

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: P545298

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-93-87-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: P545298
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-LD4-1HI-40-UNV-93-87-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

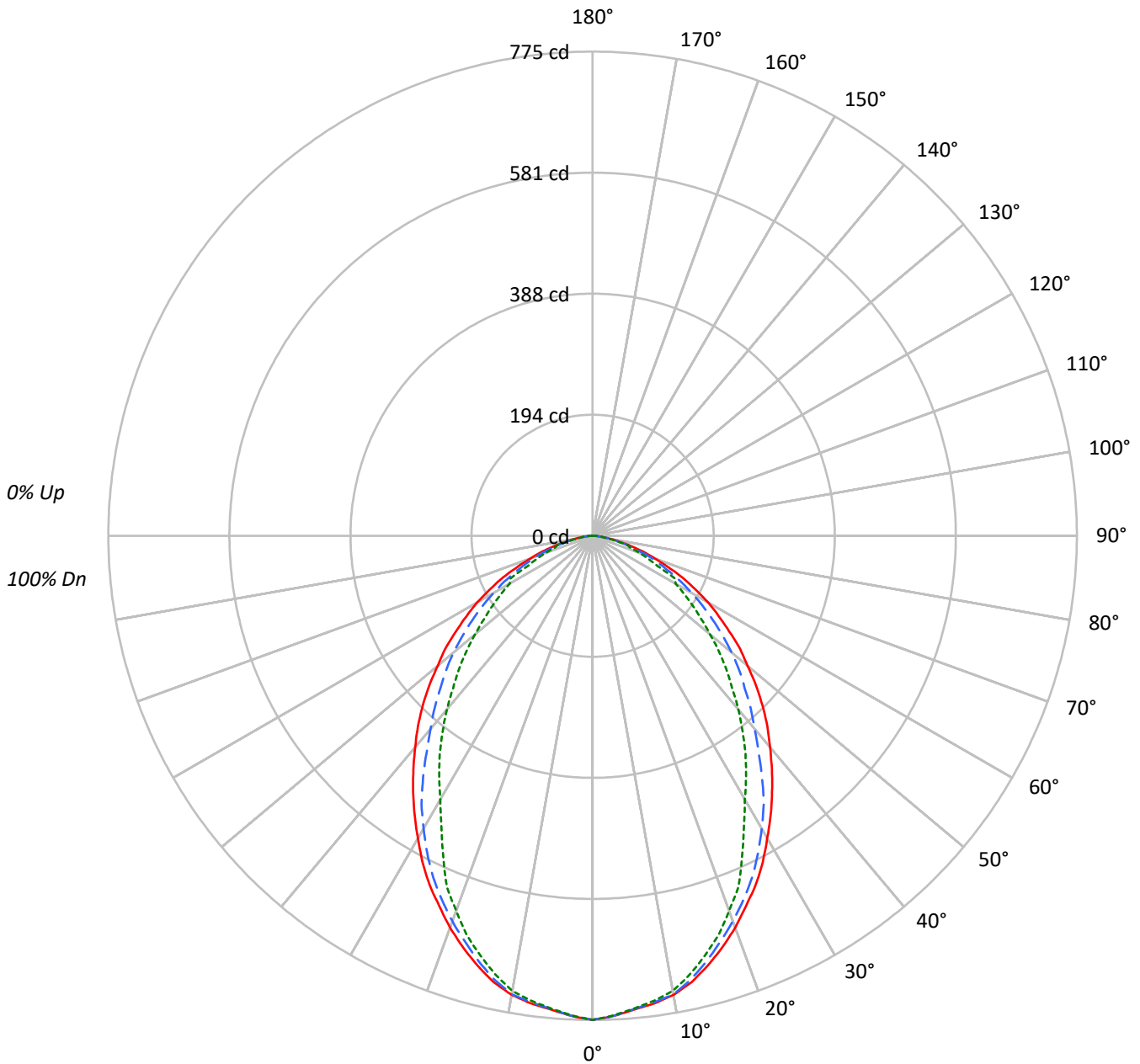
Lumens per Lamp: N/A
Luminaire Lumens: 1521.0 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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				
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°	4170	4170	4170
5°	4113	4108	4104
10°	4077	4073	4043
15°	3968	3928	3873
20°	3822	3760	3657
25°	3665	3585	3362
30°	3473	3362	3028
35°	3290	3107	2802
40°	3103	2832	2549
45°	2925	2618	2304
50°	2707	2430	2055
55°	2504	2202	1841
60°	2295	1967	1649
65°	2018	1723	1459
70°	1663	1507	1240
75°	1323	1154	1210
80°	890	834	778
85°	556	661	772



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.1	4.7
10°-20°	197.9	13.0
20°-30°	274.0	18.0
30°-40°	292.2	19.2
40°-50°	266.6	17.5
50°-60°	208.8	13.7
60°-70°	136.1	8.9
70°-80°	60.3	4.0
80°-90°	13.0	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°	544.1	35.8
0°-40°	836.3	55.0
0°-60°	1311.6	86.2
0°-90°	1521.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1521.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	775	775	775	775	775	
5°	761	760	760	760	760	72
15°	712	712	705	698	695	200
25°	617	614	604	582	566	283
35°	501	497	473	437	426	313
45°	384	376	344	315	303	296
55°	267	259	235	207	196	239
65°	158	150	135	138	115	156
75°	64	59	56	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	774.8	774.8	774.8	774.8	774.8
2.5°	769.4	769.4	769.4	768.5	768.5
5°	761.3	760.4	760.4	759.6	759.6
7.5°	755.1	754.2	753.3	752.4	750.6
10°	746.1	746.1	745.2	740.7	739.8
12.5°	731.8	730.9	727.3	721.0	719.2
15°	712.1	712.1	704.9	697.7	695.1
17.5°	690.6	689.7	680.7	673.6	670.0
20°	667.3	665.5	656.5	644.9	638.6
22.5°	641.3	641.3	630.6	615.3	609.1
25°	617.1	613.6	603.7	582.2	566.1
27.5°	589.4	584.0	573.2	542.8	524.0
30°	558.9	556.2	541.0	501.6	487.3
32.5°	530.3	525.8	509.7	468.4	456.8
35°	500.7	497.1	472.9	437.1	426.4
37.5°	471.1	466.7	436.2	407.5	394.1
40°	441.6	436.2	403.1	377.1	362.8
42.5°	413.8	406.6	374.4	346.6	330.5
45°	384.3	376.2	343.9	315.3	302.7
47.5°	354.7	347.5	318.0	288.4	274.1
50°	323.3	317.1	290.2	260.6	245.4
52.5°	297.4	287.5	261.5	232.0	219.4
55°	266.9	258.9	234.7	206.9	196.2
57.5°	239.2	231.1	208.7	182.7	173.8
60°	213.2	201.5	182.7	160.3	153.2
62.5°	184.5	175.6	159.4	140.6	149.6
65°	158.5	149.6	135.3	137.9	114.6
67.5°	129.9	125.4	112.9	100.3	96.7
70°	105.7	100.3	95.8	82.4	78.8
72.5°	84.2	78.8	72.6	65.4	62.7
75°	63.6	59.1	55.5	52.8	58.2
77.5°	43.9	42.1	39.4	36.7	35.8
80°	28.7	27.8	26.9	26.0	25.1
82.5°	17.0	17.0	17.0	17.0	17.0
85°	9.0	9.9	10.7	11.6	12.5
87.5°	5.4	5.4	6.3	7.2	8.1
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)