



Church Lighting Guide

Selecting the proper lighting for your place of worship is one of the most important decisions of any building or remodeling project. Your lighting should not only provide adequate illumination, it should also complement the architecture, be energy efficient, and be easy to maintain. King Richard's Lighting has been helping churches meet these special needs. Contemporary as well as traditional designs, thousands of size, lamp and finish options, hand-crafted fixtures built to your specifications, and a staff of experienced lighting professionals make King Richard's Lighting your church lighting experts. This guide will walk you through the basic steps of selecting the appropriate lighting for your project, whether you're planning a new building or considering a lighting upgrade.

Location

Figure A Proper location of each fixture and electrical box is important not only to ensure a uniform level of illumination, but also to fit into the architectural design and seating layout of your space. No matter how seating is arranged, fixtures should be positioned over these areas, as well as the main aisle if possible, to ensure enough light for comfortable reading. Spacing between fixtures should be based not only on the light coverage desired, but also on the spacing of windows, ceiling beams and other architectural elements (Fig. A).

Different Manning hangers and ceiling canopies are available to accommodate sloped ceilings as well as cover both recessed and exposed outlet boxes for best appearance.

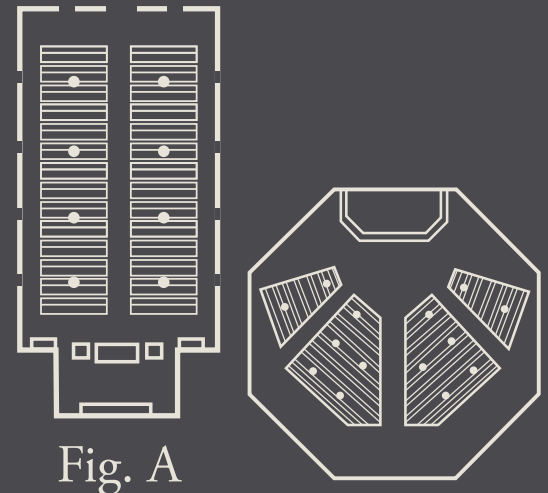


Fig. A

Mounting Height

Figure B The mounting height of each fixture should be based on the lighting level desired, the appearance of the fixtures in relation to architectural elements, and uniform distribution of light. King Richard's pendants should be suspended so that the distance from floor to bottom of fixture is approximately 1.2 times the distance between fixtures longitudinally (Fig. B). Deduct this amount from the total ceiling height to get the overall length of fixture including stem or chain. Generally, the higher a fixture is mounted, the more even the light distribution will be below. However, the higher a fixture is mounted the more the wattage of the downlight must be increased to compensate for the higher mounting height. Care must also be taken to not place indirect lighting fixtures too close to the ceiling to avoid "hot spots" above the fixture.

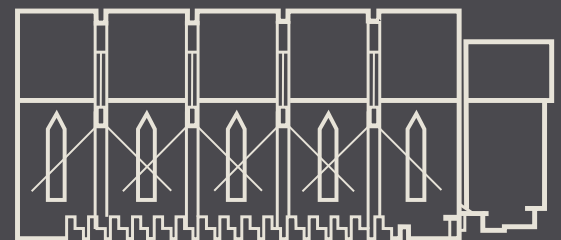


Fig. B

Lighting Other Areas

Figure G Since the altar or chancel is the focal point of most churches, it is recommended that the light levels be two to three times greater than above the pews. Lighting for this area should be concealed from the congregation to avoid distractions and provide an unobstructed view. King Richard's adjustable spot and flood lighting units mounted behind an arch or beam can be used to light the general area and spotlight the altar, pulpit, or other areas (Figs. F & G). Lighting the pulpit or lectern is best accomplished by two units to minimize shadows. Light on the speaker should be directed from an angle of 30° to 45° forward from the speaker, and spaced so that the angle is 45° or more above where the speaker stands. Areas above and below balconies should be lit with smaller fixtures that match the units in the main area. Each King Richard's fixture is available in several sizes and styles, including ceiling mounted fixtures for under balconies. Foyer and hallway lighting should be selected by room proportions, using 1 1/2" fixture diameter to 1' of room width as a guide to proportions.

