



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: 8038.0

Luminaire Tested: **FRS-432**

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: 8038.0
Test Lab:
Issue Date: 3/3/2020
Manufacturer: EATON (FORMERLY COOPER LIGHTING)
Product Line: FAIL-SAFE
Catalog Number: FRS-432
Description: FAIL-SAFE CEILING SURFACE MOUNT LUMINAIRE
HITE REFLECTOR & WRAPAROUND PRISM LENS
Light Source: 4/32W 2850 LUMENS
WATTS=130
F32T8/735/RS
Ballast/Driver: 749-L-SLH-TC-P

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 (4 lamps)
Luminaire Lumens: 6596.2 lumens
Efficiency: 57.9%
Efficacy: 50.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.31' x L: 3.95' x H: 0.14')
IES Classification: Type V - Short - Cutoff
BUG Rating: B3 - U3 - G2

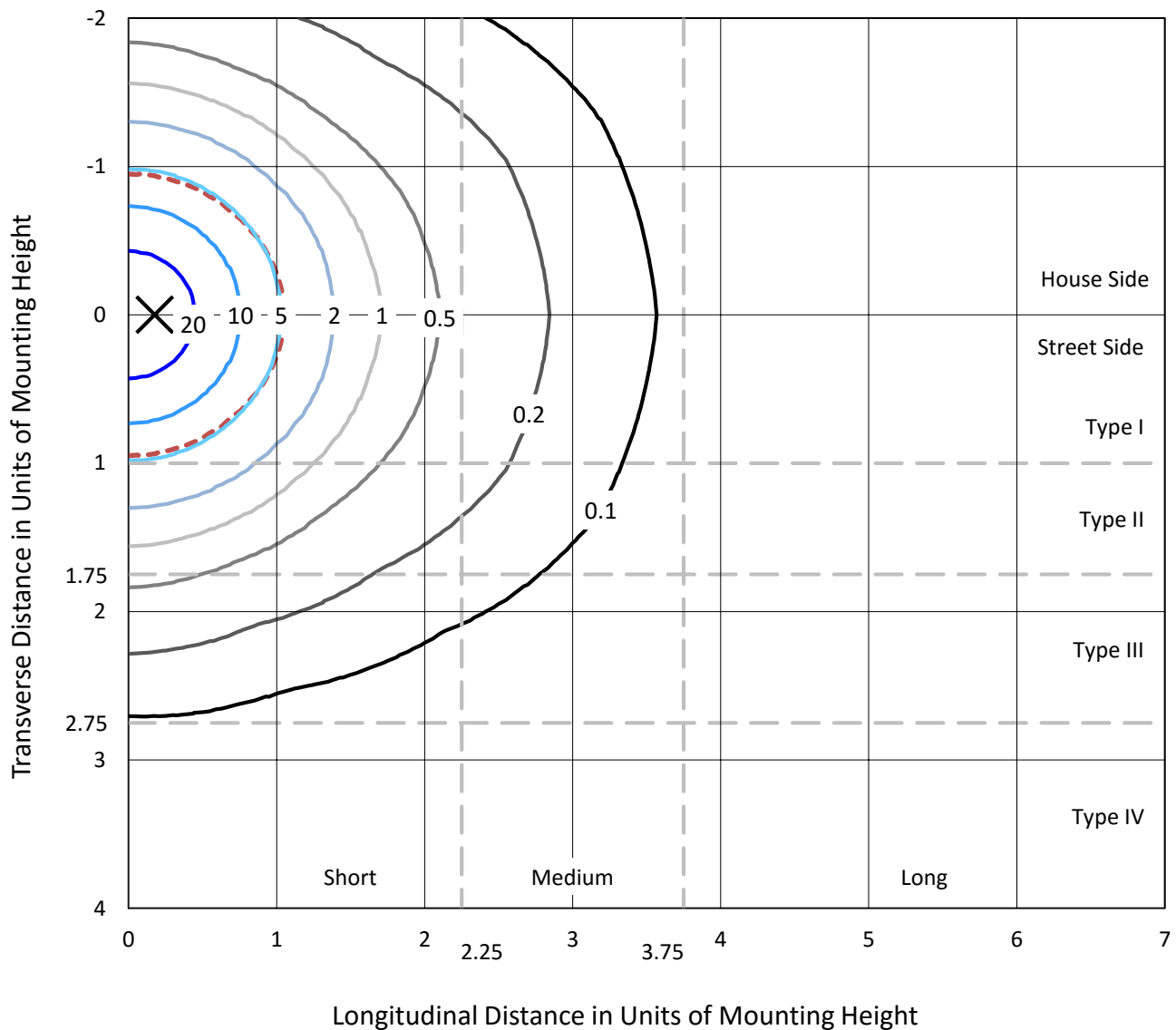
Input Watts (W): 130
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

