




1) In light of the rule, “keep it simple,” using a few of parts as possible, evaluate Shiley Hall. How many different lighting fixtures are there and how many different types of bulbs?

In Shiley Hall there are 57 different kinds of lighting fixtures throughout the building, inside and outside. As shown in Table 1, the lighting fixtures vary from hallway lights to handrail lights to display cases. There is a wide variety of fixtures. The number of different types of bulbs is not as varying as the fixtures, there are 22 different types of bulbs to fill the 57 fixtures. Most fixtures contain only 1 type of bulb with only 1 bulb per fixture. Some fixtures have up to 5 bulbs.







Table 1: Shiley Hall Lighting Fixtures

Type/Description		Image
TYPE AA	<p>DESCRIPTION: RECESSED LOW VOLTAGE MULTI-HEAD ADJUSTABLE ACCENT.</p> <p>HOUSING: 22.77" LONG BY 6.80" HIGH BY 4" APERTURE ALUMINUM CONSTRUCTION WITH .75" TRIM & CAN ACCOMMODATE CEILING THICKNESS OF .5"-1". FOUR-HEADED LUMINAIRE.</p> <p>LENS: SUPPLY WITH LINEAR SPREAD LENS FOR EACH LAMP.</p> <p>LOUVER: SUPPLY WITH HEXCELL LOUVER FOR EACH LAMP.</p> <p>MOUNTING: RECESSED IN CEILING.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: ELECTRONIC.</p> <p>LAMP: FOUR 37 WATT FLOOD IR HOUR MR16</p> <p>INPUT WATTS: 148.</p> <p>MANUFACTURERS: RSA 4-HEAD COMBOLIGHT SERIES OR APPROVED</p>	 <p>1</p>
TYPE AB	<p>DESCRIPTION: RECESSED LOW VOLTAGE MULTI-HEAD ADJUSTABLE ACCENT.</p> <p>HOUSING: 22.77" LONG BY 6.80" HIGH BY 4" APERTURE ALUMINUM CONSTRUCTION WITH .75" TRIM & CAN ACCOMMODATE CEILING THICKNESS OF .5" -1". DOUBLE-HEADED LUMINAIRE.</p> <p>LENS: SUPPLY WITH LINEAR SPREAD LENS FOR EACH LAMP.</p> <p>LOUVER: SUPPLY WITH HEXCELL LOUVER FOR EACH LAMP.</p> <p>MOUNTING: RECESSED IN CEILING.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: ELECTRONIC.</p> <p>LAMP: TWO 39 WATT BRITE SPOT METAL HALIDE, 3000K.</p> <p>INPUT WATTS: 89.</p> <p>MANUFACTURERS: RSA 2-HEAD COMBOLIGHT SERIES OR APPROVED.</p>	 <p>2</p>
TYPE BA	<p>DESCRIPTION: SEMI-RECESSED WALL MOUNT ASYMMETRIC COMPACT FLUORESCENT UPLIGHT.</p> <p>HOUSING: 7-5/8" CEILING RECESS DEPTH BY 10.5" WIDE BY 24.75" LONG ALUMINUM EXTRUSION WITH DIE CAST ALUMINUM END CAPS WITHOUT EXPOSED FASTENERS. HINGED DOORFRAME TO LAMP COMPARTMENT.</p> <p>LENS: MICRO-PRISMATIC.</p> <p>REFLECTOR: DIE FORMED 94% REFLECTIVE DUAL FINISH ANODIZED ALUMINUM ASYMMETRIC.</p> <p>MOUNTING: SEMI-RECESSED WALL MOUNT, COORDINATE WITH ARCHITECTURAL ELEVATIONS.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC PROSTART.</p> <p>NOTE: SUPPLY WITH SOLID VISOR.</p> <p>LAMP: TWO 42 WATT TTT CFL.</p> <p>INPUT WATTS: 90.</p> <p>MANUFACTURERS: AMETRIX LARGE VAULT SERIES OR APPROVED.</p>	 <p>3</p>

¹ <http://www.rsalighting.com/common/brands.cfm?pg=Products&brandName=RSA&group=&category=Multi-Lamp%20Fixtures%3A%20COMBO%20Next%20Gen%20Recessed>

² <http://www.rsalighting.com/common/brands.cfm?pg=Products&brandName=RSA&group=&category=Multi-Lamp%20Fixtures%3A%20COMBO%20Next%20Gen%20IC>

³ <http://www.ametrixlighting.com/common/brands.cfm?pg=Detail&brandName=Ametrix&category=Wall%20-%20Semi-Recessed%3A%20Vault&id=17809>

<p>TYPE DB</p>	<p>DESCRIPTION: SEMI-RECESSED WALL MOUNT ASYMMETRIC DIMMABLE COMPACT FLUORESCENT UPLIGHT.</p> <p>HOUSING: 7-5/8" CEILING RECESS DEPTH BY 10.5" WIDE BY 18.75" LONG ALUMINUM EXTRUSION WITH DIE CAST ALUMINUM END CAPS WITHOUT EXPOSED FASTENERS. HINGED DOORFRAME TO LAMP COMPARTMENT.</p> <p>LENS: MICRO-PRISMATIC.</p> <p>REFLECTOR: DIE FORMED 94% REFLECTIVE DUAL FINISH ANODIZED ALUMINUM ASYMMETRIC.</p> <p>MOUNTING: SEMI-RECESSED WALL MOUNT, COORDINATE WITH ARCHITECTURAL ELEVATIONS.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING.</p> <p>NOTE: SUPPLY WITH OPAL VISOR.</p> <p>LAMP: ONE 42 WATT TTT CFL.</p> <p>INPUT WATTS: 48.</p> <p>MANUFACTURERS: AMETRIX LARGE VAULT SERIES OR APPROVED.</p>	 <p>4</p>
<p>TYPE DA</p>	<p>DESCRIPTION: RECESSED LOW VOLTAGE ADJUSTABLE ACCENT.</p> <p>LENS: SUPPLY WITH LINEAR SPREAD LENS.</p> <p>LOUVER: SUPPLY WITH HEXCELL LOUVER.</p> <p>MOUNTING: RECESSED IN CEILING.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: ELECTRONIC.</p> <p>NOTE: LUMINAIRE TO UTILIZE HOT AIMING OR CAPABLE OF LOCKING THE FOCUS WHILE LT.</p> <p>LAMP: ONE 37 WATT FLOOD IR HOUR MR16.</p> <p>INPUT WATTS: 37</p> <p>MANUFACTURERS: KURT VERSEN 7431 SERIES, FOCAL POINT, RSA, LIGHTOLIER C4MRA SERIES OR APPROVED.</p>	 <p>5</p>
<p>TYPE DB</p> <p></p> <p>TYPE DD</p>	<p>DESCRIPTION: RECESSED DIMMABLE COMPACT FLUORESCENT DOWNLIGHT.</p> <p>HOUSING: 7.25" HIGH BY 15.78" WIDE BY 13-5/8" LONG 16 GA. GALVANIZED STEEL WITH HORIZONTALLY MOUNTED LAMPING. FOUR-PIN, POSITIVE LATCH THERMOPLASTIC SOCKET.</p> <p>REFLECTOR: MATTE CLEAR.</p> <p>MOUNTING: RECESSED IN CEILING.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING.</p> <p>LAMP: ONE 28 WATT TTT CFL.</p> <p>INPUT WATTS: 28.</p> <p>MANUFACTURERS: GOTHAM 6" AF SERIES, LIGHTOLIER-BQ31 SERIES, PORTFOLIO C6142 SERIES OR APPROVED.</p> <p>DESCRIPTION: SAME AS TYPE 'DB', EXCEPT SUPPLY WITH ELECTRONIC BALLAST.</p> <p>BALLAST: OSRAM QUICKTRONIC PROSTART.</p>	 <p>6</p>
<p>TYPE DC</p>	<p>DESCRIPTION: RECESSED DIMMABLE COMPACT FLUORESCENT DOWNLIGHT WITH DECORATIVE GLASS CYLINDER TRIM.</p> <p>HOUSING: 3-9/16" HIGH BY 14" WIDE BY 10-3/8" LONG 16 GA STEEL HOUSING WITH 5" DIAMETER APERTURE WITH CEILING FITTING PLATE.</p> <p>LENS: SUPPLY WITH WHITE OPAL SATIN GLASS CYLINDER SHADE.</p> <p>REFLECTOR: WHITE ALUMINUM CUP REFLECTOR.</p> <p>MOUNTING: RECESSED IN CEILING.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING.</p> <p>LAMP: ONE 32 WATT TTT CFL.</p> <p>INPUT WATTS: 34.</p> <p>MANUFACTURERS: WILA ZYLINDER SERIES OR APPROVED.</p>	 <p>7</p>
<p>TYPE DF</p>	<p>DESCRIPTION: RECESSED DIMMABLE COMPACT FLUORESCENT DOWNLIGHT WITH CROSS BAFFLE.</p> <p>HOUSING: 8-7/16" HIGH BY 17-3/16" WIDE BY 17.5" LONG 16 GA GALVANIZED STEEL WITH MAXIMUM CEILING THICKNESS OF 1.5". HORIZONTALLY MOUNTED, FOUR-PIN, POSITIVE LATCH, THERMOPLASTIC SOCKETS.</p> <p>LOUVER: SEMI-DIFFUSE LOW IRIDESCENT CROSS BAFFLE.</p> <p>REFLECTOR: MATTE CLEAR.</p> <p>MOUNTING: RECESSED IN CEILING.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING.</p> <p>LAMP: THREE 42 WATT TTT CFL, HORIZONTAL MOUNT.</p> <p>INPUT WATTS: 139.</p> <p>MANUFACTURERS: GOTHAM 10" AF SERIES OR APPROVED.</p>	 <p>8</p>







