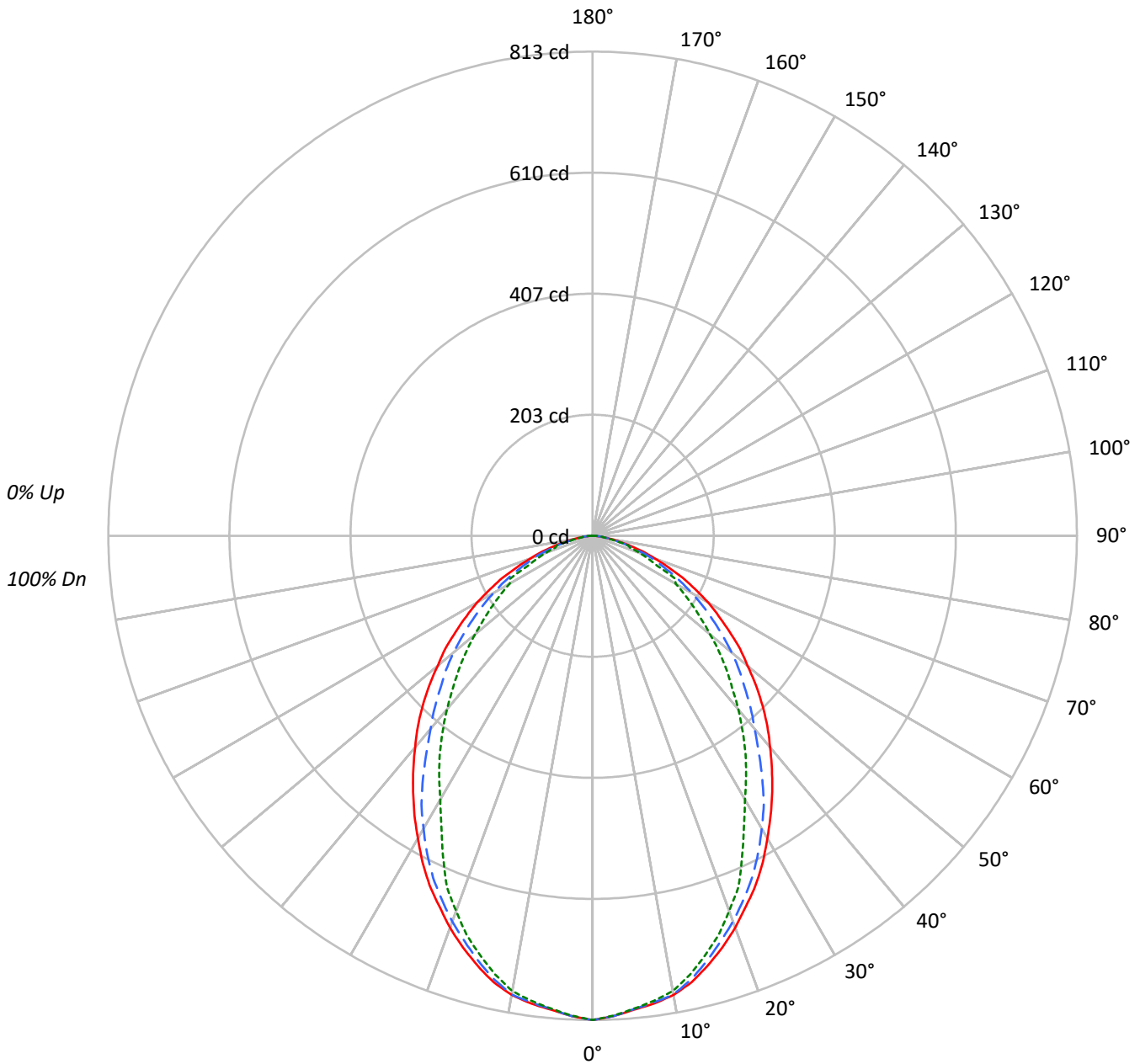
Lumens per Lamp: N/A  
Luminaire Lumens: 1596.0 lumens  
Efficiency: N/A  
Efficacy: 73.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	8751	8751	8751
5°	8632	8621	8612
10°	8557	8547	8485
15°	8327	8243	8127
20°	8021	7891	7676
25°	7691	7524	7055
30°	7290	7056	6355
35°	6904	6520	5879
40°	6511	5942	5348
45°	6138	5494	4836
50°	5682	5099	4312
55°	5256	4620	3862
60°	4816	4127	3460
65°	4238	3614	3064
70°	3490	3166	2603
75°	2774	2425	2541
80°	1866	1748	1630
85°	1161	1396	1630



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.7	4.7
10°-20°	207.7	13.0
20°-30°	287.5	18.0
30°-40°	306.6	19.2
40°-50°	279.7	17.5
50°-60°	219.1	13.7
60°-70°	142.8	8.9
70°-80°	63.3	4.0
80°-90°	13.6	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°	570.9	35.8
0°-40°	877.5	55.0
0°-60°	1376.3	86.2
0°-90°	1596.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1596.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	813	813	813	813	813	
5°	799	798	798	797	797	76
15°	747	747	740	732	729	210
25°	648	644	634	611	594	297
35°	525	522	496	459	447	328
45°	403	395	361	331	318	311
55°	280	272	246	217	206	251
65°	166	157	142	145	120	164
75°	67	62	58	56	61	72
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°	813.0	813.0	813.0	813.0	813.0
2.5°	807.3	807.3	807.3	806.4	806.4
5°	798.9	797.9	797.9	797.0	797.0
7.5°	792.3	791.4	790.4	789.5	787.6
10°	782.9	782.9	782.0	777.3	776.3
12.5°	767.9	766.9	763.2	756.6	754.7
15°	747.2	747.2	739.7	732.2	729.3
17.5°	724.6	723.7	714.3	706.8	703.0
20°	700.2	698.3	688.9	676.7	670.1
22.5°	672.9	672.9	661.7	645.7	639.1
25°	647.6	643.8	633.5	610.9	594.0
27.5°	618.4	612.8	601.5	569.6	549.8
30°	586.5	583.7	567.7	526.3	511.3
32.5°	556.4	551.7	534.8	491.5	479.3
35°	525.4	521.6	496.2	458.7	447.4
37.5°	494.4	489.7	457.7	427.6	413.5
40°	463.4	457.7	422.9	395.7	380.6
42.5°	434.2	426.7	392.9	363.7	346.8
45°	403.2	394.7	360.9	330.8	317.7
47.5°	372.2	364.7	333.7	302.6	287.6
50°	339.3	332.7	304.5	273.5	257.5
52.5°	312.0	301.7	274.4	243.4	230.3
55°	280.1	271.6	246.2	217.1	205.8
57.5°	250.9	242.5	219.0	191.7	182.3
60°	223.7	211.5	191.7	168.2	160.7
62.5°	193.6	184.2	167.3	147.6	157.0
65°	166.4	157.0	141.9	144.7	120.3
67.5°	136.3	131.6	118.4	105.3	101.5
70°	110.9	105.3	100.6	86.5	82.7
72.5°	88.3	82.7	76.1	68.6	65.8
75°	66.7	62.0	58.3	55.5	61.1
77.5°	46.1	44.2	41.4	38.5	37.6
80°	30.1	29.1	28.2	27.3	26.3
82.5°	17.9	17.9	17.9	17.9	17.9
85°	9.4	10.3	11.3	12.2	13.2
87.5°	5.6	5.6	6.6	7.5	8.5
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)