

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: P544712

Luminaire Tested: **FMR-12-1-LD4-1HI-40-UNV-82-85-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: P544712
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-82-85-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

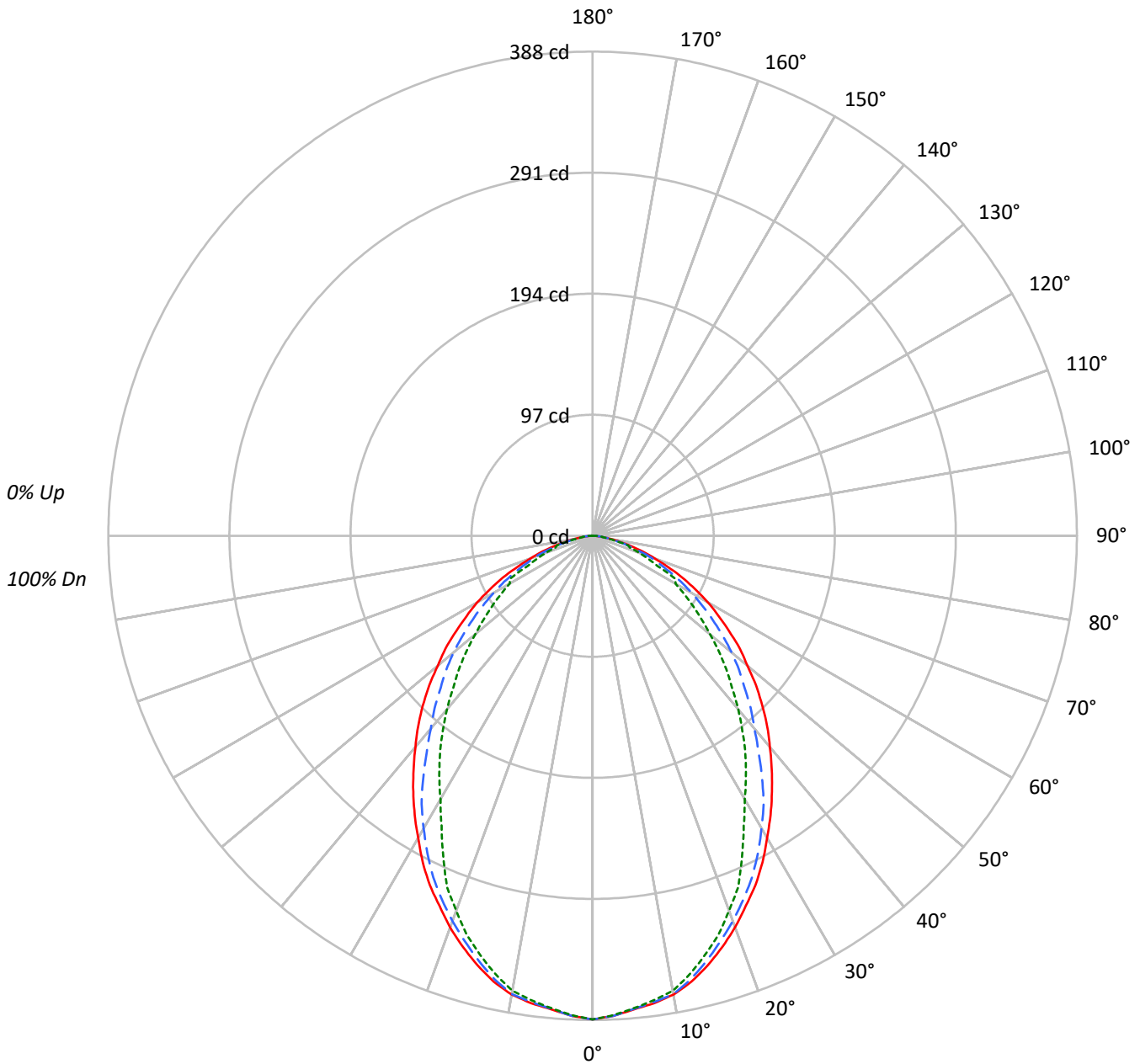
Lumens per Lamp: N/A
Luminaire Lumens: 761.0 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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

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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°	4172	4172	4172
5°	4116	4111	4106
10°	4080	4076	4046
15°	3970	3930	3876
20°	3825	3763	3660
25°	3668	3587	3363
30°	3475	3365	3030
35°	3292	3109	2803
40°	3104	2834	2550
45°	2927	2620	2306
50°	2709	2431	2056
55°	2505	2203	1841
60°	2297	1968	1649
65°	2020	1724	1462
70°	1665	1511	1240
75°	1323	1156	1210
80°	886	831	775
85°	556	667	778



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.1	4.7
10°-20°	99.0	13.0
20°-30°	137.1	18.0
30°-40°	146.2	19.2
40°-50°	133.4	17.5
50°-60°	104.5	13.7
60°-70°	68.1	8.9
70°-80°	30.2	4.0
80°-90°	6.5	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°	272.2	35.8
0°-40°	418.4	55.0
0°-60°	656.3	86.2
0°-90°	761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	388	388	388	388	388	
5°	381	380	380	380	380	36
15°	356	356	353	349	348	100
25°	309	307	302	291	283	142
35°	250	249	237	219	213	157
45°	192	188	172	158	152	148
55°	134	130	117	104	98	120
65°	79	75	68	69	57	78
75°	32	30	28	26	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	387.6	387.6	387.6	387.6	387.6
2.5°	385.0	385.0	385.0	384.5	384.5
5°	380.9	380.5	380.5	380.0	380.0
7.5°	377.8	377.3	376.9	376.4	375.5
10°	373.3	373.3	372.9	370.6	370.2
12.5°	366.1	365.7	363.9	360.8	359.9
15°	356.3	356.3	352.7	349.1	347.8
17.5°	345.5	345.1	340.6	337.0	335.2
20°	333.9	333.0	328.5	322.7	319.5
22.5°	320.9	320.9	315.5	307.9	304.7
25°	308.8	307.0	302.0	291.3	283.2
27.5°	294.9	292.2	286.8	271.6	262.2
30°	279.6	278.3	270.7	251.0	243.8
32.5°	265.3	263.1	255.0	234.4	228.6
35°	250.5	248.7	236.6	218.7	213.3
37.5°	235.7	233.5	218.2	203.9	197.2
40°	220.9	218.2	201.7	188.7	181.5
42.5°	207.0	203.5	187.3	173.4	165.4
45°	192.3	188.2	172.1	157.7	151.5
47.5°	177.5	173.9	159.1	144.3	137.1
50°	161.8	158.6	145.2	130.4	122.8
52.5°	148.8	143.9	130.9	116.1	109.8
55°	133.5	129.5	117.4	103.5	98.1
57.5°	119.7	115.6	104.4	91.4	86.9
60°	106.7	100.8	91.4	80.2	76.6
62.5°	92.3	87.8	79.8	70.4	74.8
65°	79.3	74.8	67.7	69.0	57.4
67.5°	65.0	62.7	56.5	50.2	48.4
70°	52.9	50.2	48.0	41.2	39.4
72.5°	42.1	39.4	36.3	32.7	31.4
75°	31.8	29.6	27.8	26.4	29.1
77.5°	22.0	21.1	19.7	18.4	17.9
80°	14.3	13.9	13.4	13.0	12.5
82.5°	8.5	8.5	8.5	8.5	8.5
85°	4.5	4.9	5.4	5.8	6.3
87.5°	2.7	2.7	3.1	3.6	4.0
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)