

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: P544969

Luminaire Tested: **FMR-12-1-LD4-2HI-35-UNV-82-86-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: P544969  
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-35-UNV-82-86-EDD  
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

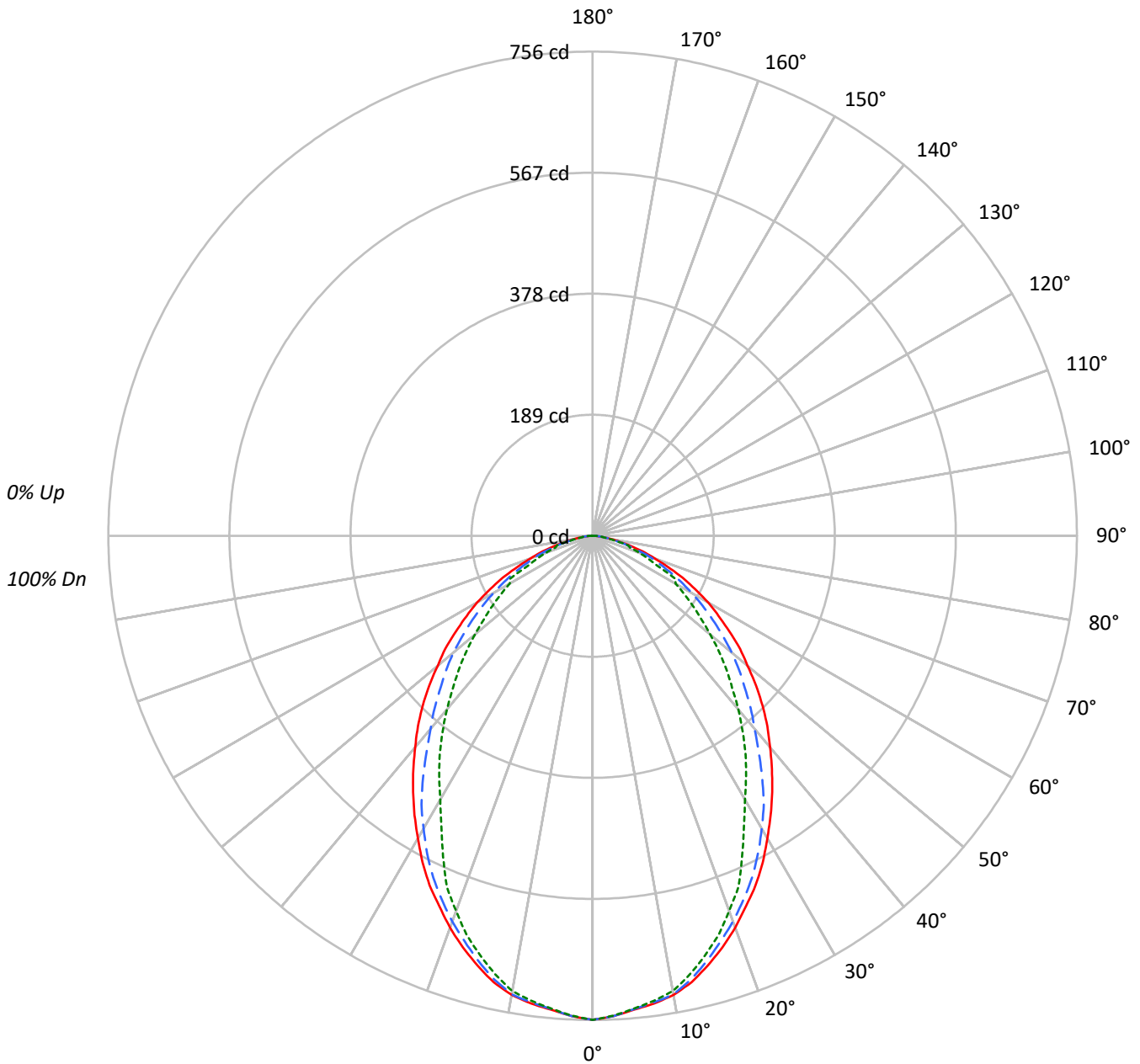
Lumens per Lamp: N/A  
Luminaire Lumens: 1484.0 lumens  
Efficiency: N/A  
Efficacy: 68.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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°	8136	8136	8136
5°	8026	8016	8008
10°	7957	7947	7889
15°	7743	7665	7558
20°	7458	7338	7137
25°	7151	6995	6559
30°	6778	6560	5909
35°	6419	6063	5466
40°	6053	5526	4973
45°	5707	5109	4497
50°	5283	4741	4011
55°	4887	4297	3592
60°	4478	3838	3216
65°	3940	3362	2850
70°	3245	2943	2420
75°	2578	2254	2362
80°	1736	1624	1519
85°	1074	1297	1507



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.4	4.7
10°-20°	193.1	13.0
20°-30°	267.4	18.0
30°-40°	285.1	19.2
40°-50°	260.1	17.5
50°-60°	203.7	13.7
60°-70°	132.8	8.9
70°-80°	58.8	4.0
80°-90°	12.6	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°	530.8	35.8
0°-40°	815.9	55.0
0°-60°	1279.7	86.2
0°-90°	1484.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1484.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	743	742	742	741	741	71
15°	695	695	688	681	678	195
25°	602	599	589	568	552	276
35°	488	485	461	426	416	305
45°	375	367	336	308	295	289
55°	260	253	229	202	191	234
65°	155	146	132	135	112	152
75°	62	58	54	52	57	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	755.9	755.9	755.9	755.9	755.9
2.5°	750.7	750.7	750.7	749.8	749.8
5°	742.8	741.9	741.9	741.1	741.1
7.5°	736.7	735.8	735.0	734.1	732.3
10°	728.0	728.0	727.1	722.7	721.8
12.5°	714.0	713.1	709.6	703.5	701.7
15°	694.8	694.8	687.8	680.8	678.2
17.5°	673.8	672.9	664.2	657.2	653.7
20°	651.1	649.3	640.6	629.2	623.1
22.5°	625.7	625.7	615.2	600.4	594.3
25°	602.1	598.6	589.0	568.0	552.3
27.5°	575.0	569.8	559.3	529.6	511.2
30°	545.3	542.7	527.8	489.4	475.4
32.5°	517.4	513.0	497.3	457.1	445.7
35°	488.5	485.0	461.4	426.5	416.0
37.5°	459.7	455.3	425.6	397.6	384.5
40°	430.8	425.6	393.3	367.9	353.9
42.5°	403.7	396.8	365.3	338.2	322.5
45°	374.9	367.0	335.6	307.6	295.4
47.5°	346.1	339.1	310.2	281.4	267.4
50°	315.5	309.4	283.1	254.3	239.5
52.5°	290.1	280.5	255.2	226.3	214.1
55°	260.4	252.6	229.0	201.9	191.4
57.5°	233.3	225.5	203.6	178.3	169.5
60°	208.0	196.6	178.3	156.4	149.4
62.5°	180.0	171.3	155.6	137.2	145.9
65°	154.7	145.9	132.0	134.6	111.9
67.5°	126.7	122.3	110.1	97.9	94.4
70°	103.1	97.9	93.5	80.4	76.9
72.5°	82.1	76.9	70.8	63.8	61.2
75°	62.0	57.7	54.2	51.6	56.8
77.5°	42.8	41.1	38.5	35.8	35.0
80°	28.0	27.1	26.2	25.3	24.5
82.5°	16.6	16.6	16.6	16.6	16.6
85°	8.7	9.6	10.5	11.4	12.2
87.5°	5.2	5.2	6.1	7.0	7.9
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)