

2025 California Energy Code

Mandatory and Prescriptive Cool Roof Requirements

Effective January 1, 2026

IMPORTANT: This chart is a summary of the cool roof code requirements in the 2025 Energy Code the CRRC has provided for reference. Please refer to the [Energy Code](#) for the compliance requirements.

Section		Construction Type	Occupancy Type	Slope	Climate Zone	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)	Notes																				
10-113(a)	Mandatory	Product Labeling	All	All	See below	See below	See below	See below	Every roofing product installed in construction to take compliance credit or meet the prescriptive requirements for reflectance and emittance shall have a clearly visible packaging label that lists the emittance and the initial and 3-year aged solar reflectance, or a CRRC Rapid Rating for solar reflectance, tested in accordance with the CRRC-1 Program.																				
10-113(b)	Mandatory	Product Rating	All	All	See below	See below	See below	See below	Every roofing product installed in construction to take compliance credit or meet the prescriptive requirements for reflectance and emittance shall be rated by CRRC.																				
110.8(i)1-4	Mandatory	Insulation, Roofing Products & Radiant Barriers	All	All	See below	See below	See below	See below	<p>SRI calculations shall be based on approach I from Section 6.1.1 of E1980 using only equations 1 and 3 and a moderate wind velocity of 2-6 m/s</p> <p>Exception 1 to Section 110.8(i)1: Roofing products that are not certified according to Section 10-113 shall assume the following default aged solar reflectance/thermal emittance values:</p> <p>A. For asphalt shingles: 0.08/0.75</p> <p>B. For all other roofing products: 0.10/0.75</p> <p>See code for additional exceptions</p> <p>Additional requirements for liquid-applied roof coatings</p>																				
140.3(a)1Aia	Prescriptive	New Construction	Nonresidential	Low Slope	Zones ALL	0.63	0.75	75	<p>Exception 1 to Section 140.3(a)1Aia: Wood-framed roofs in climate zones 3 and 5 are exempt from the requirements of Section 140.3(a)1Aia if the roof assembly has a U-factor of 0.034 or lower. Exception2 to Section 140.3(a)1Aia: Roof constructions with a weight of at least 25 lb/ft² over the roof membrane are exempt from the requirements of Section 140.3(a)1Aia. Exception 3 to Section 140.3(a)1Aia: An aged solar reflectance less than 0.63 is allowed provided the maximum roof/ceiling U-factor in Table 140.3 is not exceeded.</p> <p>TABLE 140.3 ROOF/CEILING INSULATION TRADEOFF FOR AGED SOLAR REFLECTANCE – NONRESIDENTIAL BUILDINGS</p> <table border="1"> <thead> <tr> <th>Aged Solar Reflectance</th> <th>Metal Building Climate Zone 1-16 U-factor</th> <th>Wood framed and Other Climate Zone 6 - 8 U-factor</th> <th>Wood Framed and Other All Other Climate Zones U-factor</th> </tr> </thead> <tbody> <tr> <td>0.62-0.56</td><td>0.038</td><td>0.045</td><td>0.032</td></tr> <tr> <td>0.55-0.46</td><td>0.035</td><td>0.042</td><td>0.030</td></tr> <tr> <td>0.45-0.36</td><td>0.033</td><td>0.039</td><td>0.029</td></tr> <tr> <td>0.35-0.25</td><td>0.031</td><td>0.037</td><td>0.028</td></tr> </tbody> </table>	Aged Solar Reflectance	Metal Building Climate Zone 1-16 U-factor	Wood framed and Other Climate Zone 6 - 8 U-factor	Wood Framed and Other All Other Climate Zones U-factor	0.62-0.56	0.038	0.045	0.032	0.55-0.46	0.035	0.042	0.030	0.45-0.36	0.033	0.039	0.029	0.35-0.25	0.031	0.037	0.028
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140.3(a)8	Prescriptive	New Construction	Relocatable Public School Buildings Where Manufacturer certifies use in all climate zones	Steep Slope	Zones 2 & 4–16	0.25	0.80	23	<div style="text-align: center;"> <p>TABLE 140.3-B – PRESCRIPTIVE ENVELOPE CRITERIA FOR NONRESIDENTIAL BUILDINGS EXCLUDING RELOCATABLE PUBLIC SCHOOL BUILDINGS (WHERE MANUFACTURER CERTIFIES USE ONLY IN SPECIFIC CLIMATE ZONE; NOT INCLUDING HIGH-RISE RESIDENTIAL BUILDINGS AND GUEST ROOMS OF HOTEL/MOTEL BUILDINGS)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2"></th> <th colspan="16">Climate Zone</th> </tr> <tr> <th colspan="2"></th> <th colspan="2">1</th> <th colspan="2">2</th> <th colspan="2">3</th> <th colspan="2">4</th> <th colspan="2">5</th> <th colspan="2">6</th> <th colspan="2">7</th> <th colspan="2">8</th> <th colspan="2">9</th> <th colspan="2">10</th> <th colspan="2">11</th> <th colspan="2">12</th> <th colspan="2">13</th> <th colspan="2">14</th> <th colspan="2">15</th> <th