



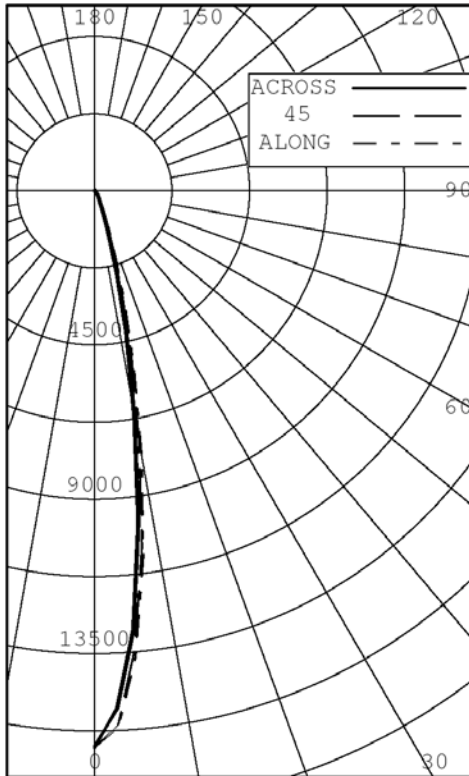
# Lighting Sciences

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. 26883

DDP - 4' LED WALL WASH LUMINAIRE, CAT# WG-48-2N-AF-3E-15-17WF-27K  
WITH DIFFUSE FLAT PLASTIC LENS  
48 LEDS. LUMINAIRE OUTPUT = 2431 LMS  
LUMINAIRE OPERATING AT 24 VDC AND 71 WATTS



INTENSITY (CANDLEPOWER) SUMMARY						OUTPUT
ANGLE	ALONG	22.5	45	67.5	ACROSS	LUMENS
0	16224	16224	16224	16224	16224	
5	13649	13455	13391	13086	12862	1072
10	7838	7705	7445	6939	6647	
15	3324	3281	3058	2732	2515	869
20	1200	1176	1074	933	850	
25	490	482	449	411	395	230
30	274	274	265	256	253	
35	184	185	184	180	178	116
40	130	132	133	130	128	
45	93	95	95	93	92	73
50	65	67	68	66	64	
55	46	47	47	46	45	42
60	32	32	32	31	31	
65	21	21	21	21	20	21
70	13	13	13	13	13	
75	6	7	7	6	5	7
80	2	2	2	0	0	
85	0	0	0	0	0	0
90	0	0	0	0	0	

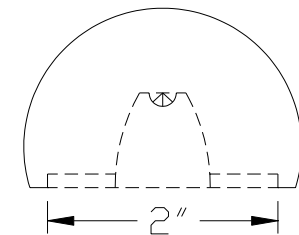
### ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	2171	89.33
0-40	2287	94.10
0-60	2402	98.84
0-90	2431	100.00
40-90	143	5.90
60-90	28	1.16
90-180	0	0.00
0-180	2431	100.00

EFFICACY (LUMENS PER WATT) : 34.2

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

LUMINOUS LENGTH: 47.500 INS  
WIDTH: 2.000 INS



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

ANGLE	ALONG	45	ACROSS
45	2150	2207	2125
55	1297	1337	1290
65	828	809	784
75	393	422	303
85	0	0	0

S/MH: 0.3  
SC: 0.3

CERTIFIED BY:

*Joseph 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	16224	16224	16224	16224	16224	16224	
2.5	15690	15538	15576	15379	15108	15473	
5.0	13649	13455	13391	13086	12862	13297	1072
7.5	10789	10626	10487	10034	9733	10352	
10.0	7838	7705	7445	6939	6647	7333	
12.5	5267	5198	4925	4515	4228	4846	
15.0	3324	3281	3058	2732	2515	2998	869
17.5	2009	1975	1805	1580	1421	1769	
20.0	1200	1176	1074	933	850	1052	
22.5	742	727	668	595	553	659	
25.0	490	482	449	411	395	446	230
27.5	354	351	333	315	306	332	
30.0	274	274	265	256	253	265	
32.5	222	222	219	214	212	218	
35.0	184	185	184	180	178	183	116
37.5	155	156	156	153	151	155	
40.0	130	132	133	130	128	131	
42.5	110	111	113	110	108	111	
45.0	93	95	95	93	92	94	73
47.5	79	80	81	78	77	79	
50.0	65	67	68	66	64	66	
52.5	56	56	57	55	55	56	
55.0	46	47	47	46	45	46	42
57.5	38	39	40	38	38	39	
60.0	32	32	32	31	31	32	
62.5	26	26	27	25	26	26	
65.0	21	21	21	21	20	21	21
67.5	17	16	17	16	16	17	
70.0	13	13	13	13	13	13	
72.5	10	9	11	10	8	9	
75.0	6	7	7	6	5	6	7
77.5	4	4	4	3	2	3	
80.0	2	2	2	0	0	1	
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	

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AVERAGE LUMINANCE DATA

CD./SQ.M (FOOTLAMBERTS)

ANGLE	ALONG	22.5	45	67.5	ACROSS
0	264709 ( 77259)	264709 ( 77259)	264709 ( 77259)	264709 ( 77259)	264709 ( 77259)
30	5161 ( 1506)	5176 ( 1510)	5004 ( 1460)	4830 ( 1409)	4769 ( 1391)
40	2776 ( 810)	2813 ( 821)	2827 ( 825)	2765 ( 807)	2719 ( 793)
45	2150 ( 627)	2183 ( 637)	2207 ( 644)	2142 ( 625)	2125 ( 620)
50	1656 ( 483)	1696 ( 495)	1730 ( 504)	1679 ( 490)	1634 ( 477)
55	1297 ( 378)	1330 ( 388)	1337 ( 390)	1303 ( 380)	1290 ( 376)
60	1054 ( 307)	1042 ( 304)	1053 ( 307)	1028 ( 300)	1006 ( 293)
65	828 ( 241)	813 ( 237)	809 ( 236)	797 ( 232)	784 ( 229)
70	601 ( 175)	610 ( 178)	617 ( 180)	628 ( 183)	608 ( 177)
75	393 ( 114)	423 ( 123)	422 ( 123)	357 ( 104)	303 ( 88)
80	183 ( 53)	146 ( 42)	155 ( 45)	42 ( 12)	28 ( 8)
85	0 ( 0)	0 ( 0)	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	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	.02	1.00
	1	1.181	.151	.141	.12	1.151	.131	.121	.10	1.131	.121	.101	.08	1.071	.061	.05	1.041	.031	.02	1.001	.000	.99	0.97		
	2	1.141	.111	.081	.05	1.121	.091	.061	.04	1.101	.071	.051	.03	1.041	.021	.01	1.011	.000	.99	0.990	.980	.96	0.95		
	3	1.111	.061	.031	.00	1.091	.051	.020	.99	1.071	.041	.010	.99	1.020	.990	.97	0.990	.970	.96	0.970	.960	.94	0.93		
	4	1.081	.030	.990	.97	1.061	.020	.980	.96	1.051	.010	.980	.95	0.990	.960	.94	0.970	.950	.93	0.950	.940	.92	0.91		
	5	1.051	.000	.960	.93	1.040	.990	.950	.93	1.020	.980	.950	.92	0.960	.940	.91	0.950	.920	.91	0.940	.920	.90	0.89		
	6	1.030	.970	.930	.91	1.020	.960	.930	.90	1.010	.960	.920	.90	0.940	.920	.89	0.930	.910	.89	0.920	.900	.88	0.87		
	7	1.000	.940	.910	.88	0.990	.940	.900	.88	0.980	.930	.900	.87	0.920	.890	.87	0.910	.890	.87	0.900	.880	.86	0.85		
	8	0.990	.930	.890	.86	0.980	.920	.880	.86	0.970	.910	.880	.86	0.900	.870	.85	0.900	.870	.85	0.890	.860	.85	0.84		
	9	0.960	.900	.870	.84	0.950	.900	.870	.84	0.950	.890	.860	.84	0.890	.860	.84	0.880	.850	.83	0.870	.850	.83	0.82		
	10	0.950	.880	.850	.82	0.940	.880	.850	.82	0.930	.880	.850	.82	0.870	.840	.82	0.860	.840	.82	0.860	.830	.82	0.81		

