班加罗尔, 印度
栀子花酒店将艺术、建筑与舒适融合到一起

Bangalore, India
Gardenia Hotel weaves in art, architecture and the green hospitality


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狭小的空间可以在一进来时就制造出空间的通透感和天空融为一体的感觉么？ 建筑师 Rajinder Kumar 设计的栀子花酒店用艺术，建筑和班加罗尔的城市景象编制出一场平静的纯美经历。

图1： 建筑的造型由多层阳台组成

Picture 1: The building's form with its multiple balconies

入口处清丽的玻璃反射出通透的光线，美观的同时又及防爆与隔离室外天气情况的功能于一身(图1)。

建筑的“双肩”向两侧延展开从而给多层宽广的阳台制造了空间，玻璃的主轴把阳光引进各层的腹地，旁边的帕特里克·布朗克分层花园郁郁葱葱，奢华又静谧。

空旷的空间到了 Rajinder Kumar 的手中就变成了传承历史与都市之美的崭新的平台。“设计在若干年中变换了形式和功能”他解释到，“它被每个文化吸收，所以我们应该谨记那些不变的精髓。”不变的是优雅。入口处的玻璃墙就是超前现代的优雅：正面看墙是透明的，而从另一个角度看去，竖直的柱子仿佛要融入到无限延伸的表面，整个建筑犹如被墙包围着。这实际上是玻璃准确的反射和极简约主义式的形状变换。这个结构的特殊性使得它成为了 ITC 公司总思想的转折点的标志，“可持续的设计和负责任的奢华”。 栀子花酒店是亚洲第一个获得“能源

Could a building in a tight space provide a solid transparency at the entrance and yet make you think it melts into the sky? Created by architect Rajinder Kumar, ITC Royal Gardenia Hotel unravels as a serene composition that weaves art, architecture and the city of Bangalore into an aesthetic experience. The entrance has a crisp and clean blast-resistant glass façade, with multiple balconies (picture 1). Rajinder Kumar's talent is to take an empty space, extract a city's historic essence to create something new and aesthetically urban. "Design over the years has changed in form and function," he says, "It has been absorbed by everyday culture. And we have to keep those constants in mind." It is the Asia's first LEED (Leadership in Energy & Environmental Design) Platinum Rated Hotel.

The hotel has utilized innovation, cutting-edge technology and design integration to earn new benchmarks in energy efficiency, water efficiency and low carbon techniques. The hotel produce 42.2% energy cost less compared to baseline cost as recommended by ASHRAE 90.1-2004, thus it got for the "Optimize Energy Performance" LEED evaluation 10 Credit. This saving in energy is partly contributed by Lutron's LCP128™ centralized lighting control system, which can save substantial amount of lighting energy by using strategies like architectural load dimming, switching, high-end trim, scene and zone control as well as scheduling.

The lighting design workflow

The lighting designer was involved right after the interior designer presented their preliminary design concepts and color and material boards.

"Our brief was to design the lighting appropriate for a five star hotel, to create the ambiance and to integrate the interior and exterior landscaping with the lighting." comments Babu Shankar, from Integrated Lighting Design "The intent was to create drama by highlighting the interior artwork and artifacts, plants and flower displays so that it creates a completely different atmosphere when the sun goes down."

图2a：带有当地文化色彩的前厅

图2b：充满阳光的走廊

图3：灯光设计师为竖直花园添置了生长光照，使得它成为厅内的亮点

Pictures 2a, 2b: View of the lobby and its reference of the local culture (2a) View of the corridor with an abundance of daylight (2b)

Picture 3: The lighting designer just accented the vertical garden with the grow lights, making it the focal point of the atrium lobby

与环境设计先锋”（LEED）的白金级别的酒店， 通过整合最先进的技术和设计从而在能源有效利用、高效用水和低碳技术等领域建立新的水准。这种对能源的良性利用意味着栀子花酒店能源成本，比 ASHRAE 90.1 -2004 制定的基本能源成本减少了42.2%。所以它取得了“能源表现最佳化”LEED 评估的10分。

杰出的节能表现部份归功于酒店所采用的路创 LCP128™ 集中式照明控制系统，通过各种策略为酒店节省非常多的能源，例如建筑负载调光、开关、高端修正、场景和光区控制及时间表等等。

