

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Fluence	Lumens Per Lamp	Light Loss Factor	Wattage	Pole Height
□	SLA	8	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-VSQ-M-80LED-700mA-NW	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 4 CIRCUIT BOARDS EACH WITH 20 LEDs, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	EIGHTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION, PRORATED BASED ON RZR-G-120LED ITL & WORSE CASE RZR-80PLED ITL VOLTAGE (120VAC, 60Hz) TO THE DRIVERS.	80	RZR-PLED-VSQ-M-80LED-700mA-NW-IES	278	0.96	173.6	30 ft
□	SLB	43	U.S. ARCHITECTURAL LIGHTING	RZR-WM1-III-20PLED-350mA-NW	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 1 CIRCUIT BOARD WITH 20 LEDs, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	TWENTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION, PRORATED LUMENS BASED ON ITL83067 & TYPE IV SCALE FACTOR	20	RZR-WM1-III-20PLED-NW-350IES	125	0.96	22.3	15 ft
○	SLC	12	U.S. ARCHITECTURAL LIGHTING	DSAP1-VLED-VSQ-48LED-350mA-NW	FABRICATED METAL HOUSING, 1 LED MODULE CONSISTING OF: 48 LEDS, VERTICAL BASE-UP POSITION, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, CLEAR FLAT GLASS LENS.		48	DSAP1-VLED-VSQ-48LED-350mA-NW-IES	125	0.96	53.1	20 ft
□	SLD	16	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-VSQ-M-40LED-525mA-NW	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 2 CIRCUIT BOARDS EACH WITH 20 LEDs, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	FORTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION, PRORATED BASED ON RZR-G-120LED ITL & WORSE CASE RZR-80PLED ITL VOLTAGE (120VAC, 60Hz) TO THE DRIVERS.	40	RZR-PLED-VSQ-M-40LED-525mA-NW-IES	228	0.96	64.7	30 ft
□	SLF	19	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-VSQ-M-40LED-350mA-NW	CAST BLACK PAINTED FINNED METAL HOUSING, CAST BLACK PAINTED METAL DRIVER COVER, 2 CIRCUIT BOARDS EACH WITH 20 LEDs, 1 CLEAR PLASTIC OPTIC BELOW EACH LED, 1 FORMED SEMI-SPECULAR METAL OPTIC MOUNTING PLATE BELOW EACH CIRCUIT BOARD.	FORTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION, PRORATED BASED ON RZR-G-120LED ITL & WORSE CASE RZR-80PLED ITL VOLTAGE (120VAC, 60Hz) TO THE DRIVERS.	40	RZR-PLED-VSQ-M-40LED-350mA-NW-IES	157	0.96	42.7	30 ft

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Stat Zone # 1 Building 1	X	11.1c	2.9f	0.4c	7.3i	2.8i
Stat Zone # 2 Building 2	X	11.1c	1.9f	0.8c	3.2i	1.8i
Stat Zone # 3 Building 3	X	11.1c	2.4f	0.6c	4.0i	1.8i
Stat Zone # 4 Building 4	X	11.1c	2.1f	0.6c	3.5i	1.8i
Stat Zone # 5 Building 5	X	0.7c	1.4f	0.4c	3.5i	1.8i
Stat Zone # 6 Building 6	X	11.1c	1.9f	0.4c	4.8i	2.8i
Stat Zone # 7 Building 7	X	11.1c	2.5f	0.4c	6.3i	2.8i
Stat Zone # 8 Building 8	X	0.7c	1.2f	0.4c	3.0i	1.8i
Stat Zone # 9 Building 9	X	0.7c	1.2f	0.4c	3.0i	1.8i
Stat Zone # 10 Building 10	X	0.9c	1.9f	0.5c	3.8i	1.8i
Stat Zone # 11 Building 11	X	0.7c	1.0f	0.4c	2.5i	1.8i
Stat Zone # 12 Building 12	X	11.1c	2.4f	0.6c	4.0i	1.8i
Stat Zone # 13 Entrance Balch	X	11.1c	2.3f	0.4c	5.8i	2.8i
Stat Zone # 14 Entrance Clubhouse	X	11.1c	3.1f	0.6c	5.2i	1.8i

### SOLID STATE AREA LIGHTING RAZAR SERIES-LED SPECIFICATIONS

**OPTICAL HOUSING**  
Heavy cast low copper aluminum (A356 alloy, <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance <±.003") to facilitate thermal transfer of heat to housing and cooling fins. Solid barrier wall separates optical and electrical compartments. The optical and electrical compartments are integrated to create one assembly. Minimum wall thickness is .188".

