

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: P544716

Luminaire Tested: **FMR-12-1-LD4-1HI-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: P544716
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-82-94-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

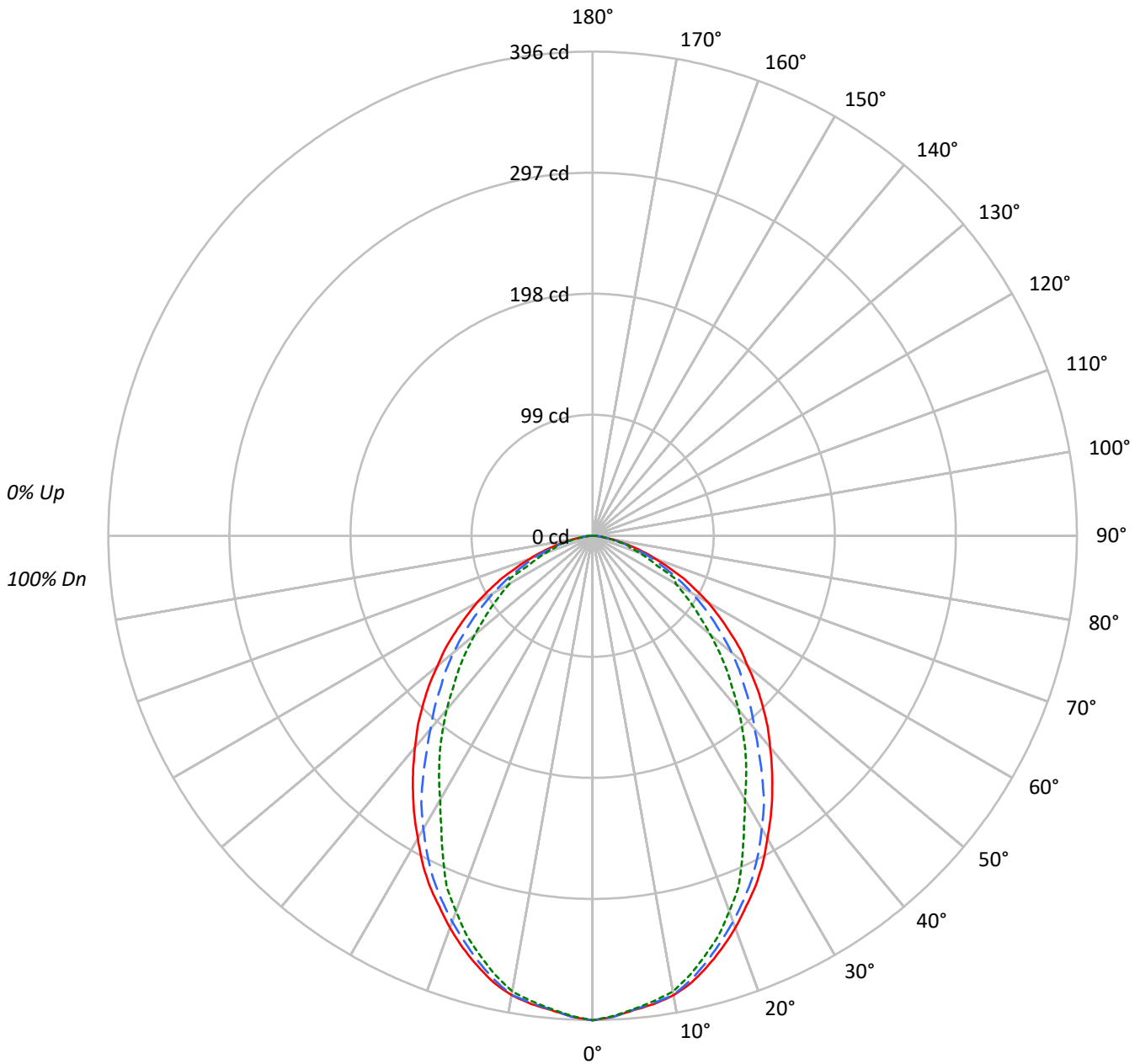
Lumens per Lamp: N/A
Luminaire Lumens: 778.0 lumens
Efficiency: N/A
Efficacy: 72.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 10.8
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				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	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4266	4266	4266
5°	4207	4203	4198
10°	4171	4167	4136
15°	4059	4018	3962
20°	3909	3846	3742
25°	3749	3668	3439
30°	3553	3439	3097
35°	3365	3179	2866
40°	3174	2897	2608
45°	2991	2678	2358
50°	2770	2485	2102
55°	2562	2252	1882
60°	2347	2013	1686
65°	2066	1762	1493
70°	1703	1542	1268
75°	1352	1181	1239
80°	911	849	793
85°	568	679	790



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.9	4.7
10°-20°	101.2	13.0
20°-30°	140.2	18.0
30°-40°	149.5	19.2
40°-50°	136.3	17.5
50°-60°	106.8	13.7
60°-70°	69.6	8.9
70°-80°	30.8	4.0
80°-90°	6.6	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°	278.3	35.8
0°-40°	427.7	55.0
0°-60°	670.9	86.2
0°-90°	778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	778.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	396	396	396	396	396	
5°	389	389	389	388	388	37
15°	364	364	361	357	356	102
25°	316	314	309	298	290	145
35°	256	254	242	224	218	160
45°	196	192	176	161	155	151
55°	136	132	120	106	100	122
65°	81	76	69	71	59	80
75°	32	30	28	27	30	35
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°	396.3	396.3	396.3	396.3	396.3
2.5°	393.6	393.6	393.6	393.1	393.1
5°	389.4	389.0	389.0	388.5	388.5
7.5°	386.2	385.8	385.3	384.8	383.9
10°	381.6	381.6	381.2	378.9	378.4
12.5°	374.3	373.9	372.0	368.8	367.9
15°	364.2	364.2	360.6	356.9	355.5
17.5°	353.2	352.8	348.2	344.5	342.7
20°	341.3	340.4	335.8	329.9	326.7
22.5°	328.0	328.0	322.5	314.8	311.5
25°	315.7	313.8	308.8	297.8	289.6
27.5°	301.5	298.7	293.2	277.6	268.0
30°	285.9	284.5	276.7	256.6	249.2
32.5°	271.2	268.9	260.7	239.6	233.7
35°	256.1	254.3	241.9	223.6	218.1
37.5°	241.0	238.7	223.1	208.5	201.6
40°	225.9	223.1	206.2	192.9	185.6
42.5°	211.7	208.0	191.5	177.3	169.1
45°	196.5	192.4	175.9	161.3	154.9
47.5°	181.4	177.8	162.6	147.5	140.2
50°	165.4	162.2	148.4	133.3	125.5
52.5°	152.1	147.1	133.8	118.7	112.2
55°	136.5	132.4	120.0	105.8	100.3
57.5°	122.3	118.2	106.7	93.5	88.9
60°	109.0	103.1	93.5	82.0	78.3
62.5°	94.4	89.8	81.6	71.9	76.5
65°	81.1	76.5	69.2	70.6	58.6
67.5°	66.4	64.1	57.7	51.3	49.5
70°	54.1	51.3	49.0	42.2	40.3
72.5°	43.1	40.3	37.1	33.4	32.1
75°	32.5	30.2	28.4	27.0	29.8
77.5°	22.4	21.5	20.2	18.8	18.3
80°	14.7	14.2	13.7	13.3	12.8
82.5°	8.7	8.7	8.7	8.7	8.7
85°	4.6	5.0	5.5	6.0	6.4
87.5°	2.7	2.7	3.2	3.7	4.1
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)