

Standard Pioneer versus Energy Star Pioneer

The reported information below is done in accordance with ASTM E 1980-01. The comparative data is based upon an ambient air temperature of 37° C. The highlighted numbers represent the Solar Reflectance Index and product surface temperatures.

ASTM E1980-01 Solar Reflectance Index Calculator for Low-Slope Roofing			
Product Colour	STANDARD PIONEER		
Thermal emittance=	0.850		
TSR=	0.065		
Solar Absorbance=	0.935		
Convective coefficient=	Wind Condition		
	Low	Medium	High
	5	12	30
X=	0.959	0.942	0.927
SRI=	-2.75	-0.65	1.21
Standard solar conditions Solar Flux=1000 W/m2 Ambient Air Temp=310K (37C) Ambient Sky Temp=300K (27C) No conductive heat transfer			
Low Slope Roofing Temperatures for above standard solar conditions			
Surface Temperature (K)=	378	356	334
Surface Temperature (C)=	105	83	61
Surface Temperature (F)=	220	181	142

ASTM E1980-01 Solar Reflectance Index Calculator for Low-Slope Roofing			
Product Colour	ENERGY STAR PIONEER		
Thermal emittance=	0.900		
TSR=	0.285		
Solar Absorbance=	0.715		
Convective coefficient=	Wind Condition		
	Low	Medium	High
	5	12	30
X=	0.701	0.697	0.693
SRI=	29.69	30.19	30.65
Standard solar conditions Solar Flux=1000 W/m2 Ambient Air Temp=310K (37C) Ambient Sky Temp=300K (27C) No conductive heat transfer			
Low Slope Roofing Temperatures for above standard solar conditions			
Surface Temperature (K)=	360	344	328
Surface Temperature (C)=	87	71	55
Surface Temperature (F)=	189	160	131