



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: BALLABS TEST NO. 9085.0

Luminaire Tested: **FWE-232-120-82-EB81**

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: BALLABS TEST NO. 9085.0
Test Lab:
Issue Date: 3/3/2020
Manufacturer: EATON (FORMERLY COOPER LIGHTING)
Product Line: FAIL-SAFE
Catalog Number: FWE-232-120-82-EB81
Description: 2/32W T8 LAMP 4'CEILING MOUNT LUMINAIRE
Light Source: -
F32T8/735/R
Ballast/Driver: LUMEN ELECTRONIC BALLAST #LM-32D120

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: 2850 (2 lamps)
Luminaire Lumens: 3090.3 lumens
Efficiency: 54.2%
Efficacy: 53.3 lumens/watt
Luminous Opening: Rectangular (W 0.21' x L: 3.94' x H: 0')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B1 - U3 - G2

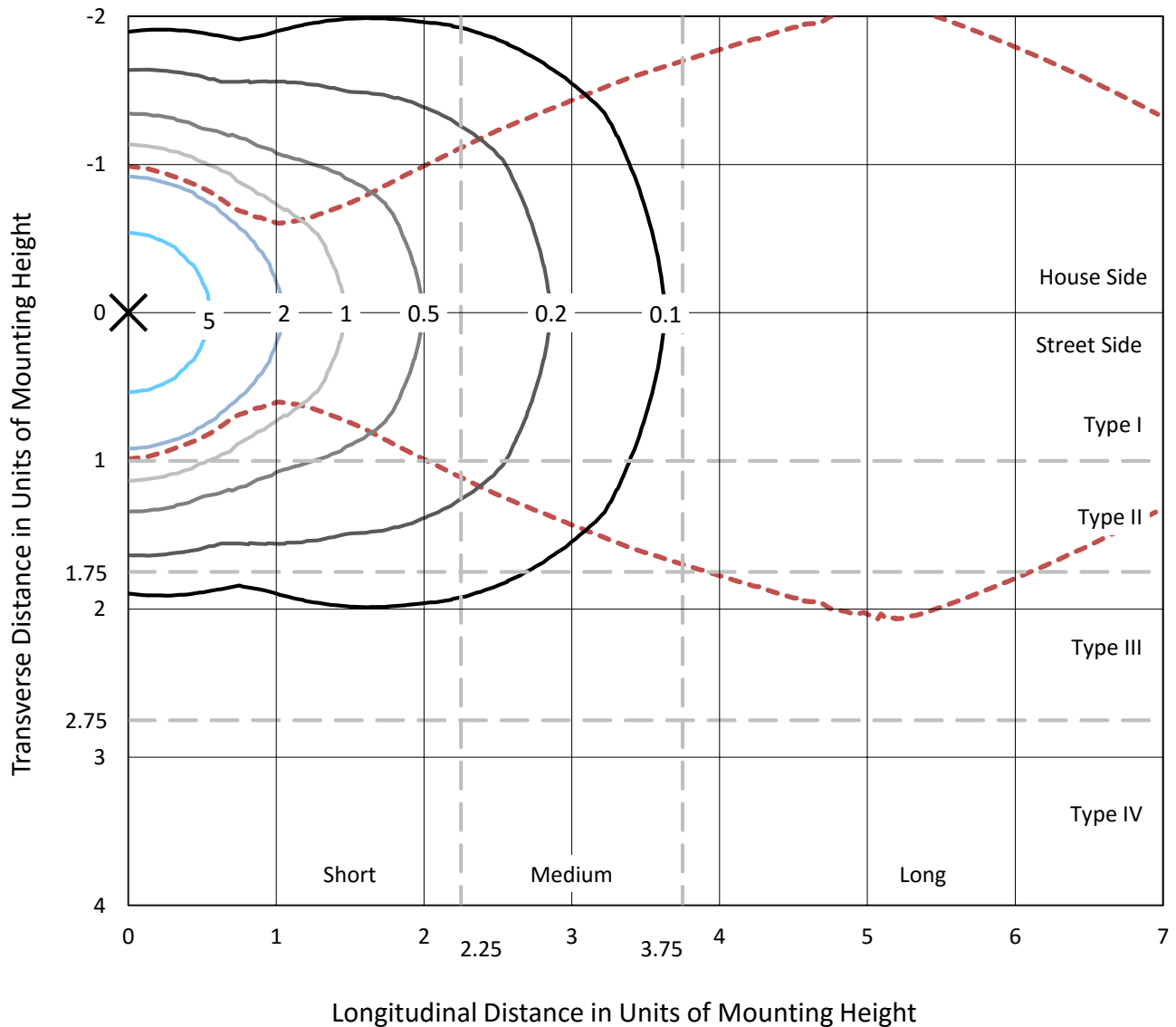
Input Watts (W): 58
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: BALLABS TEST NO. 9085.0
 CATALOG NUMBER: FWE-232-120-82-EB81

