







# LX2048 • 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 – the color rendering index (CRI), the correlated color temperature (CCT), 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 LX2048-TS913-8327N1-CT1-10120B, the “TS913-8327” represents an LED module with an output of 1300 lumens, a CRI of 83, a power usage of 22 watts and a color temperature of 2700K.

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 “N1” in LX2048-TS913-8327N1-CT1-10120B is a 70mm diameter optic that has a 10-Degree beam.

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	N1	NR	N2	N4	N6
700/98/13	7338	5346	1590	948	576
900/83/14	11007	8019	2385	1422	864
900/98/22	11007	8019	2385	1422	864
1300/83/22	15899	11583	3445	2054	1248

Delivered Lumens					
LED Module	Optic (Reflector)				
Lumens/CRI/Wattage	N1	NR	N2	N4	N6
700/98/13	468	186	438	462	444
900/83/14	702	279	657	693	666
900/98/22	702	279	657	693	666
1300/83/22	1014	403	949	1001	962

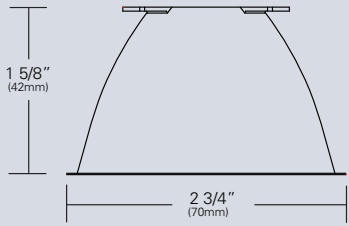
Efficiency = Lumens Per Watt					
LED Module	Optic (Reflector)				
Lumens/CRI/Wattage	N1	NR	N2	N4	N6
700/98/13	36	14	34	36	34
900/83/14	50	20	47	50	48
900/98/22	32	13	30	32	30
1300/83/22	46	18	43	46	44

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

LED Module Lumens/CRI/Wattage Letter Code	600/98/13 06-98	900/83/14 09-83	900/98/22 09-98	1300/83/22 13-83
Nominal Fixture Power (+/- 20%), Watts	13	14	22	22
Maximum Inrush Current Amps	10	10	10	10
Minimum Power Factor	0.92	0.92	0.92	0.92

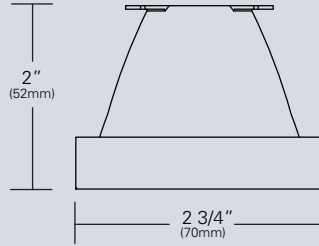
*Inrush current is instantaneous current drawn by the LED only when fixture is initially powered on or instantaneously changed from full dim to full bright. For more details see Dimming Application Sheet, IS-0119.*

# LX2048 • OPTICS



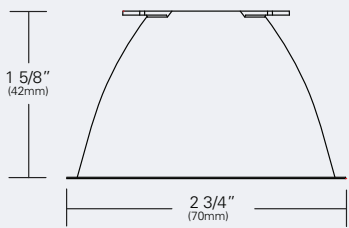
**LX-N10-REF-CLR (N1)**  
**(70mm/10°)**

Faceted reflectively coated metal optic. Tool-less twist and lock installation. Aluminized finish.



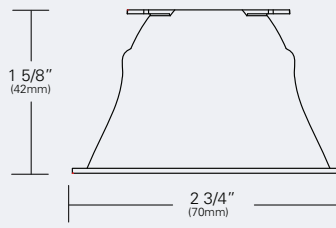
**LX-NRD-REF-CLR (NR)**  
**(72mm/10°)**

Field reducer. Proprietary field reducing baffle (black) with aluminized reflector. Tool-less twist and lock installation.



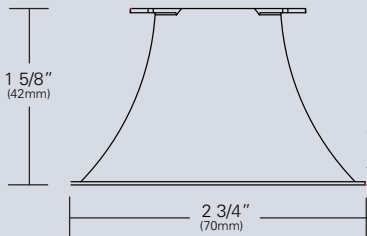
**LX-N20-REF-CLR**  
**(N2)(70mm/24°)**

Faceted reflectively coated metal optic. Tool-less twist and lock installation. Aluminized finish.



**LX-N40-REF-CLR (N4)**  
**(70mm/40°)**

Faceted reflectively coated metal optic. Tool-less twist and lock installation. Aluminized finish.



**LX-N60-REF-CLR (N6)**  
**(70mm/62°)**

Faceted reflectively coated metal optic. Tool-less twist and lock installation. Aluminized finish.

