

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: P545453

Luminaire Tested: **FMR-12-2-LD4-1STD-35-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: P545453
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-35-UNV-82-96-EDD
Description: 1X2 FMR TROFFER WITH .187 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

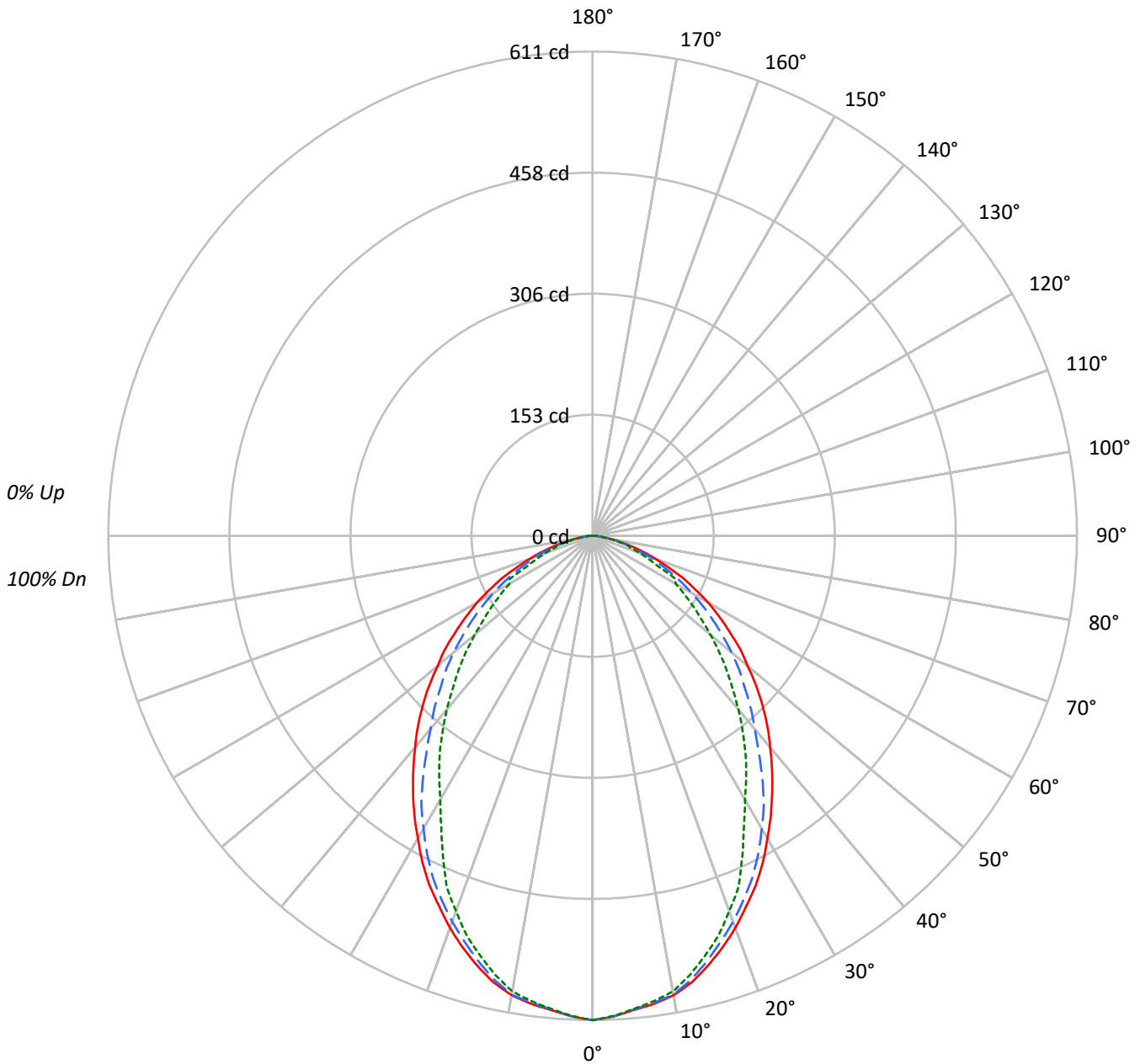
Lumens per Lamp: N/A
Luminaire Lumens: 1200.0 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	3290	3290	3290
5°	3245	3242	3238
10°	3217	3213	3190
15°	3130	3098	3056
20°	3015	2967	2886
25°	2891	2828	2652
30°	2741	2652	2389
35°	2595	2451	2210
40°	2448	2234	2011
45°	2308	2066	1818
50°	2136	1917	1621
55°	1976	1737	1453
60°	1810	1552	1300
65°	1593	1359	1152
70°	1312	1190	979
75°	1044	911	954
80°	700	657	614
85°	438	525	611



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.9	4.7
10°-20°	156.2	13.0
20°-30°	216.2	18.0
30°-40°	230.5	19.2
40°-50°	210.3	17.5
50°-60°	164.8	13.7
60°-70°	107.4	8.9
70°-80°	47.6	4.0
80°-90°	10.2	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°	429.3	35.8
0°-40°	659.8	55.0
0°-60°	1034.8	86.2
0°-90°	1200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1200.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	611	611	611	611	611	
5°	601	600	600	599	599	57
15°	562	562	556	550	548	158
25°	487	484	476	459	447	224
35°	395	392	373	345	336	247
45°	303	297	271	249	239	234
55°	211	204	185	163	155	189
65°	125	118	107	109	90	123
75°	50	47	44	42	46	54
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	611.3	611.3	611.3	611.3	611.3
2.5°	607.0	607.0	607.0	606.3	606.3
5°	600.7	600.0	600.0	599.3	599.3
7.5°	595.7	595.0	594.3	593.6	592.2
10°	588.7	588.7	587.9	584.4	583.7
12.5°	577.3	576.6	573.8	568.9	567.5
15°	561.8	561.8	556.1	550.5	548.4
17.5°	544.8	544.1	537.1	531.4	528.6
20°	526.5	525.1	518.0	508.8	503.9
22.5°	506.0	506.0	497.5	485.5	480.5
25°	486.9	484.1	476.3	459.3	446.6
27.5°	465.0	460.7	452.3	428.2	413.4
30°	441.0	438.8	426.8	395.7	384.4
32.5°	418.3	414.8	402.1	369.6	360.4
35°	395.0	392.2	373.1	344.9	336.4
37.5°	371.7	368.2	344.1	321.5	310.9
40°	348.4	344.1	318.0	297.5	286.2
42.5°	326.5	320.8	295.4	273.5	260.8
45°	303.2	296.8	271.4	248.7	238.9
47.5°	279.8	274.2	250.9	227.5	216.2
50°	255.1	250.2	229.0	205.6	193.6
52.5°	234.6	226.8	206.3	183.0	173.1
55°	210.6	204.2	185.1	163.2	154.8
57.5°	188.7	182.3	164.7	144.2	137.1
60°	168.2	159.0	144.2	126.5	120.8
62.5°	145.6	138.5	125.8	110.9	118.0
65°	125.1	118.0	106.7	108.8	90.5
67.5°	102.5	98.9	89.0	79.1	76.3
70°	83.4	79.1	75.6	65.0	62.2
72.5°	66.4	62.2	57.2	51.6	49.5
75°	50.2	46.6	43.8	41.7	45.9
77.5°	34.6	33.2	31.1	29.0	28.3
80°	22.6	21.9	21.2	20.5	19.8
82.5°	13.4	13.4	13.4	13.4	13.4
85°	7.1	7.8	8.5	9.2	9.9
87.5°	4.2	4.2	4.9	5.7	6.4
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)