

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: P544995

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-81-88-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: P544995
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-40-UNV-81-88-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

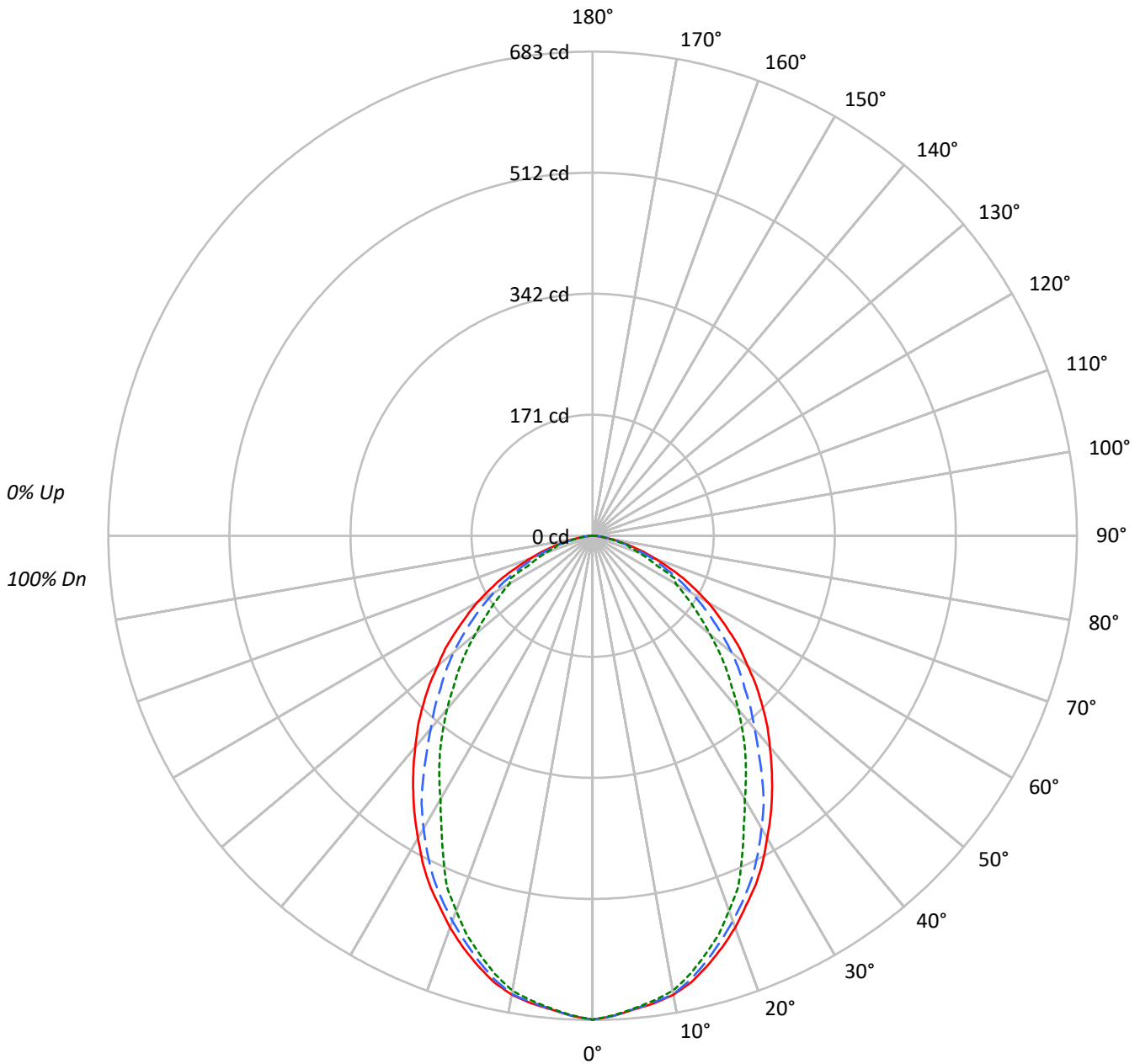
Lumens per Lamp: N/A
Luminaire Lumens: 1340.0 lumens
Efficiency: N/A
Efficacy: 62.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	7347	7347	7347
5°	7247	7239	7231
10°	7184	7176	7124
15°	6990	6920	6823
20°	6734	6625	6444
25°	6457	6317	5923
30°	6120	5924	5336
35°	5796	5474	4936
40°	5466	4990	4491
45°	5153	4612	4060
50°	4771	4282	3620
55°	4414	3879	3243
60°	4043	3466	2904
65°	3558	3036	2572
70°	2930	2656	2184
75°	2329	2034	2133
80°	1568	1469	1370
85°	976	1173	1359



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.5	4.7
10°-20°	174.4	13.0
20°-30°	241.4	18.0
30°-40°	257.4	19.2
40°-50°	234.8	17.5
50°-60°	184.0	13.7
60°-70°	119.9	8.9
70°-80°	53.1	4.0
80°-90°	11.4	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°	479.3	35.8
0°-40°	736.7	55.0
0°-60°	1155.6	86.2
0°-90°	1340.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1340.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	683	683	683	683	683	
5°	671	670	670	669	669	64
15°	627	627	621	615	612	176
25°	544	540	532	513	499	250
35°	441	438	417	385	376	276
45°	338	331	303	278	267	261
55°	235	228	207	182	173	211
65°	140	132	119	122	101	138
75°	56	52	49	47	51	60
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	682.6	682.6	682.6	682.6	682.6
2.5°	677.8	677.8	677.8	677.1	677.1
5°	670.7	670.0	670.0	669.2	669.2
7.5°	665.2	664.4	663.6	662.9	661.3
10°	657.3	657.3	656.5	652.6	651.8
12.5°	644.7	643.9	640.8	635.2	633.7
15°	627.3	627.3	621.0	614.7	612.3
17.5°	608.4	607.6	599.7	593.4	590.3
20°	587.9	586.3	578.4	568.2	562.6
22.5°	565.0	565.0	555.5	542.1	536.6
25°	543.7	540.5	531.9	512.9	498.7
27.5°	519.2	514.5	505.0	478.2	461.6
30°	492.4	490.0	476.6	441.9	429.3
32.5°	467.2	463.2	449.0	412.7	402.4
35°	441.1	438.0	416.6	385.1	375.6
37.5°	415.1	411.1	384.3	359.0	347.2
40°	389.0	384.3	355.1	332.2	319.6
42.5°	364.6	358.3	329.8	305.4	291.2
45°	338.5	331.4	303.0	277.8	266.7
47.5°	312.5	306.2	280.1	254.1	241.5
50°	284.9	279.3	255.7	229.6	216.2
52.5°	262.0	253.3	230.4	204.4	193.3
55°	235.2	228.1	206.7	182.3	172.8
57.5°	210.7	203.6	183.9	161.0	153.1
60°	187.8	177.5	161.0	141.3	134.9
62.5°	162.6	154.7	140.5	123.9	131.8
65°	139.7	131.8	119.2	121.5	101.0
67.5°	114.4	110.5	99.4	88.4	85.2
70°	93.1	88.4	84.4	72.6	69.4
72.5°	74.2	69.4	63.9	57.6	55.2
75°	56.0	52.1	48.9	46.6	51.3
77.5°	38.7	37.1	34.7	32.4	31.6
80°	25.3	24.5	23.7	22.9	22.1
82.5°	15.0	15.0	15.0	15.0	15.0
85°	7.9	8.7	9.5	10.3	11.0
87.5°	4.7	4.7	5.5	6.3	7.1
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)