

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: P545157

Luminaire Tested: **FMR-12-1-LD4-2STD-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: P545157
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-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

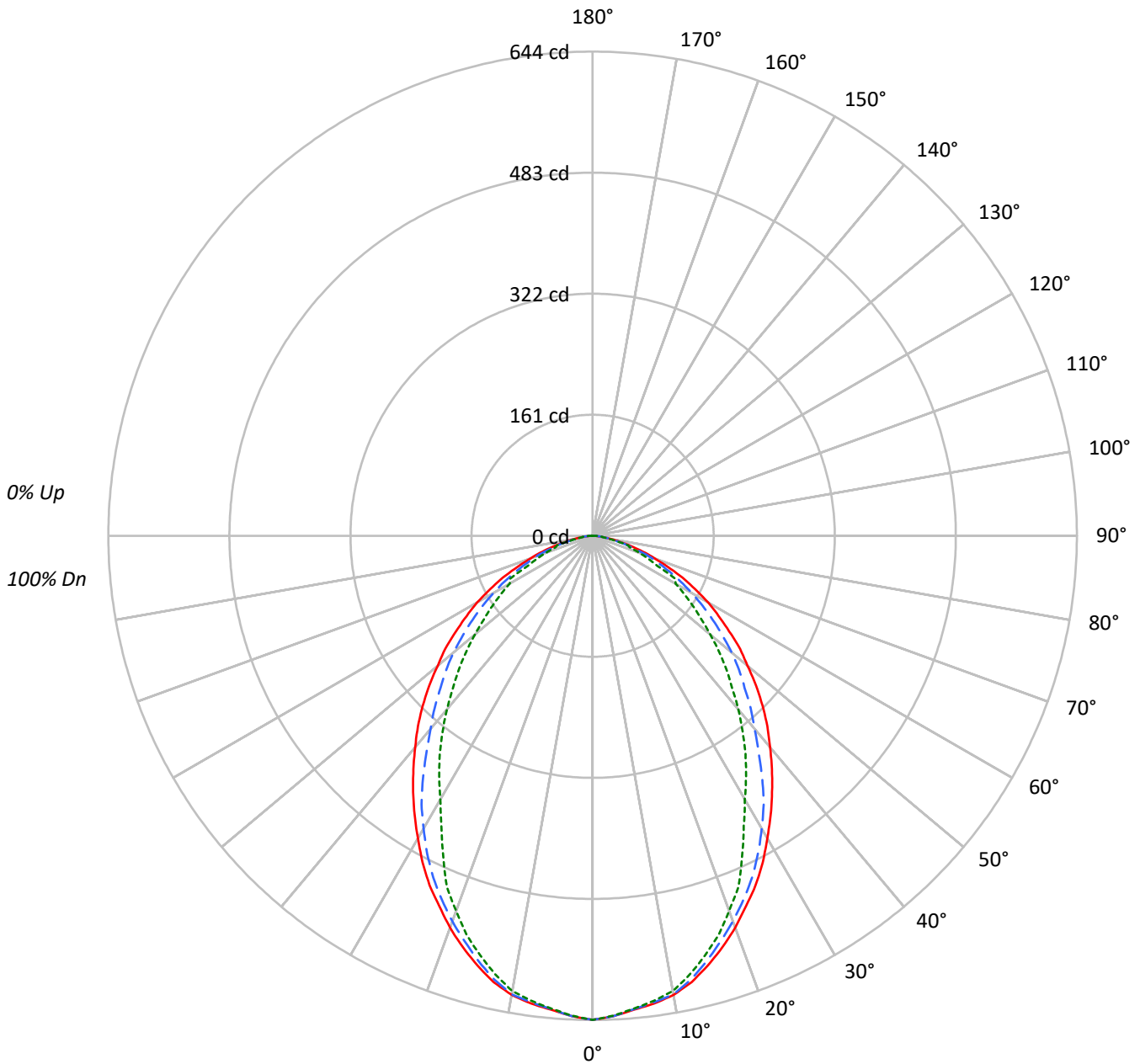
Lumens per Lamp: N/A
Luminaire Lumens: 1264.0 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (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				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			
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°	6931	6931	6931
5°	6836	6829	6820
10°	6777	6769	6720
15°	6595	6528	6437
20°	6352	6250	6079
25°	6092	5959	5587
30°	5773	5588	5033
35°	5468	5164	4656
40°	5157	4707	4236
45°	4861	4351	3830
50°	4500	4039	3416
55°	4162	3659	3059
60°	3815	3268	2740
65°	3357	2863	2427
70°	2763	2505	2061
75°	2196	1917	2013
80°	1475	1382	1289
85°	914	1099	1284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.9	4.7
10°-20°	164.5	13.0
20°-30°	227.7	18.0
30°-40°	242.8	19.2
40°-50°	221.5	17.5
50°-60°	173.5	13.7
60°-70°	113.1	8.9
70°-80°	50.1	4.0
80°-90°	10.8	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°	452.1	35.8
0°-40°	695.0	55.0
0°-60°	1090.0	86.2
0°-90°	1264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1264.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	644	644	644	644	644	
5°	633	632	632	631	631	60
15°	592	592	586	580	578	166
25°	513	510	502	484	470	235
35°	416	413	393	363	354	260
45°	319	313	286	262	252	246
55°	222	215	195	172	163	199
65°	132	124	112	115	95	130
75°	53	49	46	44	48	57
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	643.9	643.9	643.9	643.9	643.9
2.5°	639.4	639.4	639.4	638.7	638.7
5°	632.7	632.0	632.0	631.2	631.2
7.5°	627.5	626.7	626.0	625.3	623.8
10°	620.0	620.0	619.3	615.6	614.8
12.5°	608.1	607.4	604.4	599.2	597.7
15°	591.8	591.8	585.8	579.9	577.6
17.5°	573.9	573.2	565.7	559.8	556.8
20°	554.5	553.1	545.6	535.9	530.7
22.5°	533.0	533.0	524.0	511.4	506.2
25°	512.9	509.9	501.7	483.8	470.4
27.5°	489.8	485.3	476.4	451.1	435.4
30°	464.5	462.2	449.6	416.8	404.9
32.5°	440.7	436.9	423.5	389.3	379.6
35°	416.1	413.1	393.0	363.2	354.3
37.5°	391.5	387.8	362.5	338.7	327.5
40°	367.0	362.5	335.0	313.4	301.5
42.5°	343.9	337.9	311.1	288.1	274.7
45°	319.3	312.6	285.8	262.0	251.6
47.5°	294.8	288.8	264.2	239.7	227.8
50°	268.7	263.5	241.2	216.6	204.0
52.5°	247.1	238.9	217.4	192.8	182.4
55°	221.8	215.1	195.0	171.9	163.0
57.5°	198.7	192.0	173.4	151.8	144.4
60°	177.2	167.5	151.8	133.2	127.3
62.5°	153.3	145.9	132.5	116.9	124.3
65°	131.8	124.3	112.4	114.6	95.3
67.5°	107.9	104.2	93.8	83.4	80.4
70°	87.8	83.4	79.6	68.5	65.5
72.5°	70.0	65.5	60.3	54.3	52.1
75°	52.8	49.1	46.1	43.9	48.4
77.5°	36.5	35.0	32.8	30.5	29.8
80°	23.8	23.1	22.3	21.6	20.8
82.5°	14.1	14.1	14.1	14.1	14.1
85°	7.4	8.2	8.9	9.7	10.4
87.5°	4.5	4.5	5.2	6.0	6.7
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)