

Project name

Co-op Live

As built

Date: Mon May 12 18:01:43 2025

Administrative information

Building Details

Address: 1 Sportcity Way, Manchester, M11 3DL

Certifier details

Name: Mohammed Mekkawy

Telephone number:

Address: , ,

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.27

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.27

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 11239.9The CO₂ emission and primary energy rates of the building must not exceed the targets

Target CO ₂ emission rate (TER), kgCO ₂ /m ² annum	7.19
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	5.97
Target primary energy rate (TPER), kWh _{PE} /m ² annum	78.23
Building primary energy rate (BPER), kWh _{PE} /m ² annum	63.5
Do the building's emission and primary energy rates exceed the targets?	BER ≤ TER BPER ≤ TPER

The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Fabric element	U _{a-Limit}	U _{a-Calc}	U _{i-Calc}	First surface with maximum value
Walls*	0.26	0.19	0.2	RM000001:Surf[0]
Floors	0.18	0.12	0.26	RM000011:Surf[16]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.1	0.16	RM000001:Surf[3]
Windows** and roof windows	1.6	1.41	1.46	RM000056:Surf[0]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	1.74	1.74	RM000011:Surf[2]
Vehicle access & similar large doors	1.3	-	-	No vehicle access doors in building
High usage entrance doors	3	-	-	No high usage entrance doors in building

U_{a-Limit} = Limiting area-weighted average U-values [W/(m²K)]U_{i-Calc} = Calculated maximum individual element U-values [W/(m²K)]U_{a-Calc} = Calculated area-weighted average U-values [W/(m²K)]

* Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.

** Display windows and similar glazing are excluded from the U-value check.

*** Values for rooflights refer to the horizontal position.

^ For fire doors, limiting U-value is 1.8 W/m²K

NB: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.

Air permeability	Limiting standard	This building
m ³ /(h.m ²) at 50 Pa	8	4.74

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	YES
Whole building electric power factor achieved by power factor correction	>0.95

1- Auditorium AHU 01-16

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.41	3.59	0	2	0.75
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

2- Electric Radiators - Stairs

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	-	0.2	-	-
Standard value	N/A	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

3- ACC.0.A.VRV.02 + MVHR.0.A.03

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.75	7.78	0	1.24	0.83
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

4- ACC.1.A.VRV.01 + MVHR.1.A.01-02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.79	7.71	0	1.35	0.81
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

5- EAHU.0.D.02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.8	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

6- ACC.0.B.VRV.01 + MVHR.0.B.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.64	6.19	0	1.07	0.83
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

7- ACC.0.C.VRV.01 + MVHR.0.C.01-2

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.57	5.67	0	1.46	0.86
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

8- EAHU.0.C.01/02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.66	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

9- EAHU.0.C.03

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.8	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

10- ACC.0.C.VRV.02 + MVHR.0.C.01-2

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.59	5.94	0	1.39	0.81
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

11- EAHU.0.D.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.8	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

12- ACC.1.B.VRV.02 + MVHR.1.B.03

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.6	5.68	0	1.09	0.81
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

13- ACC.1.B.VRV.03 + MVHR.1.B.03

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	5.59	5.82	0	1.39	0.81
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

14- EAHU.3.C.02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.8	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

15- ACC.1.B.VRV.01 + MVHR.1.B.02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.17	6.87	0	1.18	0.81
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

16- ACC.1.C.VRV.01 + MVHR.1.C.01-02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.6	7.05	0	1.28	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

17- ACC.1.A.VRV.02 + MVHR.1.A.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.5	7.44	0	1.23	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

18- ACC.1.D.VRV.01 + MVHR.1.D.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.78	7.73	0	1.42	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

19- ACC.2.B.VRV.02 + MVHR.2.B.03-04

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.59	5.94	0	1.3	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

20- ACC.2.C.VRV.01 + MVHR.2.C.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.6	5.68	0	1.41	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

21- ACC.2.A.VRV.01 + MVHR.2.A.01-02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.75	7.78	0	1.42	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

22- ACC.2.A.VRV.02 + MVHR.2.A.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.54	5.72	0	1.31	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

23- ACC.2.B.VRV.01 + MVHR.2.B.01-02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.55	5.86	0	1.3	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

24- ACC.2.C.VRV.01 + MVHR.2.D.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.6	5.68	0	1.11	0.83
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

25- EAHU.3.C.03

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.99	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

26- ACC.2.D.VRV.01 + MVHR.2.D.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.55	5.86	0	1.11	0.83
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

27- EAHU.4.A.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.7	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

28- ACC.2.D.VRV.03 + MVHR.2.A.01-02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.78	7.73	0	1.31	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

29- ACC.3.B.VRV.02 + MVHR.3.B.03-04

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.75	7.32	0	1.39	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

30- ACC.3.A.VRV.02 + MVHR.3.B.02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.78	7.73	0	1.22	0.81
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

31- ACC.3.A.VRV.01 + MVHR.3.B.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.43	7.62	0	1.08	0.75
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

32- EAHU.3.A.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.8	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

33- ACC.3.C.VRV.01 + MVHR.3.D.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.64	6.07	0	1.21	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

34- EAHU.3.C.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.8	3.24	0	0.99	0.28
Standard value	2.5*	4.5**	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
** Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

35- ACC.4.B.VRV.01 + MVHR.4.C.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.64	5.84	0	1.1	0.83
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

36- ACC.4.A.VRV.01 + MVHR.4.B.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.57	5.67	0	1.21	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

37- ACC.4.C.VRV.01 + MVHR.4.D.01

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.59	5.94	0	1.09	0.81
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

38- ACC.2.D.VRV.02 + MVHR.2.D.02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.79	7.71	0	1.29	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

39- ACC.2.A.VRV.03 + MVHR.2.D.02

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.5	7.44	0	1.29	0.82
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

1- DHW

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	2.8	-
Standard value	2*	N/A
* Standard shown is for all types except absorption and gas engine heat pumps.		

