

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: P544719

Luminaire Tested: **FMR-12-1-LD4-1HI-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: P544719
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-12-1-LD4-1HI-40-UNV-93-84-EDD
Description: 1X1 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

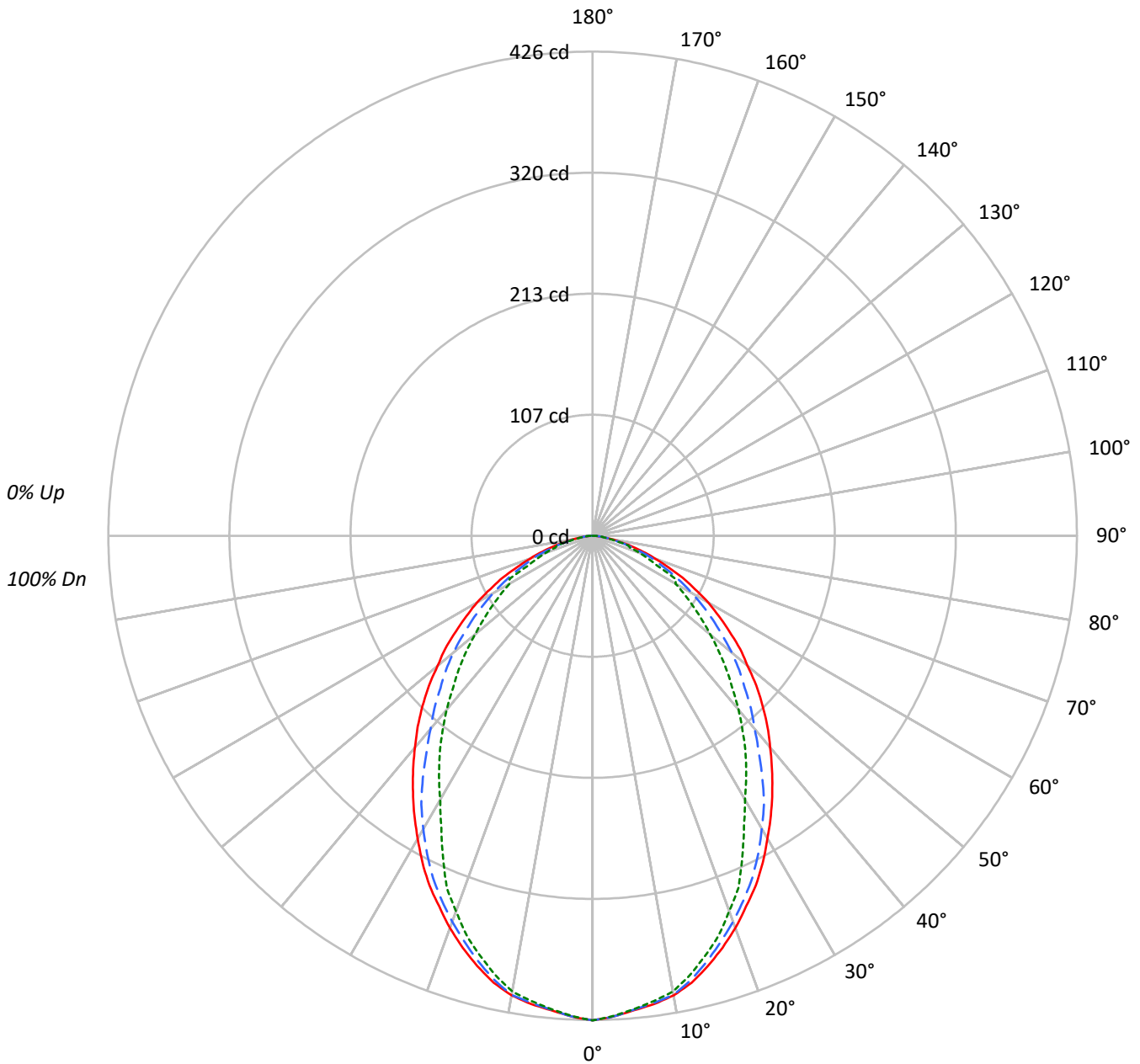
Lumens per Lamp: N/A
Luminaire Lumens: 837.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 10.8
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