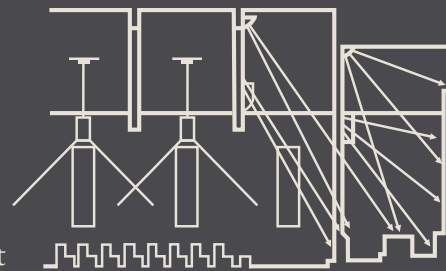


Fig. F

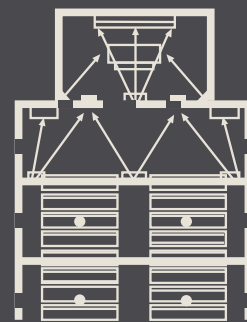


Fig. G

Fixture Selection

Figure D King Richard's offers two basic ways to light your church. Direct fixtures use sophisticated reflector systems to light the seating areas from above. Indirect fixtures bounce light up off the ceiling to light the area. Direct fixtures are better suited for churches with dark interiors and high ceilings. Indirect fixtures work best for white or light wood interiors and lower ceilings. Many King Richard's fixtures combine both indirect and direct lighting for the advantages of both. The proportion and size of the design selected will depend on the proportions of the interior, spacing between outlets, and the height at which fixtures will be suspended. In an interior where the height is greater than the width (Fig. D), fixtures of similar proportions are more compatible. A good rule of thumb to follow is to choose a unit about one-inch diameter to each foot of spacing between units longitudinally. In interiors where the width is greater than the height (Fig. E), two inches in fixture diameter for each foot of spacing should be figured. Care should be taken that the size selected has sufficient wattage capacity to produce desired lighting results.

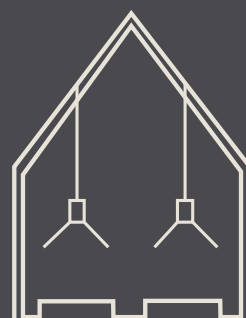


Fig. D

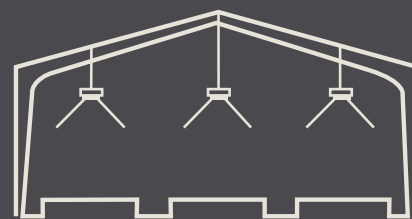


Fig. E

Light Levels

The light level in your church depends largely on the architecture, the denomination, and the tastes of the congregation. Light levels are measured in units called “footcandles” with a level of 20 to 40 footcandles generally recommended for comfortable reading. This translates to less than one watt per square foot with LED solutions, to five or more watts per square foot with older incandescent sources (though this figure will vary depending on the fixture selected and the specifications of the light source chosen). Note that energy codes in many states restrict the wattage per square foot, typically to 1 w/sqft. or less. As important as the overall light levels, is the distribution of light in the space. A uniform amount of light, without bright spots under fixtures or shadows between them, is the goal.

Most churches want the ability to control the lighting levels to suit different parts of the service or for special occasions or programs. A wide variety of dimming controls are available, from sophisticated theatrical systems to simple wall dimmers. Consider these needs when selecting a fixture and ask your Architect, Engineer or Electrician to make sure the fixtures you select will meet your needs.

Energy Efficiency

Can church lighting be effective and energy efficient? Yes! But not all types of lighting sources are appropriate for ecclesiastical spaces.

