



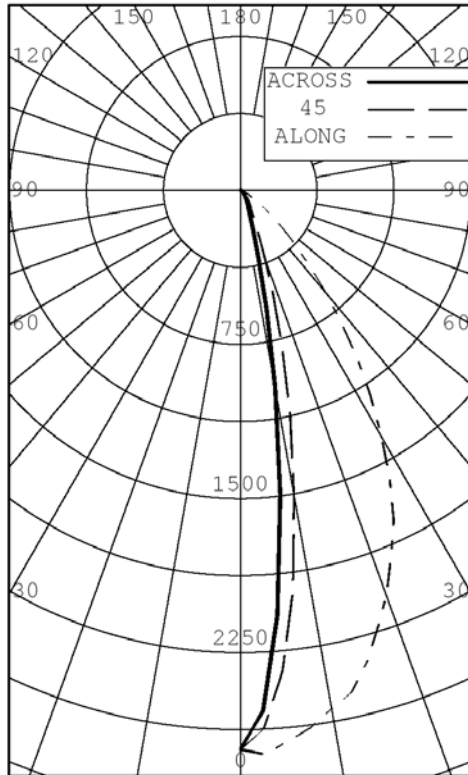
# Lighting Sciences

www.lightingsciences.com

Lighting Sciences Inc.  
7826 E. Evans Road  
Scottsdale, Arizona 85260 USA  
Tel: 480-991-9260 • Fax: 480-991-0375

CERTIFIED TEST REPORT No. 26885

DDP - 2' LED WALL WASH LUMINAIRE, CAT# WG-24-2N-AF-3E-10-17WF-27K  
WITH DIFFUSE FLAT PLASTIC LENS  
24 LEDS. LUMINAIRE OUTPUT = 984 LMS.  
LUMINAIRE OPERATING AT 24 VDC AND 33.9 WATTS



INTENSITY (CANDLEPOWER) SUMMARY						OUTPUT LUMENS
ANGLE	ALONG	22.5	45	67.5	ACROSS	
0	2722	2722	2722	2722	2722	
5	2691	2569	2349	2124	2076	203
10	2564	2183	1508	1095	975	
15	2378	1645	782	426	339	294
20	2089	1098	350	172	146	
25	1770	684	169	102	92	217
30	1375	386	104	75	67	
35	993	214	76	56	50	137
40	651	126	61	43	37	
45	396	82	47	30	26	73
50	222	59	35	23	18	
55	122	44	26	15	13	36
60	69	33	20	12	11	
65	40	23	14	8	8	18
70	24	16	10	7	4	
75	12	10	4	3	3	6
80	5	4	1	1	0	
85	0	1	0	0	0	1
90	0	0	0	0	0	

### ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	714	72.54
0-40	851	86.45
0-60	959	97.49
0-90	984	100.00
40-90	133	13.55
60-90	25	2.51
90-180	0	0.00
0-180	984	100.00

EFFICACY (LUMENS PER WATT) : 29.0

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

LUMINOUS LENGTH: 23.250 INS  
WIDTH: 2.000 INS

### LUMINANCE SUMMARY CD./SQ.M.

ANGLE	ALONG	45	ACROSS
45	18650	2213	1236
55	7076	1523	737
65	3123	1100	600
75	1519	543	326
85	0	0	0

S/MH: 0.3

SC (ALONG) : 0.9, SC (ACROSS) : 0.3

CERTIFIED BY:

*Jonah E. Weber III*

DATE:  
APR 15, 2010

PREPARED FOR:

DDP  
EL SEGUNDO, CA

TESTED IN ACCORDANCE WITH IES PROCEDURES.

