

Designing Lighting Systems Instrument

Reliability Report

Scales for the Designing Lighting Systems (LS) instrument were constructed from 178 students completing the assessment (version 8/4/2010). Correct answers to the 25 questions on the instrument were summed to create the “All” scale. The “All” scale was tested for internal reliability and was found to have a Cronbach’s α of .827 (n=178). The table below presents the four subscales and reliability information for the LS instrument.

Scale	N of Students	# Items	Items	Reliability: Cronbach’s α
All	178	25	1-25	.827
Optical Engineer	178	5	5, 8, 10, 18, 19	.625
Brightness and Movement of Light	178	5	1-3, 6, 17	.656
Properties of Light	178	8	7, 11, 13, 15, 16, 21, 23, 24	.584
Engineering Design	178	7	4, 9, 12, 14, 20, 22, 25	.519