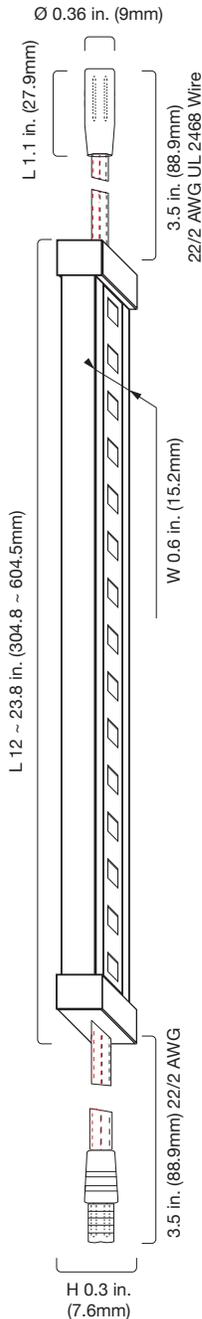


CASCADE® LED LIGHT BAR

SPECIFICATION SHEET

- High brightness
- Outdoor / wet location
- ETL Listed
- 3-Year limited warranty



SPECIFICATIONS

Input Voltage: 12VDC Constant Voltage
Power Consumption: See chart below
LED Chip Type: Epistar 5050 SMD
LED Chip Beam Angle: 120°
Mounting: 2 stainless steel mounting clips mounting screws included
Connections¹: 3.5 in. female wet location plug, 3.5 in. male wet location plug opposing end. Plug: 9mm Dia. 22/2 AWG UL 2468 wire
Dimmable: Yes

Ambient Temp²: -4 ~ 122°F (-20 ~ 50°C)
Operating Temp³: -4 ~ 176°F (-20 ~ 80°C)
Environment⁴: Outdoor / Wet location / IP68
Dimensions: 0.6 x 0.3 in. (W x H) (H = 0.5 in. with mounting clips)
Certifications: ETL Listed: 4001928. Conforms to ANSI/UL Std 2108. Certified to CAN/CSA Std C22.2 No. 250.0-08.
Included Items: 2 mounting clips, 2 mounting screws, 1 wet location splice connector pair

CASCADE - 70 CRI FIXTURES

Item #	Power Consumption	Max. Wattage Per Bar ⁵	CCT (Kelvin) ⁶	Lumens ⁷	Efficacy (lm/W) ⁸
DI-0220 (12 in.)	3.6W / 300mA	21.6W	3000K	387	107
DI-0221 (12 in.)	3.6W / 300mA	21.6W	6300K	381	105
DI-0222 (23.8 in.)	7.2W / 600mA	21.6W	3000K	767	106
DI-0223 (23.8 in.)	7.2W / 600mA	21.6W	6300K	730	101

