



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-RGB45-18
Project Number
10459969
Test Number
741501

Test Date

2014-09-03

Prepared By

A handwritten signature in black ink that reads "Javier Caban".

Javier Caban, Technician

Approved By

A handwritten signature in black ink that reads "Eric M. Gaudreau".

Eric Gaudreau, Engineering Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Aluminum housing, glass lens enclosure
Catalog Number: BROADWAVE™ LED Wall Washer DI-BRW-RGB45-18
Lamp: 12 white LEDs, with frosted plastic optics below each
Mounting: Pendant
Ballast/Driver: LED power supply

Luminaire

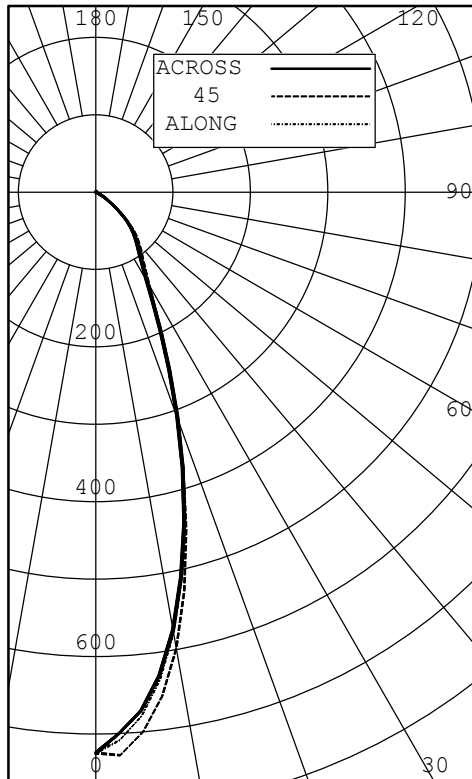


Test Conditions

Test Temperature:	25.4 °C
Voltage:	120.0 VAC
Current:	0.4002 A
Power:	24.47 W
Power Factor:	0.509
Frequency:	60 Hz
Current THD:	164 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	725	725	725	725	725	
5	680	687	700	694	673	63
10	578	585	599	595	574	
15	441	445	451	451	441	122
20	304	306	308	309	308	
25	194	197	201	199	198	93
30	133	133	138	133	131	
35	103	103	107	101	100	65
40	84	84	88	83	81	
45	67	65	70	66	64	50
50	45	43	47	45	43	
55	25	24	26	25	23	23
60	12	12	12	12	11	
65	6	6	6	6	5	6
70	3	2	2	2	2	
75	1	1	1	1	1	1
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	278	65.63
0-40	343	81.07
0-60	416	98.36
0-90	423	100.00
40-90	80	18.93
60-90	7	1.64
90-180	0	0.00
0-180	423	100.00

EFFICACY (LUMENS PER WATT): 17.3

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 2.500 INS
 WIDTH: 15.500 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 0.6
 SC: 0.6

ANGLE	ALONG	45	ACROSS
45	3767	3949	3608
55	1736	1788	1641
65	544	546	503
75	115	108	85
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	725	725	725	725	725	725	
2.5	709	716	728	722	700	718	
5.0	680	687	700	694	673	690	63
7.5	635	643	657	652	630	646	
10.0	578	585	599	595	574	589	
12.5	512	517	528	526	509	520	
15.0	441	445	451	451	441	447	122
17.5	371	373	376	378	373	375	
20.0	304	306	308	309	308	307	
22.5	244	246	250	249	249	248	
25.0	194	197	201	199	198	198	93
27.5	158	160	164	160	159	160	
30.0	133	133	138	133	131	134	
32.5	115	116	120	114	113	116	
35.0	103	103	107	101	100	103	65
37.5	93	93	97	91	89	93	
40.0	84	84	88	83	81	84	
42.5	76	75	79	75	73	76	
45.0	67	65	70	66	64	66	50
47.5	56	54	59	56	53	56	
50.0	45	43	47	45	43	45	
52.5	34	33	35	34	32	34	
55.0	25	24	26	25	23	25	23
57.5	18	17	18	17	16	17	
60.0	12	12	12	12	11	12	
62.5	8	8	8	8	8	8	
65.0	6	6	6	6	5	6	6
67.5	4	4	4	4	4	4	
70.0	3	2	2	2	2	2	
72.5	2	1	1	1	1	1	
75.0	1	1	1	1	1	1	1
77.5	0	0	0	0	0	0	
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	.061	.06	1.021	.021	.021	.02	1.00
	1	1.161	.131	.111	.09	1.141	.111	.091	.07	1.121	.091	.071	.05	1.051	.031	.021	.02	1.011	.000	.99	0.980	.970	.96	0.94		
	2	1.111	.061	.030	.99	1.091	.051	.010	.98	1.071	.030	.990	.97	0.990	.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	.890	.87	0.900	.880	.86	0.84			
	4	1.010	.940	.880	.85	1.000	.930	.880	.84	0.980	.920	.870	.83	0.900	.860	.83	0.880	.840	.82	0.860	.830	.81	0.79			
	5	0.970	.890	.830	.79	0.950	.880	.820	.78	0.930	.870	.820	.78	0.850	.810	.77	0.830	.790	.77	0.820	.790	.76	0.75			
	6	0.930	.840	.780	.74	0.910	.830	.770	.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	0.850	.780	.720	.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	0.710	.670	.64	0.700	.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	.58	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	45.5	2.33
6.00	20.2	3.49
8.00	11.4	4.65
10.0	7.28	5.82
12.0	5.05	6.98
14.0	3.71	8.14
16.0	2.84	9.31

Cone of Light Plot

