

Building services

The standard values listed below are minimum values for efficiencies and maximum values for SFPs. Refer to the Non-Domestic Building Services Compliance Guide for details.

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- UCL IOE: Rad_NV

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.84	-	0	0	-
Standard value	0.91*	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO
* Standard shown is for gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

2- Existing UCL IOE: FCU+Rad

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.84	3.9	0	2.2	0.7
Standard value	0.91*	3.9	N/A	1.6^	0.5
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO
* Standard shown is for gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

3- UCL IOE: existing radiators (Circulation)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.84	-	0	0	-
Standard value	0.91	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO

4- Existing UCL IOE: Rad+Extract

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.84	-	0	0	0.7
Standard value	0.91*	N/A	N/A	N/A	0.5
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO
* Standard shown is for gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

"No HWS in project, or hot water is provided by HVAC system"

Local mechanical ventilation, exhaust, and terminal units

ID	System type in Non-domestic Building Services Compliance Guide
A	Local supply or extract ventilation units serving a single area
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal supply and extract ventilation units serving a single room or zone with heating and heat recovery
E	Local supply and extract ventilation system serving a single area with heating and heat recovery
F	Other local ventilation units
G	Fan-assisted terminal VAV unit
H	Fan coil units
I	Zonal extract system where the fan is remote from the zone with grease filter

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	1.9	1.6	0.5	1.1	0.5	1	Zone	Standard
L9_ZC_E_Archive	-	-	-	-	-	-	-	0.8	-	-	N/A
L9_ZC_MR_E	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_Reference_E	-	-	-	-	-	-	-	0.8	-	-	N/A
L9_ZC_CO_E_03	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_E_02	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_E_04	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_E_06	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_E_05	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_TS_E_1	-	-	-	-	-	-	-	0.8	-	-	N/A
L9_ZC_CO_W_01	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_04	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_05	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_MR_W	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_06	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_07	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_08	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_09	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_02	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_03	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_CO_W_10	-	-	-	-	-	-	-	0.5	-	-	N/A
L9_ZC_TS_E_Music	-	-	-	-	-	-	-	0.8	-	-	N/A
L9_ZC_CO_E_01	-	-	-	-	-	-	-	0.5	-	-	N/A
L5_ZC_Kitchen	0.5	-	-	-	0.5	-	-	-	-	-	N/A
L9_ZC_WC_Female	0.5	-	-	-	0.5	-	-	-	-	-	N/A
L9_ZC_CC_I_02	-	-	0.5	-	-	-	-	-	-	-	N/A

General lighting and display lighting		Luminous efficacy [lm/W]		
Zone name		Luminaire	Lamp	Display lamp
Standard value		60	60	22
L5_XB_ELEC_I_01		51	-	-
L5_ZC_WS_E_02		51	-	-
L5_ZC_CO_E_01		51	-	-
L5_ZC_WS_E_03		51	-	-
L5_ZC_WS_E_05		51	-	-
L5_ZC_WS_E_04		51	-	-
L9_ZC_Store_E		51	-	-
L9_ZC_E_Archive		51	-	-
L9_ZC_MR_E		51	-	-
L9_ZC_Reference_E		51	-	-
L9_ZC_CO_E_03		51	-	-
L9_ZC_CO_E_02		51	-	-
L9_ZC_CO_E_04		51	-	-
L9_ZC_CO_E_06		51	-	-

