

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: P545187

Luminaire Tested: **FMR-12-1-LD4-2STD-40-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: P545187
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-LD4-2STD-40-UNV-81-88-EDD
Description: 1X1 FMR TROFFER WITH .156 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

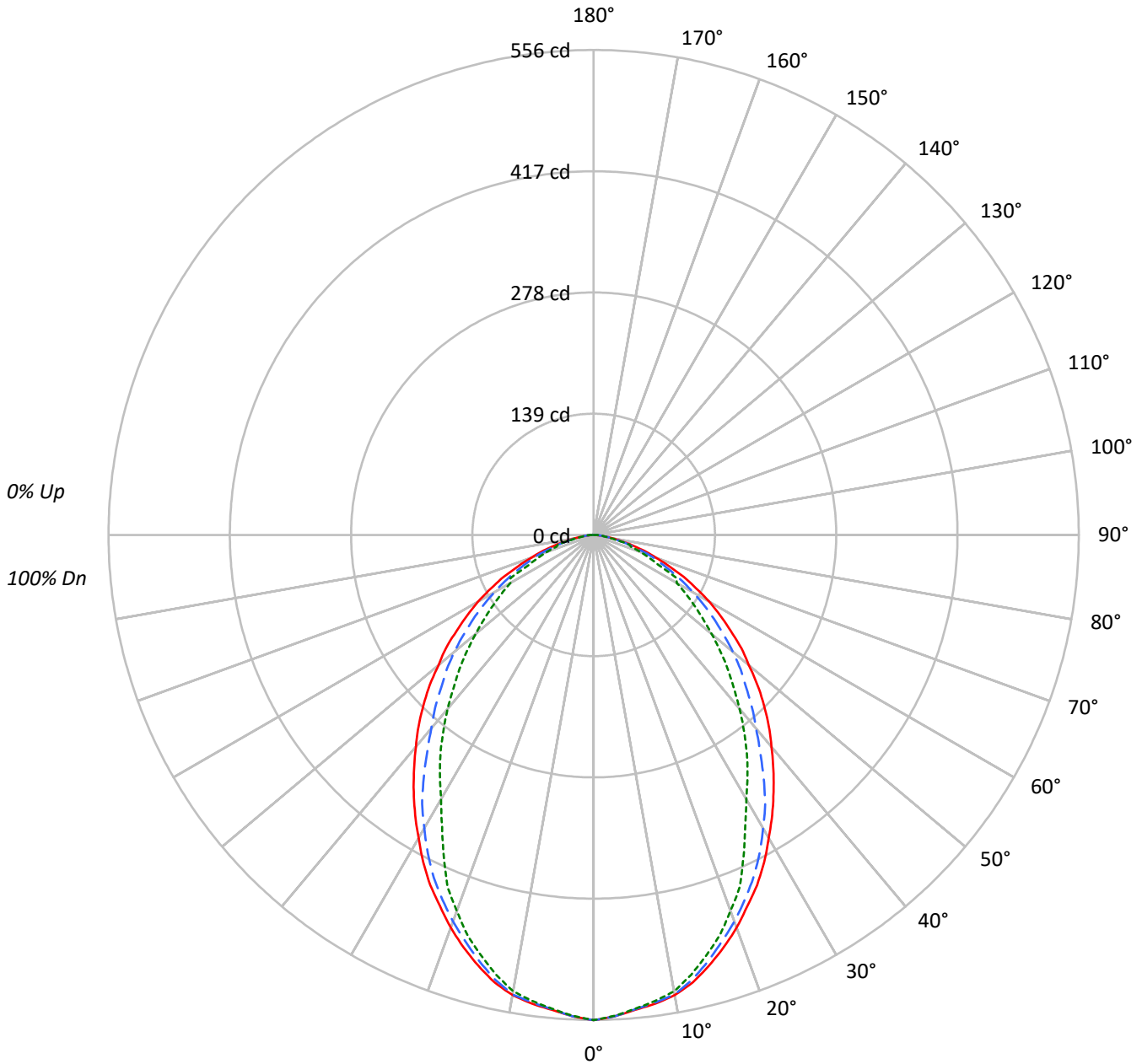
Lumens per Lamp: N/A
Luminaire Lumens: 1092.0 lumens
Efficiency: N/A
Efficacy: 65.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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

