



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
Eaton Lighting Division
(formerly Cooper Lighting)

Brand: FAIL-SAFE

Report Number: 4110.1

Luminaire Tested: **FWW-240**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Eaton or from external interests.



Test Information

Test Method: LM-79-08
Report Number: 4110.1
Test Lab:
Issue Date: 3/3/2020
Manufacturer: EATON (FORMERLY COOPER LIGHTING)
Product Line: FAIL-SAFE
Catalog Number: FWW-240
Description: FAIL-SAFE ASYMM WALL MT 2/40 W/WRAP LENS
Light Source: F40T12RS/WW 3200 LUMENS
Ballast/Driver: -

Luminaire Equipment:	<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
	a	good	reflector
	b	good	lens
	c	good	housing
	d	good	cord

Summary

Lumens per Lamp: 3200 (2 lamps)
Luminaire Lumens: 3118.8 lumens
Efficiency: 48.7%
Efficacy: 37.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 3.95' x L: 0.23' x H: 0.43')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U4 - G3

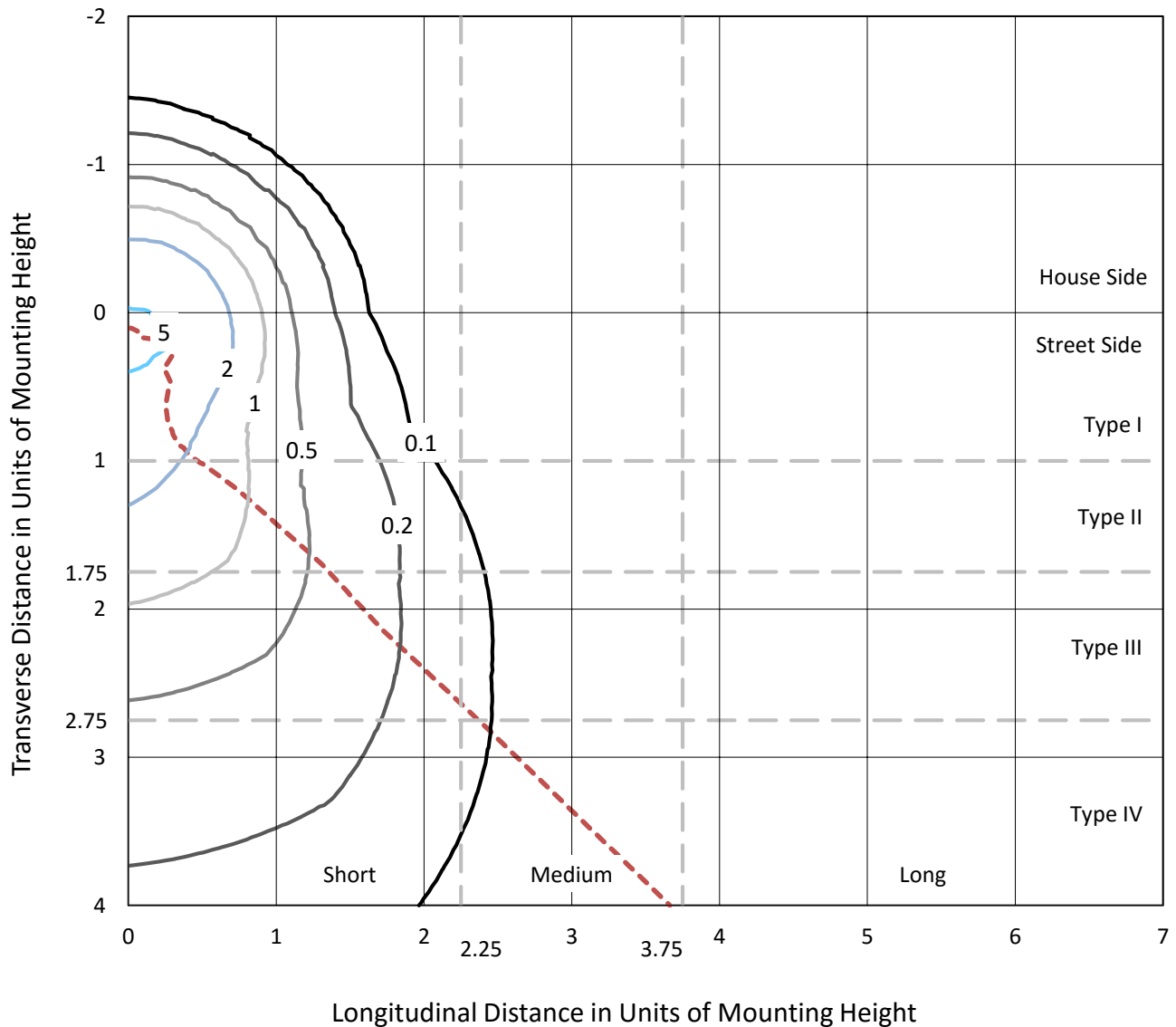
Input Watts (W): 84
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: 4110.1
 CATALOG NUMBER: FWW-240