**ELECTRICAL HOUSING w/ INTEGRATED ARM**  
Heavy cast low copper aluminum (A356 alloy, <0.2% copper) assembly with integral cooling fins surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photoball receptacle. Solid barrier wall separates optical and electrical compartments. The optical and electrical compartments are integrated to create one assembly. Minimum wall thickness is .188". Cast and support assembly above is integrated with wiring compartment cover.

**LED'S**  
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED reflector. In asymmetric distributions, a micro-reflector inside the reflector re-directs the house side emission output towards the street side and functions as a house side shielding element. Reflector and micro-reflector are H12 acrylic. Each LED reflector is secured to the PCB over an emitter and all reflectors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED reflectors produce standard symmetric distributions. Panels are field replaceable and field installable in 90° increments.

**LED DRIVERS**  
Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F. Driver(s) is/are UL and/or CE recognized and mounted to a driver assembly plate that has drilled holes to facilitate ease of assembly removal for future installation. Quick disconnects for incoming power and output assembly plate are provided. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV minimal surge protection. Luminaires supplied with 20KV surge protector for field accessible installation.)

**LED EMISSIONS**  
High output LED's are utilized with drive currents ranging from 350mA to 1000mA, 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

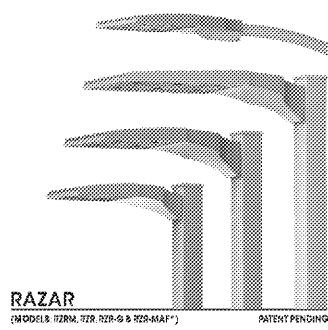
**FINISH**  
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and non-phosphate pretreatment for protection and paint adhesion. 402°F bake for maximum hardness and durability.

**REPLACEABLE OPTIC**  
Replaces standard Electrical Housing. Optic is 2 3/8" O.D. Horizontal. Two (2) straps are used. (2) bolts each are used to secure optic to housing. Optic is positioned the angle of the optic is 1.5° ± 1.5° up from the horizontal. All hardware is standard.

U.S. Architectural Lighting

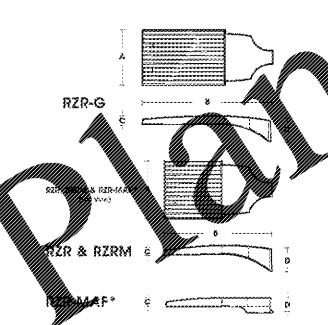
PROJECT NAME: SLA, SLD & SLF

PROJECT TYPE:



RAZAR

(MODEL'S: RZR-M, RZR-W, RZR-G & RZR-WAF\*)



FIXTURE	A	B	C	D
RZR-G	1.0"	1.8"	3.0"	3.0"
RZR-W	1.0"	1.8"	3.0"	3.0"
RZR-M	1.0"	1.8"	3.0"	3.0"
RZR-WAF	1.0"	1.8"	3.0"	3.0"

\*FIELD INSTALLABLE AS OF 7/17

U.S. Architectural Lighting

U.S. ARCHITECTURAL LIGHTING

### SOLID STATE AREA LIGHTING RAZAR WALLMOUNT-LED SPECIFICATIONS

**OPTICAL HOUSING**  
Heavy cast low copper aluminum (A356 alloy, <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance <±.003") to facilitate thermal transfer of heat to housing and cooling fins. The Optical housing seals to the Electrical housing forming a unified assembly. The minimum wall thickness is .188".

**ELECTRICAL HOUSING**  
Heavy cast low copper aluminum (A356 alloy, <0.2% copper) assembly. Minimum wall thickness is .188". Reflector Mounting Plate and electrical housing are integrated to create one assembly. The Optical housing seals to the Electrical housing forming a unified assembly. The minimum wall thickness is .188".

**LED'S**  
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED reflector. In asymmetric distributions, a micro-reflector inside the reflector re-directs the house side emission output towards the street side and functions as a house side shielding element. Reflector and micro-reflector are H12 acrylic. Each LED reflector is secured to the PCB over an emitter and all reflectors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED reflectors produce standard symmetric distributions. Panels are field replaceable and field installable in 90° increments.

**LED DRIVERS**  
Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F. Driver(s) is/are UL and/or CE recognized and mounted to a driver assembly plate that has drilled holes to facilitate ease of assembly removal for future installation. Quick disconnects for incoming power and output assembly plate are provided. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV minimal surge protection. Luminaires supplied with 20KV surge protector for field accessible installation.)

**LED EMISSIONS**  
High output LED's are utilized with drive currents ranging from 350mA to 1000mA, 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

**FINISH**  
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and non-phosphate pretreatment for protection and paint adhesion. 402°F bake for maximum hardness and durability.

