

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: P545568

Luminaire Tested: **FMR-12-2-LD4-2HI-40-UNV-81-85-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: P545568
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-81-85-EDD
Description: 1X2 FMR TROFFER WITH .156 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

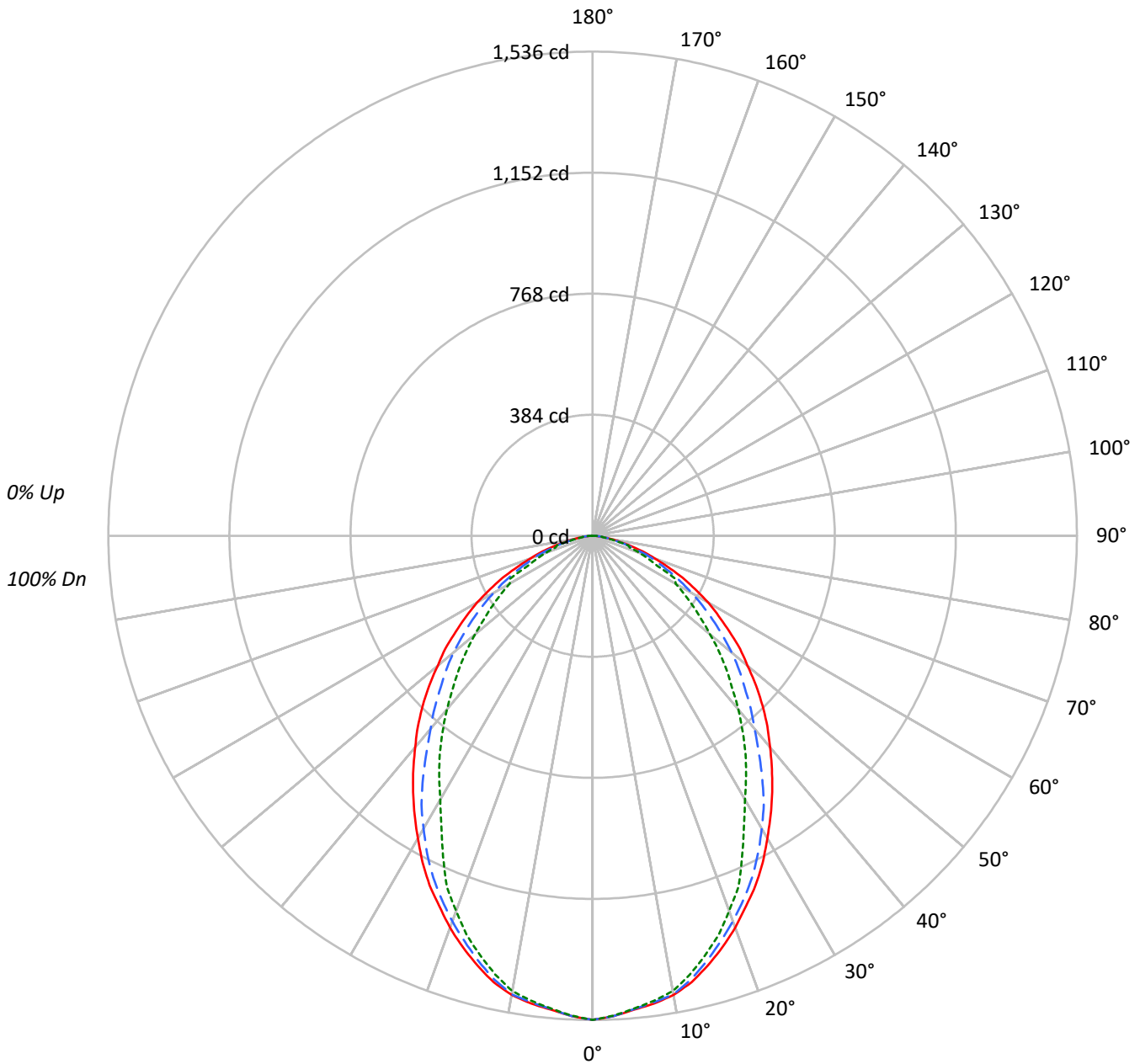
Lumens per Lamp: N/A
Luminaire Lumens: 3015.0 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (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°	8266	8266	8266
5°	8153	8144	8134
10°	8083	8073	8015
15°	7865	7785	7677
20°	7576	7454	7250
25°	7264	7106	6663
30°	6885	6664	6003
35°	6521	6160	5552
40°	6150	5613	5052
45°	5797	5189	4568
50°	5367	4817	4073
55°	4965	4365	3648
60°	4549	3899	3268
65°	4003	3414	2895
70°	3297	2990	2458
75°	2622	2289	2400
80°	1760	1652	1540
85°	1099	1315	1538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.0	4.7
10°-20°	392.3	13.0
20°-30°	543.2	18.0
30°-40°	579.2	19.2
40°-50°	528.4	17.5
50°-60°	414.0	13.7
60°-70°	269.8	8.9
70°-80°	119.5	4.0
80°-90°	25.7	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°	1078.5	35.8
0°-40°	1657.7	55.0
0°-60°	2600.0	86.2
0°-90°	3015.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3015.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1536	1536	1536	1536	1536	
5°	1509	1507	1507	1506	1506	143
15°	1412	1412	1397	1383	1378	397
25°	1223	1216	1197	1154	1122	562
35°	992	985	938	866	845	620
45°	762	746	682	625	600	587