Iso-Footcandle Lines of Horizontal Illumination

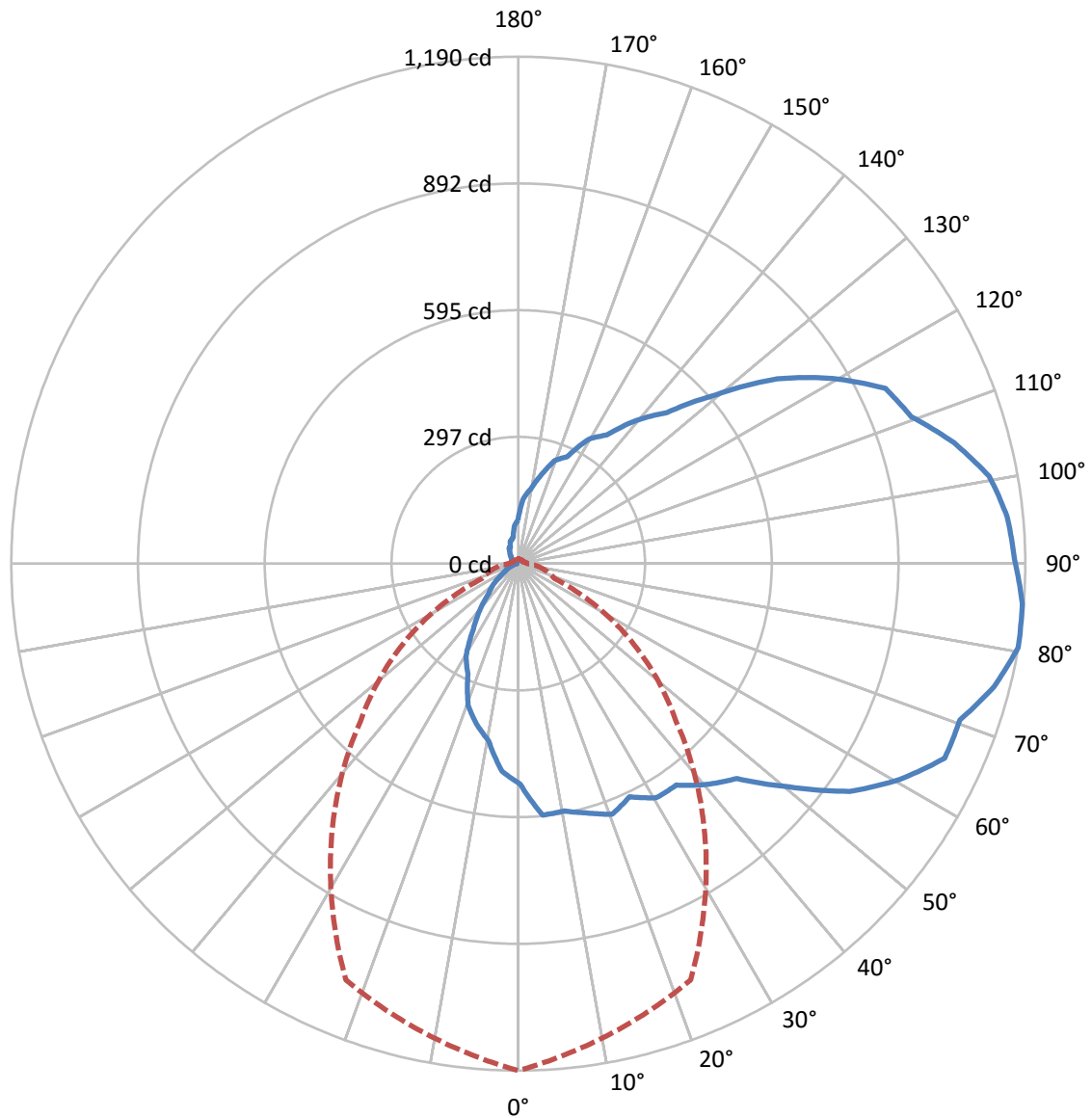
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: 4110.1
CATALOG NUMBER: FWW-240

Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 80-Deg Vertical



REPORT NUMBER: 4110.1
 CATALOG NUMBER: FWW-240

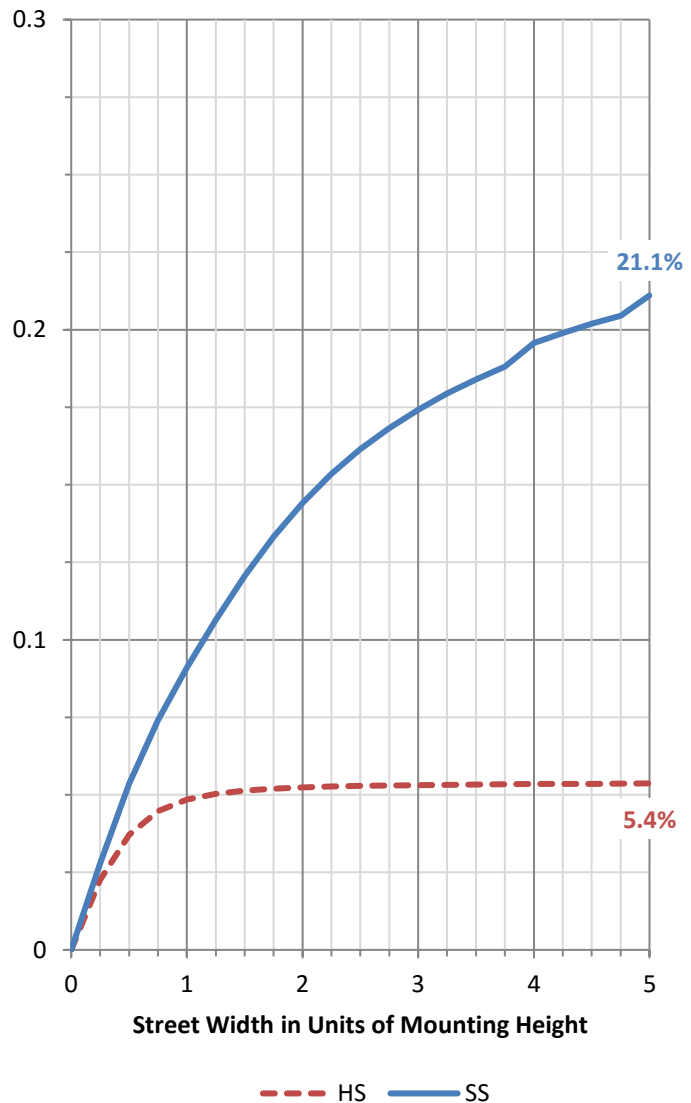
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	348.3	67.5	415.8
	% Lamp	5.4	1.1	6.5
Street Side	Lumens	1601.2	1101.8	2703.0
	% Lamp	25.0	17.2	42.2
Total	Lumens	1949.5	1169.3	3118.8
	% Lamp	30.5	18.3	48.7

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	49.9	1.6	0.8
10°-20°	141.3	4.5	2.2
20°-30°	207.6	6.7	3.2
30°-40°	229.7	7.4	3.6
40°-50°	214.9	6.9	3.4
50°-60°	229.3	7.4	3.6
60°-70°	265.0	8.5	4.1
70°-80°	297.4	9.5	4.6
80°-90°	314.5	10.1	4.9
90°-100°	286.3	9.2	4.5
100°-110°	244.5	7.8	3.8
110°-120°	198.4	6.4	3.1
120°-130°	144.8	4.6	2.3
130°-140°	103.9	3.3	1.6
140°-150°	85.4	2.7	1.3
150°-160°	60.9	2.0	1.0
160°-170°	34.4	1.1	0.5
170°-180°	10.7	0.3	0.2
0°-90°	1949.5	62.5	30.5
0°-180°	3118.8	100.0	48.7



