

ABSTRACT

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Title : *Analysis of Lighting Optimization for Public Street LED Lights on Bogor Raya Street Using the DIALux Evo Application*

Street lighting is an important part of public road facilities which functions to illuminate the road at night so that road users can see more clearly thereby increasing the safety and security of road users. Poor lighting quality and inappropriate pole designs are the weaknesses of the street lighting system on Jalan Raya Bogor. This study aims to optimize the strength of the spread of light on Public Street Lighting (PJU) on Jalan Raya Bogor. 27 of 2018. Measurement and simulation of DiaLux with an area of 665.55m² and 156 measurement points, the results of measurements in the field of 60 Watt LED lamps with a height of 10.5 m to the road produce an illumination value of 8.8 Lux and DIALux simulation results for existing conditions are obtained Illumination value 9.6 Lux. It is known that the measurement and simulation values do not meet the standards of the Minister of Transportation PM No 27 of 2018 for the category of low pedestrian conflict below 10-13 Lux. To improve the Illumination value, a pole design with a lamp height of 9 m was replaced with the same lamp so that a lighting intensity value of 11.6 Lux was obtained, including the range of 10-13 Lux. Based on the results of the increase, it has met the standards of the Minister of Transportation PM No. 27 of 2018.

Keywords : *Lights, Public Street Lighting (PJU), Dialux, PM Ministerial Regulation No. 27 of 2018.*