

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: P545579

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-82-88-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: P545579
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-LD4-2HI-40-UNV-82-88-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

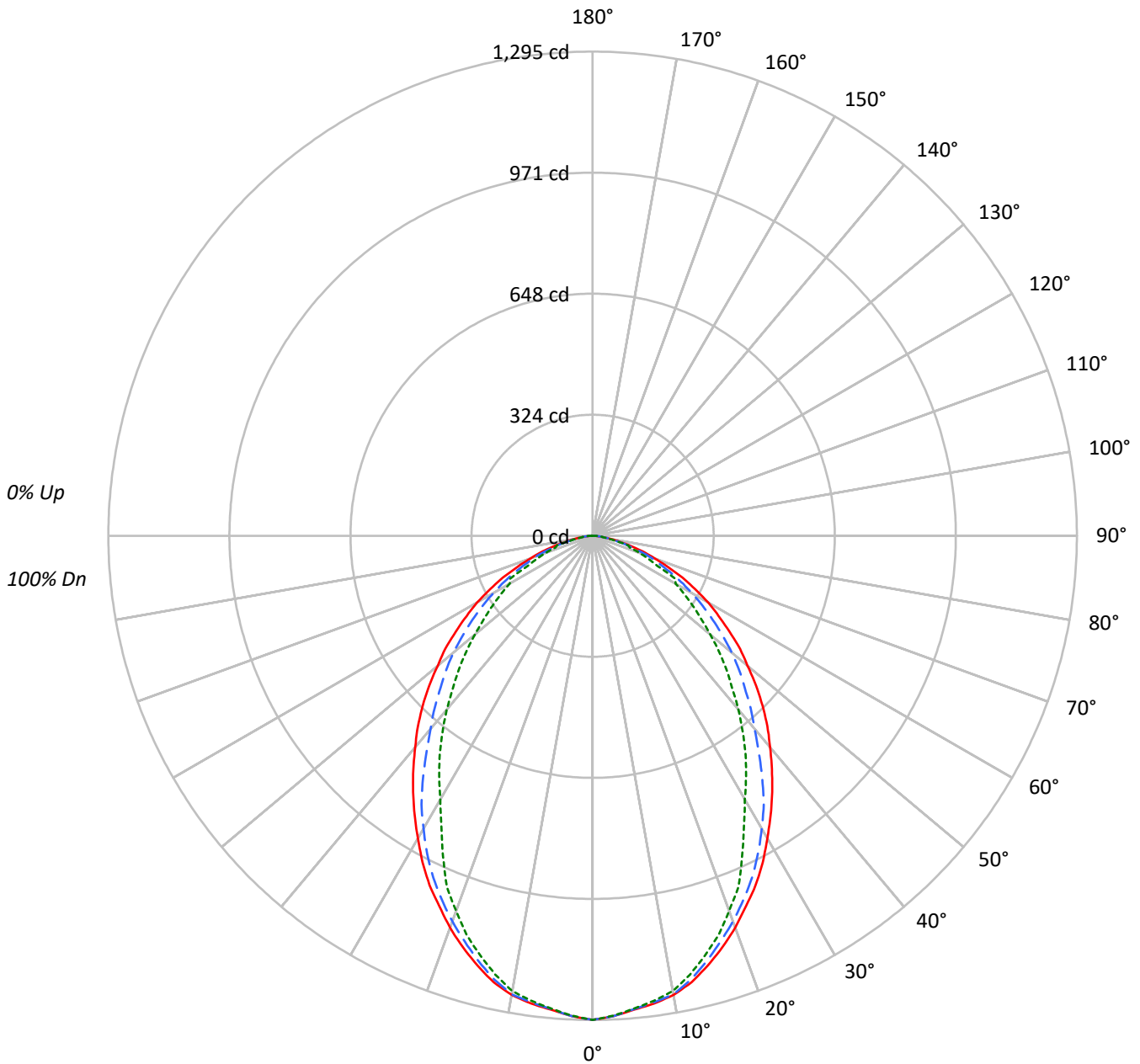
Lumens per Lamp: N/A
Luminaire Lumens: 2542.0 lumens
Efficiency: N/A
Efficacy: 58.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	6969	6969	6969
5°	6874	6866	6858
10°	6815	6807	6757
15°	6631	6564	6472
20°	6387	6285	6113
25°	6125	5991	5618
30°	5805	5619	5061
35°	5498	5193	4681
40°	5185	4732	4260
45°	4888	4375	3851
50°	4525	4061	3435
55°	4186	3680	3076
60°	3835	3287	2756
65°	3375	2878	2440
70°	2779	2521	2072
75°	2210	1930	2023
80°	1485	1392	1299
85°	926	1112	1297