colspan="2">16</th> </tr> <tr> <th rowspan="2">Envelope</th> <th rowspan="2">Manufacturing U-factor</th> <th colspan="2">Roof/</th> <th colspan="2">Wall/</th> <th colspan="2">Metal Building</th> <th colspan="2">Wood Framed and Other</th> </tr> <tr> <th>Roof/</th> <th>Ceiling</th> <th>Wall</th> <th>Roof/</th> <th>Ceiling</th> </tr> </thead> <tbody> <tr> <td rowspan="10">Roofing Products</td> <td>Roof/</td> <td>0.343</td><td>0.343</td><td>0.043</td><td>0.043</td><td>0.343</td><td>0.343</td><td>0.043</td><td>0.043</td><td>0.343</td><td>0.343</td><td>0.043</td><td>0.043</td><td>0.343</td><td>0.343</td><td>0.043</td><td>0.043</td><td>0.343</td><td>0.343</td><td>0.043</td><td>0.043</td><td>0.343</td><td>0.343</td><td>0.043</td><td>0.043</td><td>0.343</td><td>0.343</td><td>0.043</td><td>0.043</td><td>0.343</td><td>0.343</td> </tr> <tr> <td>Roof/</td> 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<td>0.390</td><td>0.390</td><td>0.202</td><td>0.202</td><td>0.368</td><td>0.369</td><td>0.185</td><td>0.178</td><td>0.368</td><td>0.369</td><td>0.185</td><td>0.178</td><td>0.368</td><td>0.369</td><td>0.185</td><td>0.178</td><td>0.368</td><td>0.369</td><td>0.185</td><td>0.178</td><td>0.368</td><td>0.369</td><td>0.185</td><td>0.178</td><td>0.368</td><td>0.369</td><td>0.185</td><td>0.178</td><td>0.368</td><td>0.369</td> </tr> <tr> <td>Roof/</td> <td>0.391</td><td>0.391</td><td>0.212</td><td>0.212</td><td>0.369</td><td>0.370</td><td>0.195</td><td>0.188</td><td>0.369</td><td>0.370</td><td>0.195</td><td>0.188</td><td>0.369</td><td>0.370</td><td>0.195</td><td>0.188</td><td>0.369</td><td>0.370</td><td>0.195</td><td>0.188</td><td>0.369</td><td>0.370</td><td>0.195</td><td>0.188</td><td>0.369</td><td>0.370</td><td>0.195</td><td>0.188</td><td>0.369</td><td>0.370</td> </tr> <tr> <td>Roof/</td> <td>0.392</td><td>0.392</td><td>0.222</td><td>0.222</td><td>0.370</td><td>0.371</td><td>0.205</td><td>0.198</td><td>0.370</td><td>0.371</td><td>0.205</td><td>0.198</td><td>0.370</td><td>0.371</td><td>0.205</td><td>0.198</td><td>0.370</td><td>0.371</td><td>0.205</td><td>0.198</td><td>0.370</td><td>0.371</td><td>0.205</td><td>0.198</td><td>0.370</td><td>0.371</td><td>0.205</td><td>0.198</td><td>0.370</td><td>0.371</td> </tr> <tr> <td>Roof/</td> <td>0.393</td><td>0.393</td><td>0.232</td><td>0.232</td><td>0.371</td><td>0.372</td><td>0.215</td><td>0.208</td><td>0.371</td><td>0.372</td><td>0.215</td><td>0.208</td><td>0.371</td><td>0.372</td><td>0.215</td><td>0.208</td><td>0.371</td><td>0.372</td><td>0.215</td><td>0.208</td><td>0.371</td><td>0.372</td><td>0.215</td><td>0.208</td><td>0.371</td><td>0.372</td><td>0.215</td><td>0.208</td><td>0.371</td><td>0.372</td> </tr> <tr> <td>Roof/</td> <td>0.394</td><td>0.394</td><td>0.242</td><td>0.242</td><td>0.372</td><td>0.373</td><td>0.225</td><td>0.218</td><td>0.372</td><td>0.373</td><td>0.225</td><td>0.218</td><td>0.372</td><td>0.373</td><td>0.225</td><td>0.218</td><td>0.372</td><td>0.373</td><td>0.225</td><td>0.218</td><td>0.372</td><td>0.373</td><td>0.225</td><td>0.218</td><td>0.372</td><td>0.373</td><td>0.225</td><td>0.218</td><td>0.372</td><td>0.373</td> </tr> <tr> <td>Roof/</td> <td>0.395</td><td>0.395</td><td>0.252</td><td>0.252</td><td>0.373</td><td>0.374</td><td>0.235</td><td>0.228</td><td>0.373</td><td>0.374</td><td>0.235</td><td>0.228</td><td>0.373</td><td>0.374</td><td>0.235</td><td>0.228</td><td>0.373</td><td>0.374</td><td>0.235</td><td>0.228</td><td>0.373</td><td>0.374</td><td>0.235</td><td>0.228</td><td>0.373</td><td>0.374</td><td>0.235</td><td>0.228</td><td>0.373</td><td>0.374</td> </tr> <tr> <td>Roof/</td> <td>0.396</td><td>0.396</td><td>0.262</td><td>0.262</td><td>0.374</td><td>0.375</td><td>0.245</td><td>0.238</td><td>0.374</td><td>0.375</td><td>0.245</td><td>0.238</td><td>0.374</td><td>0.375</td><td>0.245</td><td>0.238</td><td>0.374</td><td>0.375</td><td>0.245</td><td>0.238</td><td>0.374</td><td>0.375</td><td>0.245</td><td>0.238</td><td>0.374</td><td>0.375</td><td>0.245</td><td>0.238</td><td>0.374</td><td>0.375</td> </tr> <tr> <td>Roof/</td> <td>0.397</td><td>0.397</td><td>0.272</td><td>0.272</td><td>0.375</td><td>0.376</td><td>0.255</td><td>0.248</td><td>0.375</td><td>0.376</td><td>0.255</td><td>0.248</td><td>0.375</td><td>0.376</td><td>0.255</td><td>0.248</td><td>0.375</td><td>0.376</td><td>0.255</td><td>0.248</td><td>0.375</td><td>0.376</td><td>0.255</td><td>0.248</td><td>0.375</td><td>0.376</td><td>0.255</td><td>0.248</td><td>0.375</td><td>0.376</td> </tr> <tr> <td>Roof/</td