

COBRA 2" MINI

CB2 SERIES | Deep Regress Downlights



Small yet mighty, this family of 2" aperture recessed downlights delivers up to 1200 lumens. Compact in size and high in performance, the collection offers an extensive selection of optics, trim styles, configurations, beam spreads, housings, and mounting options—providing the versatility needed for any project. With a wide array of customizable setups, it meets virtually every design requirement. A designer favorite, these downlights ensure exceptional lighting performance for any application.



Feature

- Architectural Friendly: Modular design, various unique combinations
- Adjustable Ring: 360° rotation and a maximum 30° tilt angle
- 2 in 1 Dimming: 0-10V (Dim to 1%) and TRIAC in one package
- COB LED: 4 Fixed CCT 90+ CRI or Dim to Warm 95+ CRI options.
- Beam Angle: 30° and 60° optics options
- Trimmed or trimless options
- New construction and remodel options for any site condition



PERFORMANCE

Wattage Selectable	30° Beam @ 3000K		50° Beam @ 3000K		Dim to Warm 3000K~2000K 95+ CRI
	Efficacy	Delivered Lumens	Efficacy	Delivered Lumens	
5W	67LM/W	335LM	73LM/W	365LM	Up to 13W 840LM 70LM/W
8W	68LM/W	544LM	74LM/W	592LM	
10W	67LM/W	670LM	74LM/W	740LM	
13W	64LM/W	832LM	70LM/W	910LM	
16W	61LM/W	976LM	67LM/W	1072LM	
19W	59LM/W	1121LM	65LM/W	1235LM	

Remark: The lumens are subject to 3000K, 90+ CRI, 36° beam angle with white round trim. Lumen output may vary ± 5% base on different CCT, beam angle, trim shape and shade.

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PRODUCT ORDERING GUIDE

Example: CB-2R-TW-19W-DT1-9027-B30-HA-RW-RM

*Available For Quickship - Coming Soon.

CB	2R		19W	DT1				TA
Product Family	Size and Shape	Flange Type	Wattage Selectable	Dimming Options	CRI Options	LED Color Options	Beam Options	Adjustable Holder
CB COBRA Downlight Series	2R QuickShip 2inch Round	TW QuickShip Trimmed With White Flange TB QuickShip Trimmed With Black Flange TL QuickShip Trimless	19W QuickShip Up to 19W, 1200LM (5W, 8W, 10W, 13W, 16W, 19W Field-selectable)	DT1 QuickShip 0-10V, (Dim To 1%) Or TRIAC Dimming	90 QuickShip 90+ CRI 95 QuickShip 95+ CRI (ONLY For Dim To Warm)	27 QuickShip 2700K Cree COB 30 QuickShip 3000K Cree COB 35 QuickShip 3500K Cree COB 40 QuickShip 4000K Cree COB DW QuickShip Dim to Warm 3000K~2000K Bridgelux COB (13W Max)	B30 QuickShip Beam 30° B50 QuickShip Beam 50°	TA QuickShip Tilt Angle And 360° Horizontal Adjustment.
Trim Shade		Mounting		Optic Media(Optional)		Emergency(Optional)		
RW QuickShip White RB QuickShip Black RG QuickShip Gold RC QuickShip Chrome		RM QuickShip Remodel(Non-IC) NF QuickShip New Construction Frame Kit(Non-IC) NH QuickShip New Construction Housing Insulation Kit (IC)		{Blank} None HB QuickShip Honeycomb WR QuickShip Waterproof Plate (Wet Rated) Decorative Kit 		{Blank} None EM QuickShip Emergency Pre-install 8W LED Emergency Driver And Indicator Before Delivery 		
				+ DYB DYW QuickShip + DGB DGW QuickShip + DTB DTW QuickShip + DBB DBW QuickShip + DRB DRW QuickShip				

COBRA 2" MINI

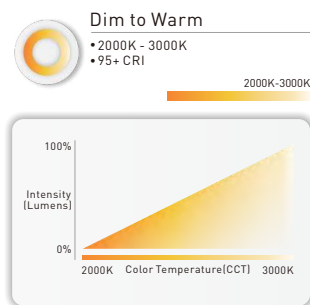
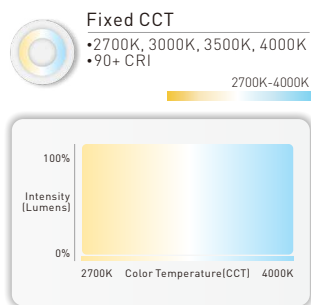
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STRUCTURE

» LED System

LED	Powered by CREE or Bridgelux high efficiency COB LED chip.
CRI	90+ for fixed CCT or 95+ CRI for Dim to Warm, producing outstanding illumination at a tight chromaticity specification and color binning process.
CCT	2700K, 3000K, 3500K and 4000K fixed CCT with a great color consistency or Dim to Warm from 3000K to 2000K.
Light Engine	Aluminum housing acting as the heat sink to maximize life. The temperature of all heatsinks are controlled at 60-70°C.



» Lens

Classic reflector-like design provides high lighting transmittance. It effect in light control and anti-glare with side facula and fade-out facula. The MR16 standard size (diameter 1.96") design make them widely practical. Available in 30° and 50° beam angles, beam spreads are interchangeable which can be easily swapped out in the field without tools.

» Trim Finish / Shade

Powder coat white and black finishes offer uniform finish providing long term performance and superior aesthetic, compatible for multiple trim shades.



Round



Decorative Kit

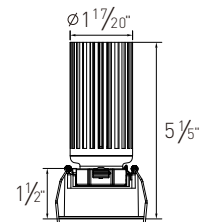
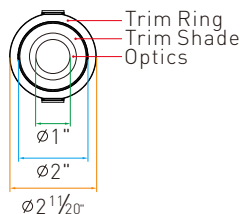
DIMENSIONS

CB-2R-TW / TB

2" Round Trim



Mounting Diameters: $2\frac{1}{5}" - 2\frac{2}{5}"$

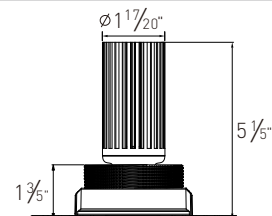
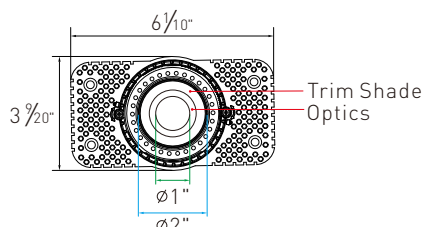


CB2R-TL

2" Round Trimless



Mounting Diameters: $3\frac{1}{2}" - 3\frac{7}{10}"$

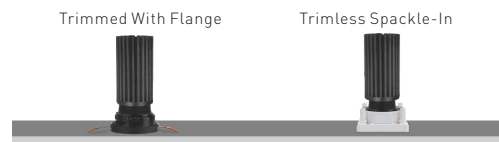


» Electrical

LED Driver	It is powered by Class 2 high efficiency LED driver, with a standard 0-10V dimming which continuous dims to 1% or Triac dimming that works with many types of controls. Thermal overload protection shuts down the luminaire when system temperatures exceed designed operating conditions.
THD	<20%
Power Factor	>0.9
Input Voltage	Standard electronic drivers are cULus recognized and available for 110-277V AC.
Environment	Environment damp rated for ambient operating temperature of -20°C to +40°C (-4° to +104°F)

» Installation

Twist & Lock feature for easy trim installation.
Durable tension clips are allowing for fast and easy flush installation.



» Listings

- cULus listed for damp locations
- Five-year warranty for parts and components. (Labor not included)

NOTES:

- Ambient temperatures at fixture location should not exceed 40°C during normal operation.
- For interior use only

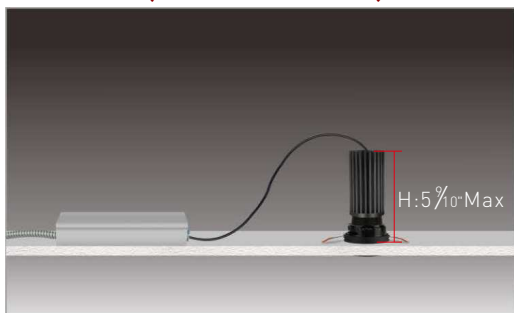
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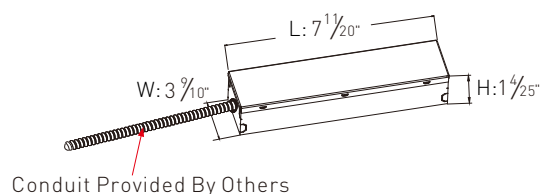


MOUNTING

Remodel(NON-IC Rated)- LED Driver Box



It can be installed in existing ceilings for remodel application. Simple cut a hole in existing drywall ceilings.

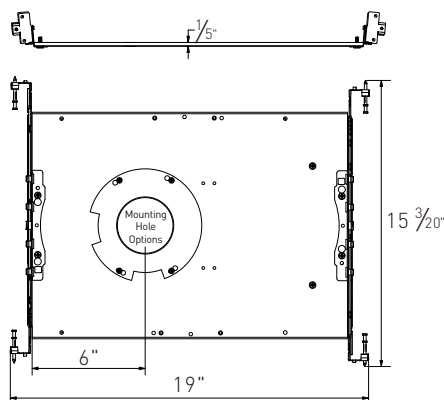


New Construction-Frame Kit (NON-IC Rated)

A rough-in frame option is available for all new constructions and a variety of ceiling types. LED driver box rests on the frame kit by magnet when installed as shown below.

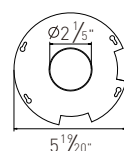


Pre-install LED
Emergency Driver
Available.

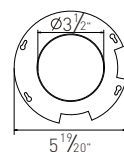


Mounting Hole Options

2" Round Trim



2" Round Trimless

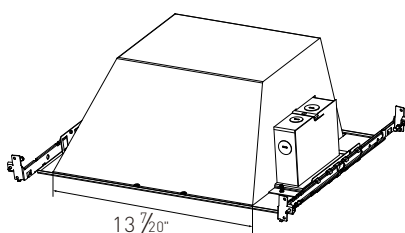
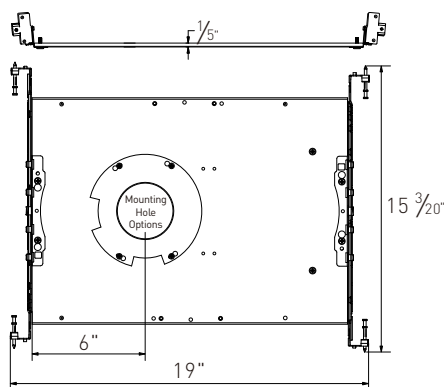


New Construction-Housing Insulation Kit (IC Rated)

An IC-rated housing frame kit allows placement of 2inch LED downlight in direct contact with insulation.



Pre-install LED
Emergency Driver
Available.



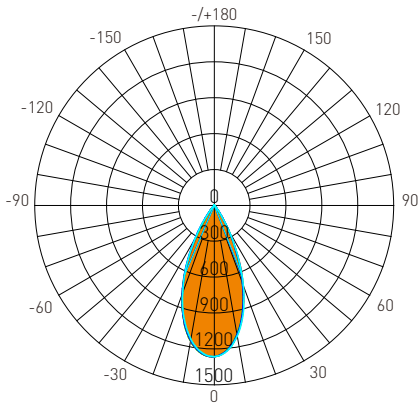
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DISTRIBUTION DIAGRAM

2" / 10W / 3000K / 50°



Lumens: 711.83 Lm
Watts: 10 W
LPW: 74.02 Lm/W
CCT: 3000K

UNIT:cd
— C0/180,44.7 °
— C30/210,44.6 °
— C60/240,44.7 °
— C90/270,44.9 °

Zonal Flux Diagram

T	C0	C45	C90	C135	C180
10	1103	1098	1108	1136	1149
20	707.5	695.1	709.7	754.8	784.6
30	235.5	250.8	252.5	286.5	288.0
40	28.5	34.08	34.15	43.27	43.93
50	4.399	4.663	4.221	4.627	4.103
60	3.207	3.187	3.495	3.034	3.023
70	1.180	1.284	1.499	1.207	1.123
80	0.1182	0.1257	0.3123	0.0988	0.0806
90	0	0	0	0	0
100	0	0.0317	0	0.0137	0
110	0.2477	0.2844	0.2788	0.2483	0.0813
120	0.8568	0.9700	0.9235	0.8664	0.3527
130	1.926	2.035	2.005	1.900	1.112
140	3.240	3.329	3.313	3.208	2.277
150	4.387	4.428	4.405	4.366	3.568
160	4.907	4.838	4.888	4.897	4.398
170	4.840	4.838	4.906	4.893	4.695
180	4.930	4.919	4.942	4.988	4.903
DEG	LUMINOUS INTENSITY:cd				

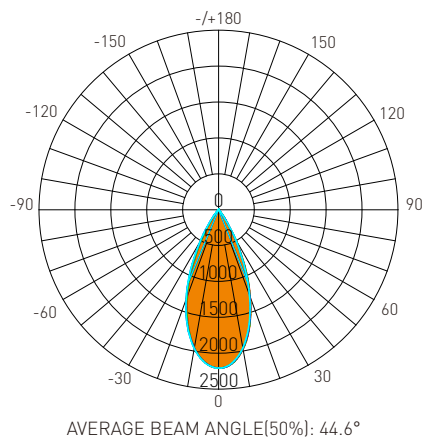
Zonal Lumens

T	φ total
0-10	113.9
10-20	377.2
20-30	605.2
30-40	683.9
40-50	696.3
50-60	699.7
60-70	702.0
70-80	702.8
80-90	702.9
90-100	702.9
100-110	703.0
110-120	703.3
120-130	704.2
130-140	705.9
140-150	708.0
150-160	710.0
160-170	711.4
170-180	711.8
DEG	UNIT: lm

Luminance cd/(m2)

G(DEG)	C0/180	C90/270
85	155	312
80	340	899
75	1118	1658
70	1723	2191
65	2260	2944
60	3204	3496
55	3327	3276
50	3418	3284
45	5071	6881

2" / 19W / 3000K / 50°



Lumens: 1237.0 Lm
Watts: 19 W
LPW: 65.82 Lm/W
CCT: 3000K

UNIT:cd
— C0/180,44.3 °
— C30/210,44.5 °
— C60/240,44.8 °
— C90/270,44.7 °

Zonal Flux Diagram

T	C0	C45	C90	C135	C180
10	1973	1972	1952	1948	1952
20	1295	1292	1262	1259	1273
30	454.7	484.9	459.1	464.1	449.4
40	60.28	64.92	61.47	67.22	63.69
50	7.343	8.124	8.805	8.116	7.210
60	5.462	5.451	5.651	5.051	5.292
70	1.999	2.358	2.952	2.111	2.061
80	0.2626	0.3539	0.7171	0.2805	0.2248
90	0.0181	0.0001	0.0274	0.0045	0.0134
100	0.0309	0.0813	0.0679	0.0911	0.0310
110	0.4508	0.4770	0.5197	0.5186	0.1994
120	1.442	1.556	1.651	1.651	0.7404
130	3.252	3.373	3.483	3.523	2.136
140	5.523	5.647	5.773	5.759	4.222
150	7.578	7.651	7.708	7.730	6.400
160	8.554	8.500	8.538	8.578	7.882
170	8.506	8.495	8.547	8.524	8.222
180	8.572	8.652	8.629	8.669	8.612
DEG	LUMINOUS INTENSITY:cd				

Zonal Lumens

T	φ total
0-10	198.8
10-20	656.9
20-30	1051
30-40	1188
40-50	1209
50-60	1215
60-70	1219
70-80	1221
80-90	1221
90-100	1221
100-110	1221
110-120	1222
120-130	1224
130-140	1227
140-150	1230
150-160	1234
160-170	1236
170-180	1237
DEG	UNIT: lm

Luminance cd/(m2)

G(DEG)	C0/180	C90/270
85	543	1194
80	770	2057
75	2008	3150
70	2977	4299
65	3928	5259
60	5564	5630
55	5734	5537
50	5819	6823
45	9832	16062