

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: P545281

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-81-86-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: P545281
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-40-UNV-81-86-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

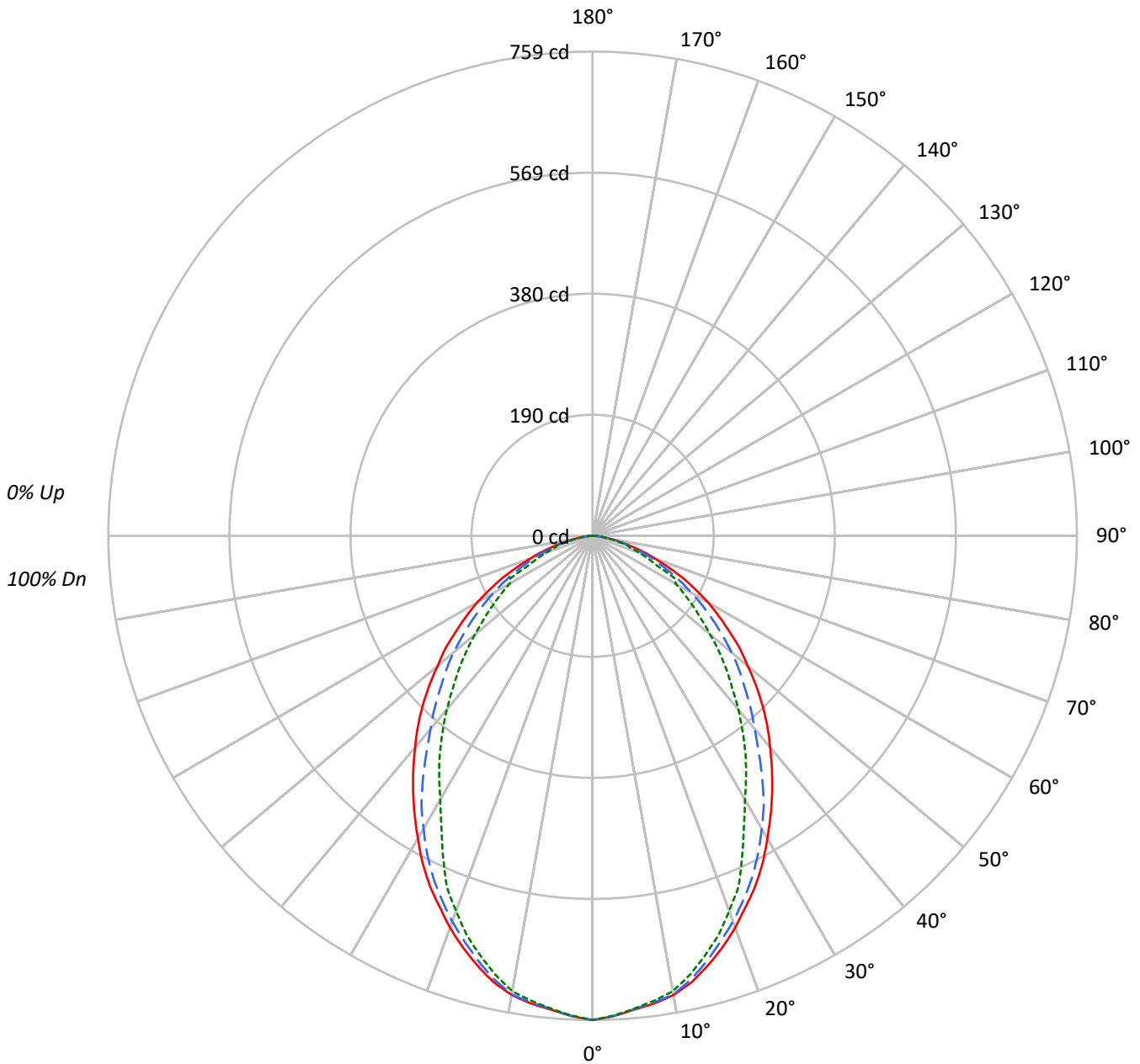
Lumens per Lamp: N/A
Luminaire Lumens: 1490.0 lumens
Efficiency: N/A
Efficacy: 69.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (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									
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°	4085	4085	4085
5°	4029	4024	4020
10°	3994	3989	3961
15°	3887	3847	3794
20°	3744	3684	3583
25°	3590	3512	3293
30°	3402	3294	2966
35°	3223	3044	2744
40°	3039	2774	2497
45°	2865	2564	2257
50°	2653	2380	2013
55°	2454	2157	1803
60°	2248	1927	1615
65°	1978	1687	1430
70°	1629	1478	1215
75°	1295	1131	1185
80°	871	815	762
85°	543	648	760



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	4.7
10°-20°	193.9	13.0
20°-30°	268.4	18.0
30°-40°	286.2	19.2
40°-50°	261.1	17.5
50°-60°	204.6	13.7
60°-70°	133.3	8.9
70°-80°	59.1	4.0
80°-90°	12.7	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°	533.0	35.8
0°-40°	819.2	55.0
0°-60°	1284.9	86.2
0°-90°	1490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	759	759	759	759	759	
5°	746	745	745	744	744	71
15°	698	698	690	684	681	196
25°	605	601	591	570	554	278
35°	490	487	463	428	418	307
45°	376	368	337	309	297	290
55°	262	254	230	203	192	235
65°	155	146	132	135	112	153
75°	62	58	54	52	57	67
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	759.0	759.0	759.0	759.0	759.0
2.5°	753.7	753.7	753.7	752.8	752.8
5°	745.8	744.9	744.9	744.1	744.1
7.5°	739.7	738.8	737.9	737.1	735.3
10°	730.9	730.9	730.0	725.6	724.8
12.5°	716.9	716.0	712.5	706.3	704.6
15°	697.6	697.6	690.5	683.5	680.9
17.5°	676.5	675.6	666.9	659.8	656.3
20°	653.7	651.9	643.2	631.8	625.6
22.5°	628.2	628.2	617.7	602.8	596.7
25°	604.6	601.0	591.4	570.3	554.5
27.5°	577.4	572.1	561.6	531.7	513.3
30°	547.5	544.9	530.0	491.4	477.3
32.5°	519.4	515.1	499.3	458.9	447.5
35°	490.5	487.0	463.3	428.2	417.7
37.5°	461.5	457.1	427.3	399.2	386.1
40°	432.6	427.3	394.8	369.4	355.4
42.5°	405.4	398.4	366.8	339.6	323.8
45°	376.4	368.5	336.9	308.9	296.6
47.5°	347.5	340.4	311.5	282.5	268.5
50°	316.8	310.6	284.3	255.3	240.4
52.5°	291.3	281.7	256.2	227.3	215.0
55°	261.5	253.6	229.9	202.7	192.2
57.5°	234.3	226.4	204.4	179.0	170.2
60°	208.8	197.4	179.0	157.1	150.0
62.5°	180.8	172.0	156.2	137.8	146.5
65°	155.3	146.5	132.5	135.1	112.3
67.5°	127.2	122.8	110.6	98.3	94.8
70°	103.5	98.3	93.9	80.7	77.2
72.5°	82.5	77.2	71.1	64.1	61.4
75°	62.3	57.9	54.4	51.8	57.0
77.5°	43.0	41.2	38.6	36.0	35.1
80°	28.1	27.2	26.3	25.4	24.6
82.5°	16.7	16.7	16.7	16.7	16.7
85°	8.8	9.7	10.5	11.4	12.3
87.5°	5.3	5.3	6.1	7.0	7.9
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)