

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: P545013

Luminaire Tested: **FMR-12-1-LD4-2HI-40-UNV-93-96-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: P545013
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-93-96-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

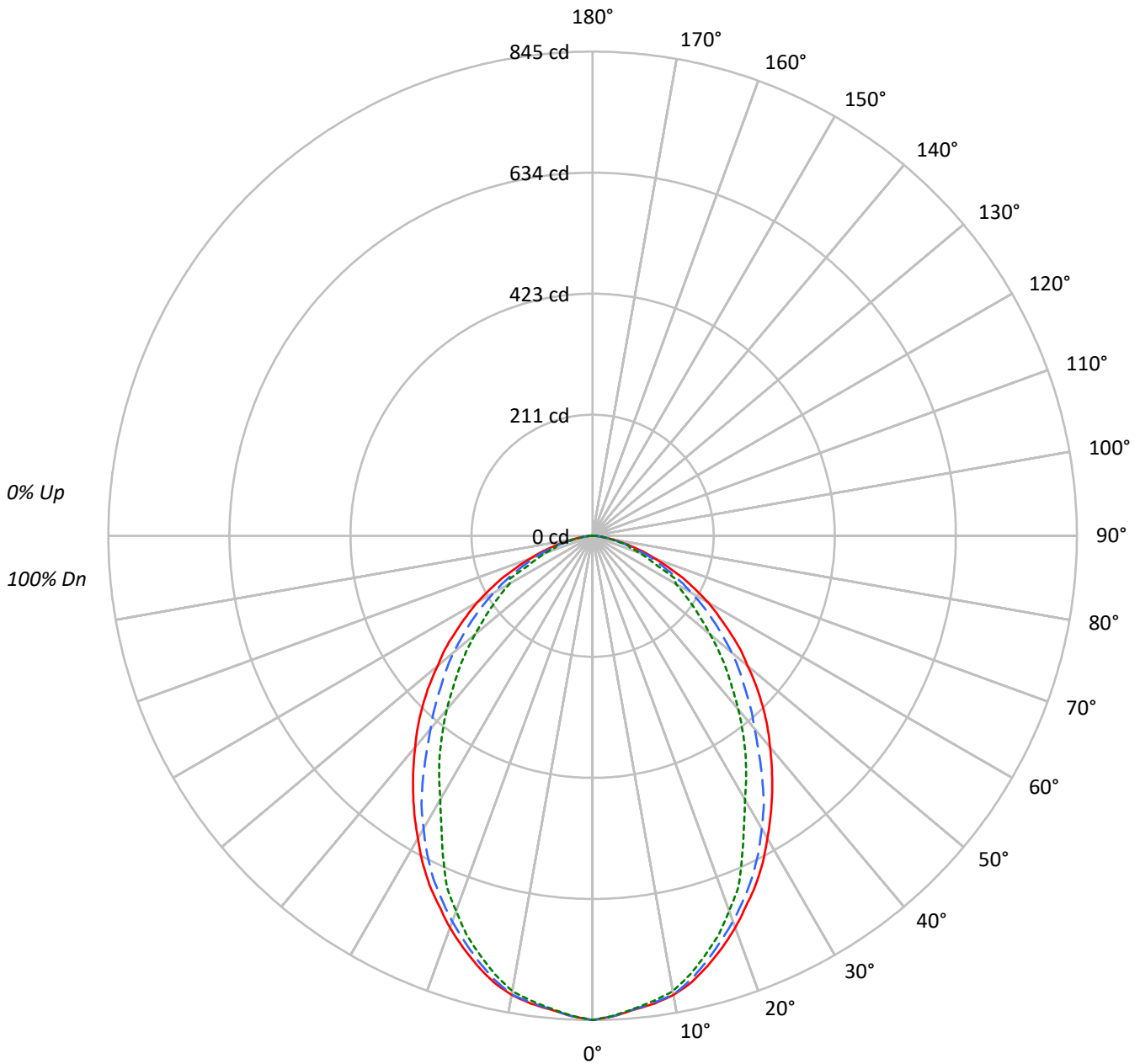
Lumens per Lamp: N/A
Luminaire Lumens: 1659.0 lumens
Efficiency: N/A
Efficacy: 76.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (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°	9097	9097	9097
5°	8972	8962	8952
10°	8895	8884	8820
15°	8655	8568	8448
20°	8337	8203	7979
25°	7994	7821	7333
30°	7577	7334	6606
35°	7176	6778	6110
40°	6767	6177	5560
45°	6380	5711	5026
50°	5906	5300	4483
55°	5463	4804	4016
60°	5005	4290	3597
65°	4404	3757	3186
70°	3629	3289	2707
75°	2886	2520	2641
80°	1940	1816	1698
85°	1210	1445	1692



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.7	4.7
10°-20°	215.9	13.0
20°-30°	298.9	18.0
30°-40°	318.7	19.2
40°-50°	290.7	17.5
50°-60°	227.8	13.7
60°-70°	148.5	8.9
70°-80°	65.8	4.0
80°-90°	14.1	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°	593.4	35.8
0°-40°	912.1	55.0
0°-60°	1430.7	86.2
0°-90°	1659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	845	845	845	845	845	
5°	830	829	829	828	828	79
15°	777	777	769	761	758	218
25°	673	669	658	635	617	309
35°	546	542	516	477	465	341
45°	419	410	375	344	330	323
55°	291	282	256	226	214	261
65°	173	163	148	150	125	170
75°	69	64	61	58	64	74
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	845.1	845.1	845.1	845.1	845.1
2.5°	839.2	839.2	839.2	838.2	838.2
5°	830.4	829.4	829.4	828.5	828.5
7.5°	823.6	822.6	821.6	820.6	818.7
10°	813.8	813.8	812.8	807.9	807.0
12.5°	798.2	797.2	793.3	786.5	784.5
15°	776.7	776.7	768.9	761.1	758.1
17.5°	753.2	752.3	742.5	734.7	730.8
20°	727.8	725.9	716.1	703.4	696.6
22.5°	699.5	699.5	687.8	671.2	664.3
25°	673.1	669.2	658.5	635.0	617.4
27.5°	642.8	637.0	625.3	592.0	571.5
30°	609.6	606.7	590.1	547.1	531.5
32.5°	578.4	573.5	555.9	511.0	498.3
35°	546.1	542.2	515.8	476.8	465.0
37.5°	513.9	509.0	475.8	444.5	429.9
40°	481.6	475.8	439.6	411.3	395.7
42.5°	451.4	443.5	408.4	378.1	360.5
45°	419.1	410.3	375.2	343.9	330.2
47.5°	386.9	379.1	346.8	314.6	299.0
50°	352.7	345.8	316.5	284.3	267.7
52.5°	324.4	313.6	285.3	253.0	239.4
55°	291.1	282.3	256.0	225.7	214.0
57.5°	260.8	252.1	227.6	199.3	189.5
60°	232.5	219.8	199.3	174.9	167.1
62.5°	201.3	191.5	173.9	153.4	163.2
65°	172.9	163.2	147.5	150.5	125.1
67.5°	141.7	136.8	123.1	109.4	105.5
70°	115.3	109.4	104.5	89.9	86.0
72.5°	91.8	86.0	79.1	71.3	68.4
75°	69.4	64.5	60.6	57.6	63.5
77.5°	47.9	45.9	43.0	40.1	39.1
80°	31.3	30.3	29.3	28.3	27.4
82.5°	18.6	18.6	18.6	18.6	18.6
85°	9.8	10.7	11.7	12.7	13.7
87.5°	5.9	5.9	6.8	7.8	8.8
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)