

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: P546074

Luminaire Tested: **FMR-12-4-LD4-1STD-50-UNV-80-87-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: P546074
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-80-87-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

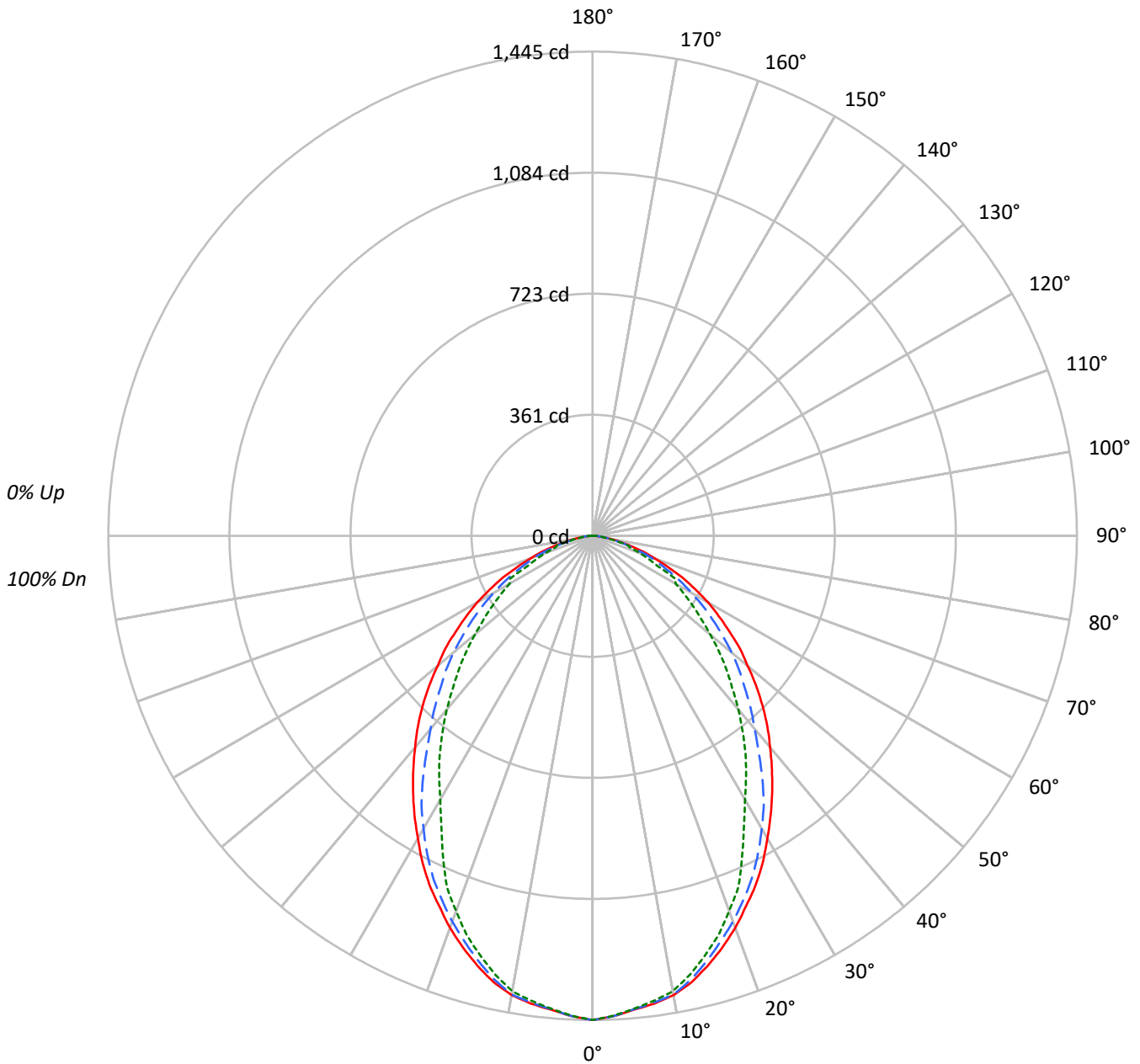
Lumens per Lamp: N/A
Luminaire Lumens: 2837.0 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3889	3889	3889
5°	3836	3831	3827
10°	3803	3798	3771
15°	3700	3663	3612
20°	3564	3507	3411
25°	3418	3343	3135
30°	3239	3136	2824
35°	3068	2898	2612
40°	2893	2641	2377
45°	2727	2441	2149
50°	2525	2266	1917
55°	2336	2054	1717
60°	2140	1834	1538
65°	1883	1606	1361
70°	1551	1407	1157
75°	1233	1077	1129
80°	829	776	725
85°	516	618	722