⁴ <http://www.ametrixlighting.com/common/brands.cfm?pg=Detail&brandName=Ametrix&category=Wall%20-%20Semi-Recessed%203A%20V%20Vault&id=17809>

⁵ <https://www.lightology.com/productsshots/web/large/1224RP-C4MRA-006H1-BKPO.jpg>

⁶ <http://www.visual-3d.com/Tools/PhotometricViewer/Default.aspx?id=29542>

⁷ <http://www.docstoc.com/docs/5324613/Attachments-LiteOpticsTM-DecoLites-Zylinder-Scultural-light-the-opal-satin>

⁸ <http://www.visual-3d.com/Tools/PhotometricViewer/Default.aspx?id=17503>

<p>TYPE DG</p> <p>TYPE DGI</p> <p></p>	<p>DESCRIPTION: RECESSED DIMMABLE COMPACT FLUORESCENT DOWNLIGHT.</p> <p>HOUSING: 7.25" HIGH BY 15.78" WIDE BY 13-5/8" LONG 16 GA. GALVANIZED STEEL WITH HORIZONTALLY MOUNTED LAMPING, FOUR-PIN, POSITIVE LATCH THERMOPLASTIC SOCKET.</p> <p>REFLECTOR: MATTE CLEAR.</p> <p>MOUNTING: RECESSED IN CEILING.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING.</p> <p>LAMP: ONE 32 WATT TTT CFL.</p> <p>INPUT WATTS: 34.</p> <p>MANUFACTURERS: GOTHAM 6" AF SERIES, LIGHTOLIER B031 SERIES PORTFOLIO C6142 SERIES OR APPROVED.</p> <p>DESCRIPTION: SAME AS TYPE 'DG', EXCEPT SUPPLY WITH ELECTRONIC BALLAST.</p> <p>BALLAST: OSRAM QUICKTRONIC PROSTART.</p>	 <p style="text-align: center;">9</p>
<p>TYPE DH</p>	<p>DESCRIPTION: RECESSED FLUORESCENT DOWNLIGHT WITH DECORATIVE CURVED RING TO REFLECT LIGHT BACK UP ONTO THE CEILING.</p> <p>HOUSING: 8-11/16" HIGH BY 18.25" WIDE BY 20.75" LONG 16 GA STEEL WITH 5.5" APERTURE.</p> <p>LOUVER: DECORATIVE WHITE GLASS CORONA.</p> <p>REFLECTOR: MATTE CLEAR.</p> <p>MOUNTING: RECESSED IN CEILING.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC PROSTART.</p> <p>LAMP: ONE 32 WATT TTT CFL.</p> <p>INPUT WATTS: 34.</p> <p>MANUFACTURERS: WILA 121 DOWNLIGHT WITH LITE OPTIC WHITE GLASS CORONA OR APPROVED.</p>	 <p style="text-align: center;">10</p>
<p>TYPE FA</p>	<p>DESCRIPTION: INTERNALLY ILLUMINATED ADA COMPLIANT LED HANDRAIL.</p> <p>HOUSING: 1.90" DIAMETER ALUMINUM IN LENGTHS AS SHOWN.</p> <p>LENS: PATENTED OPTICAL ASSEMBLY WITH 45 DEGREE BEAMSPREAD.</p> <p>DISTRIBUTION: 45 DEGREE DOWN.</p> <p>MOUNTING: COORDINATE WITH ARCHITECTURAL DRAWINGS.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: ELECTRONIC 24V DRIVER.</p> <p>NOTE: MANUFACTURER TO PROVIDE SHOP DRAWINGS.</p> <p>LAMP: 5000 KELVIN HIGH OUTPUT LED 7.6 W/FT.</p> <p>INPUT WATTS: 7.6 W/FT IN LENGTHS AS SHOWN.</p> <p>MANUFACTURERS: IO LUXRAIL OR APPROVED.</p>	 <p style="text-align: right;">11</p>
<p>TYPE FB</p>	<p>DESCRIPTION: SURFACE MOUNT DISPLAY CASE LED WALLWASHER.</p> <p>HOUSING: .77" WIDE BY .89" HIGH IN LENGTHS AS SHOWN EXTRUDED ALUMINUM THAT ALSO FUNCTIONS AS A HEAT SINK.</p> <p>LENS: PATENTED ASYMMETRIC OPTICAL ASSEMBLY.</p> <p>DISTRIBUTION: ASYMMETRIC.</p> <p>MOUNTING: COORDINATE WITH ARCHITECTURAL DRAWINGS.</p> <p>FINISH: ANODIZED ALUMINUM.</p> <p>BALLAST: REMOTE ELECTRONIC 24V DRIVER, TO BE LOCATED IN ACCESSIBLE, VENTILATED LOCATION.</p> <p>NOTE: COORDINATE WITH ARCHITECTURAL DISPLAY CASE DRAWINGS.</p> <p>UL LISTING: DRY.</p> <p>NOTE: MANUFACTURER TO PROVIDE SHOP DRAWINGS.</p> <p>LAMP: 3000 KELVIN HIGH OUTPUT LED 7.6 W/FT.</p> <p>INPUT WATTS: 7.6 W/FT IN LENGTHS AS SHOWN.</p> <p>MANUFACTURERS: IO LINE .75 OR APPROVED.</p>	 <p style="text-align: right;">12</p>
<p>TYPE FC</p>	<p>DESCRIPTION: SURFACE MOUNTED ADJUSTABLE HEAD FIBER OPTIC STRIPLIGHT MOUNTS WITHIN DISPLAY CASE.</p> <p>HOUSING: 2.350" HIGH BY LENGTHS AS SHOWN ABS PLASTIC STRIPLIGHT WITH ADJUSTABLE LENS.</p> <p>ILLUMINATOR HOUSING: 6.58" WIDE 10.29" LONG BY 4.33" HIGH</p> <p>LENS: ANODIZED ALUMINUM HOUSING WITH FORCED AIR-FIBER COOLING SYSTEM, 28.5 DBA QUIET FAN.</p> <p>MOUNTING: 30-45 DEGREE 15 MM DIAMETER DOWMED GLASS LENS.</p> <p>BALLAST: SURFACE MOUNT FIBER OPTIC STRIPLIGHT WITHIN DISPLAY CASE. COORDINATE LOCATION OF FIBER STRIP AND REMOTE, ACCESSIBLE & VENTILATED ILLUMINATOR LOCATION WITH ARCHITECTURAL DETAILS.</p> <p>NOTE: ELECTRONIC.</p> <p>LAMP: MANUFACTURER TO PROVIDE SHOP DRAWINGS.</p> <p>INPUT WATTS: ONE 150W PHILIPS CDM MASTERCOLOR, 3000K. 185.</p> <p>MANUFACTURERS: VISUAL LIGHTING TECHNOLOGIES.</p>	 <p style="text-align: center;">13</p>






⁹ <http://www.visual-3d.com/Tools/PhotometricViewer/Default.aspx?id=17525>

¹⁰ [wilalighting.com/pdf/A5.pdf](http://www.wilalighting.com/pdf/A5.pdf)

¹¹ <http://www.iolighting.com/common/brands.cfm?pg=Detail&brandName=IO&category=luxrail&id=15266>

¹² <http://www.cooperlighting.com/common/brands.cfm?pg=Detail&brandName=IO&category=linear&id=15273>

