LTL LUMINAIRE TESTING LABORATORY, INC.
SUSTAINING MEMBER of the IESNA
905 Harrison Street · Allentown, PA 18103 · 610-770-1044 · Fax 610-770-8912 · www.LuminaireTesting.com

Luminaire Flux and Color Quality Test Report

Test Date:	August 17, 2010
LTL Test Number:	20118
Prepared For:	Spectrum Lighting
Catalog Number:	SX1003RDLED18W/SM (Type F)
Luminaire:	Formed white enamel aluminum housing, formed white enamel aluminum reflector, molded translucent white plastic enclosure
Lamp:	24 white LEDs

Measured Luminaire Electrical Values:

Voltage:	119.9	V
Current:	0.190	A
Watts:	22.71	W
Power Factor:	0.995	
Temperature:	25.1	°C

Measured Luminaire Photometric Values:

Radiant Flux:	3366	mW
Luminous Flux:	1025	Lumens
Luminaire Efficacy:	45.1	Lumens per Watt
CCT:	3293	K
CRI (Ra):	82.8	
Chromaticity (x):	0.4202	
Chromaticity (y):	0.4032	
Chromaticity (u'):	0.2402	
Chromaticity (v'):	0.5185	
Duv:	0.0023	

Approved by:

Testing was performed in accordance with IES LM-79-2008

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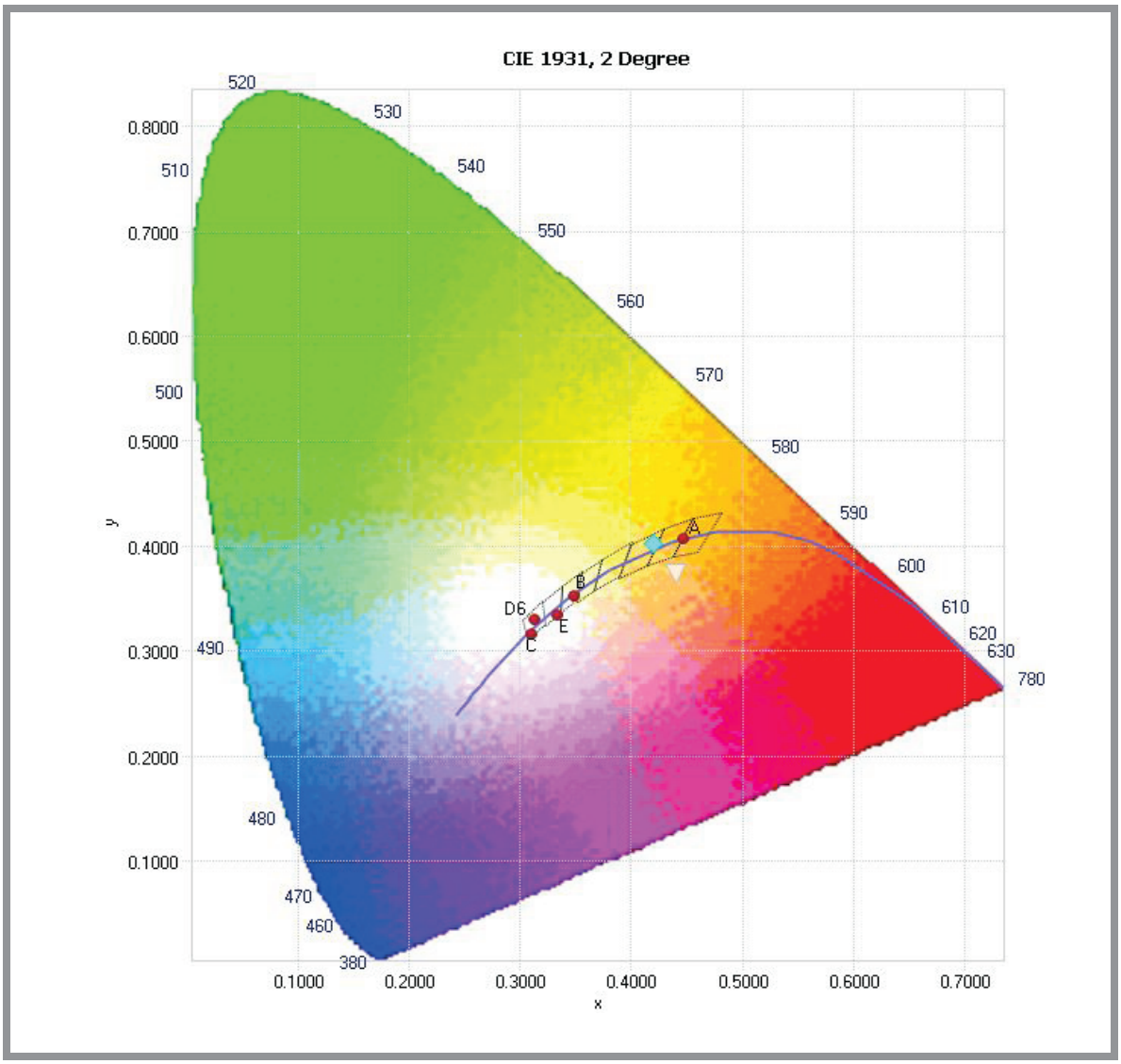
Chromaticity Coordinates						
x	y	u	v	u'	v'	Duv
0.4202	0.4032	0.2402	0.3457	0.2402	0.5185	0.0023



