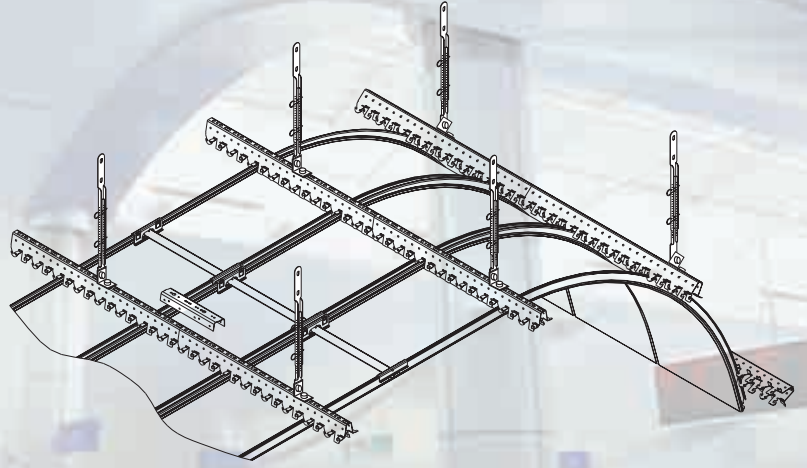


LUXALON[®]
ARCHITECTURAL PRODUCTS

CURVED PANEL 300C SYSTEM

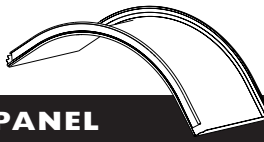


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LUXALON[®]
A HunterDouglas[®] PRODUCT

CURVED PANEL



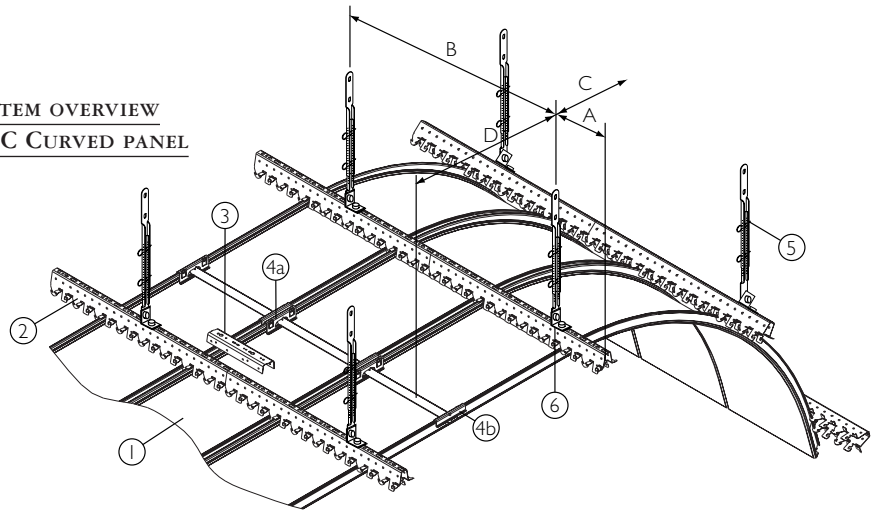
SHORT SYSTEM DESCRIPTION

The 300 mm wide panels (1) are made to measure and curved with a maximum standard length (L) of 6000 mm. They are fixed to the standard 300C carrier (2) by hanging one side of the panels on the prongs of the carrier and by then pressing the other side home with an upward movement. The aluminium panels are recycable, lightweight and strong. The panel carrier is black, made of 1.0 mm thick galvanised steel or 0.95 mm thick aluminium and is provided with prongs to accommodate the panels. Integrated locking clips onto the carrier (see 'standard construction details') can be used to lock the panels if desired. Carriers have a standard length of 5000 mm and are connected by using the carrier splice (3). Panels are connected in length by applying a panel end connector (4) on cross sections of four panels (or two panels at the edge), still allowing easy demounting and offering the additional possibility of creating swing-down panels (see 'plenum accessibility'). Nonius hanger (5) and fixing pieces (6) provide for the suspension. For trimming of the curved and straight edges, various custom solutions can be applied (see 'edge trimming options').