# LX2048 • PHOTOMETRIC DATA

**LED RATING: 07-98**

**N1- 50mm DIA Optic**

Beam Spread (minimum) **10°**  
Center Beam Candlepower **7338**  
CRI **98**

**NR- 70mm DIA Optic**

(FR: Field Reducer)  
Beam Spread (minimum) **10°**  
Center Beam Candlepower **5346**  
CRI **98**

**N2- 70mm DIA Optic**

Beam Spread (minimum) **24°**  
Center Beam Candlepower **1590**  
CRI **98**

**N4- 70mm DIA Optic**

Beam Spread (minimum) **40°**  
Center Beam Candlepower **948**  
CRI **98**

**N6- 70mm DIA Optic**

Beam Spread (minimum) **62°**  
Center Beam Candlepower **576**  
CRI **98**

**LED RATING: 13-83**

**N1- 70mm DIA Optic**

Beam Spread (minimum) **10°**  
Center Beam Candlepower **15899**  
CRI **83**

**NR- 70mm DIA Optic**

(FR: Field Reducer)  
Beam Spread (minimum) **10°**  
Center Beam Candlepower **11583**  
CRI **83**

**N2- 70mm DIA Optic**

Beam Spread (minimum) **24°**  
Center Beam Candlepower **3445**  
CRI **83**

**N4- 70mm DIA Optic**

Beam Spread (minimum) **40°**  
Center Beam Candlepower **2054**  
CRI **83**

**N6- 70mm DIA Optic**

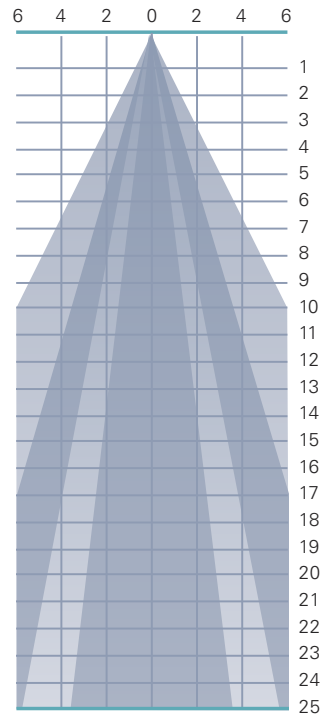
Beam Spread (minimum) **62°**  
Center Beam Candlepower **1248**  
CRI **83**

**LED RATING: 06-98**

All Max. Footcandles at 0° Beam Axis

	N6 (62°)	N4 (40°)	N2 (24°)	NR (10°) FR	N1 (10°)
	576	948	1590	5346	7338
	144	237	398	1337	1835
	64	105	177	594	815
	36	59	99	334	459
	23	38	64	214	294
	16	26	44	149	204
	12	19	32	109	150
	9	15	25	84	115
	7	12	20	66	91
	6	9	16	53	73
	5	8	13	44	61
	4	7	11	37	51
	3	6	9	32	43
	3	5	8	27	37
	3	4	7	24	33
	2	4	6	21	29
	2	3	6	18	25
	2	3	5	17	23
	2	3	4	15	20
	1	2	4	13	18
	1	2	4	12	17
	1	2	3	11	15
	1	2	3	10	14
	1	2	3	9	13
	1	2	3	9	12

All Distances in Feet



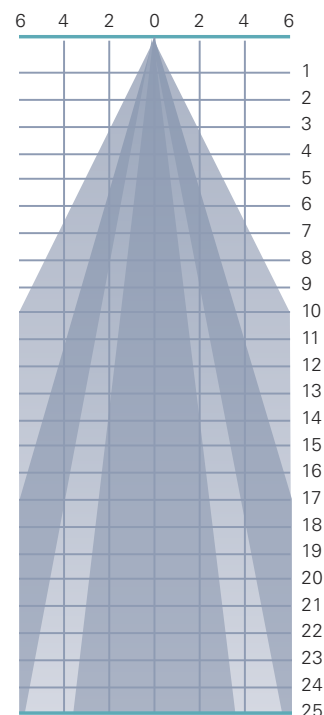
Photometric Data based on LED Rating: 07-98 (700 Lumens/98CRI/13watts)

