

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: P545507

Luminaire Tested: **FMR-12-2-LD4-1STD-50-UNV-81-88-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: P545507
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-LD4-1STD-50-UNV-81-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

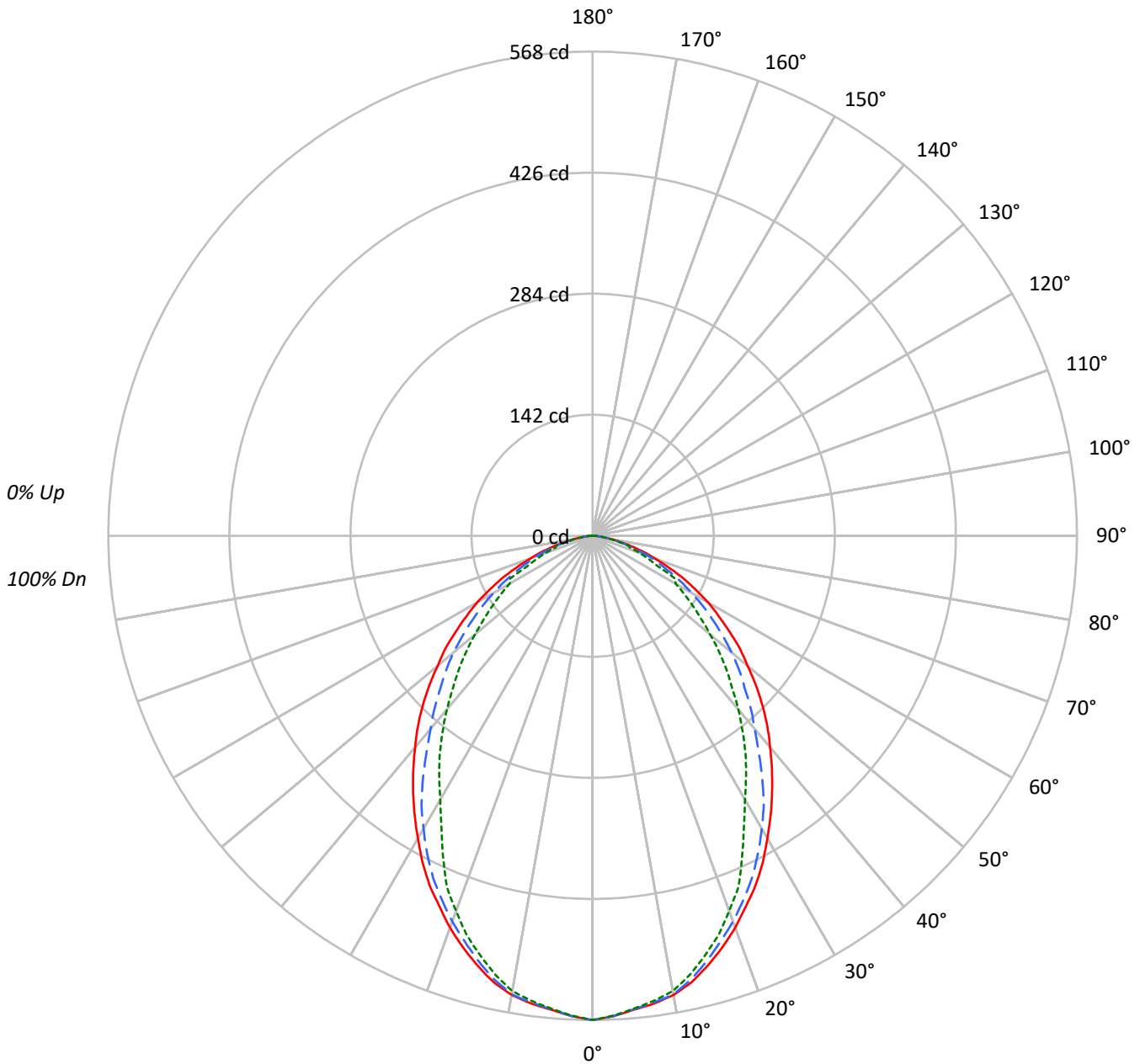
Lumens per Lamp: N/A
Luminaire Lumens: 1115.0 lumens
Efficiency: N/A
Efficacy: 67.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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: P545507