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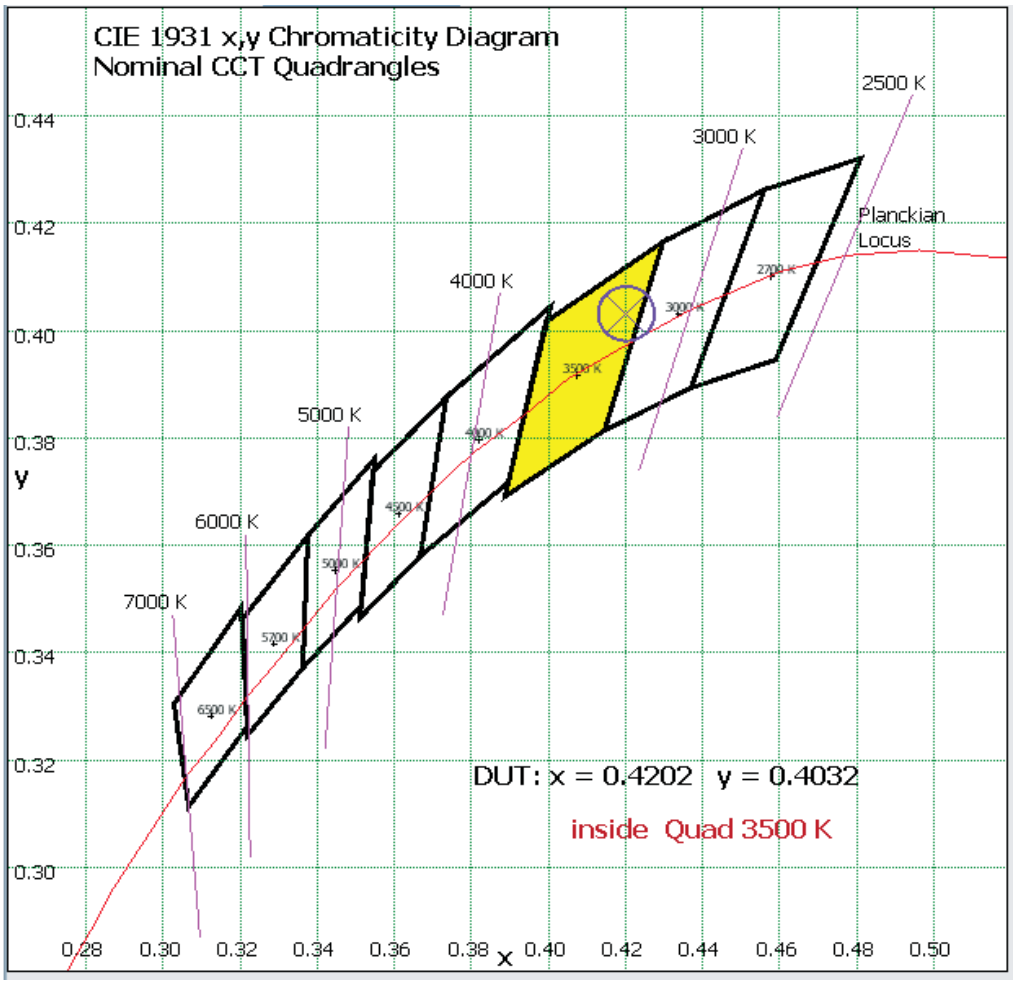

