

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: P545365

Luminaire Tested: **FMR-12-2-LD4-1LO-35-UNV-93-96-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: P545365  
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-LD4-1LO-35-UNV-93-96-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

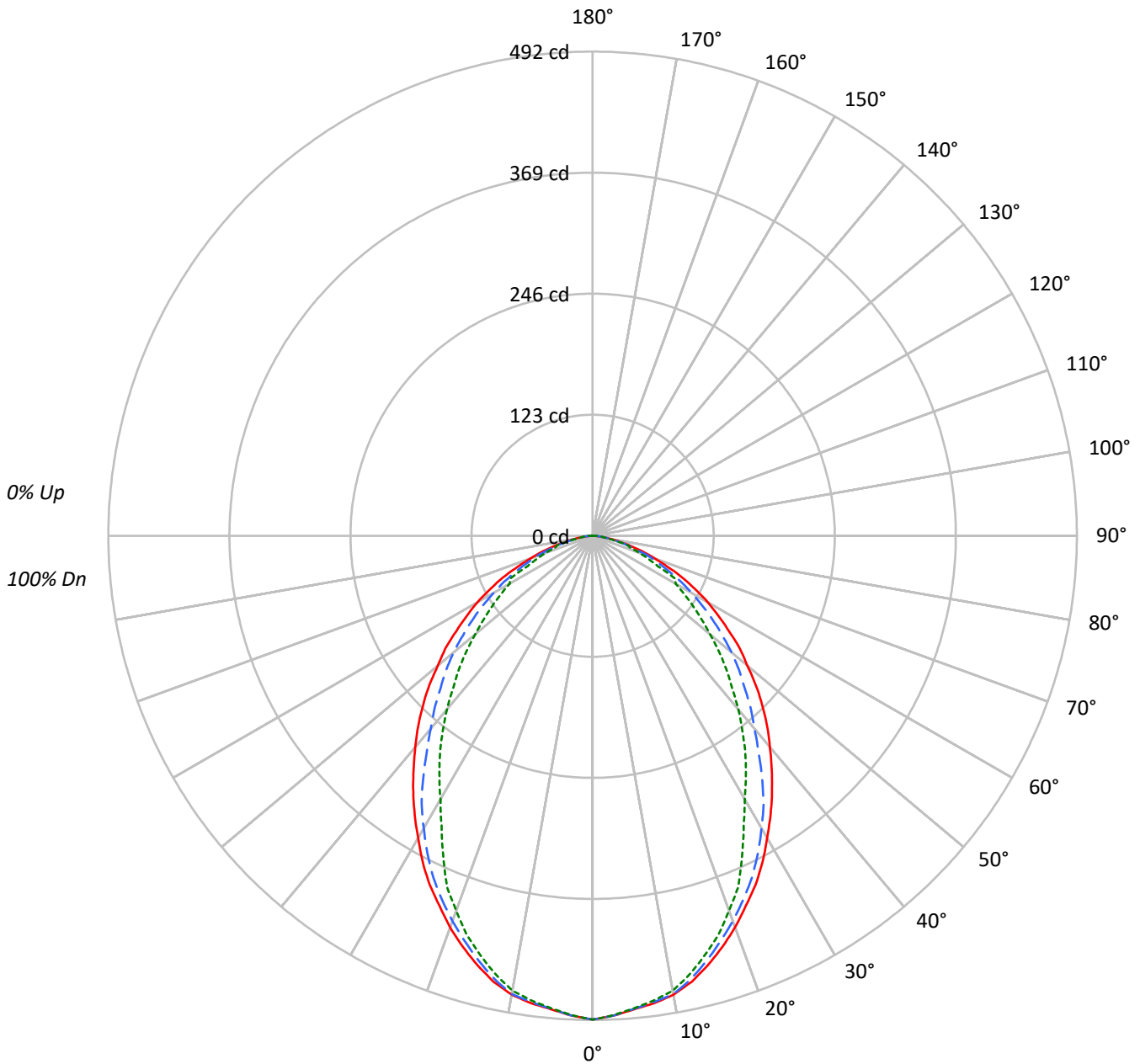
Lumens per Lamp: N/A  
Luminaire Lumens: 965.0 lumens  
Efficiency: N/A  
Efficacy: 82.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2646	2646	2646
5°	2609	2607	2603
10°	2587	2584	2565
15°	2517	2492	2457
20°	2425	2385	2321
25°	2325	2274	2132
30°	2204	2133	1921
35°	2087	1971	1777
40°	1969	1796	1617
45°	1856	1661	1462
50°	1717	1541	1304
55°	1589	1397	1168
60°	1455	1248	1046
65°	1281	1093	926
70°	1056	957	787
75°	838	732	767
80°	564	527	493
85°	352	420	494



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.8	4.7
10°-20°	125.6	13.0
20°-30°	173.9	18.0
30°-40°	185.4	19.2
40°-50°	169.1	17.5
50°-60°	132.5	13.7
60°-70°	86.4	8.9
70°-80°	38.2	4.0
80°-90°	8.2	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°	345.2	35.8
0°-40°	530.6	55.0
0°-60°	832.2	86.2
0°-90°	965.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	965.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	492	492	492	492	492	
5°	483	482	482	482	482	46
15°	452	452	447	443	441	127
25°	392	389	383	369	359	180
35°	318	315	300	277	270	199
45°	244	239	218	200	192	188
55°	169	164	149	131	124	152
65°	101	95	86	88	73	99
75°	40	38	35	34	37	43
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	491.6	491.6	491.6	491.6	491.6
2.5°	488.1	488.1	488.1	487.6	487.6
5°	483.0	482.5	482.5	481.9	481.9
7.5°	479.1	478.5	477.9	477.4	476.2
10°	473.4	473.4	472.8	470.0	469.4
12.5°	464.3	463.7	461.4	457.5	456.3
15°	451.8	451.8	447.2	442.7	441.0
17.5°	438.1	437.6	431.9	427.3	425.1
20°	423.4	422.2	416.5	409.2	405.2
22.5°	406.9	406.9	400.1	390.4	386.4
25°	391.5	389.3	383.0	369.4	359.1
27.5°	373.9	370.5	363.7	344.4	332.4
30°	354.6	352.9	343.2	318.2	309.1
32.5°	336.4	333.6	323.3	297.2	289.8
35°	317.7	315.4	300.0	277.3	270.5
37.5°	298.9	296.1	276.8	258.6	250.0
40°	280.2	276.8	255.7	239.2	230.2
42.5°	262.5	258.0	237.5	219.9	209.7
45°	243.8	238.7	218.2	200.0	192.1
47.5°	225.0	220.5	201.7	183.0	173.9
50°	205.1	201.2	184.1	165.4	155.7
52.5°	188.7	182.4	165.9	147.2	139.2
55°	169.3	164.2	148.9	131.3	124.5
57.5°	151.7	146.6	132.4	115.9	110.2
60°	135.2	127.9	115.9	101.7	97.2
62.5°	117.1	111.4	101.2	89.2	94.9
65°	100.6	94.9	85.8	87.5	72.7
67.5°	82.4	79.6	71.6	63.6	61.4
70°	67.1	63.6	60.8	52.3	50.0
72.5°	53.4	50.0	46.0	41.5	39.8
75°	40.3	37.5	35.2	33.5	36.9
77.5°	27.8	26.7	25.0	23.3	22.7
80°	18.2	17.6	17.0	16.5	15.9
82.5°	10.8	10.8	10.8	10.8	10.8
85°	5.7	6.3	6.8	7.4	8.0
87.5°	3.4	3.4	4.0	4.5	5.1
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)