> <td>0.398</td><td>0.398</td><td>0.282</td><td>0.282</td><td>0.376</td><td>0.377</td><td>0.265</td><td>0.258</td><td>0.376</td><td>0.377</td><td>0.265</td><td>0.258</td><td>0.376</td><td>0.377</td><td>0.265</td><td>0.258</td><td>0.376</td><td>0.377</td><td>0.265</td><td>0.258</td><td>0.376</td><td>0.377</td><td>0.265</td><td>0.258</td><td>0.376</td><td>0.377</td><td>0.265</td><td>0.258</td><td>0.376</td><td>0.377</td> </tr> <tr> <td>Roof/</td> <td>0.399</td><td>0.399</td><td>0.292</td><td>0.292</td><td>0.377</td><td>0.378</td><td>0.275</td><td>0.268</td><td>0.377</td><td>0.378</td><td>0.275</td><td>0.268</td><td>0.377</td><td>0.378</td><td>0.275</td><td>0.268</td><td>0.377</td><td>0.378</td><td>0.275</td><td>0.268</td><td>0.377</td><td>0.378</td><td>0.275</td><td>0.268</td><td>0.377</td><td>0.378</td><td>0.275</td><td>0.268</td><td>0.377</td><td>0.378</td> </tr> <tr> <td>Roof/</td> <td>0.400</td><td>0.400</td><td>0.302</td><td>0.302</td><td>0.378</td><td>0.379</td><td>0.285</td><td>0.278</td><td>0.378</td><td>0.379</td><td>0.285</td><td>0.278</td><td>0.378</td><td>0.379</td><td>0.285</td><td>0.278</td><td>0.378</td><td>0.379</td><td>0.285</td><td>0.278</td><td>0.378</td><td>0.379</td><td>0.285</td><td>0.278</td><td>0.378</td><td>0.379</td><td>0.285</td><td>0.278</td><td>0.378</td><td>0.379</td> </tr> <tr> <td>Roof/</td> <td>0.401</td><td>0.401</td><td>0.312</td><td>0.312</td><td>0.379</td><td>0.380</td><td>0.295</td><td>0.288</td><td>0.379</td><td>0.380</td><td>0.295</td><td>0.288</td><td>0.379</td><td>0.380</td><td>0.295</td><td>0.288</td><td>0.379</td><td>0.380</td><td>0.295</td><td>0.288</td><td>0.379</td><td>0.380</td><td>0.295</td><td>0.288</td><td>0.379</td><td>0.380</td><td>0.295</td><td>0.288</td><td>0.379</td><td>0.380</td> </tr> <tr> <td>Roof/</td> <td>0.402</td><td>0.402</td><td>0.322</td><td>0.322</td><td>0.380</td><td>0.381</td><td>0.305</td><td>0.298</td><td>0.380</td><td>0.381</td><td>0.305</td><td>0.298</td><td>0.380</td><td>0.381</td><td>0.305</td><td>0.298</td><td>0.380</td><td>0.381</td><td>0.305</td><td>0.298</td><td>0.380</td><td>0.381</td><td>0.305</td><td>0.298</td><td>0.380</td><td>0.381</td><td>0.305</td><td>0.298</td><td>0.380</td><td>0.381</td> </tr> <tr> <td>Roof/</td> <td>0.403</td><td>0.403</td><td>0.332</td><td>0.332</td><td>0.381</td><td>0.382</td><td>0.315</td><td>0.308</td><td>0.381</td><td>0.382</td><td>0.315</td><td>0.308</td><td>0.381</td><td>0.382</td><td>0.315</td><td>0.308</td><td>0.381</td><td>0.382</td><td>0.315</td><td>0.308</td><td>0.381</td><td>0.382</td><td>0.315</td><td>0.308</td><td>0.381</td><td>0.382</td><td>0.315</td><td>0.308</td><td>0.381</td><td>0.382</td> </tr> <tr> <td>Roof/</td> <td>0.404</td><td>0.404</td><td>0.342</td><td>0.342</td><td>0.382</td><td>0.383</td><td>0.325</td><td>0.318</td><td>0.382</td><td>0.383</td><td>0.325</td><td>0.318</td><td>0.382</td><td>0.383</td><td>0.325</td><td>0.318</td><td>0.382</td><td>0.383</td><td>0.325</td><td>0.318</td><td>0.382</td><td>0.383</td><td>0.325</td><td>0.318</td><td>0.382</td><td>0.383</td><td>0.325</td><td>0.318</td><td>0.382</td><td>0.383</td> </tr> <tr> <td>Roof/</td> <td>0.405</td><td>0.405</td><td>0.352</td><td>0.352</td><td>0.383</td><td>0.384</td><td>0.335</td><td>0.328</td><td>0.383</td><td>0.384</td><td>0.335</td><td>0.328</td><td>0.383</td><td>0.384</td><td>0.335</td><td>0.328</td><td>0.383</td><td>0.384</td><td>0.335</td><td>0.328</td><td>0.383</td><td>0.384</td><td>0.335</td><td>0.328</td><td>0.383</td><td>0.384</td><td>0.335</td><td>0.328</td><td>0.383</td><td>0.384</td> </tr> <tr> <td>Roof/</td> <td>0.406</td><td>0.406</td><td>0.362</td><td>0.362</td><td>0.384</td><td>0.385</td><td>0.345</td><td>0.338</td><td>0.384</td><td>0.385</td><td>0.345</td><td>0.338</td><td>0.384</td><td>0.385</td><td>0.345</td><td>0.338</td><td>0.384</td><td>0.385</td><td>0.345</td><td>0.338</td><td>0.384</td><td>0.385</td><td>0.345</td><td>0.338</td><td>0.384</td><td>0.385</td><td>0.345</td><td>0.338</td><td>0.384</td><td>0.385</td> </tr> <tr> <td>Roof/</td> <td>0.407</td><td>0.407</td><td>0.372</td><td>0.372</td><td>0.385</td><td>0.386</td><td>0.355</td><td>0.348</td><td>0.385</td><td>0.386</td><td>0.355</td><td>0.348</td><td>0.385</td><td>0.386</td><td>0.355</td><td>0.348</td><td>0.385</td><td>0.386</td><td>0.355</td><td>0.348</td><td>0.385</td><td>0.386</td><td>0.355</td><td>0.348</td><td>0.385</td><td>0.386</td><td>0.355</td><td>0.348</td><td>0.385</td><td>0.386</td> </tr> <tr> <td>Roof/</td> <td>0.408</td><td>0.408</td><td>0.382</td><td>0.382</td><td>0.386</td><td>0.387</td><td>0.365</td><td>0.358</td><td>0.386</td><td>0.387</td><td>0.365</td><td>0.358</td><td>0.386</td><td>0.387</td><td>0.365</td><td></td></tr></tbody></table></div>			