

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: P545451

Luminaire Tested: **FMR-12-2-LD4-1STD-35-UNV-82-88-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: P545451
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-35-UNV-82-88-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

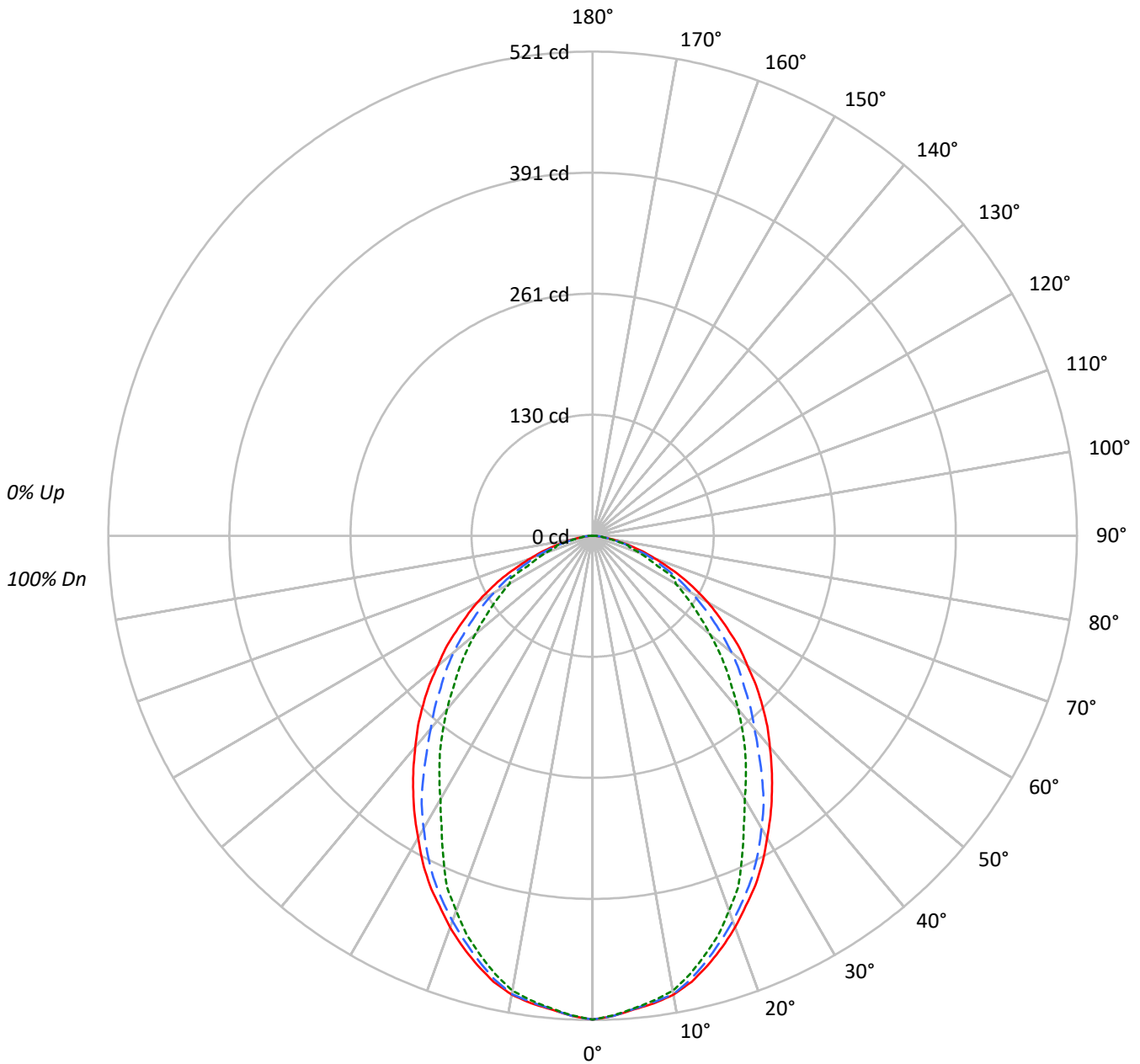
Lumens per Lamp: N/A
Luminaire Lumens: 1022.0 lumens
Efficiency: N/A
Efficacy: 61.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	2802	2802	2802
5°	2764	2761	2757
10°	2740	2736	2717
15°	2666	2639	2602
20°	2568	2527	2458
25°	2463	2409	2259
30°	2334	2259	2035
35°	2210	2088	1882
40°	2085	1903	1712
45°	1965	1759	1548
50°	1819	1633	1381
55°	1682	1480	1237
60°	1541	1322	1108
65°	1356	1158	981
70°	1117	1013	834
75°	888	776	813
80°	598	561	524
85°	371	445	519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.5	4.7
10°-20°	133.0	13.0
20°-30°	184.1	18.0
30°-40°	196.3	19.2
40°-50°	179.1	17.5
50°-60°	140.3	13.7
60°-70°	91.5	8.9
70°-80°	40.5	4.0
80°-90°	8.7	0.8
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°	365.6	35.8
0°-40°	561.9	55.0
0°-60°	881.3	86.2
0°-90°	1022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	521	521	521	521	521	
5°	512	511	511	510	510	49
15°	478	478	474	469	467	135
25°	415	412	406	391	380	190
35°	336	334	318	294	286	210
45°	258	253	231	212	203	199
55°	179	174	158	139	132	161
65°	106	100	91	93	77	105
75°	43	40	37	36	39	46
85°	6	7	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°	520.6	520.6	520.6	520.6	520.6
2.5°	517.0	517.0	517.0	516.4	516.4
5°	511.6	511.0	511.0	510.4	510.4
7.5°	507.4	506.8	506.1	505.5	504.3
10°	501.3	501.3	500.7	497.7	497.1
12.5°	491.7	491.1	488.7	484.5	483.3
15°	478.5	478.5	473.6	468.8	467.0
17.5°	464.0	463.4	457.4	452.6	450.2
20°	448.4	447.2	441.2	433.3	429.1
22.5°	430.9	430.9	423.7	413.5	409.3
25°	414.7	412.3	405.6	391.2	380.4
27.5°	396.0	392.4	385.2	364.7	352.1
30°	375.5	373.7	363.5	337.0	327.4
32.5°	356.3	353.3	342.4	314.8	306.9
35°	336.4	334.0	317.8	293.7	286.5
37.5°	316.6	313.6	293.1	273.8	264.8
40°	296.7	293.1	270.8	253.4	243.7
42.5°	278.1	273.2	251.6	232.9	222.1
45°	258.2	252.8	231.1	211.8	203.4
47.5°	238.3	233.5	213.7	193.8	184.2
50°	217.3	213.1	195.0	175.1	164.9
52.5°	199.8	193.2	175.7	155.9	147.5
55°	179.3	173.9	157.7	139.0	131.8
57.5°	160.7	155.3	140.2	122.8	116.8
60°	143.2	135.4	122.8	107.7	102.9
62.5°	124.0	118.0	107.1	94.5	100.5
65°	106.5	100.5	90.9	92.7	77.0
67.5°	87.3	84.3	75.8	67.4	65.0
70°	71.0	67.4	64.4	55.4	53.0
72.5°	56.6	53.0	48.7	43.9	42.1
75°	42.7	39.7	37.3	35.5	39.1
77.5°	29.5	28.3	26.5	24.7	24.1
80°	19.3	18.7	18.1	17.5	16.9
82.5°	11.4	11.4	11.4	11.4	11.4
85°	6.0	6.6	7.2	7.8	8.4
87.5°	3.6	3.6	4.2	4.8	5.4
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)