Fixtures designed with incandescent lamps in mind may still a viable option because they are inexpensive, can be dimmed easily, and need little in the way of special equipment to operate and maintain. However, because they are inefficient and have relatively short lamp life (generally 2000 hours or less), they aren't a good choice for many types of spaces. Screw-in LED bulbs are now widely available as incandescent replacements, and provide dramatic benefits in terms of energy savings and long life. However, their overall quality, color, and performance when being dimmed varies. We recommend trying these lamps in one fixture before deciding to replace all your lighting with LED. Fluorescent lamps are efficient, have long life (up to 20,000 hours) and are available in a larger range of color temperatures. The initial cost of the fixtures is higher however, especially if dimming is required. And fluorescent lamps may be inadequate to illuminate large spaces with high mounting heights. Metal halide lamps are also efficient and have longer life than incandescents. But they are prone to shifting in color over time, are more difficult to dim, and require several minutes to come up to full brightness. Purpose-built LED light engines offer much better efficiency and longer life than screw-in LED bulbs. They also are designed to provide better, more even illumination and be compatible with a variety of dimming systems. For many churches, the cost of an LED upgrade is paid back within a few years thanks to lower energy consumption and maintenance. King Richard's Lighting has adopted several LED solutions that are designed specifically for church lighting.

Maintenance

Figure C Wiring in existing churches should be checked for capacity with an architect or engineer. King Richard's pendant fixtures are available with downlights, interior lamps, and uplights, depending on the model and size selected (Fig. C).

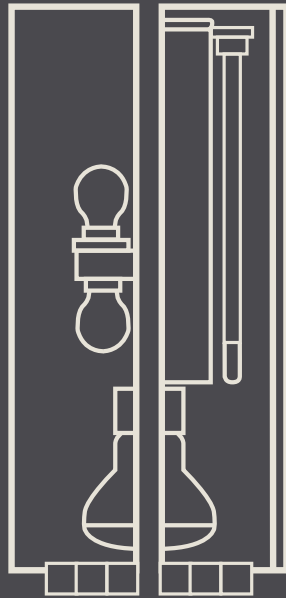


Fig. C

Consult a Professional

No matter what size your building or remodeling project, we recommend consulting with a local Electrical Engineer, Lighting Designer or Architect. Chances are they have provided solutions for churches just like yours in the past, and are sources of invaluable information. King Richards is also staffed by professionals who are eager to help you. Just give us a call or email to get started.

SPECIFICATION SHEET:

Romanesque Pendant (Large Interiors 433 series)



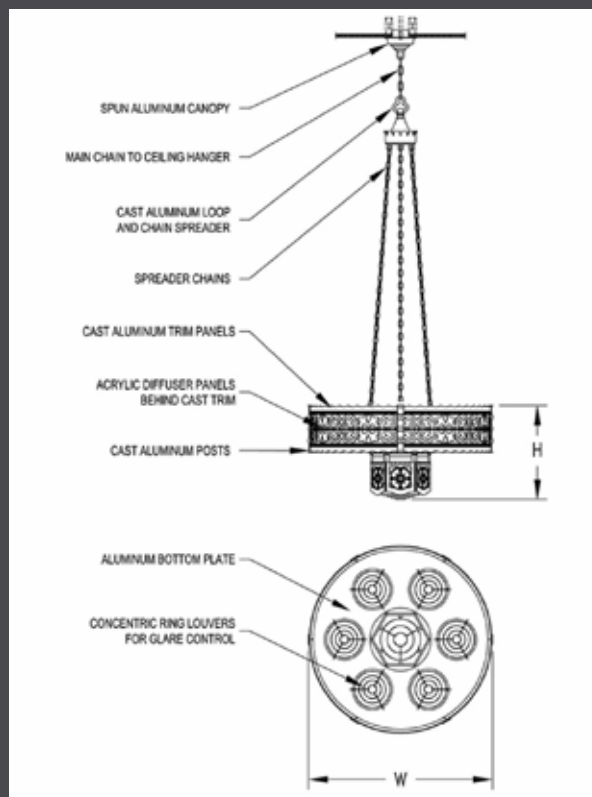
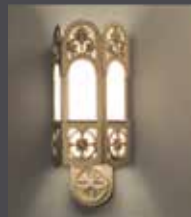
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Romanesque
Sconce

Romanesque
Exterior Sconce
(LBE-590)

