

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: P545665

Luminaire Tested: **FMR-12-2-LD4-2LO-40-UNV-81-86-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: P545665
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-LD4-2LO-40-UNV-81-86-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

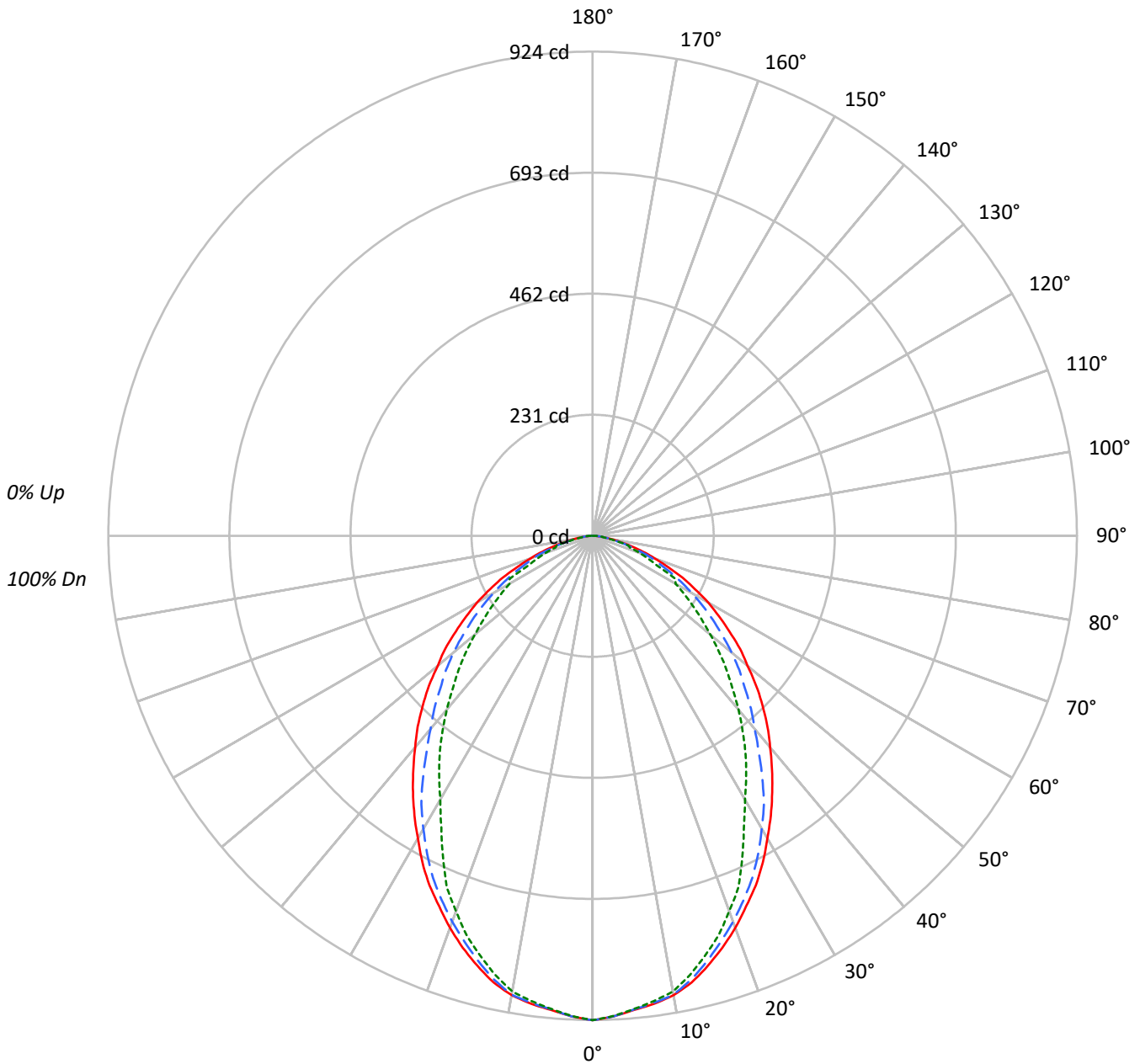
Lumens per Lamp: N/A
Luminaire Lumens: 1815.0 lumens
Efficiency: N/A
Efficacy: 77.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	4976	4976	4976
5°	4908	4902	4897
10°	4865	4860	4825
15°	4734	4687	4621
20°	4561	4487	4365
25°	4373	4278	4011
30°	4144	4012	3613
35°	3926	3708	3343
40°	3702	3379	3041
45°	3490	3124	2750
50°	3230	2900	2452
55°	2989	2627	2197
60°	2738	2347	1968
65°	2409	2055	1742
70°	1984	1800	1481
75°	1578	1379	1445
80°	1060	995	927
85°	661	790	926



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	4.7
10°-20°	236.2	13.0
20°-30°	327.0	18.0
30°-40°	348.7	19.2
40°-50°	318.1	17.5
50°-60°	249.2	13.7
60°-70°	162.4	8.9
70°-80°	72.0	4.0
80°-90°	15.5	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°	649.2	35.8
0°-40°	997.9	55.0
0°-60°	1565.2	86.2
0°-90°	1815.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1815.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	908	907	907	906	906	86
15°	850	850	841	833	829	239
25°	736	732	720	695	676	338
35°	598	593	564	522	509	374
45°	458	449	410	376	361	353
55°	318	309	280	247	234	286
65°	189	178	161	165	137	186
75°	76	70	66	63	70	81
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	924.5	924.5	924.5	924.5	924.5
2.5°	918.1	918.1	918.1	917.1	917.1
5°	908.5	907.4	907.4	906.4	906.4
7.5°	901.0	900.0	898.9	897.8	895.7
10°	890.3	890.3	889.3	883.9	882.9
12.5°	873.2	872.2	867.9	860.4	858.3
15°	849.7	849.7	841.2	832.6	829.4
17.5°	824.1	823.0	812.3	803.8	799.5
20°	796.3	794.1	783.5	769.6	762.1
22.5°	765.3	765.3	752.5	734.3	726.8
25°	736.4	732.1	720.4	694.7	675.5
27.5°	703.3	696.9	684.1	647.7	625.3
30°	666.9	663.7	645.6	598.5	581.4
32.5°	632.7	627.4	608.2	559.0	545.1
35°	597.5	593.2	564.3	521.6	508.8
37.5°	562.2	556.9	520.5	486.3	470.3
40°	526.9	520.5	481.0	450.0	432.9
42.5°	493.8	485.2	446.8	413.6	394.4
45°	458.5	448.9	410.4	376.2	361.3
47.5°	423.3	414.7	379.4	344.2	327.1
50°	385.8	378.4	346.3	311.0	292.9
52.5°	354.9	343.1	312.1	276.8	261.9
55°	318.5	308.9	280.0	246.9	234.1
57.5°	285.4	275.8	249.0	218.0	207.4
60°	254.4	240.5	218.0	191.3	182.8
62.5°	220.2	209.5	190.3	167.8	178.5
65°	189.2	178.5	161.4	164.6	136.8
67.5°	155.0	149.6	134.7	119.7	115.4
70°	126.1	119.7	114.4	98.3	94.1
72.5°	100.5	94.1	86.6	78.0	74.8
75°	75.9	70.5	66.3	63.1	69.5
77.5°	52.4	50.2	47.0	43.8	42.8
80°	34.2	33.1	32.1	31.0	29.9
82.5°	20.3	20.3	20.3	20.3	20.3
85°	10.7	11.8	12.8	13.9	15.0
87.5°	6.4	6.4	7.5	8.6	9.6
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)