TEST NUMBER: P545187

CATALOG NUMBER: FMR-12-1-LD4-2STD-40-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°	5988	5988	5988
5°	5906	5900	5892
10°	5855	5848	5806
15°	5697	5640	5561
20°	5488	5400	5252
25°	5263	5147	4827
30°	4988	4827	4348
35°	4724	4461	4022
40°	4454	4066	3659
45°	4200	3758	3309
50°	3887	3490	2951
55°	3596	3162	2642
60°	3294	2824	2368
65°	2898	2473	2096
70°	2389	2165	1781
75°	1901	1659	1738
80°	1277	1196	1116
85°	790	951	1112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.8	4.7
10°-20°	142.1	13.0
20°-30°	196.7	18.0
30°-40°	209.8	19.2
40°-50°	191.4	17.5
50°-60°	149.9	13.7
60°-70°	97.7	8.9
70°-80°	43.3	4.0
80°-90°	9.3	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°	390.6	35.8
0°-40°	600.4	55.0
0°-60°	941.7	86.2
0°-90°	1092.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1092.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	556	556	556	556	556	
5°	547	546	546	545	545	52
15°	511	511	506	501	499	144
25°	443	440	433	418	406	203
35°	360	357	340	314	306	225
45°	276	270	247	226	217	213
55°	192	186	168	148	141	172
65°	114	107	97	99	82	112
75°	46	42	40	38	42	49
85°	6	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°	556.3	556.3	556.3	556.3	556.3
2.5°	552.4	552.4	552.4	551.7	551.7
5°	546.6	546.0	546.0	545.3	545.3
7.5°	542.1	541.5	540.8	540.2	538.9
10°	535.7	535.7	535.0	531.8	531.2
12.5°	525.4	524.7	522.2	517.7	516.4
15°	511.2	511.2	506.1	500.9	499.0
17.5°	495.8	495.2	488.7	483.6	481.0
20°	479.1	477.8	471.4	463.0	458.5
22.5°	460.4	460.4	452.7	441.8	437.3
25°	443.1	440.5	433.4	418.0	406.4
27.5°	423.1	419.3	411.6	389.7	376.2
30°	401.3	399.3	388.4	360.1	349.8
32.5°	380.7	377.5	365.9	336.3	328.0
35°	359.5	356.9	339.5	313.8	306.1
37.5°	338.3	335.0	313.2	292.6	282.9
40°	317.0	313.2	289.4	270.7	260.4
42.5°	297.1	292.0	268.8	248.9	237.3
45°	275.9	270.1	246.9	226.4	217.4
47.5°	254.7	249.5	228.3	207.1	196.8
50°	232.1	227.6	208.4	187.1	176.2
52.5°	213.5	206.4	187.8	166.6	157.6
55°	191.6	185.8	168.5	148.5	140.8
57.5°	171.7	165.9	149.8	131.2	124.8
60°	153.0	144.7	131.2	115.1	110.0
62.5°	132.5	126.0	114.5	101.0	107.4
65°	113.8	107.4	97.1	99.0	82.3
67.5°	93.2	90.0	81.0	72.0	69.5
70°	75.9	72.0	68.8	59.2	56.6
72.5°	60.4	56.6	52.1	46.9	45.0
75°	45.7	42.4	39.9	37.9	41.8
77.5°	31.5	30.2	28.3	26.4	25.7
80°	20.6	19.9	19.3	18.6	18.0
82.5°	12.2	12.2	12.2	12.2	12.2
85°	6.4	7.1	7.7	8.4	9.0
87.5°	3.9	3.9	4.5	5.1	5.8
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)