

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: P544907

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-82-88-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: P544907
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-LD4-1STD-40-UNV-82-88-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

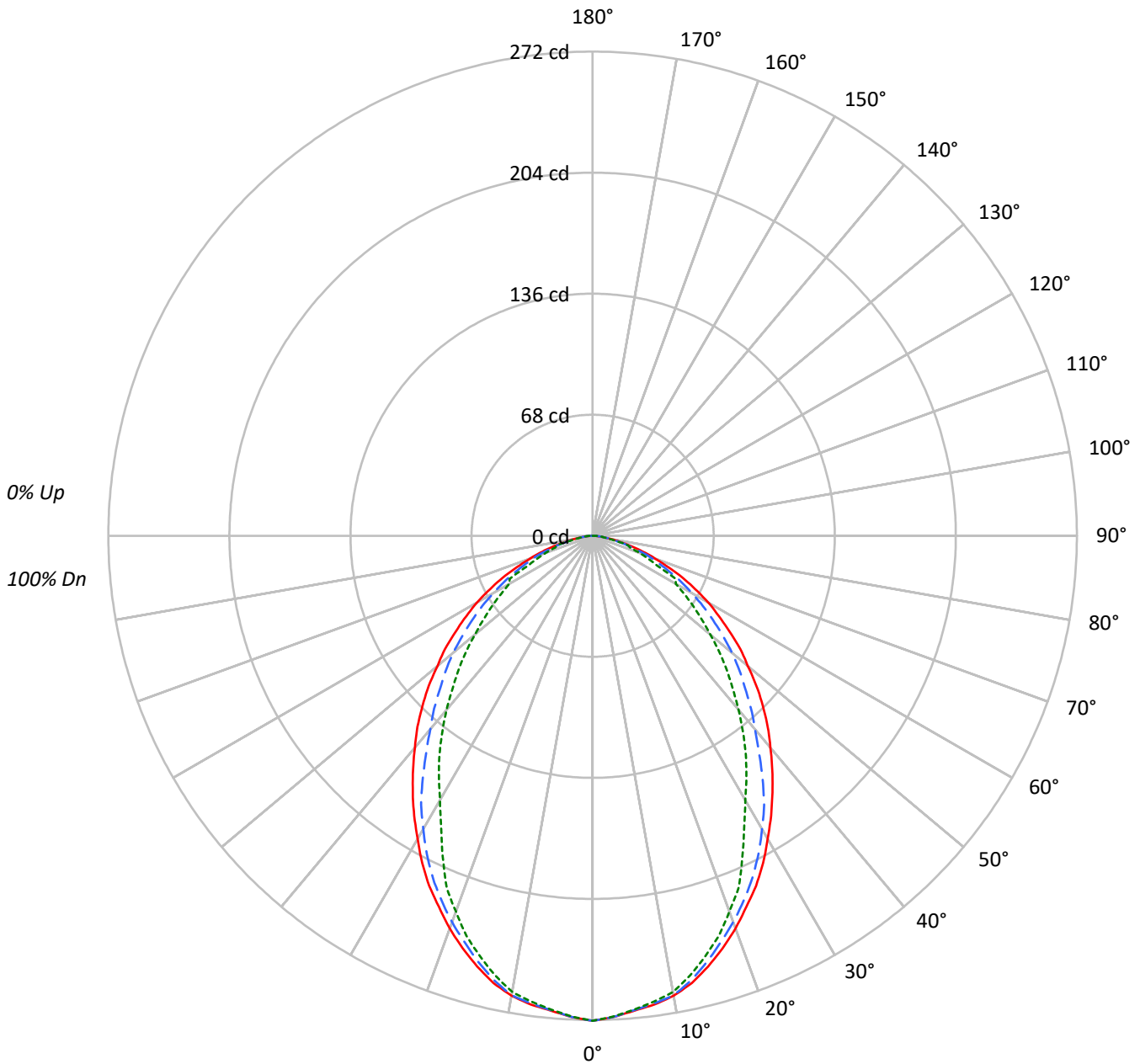
Lumens per Lamp: N/A
Luminaire Lumens: 535.0 lumens
Efficiency: N/A
Efficacy: 64.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 8.3
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

