

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: P545741

Luminaire Tested: **FMR-12-2-LD4-2STD-35-UNV-82-96-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: P545741  
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-LD4-2STD-35-UNV-82-96-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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**

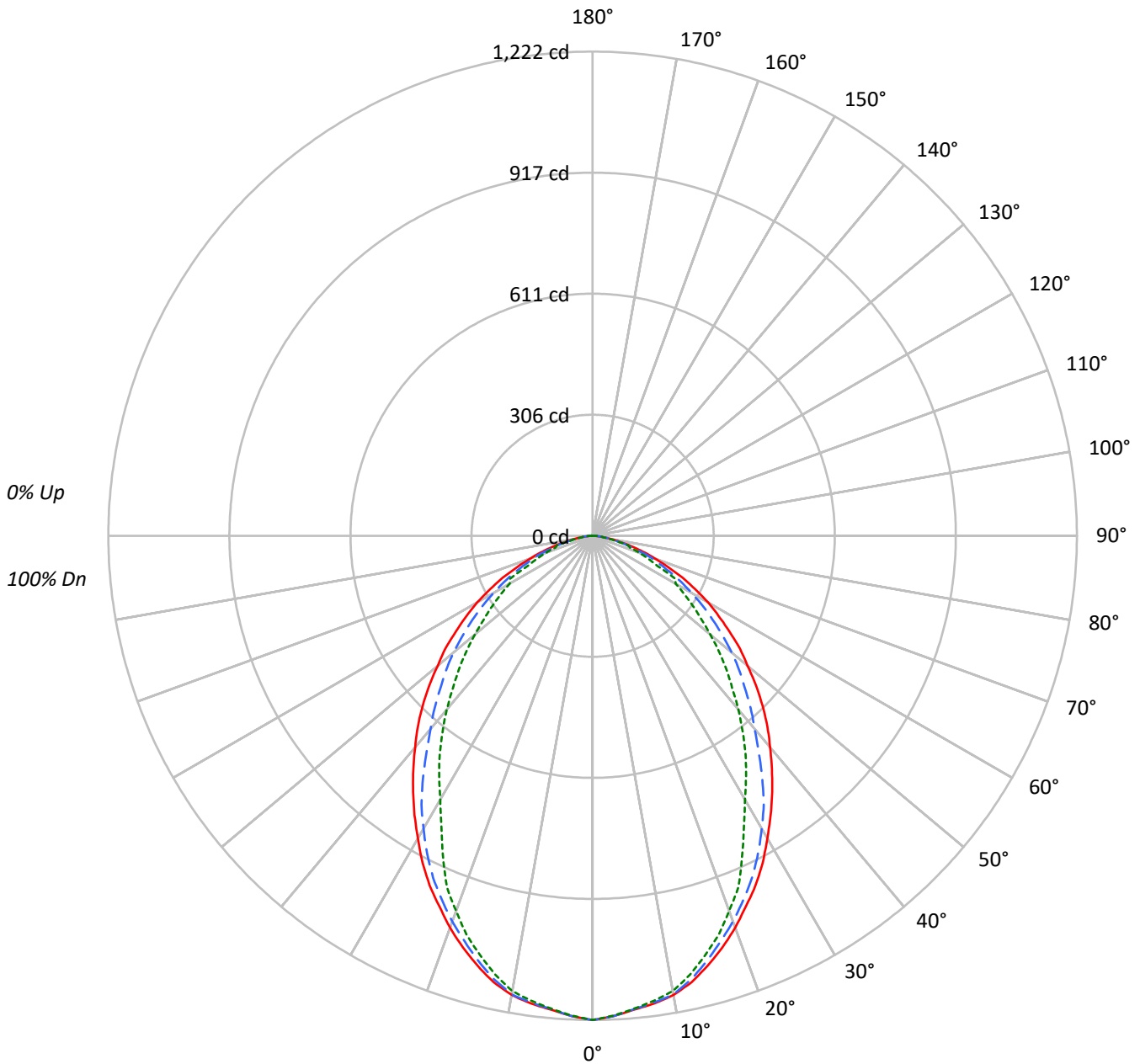
Lumens per Lamp: N/A  
Luminaire Lumens: 2399.0 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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
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°	6577	6577	6577
5°	6487	6480	6472
10°	6431	6424	6377
15°	6258	6195	6108
20°	6028	5931	5769
25°	5780	5654	5302
30°	5478	5303	4776
35°	5188	4901	4418
40°	4893	4466	4020
45°	4613	4129	3634
50°	4270	3832	3241
55°	3950	3473	2903
60°	3619	3102	2601
65°	3185	2716	2302
70°	2623	2379	1956
75°	2086	1822	1909
80°	1401	1314	1227
85°	871	1050	1223