"No zones in project where local mechanical ventilation, exhaust, or terminal unit is applicable"

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
L00- S066 Circulation		100	-	-
L00-S070 Circulation		70	-	-
L00-N018 Circulation		127	-	-
L00-S134 Cleaners		130	-	-
L00-S016 Cold Room		95	-	-
L00-E00 The floor		95	-	-
L00-N032 Lobby		127	-	-
L00-Lobby		130	-	-
L00-Lobby		106	-	-
L00-N0018 Stair		106	-	-
L00-N0018 Stair		106	-	-
L00-N003 Lobby		127	-	-
L00-N007 Electrical Substation		130	-	-
L00-N011 SCR		130	-	-
L00-N012 GA F WC		86	-	-
L00-N013 GA A WC		98	-	-
L00-N014 Cleaners Room		130	-	-
L00-N017 Vip Lobby		63	-	-
L00-N019 Decibel Club		96	-	-
L00-N020 Kitchen - DECIBEL		122	-	-
L00-N025 VIP WC		87	-	-
L00-N027 Reception Office		82	-	-
L00-N031 3 Stair		106	-	-
L00-N031 3 Stair		106	-	-
L00-N031 3 Stair		106	-	-
L00-N031 3 Stair		106	-	-
L00-N031 3 Stair		106	-	-
L00-N033 Crisis Room		121	-	-
L00-N034 Security Control		121	-	-
L00-N035 VIP Circulation		130	-	-
L00-N037 GA WC		103	-	-
L00-N038 Bulk Storage		130	-	-
L00-N039 Circulation		130	-	-
L00-N040 Staff Room		121	-	-
L00-N041 Lobby		127	-	-
L00-N042 A WC		127	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L00-N043 Reception Office		121	-	-
L00-N044 Staff Accreditation		121	-	-
L00-N045 Staff Entry		121	-	-
L00-N048 Circulation		127	-	-
L00-N058 Lobby		127	-	-
L00-N098 Store		88	-	-
L00-N099 F&B Bar		100	-	-
L00-S001 Circulation		122	-	-
L00-S009 WC		103	-	-
L00-S010 Circulation		122	-	-
L00-S011 Office		130	-	-
L00-S012 COSHH		127	-	-
L00-S018 Commissary Kitchen		122	-	-
L00-S019 Cold Room		127	-	-
L00-S020 Cold Room		95	-	-
L00-S021 Cold Room		95	-	-
L00-S022 Circulation		130	-	-
L00-S024 Circulation		130	-	-
L00-S027 WC		106	-	-
L00-S029 Crew Locker		98	-	-
L00-S030 Patch Room		130	-	-
L00-S034 Crew Catering		122	-	-
L00-S035 F&B Crew kitchen		122	-	-
L00-S039 Lobby		114	-	-
L00-S042 First Aid		117	-	-
L00-S043 WC		130	-	-
L00-S044 Circulation		70	-	-
L00-S045 Artist Corridor		70	-	-
L00-S046 Flight Case Storage		130	-	-
L00-S047 Bulk Storage		130	-	-
L00-S048 Wardrobe		130	-	-
L00-S049 Servery		122	-	-
L00-S050 Green Room		85	-	-
L00-S055 Circulation		100	-	-
L00-S056 Kitchen - RECORD ROOM		122	-	-
L00-S057 The Record Room		95	-	-
L00-S059 WC		95	-	-
L00-S060 FOH CIRCULATION		127	-	-
L00-S061 KEG		130	-	-
L00-S062 Parent Room		127	-	-
L00-S063 F&B 06 - TIER 2 MARKET		104	-	-
L00-S068 Circulation		70	-	-
L00-S069 Artist Corridor		94	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
L00-S070 Artist Corridor		70	-	-
L00-S071 Production Office		122	-	-
L00-S073 WC		84	-	-
L00-S076 WC		98	-	-
L00-S077 WC		98	-	-
L00-S079 WC		98	-	-
L00-S080 Promoter Office		122	-	-
L00-S081 Laundry		130	-	-
L00-S082 Dressing Room 01		88	-	-
L00-S083 Artist Shower		94	-	-
L00-S087 Dressing Room 03		91	-	-
L00-S088 Dressing Room 02		90	-	-
L00-S093 Dressing Room 04		91	-	-
L00-S094 Dressing Room 06		91	-	-
L00-S095 Dressing Room 05		91	-	-
L00-S100 Dressing Room 08		91	-	-
L00-S100 Dressing Room 08		91	-	-
L00-S106 Games Room		127	-	-
L00-S107 Service Corridor		130	-	-
L00-S108 Dressing Room 09		91	-	-
L00-S111 Dressing Room 10		91	-	-
L00-S115 Dressing Room 11		91	-	-
L00-S117 Dressing Room 12		91	-	-
L00-S118 Artist Shower		95	-	-
L00-S120 Electrical Substation		10	-	-
L00-S121 SCR		130	-	-
L00-S122 Bin Store		130	-	-
L00-S123 KEG		95	-	-
L00-S123 Service Corridor		128	-	-
L00-S124 12 Stair		106	-	-
L00-S124 12 Stair		106	-	-
L00-S124 12 Stair		106	-	-
L00-S124 12 Stair		106	-	-
L00-S124 12 Stair		106	-	-
L00-S128 Lobby		106	-	-
L00-S130 F&B 07 Tier 3 Market		115	-	-
L00-S136 Bar		88	-	-
L00-S137 Bar		20	-	-
L00-W003 Lobby		119	-	-
L00-W004 Base Atrium		102	-	-
L00-W005 Changing Place Room		98	-	-
L00-W006 Bin Store		130	-	-
L00-W007 KEG		95	-	-

