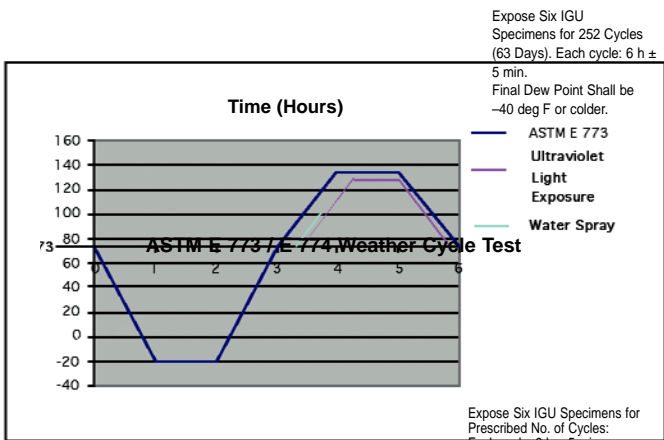
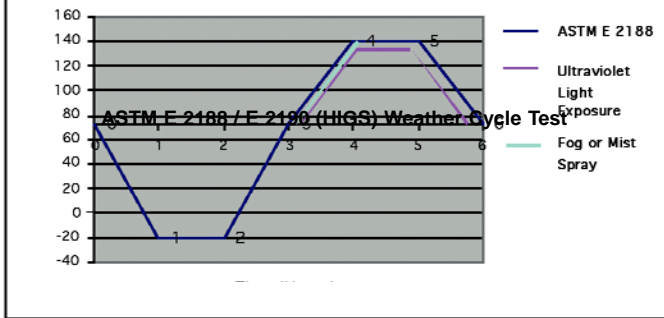


Accelerated Weather Test – Schematic

Drawings According to

ASTM E 2188/ E 2189 and ASTM E 773/E 774



Expose Six IGU Specimens for 252 Cycles (63 Days). Each cycle: 6 h ± 5 min. Final Dew Point Shall be -40 deg F or colder.

Expose Six IGU Specimens for Prescribed No. of Cycles: Each cycle: 6 h ± 5 min.

Class C: 140 Cycles - Final Dew Point -30 deg. F or colder.
Class B: Additional 56 Cycles - Final Dew Point -20 deg. F or colder.
Class A: Additional 56 Cycles - Final Dew Point -20 deg. F or colder.
 Total Duration (C, B & A): 63 Days

Harmonized IG Standards Comparison

	US Standards ASTM E 773, E 1887, E 774	Canadian Standards CAN / CGSB 12.8	Harmonized Standards ASTM E 2188, E 2189, E 2190
High Humidity Test			
Max temp.	60+/- 3 C	55+/- 3 C	60+/- 3 C
Min. temp.	(constant temperature)	22+/- 3 C	(constant temperature)
%RH	95% +/-5%	constant water mist	95% +/-5%
total time	42 days*	28 days**	42 days (14 days + 28 days)*
Accel. Weather Cycle test			
high temp	57+/-3 C	50+/-3 C	60+/- 3 C
low temp	-30+/-3 C	-32+/-3 C	-29+/-3 C
UV source	F72T12BL/HO	none	F72T12BL/HO
UV output	10 W/m ²	n/a	10 W/m ²
moisture	30 min. spray	5 min. spray	30 min. spray
time per cycle	6 hr.	4 hr.	6 hr.
# of cycles	252.00	320.00	252.00
total time	63 days	53.3 days	63 days
Volatile Fog Test			
type	corner UV exposure	full immersion box	full immersion box
glass temp at corner	65 C +/- 3 C (at corner only)	60 +/-3 C	50 +/-3 C
glass temp other locations	24 C min.	60 +/-3 C (full immersion)	50 +/-3 C
cooling plate temp	21 +/-3 C	22 +/-3 C	21 +/-3 C
cooling plate area	0.016m ² (127 x 127 mm)	0.018m ² (150mm dia)	0.018m ² (150mm dia)
UV lamp	Osram Ultra Vitalux 300w 2.0 μW/cm ² @ glass surface	Osram Ultra Vitalux 300w 0.4 μW/cm ² @ 300 nm	Osram Ultra Vitalux 300w
lamp output	[2000 μW/cm ²]	[400 μW/cm ²]	400 μW/cm ² @ 355 nm
Specimens			
width	3 56+/- 6 mm	350+/- 5 mm	355+/- 6 mm
height	508+/- 6 mm	500+/- 5 mm	505+/- 6 mm
Number for weathering	6.00	4.00	6.00
Number for high humidity	uses same 6 as weathering	8 (different for weathering)	uses same 6 as weathering
Number for fog	2.00	2.00	2.00
Evaluation criteria			
or Frost point test	E546 w/ dry ice	brass cup w/ dry ice & alcohol	E546 w/ dry ice
max. frost point	-29 C	-40 C	-40 C
visible fog	no fog at arms' length	no fog at 2m normal to view box	no fog at arms' length
Optional CAN / CGSB			
12.8 tests:	Initial Seal Test (optional)	argon concentration	water immersion test (argon)

* Both E 774 and E 2190 use same units in both the accelerated weathering and high humidity
 ** CAN 12.8 uses separate samples for accelerated weathering and high humidity