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.8	4.7
10°-20°	312.2	13.0
20°-30°	432.2	18.0
30°-40°	460.9	19.2
40°-50°	420.4	17.5
50°-60°	329.4	13.7
60°-70°	214.7	8.9
70°-80°	95.1	4.0
80°-90°	20.4	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°	858.1	35.8
0°-40°	1319.0	55.0
0°-60°	2068.8	86.2
0°-90°	2399.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2399.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1222	1222	1222	1222	1222	
5°	1201	1199	1199	1198	1198	114
15°	1123	1123	1112	1100	1096	316
25°	973	968	952	918	893	447
35°	790	784	746	689	672	494
45°	606	593	542	497	478	467
55°	421	408	370	326	309	378
65°	250	236	213	218	181	246
75°	100	93	88	83	92	107
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1222.0	1222.0	1222.0	1222.0	1222.0
2.5°	1213.5	1213.5	1213.5	1212.1	1212.1
5°	1200.8	1199.4	1199.4	1198.0	1198.0
7.5°	1190.9	1189.5	1188.1	1186.7	1183.9
10°	1176.8	1176.8	1175.4	1168.3	1166.9
12.5°	1154.2	1152.8	1147.1	1137.3	1134.4
15°	1123.1	1123.1	1111.8	1100.5	1096.3
17.5°	1089.2	1087.8	1073.7	1062.4	1056.7
20°	1052.5	1049.7	1035.5	1017.2	1007.3
22.5°	1011.5	1011.5	994.6	970.6	960.7
25°	973.4	967.7	952.2	918.3	892.9
27.5°	929.6	921.1	904.2	856.1	826.5
30°	881.5	877.3	853.3	791.1	768.5
32.5°	836.3	829.3	803.8	738.9	720.5
35°	789.7	784.1	745.9	689.4	672.5
37.5°	743.1	736.0	688.0	642.8	621.6
40°	696.5	688.0	635.7	594.8	572.2
42.5°	652.7	641.4	590.5	546.7	521.3
45°	606.1	593.4	542.5	497.3	477.5
47.5°	559.4	548.1	501.5	454.9	432.3
50°	510.0	500.1	457.7	411.1	387.1
52.5°	469.0	453.5	412.5	365.9	346.1
55°	421.0	408.3	370.1	326.3	309.4
57.5°	377.2	364.5	329.2	288.2	274.1
60°	336.2	317.9	288.2	252.9	241.6
62.5°	291.0	276.9	251.5	221.8	235.9
65°	250.1	235.9	213.3	217.6	180.8
67.5°	204.8	197.8	178.0	158.2	152.6
70°	166.7	158.2	151.2	130.0	124.3
72.5°	132.8	124.3	114.4	103.1	98.9
75°	100.3	93.2	87.6	83.4	91.8
77.5°	69.2	66.4	62.2	57.9	56.5
80°	45.2	43.8	42.4	41.0	39.6
82.5°	26.8	26.8	26.8	26.8	26.8
85°	14.1	15.5	17.0	18.4	19.8
87.5°	8.5	8.5	9.9	11.3	12.7
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)