

# The Design Process of “Hanga” Luminaire in the Dining Room of a Residential House

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## ABSTRACT

Home is a place where you may get a sense of comfort, where it can be achieved from various aspects. For instance, the quality produced by a lighting system will determine the comfort level of the room user. If the lighting quality is poor, it will be disturbing the activities held in that area. Moreover, the most common lamp used in residential housing is a pendant lamp, hence I designed a pendant lamp called *Hanga*. The design of this lamp is inspired by a clothes hanger that is often used in Asia, where the name of *Hanga* intends to represent clothes hangers in Japanese. Main material used in this design is aluminium and acrylic and it also uses neutral colors that will be more suitable to be placed in the dining room. In addition, the design process of *Hanga* is guided by using Rosemary Kilmer’s design method, starting from gathering information until the evaluating design.

**Keywords:** Home, Lighting, Luminaire, Design, Clothes Hanger

## 1. INTRODUCTION

Home is a place where you may get a sense of comfort. comfort can also be obtained from any various aspects. It can be internal and external aspects, such as the layout and atmosphere of the room. One of the internal aspects that also important is the lighting of the room. (Ashadi, 2015) [1] The existence of facilities in a room does not ensure that the room will be a comfortable room, therefore lighting in a room plays an equally important role. Although there is light in a room, but without an optimal lighting system, a room may not necessarily works properly. The quality of the lighting which produced by the lighting system will determine the comfort of the room user. If the quality of the lighting is poor, it will clearly disturb the activities of users [2].

Lighting is also influenced by the luminaire used, the luminaire is a socket to place and protect the lamp and its a mechanical component needed to support the luminaire. Therefore, the luminaire must look attractive and functional in order to maximize lighting. [3]

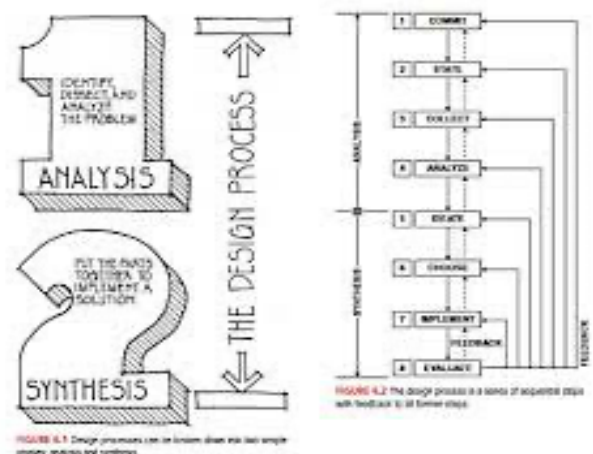
One type of lamp that is commonly used in the dining room in a residential house is the pendant lamp, because pendant lamps can provide light in certain smaller areas such as above the dining table [4]. Pendant lamp mostly have an unique decorative design. *Hanga* is a Pendant lamp designed with the basic shape of a clothes hanger. while the word *hanga* itself represents clothes hanger in Japanese, this type of hanger is usually called a folding hanger and is generally used to dry baby clothes or other types of small clothes, this multifunctional hanger is often

found on the Asian continent because it was created by one of the largest plastic manufacturers in Indonesia.

## 2. BACKGROUND

### 2.1. Design Method

There’s a view step before the design are fixed, The design method used based on Rosemary Kilmer’s design method such in data collection and analysis. [5]



**Figure 1** Rosemary Kilmer’s Design Process (By: Rosemary Kilmer, 2014)

1. **Commit**  
The first stage is the data collection stage is to find out the objectives and design problems. Data collection is done by collecting literature data such as: (a) Luminaire design that is suitable for use in the dining room (b) Luminaire design that is sturdy and easy to clean.
2. **State**  
In this stage we must know the preferential requirements to find out the problems that exist in order to design the appropriate design, and maximize the design process in the future.
3. **Collect**  
Collect stage can be done by collecting all the information from the problems that have been collected from the previous stage.
4. **Analyze**  
Followed by the analyze stage which can be done by (a) analyzing the information that has been obtained in the previous stage which can produce the right solution to make the luminaire design in the dining room of a residential house.
5. **Ideate**  
Then proceed to the ideate stage where in the following stage is the stage to collect ideas and a reference of how the design we would make, this stage can be done by: (a) creating a design concept, (b) making alternative designs, (c) material concepts and colour, (d) the concept of shape.
6. **Choose and Implement**  
In the choose and implement stage, choose the best alternative design, then developed into a final design that is better than before.
7. **Evaluate**  
The last is the evaluate and feedback stage where at this stage the design receives input and feedback from the design that we have made.

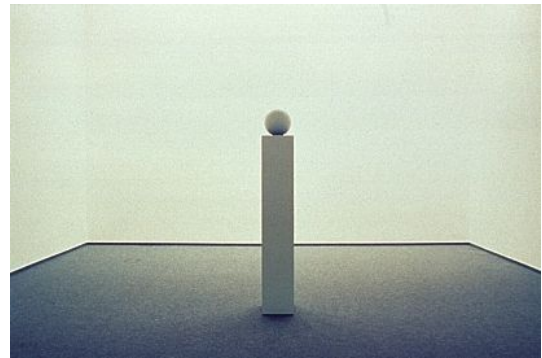
## **2.2. Richard Kelly's Perceptual Theory**

The findings from the case study will be discussing with the mentioned lighting theory of three fundamental elements of visual design, by American pioneer lighting designer Richard Kelly (1910–1977). Kelly replaced the question of lighting quantity with the question of individual qualities of light, which construct the categories ambient luminescence, focal glow, and play of brilliants. (Manninen, 2016).

### **1. Ambient luminescence**

This is mostly known as general lighting. This type of lighting includes general orientation and activity. Because of its universal and uniform approach, it essentially follows the same guidelines as quantitative lighting design, with the exception that ambient luminescence is not the end goal, but rather the basis for a more thorough lighting design. The intention is to provide distinct lighting that builds on the foundation

layer of ambient light, rather than blanket illumination or "one size fits all" lighting at the stated optimum illuminance level.



**Figure 2** Ambient Luminescence  
(By: Erco, 2006)

### **2. Focal glow**

Furthermore, in order to understand the differentiation, Kelly devised a second type of light, which he dubbed "focal glow," in order to achieve distinction. (Kelly, 1996). In fact, the areas that are illuminated where automatically enhance our attention in the first place, now become a consideration. It is feasible to control the abundance of information present in an environment by using an appropriate brightness distribution. Accent lighting can draw attention to areas carrying critical information, while lower lighting can be used to tone down secondary or distracting information. This allows for a quick and precise flow of data, with the visual environment being quickly recognized in terms of its structure and the relevance of the things it includes. This is true for both spatial orientation (e.g., the capacity to identify rapidly between a main entrance and a side door) and emphasizing specific objects, such as when displaying merchandise for sale or showcasing the most expensive sculpture in a collection.



**Figure 3** Focal Glow  
(By: Erco, 2006)

### **3. Play of Brilliants**

Play of Brilliants light layering usually used as a decoration lamp because of its beauty. [6] The third type of light, known as "play of brilliants," is the

consequence of the realization that light can both call our attention to and convey information. This is especially true for the specular effects that point light sources may have on reflecting or refracting surfaces. Furthermore, the light source might be deemed bright in and of itself. This "play of brilliants" may breathe new life into a room, especially in a distinguished setting. What chandeliers and candlelight used to generate may now be reproduced in a modern lighting design by using light sculptures or generating spectacular effects on lit materials.

