



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: 3815

Luminaire Tested: **FWS-440**

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: 3815
Test Lab:
Issue Date: 3/3/2020
Manufacturer: EATON (FORMERLY COOPER LIGHTING)
Product Line: FAIL-SAFE
Catalog Number: FWS-440
Description: FAIL-SAFE SURFACE MOUNT
Light Source: F40T12/RS/CW 3150 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: 3150 (4 lamps)
Luminaire Lumens: 5288.5 lumens
Efficiency: 42.0%
Efficacy: 26.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.66' x L: 4' x H: 0.25')
IES Classification: Type V - Short - Cutoff
BUG Rating: B2 - U3 - G1

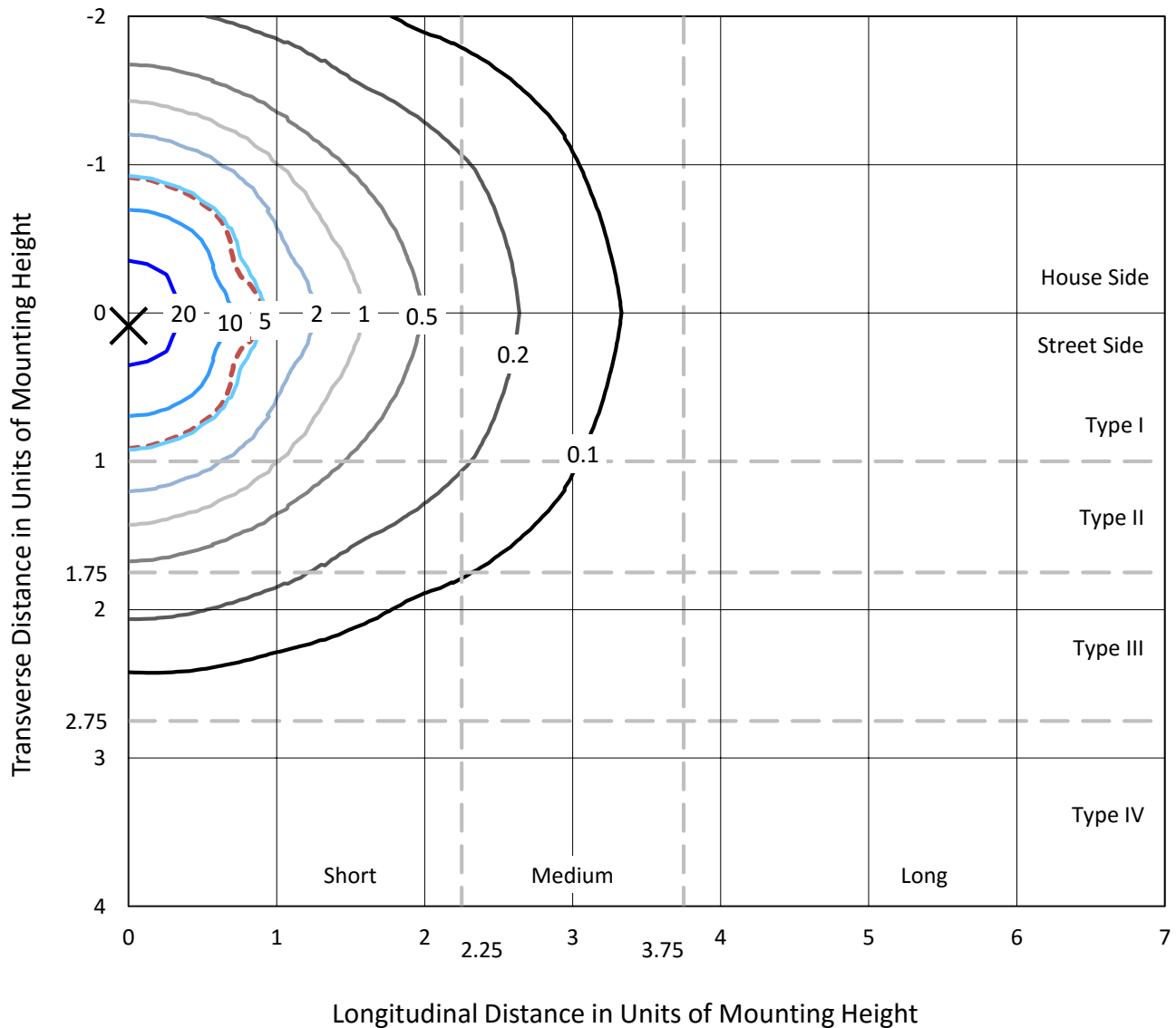
Input Watts (W): 197
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