¹³ <http://www.visual-lighting.com/fiber/products.aspx?type=illuminators>

<p>TYPE GA DESCRIPTION: RECESSED 2X4 FLUORESCENT WITH MESO-OPTICS LENS. HOUSING: 2' BY 4' COLD ROLLED STEEL HOUSING. LENS: FORMED GLARE-FREE LENS BACKED WITH HOLOGRAPHIC MESO-OPTICS FILM. MOUNTING: RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING. LAMP: THREE 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 84. MANUFACTURERS: LEDALITE PURE-FX OR APPROVED.</p> <p>TYPE GAJ DESCRIPTION: SAME AS TYPE 'GA', EXCEPT SUPPLY WITH TRIM FOR GYP CEILING.</p>	 <p>14</p>
<p>TYPE GB DESCRIPTION: RECESSED NARROW APERTURE SATIN LENS LINEAR FLUORESCENT. HOUSING: 4.5" HIGH BY 48" LONG BY 3.75" SPLAYED APERTURE FORMED COLD ROLLED STEEL HOUSING. LENS: REGRESSED .125" WHITE DIFFUSE ACRYLIC MATTE LENS. REFLECTOR: HIGHLY REFLECTIVE DIE FORMED WHITE PAINTED STEEL REFLECTOR. MOUNTING: RECESSED IN CEILING. FINISH: MATTE WHITE. BALLAST: OSRAM QUICKTRONIC PROSTART. LAMP: TWO 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 58. MANUFACTURERS: PINNACLE EDGE 4R SERIES OR APPROVED.</p> <p>TYPE GB1 DESCRIPTION: SAME AS GB, EXCEPT SUPPLY WITH TRIM FOR GYP CEILING.</p>	 <p>15</p>
<p>TYPE GC DESCRIPTION: RECESSED FLUORESCENT LENSED TROFFER. HOUSING: 2' BY 4' COLD ROLLED STEEL HOUSING. LENS: #12 PATTERN, 0.125" THICK ACRYLIC DIFFUSER. MOUNTING: RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. LAMP: TWO 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 58. MANUFACTURERS: LITHONIA SP SERIES, METALUX GC SERIES, DAYBRITE, HUBBELL, COLUMBIA, LIGHTOLIER, HE WILLIAMS OR APPROVED.</p> <p>TYPE GC1 DESCRIPTION: SAME AS TYPE 'GC', EXCEPT SUPPLY WITH THREE 32 WATT T8 LAMPS. LAMP: THREE 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 85.</p>	 <p>16</p>
<p>TYPE GD DESCRIPTION: RECESSED DIRECT FLUORESCENT CENTRAL BASKET TROFFER WITH LOUVER. HOUSING: 2' BY 4' STEEL WITH TWIN MATTE WHITE REFLECTORS. LENS: METAL DIFFUSER STAGGERED ROUND HOLES BACKED WITH WHITE ACRYLIC DIFFUSER. LOUVER: WHITE BLADE LOUVER. MOUNTING: RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. NOTE: PERFORATED BASKET TO BE EVEN WITH THE CEILING PLANE. LAMP: TWO 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 58. MANUFACTURERS: LITHONIA 2AV SERIES, LIGHTOLIER, COLUMBIA, METALUX 2RDI SERIES, DAYBRITE, HE WILLIAMS OR APPROVED.</p>	 <p>17</p>
<p>TYPE GF DESCRIPTION: RECESSED NARROW APERTURE PARABOLIC FLUORESCENT. HOUSING: 4.5" HIGH BY 48" LONG BY 3.75" SPLAYED APERTURE FORMED COLD ROLLED STEEL HOUSING. LOUVER: DIE FORMED SNAP-IN DIFFUSE PARABOLIC. REFLECTOR: HIGHLY REFLECTIVE DIE FORMED WHITE PAINTED STEEL REFLECTOR. MOUNTING: RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. LAMP: ONE 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 30. MANUFACTURERS: PINNACLE EDGE 4P SERIES, NEORAY 23-DR OR APPROVED.</p>	 <p>18</p>


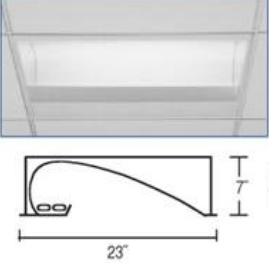



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¹⁵ http://www.pinnacle-ltg.com/products/edge_recessed.htm

¹⁶ <http://hi.atgimg.com/img/i/406/2sp8.jpg>

¹⁷ http://www.drillspot.com/pimages/136/13690_300.jpg

¹⁸ <http://www.pinnacle-ltg.com/products/edge.htm>

<p>TYPE QG DESCRIPTION: RECESSED LENSED FLUORESCENT TROFFER. HOUSING: 1' BY 4' COLD ROLLED STEEL HOUSING. LENS: #12 PATTERN, 0.125" THICK ACRYLIC DIFFUSER. BALLAST: OSRAM QUICKTRONIC PROSTART. LAMP: ONE 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 30. MANUFACTURERS: LITHONIA SP SERIES, METALUX GC SERIES, DAYBRITE, HUBBELL, COLUMBIA, LIGHTOLIER, HE WILLIAMS OR APPROVED.</p> <p>TYPE QG1 DESCRIPTION: SAME AS TYPE 'QG', EXCEPT SUPPLY WITH TRIM FOR GYP CEILING.</p>	 <p>19</p>
<p>TYPE GH DESCRIPTION: RECESSED INDIRECT DIMMABLE FLUORESCENT VIDEO CONFERENCE LIGHT. HOUSING: 23.75" WIDE BY 23.75" LONG BY 7" HIGH 22 GA CRS COATED WITH WHITE POLYESTER POWDER COAT. REFLECTOR: FORMED REFLECTOR COMBINES WHITE DIFFUSE TO .020" HIGH PURITY ALUMINUM (99.9%) REFLECTOR MATERIAL WITH 98% REFLECTANCE FINISH. DISTRIBUTION: ASYMMETRIC INDIRECT. MOUNTING: RECESSED IN CEILING. FINISH: WHITE. BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING. NOTE: ARROWS INDICATING DIRECT OF LUMINAIRE INSTALL = PARTICIPANT VIEW OF FIXTURE WHEN ON AS DESCRIBED ON CUTSHEET. LAMP: TWO 55 WATT BIAK CFL. INPUT WATTS: 110. MANUFACTURERS: VIDESSENCE SOFTLITE SERIES OR APPROVED.</p>	 <p>20</p>
<p>TYPE HA DESCRIPTION: SURFACE MOUNTED FLUORESCENT CLOSET LIGHT. HOUSING: 7-5/8" WIDE BY 1-5/8" HIGH BY 4' LONG DIE FORMED STEEL HOUSING WITH SOLID FRONT. LENS: SHATTER-RESISTANT ACRYLIC DIFFUSER. MOUNTING: SURFACE MOUNT AT HEADER ABOVE DOOR. FINISH: WHITE FINISH. BALLAST: ELECTRONIC. LAMP: ONE 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 30. MANUFACTURERS: LITHONIA N2S SERIES, LIGHTOLIER, NULITE, ALKCO LIGHTING, HE WILLIAMS, FAIL-SAFE MAB SERIES OR APPROVED.</p>	 <p>21</p>
<p>TYPE HB DESCRIPTION: PENDANT MOUNTED FLUORESCENT TURRET STYLE INDUSTRIAL. HOUSING: 13-3/8" WIDE BY 6-5/8" HIGH IN LENGTHS AS SHOWN SOLID TOP DIE EMBOSSED HEAVY GA CRS WITH BAKED WHITE ENAMEL FINISH. MOUNTING: PENDANT MOUNT, COORDINATE WITH ARCHITECTURAL DRAWINGS. FINISH: WHITE FINISH. BALLAST: OSRAM QUICKTRONIC PROSTART. NOTE: SUPPLY WITH WIRE GUARD LAMP: THREE 32 WATT T8 PER 4 FT SECTION, 3100 LUMEN LAMPS. INPUT WATTS: 85. MANUFACTURERS: LITHONIA AF SERIES, METALUX DIM SERIES, DAYBRITE, HUBBELL, COLUMBIA, LIGHTOLIER, HE WILLIAMS OR APPROVED.</p>	 <p>22</p>
<p>TYPE HC DESCRIPTION: PENDANT MOUNTED FLUORESCENT AISLE LIGHT. HOUSING: 8" DIE FORMED STEEL CHANNEL. REFLECTOR: ASYMMETRIC REFLECTOR. MOUNTING: PENDANT MOUNT, COORDINATE WITH ARCHITECTURAL DRAWINGS. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. NOTE: SUPPLY WITH WIRE GUARD LAMP: FOUR 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 113. MANUFACTURERS: SPECILIGHT FAL SERIES, METALUX IB SERIES OR APPROVED.</p>	 <p>23</p>

