

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: P546078

Luminaire Tested: **FMR-12-4-LD4-1STD-50-UNV-80-97-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: P546078
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-80-97-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

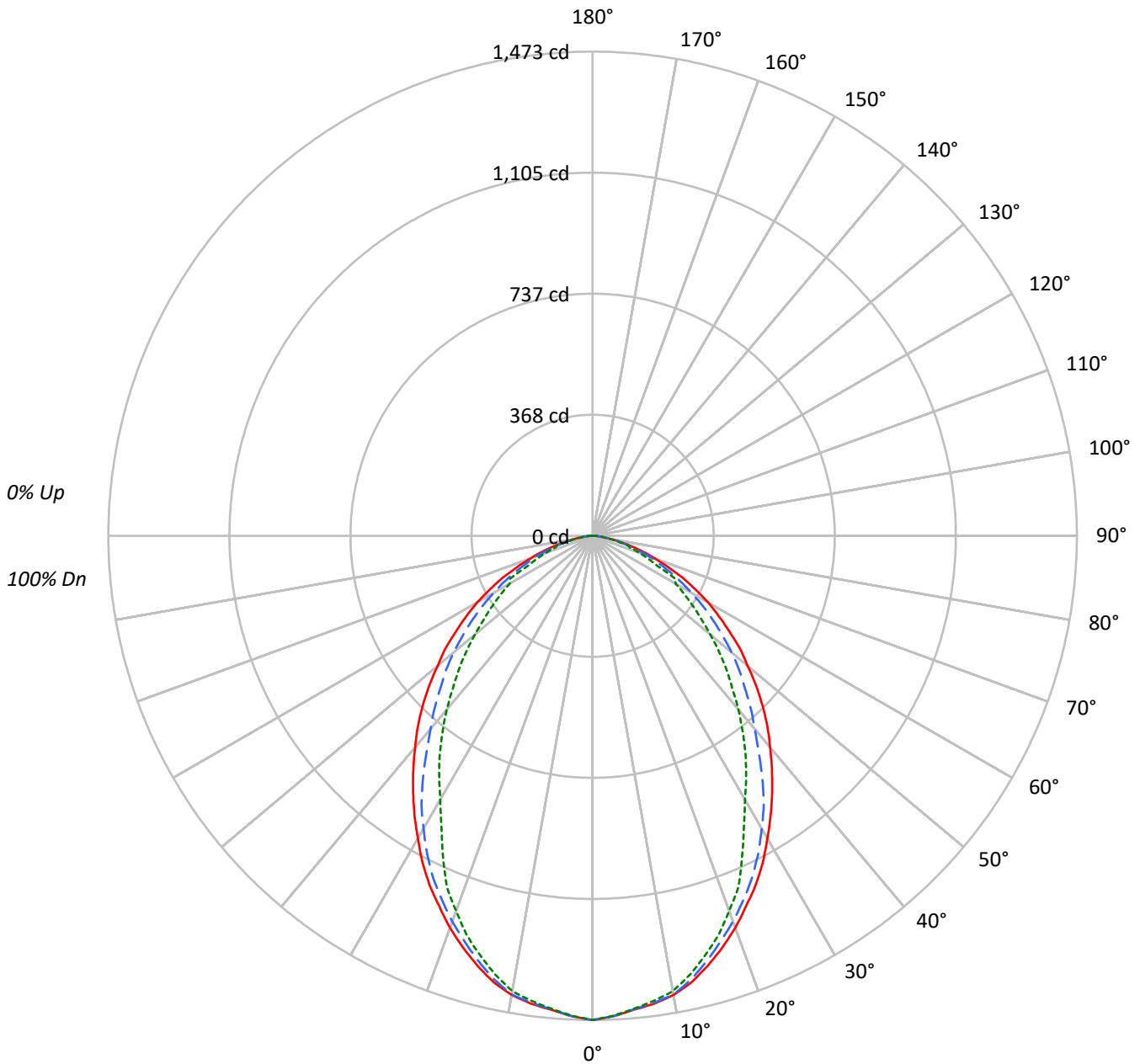
Lumens per Lamp: N/A
Luminaire Lumens: 2892.0 lumens
Efficiency: N/A
Efficacy: 86.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	3964	3964	3964
5°	3910	3906	3901
10°	3876	3872	3844
15°	3772	3734	3682
20°	3633	3575	3477
25°	3484	3408	3196
30°	3302	3196	2879
35°	3127	2954	2663
40°	2949	2692	2423
45°	2780	2489	2191
50°	2574	2310	1953
55°	2381	2093	1750
60°	2181	1870	1567
65°	1919	1638	1388
70°	1581	1434	1179
75°	1257	1098	1151
80°	845	792	739
85°	525	630	735