General lighting and display lighting		General luminaire		Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]	
	Standard value	95	80	0.3	
L00-W008 F&B 02 Bar		91	-	-	
L00-W009 GA Concourse		127	-	-	
L00-W010 F&B 03 - TIER 3 MARKET		94	-	-	
L00-W012 L00 F&B 05 - VOLUME Bar		97	-	-	
L00-W013 F&B 04 - VOLUME BAR		23	-	-	
L00-W014 F&B 08 Bar		90	-	-	
L00-W015 F&B 01 Long Bar		75	-	-	
L00-W017 GA F WC		108	-	-	
L00-W021 Cellar A		130	-	-	
L00-W025 GA F WC		121	-	-	
L00-W028 GA M WC		121	-	-	
L00-W028 KEG		95	-	-	
L00-WC		103	-	-	
L00-WC		98	-	-	
L00-WC		98	-	-	
L01-Backstage Circulation		95	-	-	
L01-E001 Back Stage Lounge		72	-	-	
L01-E002 Store		130	-	-	
L01-E003 WC		76	-	-	
L01-E006 Backstage Bar		44	-	-	
L01-E007 KEG		95	-	-	
L01-E008 Lobby		74	-	-	
L01-E009 Kitchen		122	-	-	
L01-E010 Merchandise		109	30	5	
L01-E011 Coat Store		92	-	-	
L01-E012 WC		98	-	-	
L01-Escaletor		95	-	-	
L01-N004 Lobby		127	-	-	
L01-N008 Storage		130	-	-	
L01-N009 Comms		130	-	-	
L01-N010 LV		130	-	-	
L01-N012 Merch Store		130	30	5	
L01-N014 KEG		95	-	-	
L01-N015 F&B Bar		93	-	-	
L01-N016 LV		130	-	-	
L01-N017 Comms		130	-	-	
L01-N018 F WC		93	-	-	
L01-N021 F&B 02		115	-	-	
L01-N028 F&B 03		92	-	-	
L01-N030 WC		103	-	-	
L01-N033 WC		98	-	-	
L01-N034 North Foyer		95	-	-	
L01-N035 Storage		130	-	-	

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80	0.3
L01-N037 Lobby		127	-	-
L01-N041 Dog Spending		127	-	-
L01-N042 Parent Room		130	-	-
L01-N044 Lobby		127	-	-
L01-N045 Bin Store		130	-	-
L01-S001 Lobby		119	-	-
L01-S002 Conc		117	-	-
L01-S004 Lobby		127	-	-
L01-S008 Lobby		127	-	-
L01-S012 Canal Side Circulation		99	-	-
L01-S014 WC		98	-	-
L01-S016 WC		63	-	-
L01-S018 13 Stair		106	-	-
L01-S020 Comms		130	-	-
L01-S021 LV		130	-	-
L01-S023 F&B 05 Tier 2 Market		108	-	-
L01-S024 F&B 06 Bar		100	-	-
L01-S026 First Aid		130	-	-
L01-S027 Changing Places Room		127	-	-
L01-S028 KEG		95	-	-
L01-S030 F&B 07 Tier 3 Market		108	-	-
L01-S036 LV		130	-	-
L01-S037 Comms		130	-	-
L01-S038 Storage		130	-	-
L01-S040 WC		106	-	-
L01-S045 Parent Room		98	-	-
L01-W002 Deck		122	-	-
L01-W003 F&B 01 Bar		72	-	-
L01-W004 Deck Suite		127	-	-
L01-W007 Deck Bar		38	-	-
L01-W009 WC		98	-	-
L01-W010 WC		121	-	-
L01-W012 WC		111	-	-
L01-W015 WC		110	-	-
L01-W018 WC		121	-	-
L01-W019 WC		98	-	-
L01-W020 F&B 11 Bar		51	-	-
L01-W021 Deck Suite		120	-	-
L01-W023 F&B 08 Bar		72	-	-
L01-W025 Merchandise		122	30	5
L01-W026 Circulation		127	-	-
L01-W027 Lobby		127	-	-
L01-W031 11 Stair		106	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L02-W023 VIP ACC		103	-	-
L02-E001 WC		118	-	-
L02-E002 Shower		127	-	-
L02-E003 WC		108	-	-
L02-E004 Locker Room		127	-	-
L02-E005 Locker Room		127	-	-
L02-E006 Uniform		130	-	-
L02-E007 Equip Store		130	-	-
L02-E008 Canteen		122	-	-
L02-E009 Cleaners		130	-	-
L02-E010 Store		130	-	-
L02-Lobby		127	-	-
L02-N001 Lobby		127	-	-
L02-N008 Store		130	-	-
L02-N010 Lobby		91	-	-
L02-N011 Comms		130	-	-
L02-N011 Comms		130	-	-
L02-N012 Cloakroom		130	-	-
L02-N014 Cleaners Room		130	-	-
L02-N019 Staff Corridor		130	-	-
L02-N021 WC		103	-	-
L02-N022 Comms		130	-	-
L02-N023 North Loge Club		92	-	-
L02-N024 Box 1		90	-	-
L02-N025 Box 2		90	-	-
L02-N026 Box 3		90	-	-
L02-N027 Box 4		90	-	-
L02-N028 Box 5		90	-	-
L02-N029 Box 6		90	-	-
L02-N030 Box 7		90	-	-
L02-N031 Box 8		90	-	-
L02-N032 Box 9		90	-	-
L02-N035 Box 10		90	-	-
L02-N035 Box 11		90	-	-
L02-N035 Box 12		90	-	-
L02-N036 Box 13		90	-	-
L02-N037 Box 14		90	-	-
L02-N038 East Loge		122	-	-
L02-N039 Kitchen/Catering Storage		130	-	-
L02-N040 Store		130	-	-
L02-N041 Circulation		130	-	-
L02-N042 LV		130	-	-
L02-N043 Store		127	-	-