¹⁹ <http://www.lithonia.com/commercial/SP5.html?pt=Commercial+%26+Industrial+Fluorescent>

²⁰ http://www.videssence.tv/product_select_recessed_fixtures.php

²¹ <http://www.lithonia.com/commercial/CUC.html?pt=Commercial+%26+Industrial+Fluorescent>

²² <http://www.lithonia.com/commercial/AF.html?pt=Commercial+%26+Industrial+Fluorescent>

²³ <http://www.lithonia.com/commercial/FAL.html?pt=Commercial+%26+Industrial+Fluorescent>

<p>TYPE HD</p> <p>TYPE HH</p> <p>TYPE HH</p>	<p>DESCRIPTION: SAME AS TYPE 'HB', EXCEPT SUPPLY WITH DIMMING BALLAST.</p> <p>BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING.</p> <p>LAMP: THREE 32 WATT T8 PER 4 FT SECTION, 3100 LUMEN LAMPS.</p> <p>INPUT WATTS: 84.</p> <p>MANUFACTURERS: LITHONIA AF SERIES, METALUX DIM SERIES, DAYBRITE, HUBBELL, COLUMBIA, LIGHTOLIER, HE WILLIAMS OR APPROVED.</p> <p>DESCRIPTION: SAME AS TYPE 'HD', EXCEPT SUPPLY WITH ONE 32 WATT T8 LAMP.</p> <p>LAMP: ONE 32 WATT T8, 3100 LUMEN LAMPS.</p> <p>INPUT WATTS: 30.</p> <p>DESCRIPTION: SAME AS TYPE 'HD', EXCEPT SUPPLY WITH TWO 32 WATT T8 LAMP.</p> <p>LAMP: TWO 32 WATT T8, 3100 LUMEN LAMPS.</p> <p>INPUT WATTS: 58.</p>	 <p style="text-align: center;">24</p>
<p>TYPE HF</p>	<p>DESCRIPTION: PENDANT MOUNT FLUORESCENT ROUND SKYDOME WITH FROSTED ACRYLIC LENS.</p> <p>HOUSING: 48.75" DIAMETER BY 4-1/8" DEEP DIE FORMED 20 GA. STEEL HOUSING.</p> <p>LENS: WHITE ACRYLIC.</p> <p>MOUNTING: PENDANT MOUNT, BOTTOM OF FIXTURE AT 10.5' AFF.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: ELECTRONIC.</p> <p>LAMP: FIVE 32W/T8/U6, 2900 LUMEN LAMPS.</p> <p>INPUT WATTS: 160.</p> <p>MANUFACTURERS: PRUDENTIAL P-3900 SERIES OR APPROVED.</p>	 <p style="text-align: center;">25</p>
<p>TYPE HG</p>	<p>DESCRIPTION: SURFACE MOUNTED FLUORESCENT LUMINAIRE.</p> <p>HOUSING: 46.25" LONG BY .75" WIDE BY 1.5" HIGH EXTRUDED ALUMINUM WITH WHITE ENAMEL PAINTED FINISH.</p> <p>LENS: SNAP-IN RIBBED ACRYLIC.</p> <p>MOUNTING: SURFACE MOUNT WITHIN DISPLAY CASES. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS.</p> <p>FINISH: WHITE.</p> <p>BALLAST: INTEGRAL ELECTRONIC.</p> <p>LAMP: ONE 28 WATT T5 LAMP, PER 4FT SECTION.</p> <p>INPUT WATTS: 32.</p> <p>MANUFACTURERS: JESCO SLEEK PLUS STRIP SERIES OR APPROVED.</p>	 <p style="text-align: center;">26</p>
<p>TYPE HJ</p>	<p>DESCRIPTION: SURFACE MOUNT WRAPAROUND FLUORESCENT.</p> <p>HOUSING: 7" WIDE BY 4.5" DEEP BY 48" LONG WHITE ENAMEL END PLATES.</p> <p>LENS: ACRYLIC PRISMATIC DIFFUSER WITH SONIC-WELDED, INJECTION MOLDED LUMINOUS ENDS. LINEAR SIDE PRISMS CONTROL BRIGHTNESS & PYRAMIDAL BOTTOM PRISMS MINIMIZE LAMP IMAGE.</p> <p>MOUNTING: SURFACE MOUNT AT CEILING.</p> <p>FINISH: WHITE.</p> <p>BALLAST: OSRAM QUICKTRONIC PROSTART.</p> <p>LAMP: TWO 32 WATT T8, 3100 LUMEN LAMPS.</p> <p>INPUT WATTS: 58.</p> <p>MANUFACTURERS: LITHONIA CB SERIES OR APPROVED.</p>	 <p style="text-align: center;">27</p>
<p>TYPE JA</p>	<p>DESCRIPTION: RECESSED COMPACT FLUORESCENT STEP LIGHT.</p> <p>HOUSING: 12" WIDE BY 7-13/16" HIGH BY 3-7/8" DEEP DIE FORMED 16 GA STEEL HOUSING WITH WHITE POLYESTER COATING.</p> <p>LOUVER: CAST ALUMINUM WITH METALLIC ALUMINUM POWDER COATING & GASKETING.</p> <p>REFLECTOR: DIE FORMED SEMI-SPECULAR ALUMINUM.</p> <p>MOUNTING: RECESSED IN WALL AT 24" AFF/STAIR TREAD.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC PROSTART.</p> <p>LAMP: ONE 28 WATT TTT CFL.</p> <p>INPUT WATTS: 28.</p> <p>MANUFACTURERS: COLE LIGHTING 2153 SERIES OR APPROVED.</p>	 <p style="text-align: center;">28</p>


²⁴ <http://www.lithonia.com/commercial/AF.html?pt=Commercial+%26+Industrial+Fluorescent>


²⁵ <http://www.prolite.com/prod/index.cfm?id=45#>

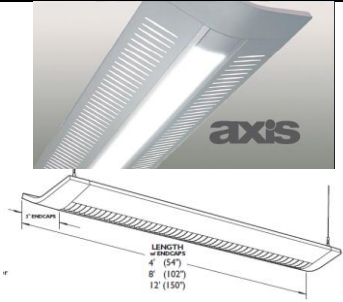
²⁶ <http://www.jescolighting.com/web/catalog.aspx?keywords=Sleek+Plus+T5+2-Wire+28W+3000K>


²⁷ <http://www.lithonia.com/commercial/CB.html?pt=Commercial+%26+Industrial+Fluorescent>