**LED RATING: 13-83**

All Max. Footcandles at 0° Beam Axis

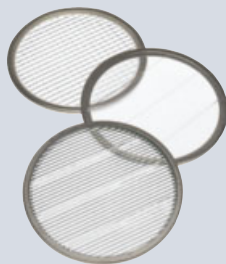
	N6 (62°)	N4 (40°)	N2 (24°)	NR (10°) FR	N1 (10°)
	1248	2054	3445	11583	15899
	514	514	861	2896	3975
	228	228	383	1287	1767
	128	128	215	724	994
	82	82	138	463	636
	57	57	96	322	442
	42	42	70	236	324
	32	32	54	181	248
	25	25	43	143	196
	21	21	34	116	159
	17	17	28	96	131
	14	14	24	80	110
	12	12	20	69	94
	10	10	18	59	81
	9	9	15	51	71
	8	8	13	45	62
	7	7	12	40	55
	6	6	11	36	49
	6	6	10	32	44
	5	5	9	29	40
	5	5	8	26	36
	4	4	7	24	33
	4	4	7	22	30
	4	4	6	20	28
	3	3	6	19	25

All Distances in Feet



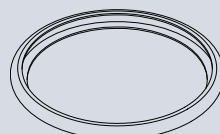
Photometric Data based on LED Rating: 13-83 (1300 Lumens/83CRI/22watts)

# LX2048 • ACCESSORIES



## SPREAD LENSES AND BEAM SOFTENER

No.	Description	% of Light 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°)



## BACKER RING AAB

Aluminum ring to hold gel when no other size AA accessories are being used. Black finish.



## 1 LIGHT BLOCKING SCREENS AA

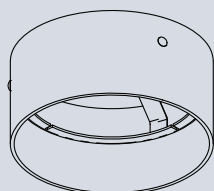
Stainless steel mesh screens used alone or in combinations will block from approximately 20% to 90% of the transmitted light without changing color temperature of the light.

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



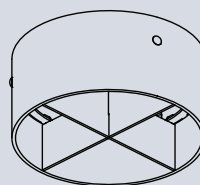
## LOUVER HEX AA

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.

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

# LX2048 • GELS

As the foremost innovator in accent lighting, LSI offers a complete range of pre-cut Gels to modify the spread and color of light for the LumeLEX LED Series.



## LumeLEX® SPREAD GELS

Size: AA (76 mm diameter)	Spread Gel
GEL-L1-AA	1° Spread Gel
GEL-L5-AA	5° Spread Gel
GEL-L10-AA	10° Spread Gel
GEL-L20-AA	20° Spread Gel
GEL-L30-AA	30° Spread Gel
GEL-L40-AA	40° Spread Gel
GEL-L60-AA	60° Spread Gel
GEL-L80-AA	80° Spread Gel
GEL-L30B5-AA	30° by 5° Spread Gel
GEL-L40B2-AA	40° by 0.2° Spread Gel
GEL-L60B1-AA	60° by 1° Spread Gel
GEL-L60B10-AA	60° by 10° Spread Gel
GEL-L75B45-AA	75° by 45° Spread Gel
GEL-L90B60-AA	90° by 60° Spread Gel
GEL-R101-AA	Beam Softener

## LumeLEX® COLOR GELS

Size: AA (76 mm diameter)	Gel Color	% of Light Transmission	Size: AA (76 mm diameter)	Gel Color	% of Light Transmission
GEL-R2-AA	Bastard Amber	78	GEL-R312-AA	Canary	85
GEL-R7-AA	Pale Yellow	96	GEL-R3204-AA	Half Blue	52
GEL-R12-AA	Straw	88	GEL-R331-AA	Shell Pink	68
GEL-R13-AA	Straw Tint	78	GEL-R383-AA	Sapphire Blue	4
GEL-R14-AA	Medium Straw	68	GEL-R397-AA	Pale Grey	70
GEL-R21-AA	Golden Amber	43	GEL-R2001-AA	Storaro Red	12
GEL-R25-AA	Orange Red	14	GEL-R2004-AA	Storaro Green	15
GEL-R26-AA	Light Red	12	GEL-R2009-AA	Storaro Violet	3
GEL-R27-AA	Medium Red	4	GEL-R3202-AA	Full Blue	36
GEL-R57-AA	Lavender	24	GEL-R3206-AA	Third Blue	64
GEL-R62-AA	Booster Blue	54	GEL-R3216-AA	Eighth Blue (Boosts 3200K to 3300K)	81
GEL-R71-AA	Sea Blue	30	GEL-R3318-AA	Tough 1/8 Minusgreen	89
GEL-R72-AA	Azure Blue	44	GEL-R3410-AA	Roscocolor (1/8 CTO) (Reduces 5500K to 4900K)	92
GEL-R91-AA	Primary Green	7	GEL-R3441-AA	Full Straw (CTS)	50
GEL-R97-AA	Light Grey	50	GEL-R3443-AA	Quarter Straw (CTS)	81
GEL-R98-AA	Medium Grey	25	GEL-R4330-AA	CalColor 30 Cyan	63
GEL-R101-AA	Light Frost	N/A	GEL-R4415-AA	CalColor 15 Green	67
GEL-R104-AA	Tough Silk	N/A	GEL-R4490-AA	CalColor 90 Green	25
GEL-R119-AA	Lt. Hamburg Frost	N/A	GEL-R4860-AA	CalColor 60 Pink	46
GEL-R121-AA	Blue Diffusion	N/A	GEL-R4890-AA	CalColor 90 Pink	38
GEL-R305-AA	Rose Gold	75	GEL-R4930-AA	CalColor 30 Lavender	47

