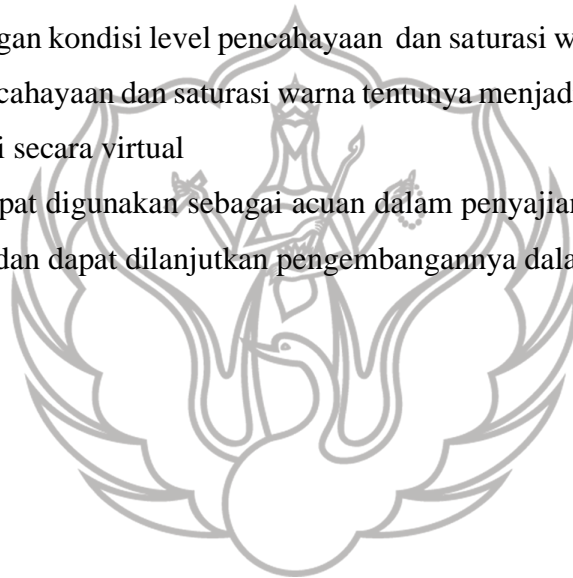


## BAB VI. KESIMPULAN

Hasil penelitian ini menyimpulkan bahwa melalui simulasi aplikasi dialux evo dapat menunjukkan bahwa setting ruang pameran virtual dengan obyek 2 dimensi dengan perbedaan konfigurasi pencahayaan dan warna menghasilkan perbedaan dalam persepsi visual. Pada penelitian ini spesifikasi jenis lampu, ketepatan peletakan, kualitas tektur, warna dan jenis bahan dari elemen pembentuk ruang dan furniturnya dapat terukur melalui aplikasi sehingga bisa diterapkan untuk perancangan selanjutnya. Tulisan ini memberikan bukti lebih lanjut bahwa warna latar sangat berpengaruh terhadap impresi ketajaman visual dari pengamat. Untuk memperjelas detail obyek 2 dimensi yang disajikan secara virtual diperlukan warna latar akromatik hitam dan warna latar kromatik biru yang memberikan kontras yang tinggi dengan sistem pencahayaan horizontal-vertikal. Namun demikian secara keseluruhan warna latar tidak terlalu berpengaruh terhadap keruangan dengan kondisi level pencahayaan dan saturasi warna yang sama. Oleh karena itu variasi dari level pencahayaan dan saturasi warna tentunya menjadi pertimbangan dalam setting display obyek 2 dimensi secara virtual

Penelitian ini dapat digunakan sebagai acuan dalam penyajian pameran virtual khususnya untuk obyek 2 dimensi dan dapat dilanjutkan pengembangannya dalam penelitian selanjutnya.