灯光设计的工作流程

灯光设计师从室内设计师展示了最初设计理念、颜色和材料板之后就投入到项目中去。 灯光设计师与室内设计师紧密合作设计出灯光和天花板整合一体的方案。“客户的要求是设计与五星级酒店相称的灯光，制造出柔和的氛围，室内与室外的环境融为一体。”灯光设计师巴布・杉卡说道，“灯光并不是要成为主角，而是要突出建筑本身和室内的元素。设计初衷是通过灯光来表现室内艺术品、陈列、植物和花卉在日落时产生的完全不同的感觉。”

酒店理念及元素

酒店的室内设计由英国的设计师弗朗切斯卡・巴素来完成，主题是反映出自然尤其是酒店的名字——栀子花，在酒店无处不在。设计师从生命的不同层面来吸取灵感，设计出的酒店每层都拥有自己的颜色、主题和质地。 主题取决于不同的情绪和自然元素的各种表达，从石头、化石、土壤、树木、木材、水、火、叶子、动物生活、鸟和蝴蝶。由于是开放式的建筑，室内外的空间联会贯通。灯光设计师充分利用丰富的自然光，让人造光的使用降到最低。日落时，人造灯也只是起到烘托气氛的作用。诺大的酒店，灯光也以顾客的视觉舒适为目标，不会过于夺目。此次灯光设计师选取了路创LCP128 系统控制酒店室内外的照明，按酒店的日常运作时间表预先为每个区域设置各种灯光场景，到时自动启动，省却人手控制的麻烦及成本。

前厅和空中花园

帕特里克・布朗克分层竖直花园的结构是由钢筋铸成的，花园由技术领先的点滴灌溉系统来从上向下浇灌。花园的光源是由自由节能的照明系统提供的自然光线。白天中，前厅只需使用自然光，花园则需要植物生长必需的光线，灯光设计师就令花园的灯光成为重点，使他成为院子中的视觉亮点。其他地方的自然光都是经过过滤的。 花卉师要求照度总共4000勒克斯，1000瓦的户外4500K金属卤素投影灯分别被隐藏在建筑中专用的照明箱中来实现所需的照明亮度。空中花园的金属卤素投影灯演色性（CRI）是85。家具和布质感的横幅使用70瓦AR-11低压灯来照明的。前厅平均的光线明暗度200勒克斯，不过横幅、喷泉、前台和花园的重点灯光照度是500-700勒克斯，使得这些地方能够得以突现。

The hotel concept

The hotel's interiors have been created by UK-based designer Francesca Basu. References to nature and the hotel mascot – the Gardenia flower – can be seen throughout the property. The designer has drawn inspiration from different layers of life forms and so each floor follows this theme by adopting different colors, motifs and textures (pictures 2a, 2b). The lighting designer has tried to minimize the use of artificial lighting during the daytime because of the abundance of daylight. "Even though the hotel is a huge hotel, the intent was to create more subtle lighting that would not over power the guests' visual senses. Moreover the intelligent use of lighting control has allowed creating different setting and mood of light." explains Shankar. Lutron's LCP128 system was selected to control both the interior and exterior lighting of the hotel. Lighting requirements for each area were preprogrammed into the system based on the daily operating schedule.

The Lobby and the hanging garden

During the day the lobby uses only daylight (picture 4). The Patrick Blank's vertical garden needed the grow lights and therefore the lighting designer just accented the vertical garden, making it the focal point of the atrium lobby. The rest of the areas are all lit with natural light that is filtered. The horticulturist required a total of 4,000 lux, achieved by using 1,000 watt exterior metal halide projectors with 4500 degree Kelvin with CRI of 85 that are concealed within the architectural light slot. 70 watt AR-111 low voltage lamps have been chosen to highlight the furniture grouping and fabric banners. The average luminance for the lobby is 200 lux, but all of the accent lights were more in the range of 500-700 lux for hanging fabric banners, fountains, registration desk, vertical hanging garden so that these elements do stand out from the overall ambient lighting.

