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CONSTRUCTION  
TECHNOLOGY LABORATORIES  
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**ASTM C 1549 Solar Reflectance of Three Paving Bricks  
CTLGroup Project No. 314015**

Dear Mr. Kaboth:

As authorized by you on April 5, 2007, CTLGroup measured the solar reflectance of three paving bricks in accordance with ASTM C 1549-04, *Standard Test Method for Determining Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer*. The average solar reflectance of the three bricks is 0.56.

The bricks, shown in Figure 1, were received at CTLGroup on April 9, 2007. They are labeled "WG5001", "WG5002", and "WG5003", and measure  $7\frac{7}{8} \times 3\frac{7}{8} \times 2\frac{1}{8}$  in. The top surface of each brick is flat and appears to be formed. The bricks were kept in a temperature- and relative humidity-controlled room (73°F and 50% RH) until they were tested on April 17, 2007.

The solar reflectance of the top surface of each brick was measured in three locations, for a total of 9 measurements. The air mass on the solar spectrum reflectometer was set to 1.5, which is appropriate for the conterminous United States. The measured solar reflectances, average, and standard deviation are reported in the Table 1.

The solar reflectance *index* was also calculated according to ASTM E 1980-01, *Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces*. Assuming an emittance of 0.9, which is appropriate for concrete and brick, the solar reflectance index is 67.

If you have any questions, please do not hesitate to call.

Sincerely,

A handwritten signature in black ink that reads 'Medgar Marceau'.

Medgar Marceau, PE (Illinois), CSI, LEED-AP  
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Figure 1. The top and edge views of the three bricks as tested.

Table 1. Solar Reflectance Measured According to ASTM C 1549

Specimen	Location	Solar reflectance
WG5001	1	0.58
	2	0.59
	3	0.59
WG5002	1	0.51
	2	0.51
	3	0.51
WG5003	1	0.59
	2	0.59
	3	0.59
<b>Average</b>		<b>0.56</b>
<b>Standard deviation</b>		<b>0.04</b>