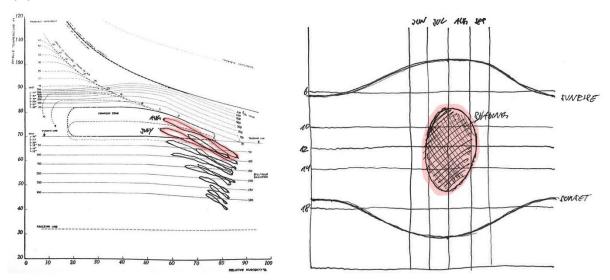
ARK-E3020 Sustainable Design Principles Assignment **Computational Cycle**

Part 1



from the bioclimatic chart you should conclude that only in July & August there is few hours of shading requirement (visible in the timetable as oval located in July/August around noon/early afternoon); for the rest of the year radiation is required for comfort each drawing one point

Part 2

Traditional *mashrabiya* is used in hot & dry climate in the Middle East for sun shading & ventilation; the façade of the Institut du Monde Arabe uses its techno-mashrabiya only for shading throughout the year; but shading is required only for few hours in July/August, otherwise radiation would be helpful for comfort; conclusion: the façade is avoiding comfort for most part of the year two points for arguments and conclusion

Appendix

used data from Paris
one point for sufficient detailed data

347035 705486	4 4
778918	4
705567 100865734	3,5
651336 705680	3,5 3,5
780896 100871333	2,5
713834	3,5
779292 100865129	2,5
100541171 1010772	5
100868223	4
100604296 100940963	4
100864816 787132	2,5
100864353	3,5 4.5
1015188 904915	3,5
100932515 999865	2
996237	
100865323 1013384	3,5
788762 714338	4
651970	4
998808 531650	3,5
61220C 654948	3,5
1001215 706553	5
586171	3,5
650094 100869594	3,5 2,5
779001	3
781675 586498	2,5 3,5
81865R 798600	4
782289 785626	4
592217	3,5
714558 64381L	3,5
712152 589660	
994624	2,5
786816 736345	3.5
100941519	4
100972180 344818	5 2,5
100866322 100869426	3,5 2,5
100771417 647748	5
474225	3,5
707808 783835	4
712178 707882	2,5
913058	4
100811584 474348	3,5 3,5
708014 51571F	4 3,5
780155	4
787006 100867978	3,5
100639630	3,5
100871621 712408	2,5 3,5
100641084 782072	3
652746	3,5
670964 430405	3,5
100542196 1012709	3,5 2
593300 610102	3
100870033	3,5 3,5
100579237 1022414	3,5 4,5
100941069 588580	4
798590	4
780294 719443	4
656496 717432	4 3.5
781989	4
715654 1015175	3,5
997618 775597	4,5 3,5
712961 648802	
739588	3,5 3,5
100475483 100838910	4
1010578 594079	2
1008836	3
710112 589644	3,5 3,5
710235	3
765840 644631	3
716077 100492262	3 2,5
781073 427366	3
710468	4
783246 354701	4
100631780 100584316	4
912583	2,5
100872125 100865284	2,5 2,5
481179 782483	3,5
448141	3,5
1014312 710989	3,5
779577 778811	3,5
711276	3
912554 994734	2 4,5
100864997	2
	4
100870868 1014008	
1014008 100572276	4 2 5
1014008 100572276 711496 1025042	4 3,5 5
1014008 100572276 711496	4 3,5 5 4,5 2,5