



Q&A #2

Date: September 19, 2014

Project: Lighting Retrofit / T12 to T8 Fluorescent Fixtures Conversion

Bidders must make sure that their bids are based on the latest version of the tender documents published and take into consideration the following amendments and information, including any information provided on amendments or Q&As previously published for this project.

Bidders that do not comply with this requirement will be discarded.

Question 2: Appendix E, Section 4.2, Item .1 "...rapid start or instant start". At item 4.3 you ask for shunted sockets, this requires instant start ballasts only.

Answer 2: The ballasts will need to be instant start to be compatible with the shunted sockets.

Question 3: Appendix E, Section 4.2, Item .4 "Power Factor: minimum 90% to 95% of rated lamp lumens." Here there is confusion between Power Factor and Ballast Factor.

Power Factor higher than 90%, correct (the electronic ballasts standard is higher than 98%)

Ballast Factor: for a magnetic ballast .95% is correct, for an electronic ballast, the market standard is as follow : T12 34 watts lamp replacement ballast factor of .77 or .78, T12 40 watts lamp replacement ballast factor of .88 (Ballast in a new fixture, ballast factor .88)

Answer 3: The ballast power factor must be higher or equal to 98%.

Question 4: Appendix E, Section 4.2, Item .8 Harmonic Distortion, the standard is lower than 10%, the hybrid ballasts are no longer available.

Answer 4: The total harmonics distortion must be lower than 10%.

Question 5: Appendix E, Section 4.2, Item .9 The lamp frequency is now higher than 42 kHz, to avoid interference with infrared units.

Answer 5: The electronic ballast operating frequency must be higher than 40 kHz.

Question 6: Appendix E, Section 4.2, Item .10 See note at item .4

The market standard is American National Standard, I have included a copy of ANSI C82.11-2011, to insure the effective operation between lamps and ballasts, this is the standard used by the market.

Answer 6: The ballast factor must be 0.77.

Question 7: Please clarify whether the specification is for Instant Start or Rapid Start ballasts. Both are listed in the table on page 6 of the technical specifications, and section 3.3.3 of the technical



specification reads '...T8 fluorescent lamps and rapid start electronic ballasts (IS)'. IS is usually used to identify Instant Start type ballasts. Please provide a manufacturer part number if possible.

Answer 7: Section 3.3.3. The electronic ballasts must be instant start (IS). Section 4.2.1.1. The ballasts will be instant start ballasts.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED