

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: P545456

Luminaire Tested: **FMR-12-2-LD4-1STD-35-UNV-93-85-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: P545456
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-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

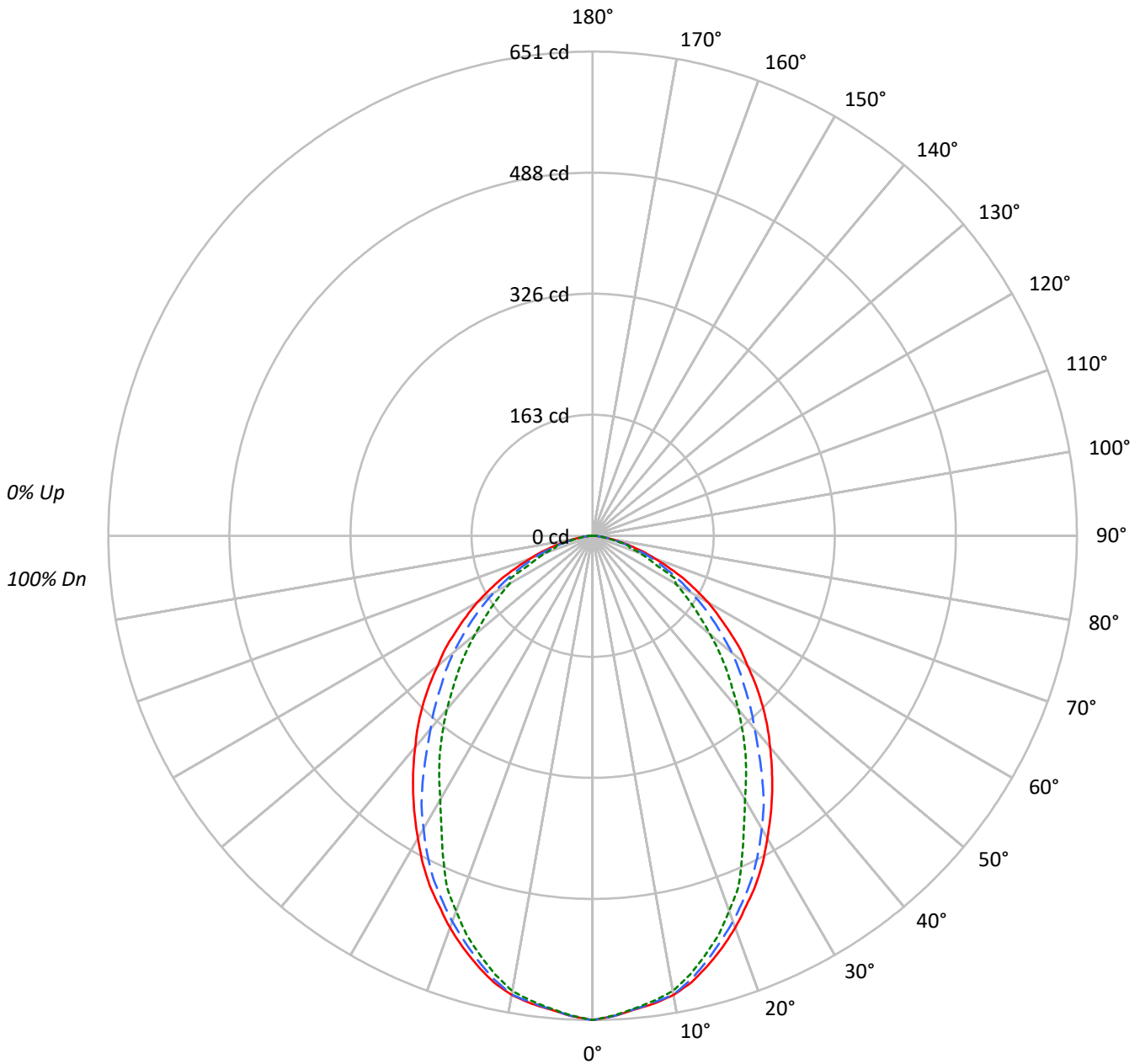
Lumens per Lamp: N/A
Luminaire Lumens: 1278.0 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (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°	3504	3504	3504
5°	3456	3452	3448
10°	3426	3422	3397
15°	3334	3300	3254
20°	3211	3160	3073
25°	3079	3013	2824
30°	2918	2825	2544
35°	2764	2611	2353
40°	2607	2380	2141
45°	2458	2200	1936
50°	2275	2041	1726
55°	2105	1850	1546
60°	1928	1652	1385
65°	1696	1447	1226
70°	1397	1267	1042
75°	1110	971	1017
80°	747	700	654
85°	463	556	648



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	4.7
10°-20°	166.3	13.0
20°-30°	230.2	18.0
30°-40°	245.5	19.2
40°-50°	224.0	17.5
50°-60°	175.5	13.7
60°-70°	114.4	8.9
70°-80°	50.7	4.0
80°-90°	10.9	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°	457.2	35.8
0°-40°	702.7	55.0
0°-60°	1102.1	86.2
0°-90°	1278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1278.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	651	651	651	651	651	
5°	640	639	639	638	638	61
15°	598	598	592	586	584	168
25°	518	516	507	489	476	238
35°	421	418	397	367	358	263
45°	323	316	289	265	254	249
55°	224	218	197	174	165	201
65°	133	126	114	116	96	131
75°	53	50	47	44	49	57
85°	8	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	651.0	651.0	651.0	651.0	651.0
2.5°	646.5	646.5	646.5	645.7	645.7
5°	639.7	639.0	639.0	638.2	638.2
7.5°	634.4	633.7	632.9	632.2	630.7
10°	626.9	626.9	626.2	622.4	621.6
12.5°	614.9	614.1	611.1	605.8	604.3
15°	598.3	598.3	592.3	586.3	584.0
17.5°	580.3	579.5	572.0	566.0	562.9
20°	560.7	559.2	551.7	541.9	536.6
22.5°	538.9	538.9	529.8	517.0	511.8
25°	518.5	515.5	507.3	489.2	475.6
27.5°	495.2	490.7	481.7	456.1	440.3
30°	469.6	467.4	454.6	421.5	409.4
32.5°	445.5	441.8	428.2	393.6	383.8
35°	420.7	417.7	397.4	367.3	358.2
37.5°	395.9	392.1	366.5	342.4	331.1
40°	371.0	366.5	338.7	316.8	304.8
42.5°	347.7	341.7	314.6	291.3	277.7
45°	322.9	316.1	289.0	264.9	254.4
47.5°	298.0	292.0	267.2	242.3	230.3
50°	271.7	266.4	243.8	219.0	206.2
52.5°	249.9	241.6	219.8	194.9	184.4
55°	224.3	217.5	197.2	173.8	164.8
57.5°	200.9	194.2	175.4	153.5	146.0
60°	179.1	169.3	153.5	134.7	128.7
62.5°	155.0	147.5	134.0	118.2	125.7
65°	133.2	125.7	113.6	115.9	96.3
67.5°	109.1	105.4	94.8	84.3	81.3
70°	88.8	84.3	80.5	69.2	66.2
72.5°	70.7	66.2	61.0	54.9	52.7
75°	53.4	49.7	46.7	44.4	48.9
77.5°	36.9	35.4	33.1	30.9	30.1
80°	24.1	23.3	22.6	21.8	21.1
82.5°	14.3	14.3	14.3	14.3	14.3
85°	7.5	8.3	9.0	9.8	10.5
87.5°	4.5	4.5	5.3	6.0	6.8
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)