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 71.0

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:	3.159	AMPS
INPUT POWER:	71.0	WATTS
POWER FACTOR:	N/A	PERCENT
TOTAL HARMONIC DISTORTION:	N/A	PERCENT
OFF STATE POWER:	0.00	WATTS

**LIGHT OUTPUT**

LUMENS:	2431	lm
EFFICACY:	34.2	lm/W

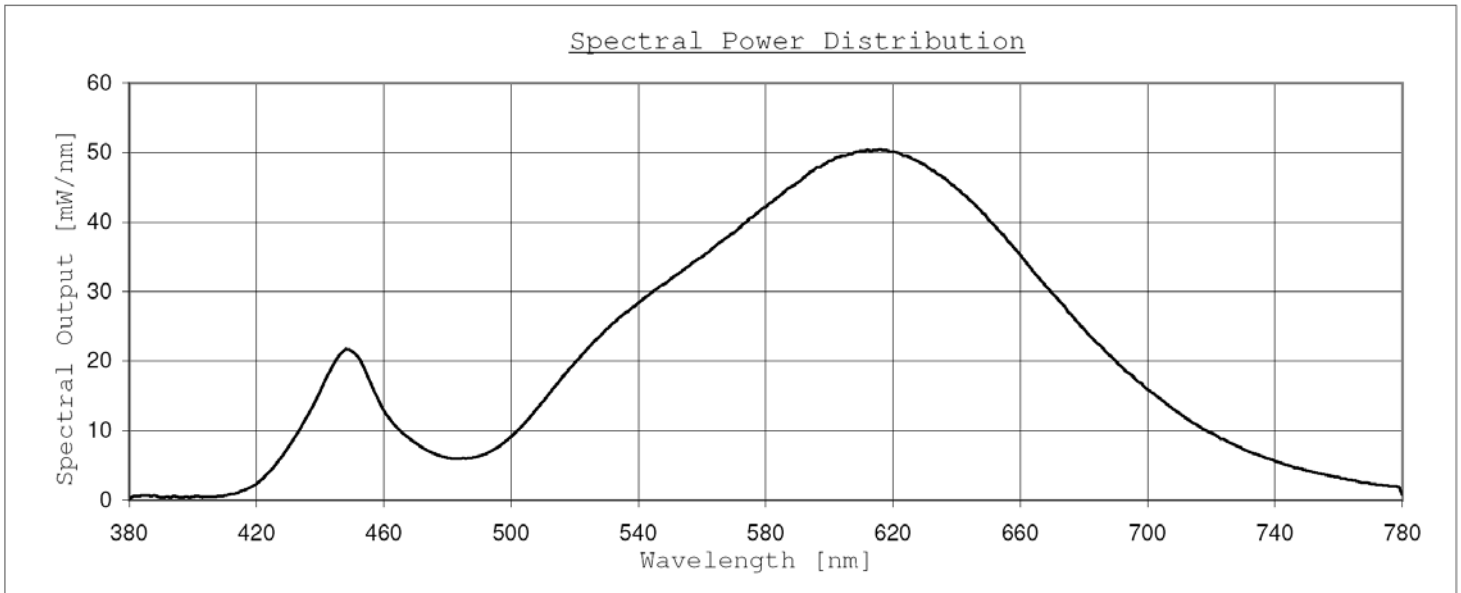
**SPECTRAL MEASUREMENTS**

X:	0.4549	
y:	0.4021	
u/u':	0.2631	
v:	0.3489	
v':	0.5233	
Duv:	0.0029	
CRI (R <sub>a</sub> ):	82.5	
CRI (R <sub>g</sub> ):	28.6	
CCT:	2701	K
RADIANT FLUX:	8265	mW