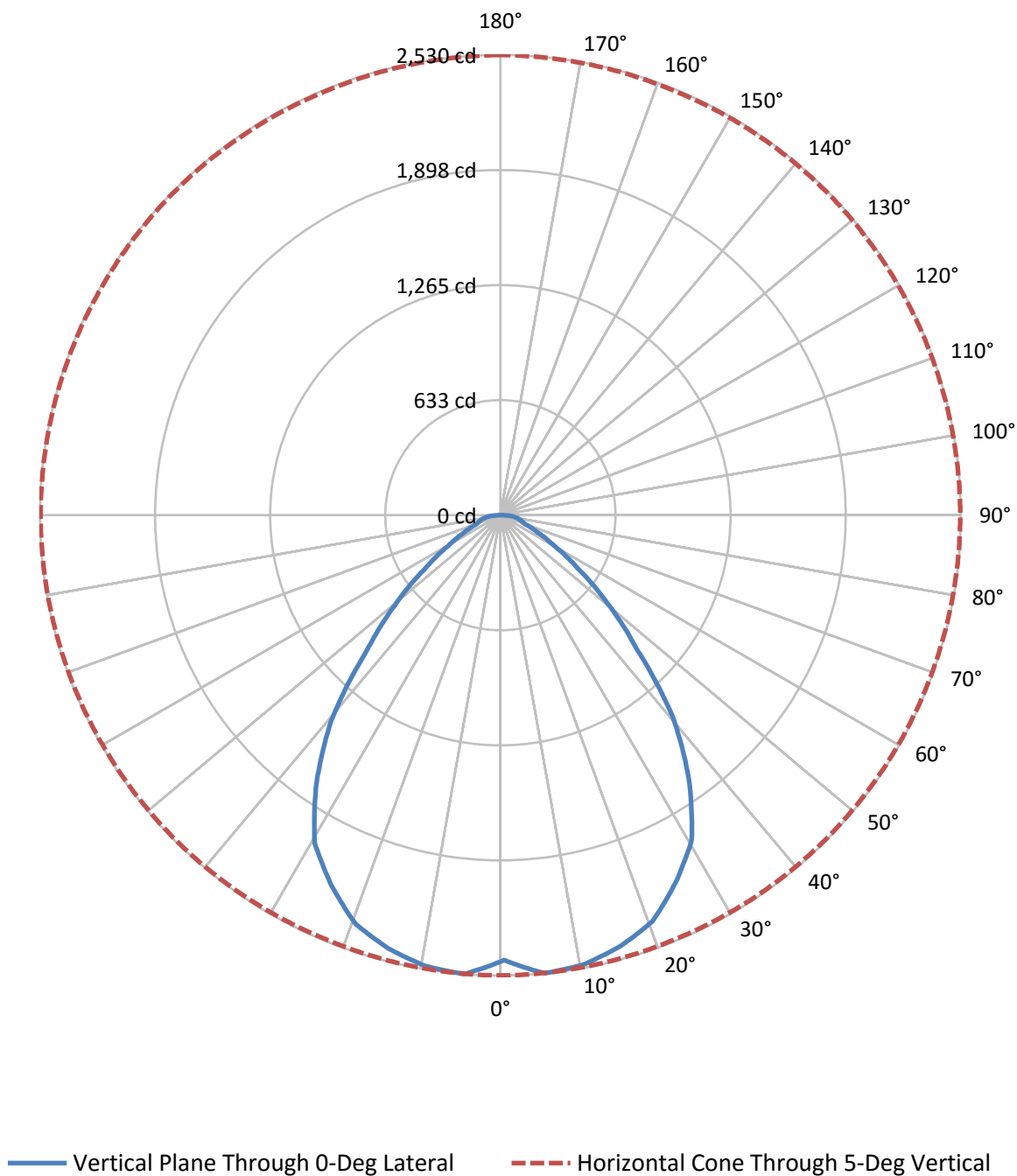


Based on 10 foot mounting height. Maximum calculated value = 24.7 fc
 Type V - Short - Cutoff

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Luminous Intensity Polar Plot



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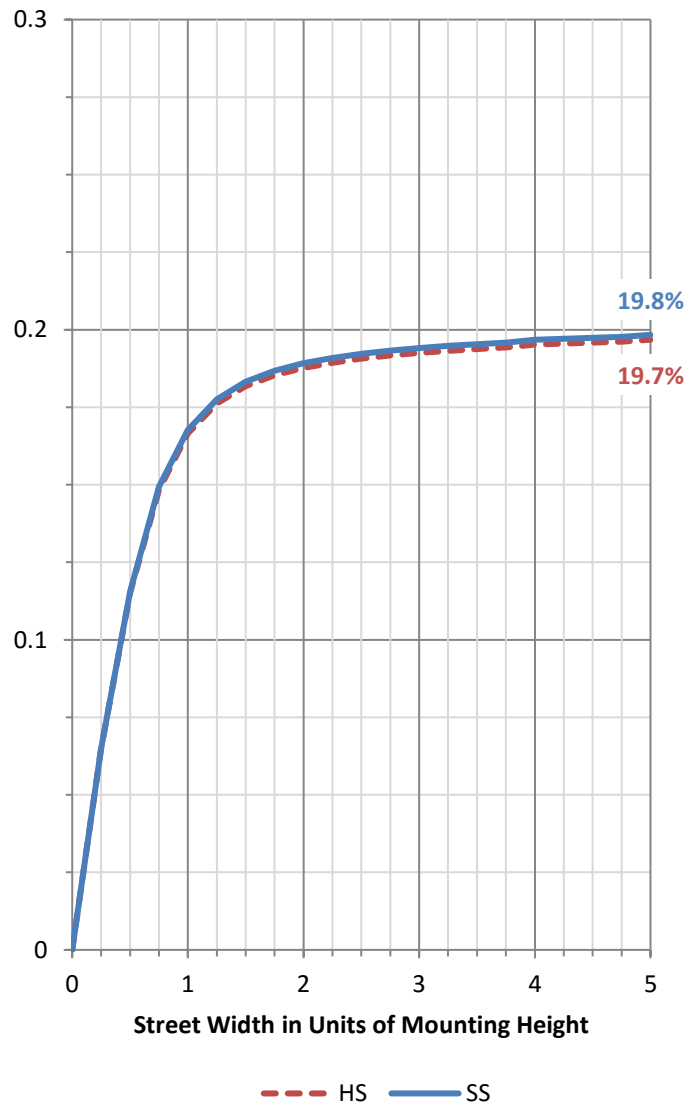
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2526.6	117.7	2644.2
	% Lamp	20.1	0.9	21.0
Street Side	Lumens	2526.6	117.7	2644.2
	% Lamp	20.1	0.9	21.0
Total	Lumens	5053.1	235.3	5288.5
	% Lamp	40.1	1.9	42.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	239.6	4.5	1.9
10°-20°	694.5	13.1	5.5
20°-30°	1026.3	19.4	8.1
30°-40°	1063.7	20.1	8.4
40°-50°	771.8	14.6	6.1
50°-60°	498.2	9.4	4.0
60°-70°	330.3	6.2	2.6
70°-80°	257.7	4.9	2.0
80°-90°	171.0	3.2	1.4
90°-100°	85.1	1.6	0.7
100°-110°	53.7	1.0	0.4
110°-120°	40.7	0.8	0.3
120°-130°	25.7	0.5	0.2
130°-140°	13.2	0.2	0.1
140°-150°	7.8	0.1	0.1
150°-160°	5.9	0.1	0.0
160°-170°	2.9	0.1	0.0
170°-180°	0.3	0.0	0.0
0°-90°	5053.1	95.6	40.1
0°-180°	5288.5	100.0	42.0