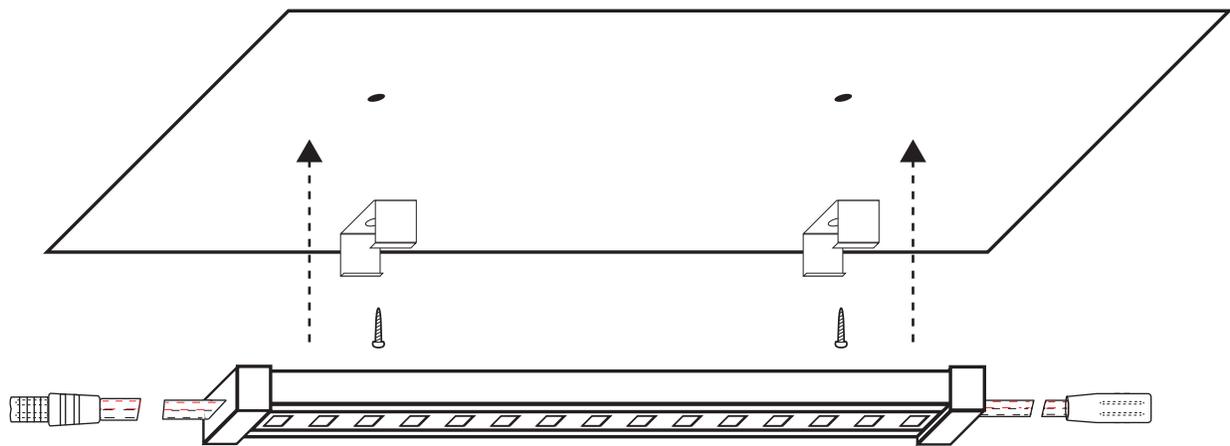
CASCADE 2 - 80 CRI FIXTURES

Item #	Power Consumption	Max. Wattage Per Bar ⁵	CCT (Kelvin) ⁶	Lumens ⁷	Efficacy (lm/W) ⁸
DI-12V-CS230-8001	3.6W / 300mA	21.6W	3000K	295	81
DI-12V-CS263-8001	3.6W / 300mA	21.6W	6300K	328	91
DI-12V-CS230-8002	7.2W / 600mA	21.6W	3000K	584	81
DI-12V-CS263-8002	7.2W / 600mA	21.6W	6300K	655	90

- Note¹** Attached connectors and connector accessories are not rated for in-wall installation unless otherwise noted. Attached connections are field cuttable.
- Note²** Do not install product in an environment outside the listed ambient temperature. Exceeding the maximum ambient temperature may damage LED chips, reduce the total lamp life, lumen output, and/or adversely impact color consistency.
- Note³** Operating temperature is measured according to the minimum and maximum ambient temperature environment.
- Note⁴** Do not install near or around chlorinated/treated water. This product is not rated as submersible. Do not install in location where water may pool or collect. Do not install in location where LED chips are exposed to direct sunlight as damage to the phosphor will occur.
- Note⁵** Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run wattage.
- Note⁶** Epistar 5050 SMD Chip binning ranges: (3000K 70 CRI: 2975K-3100K), (6300K 70 CRI: 6000-6500K).
- Note⁷** Lumen value measured in accordance to IES LM-79-08. LED chips have a luminous flux range with a tolerance of +/- 5%.
- Note⁸** Actual efficacy value is dependent to specified LED driver (power supply). An estimated efficacy value has been provided and calculated as follows: Lumen value (measured in accordance to IES LM-79-08) divided by average power consumption per fixture.

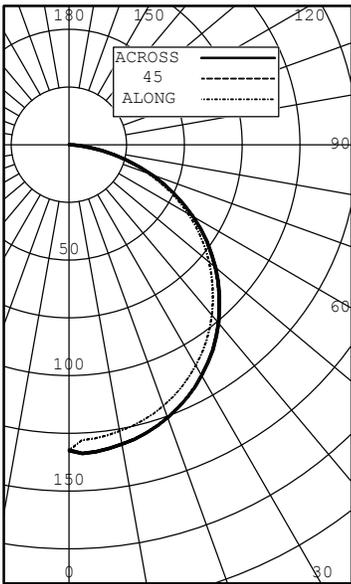
Item #:	Project:
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MOUNTING



CASCADE 12 in. 3000K
DI-0220

POLAR CANDELA DISTRIBUTION GRAPH



INTENSITY (CANDLEPOWER) SUMMARY

ANGLE	ALONG	22.5	45	67.5	ACROSS
0	132	132	132	132	132
5	128	132	133	133	134
10	126	130	132	131	132
15	124	128	129	128	129
20	120	124	125	125	126
25	116	119	121	120	121
30	110	114	115	114	115
35	104	107	108	108	109
40	96	100	100	100	101
45	88	91	92	91	92
50	79	82	82	82	83
55	70	72	72	72	73
60	59	62	62	62	62
65	48	50	50	50	50
70	37	38	38	38	39
75	24	25	26	26	26
80	13	13	14	14	15
85	5	5	5	5	5
90	0	0	0	0	0

ZONAL LUMENS AND PERCENTAGES

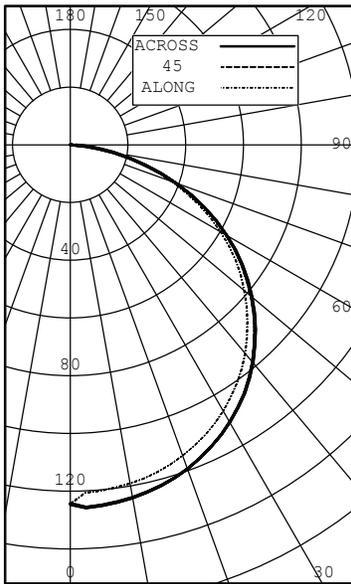
ZONE	LUMENS	% LUMINAIRE
0-30	104	26.79
0-40	171	44.09
0-60	305	78.76
0-90	387	100.00
40-90	217	55.91
60-90	82	21.24
90-180	0	0.00
0-180	387	100.00

