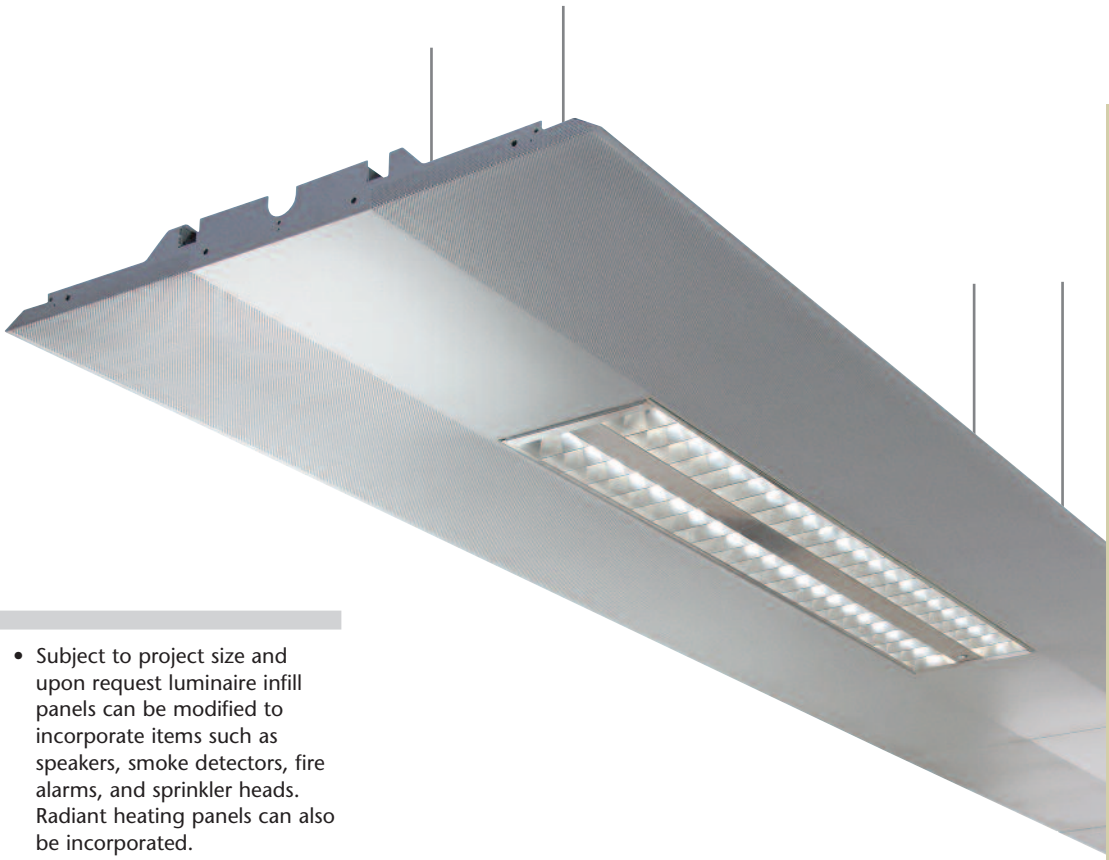
foil

Suspended: T5 fluorescent luminaire with acoustic panels

Foil is a suspended luminaire system. The incorporation of acoustic panels ensures that it is ideal for use in classrooms with solid ceilings. The chamfered low profile minimises visual intrusion. Conduits within the luminaire enable non-lighting services to be run through a continuous row of luminaires.



APPLICATION

- Universities, colleges or schools
- Offices
- Conference facilities

SPECIFICATION

- 2 x 21/28/35/39/49 or 54W T5 lamps all in 2.2m long sections.
- Twin cell louvre in semi specular zero iridescent MIRO 5 material.
- Light distribution: 80% down and 20% up. Up-light designed to give an asymmetric throw to aid vertical illuminance.
- Chamfered 0.6m or 0.8m wide, 2.2m long steel bodies painted Silver (RAL9006) or White (RAL9010), 30% gloss.
- Infill panels available in 400 and 800mm lengths
- Perforated side panels of luminaires and infill panels contain 30mm or 48mm acoustic absorbing material
- Twin adjustable stainless steel suspension kits 1.5m maximum drop. The recommended suspension range for best acoustic performance and avoidance of lighting hot spots on the ceiling is between 0.4 – 1.0m below the soffit.
- 3 segregated cable conduits. Central one for lamp control, outer ones for data, or power
- Includes 6 laser cut conduit entry caps
- Subject to project size and upon request luminaire infill panels can be modified to incorporate items such as speakers, smoke detectors, fire alarms, and sprinkler heads. Radiant heating panels can also be incorporated.
- High frequency and DSI dimming control gear as standard
- 6 way piano block termination
- 3 hour self contained emergency version.
- Lamps to be ordered separately