CATALOG NUMBER: FMR-12-2-LD4-1STD-50-UNV-81-88-EDD

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°	3057	3057	3057
5°	3015	3012	3008
10°	2989	2986	2964
15°	2908	2880	2839
20°	2802	2757	2682
25°	2687	2628	2464
30°	2546	2465	2220
35°	2411	2278	2053
40°	2274	2076	1868
45°	2144	1919	1689
50°	1984	1781	1506
55°	1836	1614	1349
60°	1682	1441	1209
65°	1480	1262	1070
70°	1220	1106	910
75°	969	846	888
80°	651	611	570
85°	408	488	568



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.9	4.7
10°-20°	145.1	13.0
20°-30°	200.9	18.0
30°-40°	214.2	19.2
40°-50°	195.4	17.5
50°-60°	153.1	13.7
60°-70°	99.8	8.9
70°-80°	44.2	4.0
80°-90°	9.5	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°	398.9	35.8
0°-40°	613.0	55.0
0°-60°	961.5	86.2
0°-90°	1115.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1115.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	568	568	568	568	568	
5°	558	558	558	557	557	53
15°	522	522	517	512	510	147
25°	452	450	443	427	415	208
35°	367	364	347	320	312	229
45°	282	276	252	231	222	217
55°	196	190	172	152	144	176
65°	116	110	99	101	84	115
75°	47	43	41	39	43	50
85°	7	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	568.0	568.0	568.0	568.0	568.0
2.5°	564.0	564.0	564.0	563.4	563.4
5°	558.1	557.5	557.5	556.8	556.8
7.5°	553.5	552.9	552.2	551.6	550.2
10°	547.0	547.0	546.3	543.0	542.4
12.5°	536.4	535.8	533.2	528.6	527.3
15°	522.0	522.0	516.8	511.5	509.5
17.5°	506.2	505.6	499.0	493.8	491.1
20°	489.2	487.9	481.3	472.8	468.2
22.5°	470.1	470.1	462.3	451.1	446.5
25°	452.4	449.8	442.6	426.8	415.0
27.5°	432.0	428.1	420.2	397.9	384.1
30°	409.7	407.8	396.6	367.7	357.2
32.5°	388.7	385.4	373.6	343.4	334.9
35°	367.0	364.4	346.7	320.4	312.5
37.5°	345.4	342.1	319.8	298.8	288.9
40°	323.7	319.8	295.5	276.4	265.9
42.5°	303.4	298.1	274.5	254.1	242.3
45°	281.7	275.8	252.1	231.1	221.9
47.5°	260.0	254.8	233.1	211.4	200.9
50°	237.0	232.4	212.7	191.1	179.9
52.5°	218.0	210.8	191.7	170.1	160.9
55°	195.7	189.8	172.0	151.7	143.8
57.5°	175.3	169.4	153.0	133.9	127.4
60°	156.3	147.7	133.9	117.5	112.3
62.5°	135.3	128.7	116.9	103.1	109.7
65°	116.2	109.7	99.1	101.1	84.0
67.5°	95.2	91.9	82.7	73.5	70.9
70°	77.5	73.5	70.3	60.4	57.8
72.5°	61.7	57.8	53.2	47.9	46.0
75°	46.6	43.3	40.7	38.7	42.7
77.5°	32.2	30.9	28.9	26.9	26.3
80°	21.0	20.4	19.7	19.0	18.4
82.5°	12.5	12.5	12.5	12.5	12.5
85°	6.6	7.2	7.9	8.5	9.2
87.5°	3.9	3.9	4.6	5.3	5.9
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)