

Submitted By 16500, INC Catalog Number LX2044-L19 10-90 CO S1 CT1-DX 120 S

Notes

Lighting Services Inc LumeLEX SERIES

### LX2044 120/277V LUMENETIX-ARAYA 19MM



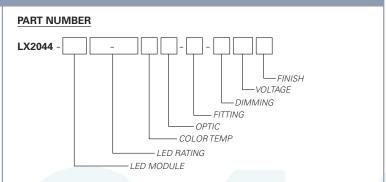
### Elegant fixture designed specifically for the most demanding architecture applications.

- Designed for the Lumenetix-araya Color Tuning LED module up to 22 Watts
- Extremely tight color consistency (less than 2 MacAdam Ellipses, ± 0.002 DUV), (2000K to 6000K at 2 SDCM)
- System efficiency up to 42 lumens/watt
- On board closed loop feedback compensates each channel for thermal and optical depreciation.
- 50,000 hour life to 70% lumen output, L70 at 95°F max ambient
- Tunable white from 1650K to 8000K
- Full color tuning and gradients of saturated colors
- Color Rendering Index (CRI) of 90+ from 2000K to 6000K
- 1000 produced lumens
- Tested to LM79 and LM80 Protocols
- Choice of dimming down to 1%. Compatible with 2 zones for 0-10V
- 0-10V with the ability to control intensity and CCT simultaneously
- Compatible with DMX and RDM
- Uses the following four DMX channels: Dimming, CCT, Saturation, and Hue
- Field interchangeable optics (15°-60°) modify the beam spread distribution
- Accessory holder accepts up to two size-AA LSI filters and accessories
- Finishes: LSI Black, White, and Silver
- Fixture weight: 3.5 lbs
- All modules are field replaceable

### **FIXTURE PART NUMBERS**

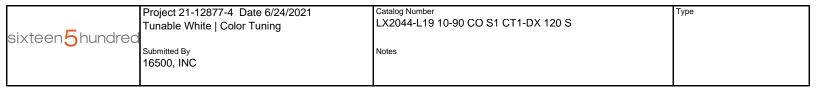
Please review the **ORDERING INFORMATION** section on the next page as well as the **MOUNTING OPTIONS** on page 3 to create a part number for each fixture that specifies the following:

- LED Module
- LED Rating
- Color Temperature
- Optic (mm/beam spread)
- Fitting/Controls (Dimming)
- Voltage
- Finish



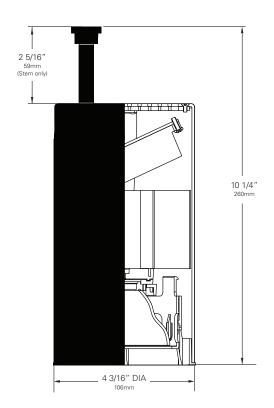
Example Part Number: **LX2044-L1910-90DWM9-CT1-10120W** is a fixture with a Lumenetix-araya 19mm LED module, 1000 Lumen/90 CRI/20 Watt LED rating, Dynamic White (1650° - 8000°K) Color Temperature, 70mm 20° Optic, CT1 CONTROLTrack fitting with 0-10V compatible control gear, 120V and a White finish.

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## LX2044 · 120/277V · LUMENETIX-ARAYA · 19MM



### **ORDERING INFORMATION**

#### **Base Fixture Model**

□ LX2044-L19

### LED Rating (Lumens/CRI/Wattage)

 $\Box$  10-90 = 1000/90/22

### **Color Temperature**

- $\square$  DW= Dynamic White 1650-8000K\*
- ☐ CO= Full Color and Dynamic White 1650-8000K (DMX Dimming only)

#### Optio

- $\square$  S1 = 50mm/15°
- $\square$  M2 = 70mm/ 20°  $\square$  M4 = 70mm/ 35°
- $\square$  M6 = 70mm/ 60°  $\square$  M8 = 70mm/ 40° Wide Field Angle
- ☐ M9 = 70mm/ 20° Wide Field Angle

### Fitting/Controls (Dimming)

- $\square$  CT1-10 = CONTROLTrack Fitting & 0-10V (1%)\*
- $\square$  CT1-DX = CONTROLTrack Fitting & DMX (<1%)
- □ 5A-10 = Canopy Fitting & 0-10V (1%)\*
- $\square$  5A-DX = Canopy Fitting & DMX (<1%)

### Voltage

□ 120 = 120V □ 230 = 220-240V □ 277 = 277V

### **Finish**

 $\square$  B = Black  $\square$  W = White  $\square$  S = Silver

### **Example Part Number:**

LX2044-L19 10-90 DW M9 - CT1-10 120 W

### Other Options (Consult Factory):

- Custom Stems, specify length (4"- 48")
- Custom color, RAL palette

<sup>\*0-10</sup>V available in Dynamic White only.