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	4.7
10°-20°	376.3	13.0
20°-30°	521.0	18.0
30°-40°	555.6	19.2
40°-50°	506.8	17.5
50°-60°	397.1	13.7
60°-70°	258.8	8.9
70°-80°	114.6	4.0
80°-90°	24.6	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°	1034.5	35.8
0°-40°	1590.1	55.0
0°-60°	2494.0	86.2
0°-90°	2892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1473	1473	1473	1473	1473	
5°	1448	1446	1446	1444	1444	137
15°	1354	1354	1340	1327	1322	381
25°	1173	1167	1148	1107	1076	539
35°	952	945	899	831	811	595
45°	731	715	654	600	576	563
55°	508	492	446	393	373	455
65°	301	284	257	262	218	297
75°	121	112	106	100	111	130
85°	17	19	20	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1473.1	1473.1	1473.1	1473.1	1473.1
2.5°	1462.9	1462.9	1462.9	1461.2	1461.2
5°	1447.6	1445.9	1445.9	1444.2	1444.2
7.5°	1435.7	1434.0	1432.3	1430.6	1427.2
10°	1418.6	1418.6	1416.9	1408.4	1406.7
12.5°	1391.4	1389.7	1382.9	1371.0	1367.6
15°	1353.9	1353.9	1340.3	1326.7	1321.6
17.5°	1313.1	1311.4	1294.3	1280.7	1273.9
20°	1268.8	1265.4	1248.3	1226.2	1214.3
22.5°	1219.4	1219.4	1199.0	1170.0	1158.1
25°	1173.4	1166.6	1147.9	1107.0	1076.3
27.5°	1120.6	1110.4	1090.0	1032.1	996.3
30°	1062.7	1057.6	1028.6	953.7	926.5
32.5°	1008.2	999.7	969.0	890.7	868.6
35°	952.0	945.2	899.2	831.1	810.7
37.5°	895.8	887.3	829.4	774.9	749.3
40°	839.6	829.4	766.4	717.0	689.7
42.5°	786.8	773.2	711.9	659.1	628.4
45°	730.6	715.3	654.0	599.5	575.6
47.5°	674.4	660.8	604.6	548.4	521.1
50°	614.8	602.9	551.8	495.6	466.6
52.5°	565.4	546.7	497.3	441.1	417.2
55°	507.5	492.2	446.2	393.4	373.0
57.5°	454.7	439.4	396.8	347.4	330.4
60°	405.3	383.2	347.4	304.8	291.2
62.5°	350.8	333.8	303.1	267.4	284.4
65°	301.4	284.4	257.2	262.3	218.0
67.5°	246.9	238.4	214.6	190.7	183.9
70°	201.0	190.7	182.2	156.7	149.9
72.5°	160.1	149.9	137.9	124.3	119.2
75°	120.9	112.4	105.6	100.5	110.7
77.5°	83.4	80.0	74.9	69.8	68.1
80°	54.5	52.8	51.1	49.4	47.7
82.5°	32.4	32.4	32.4	32.4	32.4
85°	17.0	18.7	20.4	22.1	23.8
87.5°	10.2	10.2	11.9	13.6	15.3
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)