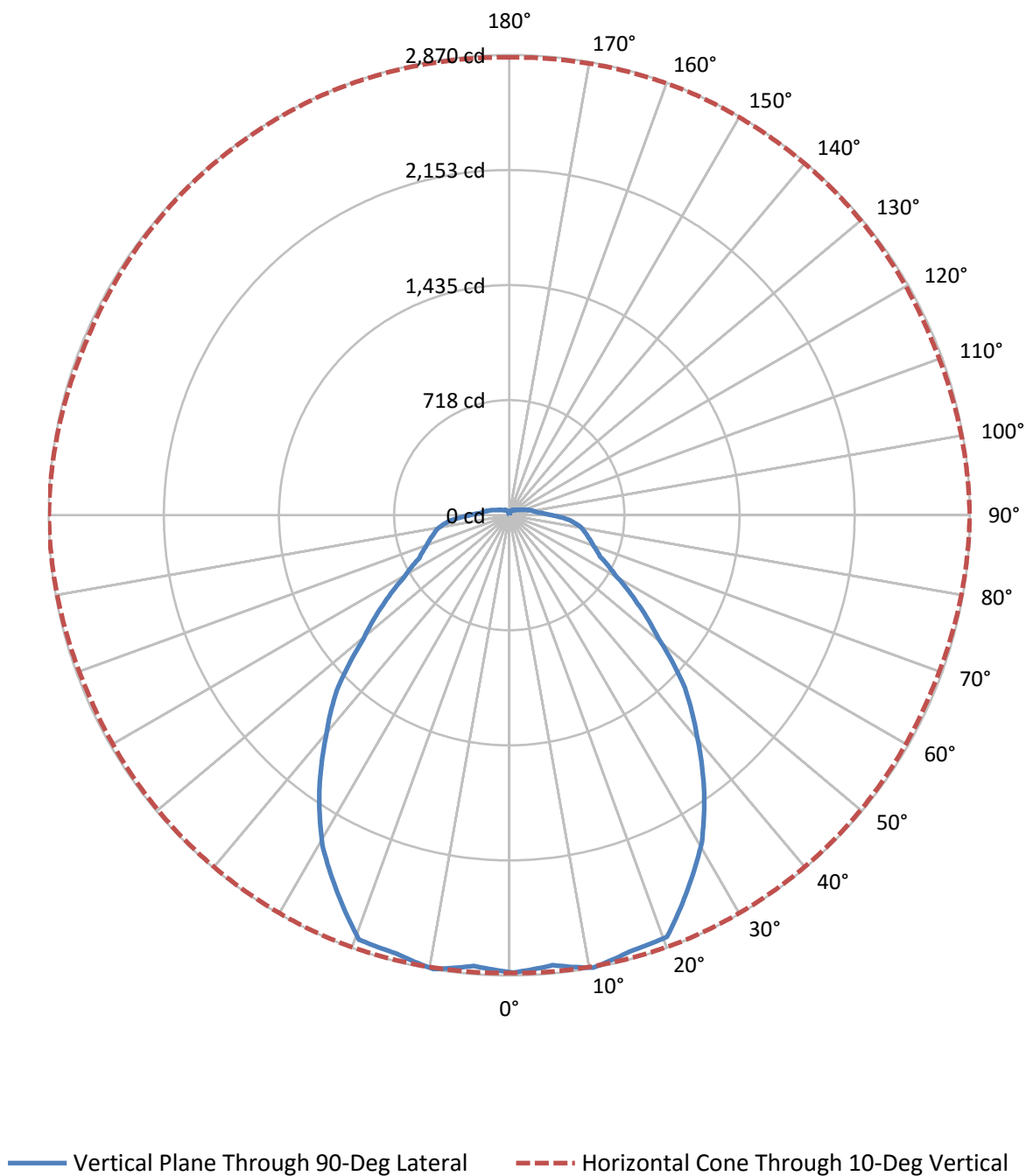
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 28.5 fc
 Type V - Short - Cutoff

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Luminous Intensity Polar Plot