Cone Of Light Tabulation

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	8.30	5.10
6.00	3.69	7.66
8.00	2.07	10.2
10.0	1.33	12.8
12.0	0.922	15.3
14.0	0.677	17.9
16.0	0.519	20.4

CASCADE 12 in. 6300K
DI-0221

POLAR CANDELA DISTRIBUTION GRAPH



INTENSITY (CANDLEPOWER) SUMMARY

ANGLE	ALONG	22.5	45	67.5	ACROSS
0	124	124	124	124	124
5	120	124	125	125	125
10	119	123	124	123	124
15	117	121	122	121	122
20	114	118	119	119	119
25	111	114	115	115	115
30	106	110	111	110	111
35	101	104	105	104	105
40	94	97	98	98	98
45	87	90	90	90	91
50	79	81	82	82	82
55	70	72	72	72	73
60	60	62	62	62	62
65	49	51	51	51	51
70	38	39	39	39	39
75	25	26	26	27	27
80	14	14	15	15	15
85	5	5	5	5	5
90	0	0	0	0	0

ZONAL LUMENS AND PERCENTAGES

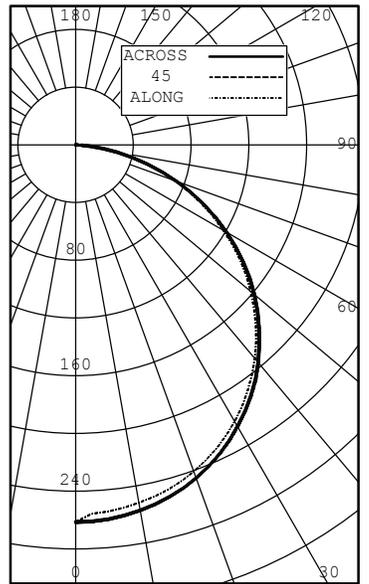
ZONE	LUMENS	% LUMINAIRE
0-30	99	25.93
0-40	164	42.98
0-60	297	77.92
0-90	381	100.00
40-90	217	57.02
60-90	84	22.08
90-180	0	0.00
0-180	381	100.00

Cone Of Light Tabulation

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	7.80	5.22
6.00	3.47	7.84
8.00	1.95	10.4
10.0	1.25	13.1
12.0	0.867	15.7
14.0	0.637	18.3
16.0	0.488	20.9

CASCADE 23.8 in. 3000K
DI-0222

POLAR CANDELA DISTRIBUTION GRAPH



INTENSITY (CANDLEPOWER) SUMMARY

ANGLE	ALONG	22.5	45	67.5	ACROSS
0	261	261	261	261	261
5	255	264	261	261	260
10	252	261	258	258	257
15	247	256	253	253	252
20	241	249	246	246	245
25	232	239	237	237	236
30	221	228	226	225	225
35	208	215	212	212	212
40	193	200	197	197	197
45	176	183	180	180	180
50	158	164	162	162	162
55	139	144	142	142	142
60	118	122	121	121	121
65	96	100	98	98	98
70	73	76	75	75	75
75	50	51	51	51	52
80	27	28	28	29	29
85	9	10	10	10	10
90	0	0	0	0	0

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	205	26.78
0-40	338	44.07
0-60	603	78.70
0-90	767	100.00
40-90	429	55.93
60-90	163	21.30
90-180	0	0.00
0-180	767	100.00

Cone Of Light Tabulation

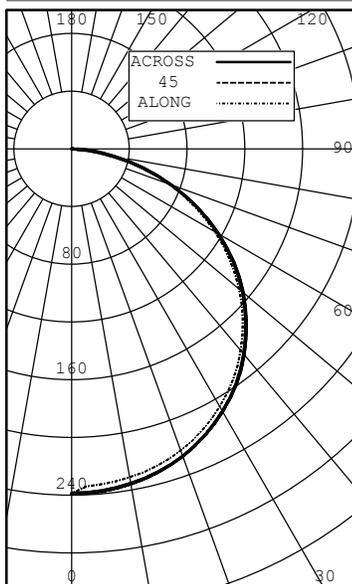
Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	16.4	5.11
6.00	7.29	7.67
8.00	4.10	10.2
10.0	2.63	12.8
12.0	1.82	15.3
14.0	1.34	17.9
16.0	1.03	20.4

* Photometric data complies with LM-79-08, ANSI C82.77-02.