Climate Zone																		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		Envelope	Manufacturing U-factor	Roof/		Wall/		Metal Building		Wood Framed and Other		Metal Building		Wood Framed and Other		Metal Building		Wood Framed and Other		Metal Building		Wood Framed and Other		Metal Building		Wood Framed and Other		Metal Building		Wood Framed and Other		Metal Building		Wood Framed and Other		Roof/	Ceiling	Wall	Roof/	Ceiling	Roof/	Ceiling	Wall	Roof/	Ceiling	Roof/	Ceiling	Wall	Roof/	Ceiling	Roof/	Ceiling	Wall	Roof/	Ceiling	Roof/	Ceiling	Wall	Roof/	Ceiling	Roof/	Ceiling	Wall	Roof/	Ceiling	Roofing Products	Roof/	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	Roof/	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	Roof/	0.360	0.360	0.072	0.072	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	Roof/	0.366	0.366	0.082	0.082	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	Roof/	0.375	0.375	0.092	0.092	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	Roof/	0.379	0.379	0.102	0.102	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	Roof/	0.380	0.380	0.112	0.112	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	Roof/	0.382	0.382	0.122	0.122	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	Roof/	0.383	0.383	0.132	0.132	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	Roof/	0.384	0.384	0.142	0.142	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	Roof/	0.385	0.385	0.152	0.152	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	Roof/	0.386	0.386	0.162	0.162	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	Roof/	0.387	0.387	0.172	0.172	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	Roof/	0.388	0.388	0.182	0.182	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	Roof/	0.389	0.389	0.192	0.192	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	Roof/	0.390	0.390	0.202	0.202	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	Roof/	0.391	0.391	0.212	0.212	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	Roof/	0.392	0.392	0.222	0.222	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	Roof/	0.393	0.393	0.232	0.232	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	Roof/	0.394	0.394	0.242	0.242	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	Roof/	0.395	0.395	0.252	0.252	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	Roof/	0.396	0.396	0.262	0.262	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	Roof/	0.397	0.397	0.272	0.272	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	Roof/	0.398	0.398	0.282	0.282	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	Roof/	0.399	0.399	0.292	0.292	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	Roof/	0.400	0.400	0.302	0.302	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	Roof/	0.401	0.401	0.312	0.312	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	Roof/	0.402	0.402	0.322	0.322	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	Roof/	0.403	0.403	0.332	0.332	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	Roof/	0.404	0.404	0.342	0.342	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	Roof/	0.405	0.405	0.352	0.352	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	Roof/	0.406	0.406	0.362	0.362	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	Roof/	0.407	0.407	0.372	0.372	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	Roof/	0.408	0.408	0.382	0.382	0.386	0.387	0.365	0.358	0.386	0.387	0.365	0.358	0.386	0.387	0.365	
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Roofing Products	Roof/	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343	0.043	0.043	0.343	0.343																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354	0.054	0.054	0.354	0.354																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.360	0.360	0.072	0.072	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356	0.060	0.055	0.355	0.356																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.366	0.366	0.082	0.082	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357	0.065	0.058	0.356	0.357																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.375	0.375	0.092	0.092	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358	0.075	0.068	0.357	0.358																