

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: P545443

Luminaire Tested: **FMR-12-2-LD4-1STD-35-UNV-81-88-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: P545443
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-81-88-EDD
Description: 1X2 FMR TROFFER WITH .156 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

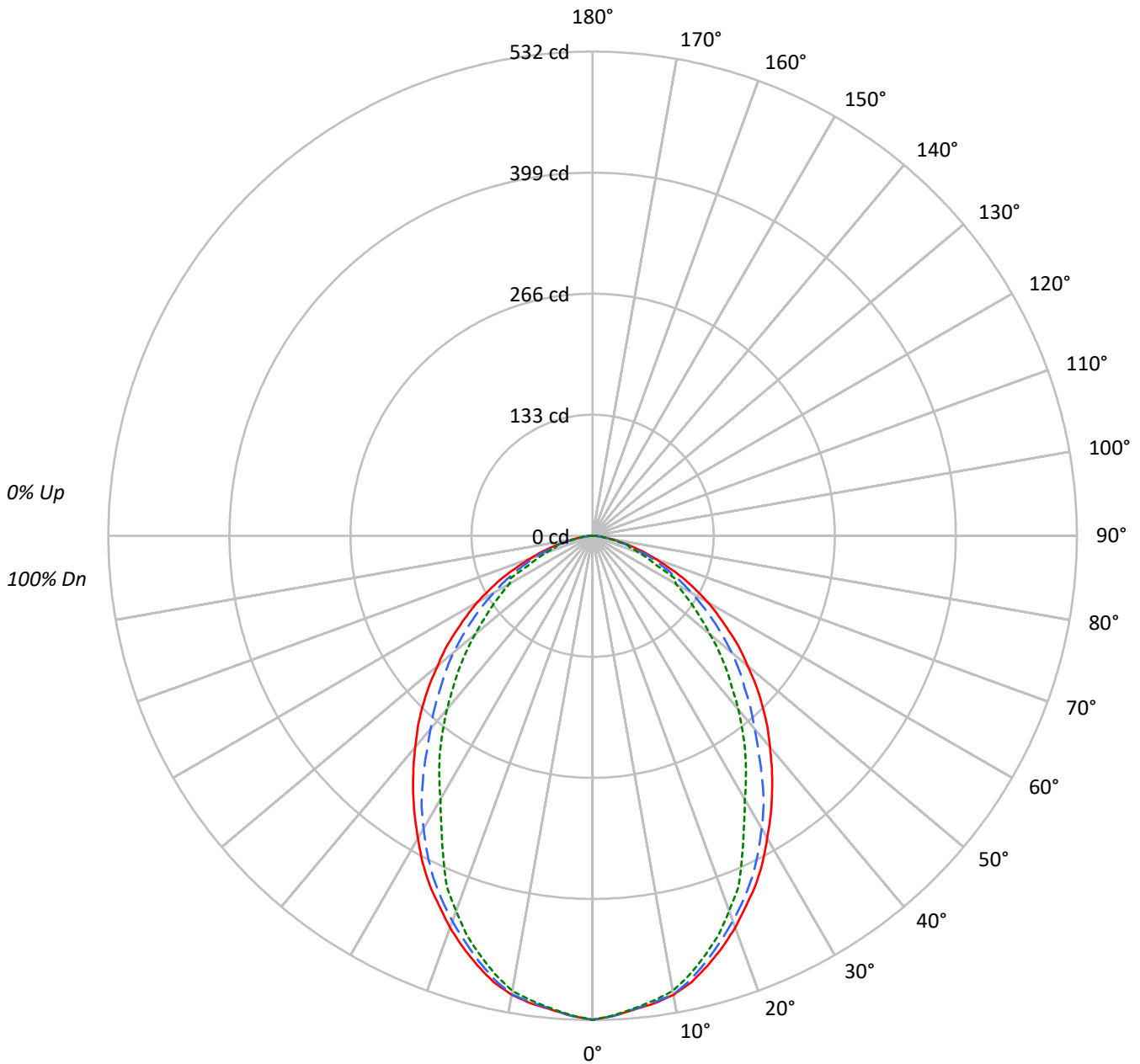
Lumens per Lamp: N/A
Luminaire Lumens: 1044.0 lumens
Efficiency: N/A
Efficacy: 62.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P545443