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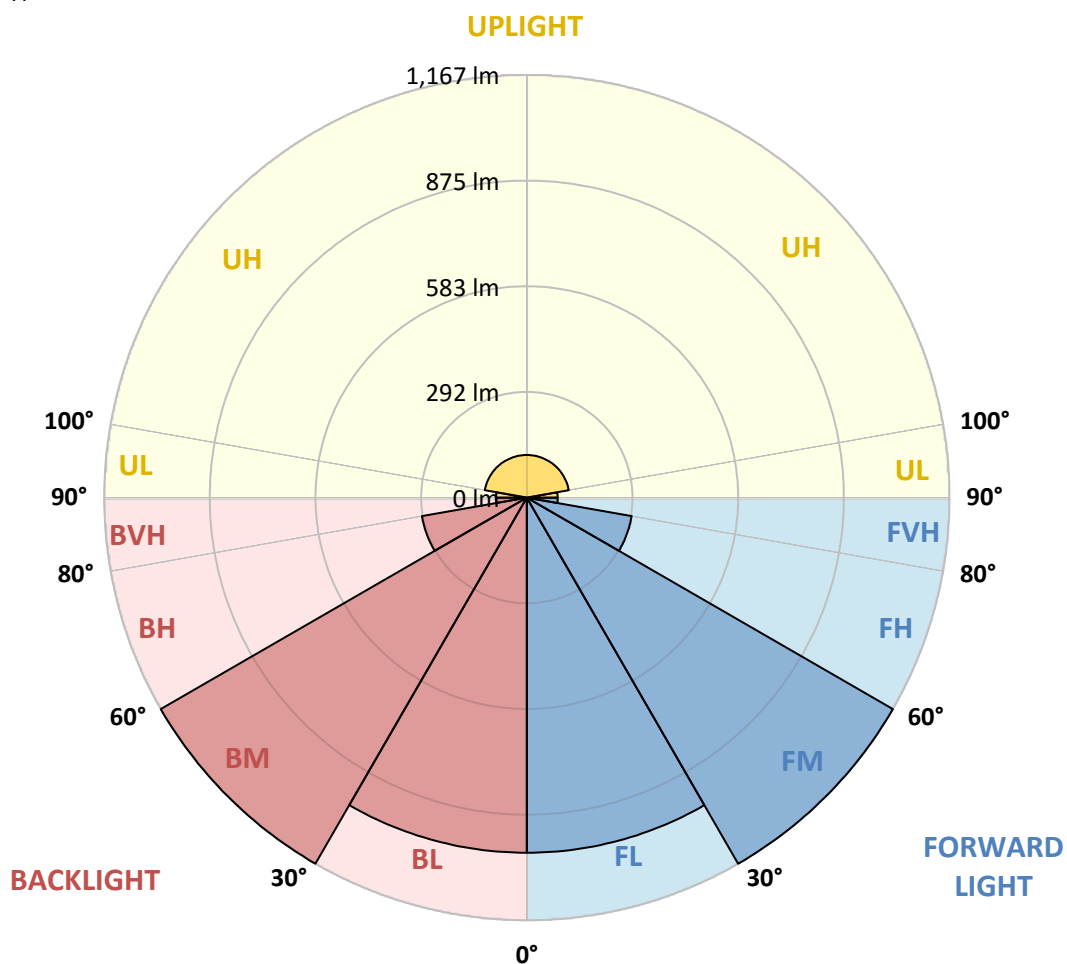
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	980.2	7.8			
FM	(30°-60°)	1166.9	9.3			
FH	(60°-80°)	294.0	2.3			G0/660
FVH	(80°-90°)	85.5	0.7			G1/100
BL	(0°-30°)	980.2	7.8	B2/1000		
BM	(30°-60°)	1166.9	9.3	B2/2500		
BH	(60°-80°)	294.0	2.3	B1/500		G0/660
BVH	(80°-90°)	85.5	0.7			G1/100
UL	(90°-100°)	85.1	0.7		U3/500	
UH	(100°-180°)	117.7	0.9		U3/500	
Trapped Light		7311.5	58.0			

BUG Rating: B2-U3-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2446	2446	2446	2446	2446
5°	2530	2521	2524	2525	2527
10°	2512	2513	2520	2494	2530
15°	2460	2460	2479	2437	2499
20°	2384	2387	2417	2307	2446
25°	2237	2254	2284	2149	2307
30°	2072	2103	2133	1818	2143
35°	1784	1804	1803	1470	1825
40°	1459	1418	1381	1071	1489
45°	1051	995	978	828	1127
50°	764	715	719	657	909
55°	515	486	515	548	735
60°	335	328	368	483	603
65°	220	229	280	419	521
70°	140	168	239	395	437
75°	118	144	236	342	411
80°	94	99	210	292	377
85°	61	70	167	211	317
90°	0	16	103	167	226
95°	0	0	87	125	186
100°	0	0	60	108	141
105°	0	0	52	85	118
110°	0	0	34	99	95
115°	0	0	48	66	108
120°	0	0	29	73	73
125°	0	0	43	36	82
130°	0	0	16	39	45
135°	0	0	27	21	50
140°	0	0	11	23	28
145°	0	1	12	26	26
150°	0	4	14	17	25
155°	0	8	14	26	15
160°	0	4	13	21	18
165°	0	6	13	18	11
170°	0	1	9	13	12
175°	0	4	0	0	0
180°	0	0	0	0	0

(END OF REPORT)