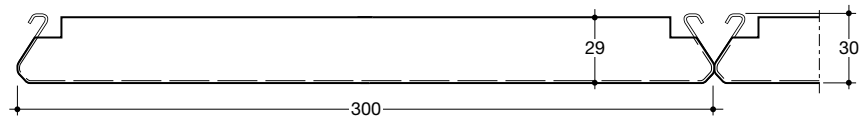
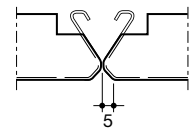
PRACTICAL APPLICATIONS

- Standard product and production process, providing for an extremely cost effective curved metal ceiling solution
- Curved panels, allowing concave or convex or undulating ceilings with a minimum radius of 1000 mm, providing visual effects and the practical accommodation of varying heights
- Long and wide panel ceilings, length made to measure up to 6000 mm, allowing swift installation (especially in larger areas) and reducing the need for joints to a minimum
- Smooth, closed ceiling surface, using a concealed carrier suspension system, allowing the chosen panel curve to determine the appearance of the ceiling
- The same easy panel-on-carrier suspension system as for standard 300C ceilings, allowing easy transition to straight ceilings using the same panel
- Smart panel end connector, accommodating a rigid connection of panels in various positions, but still allowing easy demounting by hand and offering the extra possibility of having swing-down panels for full and very easy plenum access
- Alternatively, a curved (segmented) carrier 300C system is available, allowing the ceiling to be curved in the other direction

SYSTEM OVERVIEW 300C CURVED PANEL



- 1 = curved 300C panel
- 2 = carrier
- 3 = carrier splice
- 4a = panel end connector
- 4b = panel end connector (cut in half)
- 5 = nonius hanger
- 6 = fixing piece



MAXIMUM SPANS

Panel type	Carrier Span				Panel Span	
	Steel 1.0		Alu 0.95		C	D
	A	B*	A	B*		
Alu 0.7	300	1500-2000	300	1000-1450	750	400
Steel 0.6	300	1100-1600	N.A.	N.A.	750	400

* Depending on radius: min. span for radius 1000 mm, max. span for radius > 50 meter

DIMENSIONS & WEIGHTS*

Panel	Width	Min. length	Max. length	Weight/m ² *
Alu 0.7	300	1000	6000	2.9-4.5 kg
Steel 0.6				6.7-10.4 kg

Panels from 250-1000 mm and > 6000 mm available on request.

* Min. weight for flat panels; max. weight for radius 1000 mm (see below conversion calculation)

MATERIAL REQUIREMENT PER M²

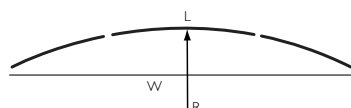
Depends on execution of curve and ceiling. For a fictive flat ceiling the material requirement would be:

	Unit	300C Curved Panel system
Panels	lm	3.33 (0.55 - 3.33 pcs)
Carriers	lm	0.7 - 2.0*
Carrier splices	pcs	0.14 - 0.2
Panelendconnectors	pcs	0.55 - 3.33*
Nonius hangers	pcs	0.35 - 2.0**

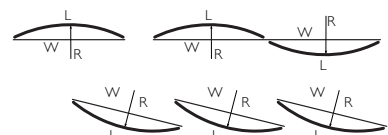
* Depending on panellength from 6 to 1 meter **Depending on radius and carriertype

Conversion from flat to curved: Above m² ceiling material (vs. m² floorspace) and also the weight per m² increases from 1 to 55% using following calculation:
extra material % = L/W (calculation of L see next page)

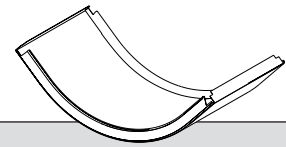
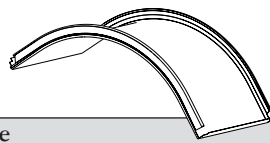
I: Multiple panel curved ceilings:



II: Single panel curved ceilings:



AVAILABLE CURVED PANEL TYPES

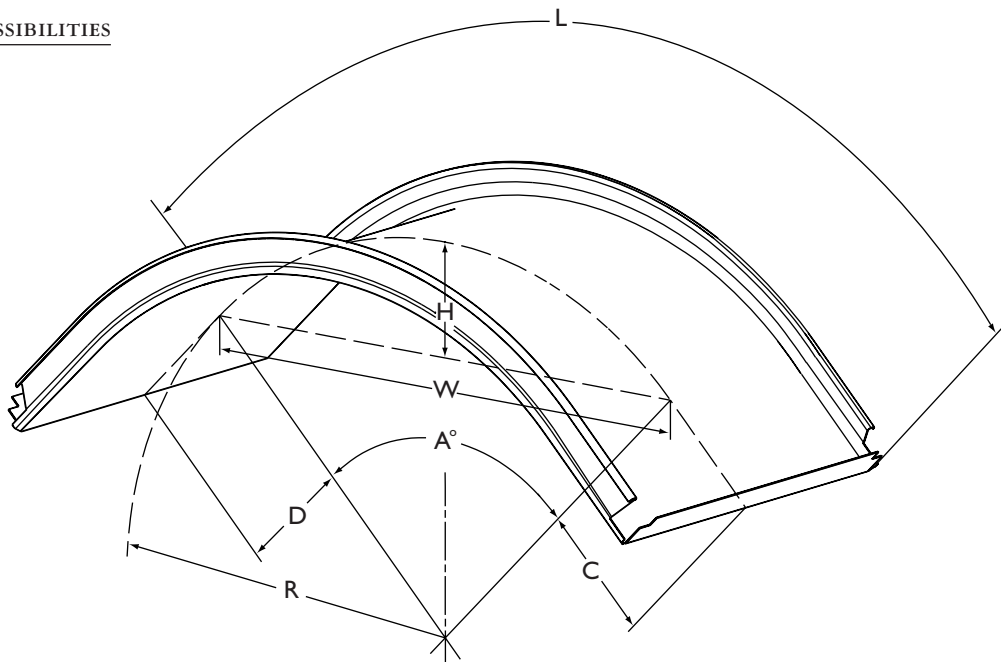


	Concave	Convex
Continuous curve		
Curve + straight end(s)		

Standard minimum radius for all curves approx. 1000 mm (< 1000 mm on request).

* Convex curves down to 50 meter radius also achievable with straight panels incl. side perforation, curving forced by suspension system.

CURVING POSSIBILITIES

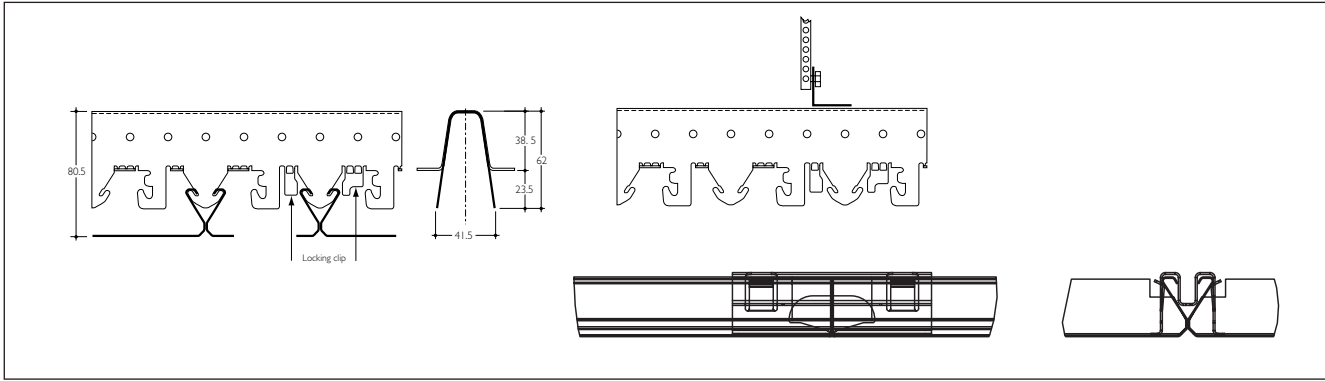


RATIO'S	CONCAVE (AS DRAWN)	CONVEX
	$L = C + (0.017453 \times (R+4.2) \times A^\circ) + D$	$L = C + (0.017453 \times (R-4.2) \times A^\circ) + D$
	$H = 0.5 W \times \text{tg} (A^\circ/4)$	$H = 0.5 W \times \text{tg} (A^\circ/4)$
	$W = 2R \times \sin (A^\circ/2)$	$W = 2R \times \sin (A^\circ/2)$

