

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: P545484

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-82-94-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: P545484
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-82-94-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

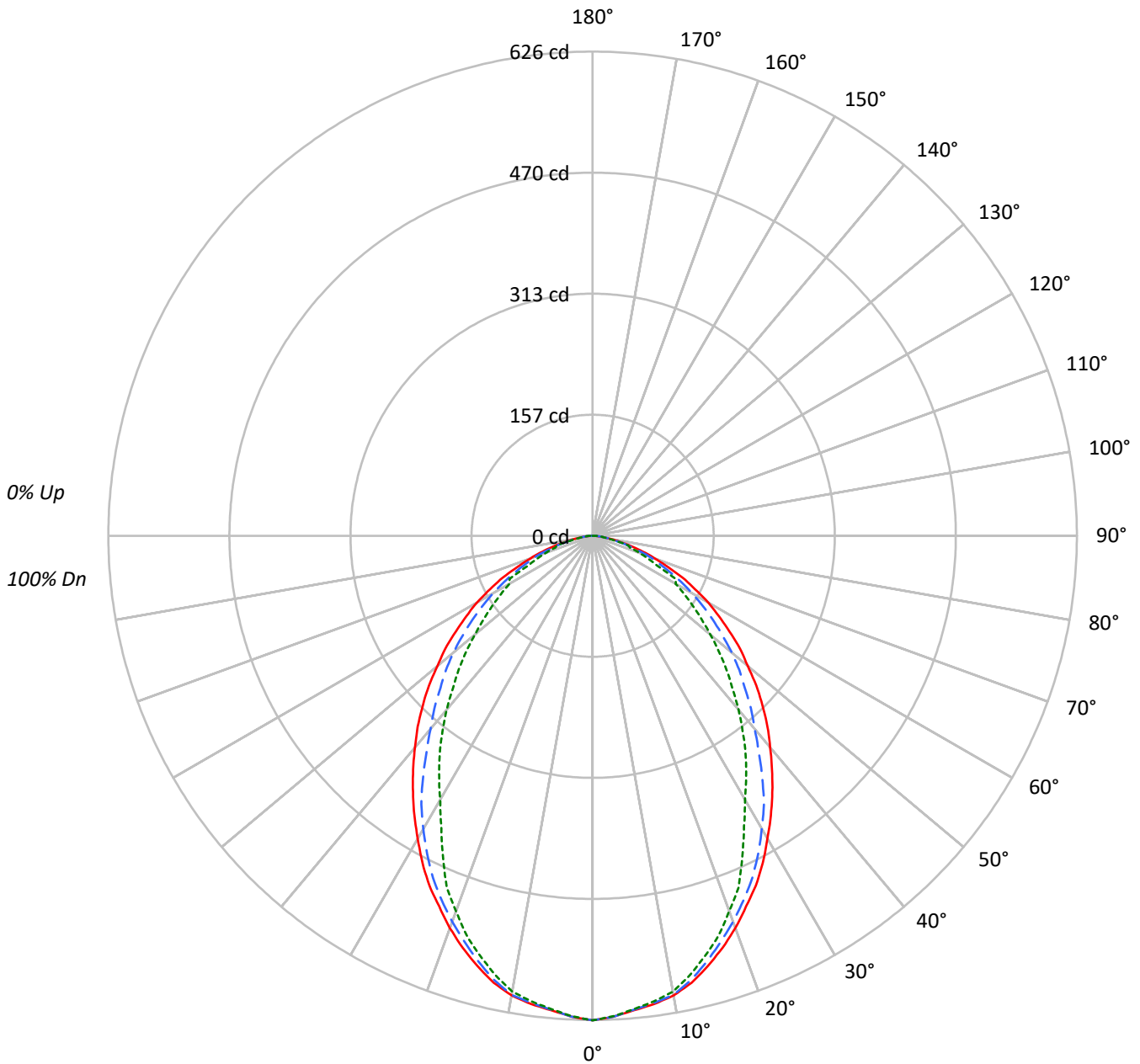
Lumens per Lamp: N/A
Luminaire Lumens: 1230.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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									
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°	3372	3372	3372
5°	3326	3323	3318
10°	3298	3293	3270
15°	3208	3176	3132
20°	3090	3041	2958
25°	2964	2899	2719
30°	2809	2719	2449
35°	2660	2512	2265
40°	2509	2290	2061
45°	2365	2117	1863
50°	2189	1965	1662
55°	2026	1781	1488
60°	1856	1591	1334
65°	1633	1393	1181
70°	1345	1220	1002
75°	1069	934	979
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°	160.1	13.0
20°-30°	221.6	18.0
30°-40°	236.3	19.2
40°-50°	215.5	17.5
50°-60°	168.9	13.7
60°-70°	110.1	8.9
70°-80°	48.8	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°	440.0	35.8
0°-40°	676.3	55.0
0°-60°	1060.7	86.2
0°-90°	1230.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1230.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	626	626	626	626	626	
5°	616	615	615	614	614	58
15°	576	576	570	564	562	162
25°	499	496	488	471	458	229
35°	405	402	382	354	345	253
45°	311	304	278	255	245	239
55°	216	209	190	167	159	194
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°	626.5	626.5	626.5	626.5	626.5
2.5°	622.2	622.2	622.2	621.5	621.5
5°	615.7	615.0	615.0	614.2	614.2
7.5°	610.6	609.9	609.2	608.4	607.0
10°	603.4	603.4	602.6	599.0	598.3
12.5°	591.8	591.1	588.2	583.1	581.6
15°	575.8	575.8	570.0	564.3	562.1
17.5°	558.5	557.7	550.5	544.7	541.8
20°	539.6	538.2	530.9	521.5	516.4
22.5°	518.6	518.6	509.9	497.6	492.5
25°	499.1	496.2	488.2	470.8	457.8
27.5°	476.6	472.3	463.6	438.9	423.7
30°	452.0	449.8	437.5	405.6	394.0
32.5°	428.8	425.2	412.1	378.8	369.4
35°	404.9	402.0	382.4	353.5	344.8
37.5°	381.0	377.4	352.7	329.6	318.7
40°	357.1	352.7	325.9	304.9	293.4
42.5°	334.6	328.8	302.8	280.3	267.3
45°	310.7	304.2	278.1	255.0	244.8
47.5°	286.8	281.0	257.1	233.2	221.6
50°	261.5	256.4	234.7	210.8	198.5
52.5°	240.5	232.5	211.5	187.6	177.5
55°	215.9	209.3	189.8	167.3	158.6
57.5°	193.4	186.9	168.8	147.8	140.5
60°	172.4	163.0	147.8	129.7	123.9
62.5°	149.2	142.0	128.9	113.7	121.0
65°	128.2	121.0	109.4	111.5	92.7
67.5°	105.0	101.4	91.3	81.1	78.2
70°	85.5	81.1	77.5	66.6	63.7
72.5°	68.1	63.7	58.7	52.9	50.7
75°	51.4	47.8	44.9	42.7	47.1
77.5°	35.5	34.0	31.9	29.7	29.0
80°	23.2	22.5	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)