

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: P545332

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-93-94-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: P545332
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-12-2-LD4-1HI-50-UNV-93-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

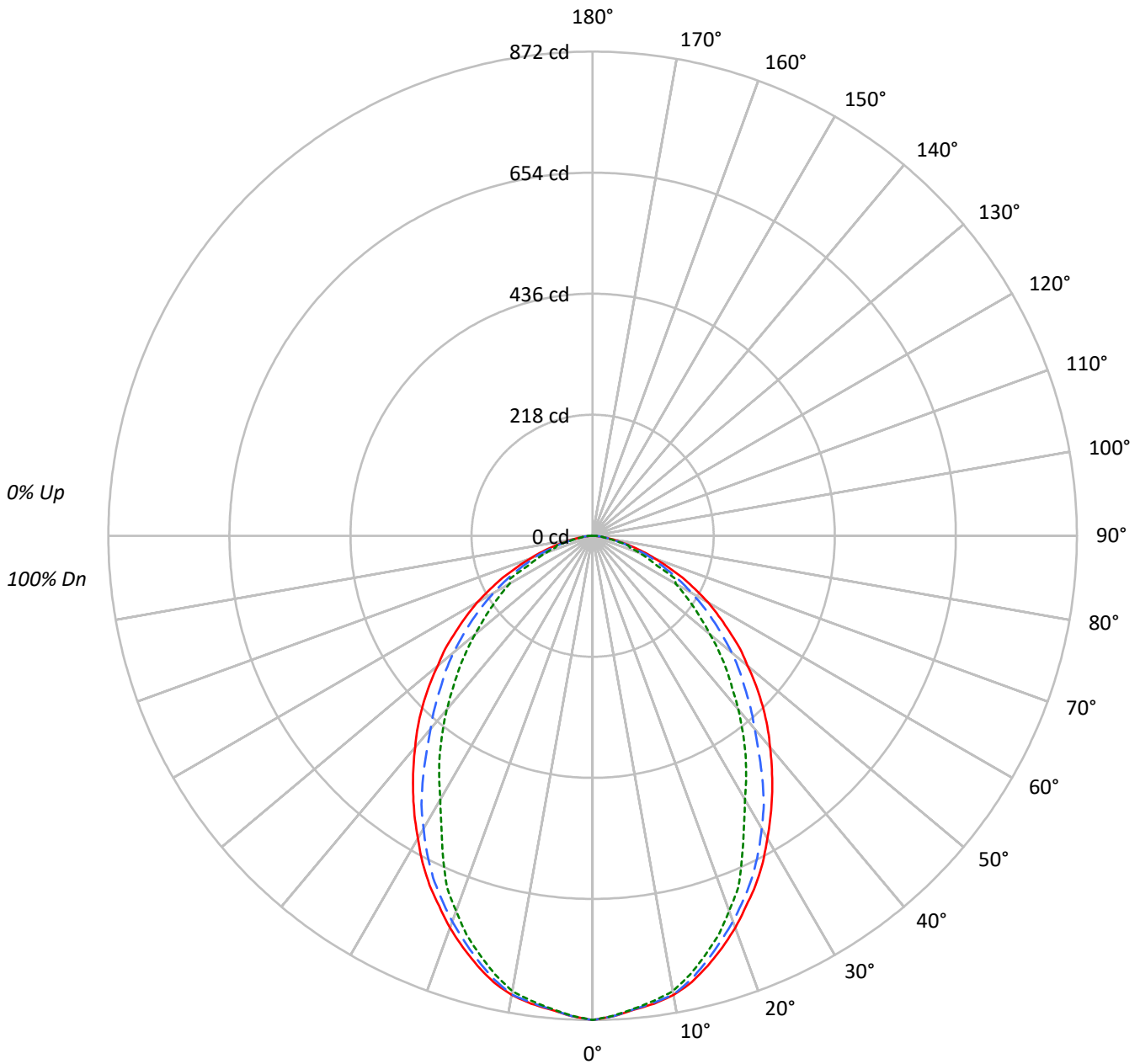
Lumens per Lamp: N/A
Luminaire Lumens: 1712.0 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	4694	4694	4694
5°	4629	4624	4619
10°	4589	4584	4551
15°	4466	4421	4359
20°	4302	4233	4117
25°	4125	4035	3784
30°	3910	3784	3408
35°	3703	3497	3153
40°	3492	3188	2869
45°	3292	2946	2594
50°	3048	2735	2313
55°	2819	2478	2072
60°	2582	2214	1856
65°	2272	1938	1643
70°	1873	1698	1396
75°	1489	1300	1362
80°	1001	936	874
85°	624	747	871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	4.7
10°-20°	222.8	13.0
20°-30°	308.4	18.0
30°-40°	328.9	19.2
40°-50°	300.0	17.5
50°-60°	235.1	13.7
60°-70°	153.2	8.9
70°-80°	67.9	4.0
80°-90°	14.6	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°	612.4	35.8
0°-40°	941.3	55.0
0°-60°	1476.4	86.2
0°-90°	1712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1712.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	872	872	872	872	872	
5°	857	856	856	855	855	81
15°	802	802	793	785	782	225
25°	695	691	680	655	637	319
35°	564	560	532	492	480	352
45°	432	423	387	355	341	333
55°	300	291	264	233	221	269
65°	178	168	152	155	129	176
75°	72	66	62	60	66	77
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°	872.1	872.1	872.1	872.1	872.1
2.5°	866.0	866.0	866.0	865.0	865.0
5°	856.9	855.9	855.9	854.9	854.9
7.5°	849.9	848.9	847.9	846.9	844.8
10°	839.8	839.8	838.8	833.8	832.8
12.5°	823.7	822.7	818.6	811.6	809.6
15°	801.5	801.5	793.4	785.4	782.3
17.5°	777.3	776.3	766.2	758.1	754.1
20°	751.1	749.1	739.0	725.9	718.8
22.5°	721.9	721.9	709.8	692.6	685.6
25°	694.6	690.6	679.5	655.3	637.2
27.5°	663.4	657.3	645.2	611.0	589.8
30°	629.1	626.1	608.9	564.6	548.4
32.5°	596.8	591.8	573.7	527.3	514.2
35°	563.6	559.5	532.3	492.0	479.9
37.5°	530.3	525.3	491.0	458.7	443.6
40°	497.0	491.0	453.7	424.4	408.3
42.5°	465.8	457.7	421.4	390.2	372.0
45°	432.5	423.4	387.1	354.9	340.8
47.5°	399.2	391.2	357.9	324.6	308.5
50°	364.0	356.9	326.6	293.4	276.2
52.5°	334.7	323.6	294.4	261.1	247.0
55°	300.4	291.4	264.1	232.9	220.8
57.5°	269.2	260.1	234.9	205.7	195.6
60°	239.9	226.8	205.7	180.5	172.4
62.5°	207.7	197.6	179.5	158.3	168.4
65°	178.4	168.4	152.2	155.3	129.0
67.5°	146.2	141.1	127.0	112.9	108.9
70°	119.0	112.9	107.9	92.8	88.7
72.5°	94.8	88.7	81.7	73.6	70.6
75°	71.6	66.5	62.5	59.5	65.5
77.5°	49.4	47.4	44.4	41.3	40.3
80°	32.3	31.3	30.2	29.2	28.2
82.5°	19.2	19.2	19.2	19.2	19.2
85°	10.1	11.1	12.1	13.1	14.1
87.5°	6.0	6.0	7.1	8.1	9.1
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)