²⁸ http://www.colelighting.com/prod_bycategory.htm#Steplites

<p>TYPE JB</p> <p>DESCRIPTION: RECESSED COMPACT FLUORESCENT STEPLIGHT MOUNTED AS AN INDIRECT UPLIGHT.</p> <p>HOUSING: 10" SQUARE BY 3.2" DEEP CORROSION PROTECTED DIE FORMED ZINC PLATED STEEL HOUSING 0.03" THICK.</p> <p>LENS: PRESSED SODA LIME GLASS RESISTANT TO THERMAL SHOCKS & INTERNALLY PAINTED TO MATCH FACEPLATE FINISH. GASKETED TO PREVENT DUST INGRESS & LIGHT LEAKS.</p> <p>REFLECTOR: THE DIFFUSER ACTS AS A REFLECTOR TO DIRECT LIGHT.</p> <p>DISTRIBUTION: ASYMMETRIC.</p> <p>MOUNTING: RECESSED IN WALL & MOUNTED TO ACT AS AN INDIRECT UPLIGHT.</p> <p>FINISH: AS SELECTED BY ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC PROSTART.</p> <p>LAMP: ONE 26 WATT TTT CFL.</p> <p>INPUT WATTS: 28.</p> <p>MANUFACTURERS: PRISMA PRO INTERIOR TECH 25 SERIES OR APPROVED.</p>	 <p>29</p>
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<p>TYPE LA</p> <p>DESCRIPTION: PENDANT MOUNTED FLUORESCENT DIRECT/INDIRECT LINEAR LUMINAIRE.</p> <p>HOUSING: 8" WIDE BY 3" HIGH EXTRUDED ALUMINUM HOUSING 2 CIRCUIT - 2 UPLIGHT & 1 DIMMING DOWNLIGHT TO BE SEPARATELY SWITCHED/DIMMED FOR AV & STANDARD CLASSROOM MODES. IN LENGTHS AS SHOWN ON DRAWINGS.</p> <p>LOUVER: SEMI-SPECULAR VDT LOUVER.</p> <p>REFLECTOR: 2 UP/1 DOWN OPTIC.</p> <p>DISTRIBUTION: 2 OUTBOARD LAMPS FOR INDIRECT UPLIGHT & ONE SEPARATELY CONTROLLED DIRECT DOWNLIGHT.</p> <p>MOUNTING: SUSPEND WITH AIRCRAFT CABLE AND WHITE CORD FEED.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: SUPPLY WITH OSRAM QUICKTRONIC POWERSENSE DIMMING FOR DOWNLIGHT COMPONENT. OSRAM QUICKTRONIC PROSTART FOR UPLIGHT.</p> <p>NOTE: E.C. TO CONFIRM LENGTHS AS SHOWN ON DRAWINGS. MANUFACTURER TO PROVIDE SHOP DRAWINGS.</p> <p>LAMP: THREE 32 WATT T8, PER 4FT SECTION, 3100 LUMEN LAMPS.</p> <p>INPUT WATTS: 84 WATTS, PER 4FT SECTION.</p> <p>MANUFACTURERS: LEDALITE ENDEAVOR, FINELITE, LINEAR, NEORAY, OR APPROVED.</p>	 <p>30</p>
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<p>TYPE LC</p> <p>DESCRIPTION: DECORATIVE PENDANT MOUNTED FLUORESCENT DIRECT/INDIRECT LINEAR LUMINAIRE.</p> <p>HOUSING: 12" WIDE BY 2.75" HIGH BY LENGTHS AS SHOWN.</p> <p>LENS: FROSTED DIFFUSER CENTER OPTIC.</p> <p>LOUVER: PERF SIDE OPTIC.</p> <p>DISTRIBUTION: DIRECT/INDIRECT.</p> <p>MOUNTING: SUSPEND WITH AIRCRAFT CABLE AND WHITE CORD FEED.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING.</p> <p>NOTE: E.C. TO CONFIRM LENGTHS AS SHOWN ON DRAWINGS. MANUFACTURER TO PROVIDE SHOP DRAWINGS.</p> <p>LAMP: TWO 32 WATT T8, PER 4FT SECTION, 3100 LUMEN LAMPS.</p> <p>INPUT WATTS: 58, PER 4FT SECTION.</p> <p>MANUFACTURERS: AXIS FLOW SERIES, LINEAR, LEDALITE, NEORAY, OR APPROVED.</p>	 <p>31</p>
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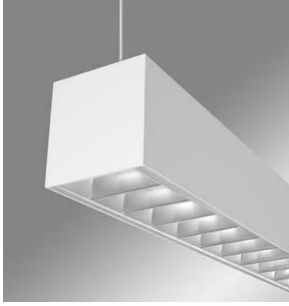

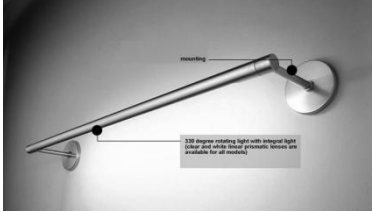


<p>TYPE LD</p> <p>DESCRIPTION: PENDANT MOUNTED FLUORESCENT DIRECT/INDIRECT LINEAR LUMINAIRE.</p> <p>HOUSING: 3.25" HIGH BY 12" WIDE IN LENGTHS AS SHOWN.</p> <p>LENS: MESO-OPTIC FILM BACKS ACRYLIC PANELS.</p> <p>DISTRIBUTION: 20% UPLIGHT & 80% DOWN.</p> <p>MOUNTING: SUSPEND WITH AIRCRAFT CABLE AND WHITE CORD FEED.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: QUICKTRONIC POWERSENSE DIMMING.</p> <p>NOTE: MANUFACTURER TO PROVIDE SHOP DRAWINGS.</p> <p>LAMP: TWO 28 WATT T5, PER 4FT SECTION.</p> <p>INPUT WATTS: 64.</p> <p>MANUFACTURERS: LEDALITE VOICE SERIES, AXIS, LINEAR, NEORAY, OR APPROVED.</p>	 <p>32</p>
<p>TYPE LJ</p> <p>DESCRIPTION: SAME AS TYPE 'LD', EXCEPT SURFACE MOUNT AT CEILING.</p>	

²⁹ <http://www.prisma-pil.com/NA/PagArticolo.asp?art=ProInterior%20Tech%2025&uso=7&ser=ProInteriorTech>

³⁰ <http://www.ledalite.com/products/endeavor/suspended/images>

³¹ http://www.axislighting.com/images/products/classics/flow/catalogue_en.pdf

³² <http://www.ledalite.com/products/voice/suspended/images>

<p>TYPE LF</p>	<p>DESCRIPTION: WALL MOUNTED FLUORESCENT DIRECT/INDIRECT LINEAR LUMINAIRE. HOUSING: 4.75" HIGH BY 4-7/16" WIDE IN LENGTHS AS SHOWN EXTRUDED ALUMINUM. LOUVER: ASYMMETRIC PARABOLIC FOR BOTH UP & DOWNLIGHT. REFLECTOR: ASYMMETRIC UPLIGHT. DISTRIBUTION: ASYMMETRIC UP & DOWNLIGHT. MOUNTING: WALL MOUNT, COORDINATE WITH ARCHITECTURAL DRAWINGS. MANUFACTURER TO PROVIDE SHOP DRAWINGS. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING. LAMP: ONE 32 WATT T8, PER 4FT SECTION, 3100 LUMEN LAMPS. INPUT WATTS: 30. MANUFACTURERS: PINNACLE EDGE EX4B SERIES, LINEAR, LEDALITE, NEORAY, OR APPROVED.</p>	 <p>33</p>
<p>TYPE LO</p>	<p>DESCRIPTION: WALL MOUNTED FLUORESCENT DIRECT LINEAR LUMINAIRE. HOUSING: 4.75" HIGH BY 4-7/16" WIDE IN LENGTHS AS SHOWN EXTRUDED ALUMINUM. LOUVER: SEMI-SPECULAR SNAP-IN ALUMINUM PARABOLIC. REFLECTOR: HIGHLY REFLECTIVE DIE FORMED WHITE PAINTED ALUMINUM REFLECTOR. MOUNTING: WALL MOUNT, COORDINATE WITH ARCHITECTURAL DRAWINGS. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING. NOTE: MANUFACTURER TO PROVIDE SHOP DRAWINGS. LAMP: TWO 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 56. MANUFACTURERS: PINNACLE EDGE EX4 SERIES, LINEAR, LEDALITE, NEORAY, OR APPROVED.</p>	 <p>34</p>
<p>TYPE LH</p>	<p>DESCRIPTION: SURFACE MOUNTED ROTATABLE WALL/DISPLAY LIGHT. HOUSING: 58" LONG BY .048" DIAMETER CRS WITH SOLID MACHINED BRASS ROTATORS WITH 330 DEGREE MAX LOCKING ROTATION. LENS: PRISMATIC. REFLECTOR: .025" HIGH REFLECTANCE WHITE PAINT. DISTRIBUTION: DIRECTIONAL. MOUNTING: SURFACE MOUNT ON WALL, COORDINATE WITH ARCHITECTURAL ELEVATIONS. FINISH: SATIN NICKEL WITH CLEAR LACQUER. BALLAST: INTEGRAL ELECTRONIC. NOTE: SUPPLY WITH 18" ARM. LAMP: ONE 28 WATT T5. INPUT WATTS: 32. MANUFACTURERS: LUMEN ART STILETTO SERIES OR APPROVED.</p>	 <p>35</p>
<p>TYPE LK</p>	<p>DESCRIPTION: PENDANT MOUNTED FLUORESCENT DIRECT/INDIRECT LINEAR LUMINAIRE. HOUSING: 8" WIDE BY 3" HIGH EXTRUDED ALUMINUM HOUSING. IN LENGTHS AS SHOWN ON DRAWINGS. LOUVER: SEMI-SPECULAR VOT LOUVER. REFLECTOR: NO UPPER OPTIC. MOUNTING: SUSPEND WITH AIRCRAFT CABLE AND WHITE CORD FEED. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC POWERSENSE DIMMING. NOTE: E.C. TO CONFIRM LENGTHS AS SHOWN ON DRAWINGS. MANUFACTURER TO PROVIDE SHOP DRAWINGS. LAMP: TWO 32 WATT T8, PER 4FT SECTION, 3100 LUMEN LAMPS. INPUT WATTS: 56 WATTS, PER 4FT SECTION. MANUFACTURERS: LEDALITE ENDEAVOR, FINELITE, LINEAR, NEORAY OR APPROVED.</p>	 <p>36</p>
<p>TYPE PA</p>	<p>DESCRIPTION: DECORATIVE FLUORESCENT GLASS GLOBE PENDANT. HOUSING: 15.7"WIDE BY 16.5" HIGH HANDBLOWN WHITE OPAL GLASS GLOBE WITH SAND-BLASTED OUTER SURFACE. MOUNTING: STEM PENDANT MOUNT WITH HANG STRAIGHT SWIVEL AND CANOPY. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS. BALLAST: OSRAM QUICKTRONIC PROSTART. LAMP: ONE 32 WATT TTT CFL. INPUT WATTS: 34. MANUFACTURERS: LOUIS POULSEN WOHLERT SERIES OR APPROVED.</p>	 <p>37</p>