General lighting and display lighting		General luminaire		Display light source	
Zone name		Efficacy [lm/W]		Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95		80	0.3
L02-N045 Lobby		130		-	-
L02-N047 Stair 1		95		-	-
L02-N051 Store		121		-	-
L02-N052 Event Office		121		-	-
L02-N053 Briefing Room		121		-	-
L02-N055 NR Office		106		-	-
L02-N056 Lobby		106		-	-
L02-N057 Stair		95		-	-
L02-N057 Stair		106		-	-
L02-N057 Stair		106		-	-
L02-N057 Stair		106		-	-
L02-N057 Stair		106		-	-
L02-N057 Stair		130		-	-
L02-N058 PAVA		87		-	-
L02-N060 F&B 10 East Loge Bar		88		-	-
L02-S001 Lobby		127		-	-
L02-S002 15 Stair		106		-	-
L02-S003 Multifaith Room		127		-	-
L02-S004 MF Room F		127		-	-
L02-S005 MF Room		127		-	-
L02-S006 Storage		122		-	-
L02-S007 South Loge		87		-	-
L02-S010 14 Stair		95		-	-
L02-S012 Lobby		127		-	-
L02-S014 Catering Storage		130		-	-
L02-S016 Club Kitchen		122		-	-
L02-S018 Storage		130		-	-
L02-S019 Comms		130		-	-
L02-S020 LV		130		-	-
L02-S021 PAVA		130		-	-
L02-S022 WC		103		-	-
L02-S023 WC		99		-	-
L02-S024 Cleaners Room		103		-	-
L02-S026 KEG		127		-	-
L02-S028 Comms		130		-	-
L02-S028 Comms		130		-	-
L02-S029 Storage		130		-	-
L02-S030 Box 28		94		-	-
L02-S031 Box 27		94		-	-
L02-S032 Box 26		94		-	-
L02-S033 Box 25		94		-	-
L02-S034 Box 24		94		-	-
L02-S035 Box 23		94		-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L02-S036 Box 22		94	-	-
L02-S037 Box 21		94	-	-
L02-S038 Box 20		94	-	-
L02-S039 Box 19		94	-	-
L02-S040 Box 18		94	-	-
L02-S041 Box 17		94	-	-
L02-S042 Box 16		94	-	-
L02-S043 Box 15		94	-	-
L02-S044 West Loge Club		91	-	-
L02-S047 Lobby		127	-	-
L02-S053 Store		122	-	-
L02-S054 Store		122	-	-
L02-S058 Cold Room		122	-	-
L02-W001 Hospitality Circulation		125	-	-
L02-W002 VIP WC		98	-	-
L02-W003 WC		103	-	-
L02-W005 Kitchen		122	-	-
L02-W006 F&B Bar		105	-	-
L02-W008 Kitchen		122	-	-
L02-W009 F&B Tier 1 Market		104	-	-
L02-W011 F&B Bar		83	-	-
L02-W012 Atrium Bar Lounge		103	-	-
L02-W014 F&B 03 Volume Bar		110	-	-
L02-W015 KEG		95	-	-
L02-W016 Atirum Bar Lounge		103	-	-
L02-W017 F&B 04 Tier 1 Market		104	-	-
L02-W019 Kitchen		122	-	-
L02-W024 Cold Room		95	-	-
L02-W025 Cold Room		95	-	-
L02-WC		103	-	-
L03 - N013 Circulation		130	-	-
L03-E001 F&B Experience		123	-	-
L03-E002 Stair		106	-	-
L03-E003 Lobby		127	-	-
L03-E005 Customer Care		127	-	-
L03-E006 F&B Bar		106	-	-
L03-N001 F&B Experience		109	-	-
L03-N004 Lobby		127	-	-
L03-N008 WC		99	-	-
L03-N009 WC		104	-	-
L03-N010 KEG		127	-	-
L03-N011 LV		130	-	-
L03-N012 Comms		130	-	-

General lighting and display lighting		General luminaire		Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]	
	Standard value	95	80	0.3	
L03-N014 F&B Market		86	-	-	
L03-N015 PAV		130	-	-	
L03-N016 Storage		130	-	-	
L03-N017 WC		100	-	-	
L03-N020 KEG		95	-	-	
L03-N021 F&B Bar		75	-	-	
L03-N025 WC		95	-	-	
L03-N027 Lobby		127	-	-	
L03-N036 Merchandise		133	30	5	
L03-N037 Bin Store		130	-	-	
L03-N038 Store		130	-	-	
L03-S002 F&B Bar		75	-	-	
L03-S003 First Aid		122	-	-	
L03-S004 Bin Store		130	-	-	
L03-S005 Storage		130	-	-	
L03-S006 Lobby		127	-	-	
L03-S007 Lobby		127	-	-	
L03-S009 Cleaners Room		130	-	-	
L03-S010 WC		100	-	-	
L03-S012 WC		98	-	-	
L03-S013 WC		98	-	-	
L03-S016 Storage		130	-	-	
L03-S017 WC		99	-	-	
L03-S019 Lobby		130	-	-	
L03-S025 Comms		130	-	-	
L03-S026 LV		130	-	-	
L03-S027 KEG		130	-	-	
L03-S028 Circulation		130	-	-	
L03-S028 F&B Experience		123	-	-	
L03-S029 F&B Market		120	-	-	
L03-S030 Circulation		130	-	-	
L03-S031 F&B Bar		122	-	-	
L03-S033 LV		130	-	-	
L03-S035 Comms		130	-	-	
L03-S036 WC		95	-	-	
L03-S040 Lobby		130	-	-	
L03-S044 WC		100	-	-	
L03-W001 F&B Experience		127	-	-	
L03-W003 F&B Bar		58	-	-	
L03-W004 F&B Market		70	-	-	
L03-W005 Cleaners Room		130	-	-	
L03-W006 WC		98	-	-	
L03-W007 Merchandise		75	30	5	

General lighting and display lighting		General luminaire		Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]	
	Standard value	95	80	0.3	
L03-W008 WC		98	-	-	
L03-W010 Cleaners Room		130	-	-	
L03-W011 F&B Bar		75	-	-	
L03-W012 F&B Market		75	-	-	
L03-W013 F&B Bar		75	-	-	
L03-WC		98	-	-	
L03-WC		98	-	-	
L030-S032 KEG		95	-	-	
L04 - N013 Kitchenette		127	-	-	
L04-Circulation		127	-	-	
L04-Circulation		127	-	-	
L04-E001 Venue Management Office		121	-	-	
L04-E002 Office		121	-	-	
L04-E004 Lobby		127	-	-	
L04-E005 Office		121	-	-	
L04-E006 Office		121	-	-	
L04-E007 Office		121	-	-	
L04-E008 Office		121	-	-	
L04-E009 Office		121	-	-	
L04-E010 Locker Room		115	-	-	
L04-E016 Operating Catering Office		124	-	-	
L04-E017 Meeting Room		121	-	-	
L04-E018 HW Plant		130	-	-	
L04-E019 PAVE UPS		130	-	-	
L04-E020 Circulation		127	-	-	
L04-E021 Staff Tea Room		127	-	-	
L04-Lobby		127	-	-	
L04-Lobby		127	-	-	
L04-N001 F&B North Hangout		127	-	-	
L04-N002 F&B Bar		127	-	-	
L04-N003 Lobby		127	-	-	
L04-N004 Cleaners Room		130	-	-	
L04-N005 Lobby		127	-	-	
L04-N009 Event Control Room		130	-	-	
L04-N010 IT/Server Room		130	-	-	
L04-N012 WC		127	-	-	
L04-N014 Lobby		127	-	-	
L04-N015 Announcer		130	-	-	
L04-N016 Production Control Room		129	-	-	
L04-N017 Comms		130	-	-	
L04-N018 LV		130	-	-	
L04-N019 Kitchen - HANGOUT NORTH		122	-	-	
L04-N020 Lobby		127	-	-	

