



Integrating Sphere Test Report

Relevant Standards
IES LM-79-2008
ANSI C78.377-2008, ANSI C82.77
CIE 13.3-1995, CIE 15-2004

Prepared For
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Catalog Number
CRSMR168WW3SP

LTL Test Number
24055

Test Date

2011-07-05

Prepared By

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Approved By

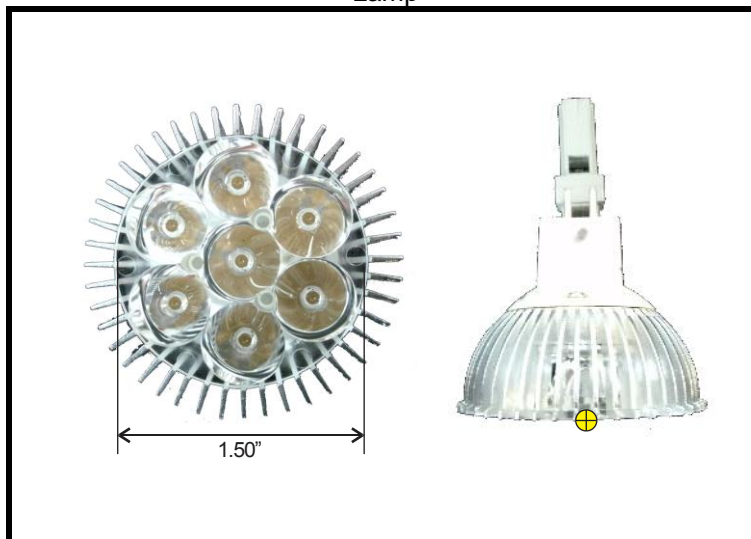
Zachary Mooney, Project Coordinator

The results contained in this report pertain only to the tested sample.
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Lamp Description: Aluminum heatsink housing, clear plastic lens below LEDs
Catalog Number: CRSMR168WW3SP
Lamp: One 7.5 watt MR16 LED replacement lamp with seven white LEDs
Mounting: VBU

Lamp



Summary of Results

Radiant Flux:	1609 mW
Luminous Flux:	478.1 Lumens
Lamp Efficacy:	64.6 Lumens/Watt
CCT:	3027 K
CRI (Ra):	86.8
Chromaticity (x):	0.4285
Chromaticity (y):	0.3901
Chromaticity (u):	0.2512
Chromaticity (v):	0.3430
Duv:	-0.0046

Test Conditions

Test Temperature:	24.3 °C
Voltage:	12.00 VAC
Current:	0.6174 A
Power:	7.400 W
Power Factor:	0.999
Frequency:	60 Hz
Current THD:	3.52 %

Testing was performed in a Labsphere SLMS7650 two meter integrating sphere using the 4π geometry method, a Labsphere CDS 1100 spectrometer, and LightMtrX software.
Absorption correction was employed for this measurement.