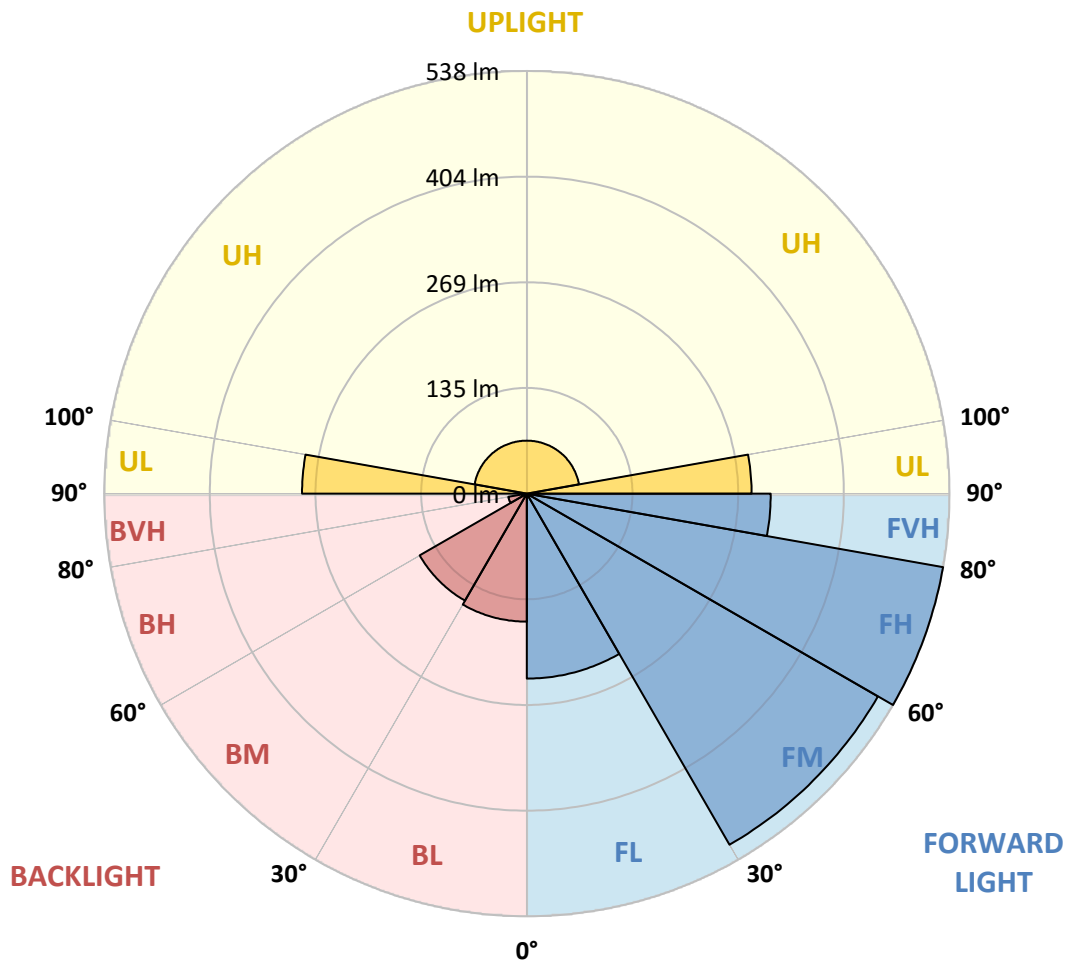


REPORT NUMBER: 4110.1
 CATALOG NUMBER: FWW-240

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	235.6	3.7			
FM	(30°-60°)	516.4	8.1			
FH	(60°-80°)	538.5	8.4			G0/660
FVH	(80°-90°)	310.7	4.9			G3/500
BL	(0°-30°)	163.1	2.5	B1/500		
BM	(30°-60°)	157.5	2.5	B0/220		
BH	(60°-80°)	23.8	0.4	B0/110		G0/110
BVH	(80°-90°)	3.8	0.1			G0/10
UL	(90°-100°)	286.3	4.5		U3/500	
UH	(100°-180°)	67.5	1.1		U3/500	
Trapped Light		3281.2	51.3			

