

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: P545200

Luminaire Tested: **FMR-12-1-LD4-2STD-40-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: P545200
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-12-1-LD4-2STD-40-UNV-93-85-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

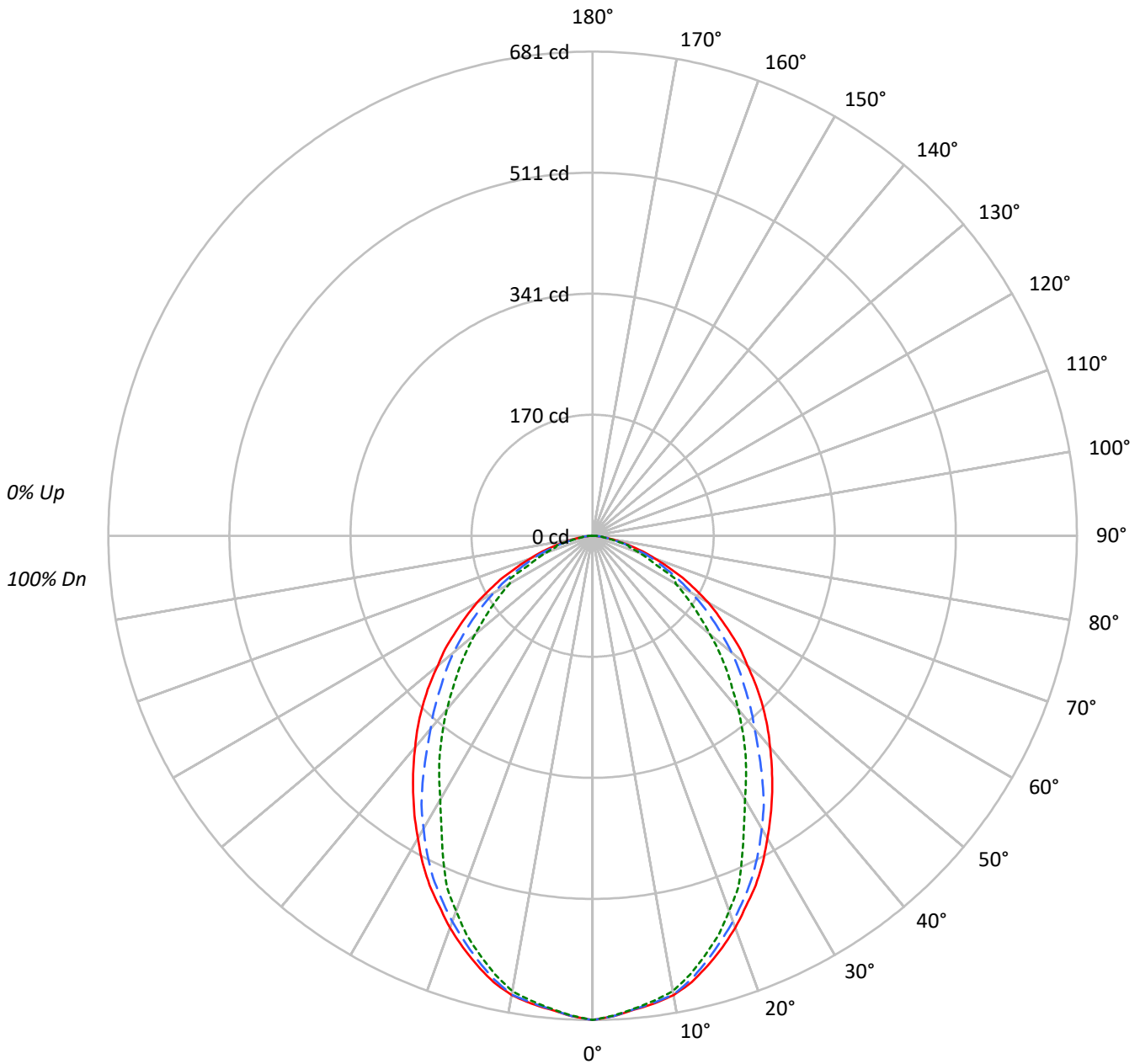
Lumens per Lamp: N/A
Luminaire Lumens: 1337.0 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P545200

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-UNV-93-85-EDD

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°	7330	7330	7330
5°	7231	7223	7215
10°	7169	7160	7108
15°	6975	6905	6809
20°	6719	6611	6431
25°	6443	6303	5910
30°	6106	5911	5323
35°	5783	5462	4925
40°	5455	4978	4481
45°	5142	4602	4051
50°	4759	4272	3612
55°	4403	3871	3235
60°	4034	3457	2898
65°	3550	3028	2567
70°	2924	2650	2181
75°	2325	2030	2129
80°	1562	1463	1364
85°	976	1161	1359



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.4	4.7
10°-20°	174.0	13.0
20°-30°	240.9	18.0
30°-40°	256.8	19.2
40°-50°	234.3	17.5
50°-60°	183.6	13.7
60°-70°	119.6	8.9
70°-80°	53.0	4.0
80°-90°	11.4	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°	478.3	35.8
0°-40°	735.1	55.0
0°-60°	1153.0	86.2
0°-90°	1337.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1337.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	681	681	681	681	681	
5°	669	668	668	668	668	64
15°	626	626	620	613	611	176
25°	542	539	531	512	498	249
35°	440	437	416	384	375	275
45°	338	331	302	277	266	260
55°	235	228	206	182	172	210
65°	139	132	119	121	101	137
75°	56	52	49	46	51	60
85°	8	9	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	681.0	681.0	681.0	681.0	681.0
2.5°	676.3	676.3	676.3	675.5	675.5
5°	669.2	668.5	668.5	667.7	667.7
7.5°	663.7	662.9	662.2	661.4	659.8
10°	655.9	655.9	655.1	651.1	650.3
12.5°	643.3	642.5	639.3	633.8	632.2
15°	625.9	625.9	619.6	613.3	611.0
17.5°	607.0	606.3	598.4	592.1	588.9
20°	586.6	585.0	577.1	566.9	561.4
22.5°	563.7	563.7	554.3	540.9	535.4
25°	542.5	539.3	530.7	511.8	497.6
27.5°	518.1	513.3	503.9	477.1	460.6
30°	491.3	488.9	475.6	440.9	428.3
32.5°	466.1	462.2	448.0	411.8	401.5
35°	440.1	437.0	415.7	384.2	374.8
37.5°	414.1	410.2	383.4	358.2	346.4
40°	388.2	383.4	354.3	331.5	318.9
42.5°	363.8	357.5	329.1	304.7	290.5
45°	337.8	330.7	302.3	277.1	266.1
47.5°	311.8	305.5	279.5	253.5	240.9
50°	284.2	278.7	255.1	229.1	215.7
52.5°	261.4	252.7	229.9	203.9	192.9
55°	234.6	227.5	206.3	181.9	172.4
57.5°	210.2	203.1	183.5	160.6	152.7
60°	187.4	177.2	160.6	140.9	134.6
62.5°	162.2	154.3	140.1	123.6	131.5
65°	139.4	131.5	118.9	121.3	100.8
67.5°	114.2	110.2	99.2	88.2	85.0
70°	92.9	88.2	84.2	72.4	69.3
72.5°	74.0	69.3	63.8	57.5	55.1
75°	55.9	52.0	48.8	46.5	51.2
77.5°	38.6	37.0	34.6	32.3	31.5
80°	25.2	24.4	23.6	22.8	22.0
82.5°	15.0	15.0	15.0	15.0	15.0
85°	7.9	8.7	9.4	10.2	11.0
87.5°	4.7	4.7	5.5	6.3	7.1
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)