

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: P546077

Luminaire Tested: **FMR-12-4-LD4-1STD-50-UNV-80-96-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: P546077
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-LD4-1STD-50-UNV-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

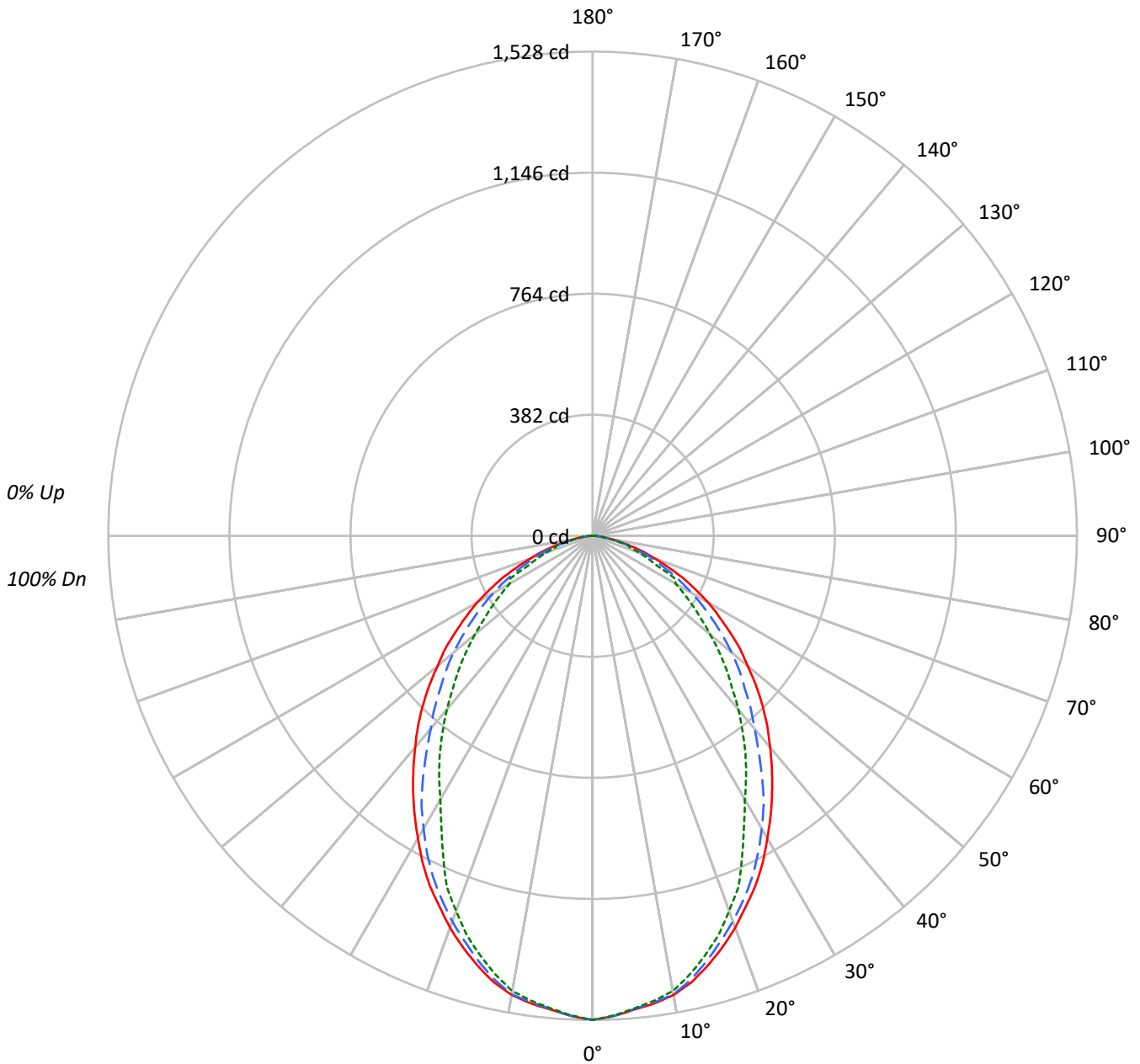
Lumens per Lamp: N/A
Luminaire Lumens: 2999.0 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4111	4111	4111
5°	4055	4050	4045
10°	4020	4015	3986
15°	3911	3872	3818
20°	3768	3707	3606
25°	3613	3534	3314
30°	3424	3315	2985
35°	3243	3063	2761
40°	3059	2792	2513
45°	2883	2581	2272
50°	2669	2395	2026
55°	2469	2171	1815
60°	2262	1939	1625
65°	1990	1698	1440
70°	1640	1487	1223
75°	1304	1138	1194
80°	876	821	766
85°	546	655	763