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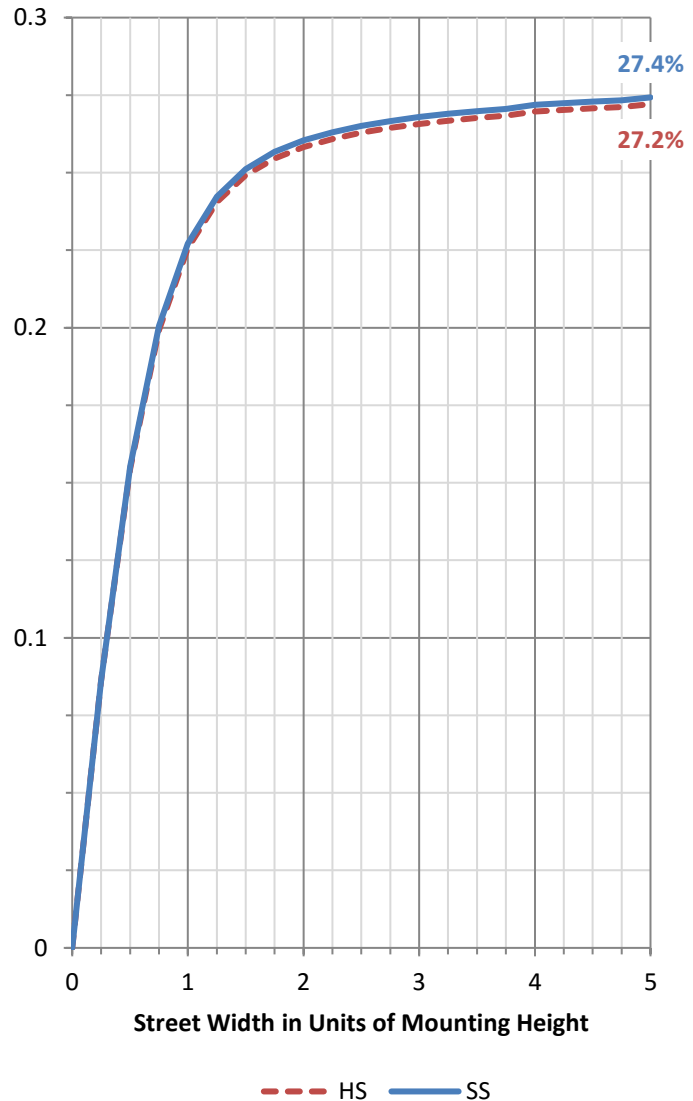
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3159.9	138.2	3298.1
	% Lamp	27.7	1.2	28.9
Street Side	Lumens	3159.9	138.2	3298.1
	% Lamp	27.7	1.2	28.9
Total	Lumens	6319.7	276.4	6596.2
	% Lamp	55.4	2.4	57.9

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	271.3	4.1	2.4
10°-20°	793.9	12.0	7.0
20°-30°	1170.5	17.7	10.3
30°-40°	1260.0	19.1	11.1
40°-50°	1085.3	16.5	9.5
50°-60°	735.4	11.1	6.5
60°-70°	447.3	6.8	3.9
70°-80°	340.5	5.2	3.0
80°-90°	215.5	3.3	1.9
90°-100°	94.1	1.4	0.8
100°-110°	60.0	0.9	0.5
110°-120°	39.8	0.6	0.3
120°-130°	29.1	0.4	0.3
130°-140°	21.9	0.3	0.2
140°-150°	16.9	0.3	0.1
150°-160°	11.0	0.2	0.1
160°-170°	3.4	0.1	0.0
170°-180°	0.1	0.0	0.0
0°-90°	6319.7	95.8	55.4
0°-180°	6596.2	100.0	57.9

