

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: P545431

Luminaire Tested: **FMR-12-2-LD4-1STD-35-UNV-80-84-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: P545431
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-80-84-EDD
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

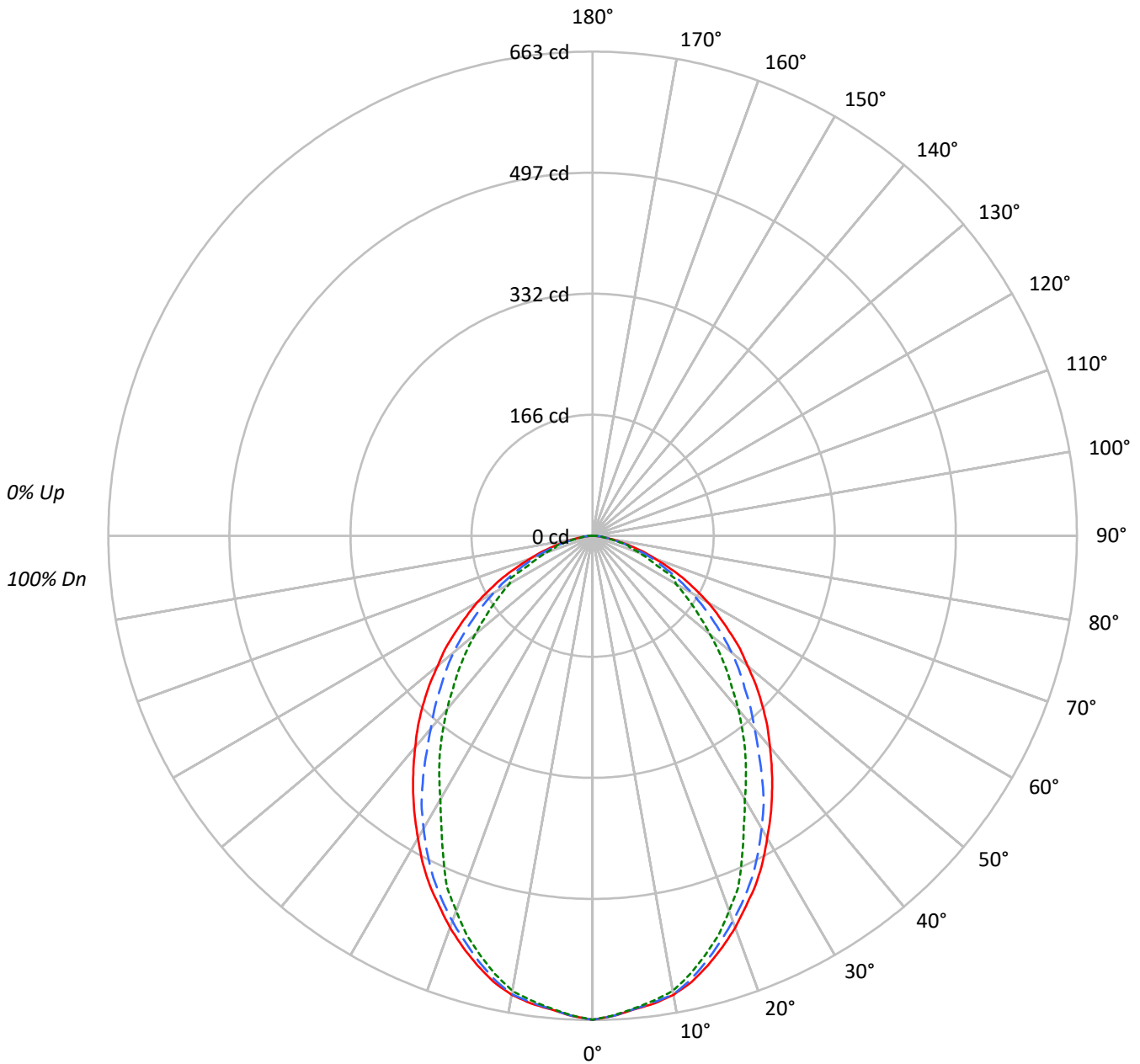
Lumens per Lamp: N/A
Luminaire Lumens: 1301.0 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P545431

CATALOG NUMBER: FMR-12-2-LD4-1STD-35-UNV-80-84-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°	3567	3567	3567
5°	3518	3514	3510
10°	3488	3483	3458
15°	3394	3360	3312
20°	3269	3216	3129
25°	3135	3067	2875
30°	2971	2875	2590
35°	2814	2658	2396
40°	2654	2422	2180
45°	2502	2239	1971
50°	2316	2078	1757
55°	2142	1883	1574
60°	1962	1682	1410
65°	1727	1473	1249
70°	1423	1290	1061
75°	1131	988	1036
80°	759	713	666
85°	475	568	661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.7	4.7
10°-20°	169.3	13.0
20°-30°	234.4	18.0
30°-40°	249.9	19.2
40°-50°	228.0	17.5
50°-60°	178.6	13.7
60°-70°	116.4	8.9
70°-80°	51.6	4.0
80°-90°	11.1	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°	465.4	35.8
0°-40°	715.3	55.0
0°-60°	1121.9	86.2
0°-90°	1301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1301.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	663	663	663	663	663	
5°	651	650	650	650	650	62
15°	609	609	603	597	594	171
25°	528	525	516	498	484	242
35°	428	425	404	374	365	268
45°	329	322	294	270	259	253
55°	228	221	201	177	168	205
65°	136	128	116	118	98	134
75°	54	51	48	45	50	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	662.7	662.7	662.7	662.7	662.7
2.5°	658.1	658.1	658.1	657.3	657.3
5°	651.2	650.5	650.5	649.7	649.7
7.5°	645.9	645.1	644.3	643.6	642.0
10°	638.2	638.2	637.4	633.6	632.8
12.5°	625.9	625.2	622.1	616.7	615.2
15°	609.1	609.1	603.0	596.8	594.5
17.5°	590.7	589.9	582.3	576.1	573.1
20°	570.8	569.2	561.6	551.6	546.3
22.5°	548.6	548.6	539.4	526.3	521.0
25°	527.9	524.8	516.4	498.0	484.2
27.5°	504.1	499.5	490.3	464.3	448.2
30°	478.1	475.8	462.7	429.0	416.8
32.5°	453.6	449.7	435.9	400.7	390.7
35°	428.3	425.2	404.5	373.9	364.7
37.5°	403.0	399.2	373.1	348.6	337.1
40°	377.7	373.1	344.8	322.5	310.3
42.5°	354.0	347.8	320.2	296.5	282.7
45°	328.7	321.8	294.2	269.7	259.0
47.5°	303.4	297.3	272.0	246.7	234.4
50°	276.6	271.2	248.2	222.9	209.9
52.5°	254.4	245.9	223.7	198.4	187.7
55°	228.3	221.4	200.7	177.0	167.8
57.5°	204.6	197.7	178.5	156.3	148.6
60°	182.3	172.4	156.3	137.1	131.0
62.5°	157.8	150.2	136.4	120.3	127.9
65°	135.6	127.9	115.7	118.0	98.1
67.5°	111.1	107.3	96.5	85.8	82.7
70°	90.4	85.8	82.0	70.5	67.4
72.5°	72.0	67.4	62.1	55.9	53.6
75°	54.4	50.6	47.5	45.2	49.8
77.5°	37.5	36.0	33.7	31.4	30.6
80°	24.5	23.8	23.0	22.2	21.5
82.5°	14.6	14.6	14.6	14.6	14.6
85°	7.7	8.4	9.2	10.0	10.7
87.5°	4.6	4.6	5.4	6.1	6.9
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)