TEST NUMBER: P544907

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P544907

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-88-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					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				100				
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65				
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56				
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50				
6	74	62	53	47	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44				
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40				
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36				
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2933	2933	2933
5°	2894	2890	2887
10°	2868	2865	2844
15°	2791	2763	2725
20°	2688	2645	2573
25°	2578	2521	2365
30°	2444	2365	2130
35°	2314	2185	1971
40°	2182	1992	1793
45°	2058	1842	1621
50°	1904	1710	1445
55°	1762	1548	1295
60°	1615	1384	1160
65°	1421	1212	1026
70°	1171	1061	872
75°	932	811	853
80°	626	589	545
85°	395	469	543



TEST NUMBER: P544907

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.4	4.7
10°-20°	69.6	13.0
20°-30°	96.4	18.0
30°-40°	102.8	19.2
40°-50°	93.8	17.5
50°-60°	73.5	13.7
60°-70°	47.9	9.0
70°-80°	21.2	4.0
80°-90°	4.6	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°	191.4	35.8
0°-40°	294.1	55.0
0°-60°	461.3	86.2
0°-90°	535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	535.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	272	272	272	272	272	
5°	268	268	268	267	267	25
15°	250	250	248	245	244	70
25°	217	216	212	205	199	100
35°	176	175	166	154	150	110
45°	135	132	121	111	106	104
55°	94	91	82	73	69	84
65°	56	53	48	48	40	55
75°	22	21	20	19	20	24
85°	3	4	4	4	4	4
90°	0	0	0	0	0	



TEST NUMBER: P544907

CATALOG NUMBER: FMR-12-1-LD4-1STD-40-UNV-82-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	272.5	272.5	272.5	272.5	272.5
2.5°	270.6	270.6	270.6	270.3	270.3
5°	267.8	267.5	267.5	267.2	267.2
7.5°	265.6	265.3	265.0	264.6	264.0
10°	262.4	262.4	262.1	260.5	260.2
12.5°	257.4	257.1	255.8	253.6	253.0
15°	250.5	250.5	247.9	245.4	244.5
17.5°	242.9	242.6	239.4	236.9	235.7
20°	234.7	234.1	230.9	226.8	224.6
22.5°	225.6	225.6	221.8	216.4	214.2
25°	217.1	215.8	212.3	204.8	199.1
27.5°	207.3	205.4	201.6	190.9	184.3
30°	196.6	195.6	190.3	176.4	171.4
32.5°	186.5	184.9	179.3	164.8	160.7
35°	176.1	174.9	166.3	153.7	150.0
37.5°	165.7	164.1	153.4	143.3	138.6
40°	155.3	153.4	141.8	132.6	127.6
42.5°	145.6	143.0	131.7	121.9	116.3
45°	135.2	132.3	121.0	110.9	106.5
47.5°	124.8	122.2	111.8	101.4	96.4
50°	113.7	111.5	102.1	91.7	86.3
52.5°	104.6	101.1	92.0	81.6	77.2
55°	93.9	91.1	82.5	72.8	69.0
57.5°	84.1	81.3	73.4	64.3	61.1
60°	75.0	70.9	64.3	56.4	53.9
62.5°	64.9	61.8	56.1	49.5	52.6
65°	55.8	52.6	47.6	48.5	40.3
67.5°	45.7	44.1	39.7	35.3	34.0
70°	37.2	35.3	33.7	29.0	27.7
72.5°	29.6	27.7	25.5	23.0	22.1
75°	22.4	20.8	19.5	18.6	20.5
77.5°	15.4	14.8	13.9	12.9	12.6
80°	10.1	9.8	9.5	9.1	8.8
82.5°	6.0	6.0	6.0	6.0	6.0
85°	3.2	3.5	3.8	4.1	4.4
87.5°	1.9	1.9	2.2	2.5	2.8
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)