CASCADE 23.8 in. 6300K

DI-0223

POLAR CANDELA DISTRIBUTION GRAPH



INTENSITY (CANDLEPOWER) SUMMARY

ANGLE	ALONG	22.5	45	67.5	ACROSS
0	239	239	239	239	239
5	234	241	239	239	238
10	231	239	236	236	236
15	228	235	233	233	232
20	222	229	227	227	226
25	215	222	219	220	219
30	206	212	210	210	210
35	195	201	199	199	199
40	182	188	186	186	186
45	168	173	171	171	171
50	151	157	155	155	155
55	134	139	137	137	137
60	114	119	118	118	117
65	94	97	97	97	96
70	72	75	74	75	74
75	50	51	51	52	52
80	28	29	29	30	30
85	10	11	11	11	11
90	0	0	0	0	0

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	190	25.95
0-40	314	42.98
0-60	568	77.77
0-90	730	100.00
40-90	416	57.02
60-90	162	22.23
90-180	0	0.00
0-180	730	100.00

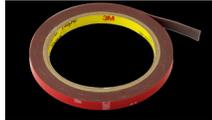
Cone Of Light Tabulation

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	15.0	5.22
6.00	6.66	7.82
8.00	3.74	10.4
10.0	2.40	13.0
12.0	1.66	15.6
14.0	1.22	18.3
16.0	0.936	20.9

* Photometric data complies with LM-79-08, ANSI C82.77-02.

ACCESSORIES

CASCADE LED Light Bars feature 9mm wet location plugs. These plugs are compatible with the following 9mm accessories. All fixture accessories including Wet Location Connections, etc. have a Class 2 amperage rating unless otherwise noted (60W/5A @ 12V DC; 100W/4.17A @ 24V DC).

Item #	Type	Description	Image
DI-0710-M-** (Male) DI-0710-F-** (Female)	Wet Location Plug (9mm) to DC Connector	Attaches a wet location plug to a male DC accessory or plug-in adapter (not rated for wet location environments). Gender specification applies to the wet location connection only. Wire: 20/2 AWG. Dimensions: 7 x 0.3 in. (L x W)	
DI-0725-**	Wet Location Solder Connector Pair (9mm Plugs)	Converts a wet location plug to a hard-wired connection (1x male & 1x female wet location plug). Wire: 22/2 AWG. Dimensions: 4.5 x 0.3 in. (L x W)	
DI-0757-** (6 in.) DI-0758-** (12 in.) DI-0759-** (24 in.) DI-0709-** (39 in.) DI-0810-** (16 ft.)	Wet Location Extension Cable (9mm Plugs)	Creates an extension between wet location plugs. Wire: 22/2 AWG. Connector width: 0.3 in.	
DI-0804-** (2-way) DI-0805-** (3-way) DI-0806-** (5-way)	Wet Location Splitter Cable (9mm Plugs)	Splits a connection for wet location accessories. Wire: 22/2 AWG. Dimensions: 8.5 x 0.6 x 0.3 in. (L x W x H) Connector width: 0.3 in.	
DI-0752-**	CASCADE Light Bar Mounting Clips	Mounts CASCADE™ Light Bars. 1 screw included per clip. 0.6 x 0.5 x 0.4 in. (L x W x H)	
DI-1740 (9.5 ft.) DI-0775-S (100 ft.)	3M™ Adhesive Tape	3M™ 4229 adhesive tape for indoor and outdoor installation of wet location LED fixtures.	

** Products available in 10x(CASCADE Light Bar Mounting Clips only), 25x, and 50x pack bulk quantities. Add -10(CASCADE Light Bar Mounting Clips only), -25, or -50 to each product # for bulk quantities.

