

DESCRIPTION

Boca 696 is a compact 6-1/4" diameter by 9-1/4" deep in-ground LED luminaire. The adjustable lamp assembly provides +/- 22° vertical tilt and 360° horizontal rotation for precision uplighting, wall washing or general illumination in constricted areas. Designed for recessed mounting in concrete, brick, stone or dirt, it is suitable for drive-over** applications. Fixture is also suitable for recessed mounting in indoor or outdoor wood flooring. A surface mount trim option is also available. Various lenses, louvers and color or dichroic filters can be combined – up to three at once – to create multiple lighting effects.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Recessed housing is constructed from corrosion-resistant, glass reinforced polyester BMC molding compound and includes two 1/2-14 NPSM conduit fittings for through wiring. Recessed housing and trim ring are sealed with a high temperature silicone molded gasket to prevent water intrusion. The painted trim ring is precision machined from corrosion resistant 6061-T6 aluminum. The trim ring is also available in machined C360 brass, C932 bronze*, C10 copper or 303/304 stainless steel, brass, bronze* or machined copper.

Finish

The painted trim is double protected by a ROHS* compliant chemical film undercoating and polyester powder coat finish. A variety of standard colors are available or RAL and custom color matches are available upon request. Trims constructed from brass, bronze*, copper and stainless steel are left unpainted to reveal the natural beauty of the

material. Brass, bronze* and copper will patina naturally over time.

Lens

Minimum 1/4" thick tempered glass lens, factory sealed with high temperature adhesive to prevent water intrusion. Suitable for drive-over** applications up to 5000 pounds.

Hardware

Stainless steel hardware is standard to provide maximum corrosion-resistance.

Electrical

When ordered as a line voltage fixture, an integral 12V magnetic transformer is included for connection to 120V or 277V line voltage. When ordered as a low voltage fixture, a remote 12V transformer is required (not included). Initial power draw on LED equipped fixtures is 12 watts. When sizing transformer use 12 watts per LED fixture. Nominal power draw after startup is 8 watts. The LED module is designed to operate within the range 12V +/- 1.2V. Any less or more voltage can cause premature

failures. Dimming only available for 120V option. See technical notes for compatible dimmer switches.

LED Modules

LED modules are included and are available in three color temperatures (2700,3000,4000) or and three distributions (spot, narrow, and flood). Both color temperature and distribution must be specified when ordering. Module has a L70 / 60,000 hour rating.

Warranty

Lumière warrants its fixtures against defects in materials & workmanship for three (3) years. Auxiliary equipment such as transformers carry the original manufacturer's warranty.

Recessed Housing

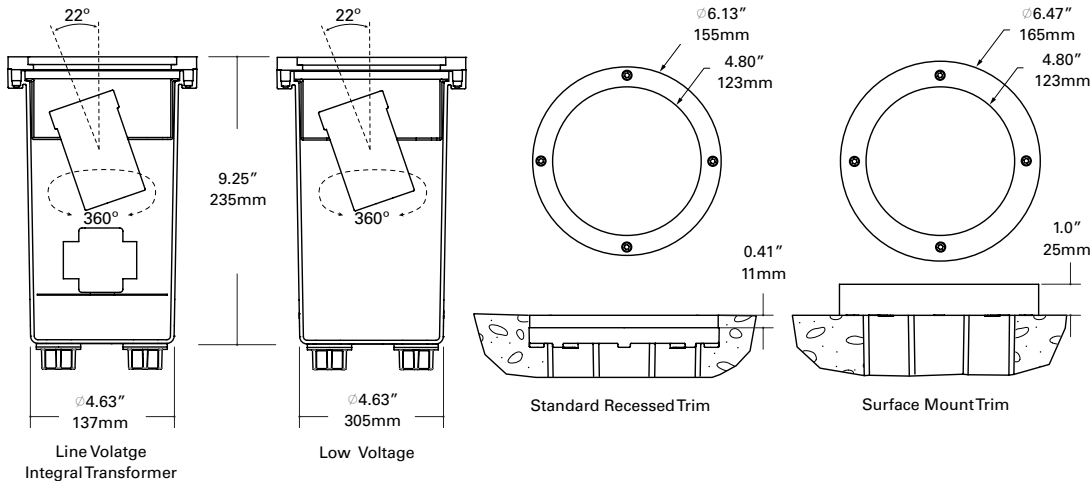
Recessed housing is available to ship in advance of complete fixture for rough-in purposes. Equipped with 1/2" conduit hub. Specify option -LBB and order separately the accompanying recessed housing from below.

Recessed Housing
600-BB



696
BOCA
LED

APPLICATIONS:
GROUND-MOUNT
RECESSED



CERTIFICATION DATA

UL and cUL Wet Location Listed
LM79 / LM80 Compliant
LM70 / 60,000 Hours
ROHS* Compliant
IP67 Ingress Protection Rated

TECHNICAL DATA

External Supply Wiring 90°C Minimum
8W LED

ORDERING INFORMATION

Sample Number: 696-10LED2712-120/12-BK

Series	Trim	Source (select from each column and combine)			Voltage	Finish ¹	Options ²
696=6 1/4" dia. Boca Inground LED Uplight, 22° Tilt, 360° Rotation	[Blank]= Standard Round Trim SM= Round Surface Mount Trim	8LED=8W LED	27=2700K 30=3000K 40=4000K	10=10° Spot 25=25° Narrow 36=36° Wide	12=12 Volt Remote Transformer Required (not included) 120/12=120V Integral Transformer 277/12=277V Integral Transformer	Painted BK=Black BZ=Bronze CS=City Silver VE=Verde WT=White Premium Finish NBR=Natural Brass NCP=Natural Copper NBZ=Natural Bronze* NSS=Natural Stainless Steel	LBB=Less Back Box

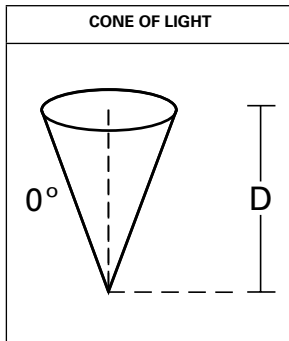
NOTES: 1 Custom and RAL color matching available upon request. Consult factory for further information. 2 When specifying LBB option the back box needs to be ordered separately 600-BB. *For natural bronze ROHS material consult factory. **Drive over fixtures not qualified for roadway or heavy traffic applications.

OPTICAL ACCESSORIES - ORDER SEPARATELY

Filters (2.00" Diameter)	Optical Lenses (2.00" Diameter)	Optical Louvers (2.00" Diameter)
F71 = Peach Dichroic F72 = Amber Dichroic F73 = Green Dichroic F74 = Medium Blue F75 = Yellow Dichroic F76 = Red Dichroic F77 = Dark Blue Dichroic F78 = Light Blue Dichroic F79 = Neutral Density Dichroic F80 = Magenta Dichroic F22 = Red Color F33 = Blue Color F44 = Green Color F55 = Yellow Color F66 = Mercury Vapor	LSL =Linear Spread Lens (elongates standard beam spread) DIF =Diffused Lens (provides even illumination) OSL =Overall Spread Lens (increases standard beam spread)	LVR =45° Hex Cell Louver (reduces glare)

BOCA 696 MR16 HALOGEN PHOTOMETRY DATA

Horizontal Illuminance on Surface - Boca 696 Standard Recessed Hood - 50W MR16



Filename	696-50MR16-12-BK-NSP.ies	
Lamp	50W MR16 NSP	
CBCP	11,000	
D	FC	Beam Diameter
2'	2550	1'6"
4'	638	1'0"
6'	283	1'6"
8'	159	2'0"
10'	102	3'0"
15'	45	4'0"

Filename	696-50MR16-12-BK-NFL.ies	
Lamp	50W MR16 NFL	
CBCP	3,200	
D	FC	Beam Diameter
2'	725	1'0"
4'	181	2'6"
6'	81	4'0"
8'	45	5'0"
10'	29	6'6"
15'	13	10'0"

CCT MULTIPLIER TABLE

LAMP WATTAGE	MULTIPLIER
20W	0.32
35W	0.57

Filename	696-50MR16-12-BK-FL.ies	
Lamp	50W MR16 FL	
CBCP	2,000	
D	FC	Beam Diameter
2'	431	1'6"
4'	106	3'0"
6'	48	5'0"
8'	27	6'6"
10'	17	8'0"
15'	7	12'0"

Filename	696-50MR16-12-BK-WFL.ies	
Lamp	50W MR16 WFL	
CBCP	1,200	
D	FC	Beam Diameter
2'	269	2'0"
4'	67	4'6"
6'	30	7'6"
8'	17	9'0"
10'	11	11'6"
15'	5	17'0"

NOTES AND FORMULAS

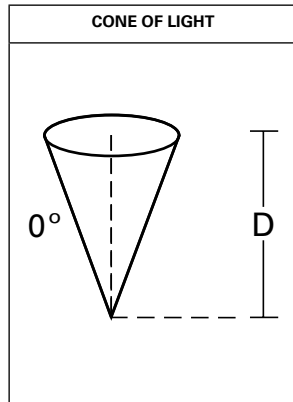
- Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
- Footcandle values are initial. Apply appropriate light loss factors where necessary.
- Bare lamp data shown. Consult lamp manufacturers to obtain detailed specifications for their lamps.

BOCA 696 LED PHOTOMETRY DATA

LED Lumen and CBCP Table - 4000K

		Flush Hood			Regressed Hood (black)			Regressed Hood (silver)		
		CBCP	LUMENS	LPW	CBCP	LUMENS	LPW	CBCP	LUMENS	LPW
10	BASE	5980	351.3	43.6	5541	298.5	37.1	5052	296.9	39.7
	+DIFF	985	286.9	35.8	968	220.4	27.4	930	233.2	31.2
	+LSL	1310	309.9	38.6	1299	253.1	31.4	1200	252.7	33.8
	+LVR	5270	243.0	30.6	4838	235.3	29.2	4633	225.1	30.1
	+OSL	1686	328.6	41.4	1700	285.7	35.5	1609	291.1	39
25	BASE	2690	417.2	53.5	2559	374.2	47.4	2357	361.8	49.4
	+DIFF	761	338.6	43.4	729	267.7	33.9	720	281.4	36.2
	+LSL	795	375.1	48.1	778	316.3	40.2	719	312.0	42.2
	+LVR	2396	285.9	36.7	2294	272.4	34.1	2092	253.3	35.3
	+OSL	1452	383.4	49.1	1414	345.0	43.8	1328	341.2	45.2
36	BASE	1144	409.2	53.1	1125	369.1	47.6	1080	371.7	49
	+DIFF	542	336.3	43.6	532	264.3	34.1	502	268.6	35.1
	+LSL	486	371.1	48.2	480	305.6	39.4	484	317.4	41.7
	+LVR	1030	267.9	34.8	996	252.1	32.4	967	251.8	33.1
	+OSL	930	384.3	49.9	932	337.8	43.6	910	348.6	45.7

Horizontal Illuminance on Surface - Boca 696 Flush Lens Hood - 4000K



Filename: 696-FL-8LED4010-12-BK.ies			
Test No.: G2-1802-569-1			
Distance	FC	Beam Diameter	
2'	1495	0.4	
4'	373.8	0.8	
6'	166.1	1.2	
8'	93.4	1.6	
10'	59.8	2	
15'	26.6	3	
20'	15	4.2	
30'	6.6	6.2	
40'	3.7	8.4	

Filename: 696-FL-8LED4025-12-BK.ies			
Test No.: G2-1802-569-2			
Distance	FC	Beam Diameter	
2'	672.5	0.6	
4'	168.1	1.2	
6'	74.7	1.8	
8'	42	2.4	
10'	26.9	3	
15'	12	4.6	
20'	6.7	6.2	
30'	3	9.2	
40'	1.7	12.4	

Filename: 696-FL-8LED4036-12-BK.ies			
Test No.: G2-1802-569-3			
Distance	FC	Beam Diameter	
2'	286	1	
4'	71.5	2.2	
6'	31.8	3.4	
8'	17.9	4.6	
10'	11.4	5.8	
15'	5.1	8.6	
20'	2.9	11.6	
30'	1.3	17.4	
40'	0.7	23.2	

CCT MULTIPLIER TABLE

CCT(K) / COLOR	MULTIPLIER
2700K	0.91
3000K	0.89
4000K	1.00

Note: Multiplier can be used to calculate center beam candle power (CBCP), Lumens and footcandle (FC) values.

TECHNICAL INFORMATION

1. Dimming is dependant on remote transformer compatibility with LED module. Please see compatibility matrix for dimmer switch and transformer selection.
2. When using a magnetic dimmer switch there are two recommended LED compatible 120V magnetic dimming switches: Lutron Ariadni AVLV-600P and Lutron Diva DVLV-600P
3. IMPORTANT: When sizing transformer use 12 watts per LED fixture. Nominal power draw after start up is 8 watts. Any less or more voltage can cause premature failures.