

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: P545430

Luminaire Tested: **FMR-12-2-LD4-1LO-50-UNV-93-97-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: P545430
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-50-UNV-93-97-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

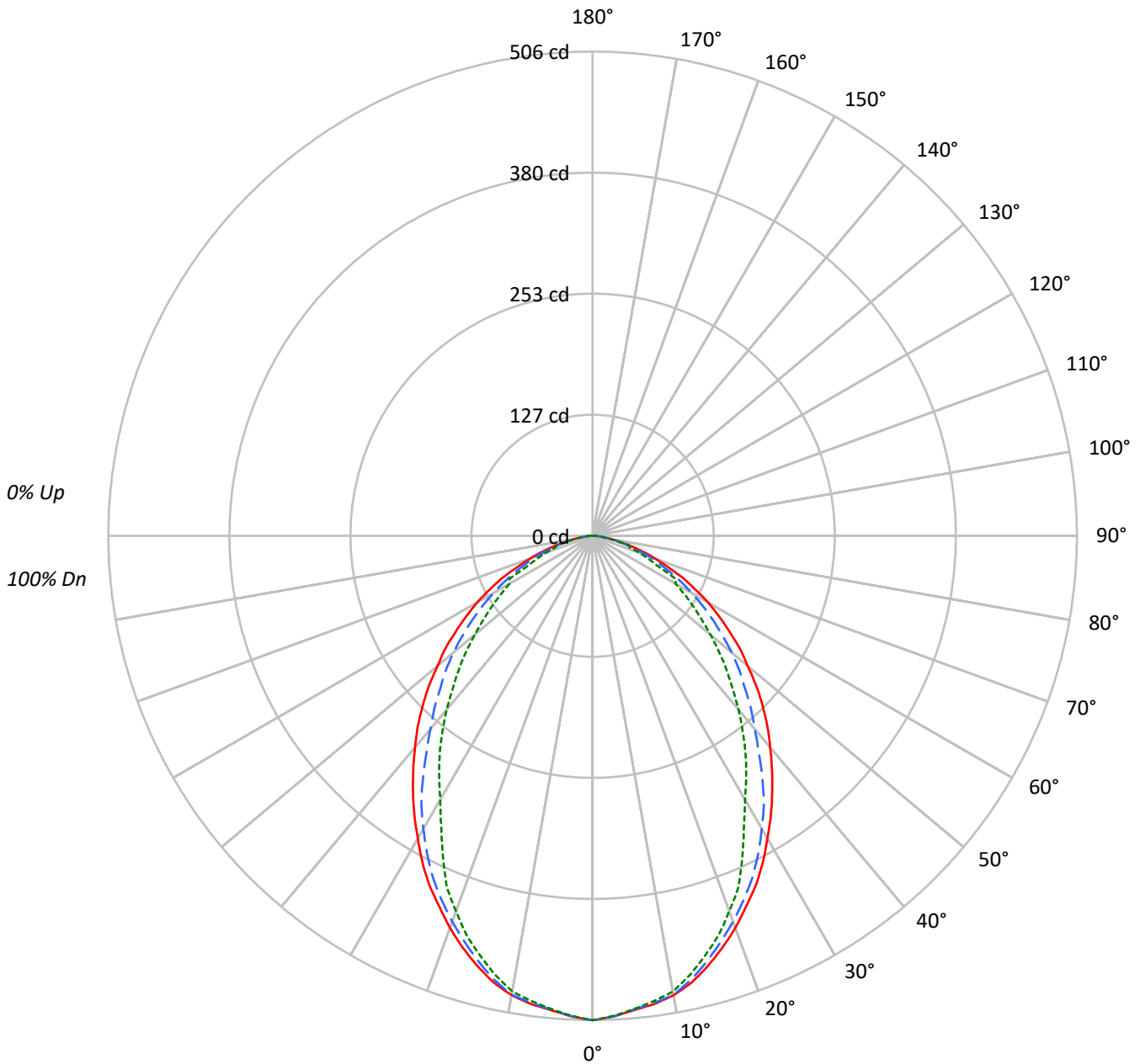
Lumens per Lamp: N/A
Luminaire Lumens: 994.0 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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			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°	2725	2725	2725
5°	2688	2685	2682
10°	2665	2661	2642
15°	2593	2567	2531
20°	2498	2458	2391
25°	2395	2343	2197
30°	2270	2197	1979
35°	2150	2031	1830
40°	2028	1851	1666
45°	1911	1711	1506
50°	1769	1588	1343
55°	1636	1439	1203
60°	1499	1285	1077
65°	1319	1126	954
70°	1087	985	810
75°	865	755	790
80°	580	545	508
85°	364	432	506



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.1	4.7
10°-20°	129.4	13.0
20°-30°	179.1	18.0
30°-40°	191.0	19.2
40°-50°	174.2	17.5
50°-60°	136.5	13.7
60°-70°	89.0	8.9
70°-80°	39.4	4.0
80°-90°	8.5	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°	355.6	35.8
0°-40°	546.5	55.0
0°-60°	857.2	86.2
0°-90°	994.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	994.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	506	506	506	506	506	
5°	498	497	497	496	496	47
15°	465	465	461	456	454	131
25°	403	401	394	380	370	185
35°	327	325	309	286	279	205
45°	251	246	225	206	198	193
55°	174	169	153	135	128	156
65°	104	98	88	90	75	102
75°	42	39	36	34	38	45
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	506.3	506.3	506.3	506.3	506.3
2.5°	502.8	502.8	502.8	502.2	502.2
5°	497.6	497.0	497.0	496.4	496.4
7.5°	493.5	492.9	492.3	491.7	490.5
10°	487.6	487.6	487.0	484.1	483.5
12.5°	478.2	477.6	475.3	471.2	470.0
15°	465.4	465.4	460.7	456.0	454.2
17.5°	451.3	450.7	444.9	440.2	437.8
20°	436.1	434.9	429.1	421.5	417.4
22.5°	419.1	419.1	412.1	402.1	398.0
25°	403.3	401.0	394.5	380.5	369.9
27.5°	385.2	381.7	374.6	354.7	342.4
30°	365.3	363.5	353.6	327.8	318.4
32.5°	346.5	343.6	333.1	306.1	298.5
35°	327.2	324.9	309.1	285.7	278.6
37.5°	307.9	305.0	285.1	266.3	257.6
40°	288.6	285.1	263.4	246.4	237.1
42.5°	270.4	265.8	244.7	226.5	216.0
45°	251.1	245.8	224.8	206.0	197.8
47.5°	231.8	227.1	207.8	188.5	179.1
50°	211.3	207.2	189.7	170.3	160.4
52.5°	194.3	187.9	170.9	151.6	143.4
55°	174.4	169.2	153.4	135.2	128.2
57.5°	156.3	151.0	136.4	119.4	113.6
60°	139.3	131.7	119.4	104.8	100.1
62.5°	120.6	114.7	104.2	91.9	97.8
65°	103.6	97.8	88.4	90.1	74.9
67.5°	84.9	81.9	73.8	65.6	63.2
70°	69.1	65.6	62.6	53.9	51.5
72.5°	55.0	51.5	47.4	42.7	41.0
75°	41.6	38.6	36.3	34.5	38.0
77.5°	28.7	27.5	25.8	24.0	23.4
80°	18.7	18.1	17.6	17.0	16.4
82.5°	11.1	11.1	11.1	11.1	11.1
85°	5.9	6.4	7.0	7.6	8.2
87.5°	3.5	3.5	4.1	4.7	5.3
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)