

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: P544988

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-80-94-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: P544988  
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-80-94-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

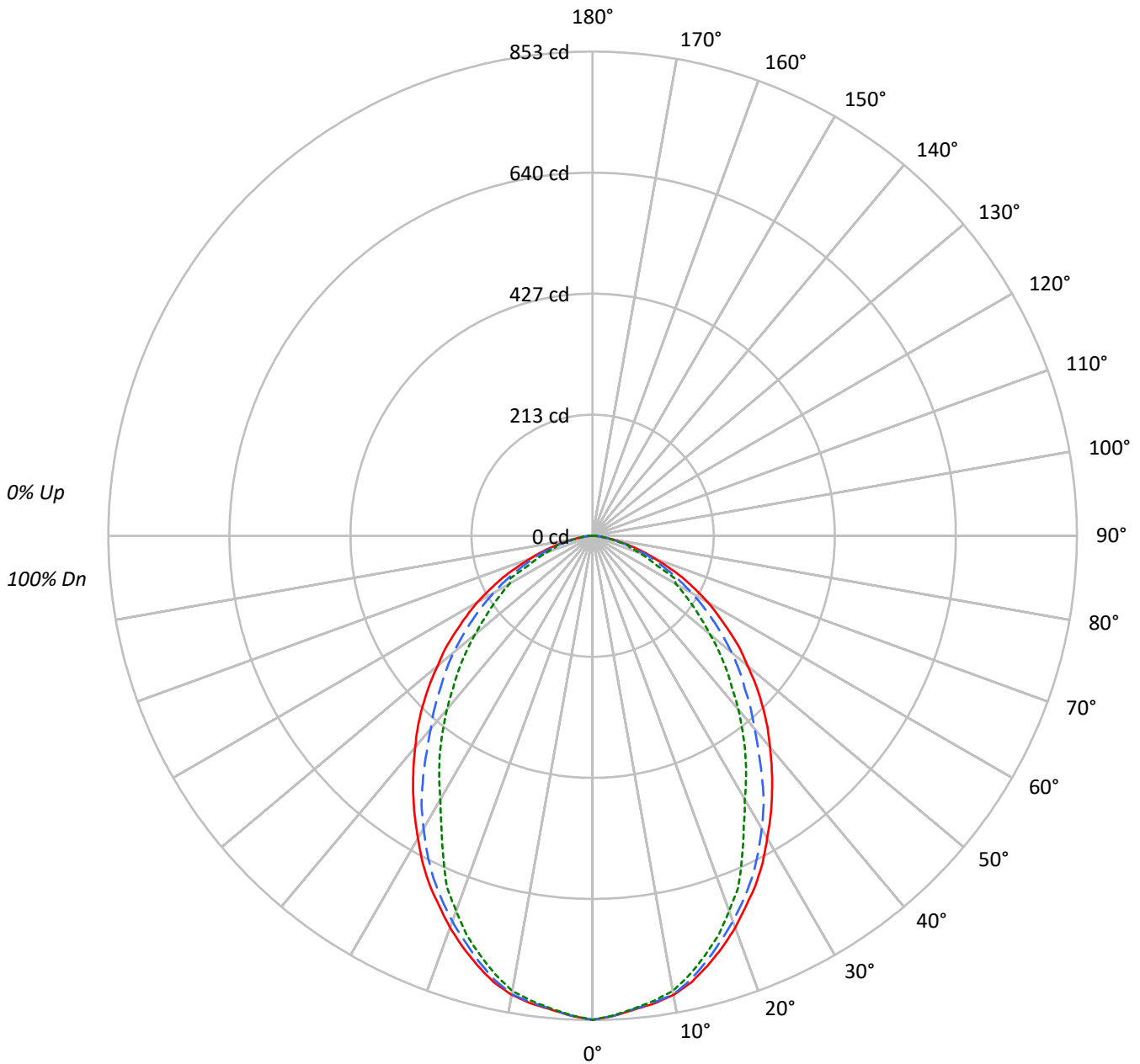
Lumens per Lamp: N/A  
Luminaire Lumens: 1674.0 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
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°	9178	9178	9178
5°	9054	9043	9033
10°	8976	8965	8900
15°	8733	8645	8525
20°	8412	8277	8052
25°	8067	7891	7399
30°	7645	7400	6666
35°	7242	6840	6165
40°	6829	6233	5609
45°	6438	5762	5072
50°	5960	5349	4523
55°	5514	4847	4052
60°	5050	4329	3630
65°	4444	3792	3214
70°	3660	3320	2732
75°	2911	2541	2666
80°	1953	1835	1711
85°	1223	1457	1704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.4	4.7
10°-20°	217.8	13.0
20°-30°	301.6	18.0
30°-40°	321.6	19.2
40°-50°	293.4	17.5
50°-60°	229.8	13.7
60°-70°	149.8	8.9
70°-80°	66.4	4.0
80°-90°	14.2	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°	598.8	35.8
0°-40°	920.4	55.0
0°-60°	1443.6	86.2
0°-90°	1674.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1674.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	838	837	837	836	836	80
15°	784	784	776	768	765	220
25°	679	675	664	641	623	312
35°	551	547	520	481	469	345
45°	423	414	378	347	333	326
55°	294	285	258	228	216	263
65°	174	165	149	152	126	172
75°	70	65	61	58	64	75
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	852.7	852.7	852.7	852.7	852.7
2.5°	846.8	846.8	846.8	845.8	845.8
5°	837.9	836.9	836.9	836.0	836.0
7.5°	831.0	830.0	829.1	828.1	826.1
10°	821.2	821.2	820.2	815.3	814.3
12.5°	805.4	804.4	800.5	793.6	791.6
15°	783.7	783.7	775.8	767.9	765.0
17.5°	760.0	759.1	749.2	741.3	737.4
20°	734.4	732.4	722.6	709.8	702.9
22.5°	705.8	705.8	694.0	677.2	670.3
25°	679.2	675.3	664.4	640.8	623.0
27.5°	648.7	642.7	630.9	597.4	576.7
30°	615.1	612.2	595.4	552.0	536.3
32.5°	583.6	578.7	560.9	515.6	502.8
35°	551.1	547.1	520.5	481.1	469.2
37.5°	518.5	513.6	480.1	448.5	433.8
40°	486.0	480.1	443.6	415.0	399.2
42.5°	455.4	447.6	412.1	381.5	363.8
45°	422.9	414.0	378.5	347.0	333.2
47.5°	390.4	382.5	350.0	317.4	301.7
50°	355.9	349.0	319.4	286.9	270.1
52.5°	327.3	316.4	287.9	255.3	241.5
55°	293.8	284.9	258.3	227.7	215.9
57.5°	263.2	254.3	229.7	201.1	191.2
60°	234.6	221.8	201.1	176.5	168.6
62.5°	203.1	193.2	175.5	154.8	164.6
65°	174.5	164.6	148.9	151.8	126.2
67.5°	142.9	138.0	124.2	110.4	106.5
70°	116.3	110.4	105.5	90.7	86.8
72.5°	92.7	86.8	79.8	72.0	69.0
75°	70.0	65.1	61.1	58.2	64.1
77.5°	48.3	46.3	43.4	40.4	39.4
80°	31.5	30.6	29.6	28.6	27.6
82.5°	18.7	18.7	18.7	18.7	18.7
85°	9.9	10.8	11.8	12.8	13.8
87.5°	5.9	5.9	6.9	7.9	8.9
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)