Romanesque
Sconce
(LBI-318)

Related Fixtures



LIGHTING SPECIFICATION SHEET - Romanesque Pendant (Large Interiors 433 series)

Fixture	Height	Diameter	OAH	Lamping	Finish:	Louver	Diffuser
CPI-433-40	21"	40"	165"	: 6R300/1R500/6N100	PT	CON	WH
CPI-433-40A	21"	40"	165"	: 6R300/1R500/3R300/6N100	PT	CON	WH
CPI-433-48	24"	48"	168"	: 8R300/1R500/8N100	PT	CON	WH
CPI-433-48A	24"	48"	168"	: 8R300/1R500/4R300/8N100	PT	CON	WH
LPI-433-40	44"	40"	188"	: 6R300/1R500/12N100	PT	CON	WH
LPI-433-40A	44"	40"	188"	: 6R300/1R500/3R300/12N100	PT	CON	WH
LPI-433-48	59"	48"	203"	: 8R300/1R500/14N60	PT	CON	WH
LPI-433-48A	59"	48"	203"	: 8R300/1R500/4R300/14N60	PT	CON	WH

Fixture Notes

- Lamping listed is Outer Downlights/Center Downlight/Uplights/Interior. Wired for two, three or four circuits.

- Energy efficient LED and fluorescent lamp options also available. Please consult factory.

Lamp Specifications

6R300:	Outer downlights: Provisions for (6) 300 watt inside frost R40 medium base reflector flood lamps supplied by others.
1R500:	Provisions for (1) 500 watt inside frost R40 mogul base reflector flood lamp supplied by others.
6N100:	Provisions for (6) 100 watt inside frost A-19 medium base incandescent lamps supplied by others.
3R300:	Provisions for (3) 300 watt inside frost R40 medium base reflector flood lamps supplied by others.
8R300:	Outer downlights: Provisions for (8) 300 watt inside frost R40 medium base reflector flood lamps supplied by others.
8N100:	Provisions for (8) 100 watt inside frost A-19 medium base incandescent lamps supplied by others.
4R300:	Provisions for (4) 300 watt inside frost R40 medium base reflector flood lamps supplied by others.
12N100:	Provisions for (12) 100 watt inside frost A-19 medium base incandescent lamps supplied by others.
14N60:	Provisions for (14) 60 watt inside frost A-19 medium base incandescent lamps supplied by others.

Fixture Details

- Specify three digit color suffix with "PT" finish option.
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- HOUSING: Consists of solid cast aluminum trim panels and corner trim posts. Three chains to spreader with single chain to ceiling hanger.
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- MOUNTING: Structural support is required for this heavy fixture. Requires 2 x 4 blocking or 1/2" IP stud extending 1/2" below finished ceiling through center of octagonal junction box.
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- CIRCUITS: Wired for two, three, or four circuits with separate neutrals.
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- OVERALL HEIGHT: Standard OAH includes fixture height plus 6' chain to spreader and 6' main chain to ceiling.
- OVERALL HEIGHT: Standard OAH includes fixture height plus 12' main chain to ceiling.

Finish Specifications

PT: Standard Painted Finishes: Polyester resin powder coat paint finish.

Louver Specifications

CON: Concentric Ring

Diffuser Options

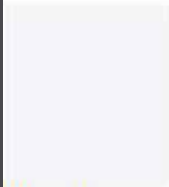
WH: Opal White Acrylic

To Specify

- 1) Choose a lamping option
- 2) Choose a voltage option
- 3) Choose a diffuser
- 4) Choose a louver

IMPORTANT: Electronic displays do not show colors accurately.
Colors shown should only be used as a guide.

Paint finishes All finishes are polyester resin powdercoat paints. Specify two- or three-letter code after PT or PP prefix in fixture number.



