

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: P545197

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-82-96-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: P545197
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-82-96-EDD
Description: 1X1 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

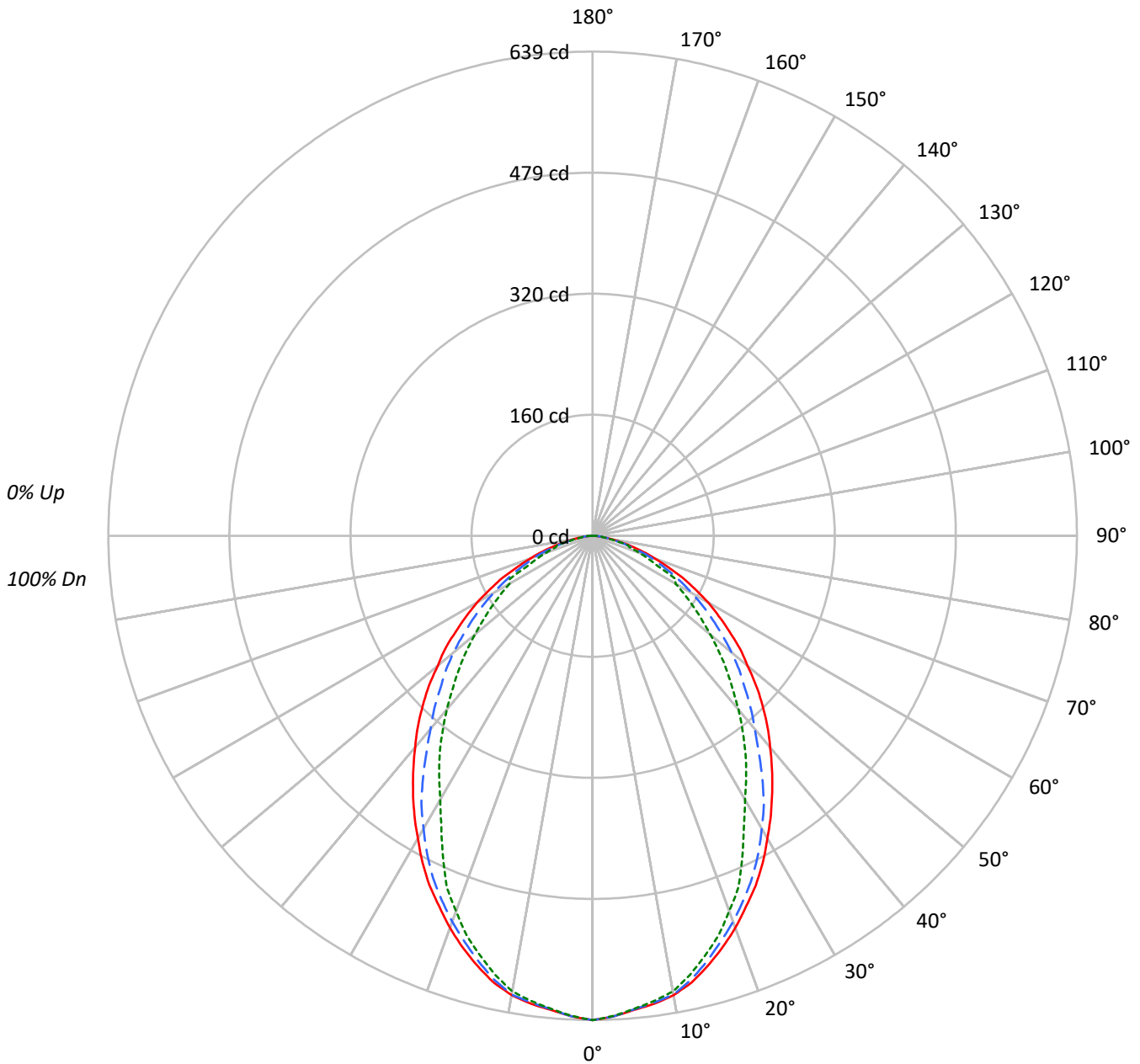
Lumens per Lamp: N/A
Luminaire Lumens: 1255.0 lumens
Efficiency: N/A
Efficacy: 75.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6881	6881	6881
5°	6788	6780	6772
10°	6728	6721	6673
15°	6547	6481	6391
20°	6307	6205	6035
25°	6048	5916	5548
30°	5732	5548	4996
35°	5428	5127	4623
40°	5120	4673	4206
45°	4827	4320	3803
50°	4468	4011	3391
55°	4132	3633	3038
60°	3787	3246	2721
65°	3331	2842	2409
70°	2744	2489	2046
75°	2183	1905	1996
80°	1463	1376	1283
85°	914	1099	1272



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	4.7
10°-20°	163.3	13.0
20°-30°	226.1	18.0
30°-40°	241.1	19.2
40°-50°	219.9	17.5
50°-60°	172.3	13.7
60°-70°	112.3	8.9
70°-80°	49.8	4.0
80°-90°	10.7	0.8
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°	448.9	35.8
0°-40°	690.0	55.0
0°-60°	1082.3	86.2
0°-90°	1255.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1255.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	639	639	639	639	639	
5°	628	628	628	627	627	60
15°	588	588	582	576	574	165
25°	509	506	498	480	467	234
35°	413	410	390	361	352	258
45°	317	310	284	260	250	244
55°	220	214	194	171	162	198
65°	131	123	112	114	95	129
75°	52	49	46	44	48	56
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°	639.3	639.3	639.3	639.3	639.3
2.5°	634.8	634.8	634.8	634.1	634.1
5°	628.2	627.5	627.5	626.7	626.7
7.5°	623.0	622.3	621.5	620.8	619.3
10°	615.6	615.6	614.9	611.2	610.5
12.5°	603.8	603.1	600.1	594.9	593.5
15°	587.5	587.5	581.6	575.7	573.5
17.5°	569.8	569.1	561.7	555.8	552.8
20°	550.6	549.1	541.7	532.1	526.9
22.5°	529.2	529.2	520.3	507.7	502.6
25°	509.2	506.3	498.1	480.4	467.1
27.5°	486.3	481.9	473.0	447.9	432.3
30°	461.2	459.0	446.4	413.9	402.0
32.5°	437.5	433.8	420.5	386.5	376.9
35°	413.1	410.2	390.2	360.7	351.8
37.5°	388.7	385.0	359.9	336.3	325.2
40°	364.4	359.9	332.6	311.1	299.3
42.5°	341.4	335.5	308.9	286.0	272.7
45°	317.1	310.4	283.8	260.1	249.8
47.5°	292.7	286.8	262.4	238.0	226.2
50°	266.8	261.6	239.5	215.1	202.5
52.5°	245.4	237.2	215.8	191.4	181.1
55°	220.2	213.6	193.6	170.7	161.9
57.5°	197.3	190.7	172.2	150.8	143.4
60°	175.9	166.3	150.8	132.3	126.4
62.5°	152.2	144.9	131.6	116.0	123.4
65°	130.8	123.4	111.6	113.8	94.6
67.5°	107.2	103.5	93.1	82.8	79.8
70°	87.2	82.8	79.1	68.0	65.0
72.5°	69.5	65.0	59.9	54.0	51.7
75°	52.5	48.8	45.8	43.6	48.0
77.5°	36.2	34.7	32.5	30.3	29.6
80°	23.6	22.9	22.2	21.4	20.7
82.5°	14.0	14.0	14.0	14.0	14.0
85°	7.4	8.1	8.9	9.6	10.3
87.5°	4.4	4.4	5.2	5.9	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)