

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: P545980

Luminaire Tested: **FMR-12-4-LD4-1LO-50-UNV-80-94-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: P545980
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-12-4-LD4-1LO-50-UNV-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

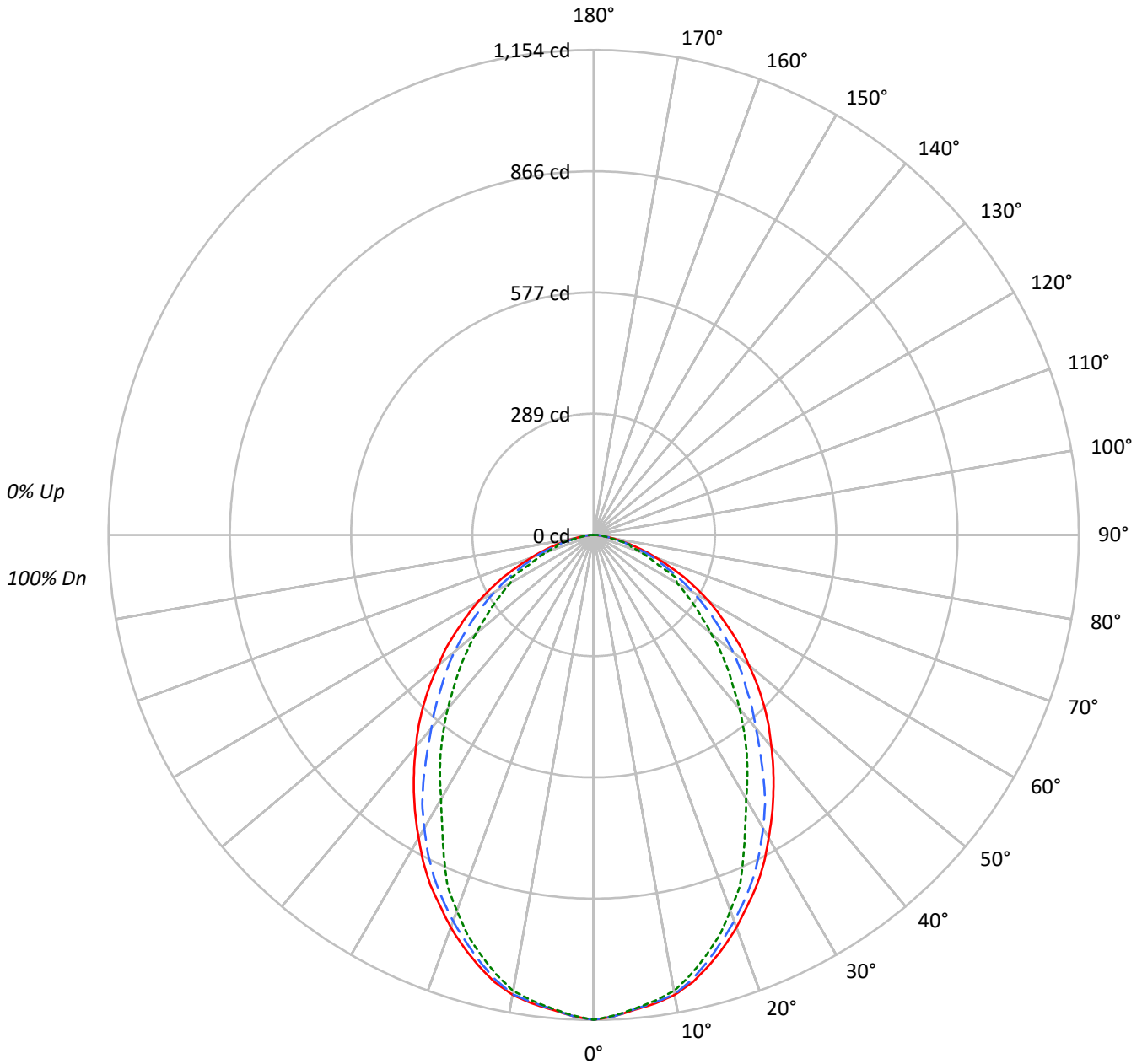
Lumens per Lamp: N/A
Luminaire Lumens: 2265.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	3105	3105	3105
5°	3063	3059	3055
10°	3036	3032	3010
15°	2954	2924	2884
20°	2846	2800	2723
25°	2729	2669	2503
30°	2586	2503	2255
35°	2449	2314	2086
40°	2310	2108	1898
45°	2178	1949	1716
50°	2016	1809	1530
55°	1865	1640	1370
60°	1709	1464	1228
65°	1503	1282	1087
70°	1238	1123	924
75°	985	860	901
80°	662	620	578
85°	411	494	577