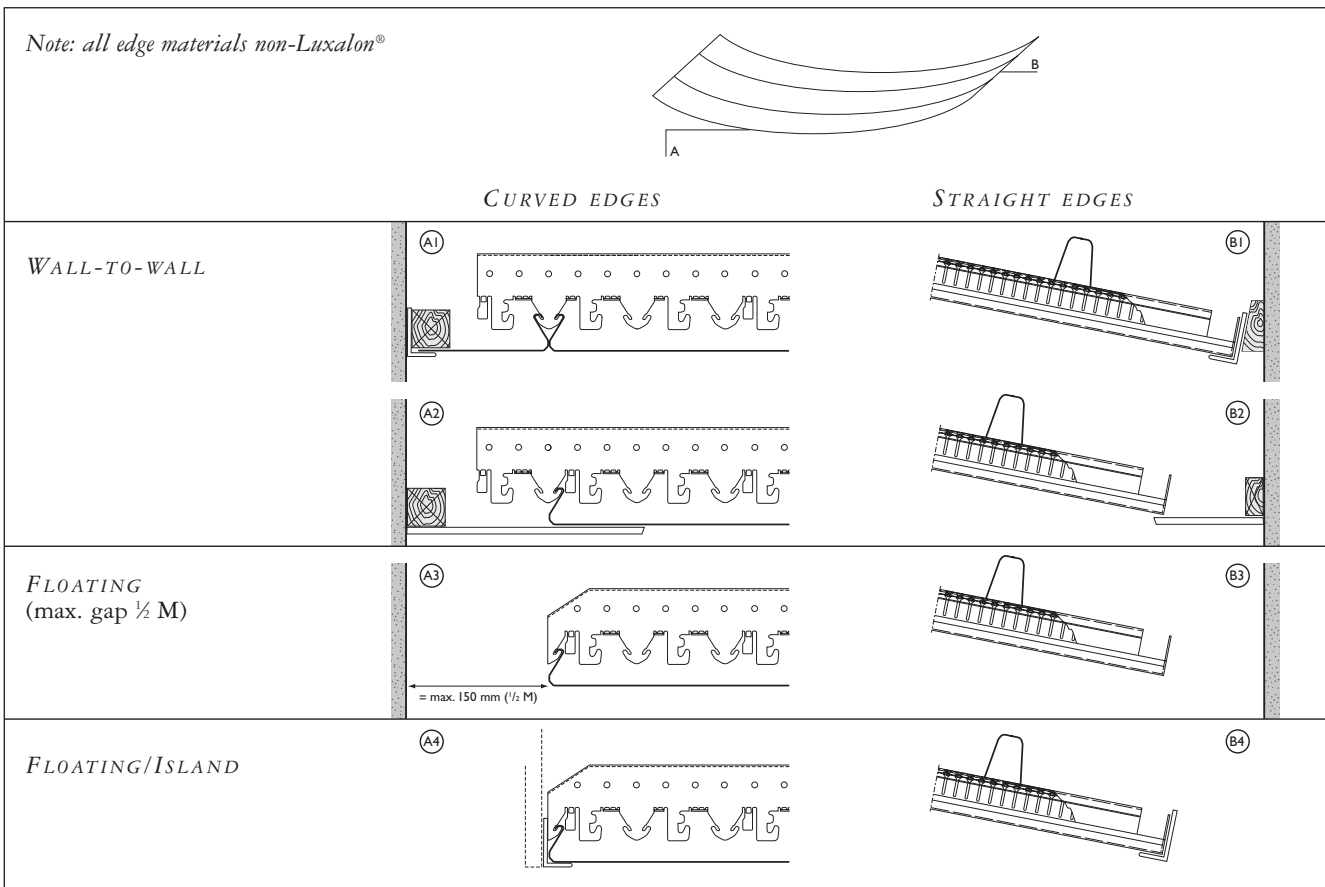
Legend	Min/Max Values
L = Length of straight panel	Lmin = 1 mtr (std)
C/D* = Length of straight ends	Lmax = 6 mtr (std)
R = Radius	C/Dmin* = 200 mm
A° = Angle (alpha degrees)	Rmin = 1000 mm
H = Height of curved section	
W = Width of curved section	

* Curved panels feature straight ends of min. 200 mm. Multiple panel curved ceilings with an approx. radius of 5000 mm or less not advisable.

