

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: P545386

Luminaire Tested: **FMR-12-2-LD4-1LO-40-UNV-82-87-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: P545386
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-LD4-1LO-40-UNV-82-87-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

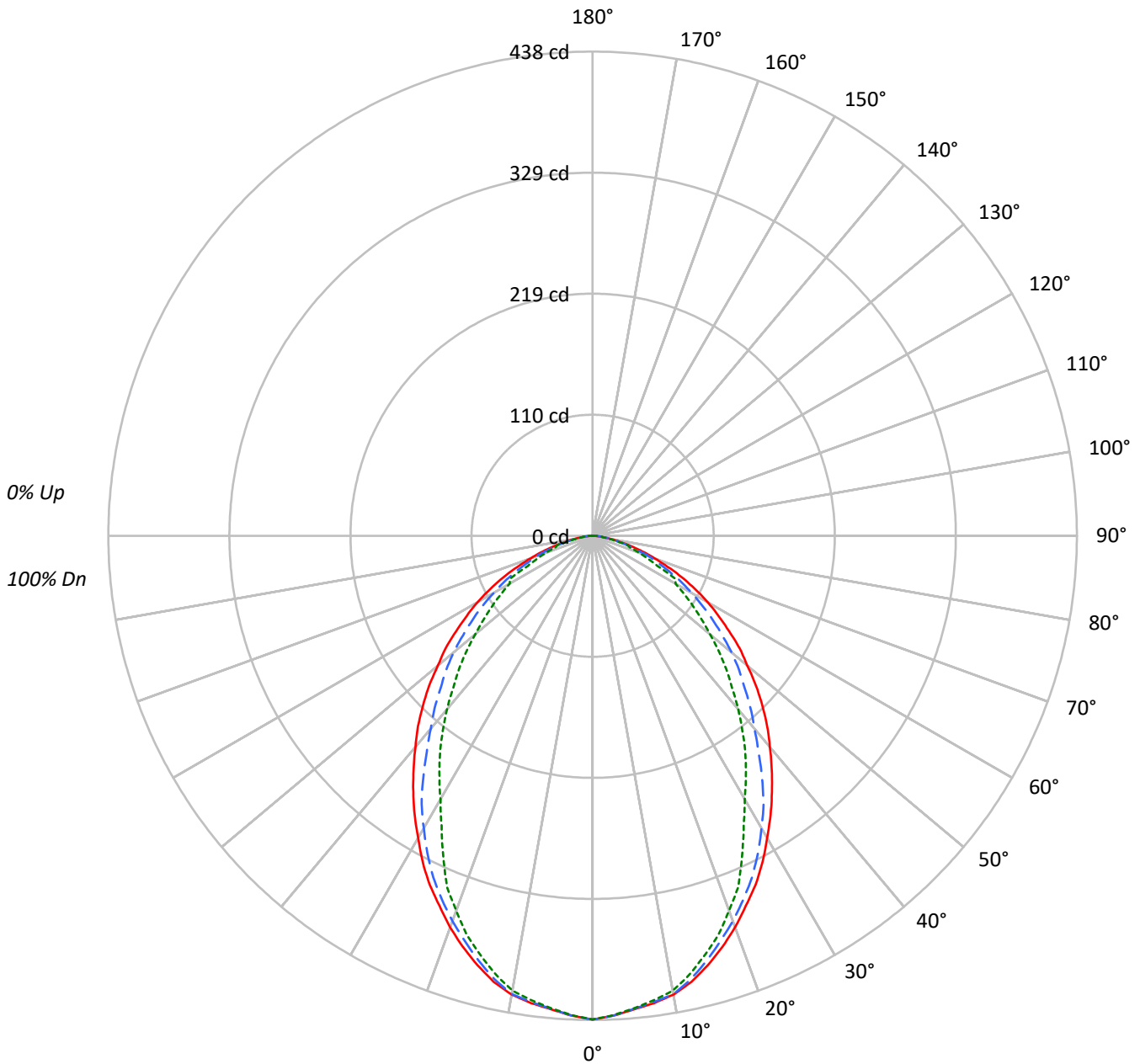
Lumens per Lamp: N/A
Luminaire Lumens: 859.0 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	2355	2355	2355
5°	2323	2320	2318
10°	2303	2300	2283
15°	2241	2218	2187
20°	2159	2124	2066
25°	2070	2024	1898
30°	1962	1899	1710
35°	1858	1755	1582
40°	1752	1599	1440
45°	1652	1478	1302
50°	1529	1372	1160
55°	1414	1243	1040
60°	1296	1111	931
65°	1140	973	824
70°	939	851	700
75°	747	653	684
80°	502	471	440
85°	315	377	438



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.7	4.7
10°-20°	111.8	13.0
20°-30°	154.8	18.0
30°-40°	165.0	19.2
40°-50°	150.6	17.5
50°-60°	117.9	13.7
60°-70°	76.9	8.9
70°-80°	34.1	4.0
80°-90°	7.3	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°	307.3	35.8
0°-40°	472.3	55.0
0°-60°	740.8	86.2
0°-90°	859.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	859.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	438	438	438	438	438	
5°	430	430	430	429	429	41
15°	402	402	398	394	392	113
25°	348	346	341	329	320	160
35°	283	281	267	247	241	177
45°	217	212	194	178	171	167
55°	151	146	132	117	111	135
65°	90	84	76	78	65	88
75°	36	33	31	30	33	39
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	437.6	437.6	437.6	437.6	437.6
2.5°	434.5	434.5	434.5	434.0	434.0
5°	430.0	429.5	429.5	429.0	429.0
7.5°	426.4	425.9	425.4	424.9	423.9
10°	421.4	421.4	420.9	418.3	417.8
12.5°	413.3	412.8	410.8	407.2	406.2
15°	402.2	402.2	398.1	394.1	392.5
17.5°	390.0	389.5	384.4	380.4	378.4
20°	376.9	375.8	370.8	364.2	360.7
22.5°	362.2	362.2	356.1	347.5	344.0
25°	348.5	346.5	340.9	328.8	319.7
27.5°	332.9	329.8	323.7	306.5	295.9
30°	315.7	314.1	305.5	283.3	275.2
32.5°	299.5	296.9	287.8	264.6	258.0
35°	282.8	280.7	267.1	246.9	240.8
37.5°	266.1	263.5	246.4	230.2	222.6
40°	249.4	246.4	227.6	213.0	204.9
42.5°	233.7	229.7	211.4	195.8	186.7
45°	217.0	212.5	194.2	178.1	171.0
47.5°	200.3	196.3	179.6	162.9	154.8
50°	182.6	179.1	163.9	147.2	138.6
52.5°	167.9	162.4	147.7	131.0	123.9
55°	150.7	146.2	132.5	116.9	110.8
57.5°	135.1	130.5	117.9	103.2	98.1
60°	120.4	113.8	103.2	90.5	86.5
62.5°	104.2	99.1	90.0	79.4	84.5
65°	89.5	84.5	76.4	77.9	64.7
67.5°	73.3	70.8	63.7	56.7	54.6
70°	59.7	56.7	54.1	46.5	44.5
72.5°	47.6	44.5	41.0	36.9	35.4
75°	35.9	33.4	31.4	29.8	32.9
77.5°	24.8	23.8	22.3	20.7	20.2
80°	16.2	15.7	15.2	14.7	14.2
82.5°	9.6	9.6	9.6	9.6	9.6
85°	5.1	5.6	6.1	6.6	7.1
87.5°	3.0	3.0	3.5	4.0	4.6
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)