**Lighting Services Inc** 

Project 21-12877-4 Date 6/24/2021 Tunable White | Color Tuning

Submitted By 16500, INC

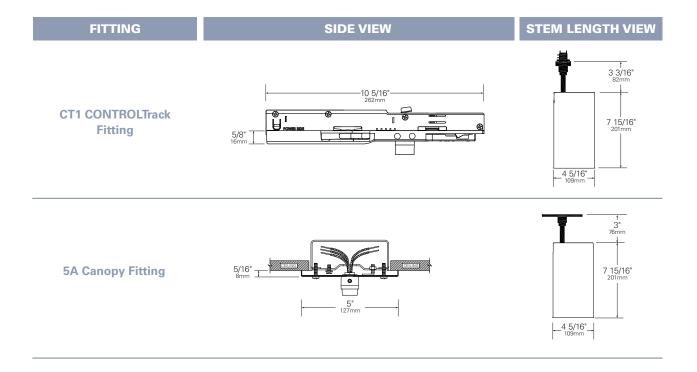
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## LX2044 · MOUNTING OPTIONS





**Lighting Services Inc** 

Project 21-12877-4 Date 6/24/2021 Tunable White | Color Tuning

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## LX2044 PERFORMANCE

The performance characteristics of the LumeLEX family of products can be customized based on the LED module and the optic (reflector) selected.

Each available LED module is defined by four characteristics – module type (dynamic white vs full color), control type (0-10V and DMX), the power that it uses (watts), and its "available lumens." Note that available lumens is a theoretical value that represents the light output of the module on its own – no fixture or optic attached.

In the LSI part number, the LED module is specified with a letter and a number that immediately follow the product series number. For example, in the part number LX2044-L1910-90COM2-CT1-DX120B, the "10-90CO" represents a 19mm Lumenetix-araya module with an output of 1000 Lumens, a minimum CRI of 90, with full color tuning and power usage of 22 Watts.

The available optics (reflectors) are characterized by size, beam angle, and in some cases the characteristics of the field angle (narrow or wide). The optic is specified by the two characters that follow the LED designation in the part number. For example, the "M2" in LX2044-L1910-90COM2-CT1-DX120B is a 70mm diameter optic that has a 20-Degree beam with a narrow field.

Additional parameters, such as Center Beam Candle Power (CBCP), Delivered Lumens, and Efficiency (Lumens per Watt) are all shown in a table that is organized by LED module and optic combination.

CBCP = Center Beam Candle Power							
LED Module	Optic (Reflector)						
Lumens/CRI/Wattage	S1 M2 M4 M6 M8 M9						
1000/90/22	2,070	3,012	2,017	1,080	1,598	2,923	

Delivered Lumens								
LED Module	Optic (Reflector)							
Lumens/CRI/Wattage	S1	M2	M4	M6	M8	M9		
1000/90/22	293	350	607	875	897	899		

Efficiency = Lumens Per Watt							
LED Module	Optic (Reflector)						
Lumens/CRI/Wattage	S1 M2 M4 M6 M8 M9						
1000/90/22	13	16	28	40	41	41	

Absolute range of values are +/- 10% of typical value, and are for all color temperatures

LED Module Lumens/CRI/Wattage Letter Code	1000/90/22 10-90
Nominal Fixture Power (+/- 20%), Watts	22
Maximum Inrush Current, Amps	10
Minimum Power Factor	0.92

Inrush current is instantaneous current drawn by the LED only when fixture is initially powered on or instantaneously changed from full dim to full bright. For more details see Dimming Application Sheet, IS-0119.



**Lighting Services Inc** 

Project 21-12877-4 Date 6/24/2021 Tunable White | Color Tuning

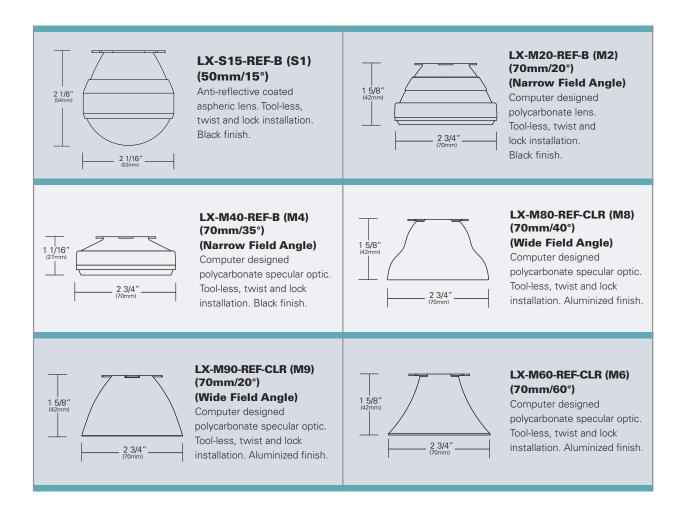
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## LX2044 OPTICS