STANDARD CONSTRUCTION DETAILS



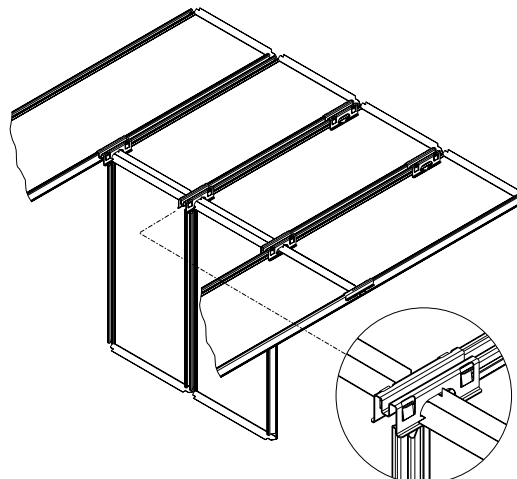
EDGE TRIMMING OPTIONS



PLENUM ACCESSIBILITY

The 300C Carrier System allows for easy demounting of the panels. The panels are fixed to a carrier allowing all panels to be removed individually. Panels can be removed by using a basic flat bladed tool.

Panel end connectors applied the whole ceiling at the cross section of four panels (or on two panels at the edge) also provide the built-in possibility of having dedicated swing-down panels where required.

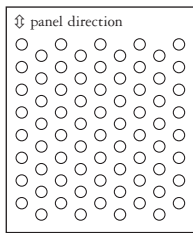


ACOUSTIC PERFORMANCE

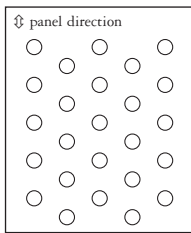
In order to improve interior sound control, the Luxalon® 300C Wide Panel Ceiling panels can be supplied perforated with a \varnothing of 1.5 or 2.0 mm (open area of 15% and 23%). As a standard feature, perforated panels can be supplied with a sound-absorbing non-woven tissue glued into the panel for enhanced acoustical performance. Acoustics can be further affected by the choice of the radius: the increase in material surface quantity (see conversion table) can result in up to 55% improvement of absorption surface.

- PERFORATION OPTIONS

300C Carrier panels are available in 2 standard perforation patterns:

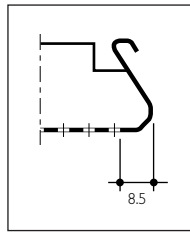


\varnothing 1.5 mm
23% open area
 Δ 3 mm

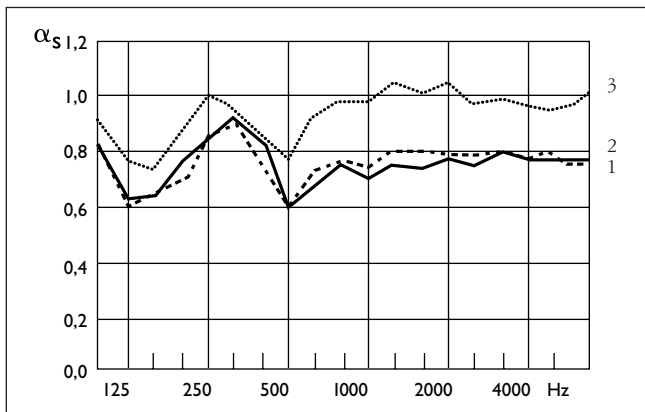


\varnothing 2.0 mm
15% open area
 Δ 5 mm

Note: Panels have a nominal plain border of 8.5 mm along the longitudinal panel direction in order to assure maximum flatness and product stability.



- SOUND ABSORPTION DATA



α_s = sound absorption degree:
an absorption of 1.0 indicates a 100% absorption of sound.

- CURVE 1 (\varnothing 2.0 MM)

2.0 mm perforated 300C panels, provided with 0.2 mm thick, black non-woven acoustic tissue glued over the whole perforated area. Plenum depth is 400 mm.

- CURVE 2 (\varnothing 1.5 MM)

\varnothing 1.5 mm perforated 300C panels, provided with 0.2 mm thick, black non-woven acoustic tissue glued over the whole perforated area. Plenum depth is 400 mm.

- CURVE 3 (\varnothing 1.5 MM)

\varnothing 1.5 mm perforated 300C panels, provided with 0.2 mm thick, black non-woven acoustic tissue glued over the whole perforated area plus 25 mm thick mineral wool pad with a density of 16 kg/m³. Plenum depth is 400 mm.

These 300C Wide Panel ceilings were tested by TNO Delft (The Netherlands), an independent official testing institute. Report no.: TPD-HAG-RPT-94-0037.

Freq. Hz.	125	250	500	1000	2000	4000
Curve 1	0.61	0.85	0.59	0.75	0.78	0.76
Curve 2	0.62	0.82	0.60	0.70	0.78	0.77
Curve 3	0.76	0.99	0.75	0.97	1.05	0.95

MATERIAL SPECIFICATIONS

- BASE MATERIAL

Luxalon® 300C panels are rollformed from 0.7 mm thick pre-painted stove enamelled aluminium strip or from 0.6 mm thick stove enamelled galvanised steel strip.

