

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: P545004

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-82-94-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: P545004
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-82-94-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

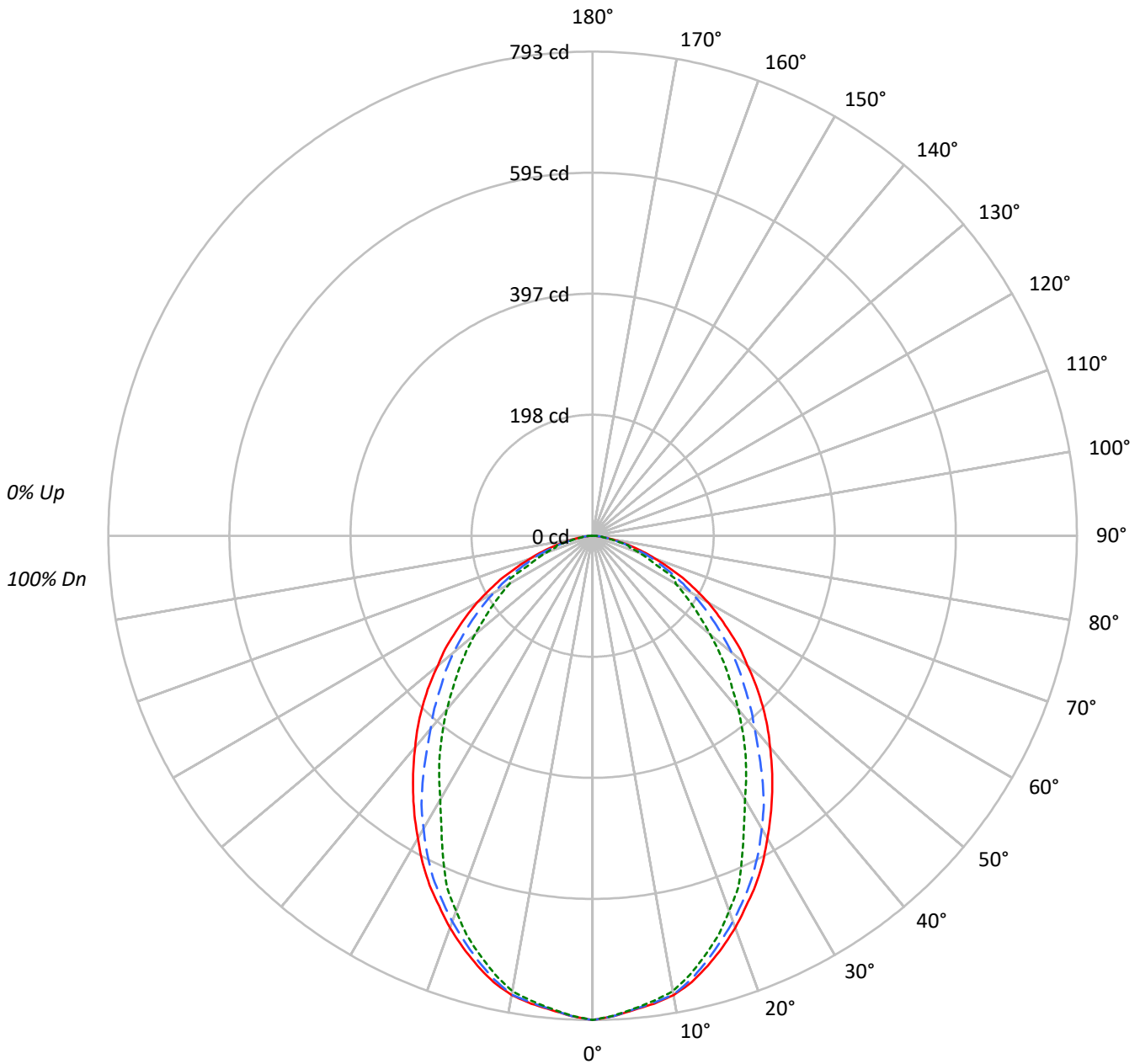
Lumens per Lamp: N/A
Luminaire Lumens: 1557.0 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	8537	8537	8537
5°	8421	8411	8401
10°	8348	8338	8278
15°	8123	8041	7929
20°	7825	7699	7488
25°	7502	7340	6883
30°	7111	6883	6200
35°	6734	6361	5734
40°	6351	5798	5217
45°	5987	5360	4717
50°	5543	4975	4207
55°	5127	4508	3768
60°	4697	4026	3376
65°	4134	3528	2990
70°	3405	3087	2540
75°	2707	2362	2479
80°	1816	1705	1593
85°	1136	1359	1581



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	4.7
10°-20°	202.6	13.0
20°-30°	280.5	18.0
30°-40°	299.1	19.2
40°-50°	272.9	17.5
50°-60°	213.8	13.7
60°-70°	139.3	8.9
70°-80°	61.7	4.0
80°-90°	13.2	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°	557.0	35.8
0°-40°	856.0	55.0
0°-60°	1342.7	86.2
0°-90°	1557.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1557.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	793	793	793	793	793	
5°	779	778	778	778	778	74
15°	729	729	722	714	712	205
25°	632	628	618	596	580	290
35°	512	509	484	447	436	320
45°	393	385	352	323	310	303
55°	273	265	240	212	201	245
65°	162	153	138	141	117	160
75°	65	60	57	54	60	70
85°	9	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°	793.1	793.1	793.1	793.1	793.1
2.5°	787.6	787.6	787.6	786.7	786.7
5°	779.4	778.4	778.4	777.5	777.5
7.5°	772.9	772.0	771.1	770.2	768.4
10°	763.8	763.8	762.9	758.3	757.4
12.5°	749.1	748.2	744.5	738.1	736.3
15°	728.9	728.9	721.6	714.3	711.5
17.5°	706.9	706.0	696.8	689.5	685.8
20°	683.1	681.3	672.1	660.2	653.7
22.5°	656.5	656.5	645.5	629.9	623.5
25°	631.7	628.1	618.0	596.0	579.5
27.5°	603.3	597.8	586.8	555.6	536.4
30°	572.1	569.4	553.8	513.5	498.8
32.5°	542.8	538.2	521.7	479.5	467.6
35°	512.5	508.9	484.1	447.4	436.4
37.5°	482.3	477.7	446.5	417.2	403.4
40°	452.0	446.5	412.6	386.0	371.3
42.5°	423.6	416.3	383.3	354.8	338.3
45°	393.3	385.1	352.1	322.7	309.9
47.5°	363.1	355.8	325.5	295.2	280.6
50°	331.0	324.6	297.1	266.8	251.2
52.5°	304.4	294.3	267.7	237.5	224.6
55°	273.2	265.0	240.2	211.8	200.8
57.5°	244.8	236.6	213.6	187.0	177.9
60°	218.2	206.3	187.0	164.1	156.8
62.5°	188.9	179.7	163.2	144.0	153.1
65°	162.3	153.1	138.5	141.2	117.4
67.5°	132.9	128.4	115.5	102.7	99.0
70°	108.2	102.7	98.1	84.4	80.7
72.5°	86.2	80.7	74.3	66.9	64.2
75°	65.1	60.5	56.8	54.1	59.6
77.5°	44.9	43.1	40.3	37.6	36.7
80°	29.3	28.4	27.5	26.6	25.7
82.5°	17.4	17.4	17.4	17.4	17.4
85°	9.2	10.1	11.0	11.9	12.8
87.5°	5.5	5.5	6.4	7.3	8.3
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)