³³ http://www.pinnacle-ltg.com/specs_ies/EX4B_P.PDF

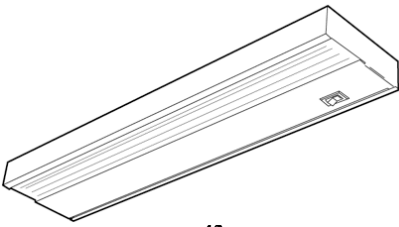
³⁴ http://www.pinnacle-ltg.com/specs_ies/EX4S_P.PDF

³⁵ http://www.lumenartltd.com/p/webpages/lv1_3/stiletto/products/wall.htm

³⁶ <http://www.ledalite.com/products/endeavor/suspended/images>

³⁷ <http://2modern.com/designer/Louis-Poulsen/Louis-Poulsen-Wohlert-Pendant-lamp>

<p>TYPE PB DESCRIPTION: FLUORESCENT DECORATIVE GLASS CYLINDER. HOUSING: 4-11/16" DIAMETER BY 13-3/4" LONG OPALSCENT FLASHED HAND BLOWN GLASS WITH IRREGULAR PATTERN ON GLASS SHADE. MOUNTING: STEM PENDANT MOUNT WITH HANG STRAIGHT SWIVEL AND CANOPY. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS. FINISH: AS SELECTED BY ARCHITECT. BALLAST: ELECTRONIC. LAMP: ONE 18W 2011 CFL. INPUT WATTS: 20. MANUFACTURERS: MP LIGHTING GLASS 01 SERIES OR APPROVED.</p>	 <p>38</p>
<p>TYPE PC DESCRIPTION: LARGE SCALE DECORATIVE PENDANT. HOUSING: 42.2" HIGH BY 27.2" DIAMETER EXTRUDED ALUMINUM FRAME WITH INTERNAL WIRE ROUTING CHANNELS & SPUN ALUMINUM SHADES. LENS: CLEAR GLASS SHADE. MOUNTING: PENDANT MOUNT, COORDINATE EXACT LOCATION & MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION. FINISH: AS SELECTED BY ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. NOTE: MODIFIED VERSION OF LUMINAIRE, CONSULT FACTORY FOR PART NUMBER. LAMP: THREE 32 WATT 42 WATT TIT CFL. INPUT WATTS: 139. MANUFACTURERS: LOUIS POULSEN CENTRUM SERIES OR APPROVED.</p>	 <p>39</p>
<p>TYPE PA DESCRIPTION: SURFACE MOUNT FLUORESCENT VANITY LIGHT. HOUSING: 5.19" HIGH BY 26" WIDE BY 3.94" DEEP CRS HOUSING & MACHINED STEEL END CAPS. LENS: 1/8" MATTE WHITE ACRYLIC. MOUNTING: SURFACE WALL MOUNT ABOVE MIRRORS. COORDINATE WITH ARCHITECTURAL ELEVATIONS. FINISH: AS SELECTED BY ARCHITECT. BALLAST: ELECTRONIC. LAMP: TWO 17 WATT T8. INPUT WATTS: 34. MANUFACTURERS: OXYGEN FUSE SERIES OR APPROVED.</p>	 <p>40</p>
<p>TYPE PB DESCRIPTION: SURFACE MOUNT DECORATIVE FLUORESCENT WALL SCONCE. HOUSING: 5.75" WIDE BY 20.5" HIGH BY 4" DEEP CRS BACKBOX. LENS: FORMED MATTE WHITE ACRYLIC. MOUNTING: SURFACE MOUNT AT 5" AFF/STAIR TREAD. COORDINATE WITH ARCHITECTURAL ELEVATIONS. FINISH: AS SELECTED BY ARCHITECT. BALLAST: ELECTRONIC. LAMP: ONE 39 WATT BIAx CFL. INPUT WATTS: 41. MANUFACTURERS: OXYGEN POLARIS SERIES OR APPROVED.</p>	 <p>41</p>

<p>TYPE UA DESCRIPTION: SURFACE MOUNTED FLUORESCENT UNDER CABINET LUMINAIRE. HOUSING: 7-5/8" WIDE BY 1-5/8" HIGH IN LENGTHS AS SHOWN DIE FORMED STEEL HOUSING WITH SOLID FRONT. LENS: SHATTER-RESISTANT ACRYLIC DIFFUSER. MOUNTING: SURFACE MOUNT AT UNDERCABINET LOCATIONS. COORDINATE WITH ARCHITECTURAL DRAWINGS. FINISH: WHITE FINISH. BALLAST: ELECTRONIC. LAMP: ONE 32 WATT T8, PER 4 FT. SECTION, 3100 LUMEN LAMPS. INPUT WATTS: 30. MANUFACTURERS: LITHONIA N25 SERIES, LIGHTOLUX, NULITE, ALKCO LIGHTING, HE WILLIAMS, FAIL-SAFE MMS SERIES OR APPROVED.</p> <p>TYPE UB DESCRIPTION: SAME AS TYPE 'UA', EXCEPT SUPPLY IN 24" LENGTH. LAMP: ONE 17 WATT T8. INPUT WATTS: 19.</p>	 <p>42</p>
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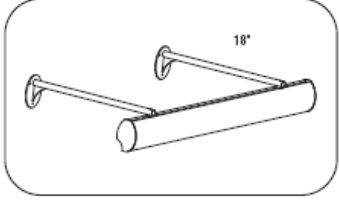
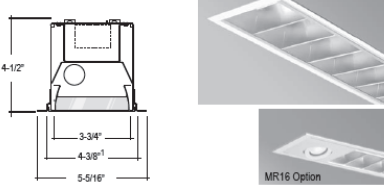


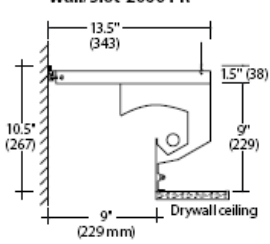
³⁸ http://pdf.archiexpo.com/pdf/mp-lighting/glass-series/10950-7157-_9.html