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.5	4.7
10°-20°	369.2	13.0
20°-30°	511.1	18.0
30°-40°	545.0	19.2
40°-50°	497.2	17.5
50°-60°	389.5	13.7
60°-70°	253.9	8.9
70°-80°	112.5	4.0
80°-90°	24.1	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°	1014.8	35.8
0°-40°	1559.8	55.0
0°-60°	2446.5	86.2
0°-90°	2837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2837.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1445	1445	1445	1445	1445	
5°	1420	1418	1418	1417	1417	135
15°	1328	1328	1315	1302	1296	373
25°	1151	1144	1126	1086	1056	528
35°	934	927	882	815	795	584
45°	717	702	642	588	565	552
55°	498	483	438	386	366	447
65°	296	279	252	257	214	291
75°	119	110	104	99	109	127
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1445.1	1445.1	1445.1	1445.1	1445.1
2.5°	1435.1	1435.1	1435.1	1433.4	1433.4
5°	1420.1	1418.4	1418.4	1416.7	1416.7
7.5°	1408.4	1406.7	1405.0	1403.4	1400.0
10°	1391.7	1391.7	1390.0	1381.6	1380.0
12.5°	1364.9	1363.3	1356.6	1344.9	1341.5
15°	1328.2	1328.2	1314.8	1301.5	1296.4
17.5°	1288.1	1286.4	1269.7	1256.3	1249.7
20°	1244.6	1241.3	1224.6	1202.9	1191.2
22.5°	1196.2	1196.2	1176.2	1147.8	1136.1
25°	1151.1	1144.4	1126.0	1085.9	1055.9
27.5°	1099.3	1089.3	1069.2	1012.4	977.3
30°	1042.5	1037.5	1009.1	935.6	908.8
32.5°	989.0	980.7	950.6	873.8	852.0
35°	933.9	927.2	882.1	815.3	795.2
37.5°	878.8	870.4	813.6	760.2	735.1
40°	823.6	813.6	751.8	703.4	676.6
42.5°	771.8	758.5	698.3	646.5	616.5
45°	716.7	701.7	641.5	588.1	564.7
47.5°	661.6	648.2	593.1	538.0	511.2
50°	603.1	591.4	541.3	486.2	457.8
52.5°	554.7	536.3	487.8	432.7	409.3
55°	497.9	482.8	437.7	385.9	365.9
57.5°	446.1	431.0	389.3	340.8	324.1
60°	397.6	375.9	340.8	299.1	285.7
62.5°	344.2	327.5	297.4	262.3	279.0
65°	295.7	279.0	252.3	257.3	213.8
67.5°	242.2	233.9	210.5	187.1	180.4
70°	197.1	187.1	178.8	153.7	147.0
72.5°	157.0	147.0	135.3	122.0	116.9
75°	118.6	110.3	103.6	98.6	108.6
77.5°	81.9	78.5	73.5	68.5	66.8
80°	53.5	51.8	50.1	48.4	46.8
82.5°	31.7	31.7	31.7	31.7	31.7
85°	16.7	18.4	20.0	21.7	23.4
87.5°	10.0	10.0	11.7	13.4	15.0
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)