

### Calculated Reverberation Time

Project	CRAM
Room Name	Concord Test Model
Engineer	
Calculation Date	March 2021

**ALL UNITS IN METERS**

Volume, V (cubic feet): 469.65

Surface Description	Surface Area, S (square meters)	Material Number	Material Description	Sound Absorption Coefficient (α)						S'α, Sabines					
				Frequency (Hz)						Frequency (Hz)					
				125	250	500	1000	2000	4000	125	250	500	1000	2000	4000
Right1	24.91	N/A	Gypsum Board	0.15	0.08	0.06	0.05	0.05	0.04	3.74	1.99	1.49	1.25	1.25	1.00
Back1	30.31	N/A	Gypsum Board	0.15	0.08	0.06	0.05	0.05	0.04	4.55	2.42	1.82	1.52	1.52	1.21
Right2	25.75	N/A	Fiberglass Fabric Curtain	0.09	0.32	0.68	0.83	0.39	0.76	2.32	8.24	17.51	21.37	10.04	19.57
Back2	30.31	N/A	Gypsum Board	0.55	0.14	0.08	0.04	0.12	0.11	16.67	4.24	2.42	1.21	3.64	3.33
Left	50.66	N/A	Gypsum Board	0.15	0.08	0.06	0.05	0.05	0.04	7.60	4.05	3.04	2.53	2.53	2.03
Front	36.47	N/A	Diffuse Signature Wood (1" standoff sides open)	0.00	0.02	0.06	0.16	0.13	0.15	0.00	0.73	2.19	5.84	4.74	5.47
Slope	37.89	N/A	Barrisol Stretched Ceiling over 3" FG	0.26	0.58	0.57	0.43	0.36	0.36	9.85	21.98	21.60	16.29	13.64	13.64
Ceil	72.93	N/A	Dampa Linar 100 Ceiling System	0.48	0.67	0.69	0.61	0.46	0.49	35.01	48.86	50.32	44.49	33.55	35.74
Floor	102.12	N/A	Wood Floor	0.15	0.11	0.10	0.07	0.06	0.07	15.32	11.23	10.21	7.15	6.13	7.15
Total Surface Area St (sq. ft):	411.35								ΣSα=	95.05	103.76	110.61	101.64	77.03	89.13

Avg.  $\alpha$  = 

0.23	0.25	0.27	0.25	0.19	0.22
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<b>Air Absorption Constant for 20 deg C and 20% RH, m (Beranek)</b>	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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Sabine Reverb Time (s)      RT = 

0.7955	0.7288	0.6836	0.7439	0.9816	0.8483
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Norris - Eyring Reverb Time (s)      RT = 

0.6996	0.6324	0.5869	0.6477	0.8865	0.7527
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Calculated RT (s) =	0.70	0.63	0.59	0.65	0.98	0.75
			Average of 500/1000 Hz:			
			0.62			