55°	529	513	465	410	389	475
65°	314	296	268	273	227	310
75°	126	117	110	105	115	135
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1535.8	1535.8	1535.8	1535.8	1535.8
2.5°	1525.1	1525.1	1525.1	1523.4	1523.4
5°	1509.2	1507.4	1507.4	1505.6	1505.6
7.5°	1496.7	1495.0	1493.2	1491.4	1487.9
10°	1479.0	1479.0	1477.2	1468.3	1466.6
12.5°	1450.6	1448.8	1441.7	1429.3	1425.7
15°	1411.5	1411.5	1397.3	1383.1	1377.8
17.5°	1368.9	1367.1	1349.4	1335.2	1328.1
20°	1322.7	1319.2	1301.4	1278.4	1265.9
22.5°	1271.3	1271.3	1249.9	1219.8	1207.3
25°	1223.3	1216.2	1196.7	1154.1	1122.1
27.5°	1168.3	1157.6	1136.3	1075.9	1038.7
30°	1107.9	1102.6	1072.4	994.3	965.9
32.5°	1051.1	1042.2	1010.3	928.6	905.5
35°	992.5	985.4	937.5	866.4	845.1
37.5°	933.9	925.0	864.7	807.8	781.2
40°	875.3	864.7	799.0	747.5	719.1
42.5°	820.3	806.1	742.2	687.1	655.2
45°	761.7	745.7	681.8	625.0	600.1
47.5°	703.1	688.9	630.3	571.7	543.3
50°	641.0	628.5	575.3	516.7	486.5
52.5°	589.5	569.9	518.4	459.9	435.0
55°	529.1	513.1	465.2	410.1	388.8
57.5°	474.1	458.1	413.7	362.2	344.4
60°	422.6	399.5	362.2	317.8	303.6
62.5°	365.8	348.0	316.0	278.8	296.5
65°	314.3	296.5	268.1	273.4	227.3
67.5°	257.4	248.6	223.7	198.9	191.8
70°	209.5	198.9	190.0	163.3	156.2
72.5°	166.9	156.2	143.8	129.6	124.3
75°	126.1	117.2	110.1	104.8	115.4
77.5°	87.0	83.4	78.1	72.8	71.0
80°	56.8	55.0	53.3	51.5	49.7
82.5°	33.7	33.7	33.7	33.7	33.7
85°	17.8	19.5	21.3	23.1	24.9
87.5°	10.7	10.7	12.4	14.2	16.0
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)