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

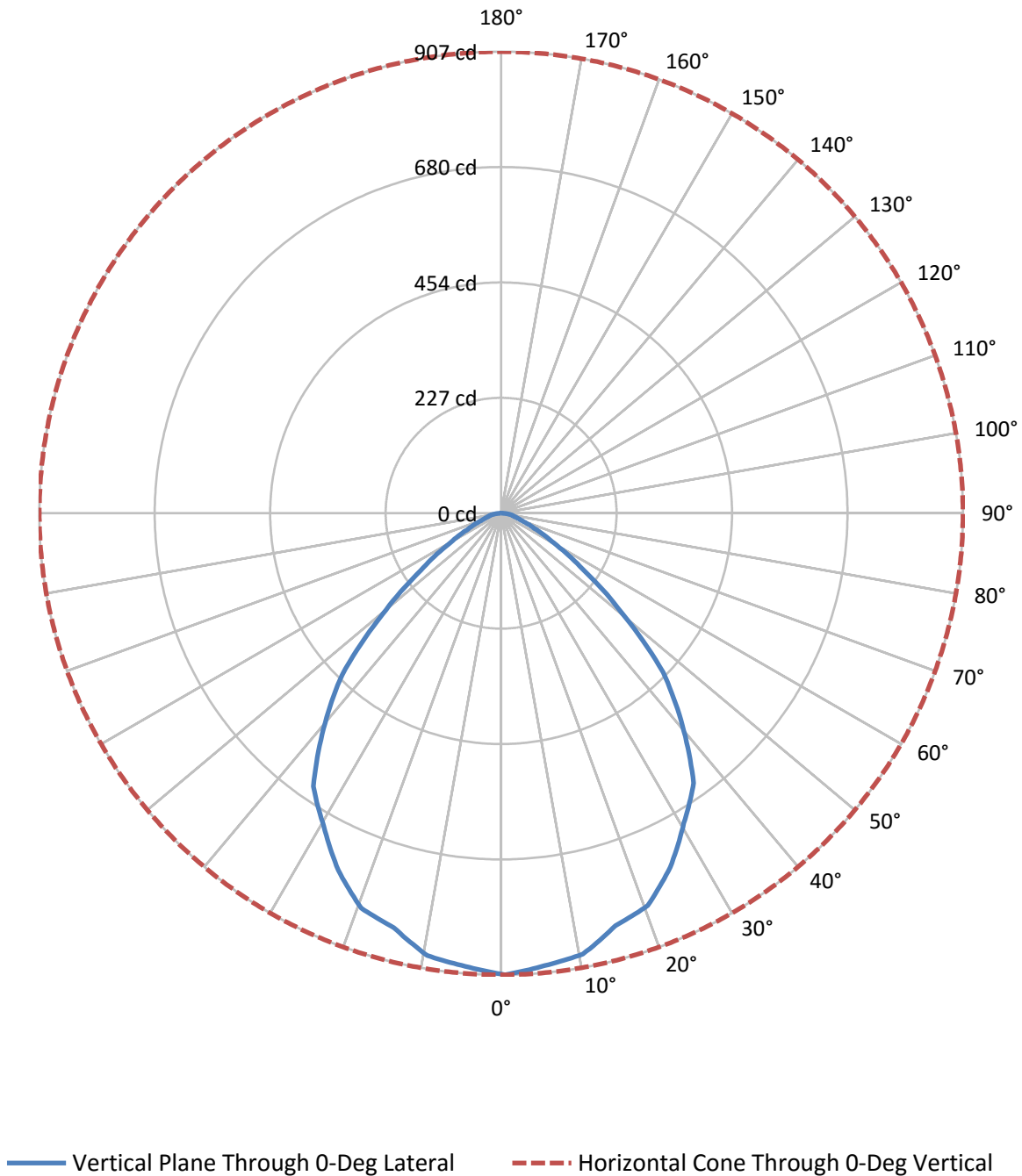


Based on 10 foot mounting height. Maximum calculated value = 9.1 fc
 Type V - Short - Non-Cutoff