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.4	4.7
10°-20°	294.7	13.0
20°-30°	408.1	18.0
30°-40°	435.1	19.2
40°-50°	396.9	17.5
50°-60°	311.0	13.7
60°-70°	202.7	8.9
70°-80°	89.8	4.0
80°-90°	19.3	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°	810.2	35.8
0°-40°	1245.3	55.0
0°-60°	1953.3	86.2
0°-90°	2265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2265.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1154	1154	1154	1154	1154	
5°	1134	1132	1132	1131	1131	108
15°	1060	1060	1050	1039	1035	298
25°	919	914	899	867	843	422
35°	746	740	704	651	635	466
45°	572	560	512	470	451	441
55°	398	386	350	308	292	357
65°	236	223	201	205	171	233
75°	95	88	83	79	87	102
85°	13	15	16	17	19	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1153.8	1153.8	1153.8	1153.8	1153.8
2.5°	1145.8	1145.8	1145.8	1144.4	1144.4
5°	1133.8	1132.4	1132.4	1131.1	1131.1
7.5°	1124.4	1123.1	1121.7	1120.4	1117.7
10°	1111.1	1111.1	1109.7	1103.1	1101.7
12.5°	1089.7	1088.4	1083.1	1073.7	1071.1
15°	1060.4	1060.4	1049.7	1039.1	1035.1
17.5°	1028.4	1027.0	1013.7	1003.0	997.7
20°	993.7	991.0	977.7	960.4	951.0
22.5°	955.0	955.0	939.0	916.3	907.0
25°	919.0	913.7	899.0	867.0	843.0
27.5°	877.7	869.7	853.6	808.3	780.3
30°	832.3	828.3	805.6	746.9	725.6
32.5°	789.6	783.0	758.9	697.6	680.3
35°	745.6	740.3	704.3	650.9	634.9
37.5°	701.6	694.9	649.6	606.9	586.9
40°	657.6	649.6	600.2	561.5	540.2
42.5°	616.2	605.6	557.5	516.2	492.2
45°	572.2	560.2	512.2	469.5	450.8
47.5°	528.2	517.5	473.5	429.5	408.2
50°	481.5	472.2	432.2	388.1	365.5
52.5°	442.8	428.2	389.5	345.5	326.8
55°	397.5	385.5	349.5	308.1	292.1
57.5°	356.1	344.1	310.8	272.1	258.8
60°	317.5	300.1	272.1	238.8	228.1
62.5°	274.8	261.4	237.4	209.4	222.7
65°	236.1	222.7	201.4	205.4	170.7
67.5°	193.4	186.7	168.1	149.4	144.1
70°	157.4	149.4	142.7	122.7	117.4
72.5°	125.4	117.4	108.0	97.4	93.4
75°	94.7	88.0	82.7	78.7	86.7
77.5°	65.4	62.7	58.7	54.7	53.4
80°	42.7	41.3	40.0	38.7	37.3
82.5°	25.3	25.3	25.3	25.3	25.3
85°	13.3	14.7	16.0	17.3	18.7
87.5°	8.0	8.0	9.3	10.7	12.0
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)