



UL Verification Services Inc.  
7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300

## Photometric Indoor Test Report

Relevant Standards  
IES LM-79-2008  
ANSI C82.77-2002

Prepared For  
Elemental LED Inc, DBA Diode LED  
Wes Buck  
Suite 211, 1195 Park Ave.  
Emeryville, CA 94608  
United States

Catalog Number  
CASCADE™ 12V Light Bar DI-0223  
Project Number  
10461972  
Test Number  
748174

Test Date

2014-09-18

Prepared By

Handwritten signature of Javier Caban in black ink.

Javier Caban, Technician

Approved By

Handwritten signature of Eric M. Gaudreau in black ink.

Eric Gaudreau, Engineering Project Handler

The results contained in this report pertain only to the tested sample.  
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Luminaire Description: Grey aluminum housing, no enclosure  
Catalog Number: CASCADE™ 12V Light Bar DI-0223  
Lamp: 30 white LEDs  
Mounting: Surface  
Ballast/Driver: One Meanwell LPV-60-12

Luminaire

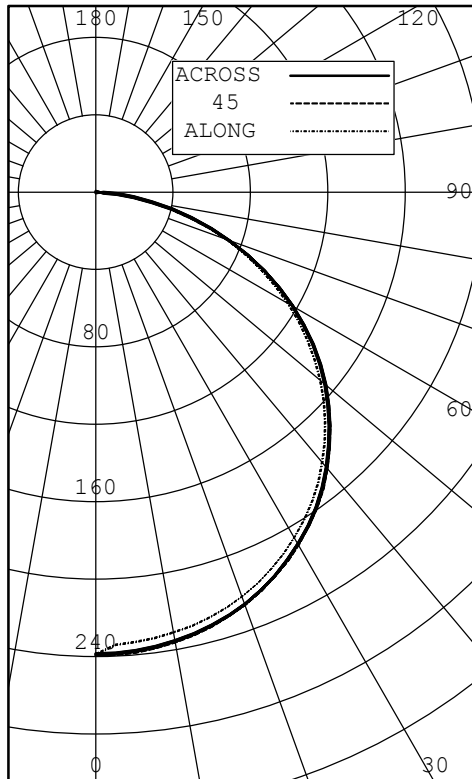


Test Conditions

Test Temperature:	24.7 °C
Voltage:	120.0 VAC
Current:	0.1595 A
Power:	9.174 W
Power Factor:	0.479
Frequency:	60 Hz
Current THD:	175 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	239	239	239	239	239	
5	234	241	239	239	238	23
10	231	239	236	236	236	
15	228	235	233	233	232	66
20	222	229	227	227	226	
25	215	222	219	220	219	101
30	206	212	210	210	210	
35	195	201	199	199	199	124
40	182	188	186	186	186	
45	168	173	171	171	171	132
50	151	157	155	155	155	
55	134	139	137	137	137	122
60	114	119	118	118	117	
65	94	97	97	97	96	95
70	72	75	74	75	74	
75	50	51	51	52	52	54
80	28	29	29	30	30	
85	10	11	11	11	11	13
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

EFFICACY (LUMENS PER WATT): 79.4

\*\*\* THIS IS AN ABSOLUTE TEST \*\*\*

LUMINOUS LENGTH: 23.130 INS  
 WIDTH: 0.500 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3  
 SC: 1.3

ANGLE	ALONG	45	ACROSS
45	31757	32592	32497
55	31229	32181	32111
65	29699	30742	30640
75	25632	26519	26770
85	15762	17036	17520

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY (CANDLEPOWER) DATA  
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	239	239	239	239	239	239	
2.5	234	242	239	239	239	239	
5.0	234	241	239	239	238	239	23
7.5	233	240	238	238	237	238	
10.0	231	239	236	236	236	236	
12.5	230	237	235	235	234	235	
15.0	228	235	233	233	232	232	66
17.5	225	232	230	230	229	230	
20.0	222	229	227	227	226	227	
22.5	219	225	223	223	223	223	
25.0	215	222	219	220	219	219	101
27.5	211	217	215	215	214	215	
30.0	206	212	210	210	210	210	
32.5	201	207	205	205	204	205	
35.0	195	201	199	199	199	199	124
37.5	189	195	193	193	193	193	
40.0	182	188	186	186	186	186	
42.5	175	181	179	179	178	179	
45.0	168	173	171	171	171	171	132
47.5	160	165	163	163	163	163	
50.0	151	157	155	155	155	155	
52.5	143	148	146	146	146	146	
55.0	134	139	137	137	137	137	122
57.5	124	129	128	128	127	127	
60.0	114	119	118	118	117	117	
62.5	104	108	107	107	107	107	
65.0	94	97	97	97	96	96	95
67.5	83	86	86	86	85	85	
70.0	72	75	74	75	74	74	
72.5	61	63	63	63	63	63	
75.0	50	51	51	52	52	51	54
77.5	39	40	40	41	40	40	
80.0	28	29	29	30	30	29	
82.5	18	19	19	20	20	19	
85.0	10	11	11	11	11	11	13
87.5	4	4	4	4	4	4	
90.0	0	0	0	0	0	0	



COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	90				80				70				50				30				10				0	
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR	0	1.221	.221	.221	.22	1.191	.191	.191	.19	1.161	.161	.161	.16	1.111	.111	.111	.11	1.061	.061	.061	.06	1.021	.021	.021	.02	1.00
	1	1.121	.071	.030	.99	1.091	.051	.010	.97	1.071	.030	.990	.95	0.980	.950	.92	0.940	.920	.90	0.910	.890	.87	0.85			
	2	1.020	.940	.880	.81	1.000	.920	.860	.80	0.980	.900	.840	.79	0.870	.820	.78	0.840	.800	.76	0.810	.770	.74	0.72			
	3	0.940	.830	.740	.68	0.910	.810	.730	.67	0.890	.800	.720	.67	0.770	.710	.65	0.740	.690	.64	0.720	.670	.63	0.61			
	4	0.860	.740	.650	.58	0.840	.730	.640	.58	0.820	.710	.640	.57	0.690	.620	.57	0.670	.610	.56	0.640	.590	.55	0.53			
	5	0.800	.660	.570	.50	0.770	.650	.560	.49	0.750	.640	.550	.49	0.610	.540	.49	0.590	.530	.48	0.580	.520	.48	0.46			
	6	0.730	.590	.500	.43	0.710	.580	.490	.43	0.690	.570	.480	.42	0.550	.480	.42	0.530	.470	.42	0.520	.460	.41	0.39			
	7	0.670	.520	.430	.38	0.650	.520	.430	.37	0.640	.510	.430	.37	0.490	.420	.36	0.480	.410	.36	0.470	.400	.36	0.34			
	8	0.620	.470	.390	.33	0.600	.470	.380	.32	0.590	.460	.380	.32	0.450	.370	.32	0.430	.370	.32	0.420	.360	.32	0.30			
	9	0.570	.430	.340	.28	0.560	.430	.340	.28	0.540	.420	.340	.28	0.410	.330	.28	0.400	.330	.28	0.380	.320	.28	0.26			
	10	0.530	.390	.300	.25	0.520	.390	.300	.25	0.510	.380	.300	.25	0.370	.300	.25	0.360	.290	.25	0.350	.290	.25	0.23			

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS  
 BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.  
 LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD  
 THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.  
 BALLAST AND FIELD FACTORS HAVE NOT BEEN APPLIED.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST  
 LUMINOUS OPENING OF LUMINAIRE.



## Cone of Light

**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

**Cone of Light Plot**

