

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: P545250

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-81-87-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: P545250
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-81-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

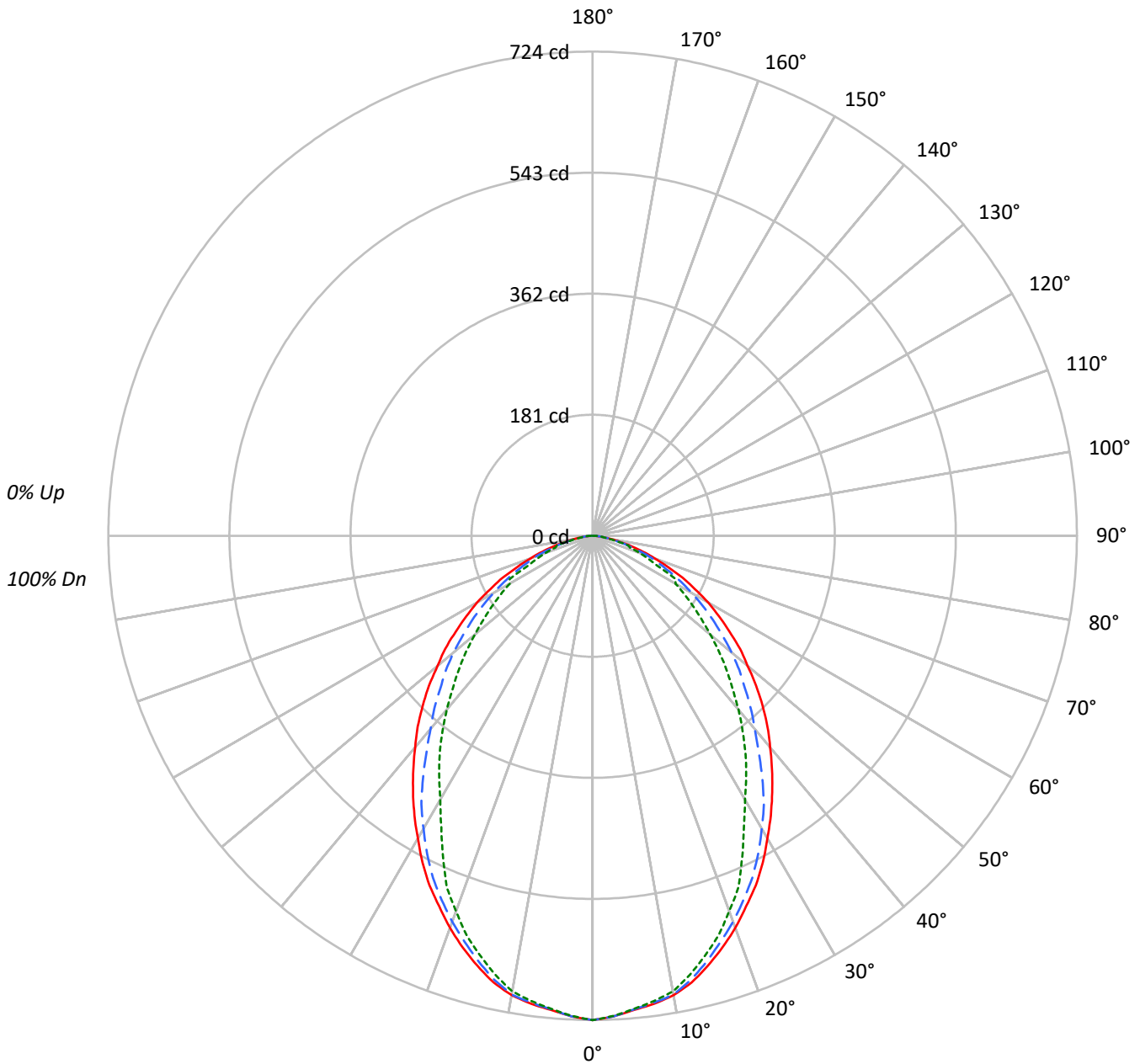
Lumens per Lamp: N/A
Luminaire Lumens: 1422.0 lumens
Efficiency: N/A
Efficacy: 65.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	3898	3898	3898
5°	3846	3841	3836
10°	3812	3807	3780
15°	3709	3672	3621
20°	3573	3515	3420
25°	3426	3352	3143
30°	3247	3143	2831
35°	3075	2905	2619
40°	2900	2647	2382
45°	2734	2448	2154
50°	2531	2272	1921
55°	2341	2059	1721
60°	2145	1838	1541
65°	1887	1610	1365
70°	1555	1410	1160
75°	1237	1079	1131
80°	831	778	725
85°	519	618	722



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	4.7
10°-20°	185.0	13.0
20°-30°	256.2	18.0
30°-40°	273.2	19.2
40°-50°	249.2	17.5
50°-60°	195.2	13.7
60°-70°	127.2	8.9
70°-80°	56.4	4.0
80°-90°	12.1	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°	508.7	35.8
0°-40°	781.8	55.0
0°-60°	1226.3	86.2
0°-90°	1422.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1422.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	724	724	724	724	724	
5°	712	711	711	710	710	68
15°	666	666	659	652	650	187
25°	577	574	564	544	529	265
35°	468	465	442	409	399	293
45°	359	352	322	295	283	277
55°	250	242	219	193	183	224
65°	148	140	126	129	107	146
75°	60	55	52	49	54	64
85°	8	9	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°	724.3	724.3	724.3	724.3	724.3
2.5°	719.3	719.3	719.3	718.5	718.5
5°	711.8	710.9	710.9	710.1	710.1
7.5°	705.9	705.1	704.3	703.4	701.7
10°	697.6	697.6	696.7	692.5	691.7
12.5°	684.2	683.3	680.0	674.1	672.4
15°	665.7	665.7	659.0	652.3	649.8
17.5°	645.6	644.8	636.4	629.7	626.4
20°	623.9	622.2	613.8	602.9	597.1
22.5°	599.6	599.6	589.5	575.3	569.4
25°	577.0	573.6	564.4	544.3	529.2
27.5°	551.0	546.0	535.9	507.5	489.9
30°	522.5	520.0	505.8	468.9	455.5
32.5°	495.7	491.6	476.5	438.0	427.1
35°	468.1	464.8	442.1	408.6	398.6
37.5°	440.5	436.3	407.8	381.0	368.5
40°	412.8	407.8	376.8	352.5	339.1
42.5°	386.9	380.2	350.0	324.1	309.0
45°	359.2	351.7	321.6	294.8	283.0
47.5°	331.6	324.9	297.3	269.6	256.2
50°	302.3	296.4	271.3	243.7	229.4
52.5°	278.0	268.8	244.5	216.9	205.2
55°	249.5	242.0	219.4	193.4	183.4
57.5°	223.6	216.0	195.1	170.8	162.5
60°	199.3	188.4	170.8	149.9	143.2
62.5°	172.5	164.1	149.1	131.5	139.8
65°	148.2	139.8	126.4	129.0	107.2
67.5°	121.4	117.2	105.5	93.8	90.4
70°	98.8	93.8	89.6	77.0	73.7
72.5°	78.7	73.7	67.8	61.1	58.6
75°	59.5	55.3	51.9	49.4	54.4
77.5°	41.0	39.4	36.8	34.3	33.5
80°	26.8	26.0	25.1	24.3	23.4
82.5°	15.9	15.9	15.9	15.9	15.9
85°	8.4	9.2	10.0	10.9	11.7
87.5°	5.0	5.0	5.9	6.7	7.5
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)