³⁹ <http://www.louispoulsen.com/en-us/Product/Pendants/LP%20Centrum.aspx>

⁴⁰ <http://www.designerpages.com/products/47052-2-5134-24-the-fuse>

⁴¹ <http://www.designerpages.com/products/47057-2-5112-24-polaris>

⁴² <http://www.lithonia.com/product/comm.aspx?pt=&fid=1104>

<p>TYPE WA</p>	<p>DESCRIPTION: WALL MOUNTED LOUVERED WHITE BOARD LIGHT. HOUSING: 5.3" HIGH BY 3.8" BY 16" LONG EXTRUDED ALUMINUM WITH 18" ARM WALL BRACKETS. LOUVER: WHITE BLADE. REFLECTOR: ASYMMETRIC FOR WHITE BOARD. MOUNTING: SURFACE MOUNT ON WALL, COORDINATE WITH ARCHITECTURAL ELEVATIONS. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. NOTE: CONFIRM LENGTHS AS SHOWN. MANUFACTURER TO PROVIDE SHOP DRAWINGS. LAMP: FOUR 32 WATT T8, 3100 LUMEN LAMPS. INPUT WATTS: 113. MANUFACTURERS: FINELITE X2-0 SERIES OR APPROVED.</p>	 <p style="text-align: right;">43</p>
<p>TYPE WB</p>	<p>DESCRIPTION: RECESSED PARABOLIC WALLWASHER. HOUSING: 4.5" HIGH BY 3.75" IN LENGTHS AS SHOWN APERTURE FORMED COLD ROLLED STEEL. LOUVER: ANODIZED SNAP-IN ANODIZED SEMI-SPECULAR PARABOLIC. REFLECTOR: HIGHLY REFLECTIVE DIE FORMED WHITE PAINTED STEEL REFLECTOR DISTRIBUTION: ASYMMETRIC. MOUNTING: RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. LAMP: ONE 32 WATT T8, PER 4FT SECTION, 3100 LUMEN LAMPS. INPUT WATTS: 30. MANUFACTURERS: PINNACLE EDGE 4WP SERIES OR APPROVED.</p>	 <p style="text-align: right;">44</p>
<p>TYPE WC</p>	<p>DESCRIPTION: RECESSED HIGH PERFORMANCE LINEAR PERIMETER FLUORESCENT WALLWASHER. HOUSING: 10" WIDE BY 7.75" HIGH IN LENGTHS AS SHOWN 20 GA STEEL HOUSING. REFLECTOR: 24 GA. STEEL WITH EXTRUDED ALUMINUM SPLAY TO SHIELD VIEW OF LAMP. DISTRIBUTION: ASYMMETRIC. MOUNTING: RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. NOTE: MANUFACTURER TO PROVIDE SHOP DRAWINGS. LAMP: ONE 32 WATT T8, PER 4 FT SECTION, 3100 LUMEN LAMPS. INPUT WATTS: 30. MANUFACTURERS: FOCAL POINT FOCUS 4 SERIES OR APPROVED.</p>	 <p style="text-align: right;">45</p>
<p>TYPE WD</p>	<p>DESCRIPTION: RECESSED ASYMMETRIC WHITE BOARD LUMINAIRE. HOUSING: 4" HIGH BY 2.20" IN LENGTHS AS SHOWN APERTURE ONE PIECE 20 GA. STEEL. REFLECTOR: .020" SPECULAR ALUMINUM UPPER REFLECTOR & .020" SEMI-SPECULAR LOWER REFLECTOR. 24 GA. PERFORATED MATTE BLACK DIFFUSER WITH 24% OPENING. DISTRIBUTION: ASYMMETRIC. MOUNTING: RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART LAMP: ONE 28 WATT T8, PER 4FT SECTION. INPUT WATTS: 32. MANUFACTURERS: FOCAL POINT AVENUE A SERIES OR APPROVED.</p>	 <p style="text-align: right;">46</p>
<p>TYPE WDI</p>	<p>DESCRIPTION: SAME AS TYPE "WD", EXCEPT SUPPLY WITH TRIM FOR GYP CEILING.</p>	
<p>TYPE WF</p>	<p>DESCRIPTION: RECESSED HIGH PERFORMANCE LINEAR PERIMETER FLUORESCENT SLOT WALLWASHER. HOUSING: DIE FORMED & WELDED 20 GA STEEL WITH CONTINUOUS FIXTURE SUPPORT RAIL OF EXTRUDED WHITE ALUMINUM. IN LENGTHS AS SHOWN. REFLECTOR: LARGE PARABOLIC PERFORMANCE ASYMMETRIC WITH SPECULAR HAMMERTONE ALUMINUM. MOUNTING: RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: OSRAM QUICKTRONIC PROSTART. NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS. MANUFACTURER TO PROVIDE SHOP DRAWINGS. LAMP: ONE 32 WATT T8, PER 4 FT SECTION, 3100 LUMEN LAMPS. INPUT WATTS: 30. MANUFACTURERS: LITECONTROL WALL/SLOT 2000 PR SERIES OR APPROVED.</p>	<p style="text-align: center;">Wall/Slot-2000 PR</p>  <p style="text-align: right;">47</p>

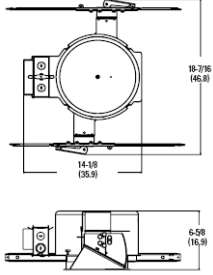
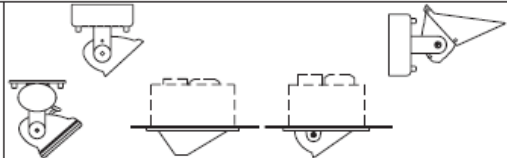



⁴³ http://www.finelite.com/download_files/series_downloads/techsheets/FL_SX2O_techsheets.pdf (accessed Nov. 16, 2009)

⁴⁴ http://www.pinnacle-ltg.com/specs_ies/edge/E4WP_1T8.PDF (accessed Nov. 16, 2009)

⁴⁵ <http://www.focalpointlights.com/luminaires/FW1.html> (accessed Nov. 16, 2009)

⁴⁶ <http://www.focalpointlights.com/luminaires/FAVA.html> (accessed Nov. 16, 2009)

⁴⁷ http://www.litecontrol.com/stuff/contentmgr/files/b0fbbc9bfa82eca9e5311b834b734939/tech/wallslot2000tech_aug09.pdf (accessed Nov. 16, 2009)

<p>TYPE WH DESCRIPTION: 6" RECESSED PERFORMANCE FLUORESCENT WALL WASHER. HOUSING: 6" APERTURE BY 18-7/16" WIDE BY 14-1/8" LONG BY 6-5/8" HIGH 16 GA GALVANIZED STEEL FORMED MATTE BLACK HOUSING. ACCOMMODATES UP TO 1.5" CEILING THICKNESS. LENS: PROPRIETARY, KEYED GOTHAM SPREAD LENS. OPTICAL ASSEMBLY ROTATES UP TO 90 DEGREES. REFLECTOR: MATTE DIFFUSE. DISTRIBUTION: ASYMMETRIC. MOUNTING: RECESSED IN CEILING. FINISH: MATTE DIFFUSE. BALLAST: OSRAM QUICKTRONIC PROSTART. LAMP: ONE 26 WATT T1T CFL. INPUT WATTS: 28. MANUFACTURERS: GOTHAM LIGHTING DLWF SERIES, PORTFOLIO C6 SERIES, LIGHTOLIER, OR APPROVED.</p>	
<p>TYPE WJ DESCRIPTION: SEMI-RECESSED HID WALLWASHER. HOUSING: 3.75" RECESS DEPTH BY 6.25" WIDE BY 12" LONG EXTRUDED ALUMINUM WITH DIE CAST ALUMINUM HOOD. LENS: MICRO-PRISMATIC TEMPERED GLASS LENS. REFLECTOR: TWO PARABOLIC REFLECTORS OF EXTRUDED HIGH PURITY ALUMINUM WITH CLEAR ANODIZED SPECULAR FINISH. DISTRIBUTION: ASYMMETRIC. MOUNTING: SEMI-RECESSED IN CEILING. FINISH: FINISH PER ARCHITECT. BALLAST: ELECTRONIC. LAMP: ONE 150 WATT CERAMIC METAL HALIDE. INPUT WATTS: 161. MANUFACTURERS: ELLIPTIPAR 205 SERIES OR APPROVED.</p>	
<p>TYPE WK DESCRIPTION: SURFACE MOUNT HID WALL WASHER. HOUSING: 9-3/8" WIDE BY 6.5" LONG BY 8" HIGH EXTRUDED ALUMINUM HOUSING WITH CAST ALLOY END PLATE & SELF LOCKING STEEL YOKE FOR HORIZONTAL & VERTICAL FOCUSING. LENS: SUPPLY WITH BEAM CONDITIONER LENS. LOUVER: SUPPLY WITH 2 WAY BARNDOOR. DISTRIBUTION: ASYMMETRIC. MOUNTING: SURFACE MOUNT, COORDINATE WITH ARCHITECTURAL DRAWINGS. FINISH: PER ARCHITECT. BALLAST: ELECTRONIC. LAMP: DOUBLE ENDED CERAMIC METAL HALIDE 70 WATT T8, 3000K. INPUT WATTS: 79. MANUFACTURERS: LSI MQM70 SERIES OR APPROVED.</p>	
<p>TYPE YA DESCRIPTION: LOW VOLTAGE IN GRADE UPLIGHT. HOUSING: 7" APERTURE BY 13.8" DEEP COORSION RESISTANT MARINE GRADE 316 STAINLESS STEEL WITH RECESSED COVER. LENS: PRISMATIC SPREAD LENS. LOUVER: HEXCELL LOUVER. MOUNTING: IN-GRADE. BALLAST: ELECTRONIC. UL LISTING: WET. NOTE: SUPPLY WITH HUMAN TOUCH LENS. LAMP: ONE 50 WATT 10,000 HOUR MR16. INPUT WATTS: 50. MANUFACTURERS: LUMASCAPE LS343 OR APPROVED.</p>	
<p>TYPE BA DESCRIPTION: EXTERIOR POST-TOP SITE LUMINAIRE TO MATCH EXISTING CAMPUS STANDARD. HOUSING: CAST ALUMINUM. LENS: REFRACTIVE POYCARBONATE, FULL CUTOFF. DISTRIBUTION: TYPE V. MOUNTING: POST-TOP, POLE: 11' EDGEWATER (FLAT BLACK). FINISH: FLAT BLACK. BALLAST: HPF ELECTRONIC. NOTE: PROVIDE MANUFACTURER'S SCREW-IN TYPE BANNER ARMS WITH SAFETY CABLES. LAMP: ONE 150 WATT HPS. INPUT WATTS: 161. MANUFACTURERS: SPRING CITY EDGEWATER REFRACTIVE SERIES TO MATCH CAMPUS STANDARD. POLE: 11' HIGH BY 10.5" DIAMETER WITH 18" FLAT TO FLAT OCTAGONAL BASE OF CAST ALUMINUM & IRON.</p>	

