Membrane Light Transmission

Total luminous flux transmittance, measured. The number to design a backlit ceiling to.

RESULTS

Material	Diffused	Directional
Translucent, Variant 1	**42.0% / 42.0%**	49.2% / 49.6%
Translucent, Variant 2	41.2% / 41.3%	48.2% / 48.7%
Transparent	70.5% / 69.4%	96.1% / 85.2%

Two figures per cell: measured through the top face and the bottom face. Samples were 30 x 30 cm, stretched on aluminium frames.

TEST DETAILS

Laboratory	Poznan University of Technology, Institute of Electrical and Electronics Engineering, Department of Lighting Technology and Electrothermics
Method	CIE 130-1998, Practical methods for the measurement of reflectance and transmittance
Report	0212/PRJG/0630, dated 2024-12-06
Engineer	Krzysztof Wandachowicz, PhD DSc Eng.
Material	TEQTUM EURO membrane, the material we install. Commissioned by the membrane manufacturer, not by Eco Ceiling Systems.

WHICH NUMBER TO DESIGN TO

For a backlit or luminous ceiling, use the DIFFUSED figure of 42%. That is the number that matters over an LED array.

The transparent material passes far more light at 70.5% diffused, but it has a strong directional component, so individual diodes stay visible as points. The translucent material scatters almost identically in both directions, which is exactly why its transmission is lower and exactly why it hides the array and gives one even glowing plane. LED output is specified up to compensate. That is normal luminous ceiling design, not a workaround.

PLEASE READ THIS AS WHAT IT IS

> This is a laboratory TEST REPORT, not a certification listing. If a specification asks for a certificate in the compliance sense, this is a different class of document and we will say so.
>
> We hold no LM-79, LM-80 or TM-21 data and no IES photometric files. We publish no lumen, lux, footcandle or efficacy figure for a finished assembly. Where a project needs a light level, we build a mockup at the real cavity depth and the lighting designer meters it.