TEST NUMBER: P544719

CATALOG NUMBER: FMR-12-1-LD4-1HI-40-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P544719

CATALOG NUMBER: FMR-12-1-LD4-1HI-40-UNV-93-84-EDD

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°	4590	4590	4590
5°	4527	4522	4517
10°	4488	4482	4450
15°	4367	4323	4262
20°	4206	4139	4025
25°	4033	3945	3700
30°	3823	3700	3332
35°	3620	3420	3083
40°	3414	3117	2805
45°	3220	2882	2536
50°	2979	2674	2262
55°	2757	2423	2025
60°	2525	2166	1815
65°	2221	1895	1607
70°	1832	1659	1366
75°	1456	1273	1331
80°	979	917	855
85°	605	729	852



TEST NUMBER: P544719

CATALOG NUMBER: FMR-12-1-LD4-1HI-40-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.7	4.7
10°-20°	108.9	13.0
20°-30°	150.8	18.0
30°-40°	160.8	19.2
40°-50°	146.7	17.5
50°-60°	114.9	13.7
60°-70°	74.9	8.9
70°-80°	33.2	4.0
80°-90°	7.1	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°	299.4	35.8
0°-40°	460.2	55.0
0°-60°	721.8	86.2
0°-90°	837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	837.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	426	426	426	426	426	
5°	419	418	418	418	418	40
15°	392	392	388	384	382	110
25°	340	338	332	320	312	156
35°	276	274	260	240	235	172
45°	212	207	189	174	167	163
55°	147	142	129	114	108	132
65°	87	82	74	76	63	86
75°	35	32	31	29	32	38
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



TEST NUMBER: P544719

CATALOG NUMBER: FMR-12-1-LD4-1HI-40-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	426.4	426.4	426.4	426.4	426.4
2.5°	423.4	423.4	423.4	422.9	422.9
5°	419.0	418.5	418.5	418.0	418.0
7.5°	415.5	415.0	414.5	414.0	413.0
10°	410.6	410.6	410.1	407.6	407.1
12.5°	402.7	402.2	400.2	396.8	395.8
15°	391.9	391.9	387.9	384.0	382.5
17.5°	380.0	379.5	374.6	370.7	368.7
20°	367.2	366.2	361.3	354.9	351.4
22.5°	352.9	352.9	347.0	338.6	335.2
25°	339.6	337.6	332.2	320.4	311.5
27.5°	324.3	321.4	315.5	298.7	288.3
30°	307.6	306.1	297.7	276.0	268.1
32.5°	291.8	289.3	280.5	257.8	251.4
35°	275.5	273.6	260.3	240.5	234.6
37.5°	259.3	256.8	240.0	224.3	216.9
40°	243.0	240.0	221.8	207.5	199.6
42.5°	227.7	223.8	206.0	190.8	181.9
45°	211.5	207.0	189.3	173.5	166.6
47.5°	195.2	191.2	175.0	158.7	150.8
50°	177.9	174.5	159.7	143.4	135.1
52.5°	163.6	158.2	143.9	127.7	120.8
55°	146.9	142.4	129.1	113.9	107.9
57.5°	131.6	127.2	114.8	100.6	95.6
60°	117.3	110.9	100.6	88.2	84.3
62.5°	101.5	96.6	87.7	77.4	82.3
65°	87.2	82.3	74.4	75.9	63.1
67.5°	71.5	69.0	62.1	55.2	53.2
70°	58.2	55.2	52.7	45.3	43.4
72.5°	46.3	43.4	39.9	36.0	34.5
75°	35.0	32.5	30.6	29.1	32.0
77.5°	24.2	23.2	21.7	20.2	19.7
80°	15.8	15.3	14.8	14.3	13.8
82.5°	9.4	9.4	9.4	9.4	9.4
85°	4.9	5.4	5.9	6.4	6.9
87.5°	3.0	3.0	3.5	3.9	4.4
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)