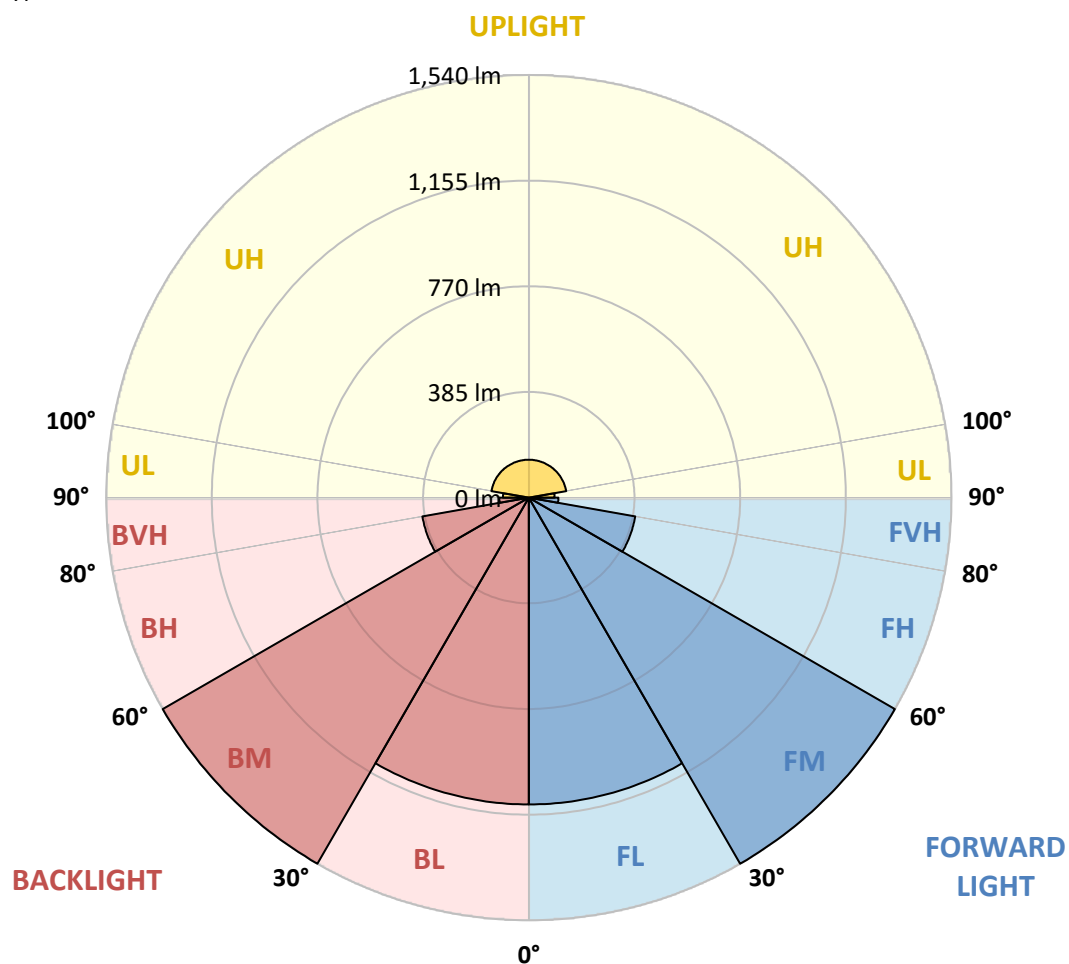


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1117.8	9.8			
FM	(30°-60°)	1540.4	13.5			
FH	(60°-80°)	393.9	3.5			G0/660
FVH	(80°-90°)	107.8	0.9			G2/225
BL	(0°-30°)	1117.8	9.8	B3/2500		
BM	(30°-60°)	1540.4	13.5	B2/2500		
BH	(60°-80°)	393.9	3.5	B1/500		G0/660
BVH	(80°-90°)	107.8	0.9			G2/225
UL	(90°-100°)	94.1	0.8		U3/500	
UH	(100°-180°)	138.2	1.2		U3/500	
Trapped Light		4803.8	42.1			

BUG Rating: B3-U3-G2
Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2852	2852	2852	2852	2852
5°	2821	2825	2831	2824	2819
10°	2855	2867	2862	2850	2870
15°	2769	2783	2788	2802	2822
20°	2739	2742	2766	2808	2807
25°	2474	2504	2535	2576	2584
30°	2242	2282	2318	2353	2365
35°	1987	1984	2007	2083	2090
40°	1645	1631	1665	1747	1799
45°	1337	1371	1414	1489	1535
50°	999	1016	1057	1169	1203
55°	740	730	778	902	969
60°	502	475	536	664	760
65°	337	316	385	544	622
70°	233	247	329	503	553
75°	177	202	304	451	501
80°	130	150	253	396	453
85°	78	87	175	311	375
90°	0	28	104	215	253
95°	0	11	68	150	178
100°	0	11	59	125	149
105°	0	14	50	102	122
110°	0	16	40	80	95
115°	0	18	35	66	78
120°	0	19	32	57	67
125°	0	21	30	49	57
130°	0	21	29	45	50
135°	0	21	29	39	46
140°	0	21	29	38	40
145°	0	23	30	38	40
150°	0	22	28	32	35
155°	0	23	28	30	30
160°	0	22	25	28	28
165°	0	9	10	12	15
170°	0	3	3	5	8
175°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)