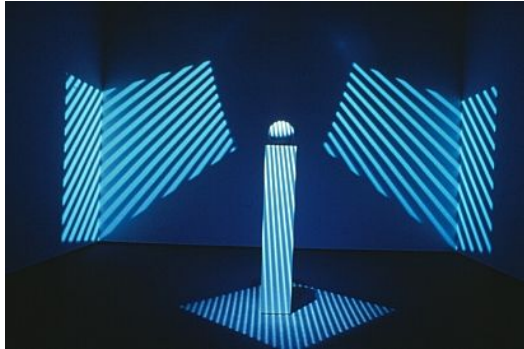


Figure 4 Play of Brilliants  
(By: Erco, 2006)

According to Richard Kelly, every lighting design starts with visual imagination first then the ideas obtained are then made into a words or pictures. [7]

### 3. RESULT AND DISCUSSION

What really inspired me for making a luminaire for pendant lamp that inspired by the clothes hanger for the residential house is because in the residential house in Asia they always have a clothes hanger, and then it I think about in. If in general, hangers are placed outside the house with its function to dry clothes, what if something similar is placed inside the house. Then how to make things that are generally placed outdoors can also be placed indoors. So then I thought why it wasn't made as a luminaire because the shape is also unique and eye catching, then the most suitable luminaire to use the basic shape of this clothes hanger is a pendant lamp. So here is it the design of the luminaire, *hanga*. which inspired by the hangers that often found in Asia. This folding clothes hanger has many sticks that are used to hang clothes and there is a main hanger to hang it on a clothesline or maybe a pole. The shape is then implemented into a pendant lamp that is used in the dining room in a residential house.

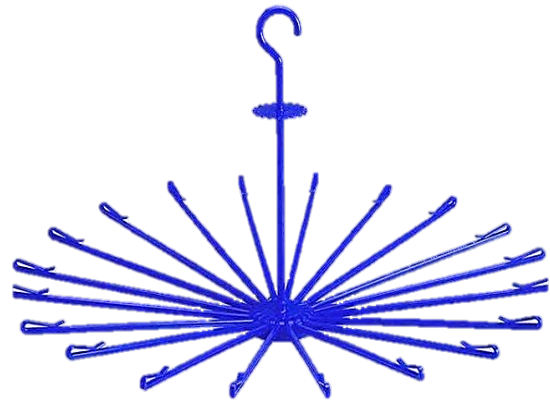


Figure 5 Folding Hanger  
(Product by Lion Star)



Figure 6 Folding Hanger Half Folded  
(Product by Lion Star)

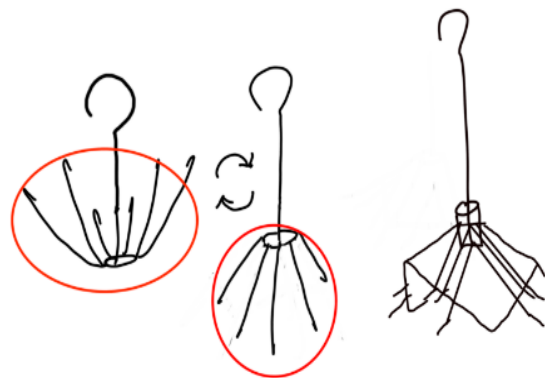


Figure 7 Hanga Design Process  
(By: Viona Clarissa, 2021)

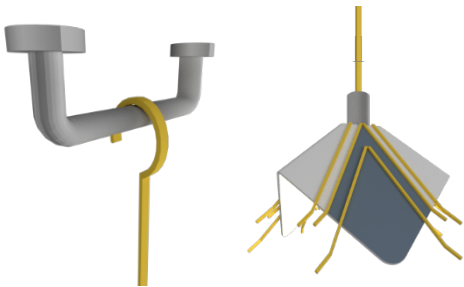
The folding stick on the clothes hanger that was used to facing upwards is then turned around to be used as decoration around the lampshade, the lampshade was triangle because it refers to the clothes hanger which have a triangle shape whenever it opened or half folded. and for connecting the lamp into the ceiling, there's a pole with a hook at the end to describe the clothes hanger which hung

on a clothesline. And to describe the clothesline, there's aluminium bar which mounted to the ceiling.