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.2	4.7
10°-20°	390.3	13.0
20°-30°	540.3	18.0
30°-40°	576.1	19.2
40°-50°	525.6	17.5
50°-60°	411.8	13.7
60°-70°	268.4	8.9
70°-80°	118.9	4.0
80°-90°	25.5	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°	1072.8	35.8
0°-40°	1648.9	55.0
0°-60°	2586.2	86.2
0°-90°	2999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1528	1528	1528	1528	1528	
5°	1501	1499	1499	1498	1498	142
15°	1404	1404	1390	1376	1370	395
25°	1217	1210	1190	1148	1116	559
35°	987	980	932	862	841	617
45°	758	742	678	622	597	584
55°	526	510	463	408	387	472
65°	313	295	267	272	226	308
75°	125	117	110	104	115	134
85°	18	19	21	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.7	1527.7	1527.7	1527.7	1527.7
2.5°	1517.1	1517.1	1517.1	1515.3	1515.3
5°	1501.2	1499.4	1499.4	1497.6	1497.6
7.5°	1488.8	1487.0	1485.3	1483.5	1480.0
10°	1471.1	1471.1	1469.4	1460.5	1458.8
12.5°	1442.9	1441.1	1434.0	1421.7	1418.2
15°	1404.0	1404.0	1389.9	1375.8	1370.5
17.5°	1361.6	1359.9	1342.2	1328.1	1321.0
20°	1315.7	1312.2	1294.5	1271.6	1259.2
22.5°	1264.5	1264.5	1243.3	1213.3	1200.9
25°	1216.8	1209.8	1190.3	1147.9	1116.2
27.5°	1162.1	1151.5	1130.3	1070.2	1033.2
30°	1102.0	1096.7	1066.7	989.0	960.7
32.5°	1045.5	1036.7	1004.9	923.7	900.7
35°	987.2	980.2	932.5	861.8	840.6
37.5°	929.0	920.1	860.1	803.6	777.1
40°	870.7	860.1	794.7	743.5	715.3
42.5°	815.9	801.8	738.2	683.5	651.7
45°	757.6	741.7	678.2	621.7	596.9
47.5°	699.4	685.2	627.0	568.7	540.4
50°	637.6	625.2	572.2	513.9	483.9
52.5°	586.3	566.9	515.7	457.4	432.7
55°	526.3	510.4	462.7	408.0	386.8
57.5°	471.5	455.6	411.5	360.3	342.6
60°	420.3	397.4	360.3	316.1	302.0
62.5°	363.8	346.1	314.4	277.3	294.9
65°	312.6	294.9	266.7	272.0	226.1
67.5°	256.1	247.2	222.5	197.8	190.7
70°	208.4	197.8	189.0	162.5	155.4
72.5°	166.0	155.4	143.1	128.9	123.6
75°	125.4	116.6	109.5	104.2	114.8
77.5°	86.5	83.0	77.7	72.4	70.6
80°	56.5	54.7	53.0	51.2	49.4
82.5°	33.6	33.6	33.6	33.6	33.6
85°	17.7	19.4	21.2	23.0	24.7
87.5°	10.6	10.6	12.4	14.1	15.9
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)