

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: P545061

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-81-96-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: P545061
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-LD4-2LO-35-UNV-81-96-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

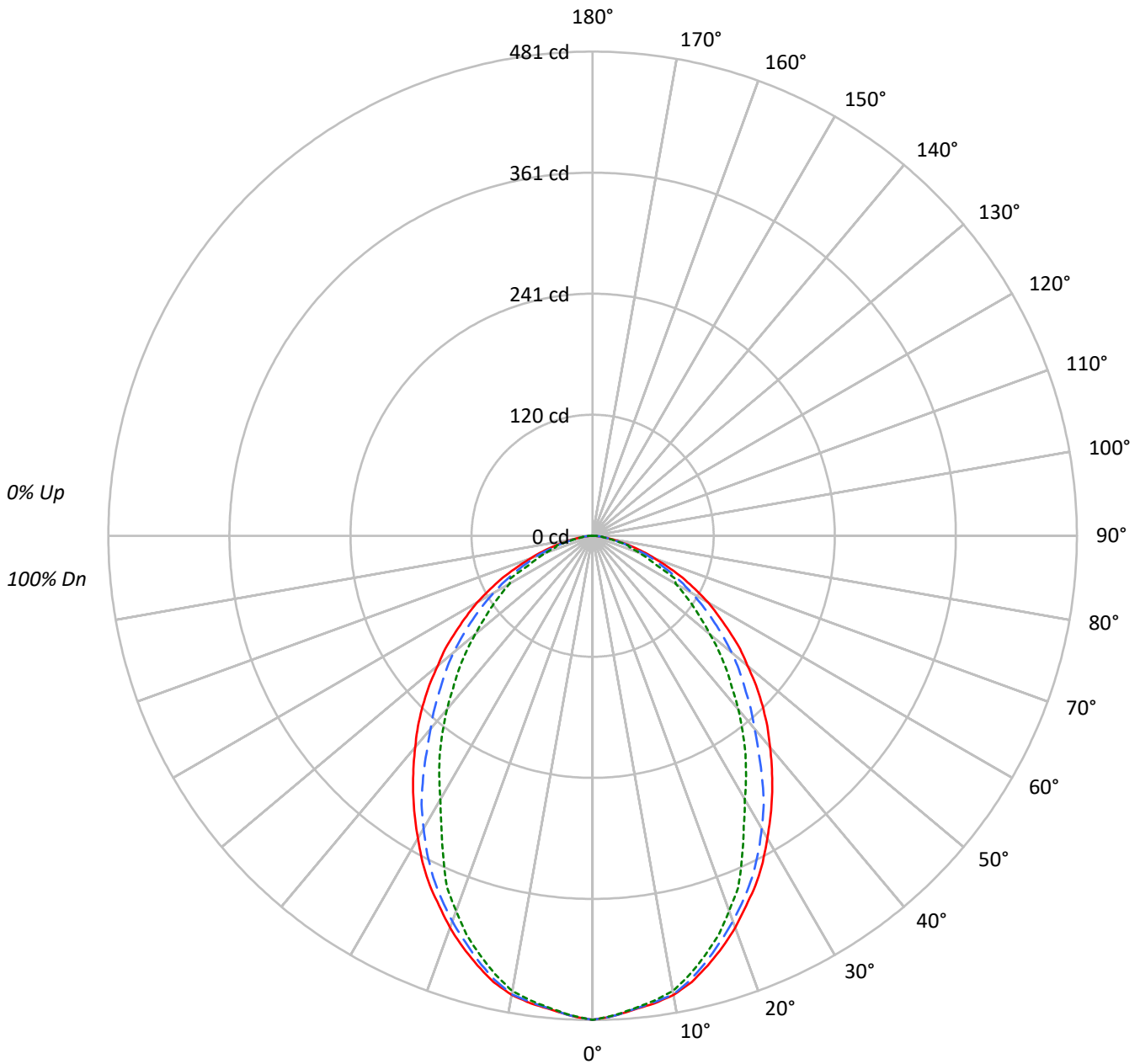
Lumens per Lamp: N/A
Luminaire Lumens: 944.0 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	5176	5176	5176
5°	5105	5100	5093
10°	5062	5055	5019
15°	4924	4875	4807
20°	4745	4668	4541
25°	4549	4450	4172
30°	4312	4174	3759
35°	4084	3857	3477
40°	3851	3516	3163
45°	3631	3250	2860
50°	3361	3016	2550
55°	3110	2732	2284
60°	2848	2441	2047
65°	2506	2137	1813
70°	2065	1873	1539
75°	1643	1435	1501
80°	1103	1035	967
85°	692	827	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.8	4.7
10°-20°	122.8	13.0
20°-30°	170.1	18.0
30°-40°	181.3	19.2
40°-50°	165.4	17.5
50°-60°	129.6	13.7
60°-70°	84.5	8.9
70°-80°	37.4	4.0
80°-90°	8.0	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°	337.7	35.8
0°-40°	519.0	55.0
0°-60°	814.1	86.2
0°-90°	944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	481	481	481	481	481	
5°	472	472	472	471	471	45
15°	442	442	438	433	431	124
25°	383	381	375	361	351	176
35°	311	308	294	271	265	194
45°	238	234	214	196	188	184
55°	166	161	146	128	122	149
65°	98	93	84	86	71	97
75°	40	37	34	33	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	480.9	480.9	480.9	480.9	480.9
2.5°	477.5	477.5	477.5	477.0	477.0
5°	472.5	472.0	472.0	471.4	471.4
7.5°	468.6	468.1	467.5	467.0	465.9
10°	463.1	463.1	462.5	459.7	459.2
12.5°	454.2	453.6	451.4	447.5	446.4
15°	441.9	441.9	437.5	433.1	431.4
17.5°	428.6	428.0	422.5	418.0	415.8
20°	414.2	413.0	407.5	400.3	396.4
22.5°	398.0	398.0	391.4	381.9	378.0
25°	383.0	380.8	374.7	361.3	351.3
27.5°	365.8	362.5	355.8	336.9	325.2
30°	346.9	345.2	335.8	311.3	302.4
32.5°	329.1	326.3	316.3	290.7	283.5
35°	310.8	308.5	293.5	271.3	264.6
37.5°	292.4	289.6	270.7	252.9	244.6
40°	274.1	270.7	250.2	234.0	225.1
42.5°	256.8	252.4	232.4	215.1	205.1
45°	238.5	233.5	213.5	195.7	187.9
47.5°	220.1	215.7	197.3	179.0	170.1
50°	200.7	196.8	180.1	161.8	152.3
52.5°	184.6	178.4	162.3	144.0	136.2
55°	165.7	160.7	145.6	128.4	121.7
57.5°	148.4	143.4	129.5	113.4	107.8
60°	132.3	125.1	113.4	99.5	95.1
62.5°	114.5	109.0	99.0	87.3	92.8
65°	98.4	92.8	83.9	85.6	71.2
67.5°	80.6	77.8	70.0	62.3	60.0
70°	65.6	62.3	59.5	51.1	48.9
72.5°	52.3	48.9	45.0	40.6	38.9
75°	39.5	36.7	34.5	32.8	36.1
77.5°	27.2	26.1	24.5	22.8	22.2
80°	17.8	17.2	16.7	16.1	15.6
82.5°	10.6	10.6	10.6	10.6	10.6
85°	5.6	6.1	6.7	7.2	7.8
87.5°	3.3	3.3	3.9	4.4	5.0
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)