

# Night Vision Case Study

Embarcadero Center, San Francisco, California

Climate Zone 3

345,000 sq ft installation of Night Vision 25

Payback period - Less than 1 year

Customer Issues:

- High energy costs and consumption
- Tenant comfort issues due to direct sun



## Product Performance & Technical Data

Glass Type (All 1/4")	Film Type	Visible Light			Total Solar Energy Rejected	Solar Heat Gain Coefficient	U Value	Solar Heat Reduction	UV Light Rejected	Glare Reduction	Luminous Efficacy
		Reflected (interior)	Reflected (exterior)	Transmitted							
Clear	Night Vision 15	11%	38%	15%	72%	0.28	0.98	66%	99%	83%	0.5
	Night Vision 25	7%	19%	24%	61%	0.39	1.00	52%	99%	73%	0.6
	Night Vision 35	7%	13%	36%	52%	0.48	1.03	41%	99%	59%	0.7
Tinted	Night Vision 15	11%	16%	9%	70%	0.30	0.98	52%	99%	82%	0.3
	Night Vision 25	7%	10%	14%	64%	0.36	1.00	43%	99%	74%	0.4
	Night Vision 35	6%	8%	22%	58%	0.42	1.03	33%	99%	58%	0.5
Double Clear	Night Vision 15	11%	39%	14%	60%	0.40	0.46	43%	99%	82%	0.4
	Night Vision 25	8%	24%	22%	51%	0.49	0.47	29%	99%	72%	0.4
	Night Vision 35	8%	19%	32%	45%	0.55	0.47	21%	99%	60%	0.6
Double Tinted	Night Vision 15	11%	17%	8%	68%	0.32	0.46	37%	99%	83%	0.3
	Night Vision 25	8%	12%	13%	63%	0.37	0.47	27%	99%	73%	0.4
	Night Vision 35	8%	10%	19%	59%	0.41	0.47	19%	99%	60%	0.5

### LEED Certification

Window films may be used towards the following LEED credits:

- SS-8
- EA-1
- MR 1.1-1.2
- MR 5.1-5.2
- EQ-7.1
- EQ-7.2
- EQ-8.1-8.2
- ID

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### 3M Renewable Energy Division Window Films

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