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## LX2044 · PHOTOMETRIC DATA

LED RATING: 10-90	
S1- 50mm DIA Optic (NFA: Narrow Field Angle) Beam Spread (minimum) Center Beam Candlepower CRI	15° 2070 90
M2-70mm DIA Optic (FR: Field Reducer) Beam Spread (minimum) Center Beam Candlepower CRI	20° 3012 90
M9- 70mm DIA Optic (NFA: Narrow Field Angle) Beam Spread (minimum) Center Beam Candlepower CRI	20° 2923 90
M4- 70mm DIA Optic (NFA: Narrow Field Angle) Beam Spread (minimum) Center Beam Candlepower CRI	35° 2017 90
M8- 70mm DIA Optic (WFA: Wide Field Angle) Beam Spread (minimum) Center Beam Candlepower CRI	40° 1598 90
M6-70mm DIA Optie (WFA: Wide Field Angle) Beam Spread (minimum) Center Beam Candlepower CRI	60° 1080 90

LED RA	TING: 10-90							
	M6 (60°) NFA	M8 (40°) WFA	M4 (35°) NFA	M9 (20°) WFA	M2 (20°) NFA	S1 (15°) NFA	All Distances in Feet	3
	1080	1598	2017	2923	3012	2070		- 1
	270	400	504	731	753	518		- 2
S	120	178	224	325	335	230		. 3
Axis	68	100	126	183	188	129		- 4
eam	43	64	81	117	120	83		- 5
ත ග	30	44	56	81	84	58		- 6
Ö	22	33	41	60	61	42		- 7
°	17	25	32	46	47	32		- 8
at	13	20	25	36	37	26		. 9
Footcandles	11	16	20	29	30	21		10
둳	9	13	17	24	25	17		11
ä	8	11	14	20	21	14		12
otc	6	9	12	17	18	12		13
Ř	6	8	10	15	15	11		14
	5	7	9	13	13	9		15
All Max.	4	6	8	11	12	8		16
=	4	6	7	10	10	7		17
₹	3	5	6	9	9	6		18
	3	4	6	8	8	6		19
	3	4	5	7	8	5		20
	2	4	5	7	7	5		21
	2	3	4	6	6	4		22
	2	3	4	6	6	4		23
	2	3	4	5	5	4		24
	2	3	3	5	5	3		25

Photometric Data based on LED Rating: 10-90 (1000 Lumens/90CRI/22watts) \*WFA Optics not represented in graph



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## LX2044 ACCESSORIES



# SPREAD LENSES AND BEAM SOFTENER % of Light

No.	Description	Transmission
AA990	Spread Lens/Clear	83 (5°X 50°)
AA992	Spread Lens/Clear	85 (5°X 30°)
AA995	Spread Lens/Clear	83 (50°X 50°)
AA996	Spread Lens/Clear	86 (45°X 50°)
AA998	Beam Softener/Clear	80 (45°X 45°)



Stainless steel mesh screens used alone or in combinations will block from approximately 20% to 90% of the transmitted light without changing color temperature of the light.

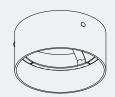
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No.	% of Light Blocked
AA801S	20
AA802S	30
AA803S	40



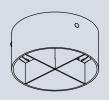
### **LOUVER HEX AA**

1/8" thick Hexcell black metal louver used for thin profile. Black finish.



### **HOOD-EXT-LX44-NXB-X**

Cylindrical metal hood controls spill light and glare. Does not include cross baffle. Specify finish.



### **HOOD-EXT-LX44-WXB-X**

Cylindrical metal hood controls spill light and glare. Includes cross baffle. Specify finish.

<sup>1.</sup> Figures vary based upon LED Module/Optic being used and relationship of screen(s) to LED Module/Optic and to each other.



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Note

**Lighting Services Inc** 

## **COLOR MEDIA**

### **COLOR FILTERS**

As the foremost innovator in accent lighting, LSI offers a complete range of permanent fade-free glass color filters, which are available in nine stock diameters. All glass color filters are rimmed in a seamless aluminum ring and are slotted for heat expansion.