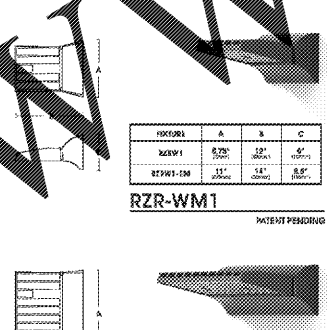
**REPLACEABLE OPTIC**  
Replaces standard Electrical Housing. Optic is 2 3/8" O.D. Horizontal. Two (2) straps are used. (2) bolts each are used to secure optic to housing. Optic is positioned the angle of the optic is 1.5° ± 1.5° up from the horizontal. All hardware is standard.

U.S. Architectural Lighting

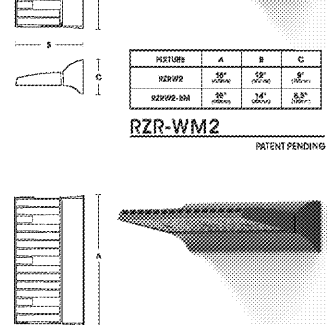
U.S. ARCHITECTURAL LIGHTING

PROJECT NAME: SLD

PROJECT TYPE:



RAZAR WALLMOUNT-LED



FIXTURE	A	B	C	D
RZR-WM1	1.0"	1.8"	3.0"	3.0"
RZR-WM2	1.0"	1.8"	3.0"	3.0"
RZR-WM3	1.0"	1.8"	3.0"	3.0"

\*FIELD INSTALLABLE AS OF 7/17

U.S. Architectural Lighting

U.S. ARCHITECTURAL LIGHTING

### SOLID STATE AREA LIGHTING DSAP SERIES-LED SPECIFICATIONS

**HOUSING**  
Upper housing is heavy gauge cast aluminum (DSAP25) or 0.125" thick spun aluminum with recess (DSAP1). Lower housing is 0.060" thick spun aluminum with integrated LED module seal. Lower housing is vented at top and bottom for convective cooling of LED module. Top Driver chamber is isolated from LED module chamber. Integral heat coupling mount is welded to housing and facilitates quick leveling and installation.

**LED DRIVERS**  
Drivers are UL and/or CE recognized mounted on a single plate and factory provided with quick-disconnect plugs. Constant current driver is electronic and has a power factor of >.90 and a minimum operating temperature of -40°F. Driver accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV minimal surge protection. Luminaires supplied with 20KV surge protector for field accessible installation.)

**LED EMISSIONS**  
High output LED's are utilized with drive currents ranging from 350mA to 1000mA, 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

**FINISH**  
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and non-phosphate pretreatment for protection and paint adhesion. 402°F bake for maximum hardness and durability.

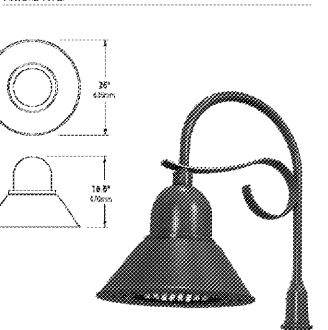
**REPLACEABLE OPTIC**  
Replaces standard Electrical Housing. Optic is 2 3/8" O.D. Horizontal. Two (2) straps are used. (2) bolts each are used to secure optic to housing. Optic is positioned the angle of the optic is 1.5° ± 1.5° up from the horizontal. All hardware is standard.

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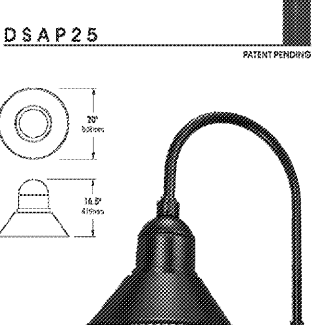
U.S. ARCHITECTURAL LIGHTING

PROJECT NAME: SLC

PROJECT TYPE:



DSAP SERIES-LED



FIXTURE	A	B	C	D
DSAP25	1.0"	1.8"	3.0"	3.0"
DSAP1	1.0"	1.8"	3.0"	3.0"

\*FIELD INSTALLABLE AS OF 7/17

U.S. Architectural Lighting

U.S. ARCHITECTURAL LIGHTING



**ENGLISH & ASSOCIATES ARCHITECTS, INC.**  
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**JOB PROGRESS:**

ITEM: DATE:

**REVISIONS:**

TAG: DATE:

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**ALEXANDRIA AN APARTMENT COMMUNITY FOR**  
**Bobo Family Group HUNTSVILLE, ALABAMA**

**JOB NUMBER:**  
**DRAWN BY:**  
**CHECKED BY:**  
**SITE PLAN LIGHTING COMPLIANCE**  
**SHEET NO.**

E-2.3