

**Better Buildings By Design Conference 2006**  
**Seminar Presentation**

**Fixture Selection and Evaluation**

**Evaluating the Recessed Housing (quality and performance aspects):**

- Is the housing IC rated or Non-IC rated?
- Is the housing “air-tite” according to Washington state energy codes?
- Is there a fire-rated housing option available? This is important in multi-family dwellings and housing projects such as apartment buildings and condominiums.
- What (nominal) apertures are available?

**Evaluating the Ballast (performance aspects):**

- Does the housing have a magnetic or electronic ballast?
- Does the ballast have a starter, or is it instant start (or rapid start)?
- Does the ballast generate audible interference?
- Is the ballast rated for <10% or <20% THD (total harmonic distortion)?
- Is the ballast a multi-output ballast that can operate a variety of lamps such as 26w, 32w, and 42w?
- Is a dimming ballast available?
- If a dimming ballast is available, who is the manufacturer and which wallbox dimmers are recommended?

**Evaluating the Trim and Lamp Placement (visual and performance aspects):**

- Is the lamp placement vertical or horizontal? Generally speaking, fixtures with vertical lamp placement are more efficient but require deeper plenum spaces. Fixtures with horizontal lamp placement are less efficient, but will fit within shallower plenum spaces.
- If the trim is a polished metal surface, is it considered to be “low-irridescent”? Low irridescent trims do not create a “rainbow” effect on the surface of the trim.
- Are both specular and semi-specular trim finishes available? Specular surfaces are mirror-like and can produce more offensive lamp imaging at certain angles. Semi-specular surfaces are slightly diffused and produce less offensive lamp imaging at certain angles.
- What is the relative distance between the bottom of the lamp and the opening of the aperture?
- What is the stated “cut-off” of the trim from the manufacturer? The higher the angle, the greater the cut-off. Generally speaking, a 45 degree cut-off or higher is excellent.
- Are a variety of trim styles with consistent appearance available, such as downlight, open wall wash, lensed, etc.?

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<b>Fixture #1</b>		<b>Fixture #2</b>
_____	<b>IC / Non-IC rated</b>	_____
_____	<b>“Air-Tite”</b>	_____
_____	<b>Fire-Rated option</b>	_____
_____	<b>Apertures (4, 5, 6)</b>	_____
_____	<b>Magnetic Ballast</b>	_____
_____	<b>Electronic Ballast</b>	_____
_____	<b>Dimming Ballast</b>	_____
_____	<b>&lt;10% THD</b>	_____
_____	<b>Multi-Output</b>	_____
_____	<b>Vertical / Horizontal</b>	_____
_____	<b>Low-Irridescent</b>	_____
_____	<b>Specular / Semi-Specular</b>	_____
_____	<b>Lamp Distance</b>	_____
_____	<b>Fixture Cut-off</b>	_____
_____	<b>Trim Options</b>	_____
_____	<b>Other</b>	_____
_____	<b>Cost</b>	_____