⁴⁸ <http://www.acuitybrandslighting.com/library/gal/documents/SpecSheets/ACF%20110.pdf> (accessed Nov. 16, 2009)

⁴⁹ <http://www.thelightingquotient.com/elliptipar/IESpdf/IES15.pdf> (accessed Nov. 16, 2009)

⁵⁰ <http://www.lightingservicesinc.com/files/pdf/79usa.pdf> (accessed Nov. 16, 2009)

⁵¹ <http://www.lumascap.com.au/html/LS343.htm> (accessed Nov. 16, 2009)

⁵² <http://www.springcity.com/virtuemart/luminaires/octagonal/edgewater> (accessed Nov. 16, 2009)

<p>TYPE 88</p>	<p>DESCRIPTION: EXTERIOR WALL MOUNTED LUMINAIRE TO MATCH EXISTING CAMPUS STANDARD.</p> <p>HOUSING: ONE-PIECE DIE-CAST, LOW COPPER ALLOY ALUMINUM WITH INTEGRAL COOLING FINS.</p> <p>LENS: ONE-PIECE DIE-CAST, LOW COPPER ALLOY ALUMINUM WITH INTEGRAL HINGES AND STAINLESS STEEL PINS.</p> <p>FINISH: TO MATCH EXISTING CAMPUS STANDARD.</p> <p>LAMP: ONE 42 WATT CFL.</p> <p>INPUT WATTS: 48.</p> <p>MANUFACTURERS: KIM 14° DIRECTOR SERIES TO MATCH CAMPUS STANDARD.</p>	 <p>53</p>
<p>TYPE 8C</p>	<p>DESCRIPTION: EXTERIOR WALL MOUNTED H.I.D. LUMINAIRE TO DOWNLIGHT & EMPHASIZE ARCHITECTURE.</p> <p>HOUSING: LOW PROFILE BULLET.</p> <p>LENS: SUPPLY WITH LINEAR SPREAD LENS</p> <p>LOUVER: SUPPLY WITH HEXCELL LOUVER.</p> <p>MOUNTING: COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATIONS.</p> <p>FINISH: BRONZE.</p> <p>BALLAST: -20 DEGREE, CWA, HIGH POWER FACTOR BALLAST.</p> <p>UL LISTING: UL LISTED WET.</p> <p>NOTE: SUPPLY WITH CUTOFF VISOR.</p> <p>LAMP: ONE 39 WATT T6 CERAMIC METAL HALIDE.</p> <p>INPUT WATTS: 45.</p> <p>MANUFACTURERS: LUMIERE MONACO SERIES OR APPROVED.</p>	 <p>54</p>
<p>TYPE 8D</p>	<p>DESCRIPTION: SEMI-RECESSED EXTERIOR CONCRETE POUR CFL DOWNLIGHT.</p> <p>HOUSING: 13.27" DIAMETER TRIM WITH 6.25" HIGH BY 10.94" DIAMETER HOUSING OF DIECAST ALUMINUM WITH A PLASTER FLANGE, A FORMED STEEL BALLAST TRAY, ADJUSTABLE MOUNTING BRACKETS & STEEL HOUSING COVER.</p> <p>LENS: FRESNEL GLASS LENS.</p> <p>MOUNTING: RECESSED.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: ELECTRONIC.</p> <p>LAMP: ONE 32 WATT TTT CFL.</p> <p>INPUT WATTS: 34.</p> <p>MANUFACTURERS: GARDCO DESIGNER CANOPY 220C SERIES OR APPROVED.</p>	 <p>55</p>
<p>TYPE 8F</p>	<p>DESCRIPTION: EXTERIOR POST MOUNTED H.I.D. LUMINAIRE TO BIKE CANOPY.</p> <p>HOUSING: 10" DIAMETER CANOPY BY 13-3/8" HIGH BY 8-5/32" DIAMETER REFRACTOR SHADE. ENCLOSED & GASKETED HOUSING & LAMP. BALLAST HOUSING IS COPPER FREE ALUMINUM WITH BAKED POWDER POLYESTER FINISH. ALL EXTERIOR HARDWARE IS STAINLESS STEEL.</p> <p>LENS: TYPE V GLASS REFRACTOR WITH WIRE GUARD.</p> <p>DISTRIBUTION: TYPE V.</p> <p>MOUNTING: SUPPLY WITH WALL MOUNT. MOUNTS AT BIKE SHELTER POSTS BELOW CANOPY STRUCTURE. COORDINATE WITH ARCHITECTURAL DRAWINGS.</p> <p>FINISH: FINISH PER ARCHITECT.</p> <p>BALLAST: -20 DEGREE, CWA, HIGH POWER FACTOR BALLAST.</p> <p>UL LISTING: UL LISTED WET.</p> <p>NOTE: LUMINAIRE TO MATCH EXISTING CAMPUS STANDARD. SUPPLY ALL MOUNTING HARDWARE & ACCESSORIES AS REQUIRED.</p> <p>LAMP: ONE 50 WATT HIGH PRESSURE SODIUM LAMP.</p> <p>INPUT WATTS: 56.</p> <p>MANUFACTURERS: HUBBELL # HLMB MEDIUM BASE SERIES OR APPROVED.</p>	 <p>56</p>
<p>TYPE X</p>	<p>DESCRIPTION: UNIVERSAL MOUNTED L.E.D. EDGELIT EXIT SIGN.</p> <p>HOUSING: EXTRUDED BRUSHED ALUMINUM FINISH LAMP HOUSING.</p> <p>LENS: CLEAR THERMOPLASTIC PANELS WITH PRECISION OUTLINE ENGRAVED LETTERS MEASURING 8" HIGH.</p> <p>FINISH: BRUSHED ALUMINUM.</p> <p>BALLAST: PROVIDE 90 MINUTE NICKEL CADMIUM BATTERY BACK-UP.</p> <p>NOTE: PROVIDE SELF DIAGNOSTIC.</p> <p>LAMP: GREEN L.E.D.</p> <p>INPUT WATTS: 5.</p> <p>MANUFACTURERS: LITHONIA EDG SERIES, SURE-LITES, HUBBELL, CHLORIDE, LSI LIGHTING OR APPROVED.</p>	

⁵³ <http://www.kimlighting.com/>

⁵⁴ <http://www.cooperlighting.com/common/newProducts/productGroup.cfm?groupID=33>

⁵⁵ <http://www.sitelighting.com/Products.cfm?Brand=gar&ProLine=dc&Style=220>

⁵⁶ http://www.hubbellindustrial.com/products/images/thumb/hil_hlmb_thumb.jpg

⁵⁷ <http://www.lithonia.com/commercial/EDG.html?pt=Emergency>

22 Types of Light Bulbs

37 WATT FLOOD IR HOUR MR16
39 WATT BRITE SPOT METAL HALIDE, 3000K.
42 WATT TTT CFL.
26 WATT TTT CFL.
32 WATT TTT CFL.
5000 KELVIN HIGH OUTPUT LED 7.6 W/FT.
3000 KELVIN HIGH OUTPUT LED 7.6 W/FT.
150W PHILIPS CDM MASTERCOLOR, 3000K.
32 WATT T8, 3100 LUMEN LAMPS.
55 WATT BIAX CFL.
32WT8U6, 2900 LUMEN LAMPS.
28 WATT T5 LAMP,
18W 2G11 CFL.
17 WATT T8.
39 WATT BIAX CFL.
150 WATT CERAMIC METAL HALIDE.
DOUBLE ENDED CERAMIC METAL HALIDE 70 WATT
T6, 3000K.
50 WATT 10,000 HOUR MR16.
150 WATT HPS.
39 WATT T6 CERAMIC METAL HALIDE.
50 WATT HIGH PRESSURE SODIUM LAMP.
GREEN L.E.D.