REPORT NUMBER: BALLABS TEST NO. 9085.0
CATALOG NUMBER: FWE-232-120-82-EB81

Luminous Intensity Polar Plot





REPORT NUMBER: BALLABS TEST NO. 9085.0
 CATALOG NUMBER: FWE-232-120-82-EB81

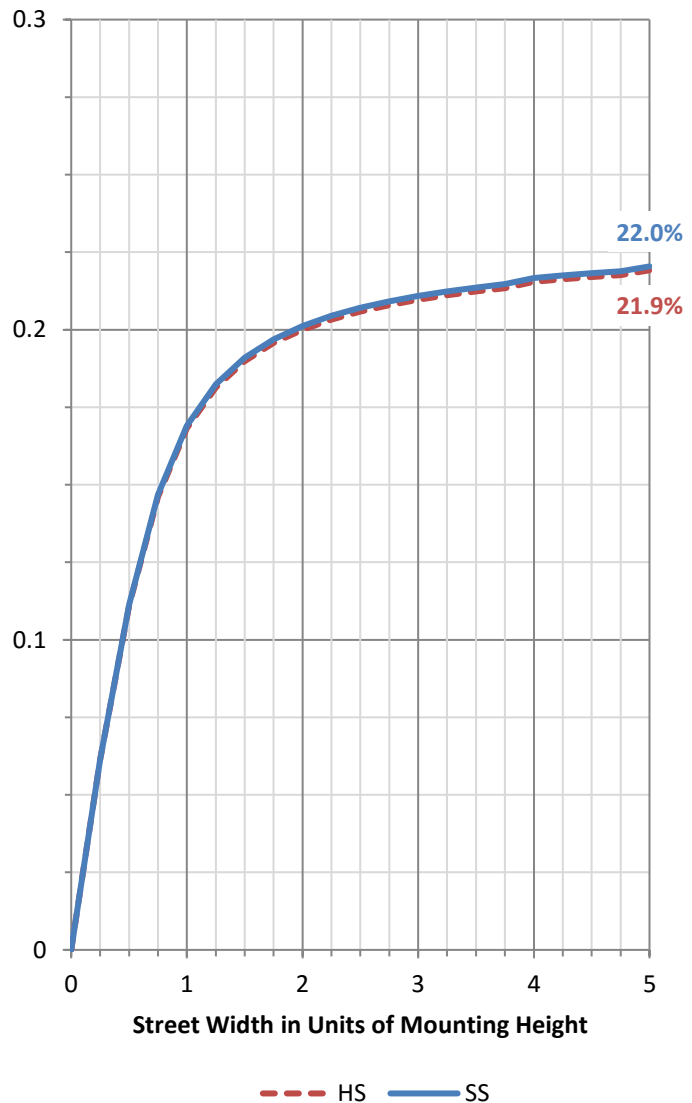
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1300.1	245.1	1545.2
	% Lamp	22.8	4.3	27.1
Street Side	Lumens	1300.1	245.1	1545.2
	% Lamp	22.8	4.3	27.1
Total	Lumens	2600.1	490.2	3090.3
	% Lamp	45.6	8.6	54.2

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	85.0	2.7	1.5
10°-20°	239.7	7.8	4.2
20°-30°	355.8	11.5	6.2
30°-40°	412.5	13.3	7.2
40°-50°	379.6	12.3	6.7
50°-60°	310.9	10.1	5.5
60°-70°	289.0	9.4	5.1
70°-80°	283.1	9.2	5.0
80°-90°	244.5	7.9	4.3
90°-100°	185.5	6.0	3.3
100°-110°	137.4	4.4	2.4
110°-120°	87.4	2.8	1.5
120°-130°	46.4	1.5	0.8
130°-140°	21.5	0.7	0.4
140°-150°	9.5	0.3	0.2
150°-160°	2.5	0.1	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	2600.1	84.1	45.6
0°-180°	3090.3	100.0	54.2