Size	Diameter	LSI Fixture Series
AAA	2 3/8"	LumeLEX® 2020/2030/2031/2038, SSLCX16, SSL260, LumeLEX MAR-S
ZM	2 13/16"	LZ ZOOM
AA	3"	LumeLEX® 2044, LumeLEX 2048
А	3 1/2"	LumeLEX® 2060, SSL230, SSLCX30, SSLGR30CL
В	4 1/4"	LumeLEX® MAR-L
С	4 3/4"	290, LumeLEX® 2084, LumeLEX® 2088, SSL238, SSLCX36, SSLCX38, SSLGR38CL

		¹% of Light
No.	Color	Transmission
902	Medium Pink	36
903	Deep Pink	37
904	Flesh Pink	73
906	Pale Lavender	14
907	Surprise Pink	19
908	Lilac	21
910	Warm Red	10
911	Strawberry	6
912	Ruby	4
913	Magenta	
914 915	Light Amethyst	25 16
916	Medium Amethyst Deep Amethyst	4
917	Olive	18
918		68
920	Light Green Medium Green	25
921	Deep Green	7
922	Silver green	65
923	Yellow Green	49
924	Emerald Green	12
925	Light Turquoise	68
926	Medium Turquoise	40
927	Deep Turquoise	17
928	Light Blue	34
930	Medium Blue	3
932	Daylight	59
933	Gene Moore Blue	18
936	Grey	56
937	Light Blue Green	17
939	Light Amber	68
940	Medium Amber	48
941	Deep Amber	43
942	Straw	78
943	Gold	87
944	Canary Yellow	84
945	Lemon	81
946	Pumpkin	32
947	Tangerine	20
948	Orange	23
949	Pink Gold	54
950	Bronze	48
951	Brass	11
952	Autumn Tan	11
953	Leaf Brown	19
954	Butter Pecan	3
955	Toasted Almond	1

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<sup>1.</sup> Values given are approximate due to slight variations in glass color and thickness.



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Type

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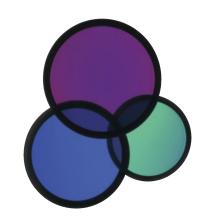
### **COLOR MEDIA**

### **DICHROIC COLOR FILTERS**

In addition to our complete line of glass color filters, LSI now offers dichroic glass color filters that achieve purer, more saturated, richer color by selective wavelength transmission. Since these filters reflect rather than absorb the unwanted color wavelengths, a higher intensity of colored light can be obtained with fewer or lower wattage fixtures. In addition, this selective transmission allows for very accurate color matching from filter to filter.

All standard LSI filter sizes are available in a wide palette of well chosen dichroic colors that can be used with all LSI fixtures that accept accessories.

LSI dichroic glass color filters have the added benefit of being rimmed for extra durability to allow for frequent usage without fear of breakage or edge chipping.



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Size	Diameter	LSI Fixture Series
AAA	2 3/8"	LumeLEX® 2020/2030/2031/2038, SSLCX16, SSL260, LumeLEX MAR-S
ZM	2 13/16"	LZ ZOOM
AA	3"	LumeLEX® 2044, LumeLEX 2048
Α	3 1/2"	LumeLEX® 2060, SSL230, SSLCX30, SSLGR30CL
В	4 1/4"	LumeLEX® MAR-L
С	4 3/4"	290, LumeLEX® 2084, LumeLEX® 2088, SSL238, SSLCX36, SSLCX38, SSLGR38CL

### **Technical Data**

Dichroic color filters are created in a vacuum chamber by multi-layer vapor deposits of different minerals onto low expansion, chemically resistant Borosilicate glass.

Deposits are made in alternating layers of varying microscopic thickness which allow very narrow color wavelengths to be selectively transmitted and all other wavelengths to be reflected.

LSI does not recommend using dichroic color filters with lamps or fixtures that have beam spreads greater than 40° because a secondary color aura is created by the wide angular transmitted wavelengths that are different than the desired color wavelength.

Since there is mainly transmission and reflection of the color wavelengths by the dichroic filter and very little absorption, the dichroic filter can be used with many high temperature lights that normally would not accept color filters.

No.	Color	% of Light Transmission
2001	Light Pink	69
2002	Medium Pink	43
2003	Hot Pink	11
2004	Pale Pink	55
2010	Deep Magenta	29
2011	Lavender	24
2012	Vivid Magenta	31
2013	Lavender Accent	48
2014	Lilac	37
2015	Purple Fusion	12
2020	Sky Blue	39
2021	Sea Blue	39
2022	Cyan	33
2023	Light Blue Green	30
2024	Primary Blue	24
2025	Medium Red Blue	15
2026	Deep Purple	16
2027	Peacock Blue	53
2028	Mediterranean Blue	20
2029	Boost Blue	51
2040	Light Yellow Green	64
2041	Fern Green	47
2042	Turquoise	35
2043	Primary Green	31
2044	Industrial Green	64
2050	Yellow	80
2051	Amber	71
2052	Amber Blush	38
2053	Bastard Amber	71
2054	Goldenrod	63
2055	Bright Straw	56
2060	Medium Orange	51
2061	Orange	44
2070	Flame Red	27
2071	Primary Red	25