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L04-N021 WC		69	-	-
L04-N023 LV		130	-	-
L04-N024 Circulation		127	-	-
L04-N024 Comms		130	-	-
L04-N025 Storage		130	-	-
L04-N026 Lobby		124	-	-
L04-N027 Cleaners Room		130	-	-
L04-N028 Lobby		127	-	-
L04-N037 WC		127	-	-
L04-N039 Meeting Room		121	-	-
L04-N040 Reception		121	30	4.5
L04-N041 Meeting Room		121	-	-
L04-N042 Storage		130	-	-
L04-N043 Storage		130	-	-
L04-N044 Meeting Room		121	-	-
L04-N045 Lobby		127	-	-
L04-S001 Circulation		127	-	-
L04-S003 Storage		130	-	-
L04-S004 Comms UPS		130	-	-
L04-S005 Circulation		130	-	-
L04-S006 Lobby		127	-	-
L04-S012 MER		130	-	-
L04-S013 MOCR		130	-	-
L04-S014 WC		99	-	-
L04-S017 F&B Hangout		127	-	-
L04-S018 Comms		130	-	-
L04-S019 LV		130	-	-
L04-S020 Kitchen - HANGOUT SOUTH		122	-	-
L04-S021 F&B Bar		127	-	-
L04-S022 LV		130	-	-
L04-S023 Comms		130	-	-
L04-S024 Lounge		127	-	-
L04-S025 Circulation		127	-	-
L04-S026 Lobby		127	-	-
L04-S031 Cleaners Room		130	-	-
L04-WC		103	-	-
L05-Lobby		130	-	-
L05-Lobby		130	-	-
L05-N004 Lobby		130	-	-
L05-N007 Lobby		130	-	-
L05-N010 UPS		130	-	-
L00-W030 F WC		104	-	-
L00-W023 GA ACC WC		98	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L00-W019 GA M WC		119	-	-
L00-W016 Merch. Shell		133	30	5
L00-W029 Storage		130	30	5
L00-S013 Bin STore		130	-	-
L00-S005 Sprinkler Plant Room		130	-	-
L00-S140 BEF Room		130	-	-
L00-S004 Electrical Substation		130	-	-
L01-S033 Box Office		122	-	-
L01-S013 WC		98	-	-
L01-N023 KEG		95	-	-
L01-N001 North Foyer		114	-	-
L01-N045 Bin Store		130	-	-
L01-N025 ACC WC		98	-	-
L01-N050 Lobby		95	-	-
L02-S008 Circulation		83	-	-
L02-W020 F&B 05 Bar		100	-	-
L02-W007 Balcony Club		117	-	-
L02-W022 WC		97	-	-
L01-S003 Bin Store		130	-	-
L01-S026 First Aid		130	-	-

The spaces in the building should have appropriate passive control measures to limit solar gains in summer

