

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: P545252

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-81-94-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: P545252  
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-LD4-1HI-35-UNV-81-94-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

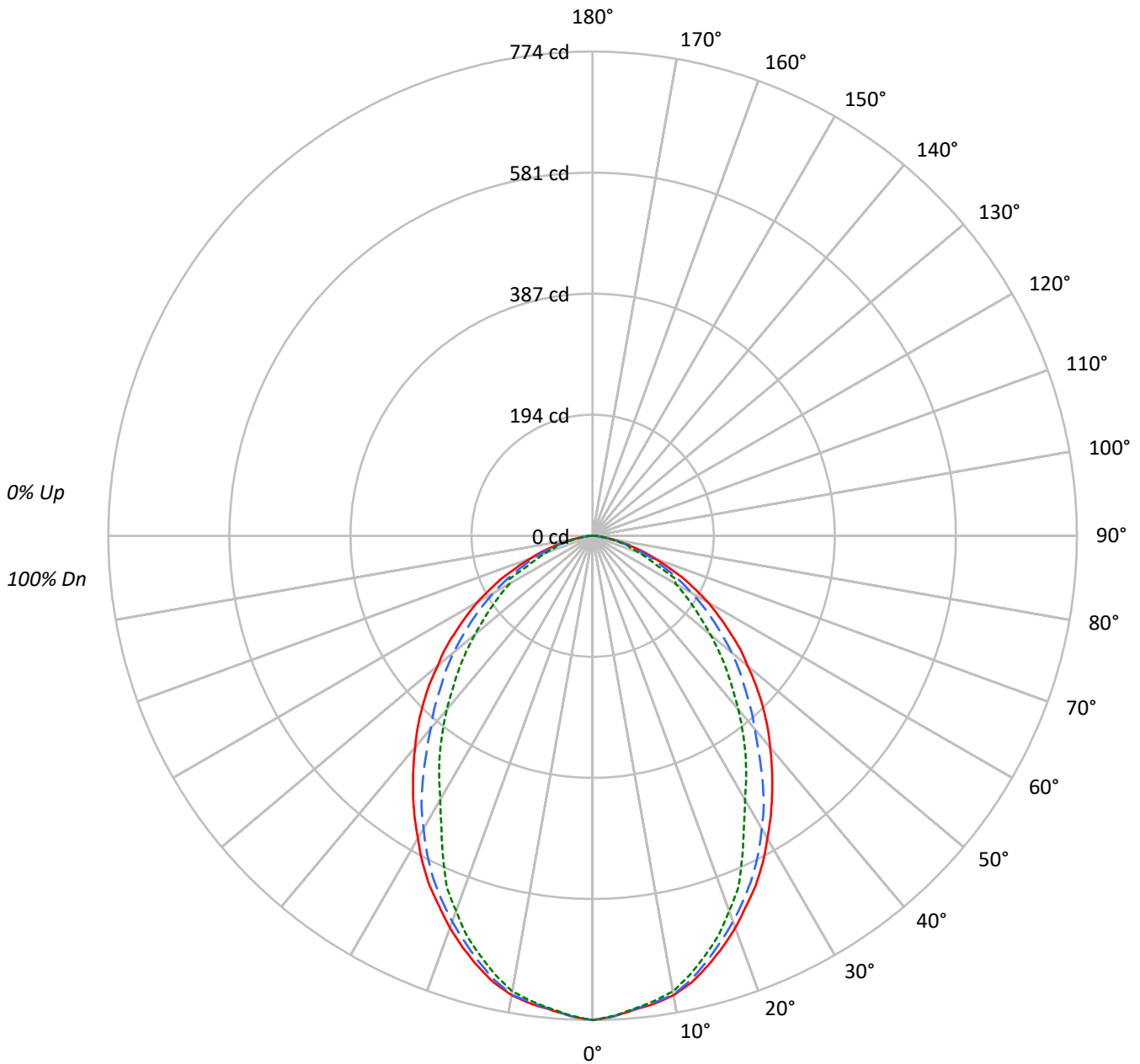
Lumens per Lamp: N/A  
Luminaire Lumens: 1520.0 lumens  
Efficiency: N/A  
Efficacy: 70.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4167	4167	4167
5°	4110	4105	4101
10°	4075	4070	4041
15°	3965	3925	3870
20°	3820	3758	3655
25°	3662	3583	3359
30°	3471	3360	3026
35°	3288	3105	2800
40°	3100	2830	2547
45°	2923	2616	2302
50°	2705	2428	2054
55°	2502	2200	1839
60°	2293	1965	1648
65°	2017	1722	1459
70°	1662	1507	1240
75°	1323	1154	1210
80°	886	834	778
85°	556	661	772



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.1	4.7
10°-20°	197.8	13.0
20°-30°	273.8	18.0
30°-40°	292.0	19.2
40°-50°	266.4	17.5
50°-60°	208.7	13.7
60°-70°	136.0	8.9
70°-80°	60.3	4.0
80°-90°	12.9	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°	543.7	35.8
0°-40°	835.7	55.0
0°-60°	1310.8	86.2
0°-90°	1520.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1520.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	761	760	760	759	759	72
15°	712	712	704	697	695	200
25°	617	613	603	582	566	283
35°	500	497	473	437	426	313
45°	384	376	344	315	302	296
55°	267	259	234	207	196	239
65°	158	150	135	138	115	156
75°	64	59	56	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	774.3	774.3	774.3	774.3	774.3
2.5°	768.9	768.9	768.9	768.0	768.0
5°	760.8	759.9	759.9	759.1	759.1
7.5°	754.6	753.7	752.8	751.9	750.1
10°	745.6	745.6	744.7	740.3	739.4
12.5°	731.3	730.4	726.8	720.6	718.8
15°	711.6	711.6	704.4	697.3	694.6
17.5°	690.1	689.2	680.3	673.1	669.5
20°	666.9	665.1	656.1	644.5	638.2
22.5°	640.9	640.9	630.2	614.9	608.7
25°	616.7	613.1	603.3	581.8	565.7
27.5°	589.0	583.6	572.9	542.4	523.6
30°	558.5	555.9	540.6	501.3	486.9
32.5°	529.9	525.4	509.3	468.1	456.5
35°	500.4	496.8	472.6	436.8	426.1
37.5°	470.8	466.4	435.9	407.3	393.8
40°	441.3	435.9	402.8	376.8	362.5
42.5°	413.5	406.4	374.2	346.4	330.3
45°	384.0	375.9	343.7	315.1	302.5
47.5°	354.5	347.3	317.8	288.2	273.9
50°	323.1	316.9	290.0	260.5	245.3
52.5°	297.2	287.3	261.4	231.8	219.3
55°	266.7	258.7	234.5	206.8	196.0
57.5°	239.0	230.9	208.6	182.6	173.7
60°	213.0	201.4	182.6	160.2	153.1
62.5°	184.4	175.4	159.3	140.5	149.5
65°	158.4	149.5	135.2	137.8	114.6
67.5°	129.8	125.3	112.8	100.3	96.7
70°	105.6	100.3	95.8	82.3	78.8
72.5°	84.1	78.8	72.5	65.3	62.7
75°	63.6	59.1	55.5	52.8	58.2
77.5°	43.9	42.1	39.4	36.7	35.8
80°	28.6	27.7	26.9	26.0	25.1
82.5°	17.0	17.0	17.0	17.0	17.0
85°	9.0	9.8	10.7	11.6	12.5
87.5°	5.4	5.4	6.3	7.2	8.1
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)