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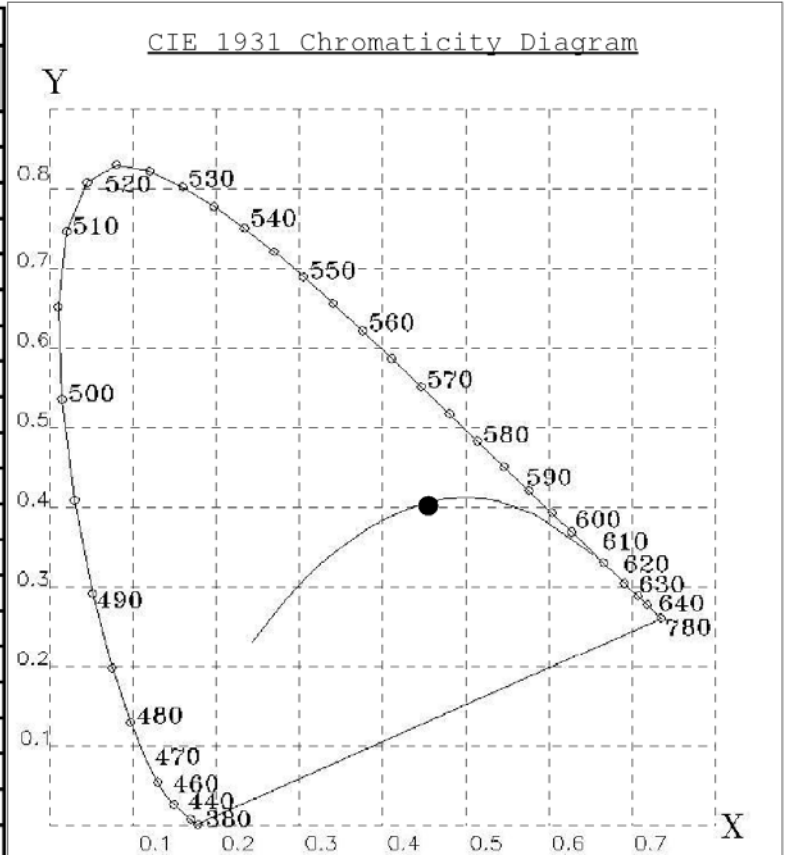
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Tabulated Spectral Power Distribution

Wavelength [nm]	[mW/nm]	Wavelength [nm]	[mW/nm]
380	0.15606	590	45.68997
390	0.36020	600	48.82124
400	0.48005	610	50.28543
410	0.67482	620	50.16370
420	2.33847	630	48.27158
430	7.61125	640	44.79915
440	15.68164	650	40.34446
450	21.43354	660	35.27050
460	12.89808	670	29.79015
470	8.24768	680	24.66625
480	6.09150	690	19.97996
490	6.35181	700	15.92448
500	9.11789	710	12.51666
510	14.17593	720	9.69190
520	19.75023	730	7.32565
530	24.62474	740	5.60145
540	28.38339	750	4.26835
550	31.77123	760	3.28796
560	35.00863	770	2.35688
570	38.45671	780	0.77158
580	42.20131		



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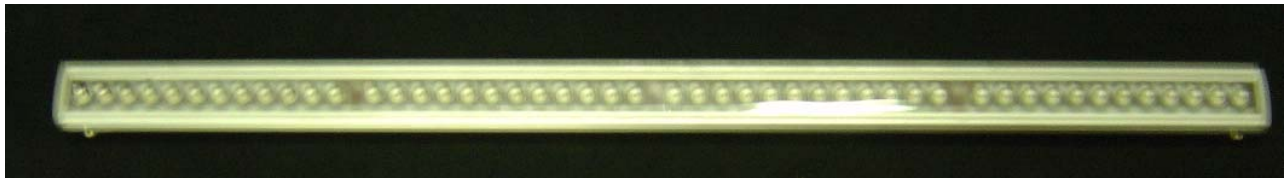
END VIEW



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.