

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: P544703

Luminaire Tested: **FMR-12-1-LD4-1HI-40-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: P544703
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-LD4-1HI-40-UNV-81-84-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

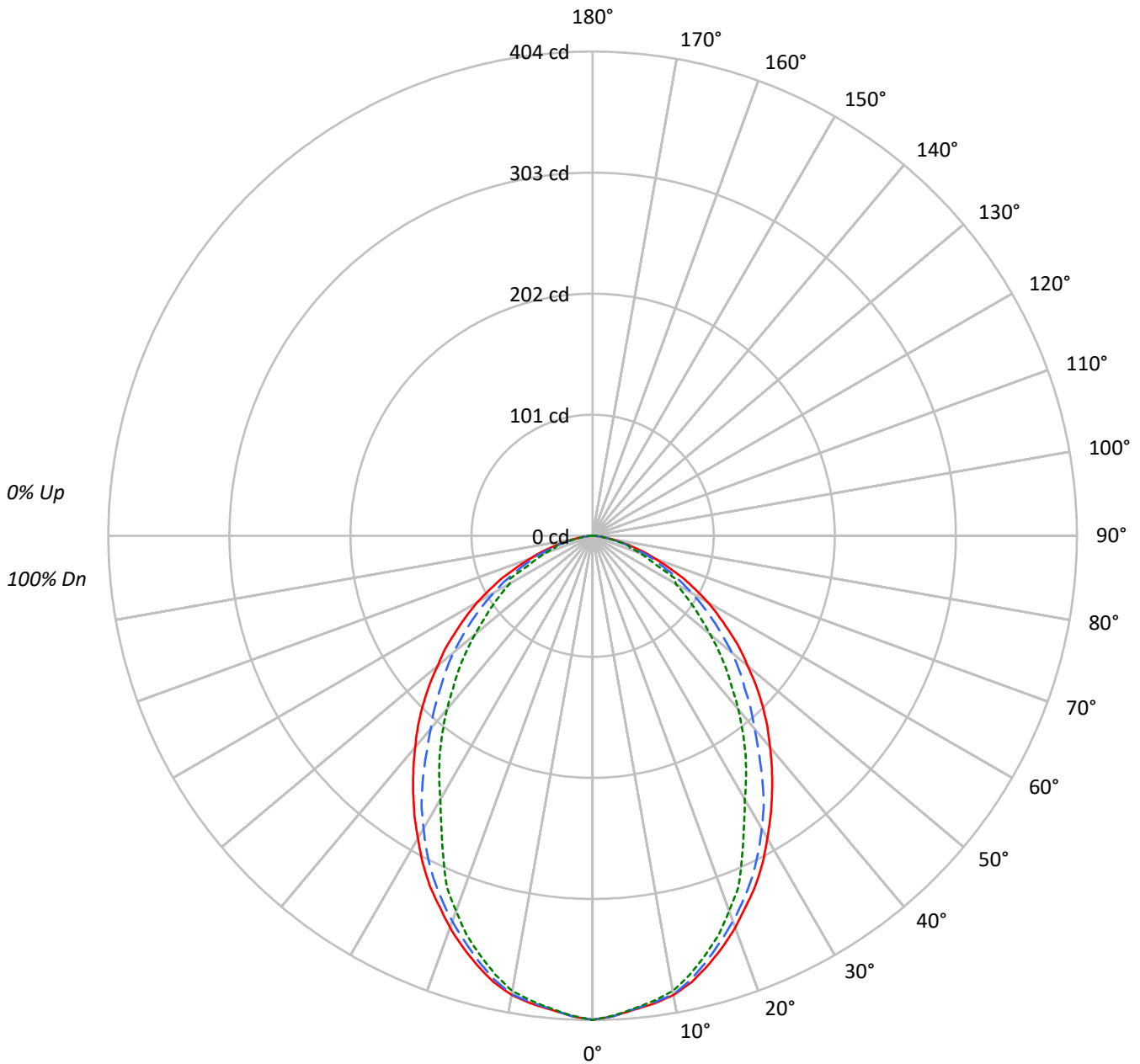
Lumens per Lamp: N/A
Luminaire Lumens: 793.0 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 10.8
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

