

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: P545440

Luminaire Tested: **FMR-12-2-LD4-1STD-35-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: P545440
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-LD4-1STD-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

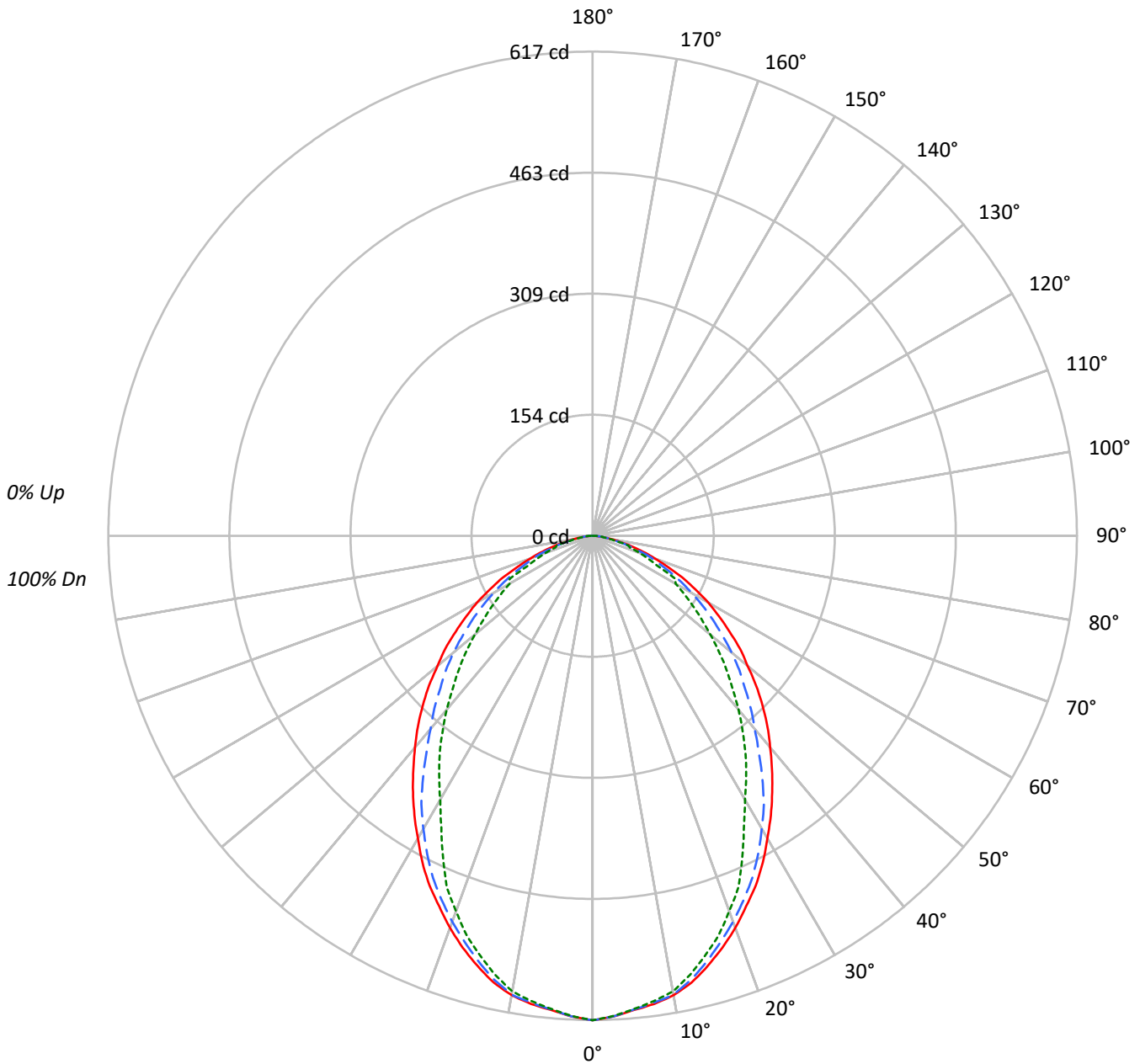
Lumens per Lamp: N/A
Luminaire Lumens: 1212.0 lumens
Efficiency: N/A
Efficacy: 73.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	3323	3323	3323
5°	3278	3274	3270
10°	3249	3245	3222
15°	3161	3130	3086
20°	3045	2997	2915
25°	2920	2857	2679
30°	2768	2679	2413
35°	2621	2476	2232
40°	2472	2257	2031
45°	2331	2086	1836
50°	2158	1936	1638
55°	1996	1755	1467
60°	1829	1567	1313
65°	1608	1373	1164
70°	1325	1202	988
75°	1054	921	965
80°	707	663	620
85°	438	531	618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	4.7
10°-20°	157.7	13.0
20°-30°	218.4	18.0
30°-40°	232.8	19.2
40°-50°	212.4	17.5
50°-60°	166.4	13.7
60°-70°	108.5	8.9
70°-80°	48.1	4.0
80°-90°	10.3	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°	433.5	35.8
0°-40°	666.4	55.0
0°-60°	1045.2	86.2
0°-90°	1212.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1212.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	617	617	617	617	617	
5°	607	606	606	605	605	58
15°	567	567	562	556	554	160
25°	492	489	481	464	451	226
35°	399	396	377	348	340	249
45°	306	300	274	251	241	236
55°	213	206	187	165	156	191
65°	126	119	108	110	91	124
75°	51	47	44	42	46	54
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	617.4	617.4	617.4	617.4	617.4
2.5°	613.1	613.1	613.1	612.4	612.4
5°	606.7	606.0	606.0	605.2	605.2
7.5°	601.7	601.0	600.2	599.5	598.1
10°	594.5	594.5	593.8	590.3	589.5
12.5°	583.1	582.4	579.5	574.6	573.1
15°	567.4	567.4	561.7	556.0	553.9
17.5°	550.3	549.6	542.4	536.7	533.9
20°	531.7	530.3	523.2	513.9	508.9
22.5°	511.0	511.0	502.5	490.3	485.3
25°	491.8	488.9	481.1	463.9	451.1
27.5°	469.6	465.4	456.8	432.5	417.5
30°	445.4	443.2	431.1	399.7	388.3
32.5°	422.5	419.0	406.1	373.3	364.0
35°	399.0	396.1	376.8	348.3	339.7
37.5°	375.4	371.9	347.6	324.7	314.0
40°	351.9	347.6	321.2	300.5	289.1
42.5°	329.7	324.0	298.3	276.2	263.4
45°	306.2	299.8	274.1	251.2	241.2
47.5°	282.6	276.9	253.4	229.8	218.4
50°	257.7	252.7	231.2	207.7	195.6
52.5°	237.0	229.1	208.4	184.9	174.9
55°	212.7	206.3	187.0	164.9	156.3
57.5°	190.6	184.1	166.3	145.6	138.5
60°	169.9	160.6	145.6	127.8	122.0
62.5°	147.0	139.9	127.0	112.1	119.2
65°	126.3	119.2	107.8	109.9	91.4
67.5°	103.5	99.9	89.9	79.9	77.1
70°	84.2	79.9	76.4	65.7	62.8
72.5°	67.1	62.8	57.8	52.1	50.0
75°	50.7	47.1	44.3	42.1	46.4
77.5°	35.0	33.5	31.4	29.3	28.5
80°	22.8	22.1	21.4	20.7	20.0
82.5°	13.6	13.6	13.6	13.6	13.6
85°	7.1	7.9	8.6	9.3	10.0
87.5°	4.3	4.3	5.0	5.7	6.4
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)