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.379	0.379	0.102	0.102	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359	0.085	0.078	0.358	0.359																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.380	0.380	0.112	0.112	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360	0.095	0.088	0.359	0.360																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.382	0.382	0.122	0.122	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361	0.105	0.098	0.360	0.361																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.383	0.383	0.132	0.132	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362	0.115	0.108	0.361	0.362																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Roof/	0.384	0.384	0.142	0.142	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363	0.125	0.118	0.362	0.363																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Roof/	0.385	0.385	0.152	0.152	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364	0.135	0.128	0.363	0.364																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.386	0.386	0.162	0.162	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365	0.145	0.138	0.364	0.365																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.387	0.387	0.172	0.172	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366	0.155	0.148	0.365	0.366																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.388	0.388	0.182	0.182	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367	0.165	0.158	0.366	0.367																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.389	0.389	0.192	0.192	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368	0.175	0.168	0.367	0.368																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.390	0.390	0.202	0.202	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369	0.185	0.178	0.368	0.369																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.391	0.391	0.212	0.212	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370	0.195	0.188	0.369	0.370																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.392	0.392	0.222	0.222	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371	0.205	0.198	0.370	0.371																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.393	0.393	0.232	0.232	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372	0.215	0.208	0.371	0.372																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.394	0.394	0.242	0.242	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373	0.225	0.218	0.372	0.373																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.395	0.395	0.252	0.252	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374	0.235	0.228	0.373	0.374																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.396	0.396	0.262	0.262	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375	0.245	0.238	0.374	0.375																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.397	0.397	0.272	0.272	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376	0.255	0.248	0.375	0.376																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.398	0.398	0.282	0.282	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377	0.265	0.258	0.376	0.377																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.399	0.399	0.292	0.292	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378	0.275	0.268	0.377	0.378																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.400	0.400	0.302	0.302	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379	0.285	0.278	0.378	0.379																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.401	0.401	0.312	0.312	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380	0.295	0.288	0.379	0.380																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.402	0.402	0.322	0.322	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381	0.305	0.298	0.380	0.381																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.403	0.403	0.332	0.332	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382	0.315	0.308	0.381	0.382																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.404	0.404	0.342	0.342	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383	0.325	0.318	0.382	0.383																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.405	0.405	0.352	0.352	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384	0.335	0.328	0.383	0.384																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.406	0.406	0.362	0.362	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385	0.345	0.338	0.384	0.385																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.407	0.407	0.372	0.372	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386	0.355	0.348	0.385	0.386																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roof/	0.408	0.408	0.382	0.382	0.386	0.387	0.365	0.358	0.386	0.387	0.365	0.358	0.386	0.387	0.365																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