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INTENSITY (CANDLEPOWER) DATA  
IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	2722	2722	2722	2722	2722	2722	
2.5	2749	2701	2623	2577	2536	2636	
5.0	2691	2569	2349	2124	2076	2356	203
7.5	2637	2380	1962	1615	1495	2006	
10.0	2564	2183	1508	1095	975	1639	
12.5	2503	1935	1118	697	593	1325	
15.0	2378	1645	782	426	339	1053	294
17.5	2231	1373	528	263	213	846	
20.0	2089	1098	350	172	146	684	
22.5	1921	883	235	128	112	565	
25.0	1770	684	169	102	92	472	217
27.5	1575	516	129	86	78	389	
30.0	1375	386	104	75	67	321	
32.5	1176	284	90	63	59	264	
35.0	993	214	76	56	50	217	137
37.5	810	161	67	50	41	176	
40.0	651	126	61	43	37	143	
42.5	512	98	54	37	29	115	
45.0	396	82	47	30	26	92	73
47.5	300	70	40	25	23	74	
50.0	222	59	35	23	18	59	
52.5	165	52	32	20	15	48	
55.0	122	44	26	15	13	38	36
57.5	93	38	22	14	12	31	
60.0	69	33	20	12	11	26	
62.5	54	27	16	11	8	21	
65.0	40	23	14	8	8	17	18
67.5	32	19	11	8	7	14	
70.0	24	16	10	7	4	12	
72.5	17	12	7	3	4	8	
75.0	12	10	4	3	3	6	6
77.5	8	5	3	1	0	3	
80.0	5	4	1	1	0	2	
82.5	3	1	0	1	0	1	
85.0	0	1	0	0	0	0	1
87.5	0	0	0	0	0	0	
90.0	0	0	0	0	0	0	

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AVERAGE LUMINANCE DATA

CD./SQ.M (FOOTLAMBERTS)

ANGLE	ALONG	22.5	45	67.5	ACROSS
0	90719( 26477)	90719( 26477)	90719( 26477)	90719( 26477)	90719( 26477)
30	52918( 15445)	14897( 4347)	4016( 1172)	2877( 839)	2594( 757)
40	28345( 8272)	5496( 1604)	2660( 776)	1856( 541)	1595( 465)
45	18650( 5443)	3858( 1126)	2213( 645)	1434( 418)	1236( 360)
50	11536( 3367)	3070( 896)	1835( 535)	1205( 351)	917( 267)
55	7076( 2065)	2551( 744)	1523( 444)	859( 250)	737( 215)
60	4606( 1344)	2226( 649)	1321( 385)	788( 230)	730( 213)
65	3123( 911)	1829( 533)	1100( 321)	666( 194)	600( 175)
70	2340( 683)	1566( 457)	947( 276)	658( 192)	410( 119)
75	1519( 443)	1252( 365)	543( 158)	326( 95)	326( 95)
80	1051( 306)	811( 236)	243( 71)	242( 70)	0( 0)
85	0( 0)	485( 141)	0( 0)	0( 0)	0( 0)

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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	1.171	.141	.121	.09	1.141	.121	.101	.08	1.121	.101	.081	.06	1.061	.041	.03	1.021	.011	.00	0.990	.980	.97	0.95				
2	1.111	.071	.041	.00	1.101	.061	.020	.99	1.081	.041	.010	.98	1.010	.980	.96	0.980	.960	.94	0.950	.940	.92	0.91				
3	1.071	.010	.970	.93	1.051	.000	.960	.92	1.030	.980	.950	.92	0.960	.930	.90	0.940	.910	.89	0.920	.900	.88	0.86				
4	1.030	.960	.910	.88	1.010	.950	.910	.87	1.000	.940	.900	.86	0.920	.880	.85	0.900	.870	.85	0.880	.860	.84	0.82				
5	0.990	.910	.860	.82	0.970	.900	.850	.82	0.960	.890	.850	.81	0.880	.840	.81	0.860	.830	.80	0.850	.820	.79	0.78				
6	0.950	.870	.820	.78	0.940	.860	.810	.78	0.920	.860	.810	.78	0.840	.800	.77	0.830	.790	.77	0.820	.780	.76	0.75				
7	0.910	.830	.780	.74	0.900	.820	.770	.74	0.890	.820	.770	.73	0.800	.760	.73	0.790	.750	.73	0.780	.750	.72	0.71				
8	0.880	.790	.740	.71	0.870	.790	.740	.70	0.860	.780	.730	.70	0.770	.730	.70	0.760	.720	.69	0.750	.720	.69	0.68				
9	0.840	.760	.710	.67	0.830	.750	.700	.67	0.820	.750	.700	.67	0.740	.700	.67	0.730	.690	.66	0.720	.690	.66	0.65				
10	0.810	.730	.670	.64	0.800	.720	.670	.64	0.790	.720	.670	.64	0.710	.670	.64	0.700	.660	.64	0.700	.660	.63	0.62				

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

LUMINAIRE INPUT WATTS 33.9

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.

