

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: P545520

Luminaire Tested: **FMR-12-2-LD4-1STD-50-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: P545520
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-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

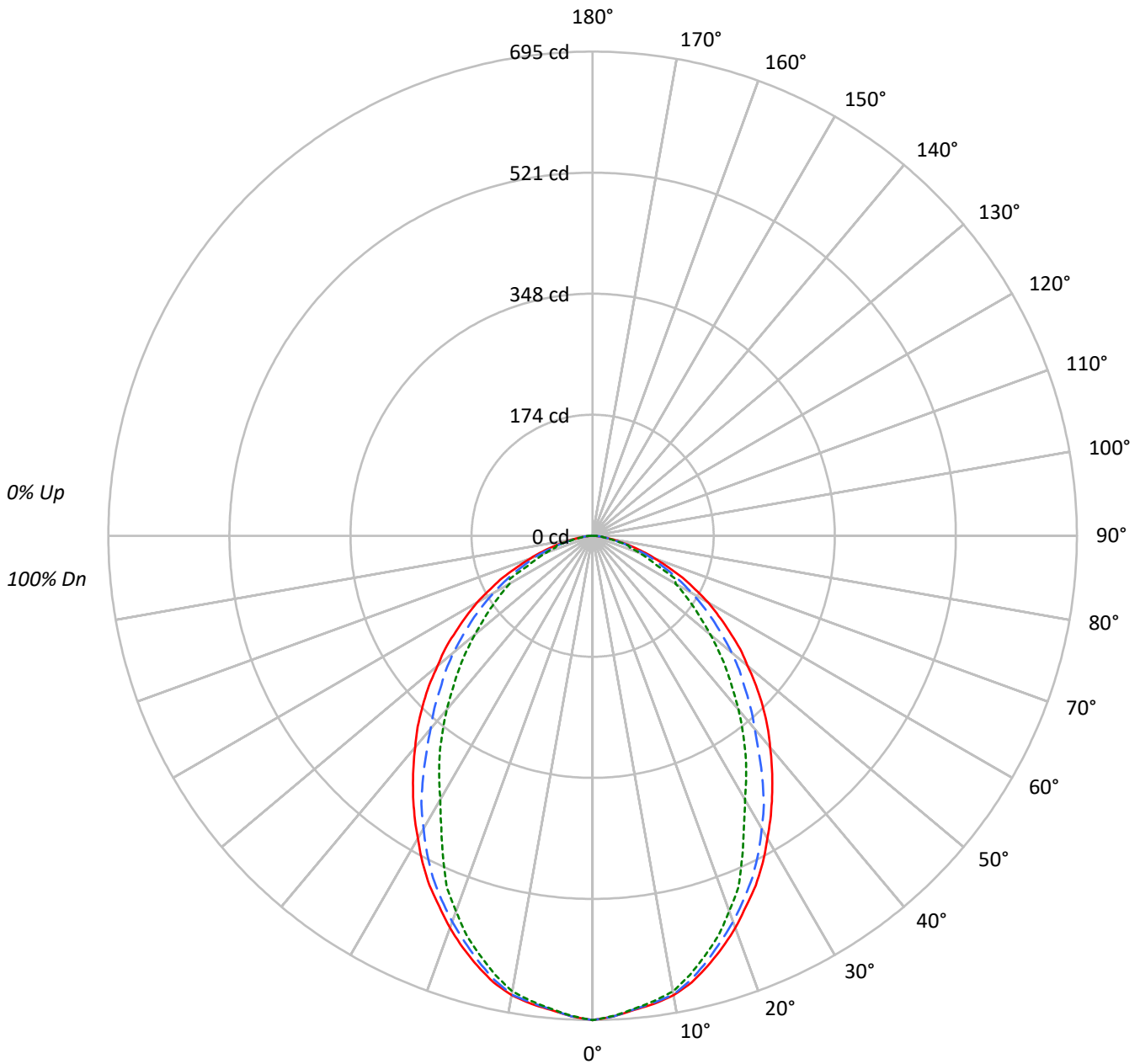
Lumens per Lamp: N/A
Luminaire Lumens: 1365.0 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3742	3742	3742
5°	3692	3687	3682
10°	3659	3655	3629
15°	3560	3525	3476
20°	3430	3375	3282
25°	3289	3217	3017
30°	3117	3017	2718
35°	2952	2788	2514
40°	2784	2541	2288
45°	2624	2350	2068
50°	2430	2180	1844
55°	2247	1976	1651
60°	2059	1765	1480
65°	1812	1546	1310
70°	1493	1353	1113
75°	1187	1036	1085
80°	797	747	697
85°	494	593	698



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	4.7
10°-20°	177.6	13.0
20°-30°	245.9	18.0
30°-40°	262.2	19.2
40°-50°	239.2	17.5
50°-60°	187.4	13.7
60°-70°	122.1	8.9
70°-80°	54.1	4.0
80°-90°	11.6	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°	488.3	35.8
0°-40°	750.5	55.0
0°-60°	1177.1	86.2
0°-90°	1365.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1365.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	683	682	682	682	682	65
15°	639	639	633	626	624	180
25°	554	551	542	522	508	254
35°	449	446	424	392	383	281
45°	345	338	309	283	272	266
55°	240	232	211	186	176	215
65°	142	134	121	124	103	140
75°	57	53	50	47	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	695.3	695.3	695.3	695.3	695.3
2.5°	690.5	690.5	690.5	689.7	689.7
5°	683.3	682.5	682.5	681.6	681.6
7.5°	677.6	676.8	676.0	675.2	673.6
10°	669.6	669.6	668.8	664.8	664.0
12.5°	656.7	655.9	652.7	647.1	645.5
15°	639.0	639.0	632.6	626.2	623.8
17.5°	619.8	618.9	610.9	604.5	601.3
20°	598.9	597.2	589.2	578.8	573.1
22.5°	575.5	575.5	565.9	552.2	546.6
25°	553.8	550.6	541.8	522.5	508.0
27.5°	528.9	524.1	514.5	487.1	470.2
30°	501.6	499.2	485.5	450.1	437.3
32.5°	475.9	471.8	457.4	420.4	410.0
35°	449.3	446.1	424.4	392.3	382.6
37.5°	422.8	418.8	391.5	365.7	353.7
40°	396.3	391.5	361.7	338.4	325.6
42.5°	371.4	364.9	336.0	311.1	296.6
45°	344.8	337.6	308.7	282.9	271.7
47.5°	318.3	311.9	285.4	258.8	246.0
50°	290.2	284.6	260.4	233.9	220.2
52.5°	266.9	258.0	234.7	208.2	196.9
55°	239.5	232.3	210.6	185.7	176.0
57.5°	214.6	207.4	187.3	164.0	155.9
60°	191.3	180.9	164.0	143.9	137.5
62.5°	165.6	157.6	143.1	126.2	134.2
65°	142.3	134.2	121.4	123.8	102.9
67.5°	116.6	112.5	101.3	90.0	86.8
70°	94.9	90.0	86.0	74.0	70.7
72.5°	75.6	70.7	65.1	58.7	56.3
75°	57.1	53.1	49.8	47.4	52.2
77.5°	39.4	37.8	35.4	33.0	32.2
80°	25.7	24.9	24.1	23.3	22.5
82.5°	15.3	15.3	15.3	15.3	15.3
85°	8.0	8.8	9.6	10.4	11.3
87.5°	4.8	4.8	5.6	6.4	7.2
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)