



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
Broadwave™ LED Wall Washer DI-BRW-6045-18
Project Number
10458922
Test Number
738577

Test Date

2014-09-02

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.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.



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

Luminaire Description: Aluminum housing, glass lens enclosure
Catalog Number: Broadwave™ LED Wall Washer DI-BRW-6045-18
Lamp: 12 white LEDs, with frosted plastic optics below each
Mounting: Pendant
Ballast/Driver: LED power supply

Luminaire

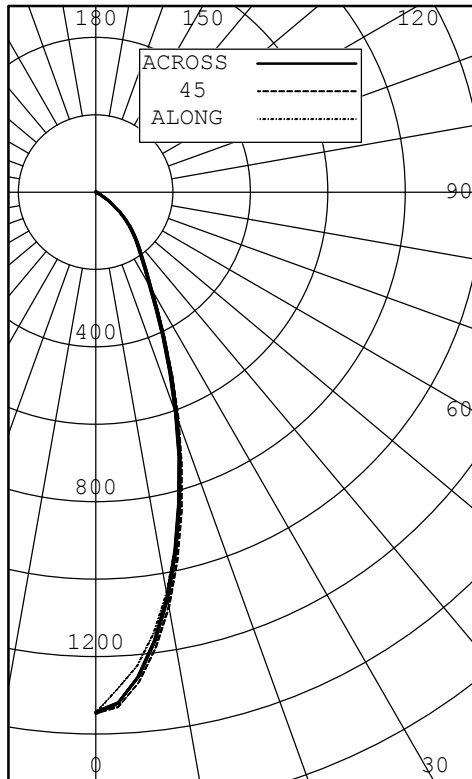


Test Conditions

Test Temperature:	25.3 °C
Voltage:	120.0 VAC
Current:	0.3966 A
Power:	24.43 W
Power Factor:	0.513
Frequency:	60 Hz
Current THD:	163 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	1345	1345	1345	1345	1345	
5	1228	1273	1271	1273	1257	116
10	1053	1092	1087	1081	1065	
15	834	863	855	849	832	233
20	615	633	622	617	606	
25	422	432	423	419	413	196
30	286	294	287	284	283	
35	209	214	210	208	209	134
40	162	164	163	162	163	
45	122	122	124	123	123	94
50	80	79	82	81	81	
55	44	43	45	45	45	41
60	22	22	23	22	22	
65	11	11	11	11	11	12
70	5	5	5	5	5	
75	2	2	2	2	2	2
80	0	0	0	0	0	
85	0	0	0	0	0	0
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	544	65.83
0-40	678	81.98
0-60	813	98.31
0-90	827	100.00
40-90	149	18.02
60-90	14	1.69
90-180	0	0.00
0-180	827	100.00

EFFICACY (LUMENS PER WATT): 33.9

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 1.875 INS
 WIDTH: 15.500 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 0.6
 SC: 0.6

ANGLE	ALONG	45	ACROSS
45	9194	9369	9346
55	4072	4200	4172
65	1369	1399	1387
75	391	381	372
85	0	0	0

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	1345	1345	1345	1345	1345	1345	
2.5	1285	1333	1332	1336	1322	1326	
5.0	1228	1273	1271	1273	1257	1265	116
7.5	1148	1191	1187	1184	1169	1180	
10.0	1053	1092	1087	1081	1065	1080	
12.5	946	981	974	968	951	968	
15.0	834	863	855	849	832	850	233
17.5	723	745	736	731	718	733	
20.0	615	633	622	617	606	621	
22.5	512	526	515	511	503	515	
25.0	422	432	423	419	413	423	196
27.5	346	354	347	344	340	347	
30.0	286	294	287	284	283	287	
32.5	242	248	243	241	241	243	
35.0	209	214	210	208	209	210	134
37.5	183	187	184	183	184	184	
40.0	162	164	163	162	163	163	
42.5	142	143	144	142	143	143	
45.0	122	122	124	123	123	123	94
47.5	101	100	103	102	103	102	
50.0	80	79	82	81	81	80	
52.5	60	59	62	61	62	61	
55.0	44	43	45	45	45	44	41
57.5	31	31	32	32	32	31	
60.0	22	22	23	22	22	22	
62.5	16	15	16	16	16	16	
65.0	11	11	11	11	11	11	12
67.5	8	8	8	8	8	8	
70.0	5	5	5	5	5	5	
72.5	3	3	3	3	3	3	
75.0	2	2	2	2	2	2	2
77.5	1	1	1	1	1	1	
80.0	0	0	0	0	0	0	
82.5	0	0	0	0	0	0	
85.0	0	0	0	0	0	0	0
87.5	0	0	0	0	0	0	
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	.06	1.021	.021	.02	1.00	
	1	1.161	.131	.111	.09	1.141	.111	.091	.07	1.121	.101	.071	.05	1.051	.041	.02	1.021	.000	.99	0.980	.970	.96	0.95		
	2	1.111	.071	.030	.99	1.091	.051	.010	.98	1.071	.031	.000	.97	1.000	.970	.95	0.970	.950	.93	0.940	.920	.91	0.89		
	3	1.061	.000	.950	.91	1.040	.980	.940	.90	1.020	.970	.930	.90	0.950	.910	.88	0.920	.900	.87	0.900	.880	.86	0.84		
	4	1.010	.940	.890	.85	1.000	.930	.880	.84	0.980	.920	.880	.84	0.900	.860	.83	0.880	.840	.82	0.860	.830	.81	0.80		
	5	0.970	.890	.830	.79	0.950	.880	.820	.78	0.930	.870	.820	.78	0.850	.810	.77	0.830	.800	.77	0.820	.790	.76	0.75		
	6	0.930	.840	.780	.74	0.910	.830	.780	.74	0.900	.820	.770	.73	0.810	.760	.73	0.790	.750	.72	0.780	.750	.72	0.71		
	7	0.880	.790	.730	.70	0.870	.780	.730	.69	0.860	.780	.730	.69	0.760	.720	.68	0.750	.710	.68	0.740	.700	.68	0.66		
	8	0.840	.750	.690	.65	0.830	.740	.690	.65	0.820	.730	.680	.65	0.720	.680	.64	0.720	.670	.64	0.710	.670	.64	0.63		
	9	0.800	.710	.650	.61	0.790	.700	.650	.61	0.780	.700	.650	.61	0.690	.640	.61	0.680	.640	.60	0.670	.630	.60	0.59		
	10	0.770	.670	.610	.58	0.760	.670	.610	.58	0.750	.660	.610	.58	0.650	.610	.57	0.650	.600	.57	0.640	.600	.57	0.56		

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	84.6	2.41
6.00	37.6	3.61
8.00	21.2	4.81
10.0	13.5	6.01
12.0	9.40	7.22
14.0	6.91	8.42
16.0	5.29	9.62

Cone of Light Plot