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**ELECTRICAL MEASUREMENTS**

INPUT VOLTAGE:	24.0	VOLTS DC
INPUT CURRENT:	1.414	AMPS
INPUT POWER:	33.9	WATTS
POWER FACTOR:	N/A	PERCENT
TOTAL HARMONIC DISTORTION:	N/A	PERCENT
OFF STATE POWER:	0.00	WATTS

**LIGHT OUTPUT**

LUMENS:	984	lm
EFFICACY:	29.0	lm/W

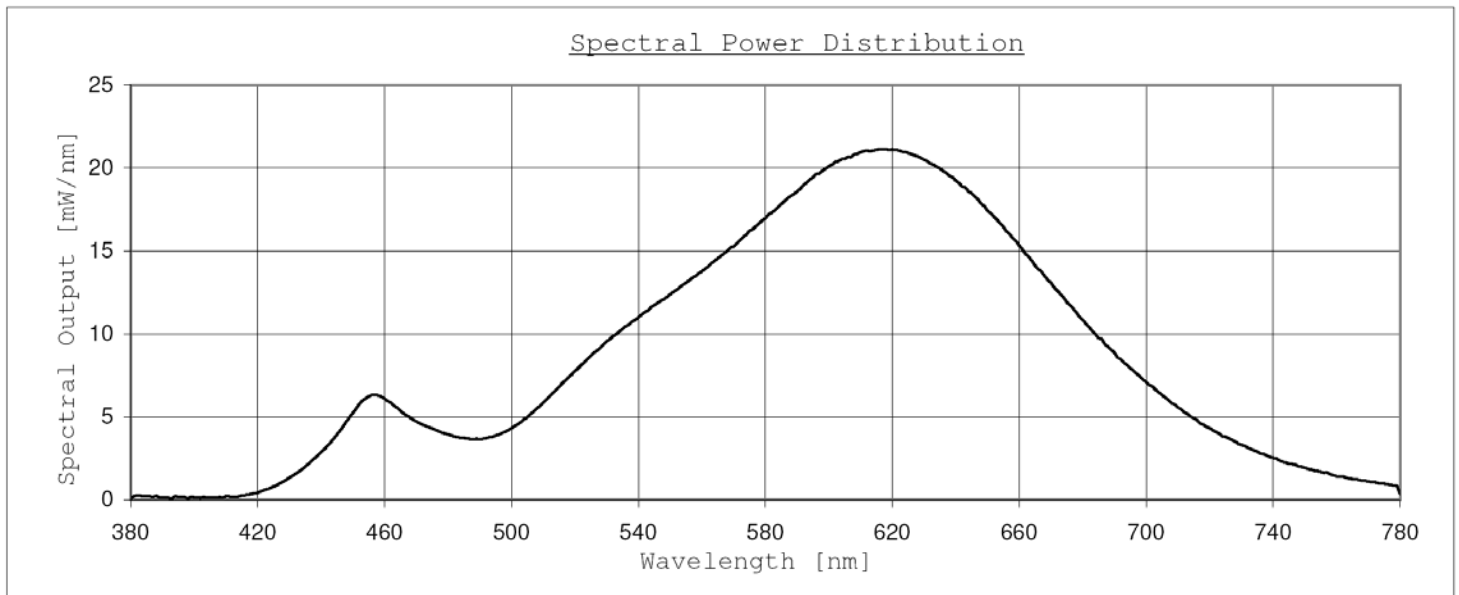
**SPECTRAL MEASUREMENTS**

X:	0.4684	
y:	0.4132	
u/u':	0.2668	
v:	0.3531	
v':	0.5296	
Duv:	0.0002	
CRI (R <sub>a</sub> ):	85.4	
CRI (R <sub>g</sub> ):	33.9	
CCT:	2603	K
RADIANT FLUX:	3396	mW