SWITCHES, CONTROLS, LED DRIVERS, & SYSTEM DIAGRAMS

We offer a variety of switches, controls, and LED drivers (power supplies) to address all common light installations. For additional information, please see the additional component sections of our website or catalog. For additional questions and concerns please contact technical support.

ADDITIONAL RESOURCES

Visit the on line product page at www.DiodeLED.com for additional resources including:

- **Voltage Drop Charts**

Use to specify appropriate wire gauge for installation. Available at the 'Tools & Resources' page at www.DiodeLED.com.

SAFETY & DISCLOSURES

- Install in accordance with the national and local electrical code regulations.
- This product is intended to be installed and serviced by a qualified, licensed electrician.
- This product must be powered with a compatible Class 2 DC constant voltage LED driver (power supply).
- Do not connect directly to high voltage or AC power.
- Do not install near or around chlorinated/treated water. This product is not rated as submersible. Do not install in location where water may pool or collect.
- Do not install in location where LED chips are exposed to direct sunlight as damage to the phosphor will occur.
- It is generally recommended to load the driver no more than 80% the labeled rating for maximum performance and longevity. However, see each driver specification sheet for exact minimum and maximum loading values.
- Do not install product in an environment outside the listed ambient temperature. Ensure adequate airflow and heatsinking is considered when mounting/installing.
- Operating temperature is measured according to the minimum and maximum ambient temperature environment. Exceeding the maximum operating temperature may damage the controller or fixture.
- Ensure applicable wire is installed between driver, fixture, and any controls in-between. When choosing wire, factor in voltage drop, amperage rating, and type (in-wall rated, wet location rated, etc.). Inadequate wire installation could overheat wires, and cause fire.
- 'Voltage drop' is a gradual decrease in voltage along a conductor through which current is flowing. When specifying an LED system, ensure to calculate voltage drop appropriately. Voltage drop calculators will suggest the proper gauge wire and distance to install the driver from the fixture.
- Attached wire leads, and additional extension cables, connectors, etc., are not rated for in-wall installation unless otherwise noted.
- All fixture accessories including wet location connectors, DC connections, etc. have a Class 2 amperage rating unless otherwise noted (60W/5A @ 12V DC; 100W/4.17A @ 24V DC).
- Do not modify or disassemble this product beyond instructions or the warranty will be void. Attached connections are field cuttable and will not void warranty if modified.
- Actual color may vary from what is pictured on this sheet and other print materials due to the limitations of photographic processes.
- We reserve the right to modify and improve the design of our fixtures without prior notice. We cannot guarantee to match existing installed fixtures for subsequent orders or replacements in regards to product appearance, CCT, or lumen output.

WARRANTY INFORMATION

Limited Warranty

This LED fixture has a three (3) year limited warranty from the date of shipment. This warranty does not include the additional accessories referenced in this specification sheet. Complete warranty details for fixtures and additional accessories are available at www.DiodeLED.com under the 'Tools & Resources' tab. For warranty related questions, please contact customer service.

Consumer's Acknowledgment

Diode LED stands behind its products when they are used properly and according to our specifications. By purchasing our products, the purchaser agrees and acknowledges that lighting design, configuration and installation is a complex process, wherein seemingly minor factors or changes in layout and in-field adjustments can have a significant impact on an entire system. Choosing the right components is essential. Diode LED is able to work with the original purchaser to make an appropriate product selection to the extent of the limited information that the customer can provide, but it is virtually impossible for Diode LED to design a system that foresees every unknown factor. For this reason, this Warranty does not cover problems caused by improper design, configuration or installation issues. Any statement from a Diode LED employee or agent regarding a customer's bill of goods and/or purchase order is NOT an acknowledgment that the products purchased are designed and configured correctly. The purchaser agrees and acknowledges that it is the customer's responsibility to adhere strictly to all information contained in the Product Specification Sheets.

There is often more than one way to design, configure and layout an LED lighting application properly to achieve the same lighting effect. Diode LED strongly recommends that licensed professionals be used in the design and installation of lighting systems that include Diode LED products. The specifications include important information that a designer and installer should carefully review and strictly follow. Qualified designers and certified and/or licensed installers, with access to the final installation environment, customer goals, and Diode LED product specifications can make the requisite decisions appropriate for a successful finished lighting application.



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