CATALOG NUMBER: FMR-12-2-LD4-1STD-35-UNV-81-88-EDD

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°	2862	2862	2862
5°	2823	2820	2816
10°	2799	2795	2775
15°	2724	2696	2658
20°	2623	2581	2511
25°	2515	2461	2308
30°	2384	2307	2078
35°	2258	2133	1922
40°	2129	1944	1749
45°	2007	1797	1582
50°	1858	1668	1411
55°	1719	1512	1263
60°	1575	1350	1131
65°	1386	1182	1002
70°	1141	1035	851
75°	909	792	832
80°	611	570	533
85°	377	457	531



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	4.7
10°-20°	135.9	13.0
20°-30°	188.1	18.0
30°-40°	200.5	19.2
40°-50°	183.0	17.5
50°-60°	143.3	13.7
60°-70°	93.4	8.9
70°-80°	41.4	4.0
80°-90°	8.9	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°	373.4	35.8
0°-40°	574.0	55.0
0°-60°	900.3	86.2
0°-90°	1044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1044.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	523	522	522	521	521	50
15°	489	489	484	479	477	137
25°	424	421	414	400	389	194
35°	344	341	325	300	293	215
45°	264	258	236	216	208	203
55°	183	178	161	142	135	164
65°	109	103	93	95	79	107
75°	44	41	38	36	40	47
85°	6	7	7	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	531.8	531.8	531.8	531.8	531.8
2.5°	528.1	528.1	528.1	527.5	527.5
5°	522.6	522.0	522.0	521.3	521.3
7.5°	518.3	517.7	517.0	516.4	515.2
10°	512.1	512.1	511.5	508.4	507.8
12.5°	502.3	501.7	499.2	494.9	493.7
15°	488.8	488.8	483.8	478.9	477.1
17.5°	474.0	473.4	467.2	462.3	459.9
20°	458.0	456.8	450.6	442.7	438.4
22.5°	440.2	440.2	432.8	422.4	418.1
25°	423.6	421.1	414.4	399.6	388.6
27.5°	404.5	400.8	393.5	372.6	359.7
30°	383.6	381.8	371.3	344.3	334.4
32.5°	364.0	360.9	349.8	321.5	313.5
35°	343.7	341.2	324.6	300.0	292.6
37.5°	323.4	320.3	299.4	279.7	270.5
40°	303.1	299.4	276.7	258.8	249.0
42.5°	284.0	279.1	257.0	237.9	226.9
45°	263.7	258.2	236.1	216.4	207.8
47.5°	243.5	238.5	218.3	198.0	188.1
50°	221.9	217.6	199.2	178.9	168.5
52.5°	204.1	197.3	179.5	159.2	150.6
55°	183.2	177.7	161.1	142.0	134.6
57.5°	164.2	158.6	143.2	125.4	119.3
60°	146.3	138.3	125.4	110.0	105.1
62.5°	126.6	120.5	109.4	96.5	102.7
65°	108.8	102.7	92.8	94.7	78.7
67.5°	89.1	86.1	77.5	68.9	66.4
70°	72.5	68.9	65.8	56.6	54.1
72.5°	57.8	54.1	49.8	44.9	43.0
75°	43.7	40.6	38.1	36.3	40.0
77.5°	30.1	28.9	27.1	25.2	24.6
80°	19.7	19.1	18.4	17.8	17.2
82.5°	11.7	11.7	11.7	11.7	11.7
85°	6.1	6.8	7.4	8.0	8.6
87.5°	3.7	3.7	4.3	4.9	5.5
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)