Section		Construction Type	Occupancy Type	Slope	Climate Zone	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)	Notes																											
									<p>EXCEPTION 3 to Sections 141.0(b)2B: Roof constructions with a weight of at least 25 lb/ft² are not required to meet the minimum requirements for solar reflectance, thermal emittance, or SRI.</p> <p><i>Table 141.0-B Roof/Ceiling Insulation Tradeoff for Low-Sloped Aged Solar Reflectance</i></p> <table border="1"> <thead> <tr> <th>Aged Solar Reflectance</th> <th>Climate Zones 6, 7, & 8 U-factor</th> <th>All Other Climate Zones U-factor</th> </tr> </thead> <tbody> <tr> <td>0.62-0.60</td> <td>0.043</td> <td>0.035</td> </tr> <tr> <td>0.59-0.55</td> <td>0.041</td> <td>0.034</td> </tr> <tr> <td>0.54-0.50</td> <td>0.038</td> <td>0.031</td> </tr> <tr> <td>0.49-0.45</td> <td>0.034</td> <td>0.029</td> </tr> <tr> <td>0.44-0.40</td> <td>0.032</td> <td>0.028</td> </tr> <tr> <td>0.39-0.35</td> <td>0.029</td> <td>0.026</td> </tr> <tr> <td>0.34-0.30</td> <td>0.028</td> <td>0.025</td> </tr> <tr> <td>0.29-0.25</td> <td>0.026</td> <td>0.024</td> </tr> </tbody> </table>	Aged Solar Reflectance	Climate Zones 6, 7, & 8 U-factor	All Other Climate Zones U-factor	0.62-0.60	0.043	0.035	0.59-0.55	0.041	0.034	0.54-0.50	0.038	0.031	0.49-0.45	0.034	0.029	0.44-0.40	0.032	0.028	0.39-0.35	0.029	0.026	0.34-0.30	0.028	0.025	0.29-0.25	0.026	0.024
Aged Solar Reflectance	Climate Zones 6, 7, & 8 U-factor	All Other Climate Zones U-factor																																		
0.62-0.60	0.043	0.035																																		
0.59-0.55	0.041	0.034																																		
0.54-0.50	0.038	0.031																																		
0.49-0.45	0.034	0.029																																		
0.44-0.40	0.032	0.028																																		
0.39-0.35	0.029	0.026																																		
0.34-0.30	0.028	0.025																																		
0.29-0.25	0.026	0.024																																		
150.1(c)11A	Prescriptive	New Construction	Single-family Residential	Steep Slope	Zones 10-15	0.20	0.75	16	<p>EXCEPTION 1 to Section 150.1(c)11: Building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the minimum requirements for aged solar reflectance and thermal emittance or SRI.</p> <p>EXCEPTION 2 to Section 150.1(c)11: Roof constructions with a weight of at least 25 lb/ft² are exempt from the minimum requirements for aged solar reflectance and thermal emittance, or SRI.</p>																											
150.1(c)11B	Prescriptive	New Construction	Single-family Residential	Low Slope	Zones 13 and 15	0.63	0.75	75	<p>EXCEPTION 1 to Section 150.1(c)11: Building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the minimum requirements for aged solar reflectance and thermal emittance or SRI.</p> <p>EXCEPTION 2 to Section 150.1(c)11: Roof constructions with a weight of at least 25 lb/ft² are exempt from the minimum requirements for aged solar reflectance and thermal emittance, or SRI.</p>																											
150.2(b)1ii	Prescriptive	Re-Roofing (Replacements, recovering or re-coating)	Single-family residential (New roofing products)	Steep Slope	Zones 4, 8 -15	0.20	0.75	16	<p>EXCEPTION 1 to Section 150.2(b)1ii: The following shall be considered equivalent to Subsection i:</p> <ol style="list-style-type: none"> Buildings with ceiling assemblies with a U-factor lower than or equal to 0.025 or that are insulated with at least R-38 ceiling insulation; or Buildings with a radiant barrier in the attic, where the radiant barrier is not installed directly above spaced sheathing, meeting the requirements of Section 150.1(c)2; or In Climate Zones 2, 4, 9, 10, 12 and 14, buildings that have no ducts in the attic; or Buildings with R-2 or greater continuous insulation above or below the roof deck. <p>EXCEPTION 2 to Section 150.2(b)1ii: Roof area covered by building integrated photovoltaic panels or building integrated solar thermal panels is not required to meet minimum requirements for aged solar reflectance, thermal emittance or SRI.</p> <p>EXCEPTION 3 to Section 150.2(b)1ii: Roof constructions with a weight of at least 25 lb/ft² are exempt from minimum requirements for aged solar reflectance and thermal emittance, or SRI.</p>																											

