

C-3 Report on Intensity Values

The USGS Lidar Base Specification Version 1.3 states: "Intensity values are required for each multiple discrete return. The values recorded in the LAS files shall be normalized to 16 bit, as required by the LAS Specification version 1.4-R13 (ASPRS, 2011). It warrants re-emphasis that intensity normalization is strictly linear. Common image stretches (minimum-maximum, standard deviations, percent clip, histogram, and so forth) are expressly forbidden."

The purpose of this section is to report on the presence and quantities of lidar intensity in the LAS data.

[Data Source - Y:\Mapping\Projects\65220171_USGS-TX_West_Texas\Production\Final_Client_Deliverables\Lot6_utm14\point_cloud\Swaths_MARS](#)

File	Minimum	Maximum	Mean	Median	Mode
CS_00003.las	16	65,520	8,312	9,168	1,120
CS_00007.las	16	65,520	9,461	10,048	11,936
CS_00023.las	16	65,520	8,859	9,696	11,312
CS_00024.las	16	65,520	8,333	9,264	1,120
CS_00029.las	16	65,520	9,532	9,776	10,256
CS_00033.las	80	65,520	9,811	10,192	11,744
CS_00034.las	48	65,520	9,616	9,968	12,128
CS_00035.las	16	65,520	10,018	10,448	11,840
CS_00036.las	16	65,520	8,190	8,384	9,888
CS_00037.las	16	65,520	8,501	8,768	9,792
CS_00038.las	16	65,520	8,253	8,512	9,392
CS_00039.las	16	65,520	8,789	9,104	11,232
CS_00040.las	16	65,520	8,563	8,848	10,608
CS_00041.las	16	65,520	7,998	8,240	9,120
CS_00042.las	16	65,520	7,720	8,000	8,800
CS_00043.las	736	65,520	8,264	8,352	1,664
CS_00044.las	16	65,520	7,590	7,936	1,664
CS_00045.las	16	65,520	8,547	8,800	10,448
CS_00046.las	16	65,520	8,170	8,608	10,016
CS_00047.las	784	65,520	7,061	7,056	1,712
CS_00048.las	16	65,520	8,019	8,576	9,712
CS_00050.las	16	65,520	9,587	10,368	11,936
CS_00051.las	16	65,520	7,978	8,464	9,376
CS_00052.las	16	65,520	9,638	10,352	16
CS_00053.las	16	65,520	9,257	10,096	12,400

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File	Minimum	Maximum	Mean	Median	Mode
CS_00054.las	928	17,536	7,889	8,224	9,472
CS_00055.las	48	65,520	9,214	10,128	12,720
CS_00056.las	16	65,520	9,660	10,352	11,328
CS_00057.las	16	65,520	10,274	10,800	12,688
CS_00058.las	16	65,520	8,471	9,056	1,696
CS_00059.las	16	65,520	9,248	9,984	11,696
CS_00060.las	16	65,520	9,221	9,936	12,016
CS_00061.las	48	65,520	10,104	10,560	13,136
CS_00062.las	16	65,520	9,011	9,408	16
CS_00063.las	16	65,520	9,658	10,352	16
CS_00064.las	16	65,520	9,408	10,464	16
CS_00065.las	16	65,520	9,789	10,480	16
CS_00066.las	16	65,520	10,236	10,880	12,256
CS_00067.las	16	65,520	7,920	8,432	9,504
CS_00068.las	16	65,520	9,851	10,624	12,352
CS_00069.las	16	65,520	7,925	8,480	9,440
CS_00070.las	16	65,520	9,443	10,448	16
CS_00071.las	48	65,520	10,078	10,784	11,984
CS_00072.las	16	65,520	8,721	9,568	16
CS_00073.las	16	65,520	8,964	9,680	1,664
CS_00074.las	48	65,520	9,508	9,504	8,288
CS_00075.las	16	65,520	9,580	10,384	16
CS_00078.las	48	65,520	9,958	10,544	12,256
CS_00079.las	16	65,520	9,318	10,032	11,168
CS_00080.las	16	65,520	9,937	10,688	16
CS_00081.las	16	65,520	10,052	10,896	16
CS_00083.las	16	65,520	10,291	11,184	12,640
CS_00084.las	16	65,520	9,417	10,272	16
CS_00085.las	16	65,520	9,373	10,080	11,184
CS_00086.las	16	65,520	10,097	10,880	16
CS_00087.las	16	65,520	9,570	10,304	16
CS_00089.las	16	65,520	5,324	5,552	6,784
CS_00090.las	48	65,520	5,333	5,440	6,656

