

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: P545775

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-93-84-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: P545775
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-93-84-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

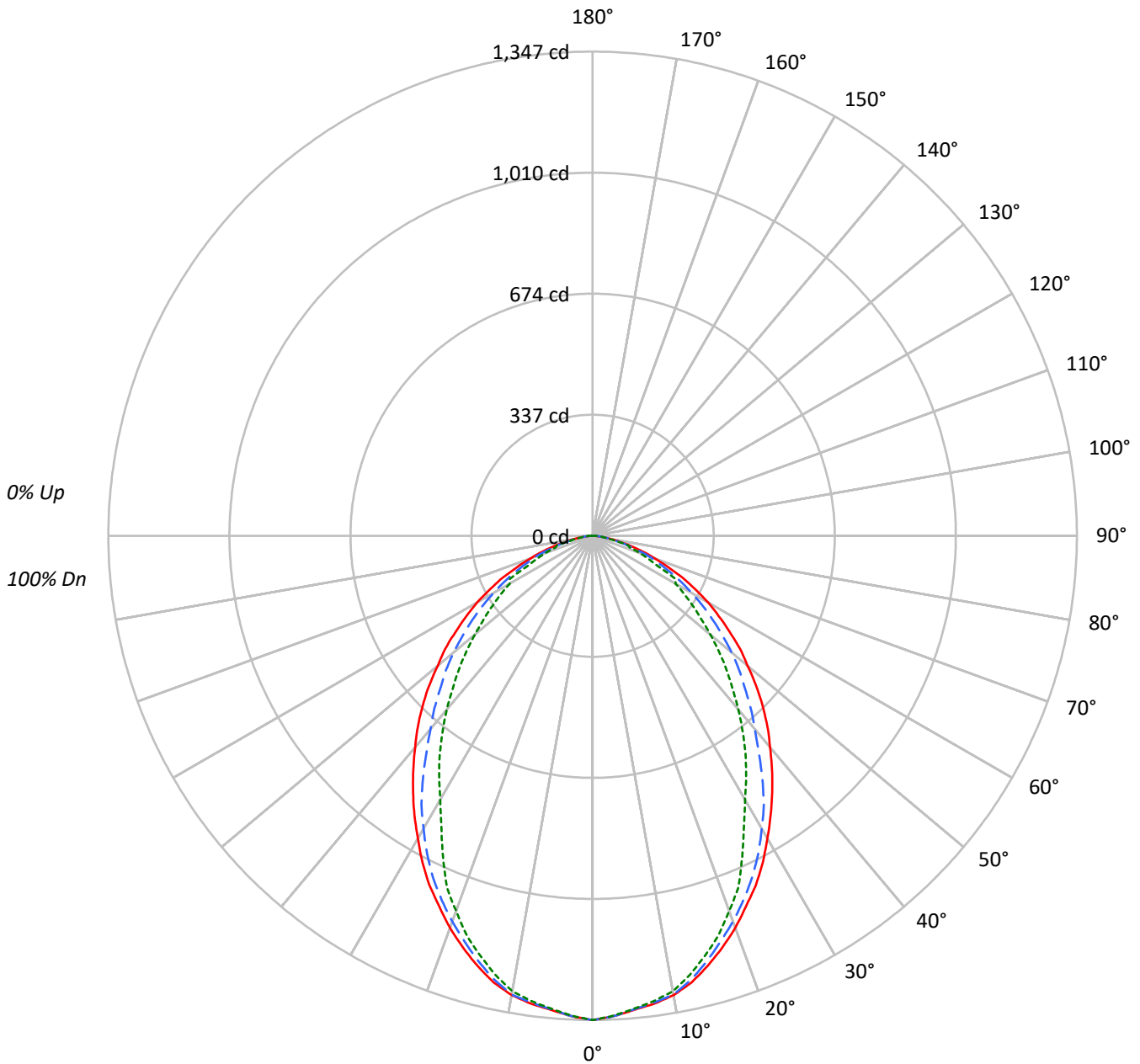
Lumens per Lamp: N/A
Luminaire Lumens: 2645.0 lumens
Efficiency: N/A
Efficacy: 79.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (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°	7251	7251	7251
5°	7153	7144	7136
10°	7091	7082	7031
15°	6900	6830	6735
20°	6646	6539	6361
25°	6373	6234	5846
30°	6040	5847	5266
35°	5721	5403	4871
40°	5395	4924	4432
45°	5086	4552	4007
50°	4708	4226	3574
55°	4356	3829	3201
60°	3990	3421	2868
65°	3511	2995	2539
70°	2892	2623	2157
75°	2300	2009	2104
80°	1543	1447	1351
85°	963	1155	1346