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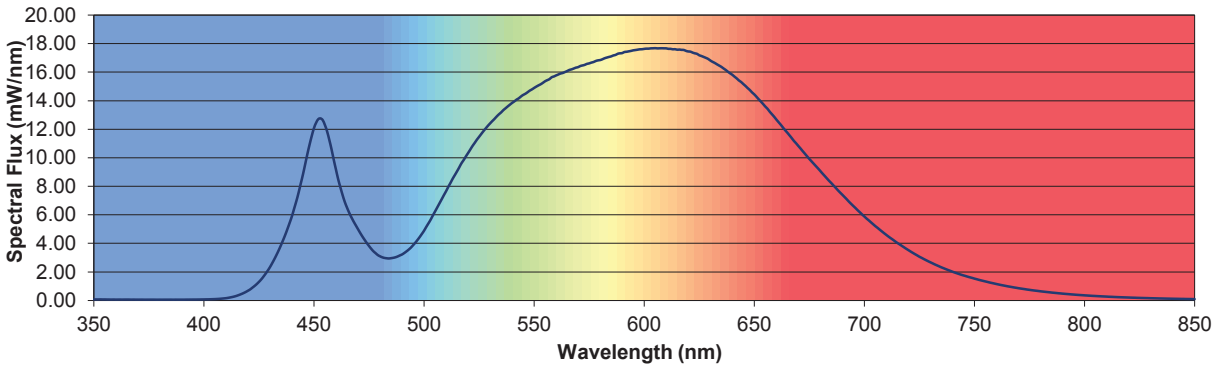
Spectral Power Distribution

λ(nm)	mW	λ(nm)	mW	λ(nm)	mW	λ(nm)	mW	λ(nm)	mW
350	0.07	400	0.07	450	12.07	500	4.88	550	14.89
351	0.07	401	0.07	451	12.46	501	5.15	551	14.99
352	0.07	402	0.08	452	12.71	502	5.40	552	15.07
353	0.07	403	0.08	453	12.76	503	5.66	553	15.15
354	0.07	404	0.09	454	12.64	504	5.95	554	15.25
355	0.07	405	0.09	455	12.29	505	6.23	555	15.36
356	0.06	406	0.10	456	11.84	506	6.51	556	15.44
357	0.06	407	0.11	457	11.24	507	6.80	557	15.51
358	0.06	408	0.12	458	10.59	508	7.08	558	15.65
359	0.06	409	0.14	459	9.85	509	7.37	559	15.70
360	0.06	410	0.15	460	9.17	510	7.65	560	15.77
361	0.06	411	0.18	461	8.50	511	7.95	561	15.84
362	0.06	412	0.21	462	7.93	512	8.23	562	15.91
363	0.06	413	0.24	463	7.40	513	8.53	563	15.94
364	0.06	414	0.28	464	6.90	514	8.79	564	16.01
365	0.06	415	0.33	465	6.51	515	9.05	565	16.07
366	0.06	416	0.38	466	6.15	516	9.32	566	16.15
367	0.06	417	0.44	467	5.83	517	9.61	567	16.20
368	0.06	418	0.51	468	5.54	518	9.84	568	16.25
369	0.05	419	0.59	469	5.26	519	10.09	569	16.32
370	0.05	420	0.68	470	5.00	520	10.33	570	16.35
371	0.05	421	0.77	471	4.73	521	10.57	571	16.43
372	0.06	422	0.89	472	4.48	522	10.82	572	16.47
373	0.05	423	1.01	473	4.25	523	11.04	573	16.51
374	0.05	424	1.14	474	4.02	524	11.26	574	16.58
375	0.05	425	1.30	475	3.82	525	11.46	575	16.61
376	0.05	426	1.46	476	3.62	526	11.67	576	16.67
377	0.05	427	1.65	477	3.45	527	11.87	577	16.71
378	0.05	428	1.86	478	3.31	528	12.05	578	16.78
379	0.05	429	2.08	479	3.18	529	12.24	579	16.83
380	0.05	430	2.33	480	3.09	530	12.41	580	16.85
382	0.05	432	2.89	482	2.98	532	12.72	582	16.97
383	0.05	433	3.19	483	2.96	533	12.89	583	17.02
384	0.05	434	3.52	484	2.94	534	13.04	584	17.07
385	0.05	435	3.86	485	2.96	535	13.18	585	17.10
386	0.05	436	4.23	486	2.98	536	13.33	586	17.17
387	0.05	437	4.61	487	3.02	537	13.46	587	17.21
388	0.05	438	5.02	488	3.08	538	13.59	588	17.29
389	0.05	439	5.45	489	3.15	539	13.72	589	17.32
390	0.05	440	5.90	490	3.22	540	13.84	590	17.33
391	0.05	441	6.43	491	3.32	541	13.95	591	17.41
392	0.06	442	6.95	492	3.43	542	14.07	592	17.43
393	0.06	443	7.54	493	3.56	543	14.16	593	17.46
394	0.06	444	8.18	494	3.70	544	14.29	594	17.49
395	0.06	445	8.82	495	3.86	545	14.40	595	17.53
396	0.06	446	9.53	496	4.04	546	14.48	596	17.55
397	0.06	447	10.25	497	4.23	547	14.59	597	17.57
398	0.06	448	10.91	498	4.44	548	14.70	598	17.60
399	0.07	449	11.52	499	4.65	549	14.79	599	17.61