General lighting and display lighting	Luminous efficacy [lm/W]			
Zone name	Luminaire	Lamp	Display lamp	General lighting [W]
Standard value	60	60	22	
L9_ZC_CO_E_05	51	-	-	167
L9_ZC_TS_E_1	51	-	-	584
L9_ZC_CO_W_01	51	-	-	290
L9_ZC_CO_W_04	51	-	-	290
L9_ZC_CO_W_05	51	-	-	290
L9_ZC_MR_W	51	-	-	290
L9_ZC_CO_W_06	51	-	-	217
L9_ZC_CO_W_07	51	-	-	217
L9_ZC_CO_W_08	51	-	-	217
L9_ZC_CO_W_09	51	-	-	217
L9_ZC_CO_W_02	51	-	-	160
L9_ZC_CO_W_03	51	-	-	160
L9_ZC_Store_W	51	-	-	19
L9_ZC_CO_W_10	51	-	-	217
L9_ZC_TS_E_Music	51	-	-	590
L9_ZC_CO_E_01	51	-	-	303
L5_ZC_CO_E_06	51	-	-	215
L5_ZC_CO_E_07	51	-	-	215
L5_ZC_CO_E_09	51	-	-	215
L5_ZC_CO_E_10	51	-	-	212
L5_ZC_CO_E_08	51	-	-	215
L5_ZC_CO_E_14	51	-	-	244
L5_ZC_CO_E_12	51	-	-	272
L5_ZC_CO_E_11	51	-	-	269
L5_ZC_CO_E_13	51	-	-	215
L5_ZC_CI_E	-	51	-	169
L5_ZC_CI_E_02	-	51	-	25
L5_ZC_Kitchen	-	51	-	99
L5_ZC_Lobby_Kitchen	-	51	-	15
L9_ZC_WC_Female	-	51	-	147
L9_ZC_CC_I_02	-	51	-	215
L9_ZC_Lobby_Toilet	-	51	-	15

Criterion 3: The spaces in the building should have appropriate passive control measures to limit solar gains

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L5_ZC_WS_E_02	NO (-80.2%)	NO
L5_ZC_CO_E_01	NO (-94.1%)	NO
L5_ZC_WS_E_03	NO (-80.2%)	NO
L5_ZC_WS_E_05	NO (-80.1%)	NO
L5_ZC_WS_E_04	NO (-80.2%)	NO
L9_ZC_E_Archive	N/A	N/A
L9_ZC_MR_E	NO (-44.6%)	NO
L9_ZC_Reference_E	NO (-99.7%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L9_ZC_CO_E_03	NO (-44.8%)	NO
L9_ZC_CO_E_02	NO (-44.8%)	NO
L9_ZC_CO_E_04	NO (-44.6%)	NO
L9_ZC_CO_E_06	NO (-68.4%)	NO
L9_ZC_CO_E_05	NO (-41.1%)	NO
L9_ZC_TS_E_1	NO (-46.5%)	NO
L9_ZC_CO_W_01	NO (-20.4%)	NO
L9_ZC_CO_W_04	NO (-14.6%)	NO
L9_ZC_CO_W_05	NO (-14.5%)	NO
L9_ZC_MR_W	NO (-14.3%)	NO
L9_ZC_CO_W_06	NO (-14.9%)	NO
L9_ZC_CO_W_07	NO (-15%)	NO
L9_ZC_CO_W_08	NO (-15.2%)	NO
L9_ZC_CO_W_09	NO (-15.9%)	NO
L9_ZC_CO_W_02	NO (-15.9%)	NO
L9_ZC_CO_W_03	NO (-15.4%)	NO
L9_ZC_CO_W_10	NO (-16.8%)	NO
L9_ZC_TS_E_Music	NO (-68%)	NO
L9_ZC_CO_E_01	NO (-81.3%)	NO
L5_ZC_CO_E_06	NO (-80.1%)	NO
L5_ZC_CO_E_07	NO (-79.5%)	NO
L5_ZC_CO_E_09	NO (-79.5%)	NO
L5_ZC_CO_E_10	NO (-79.1%)	NO
L5_ZC_CO_E_08	NO (-79.5%)	NO
L5_ZC_CO_E_14	NO (-94.6%)	NO
L5_ZC_CO_E_12	NO (-78.9%)	NO
L5_ZC_CO_E_11	NO (-79%)	NO
L5_ZC_CO_E_13	NO (-79.3%)	NO
L5_ZC_Kitchen	N/A	N/A

Criterion 4: The performance of the building, as built, should be consistent with the calculated BER

Separate submission

Criterion 5: The necessary provisions for enabling energy-efficient operation of the building should be in place

Separate submission

EPBD (Recast): Consideration of alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	NO
Is evidence of such assessment available as a separate submission?	NO
Are any such measures included in the proposed design?	NO