

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: P545472

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-81-85-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: P545472
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-40-UNV-81-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC 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

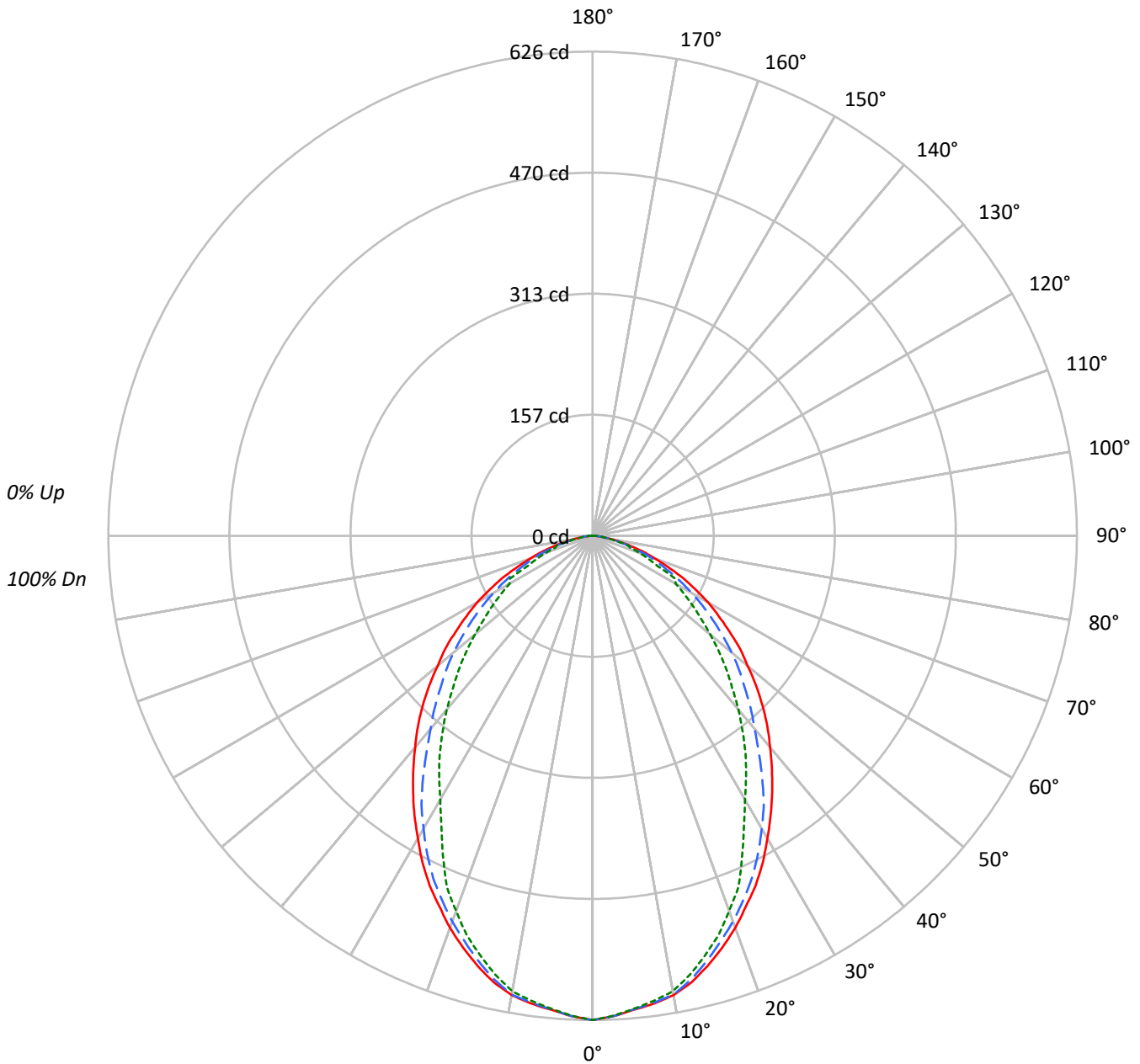
Lumens per Lamp: N/A
Luminaire Lumens: 1229.0 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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				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°	3369	3369	3369
5°	3324	3320	3316
10°	3295	3291	3267
15°	3206	3174	3129
20°	3088	3038	2955
25°	2961	2897	2716
30°	2806	2716	2447
35°	2658	2510	2263
40°	2507	2288	2059
45°	2363	2115	1862
50°	2188	1963	1660
55°	2024	1779	1487
60°	1855	1589	1333
65°	1631	1392	1179
70°	1344	1218	1002
75°	1069	934	977
80°	719	673	629
85°	445	537	624



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.3	4.7
10°-20°	159.9	13.0
20°-30°	221.4	18.0
30°-40°	236.1	19.2
40°-50°	215.4	17.5
50°-60°	168.7	13.7
60°-70°	110.0	8.9
70°-80°	48.7	4.0
80°-90°	10.5	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°	439.6	35.8
0°-40°	675.7	55.0
0°-60°	1059.8	86.2
0°-90°	1229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	626	626	626	626	626	
5°	615	614	614	614	614	58
15°	575	575	570	564	562	162
25°	499	496	488	470	457	229
35°	405	402	382	353	344	253
45°	310	304	278	255	245	239
55°	216	209	190	167	158	193
65°	128	121	109	112	93	126
75°	51	48	45	43	47	55
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	626.0	626.0	626.0	626.0	626.0
2.5°	621.7	621.7	621.7	621.0	621.0
5°	615.2	614.5	614.5	613.7	613.7
7.5°	610.1	609.4	608.7	607.9	606.5
10°	602.9	602.9	602.2	598.5	597.8
12.5°	591.3	590.6	587.7	582.6	581.2
15°	575.4	575.4	569.6	563.8	561.6
17.5°	558.0	557.3	550.0	544.3	541.4
20°	539.2	537.7	530.5	521.1	516.0
22.5°	518.2	518.2	509.5	497.2	492.1
25°	498.7	495.8	487.8	470.4	457.4
27.5°	476.2	471.9	463.2	438.6	423.4
30°	451.6	449.4	437.1	405.3	393.7
32.5°	428.5	424.8	411.8	378.5	369.1
35°	404.6	401.7	382.1	353.2	344.5
37.5°	380.7	377.1	352.5	329.3	318.4
40°	356.8	352.5	325.7	304.7	293.1
42.5°	334.4	328.6	302.5	280.1	267.1
45°	310.5	304.0	277.9	254.8	244.6
47.5°	286.6	280.8	256.9	233.0	221.5
50°	261.3	256.2	234.5	210.6	198.3
52.5°	240.3	232.3	211.3	187.4	177.3
55°	215.7	209.2	189.6	167.2	158.5
57.5°	193.2	186.7	168.6	147.6	140.4
60°	172.3	162.8	147.6	129.5	123.8
62.5°	149.1	141.9	128.8	113.6	120.9
65°	128.1	120.9	109.3	111.5	92.6
67.5°	104.9	101.3	91.2	81.1	78.2
70°	85.4	81.1	77.4	66.6	63.7
72.5°	68.0	63.7	58.6	52.8	50.7
75°	51.4	47.8	44.9	42.7	47.0
77.5°	35.5	34.0	31.8	29.7	28.9
80°	23.2	22.4	21.7	21.0	20.3
82.5°	13.8	13.8	13.8	13.8	13.8
85°	7.2	8.0	8.7	9.4	10.1
87.5°	4.3	4.3	5.1	5.8	6.5
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)