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L00-E00 The floor	N/A	N/A
L00-N012 GA F WC	N/A	N/A
L00-N013 GA A WC	N/A	N/A
L00-N017 Vip Lobby	N/A	N/A
L00-N019 Decibel Club	N/A	N/A
L00-N020 Kitchen - DECIBEL	N/A	N/A
L00-N025 VIP WC	N/A	N/A
L00-N027 Reception Office	N/A	N/A
L00-N033 Crisis Room	N/A	N/A
L00-N034 Security Control	N/A	N/A
L00-N035 VIP Circulation	N/A	N/A
L00-N037 GA WC	N/A	N/A
L00-N040 Staff Room	N/A	N/A
L00-N042 A WC	N/A	N/A
L00-N043 Reception Office	N/A	N/A
L00-N044 Staff Accreditation	N/A	N/A
L00-N045 Staff Entry	N/A	N/A
L00-N099 F&B Bar	N/A	N/A
L00-S009 WC	N/A	N/A
L00-S011 Office	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L00-S018 Commissary Kitchen	N/A	N/A
L00-S027 WC	NO (-100%)	NO
L00-S029 Crew Locker	NO (-99.9%)	NO
L00-S034 Crew Catering	N/A	N/A
L00-S035 F&B Crew kitchen	N/A	N/A
L00-S042 First Aid	N/A	N/A
L00-S043 WC	N/A	N/A
L00-S048 Wardrobe	N/A	N/A
L00-S049 Servery	N/A	N/A
L00-S050 Green Room	N/A	N/A
L00-S056 Kitchen - RECORD ROOM	N/A	N/A
L00-S057 The Record Room	N/A	N/A
L00-S059 WC	N/A	N/A
L00-S060 FOH CIRCULATION	N/A	N/A
L00-S063 F&B 06 - TIER 2 MARKET	N/A	N/A
L00-S069 Artist Corridor	N/A	N/A
L00-S070 Artist Corridor	N/A	N/A
L00-S071 Production Office	N/A	N/A
L00-S073 WC	N/A	N/A
L00-S076 WC	N/A	N/A
L00-S077 WC	N/A	N/A
L00-S079 WC	N/A	N/A
L00-S080 Promoter Office	N/A	N/A
L00-S082 Dressing Room 01	N/A	N/A
L00-S087 Dressing Room 03	N/A	N/A
L00-S088 Dressing Room 02	N/A	N/A
L00-S093 Dressing Room 04	N/A	N/A
L00-S094 Dressing Room 06	N/A	N/A
L00-S095 Dressing Room 05	NO (-100%)	NO
L00-S100 Dressing Room 08	N/A	N/A
L00-S100 Dressing Room 08	N/A	N/A
L00-S106 Games Room	N/A	N/A
L00-S108 Dressing Room 09	N/A	N/A
L00-S111 Dressing Room 10	N/A	N/A
L00-S115 Dressing Room 11	NO (-98%)	NO
L00-S117 Dressing Room 12	N/A	N/A
L00-S130 F&B 07 Tier 3 Market	N/A	N/A
L00-S136 Bar	N/A	N/A
L00-S137 Bar	N/A	N/A
L00-W004 Base Atrium	NO (-100%)	NO
L00-W008 F&B 02 Bar	N/A	N/A
L00-W009 GA Concourse	N/A	N/A
L00-W010 F&B 03 - TIER 3 MARKET	N/A	N/A
L00-W012 L00 F&B 05 - VOLUME Bar	N/A	N/A
L00-W013 F&B 04 - VOLUME BAR	N/A	N/A
L00-W014 F&B 08 Bar	N/A	N/A
L00-W015 F&B 01 Long Bar	N/A	N/A
L00-W017 GA F WC	N/A	N/A
L00-W021 Cellar A	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L00-W025 GA F WC	N/A	N/A
L00-W028 GA M WC	N/A	N/A
L00-WC	N/A	N/A
L00-WC	N/A	N/A
L00-WC	N/A	N/A
L01-Backstage Circulation	N/A	N/A
L01-E001 Back Stage Lounge	N/A	N/A
L01-E003 WC	NO (-100%)	NO
L01-E006 Backstage Bar	N/A	N/A
L01-E009 Kitchen	N/A	N/A
L01-E010 Merchandise	N/A	N/A
L01-E011 Coat Store	N/A	N/A
L01-E012 WC	N/A	N/A
L01-N012 Merch Store	N/A	N/A
L01-N015 F&B Bar	N/A	N/A
L01-N018 F WC	NO (-100%)	NO
L01-N021 F&B 02	N/A	N/A
L01-N028 F&B 03	N/A	N/A
L01-N030 WC	N/A	N/A
L01-N033 WC	N/A	N/A
L01-N034 North Foyer	NO (-20.2%)	NO
L01-S002 Conc	NO (-20.7%)	NO
L01-S012 Canal Side Circulation	N/A	N/A
L01-S014 WC	N/A	N/A
L01-S016 WC	N/A	N/A
L01-S023 F&B 05 Tier 2 Market	N/A	N/A
L01-S024 F&B 06 Bar	NO (-51%)	NO
L01-S026 First Aid	N/A	N/A
L01-S030 F&B 07 Tier 3 Market	N/A	N/A
L01-S040 WC	N/A	N/A
L01-W002 Deck	NO (-36.6%)	NO
L01-W003 F&B 01 Bar	N/A	N/A
L01-W004 Deck Suite	N/A	N/A
L01-W007 Deck Bar	N/A	N/A
L01-W009 WC	N/A	N/A
L01-W010 WC	N/A	N/A
L01-W012 WC	N/A	N/A
L01-W015 WC	N/A	N/A
L01-W018 WC	N/A	N/A
L01-W019 WC	N/A	N/A
L01-W020 F&B 11 Bar	N/A	N/A
L01-W021 Deck Suite	N/A	N/A
L01-W023 F&B 08 Bar	N/A	N/A
L01-W025 Merchandise	N/A	N/A
L02-E001 WC	N/A	N/A
L02-E003 WC	N/A	N/A
L02-E004 Locker Room	NO (-100%)	NO
L02-E005 Locker Room	N/A	N/A
L02-E006 Uniform	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L02-E007 Equip Store	N/A	N/A
L02-E008 Canteen	N/A	N/A
L02-N010 Lobby	NO (-100%)	NO
L02-N012 Cloakroom	N/A	N/A
L02-N021 WC	N/A	N/A
L02-N023 North Loge Club	N/A	N/A
L02-N024 Box 1	N/A	N/A
L02-N025 Box 2	N/A	N/A
L02-N026 Box 3	N/A	N/A
L02-N027 Box 4	N/A	N/A
L02-N028 Box 5	N/A	N/A
L02-N029 Box 6	N/A	N/A
L02-N030 Box 7	N/A	N/A
L02-N031 Box 8	N/A	N/A
L02-N032 Box 9	N/A	N/A
L02-N035 Box 10	N/A	N/A
L02-N035 Box 11	N/A	N/A
L02-N035 Box 12	N/A	N/A
L02-N036 Box 13	N/A	N/A
L02-N037 Box 14	N/A	N/A
L02-N038 East Loge	N/A	N/A
L02-N052 Event Office	NO (-100%)	NO
L02-N053 Briefing Room	NO (-99.9%)	NO
L02-N055 NR Office	N/A	N/A
L02-N060 F&B 10 East Loge Bar	N/A	N/A
L02-S003 Multifaith Room	N/A	N/A
L02-S004 MF Room F	N/A	N/A
L02-S005 MF Room	N/A	N/A
L02-S007 South Loge	N/A	N/A
L02-S016 Club Kitchen	N/A	N/A
L02-S022 WC	N/A	N/A
L02-S023 WC	N/A	N/A
L02-S030 Box 28	N/A	N/A
L02-S031 Box 27	N/A	N/A
L02-S032 Box 26	N/A	N/A
L02-S033 Box 25	N/A	N/A
L02-S034 Box 24	N/A	N/A
L02-S035 Box 23	N/A	N/A
L02-S036 Box 22	N/A	N/A
L02-S037 Box 21	N/A	N/A
L02-S038 Box 20	N/A	N/A
L02-S039 Box 19	N/A	N/A
L02-S040 Box 18	N/A	N/A
L02-S041 Box 17	N/A	N/A
L02-S042 Box 16	N/A	N/A
L02-S043 Box 15	N/A	N/A
L02-S044 West Loge Club	N/A	N/A
L02-W001 Hospitality Circulation	N/A	N/A
L02-W002 VIP WC	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L02-W003 WC	N/A	N/A
L02-W005 Kitchen	N/A	N/A
L02-W006 F&B Bar	N/A	N/A
L02-W008 Kitchen	N/A	N/A
L02-W009 F&B Tier 1 Market	N/A	N/A
L02-W011 F&B Bar	N/A	N/A
L02-W012 Atrium Bar Lounge	N/A	N/A
L02-W014 F&B 03 Volume Bar	N/A	N/A
L02-W016 Atirum Bar Lounge	N/A	N/A
L02-W017 F&B 04 Tier 1 Market	N/A	N/A
L02-W019 Kitchen	N/A	N/A
L02-WC	N/A	N/A
L03 - N013 Circulation	N/A	N/A
L03-E001 F&B Experience	NO (-99.9%)	NO
L03-E005 Customer Care	N/A	N/A
L03-E006 F&B Bar	NO (-100%)	NO
L03-N001 F&B Experience	NO (-100%)	NO
L03-N008 WC	N/A	N/A
L03-N009 WC	N/A	N/A
L03-N014 F&B Market	N/A	N/A
L03-N017 WC	N/A	N/A
L03-N021 F&B Bar	N/A	N/A
L03-N025 WC	N/A	N/A
L03-N036 Merchandise	NO (-100%)	NO
L03-S002 F&B Bar	N/A	N/A
L03-S003 First Aid	N/A	N/A
L03-S010 WC	N/A	N/A
L03-S012 WC	N/A	N/A
L03-S013 WC	N/A	N/A
L03-S017 WC	N/A	N/A
L03-S028 F&B Experience	N/A	N/A
L03-S029 F&B Market	N/A	N/A
L03-S031 F&B Bar	N/A	N/A
L03-S036 WC	N/A	N/A
L03-S044 WC	N/A	N/A
L03-W001 F&B Experience	N/A	N/A
L03-W003 F&B Bar	N/A	N/A
L03-W004 F&B Market	N/A	N/A
L03-W006 WC	N/A	N/A
L03-W007 Merchandise	N/A	N/A
L03-W008 WC	N/A	N/A
L03-W011 F&B Bar	N/A	N/A
L03-W012 F&B Market	N/A	N/A
L03-W013 F&B Bar	N/A	N/A
L03-WC	N/A	N/A
L03-WC	N/A	N/A
L04-E001 Venue Management Office	NO (-58.2%)	NO
L04-E002 Office	NO (-100%)	NO
L04-E005 Office	NO (-99.9%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L04-E006 Office	NO (-99.9%)	NO
L04-E007 Office	N/A	N/A
L04-E008 Office	N/A	N/A
L04-E009 Office	NO (-99.9%)	NO
L04-E016 Operating Catering Office	NO (-82.2%)	NO
L04-E017 Meeting Room	N/A	N/A
L04-E021 Staff Tea Room	NO (-72.5%)	NO
L04-N001 F&B North Hangout	N/A	N/A
L04-N002 F&B Bar	N/A	N/A
L04-N009 Event Control Room	N/A	N/A
L04-N012 WC	N/A	N/A
L04-N015 Announcer	N/A	N/A
L04-N016 Production Control Room	N/A	N/A
L04-N019 Kitchen - HANGOUT NORTH	N/A	N/A
L04-N021 WC	N/A	N/A
L04-N024 Circulation	N/A	N/A
L04-N037 WC	N/A	N/A
L04-N039 Meeting Room	N/A	N/A
L04-N040 Reception	NO (-100%)	NO
L04-N041 Meeting Room	NO (-41%)	NO
L04-N044 Meeting Room	N/A	N/A
L04-S014 WC	N/A	N/A
L04-S017 F&B Hangout	N/A	N/A
L04-S020 Kitchen - HANGOUT SOUTH	N/A	N/A
L04-S021 F&B Bar	N/A	N/A
L04-S024 Lounge	N/A	N/A
L04-WC	N/A	N/A
L00-W030 F WC	N/A	N/A
L00-W023 GA ACC WC	N/A	N/A
L00-W019 GA M WC	N/A	N/A
L00-W016 Merch. Shell	NO (-100%)	NO
L00-W029 Storage	N/A	N/A
L01-S033 Box Office	YES (+201.7%)	NO
L01-S013 WC	N/A	N/A
L01-N001 North Foyer	N/A	N/A
L01-N050 Lobby	N/A	N/A
L02-S008 Circulation	N/A	N/A
L02-W020 F&B 05 Bar	N/A	N/A
L02-W007 Balcony Club	N/A	N/A
L02-W022 WC	N/A	N/A
L01-S026 First Aid	N/A	N/A

