

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: P545631

Luminaire Tested: **FMR-12-2-LD4-2LO-35-UNV-81-84-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: P545631
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-35-UNV-81-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

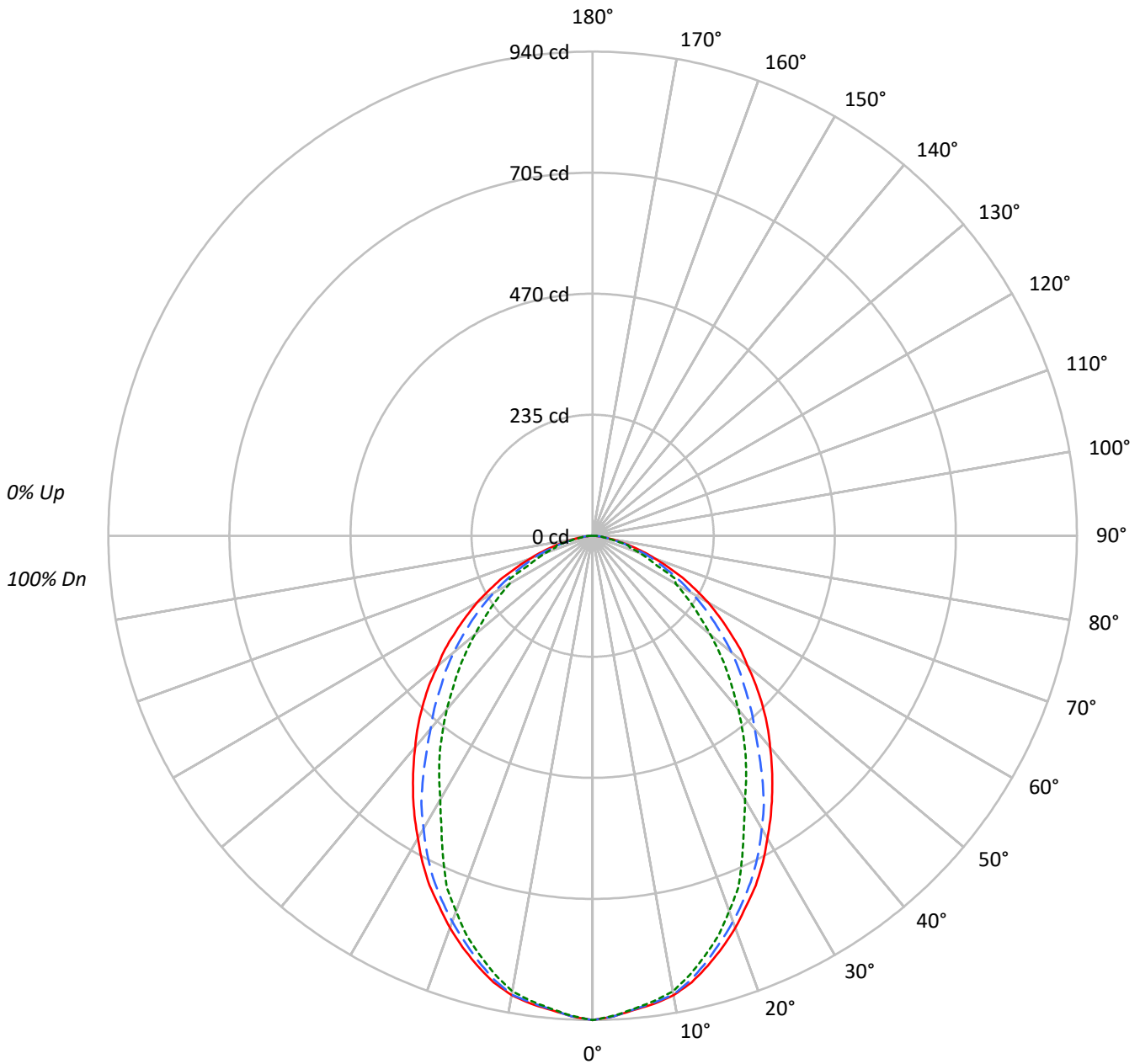
Lumens per Lamp: N/A
Luminaire Lumens: 1846.0 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	5061	5061	5061
5°	4992	4986	4980
10°	4949	4943	4907
15°	4815	4767	4700
20°	4639	4564	4439
25°	4448	4351	4080
30°	4215	4080	3675
35°	3993	3771	3400
40°	3765	3437	3093
45°	3550	3177	2796
50°	3286	2949	2494
55°	3040	2672	2234
60°	2785	2387	2001
65°	2450	2090	1771
70°	2019	1830	1506
75°	1605	1402	1470
80°	1079	1010	942
85°	673	803	939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.5	4.7
10°-20°	240.2	13.0
20°-30°	332.6	18.0
30°-40°	354.6	19.2
40°-50°	323.5	17.5
50°-60°	253.5	13.7
60°-70°	165.2	8.9
70°-80°	73.2	4.0
80°-90°	15.7	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°	660.3	35.8
0°-40°	1015.0	55.0
0°-60°	1591.9	86.2
0°-90°	1846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1846.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	924	923	923	922	922	88
15°	864	864	856	847	844	243
25°	749	745	733	707	687	344
35°	608	603	574	530	518	380
45°	466	457	417	383	367	359
55°	324	314	285	251	238	291
65°	192	182	164	167	139	190
75°	77	72	67	64	71	83
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°	940.3	940.3	940.3	940.3	940.3
2.5°	933.8	933.8	933.8	932.7	932.7
5°	924.0	922.9	922.9	921.8	921.8
7.5°	916.4	915.3	914.2	913.2	911.0
10°	905.5	905.5	904.5	899.0	897.9
12.5°	888.1	887.1	882.7	875.1	872.9
15°	864.2	864.2	855.5	846.8	843.6
17.5°	838.1	837.1	826.2	817.5	813.1
20°	809.9	807.7	796.8	782.7	775.1
22.5°	778.4	778.4	765.3	746.8	739.2
25°	749.0	744.7	732.7	706.6	687.0
27.5°	715.3	708.8	695.7	658.8	635.9
30°	678.3	675.1	656.6	608.8	591.4
32.5°	643.6	638.1	618.6	568.5	554.4
35°	607.7	603.3	574.0	530.5	517.5
37.5°	571.8	566.4	529.4	494.6	478.3
40°	535.9	529.4	489.2	457.7	440.3
42.5°	502.2	493.5	454.4	420.7	401.1
45°	466.4	456.6	417.4	382.7	367.4
47.5°	430.5	421.8	385.9	350.0	332.6
50°	392.4	384.8	352.2	316.3	297.9
52.5°	360.9	349.0	317.4	281.6	266.3
55°	324.0	314.2	284.8	251.1	238.1
57.5°	290.3	280.5	253.3	221.8	210.9
60°	258.7	244.6	221.8	194.6	185.9
62.5°	223.9	213.1	193.5	170.7	181.5
65°	192.4	181.5	164.1	167.4	139.1
67.5°	157.6	152.2	137.0	121.8	117.4
70°	128.3	121.8	116.3	100.0	95.7
72.5°	102.2	95.7	88.1	79.4	76.1
75°	77.2	71.7	67.4	64.1	70.7
77.5°	53.3	51.1	47.8	44.6	43.5
80°	34.8	33.7	32.6	31.5	30.4
82.5°	20.7	20.7	20.7	20.7	20.7
85°	10.9	12.0	13.0	14.1	15.2
87.5°	6.5	6.5	7.6	8.7	9.8
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)