WHT white



CRM cream



BLK black



CLG cool gray



WMG warm gray



LSV light silver



MSV medium silver



DSV deep silver



TSV textured silver



SD silverado



LTM light titanium



MTM medium titanium



TNK textured nickel



LGD light gold



MGD medium gold



DGD deep gold



LBZ light bronze



MBZ medium bronze



DBZ deep bronze



BC bronze crater



BCP bright copper



LCP light copper



MCP medium copper



DCP deep copper



ACP aged copper



TCP textured copper

Natural Metals Raw metals with a protective clear coat. Specify two-letter code in fixture number.



PB polished brass



SAB antique brass



BB brushed brass



DB distressed brass



BA brushed aluminum



BS brushed stainless



GF grinder finish



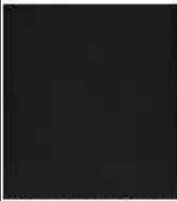
CU raw copper



DU distressed copper



DZ distressed bronze



ZB anodized black



ZS anodized aluminum

— DigitalSpec® Planar series only —

Natural Woods Oak wood stained in three different shades. Specify three-letter code after WT prefix in fixture number.



BRH birch



OAK oak



DOK dark oak

Wood veneers Specify three-letter code after WV prefix in fixture number.



MPL maple



CHR cherry



LOK light oak

Acrylic Diffusers Specify two-letter code in fixture number.

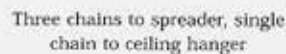


Ambia collection configured diffusers Fabrics, organics, and graphics in translucent resin panels. Specify three-letter code after CD prefix in fixture number.



Most acrylics from manufacturers like 3Form® and Lumicor® can be specified as diffusers in products. Please consult factory for more information.

KRLTMG-22



CPI-433 Series



160 CM 25 A-19 LAMPS

OPTIONAL UPLIGHTS USE SURFIN™
AND ADJUSTABLE UPLIGHTS
(74-10) FROM VERTICAL
(100°) POSITION



Cast Aluminum

Wired for two, three or four circuits

see specifications page

LPI-433 Series

Specifications

NO.	DIA. "D"	HT. "H"	ADJ. OUTER DOWNLIGHTS	CENTER DOWNLIGHT	ADJUSTABLE UPLIGHTS	INTERIOR LIGHTS
LPI-433-40	40"	44"	6-R40(150-300)	1-R52(500-750)	NONE	12-(60-100)
-40A	40"	44"	6-R40(150-300)	1-R52(500-750)	3-R40(150-300)	12-(60-100)
LPI-433-48	48"	59"	8-R40(150-300)	1-R52(500-750)	NONE	14-(60-75)
-48A	48"	59"	8-R40(150-300)	1-R52(500-750)	4-R40(150-300)	14-(60-75)
CPI-433-40	40"	21"	6-R40(150-300)	1-R52(500-750)	NONE	6-(60-100)
-40A	40"	21"	6-R40(150-300)	1-R52(500-750)	3-R40(150-300)	6-(60-100)
CPI-433-48	48"	24"	8-R40(150-300)	1-R52(500-750)	NONE	8-(60-100)
-48A	48"	24"	8-R40(150-300)	1-R52(500-750)	4-R40(150-300)	8-(60-100)

Fluorescent lamps available. Please contact factory.

For speaker provision in center to replace downlight add suffix -x
Up to 8" dia. speakers in -40 & -40A and up to 12" dia. speakers in -48 & 48A

For optional finishes and glass see inside front cover

For matching supplementary equipment see our traditional catalog "T-7" page 11 & 12

Production time is estimated at 16 weeks from receipt of the deposit

Terms are 60% due at commission, 20% due when ready to ship – remaining balance due upon arrival.

Shipping is estimated at \$6000 to Cape Coast, Ghana – parish responsible for any VAT, import taxes, etc.

Price quotes below based on an order of 12 or more pendant lights

LPI-433-40-6R300-1R500-12N100	\$10,172 each
LPI-433-40A-3R600-1R500-3R300-12N100	\$10,271 each
LPI-433-48-8R300-1R500-14N60	\$12,363 each
LPI-433-48A-8R300-1R500-4R300-14N60	\$12,462 each



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