A floating pavilion

Amidst verdant gardens and recycled water bodies stands the gracious multi-column Lotus Pavilion (picture 5). "Our intent was to conceal linear lights at the base of the structure so that

漂流亭

在青翠的花园和循环不息的流水之中，悄然站着优雅的莲花厅。它的建筑风格取材于缇部·苏丹（Tipu Sultan）的在石丽兰噶帕特纳（Srirangapatna）的宫殿，为周游世界的旅客提供了一个重温旧址的机会。莲花厅有一组装饰用的柱子组成而且整个结构漂浮在莲花池上。“我们想把直线的光放装在亭子结构的底部从而产生亭子漂浮在水面上的感觉” 杉卡先生进一步解释道，“我们通过把LED灯内嵌在地上来突出柱子及其细节特点，同时所有的咖啡桌和艺术品也做同样处理。”这个地方也是只有在夜晚才会把人造灯打开来烘托气氛和感觉。 这个功能由四个情景光控系统来实现。

三餐食坊

餐厅是24小时供应食品，灯光需要灵活舒适。早上灯光要充足以便阅读报纸，晚上要富情调以配合主题餐厅的用餐气氛。夜深人静的时候，可将无人使用的角落的灯光调至最暗以节省能源，正好符合过这个LEED白金级别项目的要求。以上各种灯光及氛围组合全赖路创LCP128™ 照明控制系统，其专利RTISS™ 技术更可防止灯光在电流不稳定的情况下闪动，破坏优美的用餐氛围。

灯光设计师用LED作为重点照明光源和藏在小海湾旁的间接照明光源。桌面照度平均值是250勒克斯，自助餐处为400勒克斯。“我们使用了4500K金属卤素灯，其演色性（CRI）为85，来提亮整个空中花园；37瓦的MR-16低压灯照射餐桌，自助餐处和墙上艺术品。”杉卡如是解释道。这些不同的照明设置是通过路创LCP 128™ 的时钟控制和路创专利的RTISS 技术等来实现的。

会议室

会议室主要是由内嵌式LED灯，窗帘处的内嵌式的灯具和低压灯来照明的，平均照度是400勒克斯。会议室采用了路创的 GRAFIK Eye® 预设照明控制系统，为所有的会议室和董事长室预先设定四个场景，包括大型会议/一般会议/视频培训/演示，一个按键即重现所需场景。■

图4：充满阳光的前厅

图5：莲花厅　线形的灯光被灯光师巧妙地隐藏起来从而使莲花厅看起来像是浮在水上

图6：三餐食坊

Picture 4: The Lobby and the daylight

Picture 5: The Lotus Pavillion – the intent of the lighting designer was to conceal linear lights at the base of the structure so that it creates a feeling that the whole structure is floating over the pond

Picture 6: The Three Meal Restaurant

项目信息 Project information

酒店名称 Hotel Name:	栀子花酒店 ITC Royal Gardenia, Bangalore India
拥有者 Owner:	ITC-WELCOMGROUP
灯光设计师 Lighting Designer:	巴布·杉卡 综合体灯光设计 Babu Shankar, Integra ted Lighting Design
灯光设计师 Interior Designer:	弗朗切斯卡·巴素 英国 Francesca Basu, UK
照明控制系统 Lighting Control System:	路创 Lutron

it creates a feeling that the whole structure is floating over the pond. “explains Shankar “We accented all of the columns and revealed the details of the columns by recessing LED up lights in the floor. We provided LED accent lights to light all of the coffee tables and the art and artifacts. During the daytime, the entire space is lit with daylight and only in the evening time do we use the artificial lighting to create the mood and ambiance.”

The restaurant

The Three Meal Restaurant is used for 24 hour dining, so the lighting should be flexible, comfortable enough to read a newspaper during the morning breakfast and at the same time to be used as a specialty restaurant in the evening time to create mood and ambiance. During late-night hours, unused corners of the restaurant can be dimmed to minimum to save energy, which is very important consideration for a LEED platinum project like this hotel. These different combinations of light levels and ambience were all made possible with LCP 128™ Centralized Lighting Control System with a patented RTISS™ technology which can prevent flickering of light even in case of power line noise and fluctuation. Concealed grow lights have been used in the atrium seating area for the hanging gardens, in order not to over power the diners' sensory experience. LED have been used for accent lighting and lighting concealed inside the cove for indirect lighting. The average luminance is 250 lux at the tables, and 400 lux at the buffet counter. “We used metal halide with 4500 degree Kelvin with CRI of 85 to highlight the hanging gardens and 37 watt MR-16 low voltage lamps to highlight the dining tables, buffet counters and artwork on the wall.” comments Shankar.

Conference rooms

For the conference rooms there are mostly indirect lighting coves with LED and concealed lights for the perimeter draperies and low voltage down lights to provide ambient lighting, the average luminance is 400 lux. Four scenes (Conference/General meeting/ Video training/AV presentation) are preset for all of the meeting rooms and board rooms - thanks to Lutron's GRAFIK Eye® Preset Lighting Control System. ■