For the 2.0 version of Energy Star I have the following suggestions.

1. In the Specification Discussion Document you published, I agree with the Color Angular Uniformity modification to .006 as a change that meets your goals A and C on the first page.
2. I agree with removing the Start Time and Lamp Current Crest Factor completely, supporting A and C.
3. Zonal Lumen Density is currently very restrictive and prohibitive to the point where it is actually stifling advancement of new technology because it can be shapes and used in so many new ways. The beam distribution of the luminaire, including accent, track , undercabinet, cove, panel, and non symmetrical products is now possible and desired by the marketplace and specifiers. These new shapes of light allow better energy efficiency (meeting goals B and C) for the user. This category should be eliminated as it is, but should be replaced by a "Distribution Type" category descriptor. While not a pass/fail requirement, a required distribution type (much like there are for outdoor Type 1, 2, 3 etc.) would communicate the shape of the light distribution so users can specify what is necessary instead of extra energy and coverage; type 1 could be rectangular like from a linear cove light, type 2 could be rectangular like an undercabinet unit, type 3 could be an oval like a trach accent wall wash light. Perhaps this goes into the labeling requirement with a number and candlepower distribution curve.
4. I support, to reduce testing costs, per goal A, the requirement for an integrating sphere test to support photometric performance for directional models for a family with one test for each beam spread only, the provided there is no change in optics. This will ensure the efficiency and quality is there but it will save time and money for the manufacturer as well as bring products to market quicker.
5. I suggest reorganizing the 2.0 from the current performance requirement categories to organizing by light source. This will make the items easier to understand, clearer, and simpler to all users. It will also allow easier updates in the future when adding or modifying categories.
6. Discussion question 1: retrofit products are performing at higher efficacies because the market they are serving and the distribution channel serving them. In this area, a module, selected by a distributor, has one goal, to lower energy while producing light. In these products there is a high glare factor as the manufacturers move the luminous plane down to the aperture to produce light – and that is it. While energy savings and high efficacies are achieved, from a quality lighting perspective, these tend to be glare masters, causing disability glare all over the reflectiuve screens of today. In addition, the high angle glare from these fixtures is not delivered to the workplane, so it is actually wasting energy. Recessed luminaires attempt to produce high effecicaies, but also must work to reduce glare by moving the source up into the housing, which is better for the specifier, architect, and end user, but reduces effecacies.
7. Discussion question 2: There should not be cost considerations for gigher efficacy levels, it should be performance (quality and efficacy) based.
8. Discussion question 2 (later): an LED light engine should be defined as the combination of LED modules, mounting mechanisim, first heat sink layer or slug and LED driver. You have to include the mounting in this, the chip or chips can't just float out there.
9. Discussion question 4: As a member of the IESNA SSL TPC, I do not think the LM 82 testing is necessary if the ration test was completed. The LM 82 report goes beyond what is necessary for the product to prove performance, requiring 82 would be prohibitive and not provide an upside.

Please let me know if you have any questions.

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