

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: P545781

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-93-96-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: P545781
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-LD4-2STD-40-UNV-93-96-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

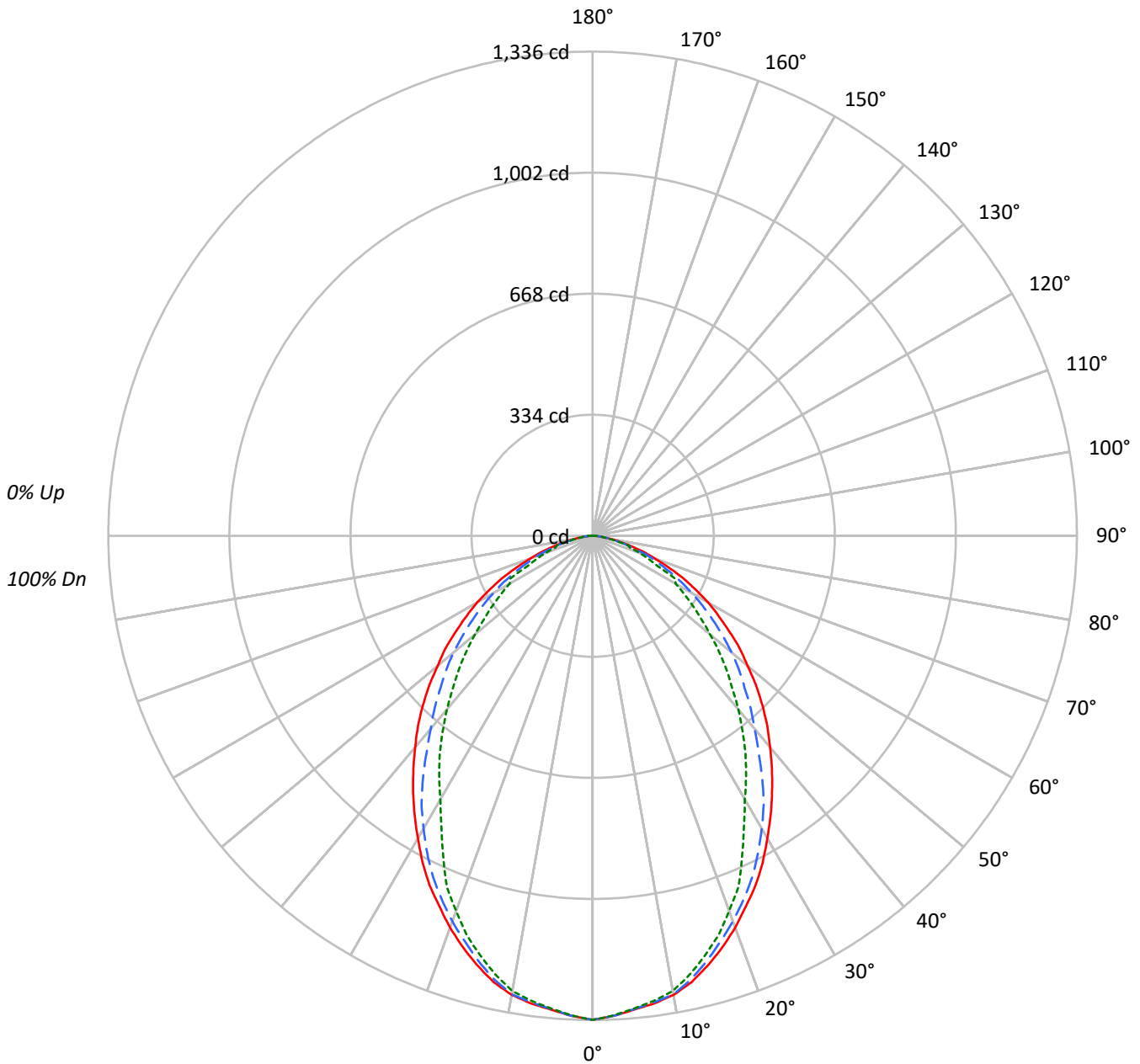
Lumens per Lamp: N/A
Luminaire Lumens: 2622.0 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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

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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°	7188	7188	7188
5°	7091	7082	7074
10°	7029	7021	6970
15°	6839	6771	6676
20°	6588	6482	6305
25°	6318	6180	5795
30°	5988	5796	5220
35°	5671	5357	4829
40°	5348	4881	4393
45°	5042	4513	3972
50°	4667	4189	3543
55°	4317	3795	3172
60°	3956	3391	2842
65°	3480	2970	2516
70°	2867	2600	2138
75°	2279	1990	2088
80°	1531	1435	1339
85°	951	1142	1334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.3	4.7
10°-20°	341.2	13.0
20°-30°	472.4	18.0
30°-40°	503.7	19.2
40°-50°	459.5	17.5
50°-60°	360.0	13.7
60°-70°	234.6	8.9
70°-80°	104.0	4.0
80°-90°	22.3	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°	937.9	35.8
0°-40°	1441.6	55.0
0°-60°	2261.1	86.2
0°-90°	2622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2622.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1336	1336	1336	1336	1336	
5°	1312	1311	1311	1309	1309	125
15°	1228	1228	1215	1203	1198	345
25°	1064	1058	1041	1004	976	488
35°	863	857	815	754	735	540
45°	662	648	593	544	522	510
55°	460	446	404	357	338	413
65°	273	258	233	238	198	269
75°	110	102	96	91	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1335.6	1335.6	1335.6	1335.6	1335.6
2.5°	1326.3	1326.3	1326.3	1324.8	1324.8
5°	1312.5	1310.9	1310.9	1309.4	1309.4
7.5°	1301.6	1300.1	1298.6	1297.0	1293.9
10°	1286.2	1286.2	1284.7	1276.9	1275.4
12.5°	1261.5	1260.0	1253.8	1243.0	1239.9
15°	1227.5	1227.5	1215.2	1202.8	1198.2
17.5°	1190.5	1188.9	1173.5	1161.1	1155.0
20°	1150.3	1147.2	1131.8	1111.7	1100.9
22.5°	1105.5	1105.5	1087.0	1060.8	1050.0
25°	1063.9	1057.7	1040.7	1003.6	975.8
27.5°	1016.0	1006.7	988.2	935.7	903.3
30°	963.5	958.9	932.6	864.7	840.0
32.5°	914.1	906.4	878.6	807.5	787.5
35°	863.1	857.0	815.3	753.5	735.0
37.5°	812.2	804.5	752.0	702.5	679.4
40°	761.2	752.0	694.8	650.0	625.3
42.5°	713.4	701.0	645.4	597.6	569.8
45°	662.4	648.5	592.9	543.5	521.9
47.5°	611.4	599.1	548.1	497.2	472.5
50°	557.4	546.6	500.3	449.3	423.1
52.5°	512.6	495.6	450.9	399.9	378.3
55°	460.1	446.2	404.5	356.7	338.1
57.5°	412.3	398.4	359.8	315.0	299.5
60°	367.5	347.4	315.0	276.4	264.0
62.5°	318.1	302.6	274.8	242.4	257.9
65°	273.3	257.9	233.2	237.8	197.6
67.5°	223.9	216.2	194.6	172.9	166.8
70°	182.2	172.9	165.2	142.1	135.9
72.5°	145.1	135.9	125.1	112.7	108.1
75°	109.6	101.9	95.7	91.1	100.4
77.5°	75.7	72.6	67.9	63.3	61.8
80°	49.4	47.9	46.3	44.8	43.2
82.5°	29.3	29.3	29.3	29.3	29.3
85°	15.4	17.0	18.5	20.1	21.6
87.5°	9.3	9.3	10.8	12.4	13.9
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)