Lighting Solutions
AE vs. AF light squares

The Galleon and Navion outdoor area luminaires from the McGraw-Edison, Lumark and Streetworks brands are now available with a newly upgraded light engine. The Galleon Wall Companion, XNV2 and XNV products will receive upgrades in the coming weeks. The new 'AF' Light Square generation demonstrates Eaton's commitment to providing our customers with industry leading performance and value. Available lumen packages now exceed 68,000 lumens with efficacies eclipsing 130 lumens per watt. These improvements enable the replacement of a 1000W metal halide fixture with a 6-square LED fixture and a 750W metal halide fixture with a 4-square LED fixture — both at over 60 percent energy savings.

The transition to the 'AF' Light Square generation brings an incredible 16 percent lumen increase along with a 10 percent increase in efficacy at comparable square counts using the standard 1A drive current. In addition to the lumen and efficacy improvements, a new optional 1.2A drive current increases the maximum lumen output of the fixtures by more than 27 percent while still maintaining a 5 percent increase in efficacy. The 'AF' Light Square generation will maintain the standard 1A drive current and transition the 700mA and 530mA options to 800mA and 600mA in order to provide a more balanced range of lumen packages.

'AE' Light Square			'AF' Light Square			
Drive Current	Lumen Output	LPW	Drive Current	Lumen Output	LPW	Lumen Increase
--	--	--	1.2A	6,500-7,200 lumens	95-110	+27%
1A	5,100-5,700 lumens	92-102	1A	6,000-6,600 lumens	100-115	+16%
700mA	3,700-4,200 lumens	100-115	800mA	4,800-5,300 lumens	110-125	+28%
530mA	2,900-3,300 lumens	105-120	600mA	3,900-4,300 lumens	115-130+	+31%

The tables below provide a simple reference in making the conversion to the new 'AF' Light Square. Nominal lumens and 'AE' square counts at each of the drive currents are compared to three scenarios using the new 'AF' Light Square and drive currents:

- Maximum reduction in Light Squares (and cost) at the given lumen output
- Maximum wattage reduction without increasing the square count
- Maintaining the same lumen output (or higher) as the 'AE' square count

'AE' - 1A Drive Current

Nominal Lumens	'AE' Light Squares		Fewer 'AF' Light Squares (Lm within 6%)		Wattage Reduction (Lm within 6%)		Maintain or Increase Lumens (Lm > 'AE')	
	Number of Squares	'AE' Drive Current	Number of Squares	'AF' Drive Current	Number of Squares	'AF' Drive Current	Number of Squares	'AF' Drive Current
48,000-54,000	10	1A	8	1.2A	10	800mA	9	1A
43,000-48,000	9	1A	7	1.2A	9	800mA	8	1A
39,000-43,000	8	1A	6	1.2A	8	800mA	7	1A
34,000-38,000	7	1A	6	1A	7	800mA	7	1A
29,000-32,000	6	1A	5	1A	6	800mA	6	1A
24,000-27,000	5	1A	4	1A	5	800mA	5	1A
20,000-22,000	4	1A	3	1.2A	4	800mA	4	1A
15,000-17,000	3	1A	--	--	3	800mA	3	1A
10,000-11,000	2	1A	--	--	2	800mA	2	1A
5,000-6,000	1	1A	--	--	1	800mA	1	1A

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Lighting Solutions

AE vs. AF light squares

'AE' - 700mA Drive Current

Nominal Lumens	'AE' Light Squares		Fewer 'AF' Light Squares (Lm within 6%)		Wattage Reduction (Lm within 6%)		Maintain or Increase Lumens (Lm > 'AE')	
	Number of Squares	'AE' Drive Current	Number of Squares	'AF' Drive Current	Number of Squares	'AF' Drive Current	Number of Squares	'AF' Drive Current
35,000-39,000	10	700mA	6	1A	9	600mA	8	800mA
32,000-35,000	9	700mA	5	1.2A	8	600mA	7	800mA
29,000-32,000	8	700mA	5	1A	6	800mA	7	800mA
25,000-28,000	7	700mA	4	1.2A	7	600mA	6	800mA
21,000-24,000	6	700mA	4	1A	6	600mA	5	800mA
18,000-20,000	5	700mA	3	1A	5	600mA	4	800mA
14,000-16,000	4	700mA	3	800mA	4	600mA	4	800mA
11,000-12,000	3	700mA	2	1A	3	600mA	3	600mA
7,000-8,000	2	700mA	--	--	2	600mA	2	600mA
3,500-4,500	1	700mA	--	--	1	600mA	1	600mA

'AE' - 530mA Drive Current

Nominal Lumens	'AE' Light Squares		Fewer 'AF' Light Squares (Lm within 6%)		Wattage Reduction (Lm within 6%)		Maintain or Increase Lumens (Lm > 'AE')	
	Number of Squares	'AE' Drive Current	Number of Squares	'AF' Drive Current	Number of Squares	'AF' Drive Current	Number of Squares	'AF' Drive Current
28,000-31,000	10	530mA	5	1A	7	600mA	8	600mA
25,000-28,000	9	530mA	4	1.2A	7	600mA	7	600mA
23,000-25,000	8	530mA	4	1A	6	600mA	5	800mA
20,000-22,000	7	530mA	3	1.2A	5	600mA	5	800mA
17,000-19,000	6	530mA	3	1A	4	600mA	4	800mA
14,000-16,000	5	530mA	3	800mA	4	600mA	4	600mA
11,000-13,000	4	530mA	2	1A	3	600mA	3	800mA
8,000-10,000	3	530mA	2	800mA	--	--	2	800mA
6,000-7,000	2	530mA	1	1A	--	--	1	1A
3,000-3,500	1	530mA	--	--	--	--	1	600mA

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