Section		Construction Type	Occupancy Type	Slope	Climate Zone	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)	Notes																		
150.2(b)1iii(a)	Prescriptive	Re-Roofing (Replacements, recovering or re-coating)	Single-family residential (New roofing products)	Low Slope	Zones 4, 6-15	0.63	0.75	75	<p>EXCEPTION 1 to Section 150.2(b)1iii(a): The aged solar reflectance can be met by using insulation at the roof deck specified in Table 150.2-B</p> <p>TABLE 150.2-B AGED SOLAR REFLECTANCE INSULATION TRADE OFF TABLE</p> <table border="1"> <thead> <tr> <th>Minimum Aged Solar Reflectance</th> <th>Roof Deck Continuous Insulation R-value (Climate Zones 6-7)</th> <th>Roof Deck Continuous Insulation R-value (Climate Zones 2, 4, & 8-15)</th> </tr> </thead> <tbody> <tr> <td>0.60</td> <td>2</td> <td>16</td> </tr> <tr> <td>0.55</td> <td>4</td> <td>18</td> </tr> <tr> <td>0.50</td> <td>6</td> <td>20</td> </tr> <tr> <td>0.45</td> <td>8</td> <td>22</td> </tr> <tr> <td>No Requirement</td> <td>10</td> <td>24</td> </tr> </tbody> </table> <p>EXCEPTION 2 to Section 150.2(b)1iii(a): Roof area covered by building integrated photovoltaic panels or building integrated solar thermal panels is not required to meet the minimum requirements for aged solar reflectance, thermal emittance or SRI.</p> <p>EXCEPTION 3 to Section 150.2(b)1iii(a): Roof constructions with a weight of at least 25 lb/ft² are exempt from the minimum requirements for aged solar reflectance and thermal emittance, or SRI.</p>	Minimum Aged Solar Reflectance	Roof Deck Continuous Insulation R-value (Climate Zones 6-7)	Roof Deck Continuous Insulation R-value (Climate Zones 2, 4, & 8-15)	0.60	2	16	0.55	4	18	0.50	6	20	0.45	8	22	No Requirement	10	24
Minimum Aged Solar Reflectance	Roof Deck Continuous Insulation R-value (Climate Zones 6-7)	Roof Deck Continuous Insulation R-value (Climate Zones 2, 4, & 8-15)																									
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170.2(a)1A	Prescriptive	New Construction	Multifamily Buildings (Subchapter 11)	Low Slope (Options B & C)	Zones 13 & 15	0.63	0.75	75	<p>EXCEPTION 1 to Section 170.2(a)1A: Building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.</p> <p>EXCEPTION 2 to Section 170.2(a)1A: Roof constructions with a weight of at least 25 lb/ft² are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.</p>																		
170.2(a)1A	Prescriptive	New Construction	Multifamily Buildings (Subchapter 11)	Low Slope (Option D)	Zones 9-10 & 12-15	0.63	0.75	75	<p>EXCEPTION 1 to Section 170.2(a)1A: Building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.</p> <p>EXCEPTION 2 to Section 170.2(a)1A: Roof constructions with a weight of at least 25 lb/ft² are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.</p>																		
170.2(a)1A	Prescriptive	New Construction	Multifamily Buildings (Subchapter 11)	Steep Slope (Option B)	Zones 10, 11, 13, 15	0.25	0.75	23	<p>EXCEPTION 1 to Section 170.2(a)1A: Building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.</p> <p>EXCEPTION 2 to Section 170.2(a)1A: Roof constructions with a weight of at least 25 lb/ft² are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.</p>																		
					Zones 12 & 14	0.20	0.75	16	<p>EXCEPTION 1 to Section 170.2(a)1A: Building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.</p> <p>EXCEPTION 2 to Section 170.2(a)1A: Roof constructions with a weight of at least 25 lb/ft² are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.</p>																		

Section		Construction Type	Occupancy Type	Slope	Climate Zone	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)	Notes																		
170.2(a)1A	Prescriptive	New Construction	Multifamily Buildings (Subchapter 11)	Steep Slope (Option C)	Zones 10-15	0.20	0.75	16	EXCEPTION 1 to Section 170.2(a)1A: Building integrated photovoltaic panels and building integrated solar Thermal panels are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI. EXCEPTION 2 to Section 170.2(a)1A: Roof constructions with a weight of at least 25 lb/ft ² are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.																		