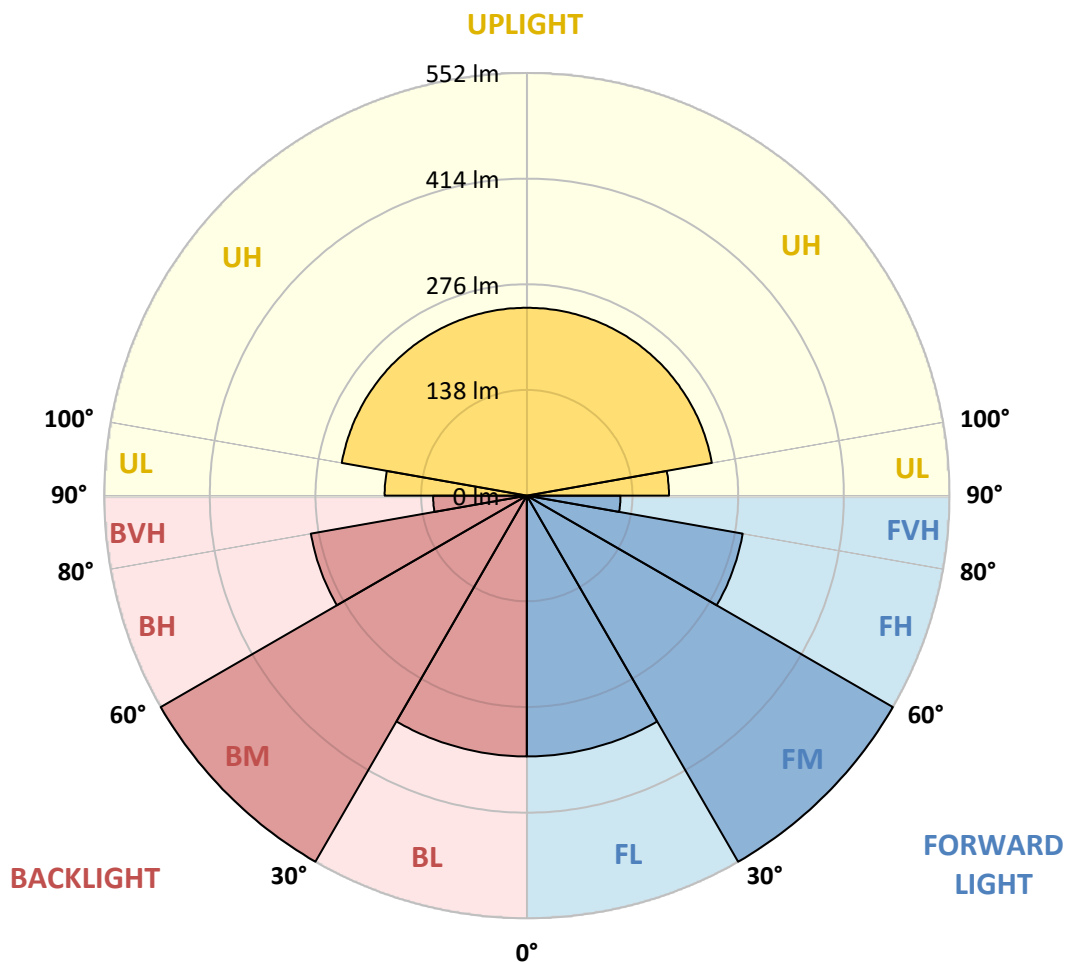


REPORT NUMBER: BALLABS TEST NO. 9085.0
 CATALOG NUMBER: FWE-232-120-82-EB81

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	340.2	6.0			
FM (30°-60°)	551.5	9.7			
FH (60°-80°)	286.1	5.0			G0/660
FVH (80°-90°)	122.3	2.1			G2/225
BL (0°-30°)	340.2	6.0	B1/500		
BM (30°-60°)	551.5	9.7	B1/1000		
BH (60°-80°)	286.1	5.0	B1/500		G0/660
BVH (80°-90°)	122.3	2.1			G2/225
UL (90°-100°)	185.5	3.3		U3/500	
UH (100°-180°)	245.1	4.3		U3/500	
Trapped Light	2609.7	45.8			

BUG Rating: B1-U3-G2
 Type V Short





REPORT NUMBER: BALLABS TEST NO. 9085.0
 CATALOG NUMBER: FWE-232-120-82-EB81

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	907	907	907	907	907
5°	893	893	893	893	893
10°	881	880	881	881	881
15°	841	843	844	844	844
20°	823	826	823	822	825
25°	771	774	770	774	780
30°	707	707	706	723	735
35°	651	651	656	691	713
40°	548	546	558	615	660
45°	446	434	452	558	627
50°	306	294	349	507	575
55°	194	200	293	496	565
60°	119	138	264	490	555
65°	71	94	253	495	560
70°	42	66	256	493	560
75°	28	54	264	478	534
80°	21	44	259	451	498
85°	10	34	241	401	438
90°	0	24	212	347	381
95°	0	18	179	306	341
100°	0	16	150	276	314
105°	0	6	123	249	287
110°	0	0	95	212	253
115°	0	0	72	173	209
120°	0	0	56	133	167
125°	0	0	42	98	126
130°	0	0	31	71	88
135°	0	0	25	51	65
140°	0	0	19	36	47
145°	0	0	18	28	36
150°	0	0	0	21	24
155°	0	0	0	16	18
160°	0	0	0	0	0
165°	0	0	0	0	0
170°	0	0	0	0	0
175°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)