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λ(nm)	mW	λ(nm)	mW	λ(nm)	mW	λ(nm)	mW	λ(nm)	mW
600	17.63	650	14.44	700	5.88	750	1.53	800	0.36
601	17.65	651	14.27	701	5.74	751	1.49	801	0.34
602	17.65	652	14.10	702	5.61	752	1.44	802	0.34
603	17.67	653	13.94	703	5.47	753	1.40	803	0.33
604	17.67	654	13.77	704	5.34	754	1.37	804	0.32
605	17.68	655	13.59	705	5.21	755	1.33	805	0.31
606	17.67	656	13.43	706	5.09	756	1.29	806	0.30
607	17.67	657	13.23	707	4.96	757	1.25	807	0.29
608	17.67	658	13.05	708	4.83	758	1.22	808	0.28
609	17.67	659	12.88	709	4.71	759	1.18	809	0.28
610	17.67	660	12.68	710	4.59	760	1.15	810	0.27
611	17.63	661	12.50	711	4.47	761	1.12	811	0.26
612	17.63	662	12.32	712	4.36	762	1.08	812	0.25
613	17.60	663	12.13	713	4.25	763	1.05	813	0.25
614	17.61	664	11.93	714	4.14	764	1.02	814	0.24
615	17.57	665	11.76	715	4.03	765	0.99	815	0.23
616	17.58	666	11.57	716	3.93	766	0.96	816	0.23
617	17.56	667	11.38	717	3.83	767	0.94	817	0.22
618	17.56	668	11.18	718	3.73	768	0.91	818	0.21
619	17.49	669	11.01	719	3.62	769	0.88	819	0.21
620	17.45	670	10.83	720	3.53	770	0.86	820	0.20
621	17.44	671	10.65	721	3.43	771	0.83	821	0.20
622	17.37	672	10.46	722	3.33	772	0.81	822	0.19
623	17.32	673	10.28	723	3.24	773	0.79	823	0.19
624	17.28	674	10.10	724	3.16	774	0.76	824	0.18
625	17.18	675	9.92	725	3.06	775	0.74	825	0.18
626	17.13	676	9.75	726	2.99	776	0.72	826	0.17
627	17.07	677	9.58	727	2.90	777	0.70	827	0.17
628	17.00	678	9.41	728	2.82	778	0.68	828	0.16
629	16.93	679	9.25	729	2.75	779	0.66	829	0.16
630	16.82	680	9.07	730	2.67	780	0.64	830	0.15
632	16.65	682	8.72	732	2.52	782	0.60	832	0.15
633	16.55	683	8.55	733	2.46	783	0.59	833	0.14
634	16.47	684	8.38	734	2.39	784	0.57	834	0.14
635	16.38	685	8.22	735	2.32	785	0.55	835	0.13
636	16.26	686	8.05	736	2.26	786	0.54	836	0.13
637	16.16	687	7.89	737	2.19	787	0.52	837	0.13
638	16.03	688	7.72	738	2.13	788	0.50	838	0.12
639	15.92	689	7.56	739	2.08	789	0.49	839	0.12
640	15.82	690	7.41	740	2.01	790	0.48	840	0.12
641	15.69	691	7.25	741	1.96	791	0.46	841	0.11
642	15.57	692	7.09	742	1.90	792	0.45	842	0.11
643	15.42	693	6.92	743	1.85	793	0.44	843	0.11
644	15.31	694	6.77	744	1.80	794	0.42	844	0.11
645	15.17	695	6.62	745	1.75	795	0.41	845	0.10
646	15.03	696	6.47	746	1.71	796	0.40	846	0.10
647	14.88	697	6.31	747	1.66	797	0.39	847	0.10
648	14.75	698	6.17	748	1.62	798	0.38	848	0.10
649	14.58	699	6.02	749	1.58	799	0.37	849	0.09
								850	0.09

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Color Rendering Index Detail								
R1	R2	R3	R4	R5	R6	R7	R8	Ra (CRI)
82.0	86.0	87.7	82.9	79.8	78.9	90.7	74.7	82.8

Color Rendering Index Detail (Expanded)								
R9	R10	R11	R12	R13	R14			
34.0	65.1	79.0	52.9	82.2	92.3			

Testing was performed in the LTL two-meter integrating sphere (Labsphere model SLMS7650) using a Labsphere model CDS1100 spectrometer and LightMtrX software.

Testing was performed using the 4π geometry method of measurement.

Absorption correction was employed for this measurement.

Electrical power was supplied to the device under test using a regulated power supply.

The device under test was allowed to reach stability according to appropriate IES standards prior to measurement.