Options

- Easytest – Integral self test emergency
- Comet - Addressable emergency
- Command 3 intelligent integrated luminaire control system

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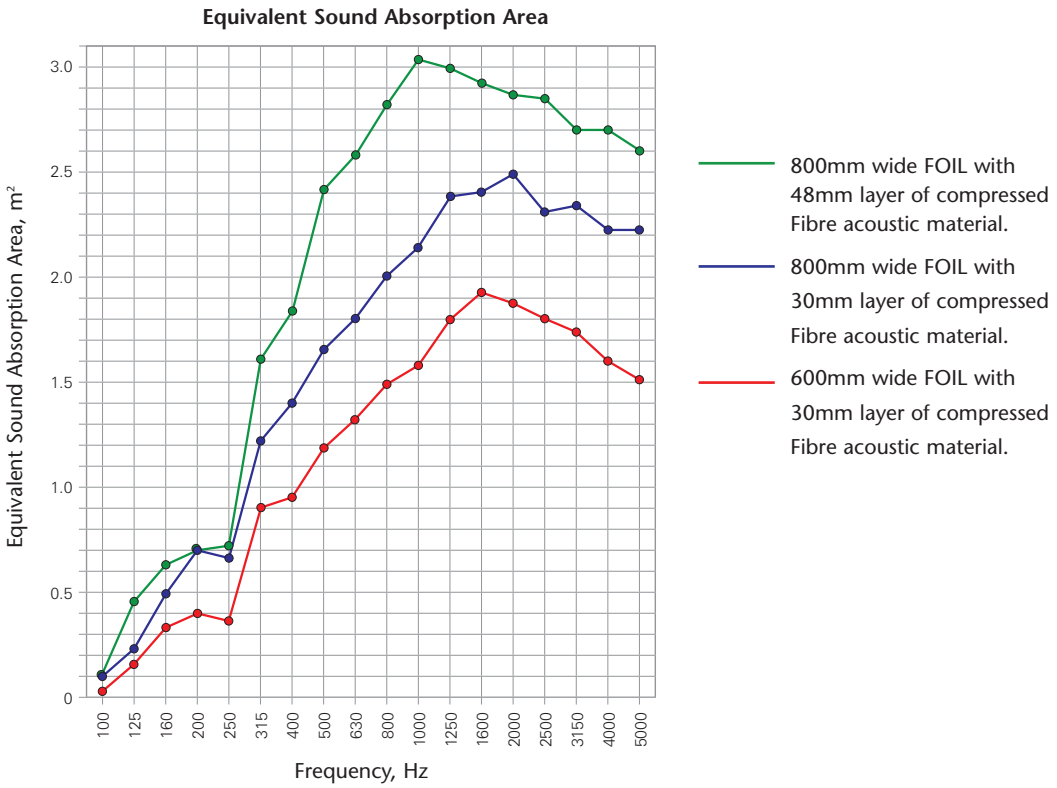
ACOUSTIC PERFORMANCE

A typical 60m² classroom installation would use 9off FOIL luminaires, infil panels maybe used to extend runs or centralize luminaires within the space.

If these luminaires are used in a carpeted classroom, we are able to use the data shown on this page to demonstrate that the 800mm FOIL with the 30mm absorbers would allow the room to achieve between 90% and 100% of the acoustic requirement needed to reach a reverberation time of <0.8 seconds.

When the acoustic contribution of other materials in the space is included (pin-boards, ductwork cladding etc), this should be sufficient to eliminate the need for acoustic wall linings.



800mm wide FOIL with 48mm layer of compressed Fibre acoustic material.

