

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: P544976

Luminaire Tested: **FMR-12-1-LD4-2HI-35-UNV-93-85-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: P544976  
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-93-85-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

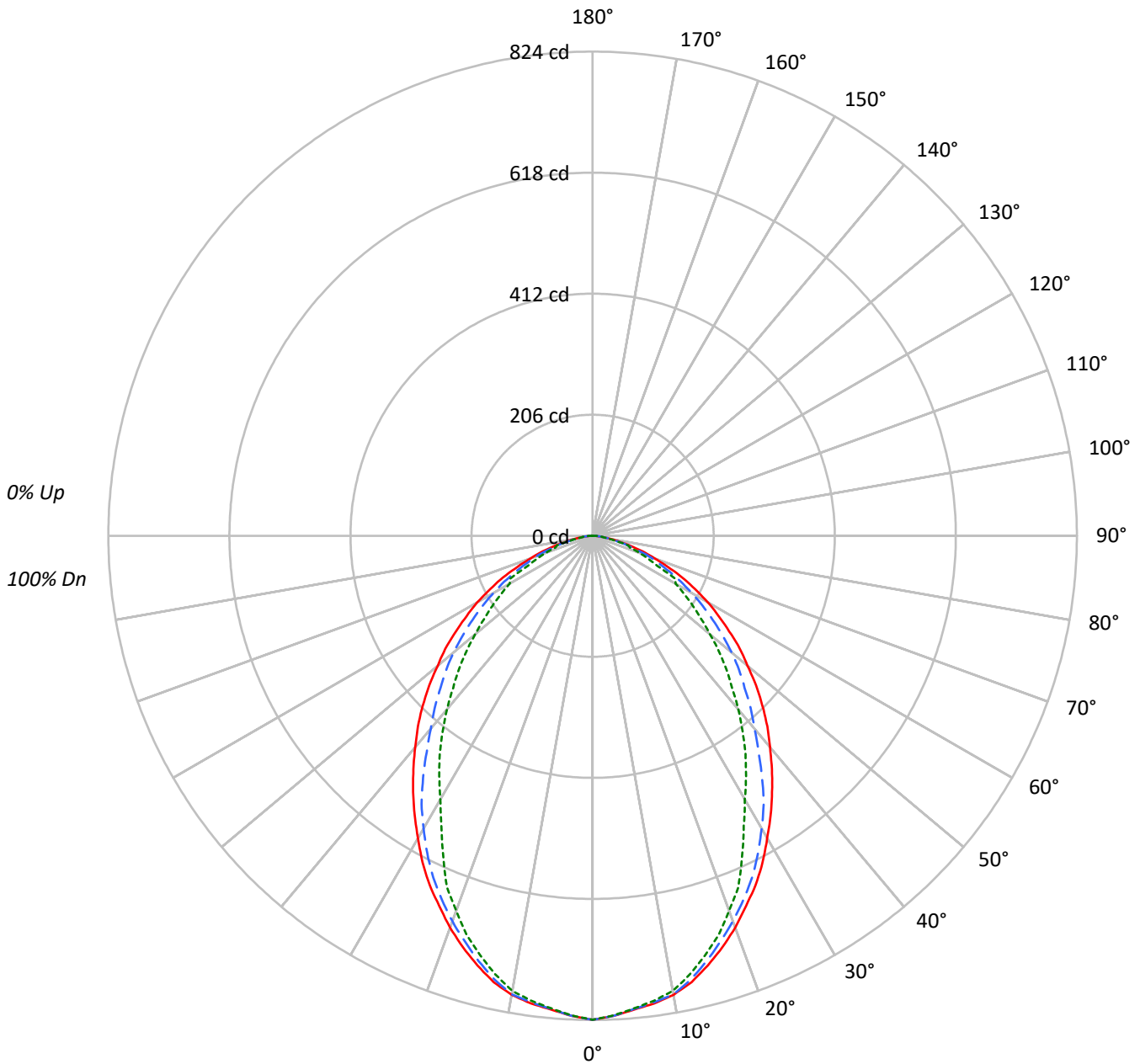
Lumens per Lamp: N/A  
Luminaire Lumens: 1617.0 lumens  
Efficiency: N/A  
Efficacy: 74.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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				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			
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°	8866	8866	8866
5°	8746	8735	8725
10°	8670	8660	8596
15°	8436	8351	8234
20°	8126	7995	7777
25°	7792	7622	7147
30°	7385	7148	6438
35°	6995	6607	5957
40°	6596	6021	5420
45°	6218	5567	4900
50°	5757	5166	4369
55°	5326	4682	3913
60°	4878	4183	3505
65°	4292	3663	3105
70°	3537	3207	2637
75°	2811	2454	2574
80°	1891	1773	1655
85°	1173	1408	1643



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.7	4.7
10°-20°	210.4	13.0
20°-30°	291.3	18.0
30°-40°	310.6	19.2
40°-50°	283.4	17.5
50°-60°	222.0	13.7
60°-70°	144.7	8.9
70°-80°	64.1	4.0
80°-90°	13.8	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°	578.4	35.8
0°-40°	889.0	55.0
0°-60°	1394.4	86.2
0°-90°	1617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1617.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	809	808	808	808	808	77
15°	757	757	749	742	739	213
25°	656	652	642	619	602	301
35°	532	528	503	465	453	333
45°	408	400	366	335	322	315
55°	284	275	250	220	208	255
65°	168	159	144	147	122	166
75°	68	63	59	56	62	72
85°	10	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	823.7	823.7	823.7	823.7	823.7
2.5°	818.0	818.0	818.0	817.0	817.0
5°	809.4	808.4	808.4	807.5	807.5
7.5°	802.7	801.8	800.8	799.9	798.0
10°	793.2	793.2	792.3	787.5	786.5
12.5°	778.0	777.0	773.2	766.5	764.6
15°	757.0	757.0	749.4	741.8	738.9
17.5°	734.2	733.2	723.7	716.1	712.3
20°	709.4	707.5	698.0	685.6	678.9
22.5°	681.8	681.8	670.4	654.2	647.5
25°	656.1	652.3	641.8	618.9	601.8
27.5°	626.6	620.9	609.4	577.1	557.1
30°	594.2	591.3	575.1	533.2	518.0
32.5°	563.7	559.0	541.8	498.0	485.6
35°	532.3	528.5	502.8	464.7	453.3
37.5°	500.9	496.1	463.7	433.3	419.0
40°	469.4	463.7	428.5	400.9	385.7
42.5°	439.9	432.3	398.0	368.5	351.4
45°	408.5	399.9	365.7	335.2	321.9
47.5°	377.1	369.5	338.0	306.6	291.4
50°	343.8	337.1	308.5	277.1	260.9
52.5°	316.1	305.7	278.1	246.6	233.3
55°	283.8	275.2	249.5	220.0	208.5
57.5°	254.2	245.7	221.9	194.3	184.7
60°	226.6	214.3	194.3	170.4	162.8
62.5°	196.2	186.6	169.5	149.5	159.0
65°	168.5	159.0	143.8	146.6	121.9
67.5°	138.1	133.3	120.0	106.6	102.8
70°	112.4	106.6	101.9	87.6	83.8
72.5°	89.5	83.8	77.1	69.5	66.7
75°	67.6	62.8	59.0	56.2	61.9
77.5°	46.7	44.8	41.9	39.0	38.1
80°	30.5	29.5	28.6	27.6	26.7
82.5°	18.1	18.1	18.1	18.1	18.1
85°	9.5	10.5	11.4	12.4	13.3
87.5°	5.7	5.7	6.7	7.6	8.6
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)