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.5	4.7
10°-20°	330.8	13.0
20°-30°	458.0	18.0
30°-40°	488.3	19.2
40°-50°	445.5	17.5
50°-60°	349.0	13.7
60°-70°	227.5	8.9
70°-80°	100.8	4.0
80°-90°	21.6	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°	909.3	35.8
0°-40°	1397.6	55.0
0°-60°	2192.1	86.2
0°-90°	2542.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2542.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1295	1295	1295	1295	1295	
5°	1272	1271	1271	1269	1269	121
15°	1190	1190	1178	1166	1162	335
25°	1031	1025	1009	973	946	474
35°	837	831	790	730	712	523
45°	642	629	575	527	506	495
55°	446	433	392	346	328	400
65°	265	250	226	230	192	261
75°	106	99	93	88	97	114
85°	15	16	18	20	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1294.9	1294.9	1294.9	1294.9	1294.9
2.5°	1285.9	1285.9	1285.9	1284.4	1284.4
5°	1272.4	1270.9	1270.9	1269.4	1269.4
7.5°	1261.9	1260.4	1258.9	1257.4	1254.4
10°	1247.0	1247.0	1245.5	1238.0	1236.5
12.5°	1223.0	1221.5	1215.5	1205.0	1202.1
15°	1190.1	1190.1	1178.1	1166.1	1161.6
17.5°	1154.1	1152.7	1137.7	1125.7	1119.7
20°	1115.2	1112.2	1097.3	1077.8	1067.3
22.5°	1071.8	1071.8	1053.9	1028.4	1017.9
25°	1031.4	1025.4	1008.9	973.0	946.1
27.5°	985.0	976.0	958.0	907.2	875.7
30°	934.1	929.6	904.2	838.3	814.3
32.5°	886.2	878.7	851.8	782.9	763.4
35°	836.8	830.8	790.4	730.5	712.5
37.5°	787.4	779.9	729.0	681.1	658.7
40°	738.0	729.0	673.6	630.2	606.3
42.5°	691.6	679.6	625.7	579.3	552.4
45°	642.2	628.7	574.8	526.9	506.0
47.5°	592.8	580.8	531.4	482.0	458.1
50°	540.4	529.9	485.0	435.6	410.2
52.5°	497.0	480.5	437.1	387.7	366.8
55°	446.1	432.6	392.2	345.8	327.8
57.5°	399.7	386.2	348.8	305.4	290.4
60°	356.3	336.8	305.4	268.0	256.0
62.5°	308.4	293.4	266.5	235.0	250.0
65°	265.0	250.0	226.0	230.5	191.6
67.5°	217.1	209.6	188.6	167.7	161.7
70°	176.6	167.7	160.2	137.7	131.7
72.5°	140.7	131.7	121.3	109.3	104.8
75°	106.3	98.8	92.8	88.3	97.3
77.5°	73.4	70.4	65.9	61.4	59.9
80°	47.9	46.4	44.9	43.4	41.9
82.5°	28.4	28.4	28.4	28.4	28.4
85°	15.0	16.5	18.0	19.5	21.0
87.5°	9.0	9.0	10.5	12.0	13.5
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)