Regulation 25A: Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	YES
Is evidence of such assessment available as a separate submission?	YES
Are any such measures included in the proposed design?	YES

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	53253.4	53253.4
External area [m ²]	63035.1	63035.1
Weather	MAN	MAN
Infiltration [m ³ /hm ² @ 50Pa]	5	3
Average conductance [W/K]	9175.88	14047.4
Average U-value [W/m ² K]	0.15	0.22
Alpha value* [%]	22.08	10

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area	Building Type
	Retail/Financial and Professional Services
1	Restaurants and Cafes/Drinking Establishments/Takeaways
	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	Hotels
	Residential Institutions: Hospitals and Care Homes
	Residential Institutions: Residential Schools
	Residential Institutions: Universities and Colleges
	Secure Residential Institutions
	Residential Spaces
	Non-residential Institutions: Community/Day Centre
	Non-residential Institutions: Libraries, Museums, and Galleries
	Non-residential Institutions: Education
	Non-residential Institutions: Primary Health Care Building
	Non-residential Institutions: Crown and County Courts
97	General Assembly and Leisure, Night Clubs, and Theatres
	Others: Passenger Terminals
	Others: Emergency Services
2	Others: Miscellaneous 24hr Activities
	Others: Car Parks 24 hrs
	Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m²]

	Actual	Notional
Heating	3.22	2.72
Cooling	2.38	1.97
Auxiliary	9.78	9.25
Lighting	9.43	9.3
Hot water	37.25	30.97
Equipment*	44.82	44.82
TOTAL **	62.06	54.2

* Energy used by equipment does not count towards the total for consumption or calculating emissions.

** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m²]

	Actual	Notional
Photovoltaic systems	19.14	1.21
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>19.14</i>	<i>1.21</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	57.25	54.92
Primary energy [kWh _{PE} /m ²]	63.5	78.23
Total emissions [kg/m ²]	5.97	7.19

HVAC Systems Performance										
System Type		Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEF	Cool SSEER	Heat gen SEFF	Cool gen SEER
[ST] Single-duct VAV, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	74.6	3.4	6.8	0.4	28	3.06	2.58	3.41	3.59
	Notional	51.7	6.4	5.2	0.4	13.1	2.78	4.63	----	----
[ST] Other local room heater - unfanned, [HS] Direct or storage electric heater, [HFT] Electricity, [CFT] Electricity										
	Actual	72	0	20	0	0	1	0	1	0
	Notional	80	0	15.8	0	0	1.41	0	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	0	266.1	0	34.6	12.4	3.99	2.14	3.8	3.24
	Notional	0	316.1	0	19	12.7	2.78	4.63	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	0.2	172	0	23.1	13.9	3.94	2.07	3.8	3.24
	Notional	0	204.7	0	12.3	11.5	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	11.2	35.1	0.7	1.8	6.2	4.65	5.31	4.75	7.78
	Notional	13.9	42.4	1.4	2.5	15.4	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	27.1	163	2.1	11.8	3.4	3.52	3.84	3.57	5.67
	Notional	27.8	160.5	2.8	9.6	8.5	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	11.8	40.2	0.9	2.8	3.2	3.53	4.03	3.59	5.94
	Notional	15.7	37.2	1.6	2.2	6.9	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	28.2	57.5	2.2	3.8	2.1	3.54	4.25	3.64	6.19
	Notional	63.3	42	6.3	2.5	8	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	1.8	46	0.1	2.4	7	4.71	5.24	4.79	7.71
	Notional	3.3	42.5	0.3	2.5	15.5	2.78	4.63	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	0	207.4	0	27.9	15.3	3.94	2.07	3.8	3.24
	Notional	0	196.7	0	11.8	11.5	2.78	4.63	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	0	215.3	0	29.8	17.5	4.03	2.01	3.8	3.24
	Notional	0	209.8	0	12.6	12.9	2.78	4.63	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	13.8	153.2	1	20.3	12.3	3.89	2.1	3.8	3.24
	Notional	1.8	182.6	0.2	11	11.7	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	11.3	32.7	0.7	1.8	2.6	4.4	5.08	4.5	7.44
	Notional	7.1	34.7	0.7	2.1	6.5	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	1.7	43.5	0.1	2.6	6.8	4.07	4.7	4.17	6.87
	Notional	2.2	32.1	0.2	1.9	18.1	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	4.4	25.2	0.3	1.8	4.5	3.5	3.9	3.6	5.68
	Notional	7.4	28.3	0.7	1.7	12.9	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	18.7	125.4	0.9	8.8	3.1	5.5	3.95	5.59	5.82
	Notional	14.5	57.9	1.5	3.5	7.5	2.78	4.63	----	----

HVAC Systems Performance (cont.)										
System Type		Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEEF	Cool SSEER	Heat gen SEFF	Cool gen SEER
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	0.7	50.7	0	2.9	6.4	4.51	4.81	4.6	7.05
	Notional	0.7	49.4	0.1	3	14.7	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	12.8	51.3	0.8	2.7	3.1	4.71	5.25	4.78	7.73
	Notional	8.2	47.6	0.8	2.9	6.7	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	5.1	56	0.3	2.9	7.2	4.68	5.28	4.75	7.78
	Notional	6.4	58.1	0.6	3.5	14.7	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	4.6	45.3	0.4	3.2	4.1	3.47	3.9	3.54	5.72
	Notional	2.1	44.6	0.2	2.7	8.1	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	8.6	47	0.5	2.6	5.1	4.41	5.07	4.5	7.44
	Notional	12.2	44.5	1.2	2.7	11.7	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	5.8	115.7	0.5	8	2.8	3.48	3.99	3.55	5.86
	Notional	4.4	99.1	0.4	5.9	8.1	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	2	27.2	0.2	1.9	3.6	3.52	4.05	3.59	5.94
	Notional	4	33.7	0.4	2	9.7	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	7.8	31.2	0.6	2.3	3	3.55	3.86	3.6	5.68
	Notional	9.2	35.4	0.9	2.1	7.8	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	3.9	35.7	0.3	2.5	2.3	3.5	3.9	3.6	5.68
	Notional	2.2	39.1	0.2	2.3	6.2	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	2.1	40	0.2	2.8	3.4	3.45	4.02	3.55	5.86
	Notional	1	42.9	0.1	2.6	8.1	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	18.7	29.9	1.1	1.6	2.7	4.7	5.26	4.79	7.71
	Notional	7.6	34.8	0.8	2.1	6.5	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	25.1	20.4	1.5	1.1	2.7	4.69	5.27	4.78	7.73
	Notional	14	28.6	1.4	1.7	6.6	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	14.7	18.8	0.9	1	2.5	4.3	5.23	4.43	7.62
	Notional	13	24.9	1.3	1.5	8.8	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	10.6	21.3	0.6	1.1	2.8	4.67	5.28	4.78	7.73
	Notional	11.3	26	1.1	1.6	8.1	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	7.9	29.1	0.5	1.6	2.9	4.68	4.97	4.75	7.32
	Notional	8.8	41.6	0.9	2.5	7.8	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	1.6	60.9	0.1	4.1	2.8	3.56	4.15	3.64	6.07
	Notional	1.7	68.4	0.2	4.1	8.7	2.78	4.63	----	----

HVAC Systems Performance (cont.)										
System Type	Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	22.4	17.3	1.8	1.2	2.6	3.49	3.88	3.57	5.67
	Notional	26.4	25.6	2.6	1.5	7.2	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	5.3	104.6	0.4	7.3	2.3	3.54	4.01	3.64	5.84
	Notional	5.1	108	0.5	6.5	9.4	2.78	4.63	----	----
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	8.4	63	0.7	4.3	2.5	3.49	4.08	3.59	5.94
	Notional	7.5	68.9	0.8	4.1	8.6	2.78	4.63	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	0	220.3	0	29.6	14	3.94	2.07	3.8	3.24
	Notional	0	242.6	0	14.6	14.6	2.78	4.63	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	13.5	150.3	0.9	20.2	13.6	3.94	2.07	3.8	3.24
	Notional	1.5	182.1	0.1	10.9	12.8	2.78	4.63	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	0	203.8	0	27.4	14.1	3.94	2.07	3.8	3.24
	Notional	0	209	0	12.5	14.4	2.78	4.63	----	----
[ST] Constant volume system (fixed fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	0	209.1	0	28.9	15.9	4.03	2.01	3.8	3.24
	Notional	0	244.9	0	14.7	16.3	2.78	4.63	----	----
[ST] No Heating or Cooling										
	Actual	0	0	0	0	0	0	0	0	0
	Notional	0	0	0	0	0	0	0	----	----

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type