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.4	4.7
10°-20°	344.2	13.0
20°-30°	476.5	18.0
30°-40°	508.1	19.2
40°-50°	463.5	17.5
50°-60°	363.2	13.7
60°-70°	236.7	8.9
70°-80°	104.9	4.0
80°-90°	22.5	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°	946.1	35.8
0°-40°	1454.3	55.0
0°-60°	2281.0	86.2
0°-90°	2645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1347	1347	1347	1347	1347	
5°	1324	1322	1322	1321	1321	126
15°	1238	1238	1226	1213	1209	348
25°	1073	1067	1050	1012	984	493
35°	871	864	822	760	741	544
45°	668	654	598	548	526	515
55°	464	450	408	360	341	416
65°	276	260	235	240	199	272
75°	111	103	97	92	101	119
85°	16	17	19	20	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1347.3	1347.3	1347.3	1347.3	1347.3
2.5°	1338.0	1338.0	1338.0	1336.4	1336.4
5°	1324.0	1322.4	1322.4	1320.8	1320.8
7.5°	1313.1	1311.5	1309.9	1308.4	1305.3
10°	1297.5	1297.5	1295.9	1288.1	1286.6
12.5°	1272.6	1271.0	1264.8	1253.9	1250.8
15°	1238.3	1238.3	1225.8	1213.4	1208.7
17.5°	1200.9	1199.4	1183.8	1171.3	1165.1
20°	1160.4	1157.3	1141.7	1121.5	1110.6
22.5°	1115.2	1115.2	1096.6	1070.1	1059.2
25°	1073.2	1067.0	1049.8	1012.4	984.4
27.5°	1024.9	1015.6	996.9	943.9	911.2
30°	971.9	967.3	940.8	872.3	847.3
32.5°	922.1	914.3	886.3	814.6	794.4
35°	870.7	864.5	822.4	760.1	741.4
37.5°	819.3	811.5	758.6	708.7	685.3
40°	767.9	758.6	700.9	655.8	630.8
42.5°	719.6	707.2	651.1	602.8	574.8
45°	668.2	654.2	598.1	548.3	526.5
47.5°	616.8	604.4	552.9	501.5	476.6
50°	562.3	551.4	504.7	453.3	426.8
52.5°	517.1	500.0	454.8	403.4	381.6
55°	464.2	450.1	408.1	359.8	341.1
57.5°	415.9	401.9	362.9	317.8	302.2
60°	370.7	350.5	317.8	278.8	266.4
62.5°	320.9	305.3	277.3	244.5	260.1
65°	275.7	260.1	235.2	239.9	199.4
67.5°	225.9	218.1	196.3	174.5	168.2
70°	183.8	174.5	166.7	143.3	137.1
72.5°	146.4	137.1	126.2	113.7	109.0
75°	110.6	102.8	96.6	91.9	101.2
77.5°	76.3	73.2	68.5	63.9	62.3
80°	49.8	48.3	46.7	45.2	43.6
82.5°	29.6	29.6	29.6	29.6	29.6
85°	15.6	17.1	18.7	20.2	21.8
87.5°	9.3	9.3	10.9	12.5	14.0
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)