TEST NUMBER: P544703

CATALOG NUMBER: FMR-12-1-LD4-1HI-40-UNV-81-84-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4348	4348	4348
5°	4289	4284	4279
10°	4252	4246	4216
15°	4138	4095	4038
20°	3985	3921	3814
25°	3822	3738	3505
30°	3622	3506	3157
35°	3430	3240	2921
40°	3235	2952	2657
45°	3049	2729	2402
50°	2823	2534	2143
55°	2612	2297	1920
60°	2392	2052	1720
65°	2106	1796	1523
70°	1734	1574	1293
75°	1381	1206	1264
80°	924	868	812
85°	580	692	803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.6	4.7
10°-20°	103.2	13.0
20°-30°	142.9	18.0
30°-40°	152.3	19.2
40°-50°	139.0	17.5
50°-60°	108.9	13.7
60°-70°	71.0	8.9
70°-80°	31.4	4.0
80°-90°	6.8	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°	283.7	35.8
0°-40°	436.0	55.0
0°-60°	683.9	86.2
0°-90°	793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	793.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	404	404	404	404	404	
5°	397	396	396	396	396	38
15°	371	371	368	364	362	104
25°	322	320	315	304	295	148
35°	261	259	247	228	222	163
45°	200	196	179	164	158	154
55°	139	135	122	108	102	125
65°	83	78	70	72	60	81
75°	33	31	29	28	30	36
85°	5	5	6	6	6	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	403.9	403.9	403.9	403.9	403.9
2.5°	401.1	401.1	401.1	400.7	400.7
5°	396.9	396.5	396.5	396.0	396.0
7.5°	393.7	393.2	392.7	392.3	391.3
10°	389.0	389.0	388.5	386.2	385.7
12.5°	381.5	381.1	379.2	375.9	375.0
15°	371.3	371.3	367.5	363.8	362.4
17.5°	360.0	359.6	354.9	351.2	349.3
20°	347.9	347.0	342.3	336.2	333.0
22.5°	334.4	334.4	328.8	320.8	317.6
25°	321.8	319.9	314.7	303.5	295.1
27.5°	307.3	304.5	298.9	283.0	273.2
30°	291.4	290.0	282.1	261.5	254.0
32.5°	276.5	274.1	265.7	244.2	238.2
35°	261.0	259.2	246.6	227.9	222.3
37.5°	245.6	243.3	227.4	212.5	205.5
40°	230.2	227.4	210.1	196.6	189.1
42.5°	215.7	212.0	195.2	180.7	172.3
45°	200.3	196.1	179.3	164.4	157.8
47.5°	184.9	181.2	165.8	150.4	142.9
50°	168.6	165.3	151.3	135.9	128.0
52.5°	155.0	149.9	136.4	120.9	114.4
55°	139.2	135.0	122.4	107.9	102.3
57.5°	124.7	120.5	108.8	95.3	90.6
60°	111.1	105.1	95.3	83.6	79.9
62.5°	96.2	91.5	83.1	73.3	78.0
65°	82.7	78.0	70.5	71.9	59.8
67.5°	67.7	65.4	58.8	52.3	50.4
70°	55.1	52.3	50.0	43.0	41.1
72.5°	43.9	41.1	37.8	34.1	32.7
75°	33.2	30.8	29.0	27.6	30.4
77.5°	22.9	21.9	20.5	19.1	18.7
80°	14.9	14.5	14.0	13.5	13.1
82.5°	8.9	8.9	8.9	8.9	8.9
85°	4.7	5.1	5.6	6.1	6.5
87.5°	2.8	2.8	3.3	3.7	4.2
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)