**Figure 8** Hanga Pendant Lamp Elevation  
(By: Viona Clarissa, 2021)

Hanga used a basic neutral color such as blue grey, white and a gold as an accent as a decorative accents to make it look more elegant. White is a neutral color and it gave you a clean sensation, and blue such as a color of stability or calm. (Cherry, 2020) [8]



**Figure 9** Hanga Pendant Lamp Detail  
(By: Viona Clarissa, 2021)

Hanga pendant lamp uses aluminium bar and acrylic as basic materials because these materials are durable and easy to clean even with the minimum maintenance [9]. The hook that hangs on the aluminum bar mounted to the ceiling can be shifted according to where you want to use more light. But for aesthetics, it's better to make it stay in the middle



**Figure 10** Hanga Luminaire View 1  
(By: Viona Clarissa, 2021)

This luminaire design is very suitable to be placed in the dining room with a simple, minimalist and monochromatic design. Because the color of the pendant lamp, *hanga* itself also uses neutral colors such as white and blue gray.



**Figure 11** Hanga Luminaire View 2  
(By: Viona Clarissa, 2021)

There are at least three light functions. The first is to help us do a certain activity such as a lamp for reading or a lamp for sleeping. The second function is to give an accent to the room. This type of lamp is usually not too bright and has a unique shape so that it produces a certain atmosphere in the room. While the third function is to provide general information. Well, this third function can be obtained from the ceiling lamp or pendant lamp. [10]



**Figure 12** *Hanga* Luminaire View 3  
(By: Viona Clarissa, 2021)

#### 4. CONCLUSIONS

Indirectly, the luminaire greatly affects the comfort of a space, because the luminaire itself can affect the effectiveness of the lighting in the room. And the lighting in a room can affect the level of comfort in the room, it would be nice if the luminaire used can be adjusted to where it is placed. The design of the luminaire itself can also attract the attention of space users because the lamp certainly emits light and attracts the attention of people in the room, *hanga* is a pendant lamp made by aluminium and acrylic, that the basic shape are inspired by the folding clothes hanger. *Hanga* usually designed to be placed in the dining room in a residential house.

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#### REFERENCES

- [1] Ashadi, N. A. (2015). *Pencahayaan sebagai Indikator Kenyamanan pada Rumah Sedeherana yang Ergonomis. Studi Kasus RSS di Kota Depok Jawa Barat*, A-18.
- [2] Kania. (2019, May 17). *Pentingnya Pencahayaan Optimal di Dalam Ruangan*. Retrieved from dekoruma: <https://www.dekoruma.com/artikel/85968/pentingnya-sistem-pencahayaan-optimal-di-ruangan>
- [3] Tjhin, W. T. (n.d.). *Luminer dan Alat Kontrol* . Retrieved from Scribd.
- [4] Mariska, K. (2020, May 26). *Kenali Jenis dan Fungsi Lampu untuk Desain Interior*. Retrieved from Narasi Design & Furnishing: <https://narasidesign.com/kenali-jenis-dan-fungsi-lampu-untuk-desain-interior/>
- [5] Kilmer, R. (2014). *Designing Interiors*. New Jersey: John Wiley & Sons.
- [6] Neumann, D. (2010). *The Structure of Light: Richard Kelly and the Illumination*. Yale School of Architecture.
- [7] Manninen, M. (2016). *Artificial Light as A Resource in Public Art. The Roles of Light, 2*.
- [8] Cherry, K. (2020, May 28). *Color Psychology: Does It Affect How You Feel?* Retrieved from verywellMind: <https://www.verywellmind.com/color-psychology-2795824>
- [9] Kania. (2016, August 1). *Furniture 101: Metal, si Kuat dan Awet*. Retrieved from Dekoruma.
- [10] adminrumahku. (2015, September 25). *Lampu Gantung-Antara Fungsi dan Estetika*. Retrieved from rumahku: <https://www.rumahku-online.com/artikel/etalasc/287-lampu-gantung-antara-fungsi-dan-estetika>