C-3 Report on Intensity Values - continued

File	Minimum	Maximum	Mean	Median	Mode
CS_00091.las	16	65,520	5,130	5,376	6,000
CS_00092.las	32	65,520	5,298	5,360	6,752
CS_00093.las	16	65,520	5,136	5,344	5,984
CS_00094.las	16	65,520	4,792	4,896	1,456
CS_00095.las	16	65,520	5,175	5,408	6,016
CS_00096.las	48	65,520	5,220	5,248	6,816
CS_00097.las	48	65,520	5,354	5,440	6,784
CS_00098.las	16	65,520	5,314	5,504	6,624
CS_00099.las	16	65,520	5,245	5,472	6,336
CS_00100.las	16	65,520	5,111	5,312	6,000
CS_00101.las	48	65,520	5,317	5,280	2,432
CS_00102.las	832	45,824	7,203	7,232	7,216
CS_00317.las	16	65,520	9,789	11,168	13,440
CS_00318.las	16	65,520	9,300	10,224	16
CS_00319.las	48	65,520	14,751	13,072	3,760
CS_00320.las	16	65,520	9,167	9,984	16
CS_00321.las	16	65,520	6,018	6,544	7,328
CS_00322.las	48	65,520	14,825	14,080	4,672
CS_00323.las	16	65,520	9,263	10,288	16
CS_00324.las	16	65,520	5,818	6,272	7,248
CS_00325.las	16	65,520	5,145	5,584	6,320
CS_00326.las	16	65,520	7,078	5,984	16
CS_00327.las	16	65,520	9,158	10,064	11,760
CS_00328.las	48	65,520	12,610	9,984	2,064
CS_00329.las	16	65,520	7,350	7,312	16
CS_00330.las	48	65,520	14,896	13,792	4,400
CS_00331.las	16	65,520	5,728	6,224	7,200
CS_00332.las	16	65,520	8,900	9,296	16
CS_00333.las	16	65,520	7,301	7,088	1,664
CS_00334.las	48	65,520	12,807	10,112	1,968
CS_00335.las	16	65,520	5,156	5,552	6,048
CS_00336.las	16	65,520	7,388	6,672	2,784
CS_00337.las	16	65,520	8,745	9,456	11,872

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File	Minimum	Maximum	Mean	Median	Mode
CS_00338.las	48	65,520	11,557	9,744	1,968
CS_00339.las	48	65,520	12,714	10,640	1,968
CS_00340.las	48	65,520	12,782	10,544	2,368
CS_00341.las	16	65,520	9,188	9,936	13,072
CS_00342.las	16	65,520	8,569	8,624	16
CS_00343.las	48	65,520	15,029	13,024	2,000
CS_00344.las	16	65,520	7,118	6,048	16
CS_00345.las	16	65,520	8,717	9,248	16
CS_00346.las	48	65,520	10,697	9,120	2,064
CS_00347.las	16	65,520	5,969	6,464	7,360
CS_00348.las	16	65,520	8,843	9,328	16
CS_00349.las	16	65,520	8,818	9,600	11,760
CS_00350.las	16	65,520	8,362	8,912	16
CS_00351.las	672	22,752	8,780	9,632	12,352
CS_00352.las	48	65,520	10,771	9,296	2,064
CS_00353.las	48	65,520	13,653	11,680	65,520
CS_00354.las	16	65,520	9,264	10,128	16
CS_00355.las	48	65,520	14,576	12,960	4,416
CS_00356.las	16	65,520	7,423	7,616	16
CS_00357.las	16	65,520	5,897	6,432	7,264
CS_00358.las	480	65,520	4,288	4,352	1,456
CS_00359.las	48	65,520	15,031	14,176	4,368
CS_00360.las	16	65,520	8,749	9,296	16
CS_00361.las	48	65,520	11,541	10,304	1,968
CS_00362.las	48	65,520	13,124	11,328	2,416
CS_00363.las	16	65,520	7,840	7,856	2,768
CS_00364.las	16	65,520	7,221	6,176	16
CS_00365.las	16	65,520	8,980	9,616	16
CS_00366.las	16	65,520	7,536	6,992	2,496
CS_00367.las	16	65,520	7,240	6,400	16
CS_00368.las	16	65,520	8,619	9,280	11,600
CS_00369.las	48	65,520	13,815	12,032	1,968
CS_00370.las	16	65,520	7,318	6,528	16

C-3 Report on Intensity Values - continued

File	Minimum	Maximum	Mean	Median	Mode
CS_00371.las	16	65,520	5,091	5,712	6,016
CS_00372.las	48	65,520	10,985	9,696	2,064
CS_00373.las	48	65,520	13,242	11,472	4,560
CS_00374.las	16	65,520	8,430	9,024	11,584
CS_00375.las	48	65,520	11,550	9,472	2,064
CS_00376.las	48	65,520	10,601	8,784	2,064
CS_00377.las	48	65,520	13,093	11,168	2,416
CS_00378.las	16	65,520	7,057	6,400	1,616
CS_00379.las	16	65,520	9,271	10,144	16
CS_00380.las	16	65,520	7,400	7,136	16
CS_00381.las	16	65,520	8,967	9,584	16
Overall Statistics	16	65,520	9,275	8,256	1,968

C-3 Report on Intensity Values - continued

The purpose of this section is to show a frequency distribution chart of intensities throughout all of the lidar files.

[Data Source - Y:\Mapping\Projects\65220171_USGS-TX_West_Texas\Production\Final_Client_Deliverables\Lot6_utm14\point_cloud\Swaths_MARS](Y:\Mapping\Projects\65220171_USGS-TX_West_Texas\Production\Final_Client_Deliverables\Lot6_utm14\point_cloud\Swaths_MARS)