- COATING

The tough and durable 2-layer polyester finish in a nominal thickness of 20 microns, is stove enamelled in a continuous coil-coating process ensuring uniform coating thickness and absolute adhesion.

- LUXALON® COLOUR RANGE

The standard Luxalon® colour range for 300C includes several different colours and finishes. See Luxalon® colour chart. Any other (RAL or NCS) colour is available on request.

- FIRE BEHAVIOUR

A fire resistant ceiling can be constructed utilizing steel panels and steel carriers. The 300C ceiling has been tested on fire resistancy in accordance to British standard, BS476: part 23: 1987: clause 5, resulting in a fire resistance of 132 minutes and to the German DIN 4102, part 2 rating F30 AB. Test results are available on request.

For information on the system construction, please contact your Luxalon® supplier.

LUXALON® CURVED PANEL 300C CEILING SPECIFICATION

PART 1. CURVED 300C SYSTEM GENERAL

1.1 INTRODUCTION

Supply and fix Luxalon® Curved Panel 300C Ceiling System as manufactured by Hunter Douglas Architectural Products.

1.2 DESCRIPTION OF THE SYSTEM

The system will consist of curved panels fixed to an adjustable suspension system allowing all individual panels to be removed by using a basic flat bladed tool, also allowing all panels to have swing-down functionality.

PART 2. PRODUCT

_____ m² Luxalon® Curved Panel 300C Ceiling consisting of:

2.1 PANELS:

Panels to be pre-rollformed from 0.7 mm thick stove enamelled aluminium strip/0.6 mm thick stove enamelled galvanised steel strip, plain/perforated with/without non-woven acoustic textile. The 29 mm high upstands at the ends to give enhanced rigidity. The 300 mm wide panels to feature 5 mm bevelled edges to form visually closed V-groove joints.

Panels to be curved concave/convex featuring straight ends with a maximum flat distance of approx. 200 mm. Curved panel ceiling optionally to be connected and visually proceeding in length direction with identical but straight panel ceiling.

Panels to be manufactured from prepainted, stove enamelled, alloy EN-AW-3005 or equivalent (according to EN 1396 and ECCA). All curved panels to have exact and identical radius and length measurements as indicated in drawing (manufacturer availability minimum radius 1000 mm and lengths 1000-6000 mm, on request 250-1000 mm and > 6000 mm).

Panels to be rigidly connected and correctly positioned by applying panel end connectors on the cross section of 4 panels (or on 2 panels at the edge). Panel end connector to allow for easy demounting of the panels and also to allow for dedicated swing-down panels where required.

2.2 SUSPENSION

Rows of 1.0 Fe/0.95 Alu rollformed carriers shall be installed at _____ centre on centre (system maximum up to ... mm) by means of rigid suspensions at a distance of _____, centre on centre. Carriers will be joined by means of carrier splices. Carriers to include integrated locking clips for locking the panels if desired.

PART 3. ADDITIONAL SPECIFICATIONS

3.1 PERIMETER PROFILES

- Custom solution, non-Luxalon® materials.

3.2 PERFORATIONS

Manufacturer shall supply all 300C Carrier panels with following perforation specifications:

- Ø 1.5 mm, Δ 3 mm, open area 23%
- Ø 2.0 mm, Δ 5 mm, open area 15%

Perforated panels to have a nominal plain border of 8.5 mm along the longitudinal panel direction to assure maximum flatness and product stability.

3.3 ACOUSTICS

Manufacturer shall supply acoustic non-woven tissue, thickness 0.2 mm and factory applied inside the panels. Alternatively the installer can place individual, PE-wrapped mineral wool pads.

3.4 COATING

Architect will make a colour selection from the standard Hunter Douglas colour range for Luxalon® 300C Wide panels code no. _____ or a special colour will be made to match.

The coating will consist of a tough and durable 2-layer polyester finish in nominal thickness of 20 microns, applied in a continuous coil-coating process ensuring uniform coating and absolute adhesion.

3.5 INSTALLATION

All materials shall be installed in strict compliance with all local codes, ordinances and manufacturers recommendations including specific additional requirements as may be called for in the specifications or shown on the drawings.

LUXALON® CEILING SYSTEMS

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