Freq Hz	T1 sec	T2 sec	Equivalent Sound Absorption Area, m²
50*	4.59	3.99	0.4
63*	4.66	3.37	1.0
80*	3.94	3.59	0.3
100	6.17	5.83	0.1
125	6.75	5.40	0.4
160	6.46	4.83	0.6
200	6.94	4.94	0.7
250	7.03	4.98	0.7
315	6.87	3.61	1.6
400	5.92	3.13	1.8
500	5.26	2.58	2.4
630	5.12	2.46	2.6
800	5.33	2.39	2.8
1000	5.62	2.34	3.0
1250	5.56	2.34	3.0
1600	5.13	2.27	2.9
2000	4.55	2.15	2.9
2500	3.98	1.99	2.9
3150	3.33	1.81	2.7
4000	2.69	1.56	2.7
5000	2.17	1.34	2.6
6300*	1.59	1.07	2.4
8000*	1.21	0.86	2.3
10000*	0.91	0.66	2.6

800mm wide FOIL with 30mm layer of compressed Fibre acoustic material.

Freq Hz	T1 sec	T2 sec	Equivalent Sound Absorption Area, m²
50*	4.59	4.16	0.3
63*	4.66	2.94	1.5
80*	3.94	3.40	0.5
100	6.17	5.86	0.1
125	6.75	5.98	0.2
160	6.46	5.11	0.5
200	6.94	4.95	0.7
250	7.03	5.09	0.7
315	6.87	4.08	1.2
400	5.92	3.53	1.4
500	5.26	3.08	1.7
630	5.12	2.92	1.8
800	5.33	2.84	2.0
1000	5.62	2.82	2.1
1250	5.56	2.64	2.4
1600	5.13	2.50	2.4
2000	4.55	2.28	2.5
2500	3.98	2.15	2.3
3150	3.33	1.88	2.3
4000	2.69	1.62	2.2
5000	2.17	1.35	2.2
6300*	1.59	1.07	2.0
8000*	1.21	0.82	2.3
10000*	0.91	0.64	2.4

600mm wide FOIL with 30mm layer of compressed Fibre acoustic material.

Freq Hz	T1 sec	T2 sec	Equivalent Sound Absorption Area, m²
50*	4.59	4.61	-0.0
63*	4.66	3.69	0.7
80*	3.94	3.61	0.3
100	6.17	6.05	0.0
125	6.75	6.18	0.2
160	6.46	5.48	0.3
200	6.94	5.66	0.4
250	7.03	5.82	0.4
315	6.87	4.57	0.9
400	5.92	4.07	1.0
500	5.26	3.50	1.2
630	5.12	3.31	1.3
800	5.33	2.23	1.5
1000	5.62	3.24	1.6
1250	5.56	3.02	1.8
1600	5.13	2.77	1.9
2000	4.55	2.57	1.9
2500	3.98	2.35	1.8
3150	3.33	2.06	1.7
4000	2.69	1.75	1.6
5000	2.17	1.45	1.5
6300*	1.59	1.11	1.4
8000*	1.21	0.85	1.6
10000*	0.91	0.64	2.3

Empty Room:

Temperature:	16.2°C
Humidity:	55%RH
Pressure:	1008 mbar

Room with Sample:

Temperature:	16.2°C
Humidity:	55%RH
Pressure:	1008 mbar

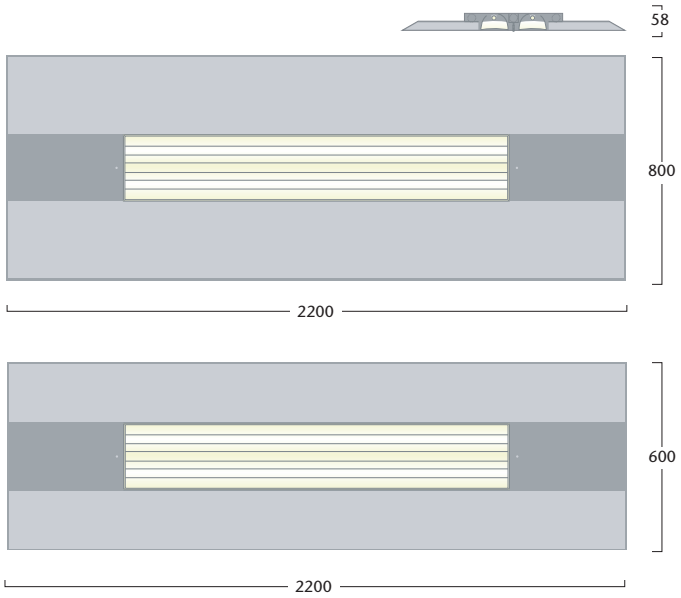
* Denotes frequencies outside the range covered by BS EN ISO 354:2003