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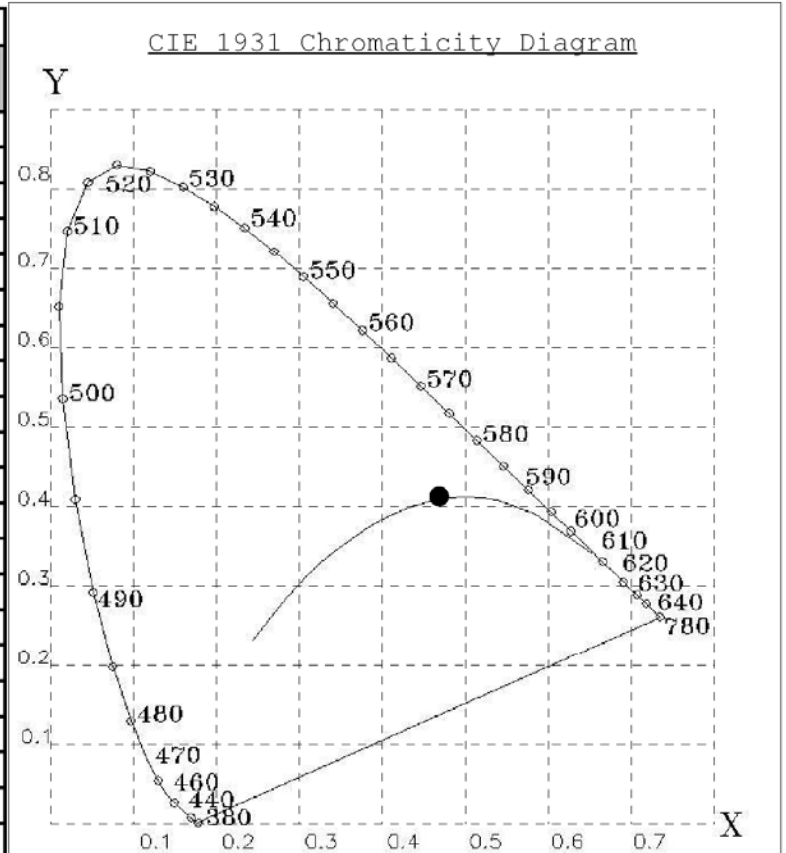
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Tabulated Spectral Power Distribution

Wavelength [nm]	[mW/nm]	Wavelength [nm]	[mW/nm]
380	0.09735	590	18.58823
390	0.13446	600	20.09880
400	0.14358	610	20.95926
410	0.20136	620	21.12762
420	0.42097	630	20.50438
430	1.33973	640	19.23729
440	2.87677	650	17.42130
450	5.22941	660	15.32361
460	6.08753	670	13.08299
470	4.72550	680	10.84394
480	3.93703	690	8.86532
490	3.66029	700	7.10957
500	4.29905	710	5.56171
510	5.86465	720	4.32852
520	7.75525	730	3.30557
530	9.55677	740	2.52401
540	11.00565	750	1.93063
550	12.37850	760	1.41485
560	13.76557	770	1.11098
570	15.26910	780	0.35394
580	16.97307		



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END VIEW



SIDE VIEW



LUMINOUS OPENING



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This photometric test was conducted using a Lighting Sciences series 6000 Moving Mirror Goniophotometer.

The photometric reference standard used was a set of three incandescent luminous intensity standard lamps calibrated traceable to the U.S. National Institute of Standards and Technology. Calibration certificates are on file at the laboratories of Lighting Sciences Inc.

The condition of the item tested was new. Operating time of the product prior to testing exceeded 8 hours. Stabilization time before testing exceeded 30 minutes.

Colorimetric testing was performed using a Lighting Sciences model 4000 integrating sphere of either 1 or 2 meters diameter, having an internal reflectance exceeding 0.80.  $4\pi$  geometry was used. Correction factors were applied for spectral mismatch and self-absorption. The spectroradiometer employed was a LSC model 500E having a bandwidth .84.

Ambient temperature during testing was  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ , measured using an Omega model DP460. All testing was conducted in accordance with IES LM-79-08.

All photometric quantities provided in this report are presented on an absolute basis. Testing was conducted using the rated input voltage to the driver.