Plan View

186 m

0 m

360 m

FBP X

FBP Y

FBP Z

FCS X

FCS Y

FCS Z

Fire line

Road

360 m

160 m

1. Experimental results

|  |  |  |  |
| --- | --- | --- | --- |
|  | FCS Z | FCS Y | FCS X |
| Firebrand density (pcs/m2) | 536 | 463 | 335 |
| Time span (s) | 394 | 513 | 407 |
| Total firebrand flux (pcs/m2.s) | 1.361 | 0.902 | 0.824 |

Let’s take FCS Z firebrand collection plot:

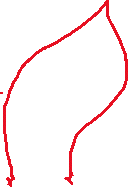
* 536 firebrands landed on 1m2 in 394 seconds.

1. Simulation results

|  |  |
| --- | --- |
|  | FCS Z |
| Firebrand density (pcs/m2) | 243 |
| Time span (s) | 175 |
| Total firebrand flux (pcs/m2.s) | 1.388 |



Estimated number of firebrands in 394 seconds =



 = 547



Fire intensity and input number of firebrands



Fireline length =130 m



Fire line depth = 2 m



Fireline intensity =18.46 MW/m



Firebrands input volume = 2m x 130 m x 9 m = 2340 m3

Input number of firebrands = 8160 pcs/s

Input number vs intensity = (8160 pcs/s)/[(18.46 MW/m)] 442 pcs/MJ.m