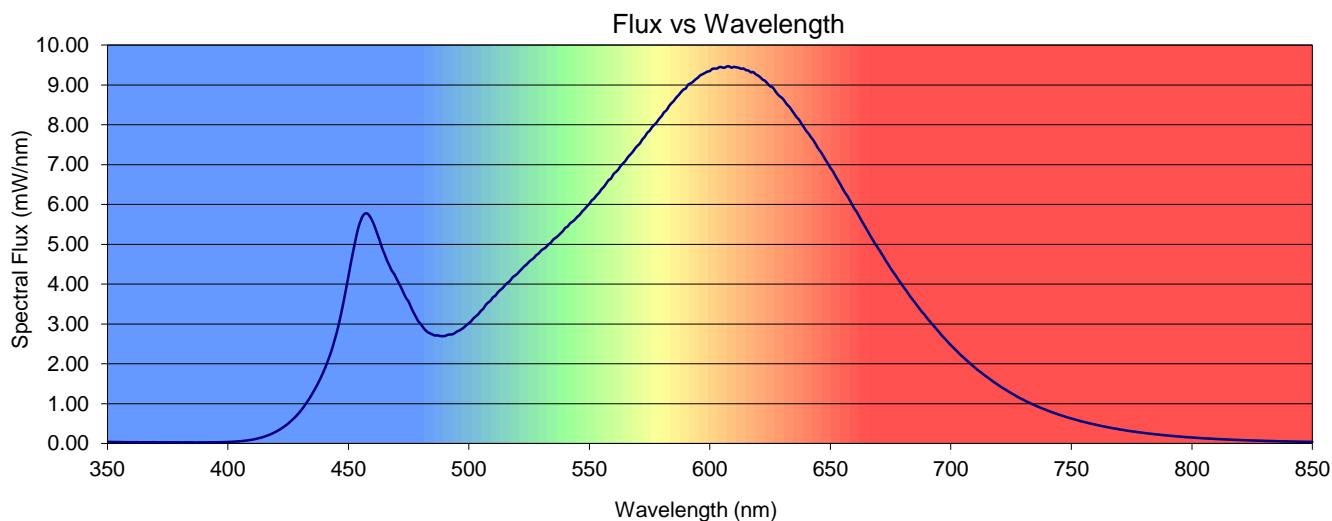
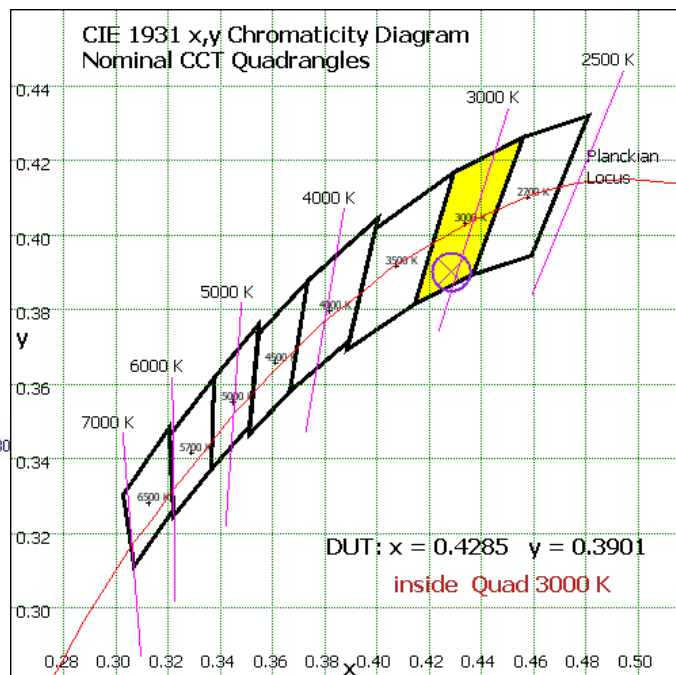
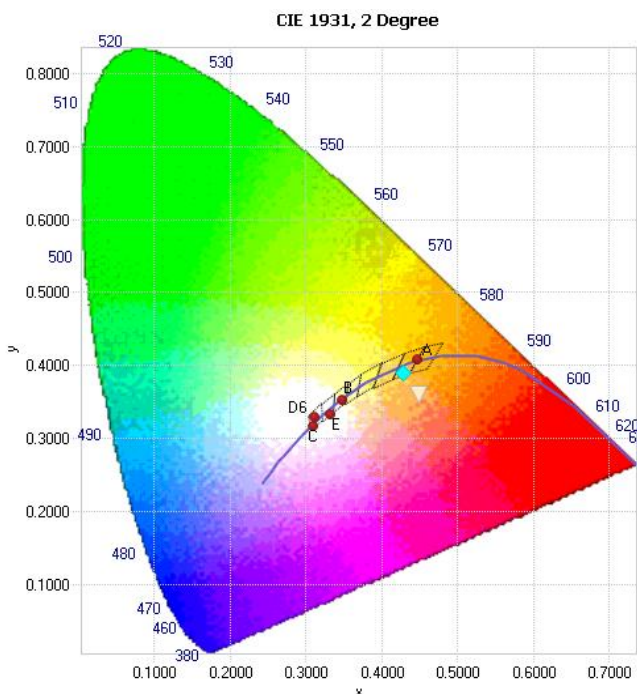