## DAFTAR PUSTAKA

- Abdollahi, R. (2021). Design of lighting system for sacred places with the approach of improving technical and economic conditions. *Ain Shams Engineering Journal*, 12(3), 2899–2905. <https://doi.org/10.1016/j.asej.2021.02.021>
- Castellotti, S., Conti, M., Feitosa-Santana, C., & Del Viva, M. M. (2020). Pupillary response to representations of light in paintings. *Journal of Vision*, 20(10), 1–18. <https://doi.org/10.1167/jov.20.10.14>
- Díaz-Barrancas, F., Cwierz, H., Pardo, P. J., Pérez, Á. L., & Suero, M. I. (2020). Spectral color management in virtual reality scenes. *Sensors (Switzerland)*, 20(19), 1–16. <https://doi.org/10.3390/s20195658>
- Dresp-Langley, B., & Reeves, A. (2014). Effects of saturation and contrast polarity on the figure-ground organization of color on grey. *Frontiers in Psychology*, 5(SEP). <https://doi.org/10.3389/fpsyg.2014.01136>
- Duff, J., Kelly, K., & Cuttle, C. (2015). Perceived adequacy of illumination, spatial brightness, horizontal illuminance and mean room surface exitance in a small office. *Lighting Research and Technology*, 1–14. <https://doi.org/10.1177/1477153515599189>
- Egusa, H. (1982). Effect of brightness on perceived distance as a figure-ground phenomenon. *Perception*, 11(6), 671–676. <https://doi.org/10.1068/p110671>
- Egusa, H. (1983). Effects of brightness, hue, and saturation on perceived depth between adjacent regions in the visual field. *Perception*, 12(2), 167–175. <https://doi.org/10.1068/p120167>
- Farné, M. (1977). Brightness as an indicator to distance: relative brightness per se or contrast with the background? *Perception*, Vol. 6, pp. 287–293. Retrieved from <http://www.perceptionweb.com/perception/fulltext/p06/p060287.pdf>
- Gordon, G. (2014). *Interior Lighting For Designers* (fifth edit). New Jersey: John Wiley & Sons, Inc.
- Hamedani, Z., Solgi, E., Skates, H., Hine, T., Fernando, R., Lyons, J., & Dupre, K. (2019). Visual discomfort and glare assessment in office environments: A review of light-induced physiological and perceptual responses. *Building and Environment*, 153(February), 267–280. <https://doi.org/10.1016/j.buildenv.2019.02.035>
- Hangga, A., Nisa, A., Apriliyanto, M., Afandi, M., Pratama, D., Aziz, M., ... Witrianto, S. (2021). Modelling of lighting system utilizing natural and artificial lighting using DIALux. *IOP Conference Series : Earth and Environmental Science*. <https://doi.org/10.1088/1755-1315/969/1/012024>
- Hedrich, M., Bloj, M., & Ruppertsberg, A. I. (2009). Color constancy improves for real 3D objects. *Journal of Vision*, 9(4), 1–16. <https://doi.org/10.1167/9.4.16>
- Krupinski, R. (2020). Virtual reality system and scientific visualisation for smart designing and evaluating of lighting. *Energies*, 13(20). <https://doi.org/10.3390/en13205518>
- Lindemann, F., & Ropinski, T. (2011). About the influence of illumination models on image comprehension in direct volume rendering. *IEEE Transactions on Visualization and Computer Graphics*, 17(12), 1922–1931. <https://doi.org/10.1109/TVCG.2011.161>
- Lohwanitchai, K., & Jareemit, D. (2021). Modeling energy efficiency performance and cost-benefit analysis achieving net-zero energy building design: Case studies of three representative offices in thailand. *Sustainability (Switzerland) Open Acces, Volume 13*(Issue 9). <https://doi.org/10.3390/su13095201>
- Mangkuto, R. A. (2016). Validation of DIALux 4.12 and DIALux evo 4.1 against the Analytical Test Cases of CIE 171:2006. *LEUKOS - Journal of Illuminating Engineering Society of North America*, 12(3), 139–150.

- <https://doi.org/10.1080/15502724.2015.1061438>
- Maniglia, M., Thurman, S. M., Seitz, A. R., & Davey, P. G. (2018). Effect of varying levels of glare on contrast sensitivity measurements of young healthy individuals under photopic and mesopic vision. *Frontiers in Psychology*, 9(JUN), 1–7.  
<https://doi.org/10.3389/fpsyg.2018.00899>
- Pellegrini, R. ., Schauss, A. ., & Miller, M. . (1981). Room color and aggression in a criminal detention holding cell: a test of the “tranquilizing pink” hypothesis. *Journal of Othomolecular Psychiatry*, 10 (3), 174–181.
- Ping, J., Liu, Y., & Weng, D. (2021). Review of depth perception in virtual and real fusion environment. *Journal of Image and Graphics*, Volume 26, Pages 1503-1520.  
<https://doi.org/10.11834/jig.210027>
- Scorpio, M., Laffi, R., Teimoorzadeh, A., & Ciampi, G. (2022). A calibration methodology for light sources aimed at using immersive virtual reality game engine as a tool for lighting design in buildings. *Journal Of Building Engineering*, Volume 48.  
<https://doi.org/10.1016/j.jobe.2022.103998>
- Suhihuuhg, W., Ri, O., Xvlqj, E., Fdwhjrulhv, W., Zklfk, W., Eduho, D. U. H., ... Iuhh, E. (2017). Study on the relationship between illuminance and contrast of target and background for visually challenged people. *Journal Environ. Eng.*, Vo. 82 No., 121–128.
- Watson, A. B., & Yellott, J. I. (2012). A unified formula for light-adapted pupil size. *Journal of Vision*, 12(10), 1–8. <https://doi.org/10.1167/12.10.12>
- Ye, Z. T., Ruan, M., & Kuo, H. C. (2020). CSP-LEDs combined with light guide without reflective matrix for antiglare design. *IEEE Access*, 8, 156718–156726.  
<https://doi.org/10.1109/ACCESS.2020.3019314>