BUG Rating: B1-U4-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	517.5	517.5	517.5	517.5	517.5	517.5	517.5	517.5	517.5
5°	593.0	585.4	573.8	554.5	536.3	519.6	504.1	492.4	488.8
10°	590.4	582.1	567.5	539.0	501.2	468.9	444.6	427.3	421.7
15°	607.3	601.5	585.0	550.8	498.5	452.0	419.3	397.0	389.4
20°	628.3	617.4	596.9	551.6	485.8	431.0	390.2	362.0	352.7
25°	606.5	588.6	559.1	511.4	435.6	372.0	327.9	296.1	285.1
30°	637.8	601.9	547.7	498.2	411.3	344.5	293.2	260.3	248.9
35°	638.6	573.2	463.6	424.1	339.1	272.1	222.0	194.6	185.6
40°	681.5	571.0	404.0	347.5	276.3	216.3	172.4	153.9	142.8
45°	719.3	572.3	342.3	255.7	193.1	151.8	117.2	103.5	99.9
50°	823.5	646.0	337.7	205.9	143.6	112.7	83.8	76.5	78.9
55°	943.7	753.0	343.8	161.8	94.3	73.8	57.4	51.1	55.3
60°	1028.9	852.3	360.8	129.1	58.7	47.4	36.2	34.2	36.2
65°	1100.2	949.2	401.0	118.6	43.1	36.1	25.0	26.9	28.7
70°	1099.4	969.1	432.0	106.8	29.9	25.1	18.7	18.7	18.7
75°	1153.4	1025.9	480.9	97.0	25.8	14.9	13.4	11.8	11.8
80°	1189.9	1057.4	524.5	92.5	21.3	11.4	11.4	9.9	11.4
85°	1186.7	1059.2	544.3	90.6	14.2	5.5	5.5	7.0	8.4
90°	1164.9	1039.1	535.3	84.7	1.4	0.0	1.4	1.4	2.9
95°	1152.8	982.6	431.0	85.1	0.0	0.0	0.0	1.5	4.1
100°	1124.2	949.1	390.5	78.2	2.9	2.9	1.5	2.9	4.1
105°	1061.3	886.6	338.5	74.6	3.1	1.6	3.1	4.7	6.2
110°	984.6	811.9	292.1	78.5	7.7	6.1	6.1	7.7	9.3
115°	954.8	756.7	264.4	82.1	12.5	8.8	7.0	10.7	12.5
120°	856.2	639.6	227.9	81.7	17.1	11.3	9.3	11.3	13.2
125°	747.1	546.7	204.2	88.0	26.4	16.4	12.2	14.3	18.4
130°	610.3	445.1	186.8	98.0	38.2	21.6	16.7	19.1	21.6
135°	496.4	368.5	175.4	110.6	47.5	30.2	21.8	21.8	23.5
140°	436.0	338.2	197.0	140.8	67.7	40.8	30.0	28.1	30.0
145°	366.2	307.0	215.8	153.5	77.5	50.1	36.4	33.3	33.3
150°	335.8	294.4	233.2	169.4	92.4	63.8	44.0	42.6	42.6
155°	275.7	248.8	209.2	153.7	87.2	61.9	46.1	42.8	42.8
160°	256.7	241.3	206.7	159.8	100.1	76.7	59.4	56.5	54.9
165°	214.9	202.9	179.1	143.0	98.4	78.9	64.2	58.1	58.1
170°	177.7	168.4	149.6	125.3	95.5	83.4	71.2	66.0	64.6
175°	153.4	148.1	136.5	123.6	110.6	103.0	95.3	91.4	90.0
180°	101.6	100.2	100.2	98.8	100.2	103.0	101.6	103.0	101.6

(END OF REPORT)