T1, empty room reverberation time

T2, room reverberation time with sample

800mm suspension height

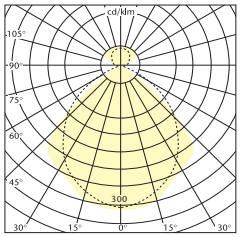
DIMENSIONS



PHOTOMETRY

FOIL

TWIN CELL LOUVRE
2 x 54W T5 Lamp



- LOR = 77.5%
- SHR MAX = 1.65

UTILISATION FACTORS UF(F) SHR NOM 1.50

Room Reflectance Room Index

C	W	F	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.51	0.57	0.62	0.65	0.69	0.72	0.74	0.76	0.78
0.50	0.30	0.20	0.44	0.50	0.54	0.58	0.62	0.65	0.67	0.69	0.71
0.00	0.00	0.00	0.38	0.42	0.46	0.48	0.52	0.54	0.55	0.57	0.58

LAMP PERFORMANCE MATRIX

WATTAGE	IL@25°C	LAMP LIFE
1 x 21W T5	1900	20,000
1 x 28W T5	2600	20,000
1 x 35W T5	3300	20,000
1 x 39W T5	3100	20,000
1 x 49W T5	4300	20,000
1 x 54W T5	4450	20,000

ORDER CODES – FOIL TWIN CELL LOUVRE

T5 FLUORESCENT LUMINAIRE WITH ACOUSTIC PANELS

LAMP LESS SUPPLIED	COLOUR	HIGH FREQUENCY
2 x 21W T5	SILVER	**FLL830H221S**
2 x 28W T5	SILVER	**FLL830H228S**
2 x 35W T5	SILVER	**FLL830H235S**
2 x 39W T5	SILVER	**FLL830H239S**
2 x 49W T5	SILVER	**FLL830H249S**
2 x 54W T5	SILVER	**FLL830H254S**
400mm long infill	SILVER	**FLL830INF400S**
800mm long infill	SILVER	**FLL830INF800S**
End cap 30mm acoustic absorber, 800mm wide	SILVER	**FLL830ECS**
End cap 48mm acoustic absorber, 800mm wide	SILVER	**FLL848ECS**
Wire Suspension Kit for one luminaire suppled separately	Full suspension assembly	**FLLSUSKIT**
Bracket set for one luminaire	Drop rods to be supplied by others	**FLLBRAKIT**

COLOUR – *Repalce the suffix S in the above order codes*

W *White i.e. FLL830H221**W***

48MM ACOUSTIC ABSORPTION MATERIAL – *Replace the 30 (5th and 6th) digits in the above codes*

48 *48mm thick acoustic absorption material i.e. FLL8**48**H221S*

600MM WIDE RAFT – *Replace the 8 (4th digit) in the above part codes*

6 *600mm wide raft i.e. FLL**6**30H221S*

EMERGENCY *Add suffix to order codes above*

EMIN 3 hour integral emergency, *i.e. FLL830H221S**EMIN***

EASYTEST OPTION *Add suffix to luminaire order codes above*

/ET Easytest self test emergency, *i.e. FLL830H221S/**ET***

Dimming Replace **H** with

D DSI Dimming, i.e. *FLL830**D**221S*

C Command 3 Sensor, i.e. *FLL830**C**221S*

UPON REQUEST DEPENDING ON PROJECT SIZE

INFILL APERTURES

Apertures cut as required to house sprinkler heads, smoke alarms etc.

To specify state:

Suspended T5 lighting, acoustic and integrated services 600 or 800mm raft with concealed 30 or 48mm thick acoustic absorbers behind perforated side panels in a shallow chamfered steel body. 3 segregated 28m x 28mm wiring channels, Miro 5 zero iridescent louvres – as Whitecroft Lighting FOIL

QuickLink FOIL Go