\* Backer Ring AAB required to hold gels when no other rimmed "AA" accessories are used.

LSI ROSCO GEL CCT CONVERSION CHART FROM 3000K			
Type	ROSCO #	ROSCO Description	Resulting CCT
Amber Filters Lower CCT	3420	Double CTO	1531
	3407	Sun CTO	1999
	3401	Sun 85	2154
	3411	Sun 3/4 CTO	2154
	3408	Sun 1/2 CTO	2414
	3409	Sun 1/4 CTO	2664
	3410	Sun 1/8 CTO	2830
	3114	UV Filter	2930
Blue Filters Raise CCT	3220	Double Blue	N/A
	3202	Full Blue	4942
	3203	Three-Quarter Blue	4286
	3204	Half Blue	3769
	3206	Third Blue	3517
	3208	Quarter Blue	3297
	3216	Eighth Blue	3112



# 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	No.	Color	% of Light Transmission
AAA	2 3/8"	LumeLEX® 2020/2030/2031/2038, SSLCX16, SSL260, LumeLEX MAR-S	902	Medium Pink	36
			903	Deep Pink	37
			904	Flesh Pink	73
ZM	2 13/16"	LZ ZOOM	906	Pale Lavender	14
			907	Surprise Pink	19
AA	3"	LumeLEX® 2044, LumeLEX 2048	908	Lilac	21
			910	Warm Red	10
A	3 1/2"	LumeLEX® 2060, SSL230, SSLCX30, SSLGR30CL	911	Strawberry	6
			912	Ruby	4
B	4 1/4"	LumeLEX® MAR-L	913	Magenta	1
			914	Light Amethyst	25
			915	Medium Amethyst	16
C	4 3/4"	LumeLEX® 2084, LumeLEX® 2088, SSL238, SSLCX36, SSLCX38, SSLGR38CL	916	Deep Amethyst	4
			917	Olive	18
			918	Light Green	68
			920	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

**Notes:**

1. Values given are approximate due to slight variations in glass color and thickness.

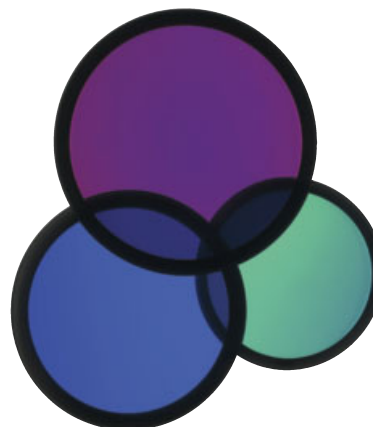
# COLOR MEDIA

## 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.



Size	Diameter	LSI Fixture Series	Technical Data	No.	Color	% of Light Transmission
AAA	2 3/8"	LumeLEX® 2020/2030/2031/2038, SSLCX16, SSL260, LumeLEX MAR-S	Dichroic color filters are created in a vacuum chamber by multi-layer vapor deposits of different minerals onto low expansion, chemically resistant Borosilicate glass.	2001	Light Pink	69
ZM	2 13/16"	LZ ZOOM	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.	2002	Medium Pink	43
AA	3"	LumeLEX® 2044, LumeLEX 2048	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.	2003	Hot Pink	11
A	3 1/2"	LumeLEX® 2060, SSL230, SSLCX30, SSLGR30CL	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.	2004	Pale Pink	55
B	4 1/4"	LumeLEX® MAR-L		2010	Deep Magenta	29
C	4 3/4"	LumeLEX® 2084, LumeLEX® 2088, SSL238, SSLCX36, SSLCX38, SSLGR38CL		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