170.2(a)1A	Prescriptive	New Construction	Multifamily Buildings (Subchapter 11)	Steep Slope (Option D)	Zones 2-15	0.20	0.75	16	EXCEPTION 1 to Section 170.2(a)1A: Building integrated photovoltaic panels and building integrated solar Thermal panels are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI. EXCEPTION 2 to Section 170.2(a)1A: Roof constructions with a weight of at least 25 lb/ft ² are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.																		
170.2(a)1A	Prescriptive	New Construction	Multifamily Buildings (Subchapter 11)	Low Slope (Option D)	Zones 2, 4 & 6-15	0.63	0.75	75	EXCEPTION 1 to Section 170.2(a)1A: Building integrated photovoltaic panels and building integrated solar Thermal panels are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI. EXCEPTION 2 to Section 170.2(a)1A: Roof constructions with a weight of at least 25 lb/ft ² are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.																		
180.1(a)1A	Prescriptive	Additions (Greater than 700 sf)	Multifamily Buildings (Subchapter 12)	Steep and Low Slope	Shall meet requirements of Section 170.2(a)	EXCEPTION 1 to Section 170.2(a)1A: Building integrated photovoltaic panels and building integrated solar Thermal panels are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI. EXCEPTION 2 to Section 170.2(a)1A: Roof constructions with a weight of at least 25 lb/ft ² are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.																					
180.2(b)1Ai	Prescriptive	Alterations (More than 50% of roof area or more than 2,000 sf of roof, whichever is less, being altered)	Multifamily Buildings (Subchapter 12)	Low Slope	Zones 2, 4, 6-15	0.63	0.75	75	EXCEPTION to Section 180.2(b)1Ai: The aged solar reflectance requirement can be met by using insulation at the roof deck specified in Table 180.2-A.																		
									<p><i>Table 180.2-A Roof/Ceiling Insulation Tradeoff for Low-Sloped Aged Solar Reflectance</i></p> <table border="1"> <thead> <tr> <th>Minimum Aged Solar Reflectance</th> <th>Roof Deck Continuous Insulation R-value (Climate Zones 6-7)</th> <th>Roof Deck Continuous Insulation R-value (Climate Zones 2, 4, 8-15)</th> </tr> </thead> <tbody> <tr> <td>0.60</td> <td>2</td> <td>16</td> </tr> <tr> <td>0.55</td> <td>4</td> <td>18</td> </tr> <tr> <td>0.50</td> <td>6</td> <td>20</td> </tr> <tr> <td>0.45</td> <td>8</td> <td>22</td> </tr> <tr> <td>No requirement</td> <td>10</td> <td>24</td> </tr> </tbody> </table>	Minimum Aged Solar Reflectance	Roof Deck Continuous Insulation R-value (Climate Zones 6-7)	Roof Deck Continuous Insulation R-value (Climate Zones 2, 4, 8-15)	0.60	2	16	0.55	4	18	0.50	6	20	0.45	8	22	No requirement	10	24
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180.2(b)1Aii	Prescriptive	Alterations (More than 50% of roof area or more than 2,000 sf of roof, whichever is less, being altered)	Multifamily Buildings (Subchapter 12)	Steep Slope	Zones 4, 8-15	0.20	0.75	16	EXCEPTION to Section 180.2(b)1Aii: The following shall be considered equivalent to Subsection ii: <ul style="list-style-type: none"> a. Buildings with ceiling assemblies with a U-factor lower than or equal to 0.025 or that are insulated with at least R-38 ceiling insulation in an attic; or b. Buildings with a radiant barrier in the attic, where the radiant barrier is not installed directly above spaced sheathing, meeting the requirements of Section 170.2(a)1C; or c. Buildings that have no ducts in the attic in Climate Zones 2, 4, 9, 10, 12 and 14; or 																		

Section		Construction Type	Occupancy Type	Slope	Climate Zone	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)	Notes
									<p>d. Buildings with R-2 or greater continuous insulation above or below the roof deck.</p> <p>EXCEPTION 1 to Sections 180.2(b)1Ai and ii: Roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels is not required to meet the minimum requirements for solar reflectance, thermal emittance or SRI.</p> <p>EXCEPTION 2 to Sections 180.2(b)1Ai and ii: Roof constructions with a weight of at least 25 lb/ft² are not required to meet the minimum requirements for solar reflectance, thermal emittance or SRI.</p>