Chromaticity Coordinates

x	y	u	v	u'	v'	Duv
0.4285	0.3901	0.2512	0.3430	0.2512	0.5145	-0.0046

Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
86.8	87.1	96.2	94.5	82.9	87.0	93.8	84.3	69.0	35.0	89.8	81.1	78.3	89.8	98.1





Spectral Power Distribution

λ(nm)	mW/nm	λ(nm)	mW/nm	λ(nm)	mW/nm	λ(nm)	mW/nm	λ(nm)	mW/nm	λ(nm)	mW/nm	λ(nm)	mW/nm	λ(nm)	mW/nm
350	0.0393	422	0.370	494	2.77	566	7.19	638	8.03	710	1.90	782	0.251		
351	0.0386	423	0.410	495	2.81	567	7.25	639	7.94	711	1.85	783	0.244		
352	0.0392	424	0.454	496	2.83	568	7.32	640	7.85	712	1.81	784	0.238		
353	0.0375	425	0.500	497	2.87	569	7.41	641	7.77	713	1.76	785	0.231		
354	0.0378	426	0.557	498	2.92	570	7.47	642	7.68	714	1.71	786	0.225		
355	0.0370	427	0.609	499	2.97	571	7.53	643	7.61	715	1.67	787	0.218		
356	0.0356	428	0.668	500	3.02	572	7.63	644	7.50	716	1.62	788	0.212		
357	0.0336	429	0.734	501	3.07	573	7.70	645	7.40	717	1.58	789	0.205		
358	0.0336	430	0.804	502	3.15	574	7.80	646	7.32	718	1.54	790	0.200		
359	0.0328	431	0.882	503	3.20	575	7.85	647	7.22	719	1.50	791	0.194		
360	0.0328	432	0.967	504	3.25	576	7.94	648	7.12	720	1.45	792	0.190		
361	0.0313	433	1.06	505	3.33	577	8.00	649	7.03	721	1.41	793	0.183		
362	0.0345	434	1.15	506	3.38	578	8.06	650	6.92	722	1.38	794	0.179		
363	0.0318	435	1.25	507	3.48	579	8.15	651	6.84	723	1.34	795	0.174		
364	0.0296	436	1.35	508	3.54	580	8.22	652	6.73	724	1.30	796	0.168		
365	0.0319	437	1.46	509	3.59	581	8.31	653	6.62	725	1.27	797	0.164		
366	0.0322	438	1.58	510	3.67	582	8.36	654	6.52	726	1.23	798	0.159		
367	0.0310	439	1.71	511	3.71	583	8.46	655	6.41	727	1.19	799	0.155		
368	0.0309	440	1.85	512	3.79	584	8.54	656	6.30	728	1.16	800	0.151		
369	0.0332	441	2.00	513	3.85	585	8.60	657	6.22	729	1.13	801	0.146		
370	0.0310	442	2.16	514	3.90	586	8.68	658	6.11	730	1.10	802	0.142		
371	0.0307	443	2.33	515	3.97	587	8.74	659	6.00	731	1.07	803	0.138		
372	0.0307	444	2.54	516	4.03	588	8.82	660	5.89	732	1.04	804	0.135		
373	0.0294	445	2.75	517	4.08	589	8.88	661	5.81	733	1.01	805	0.130		
374	0.0292	446	2.99	518	4.16	590	8.91	662	5.69	734	0.983	806	0.127		
375	0.0313	447	3.27	519	4.21	591	9.01	663	5.59	735	0.955	807	0.125		
376	0.0298	448	3.56	520	4.25	592	9.04	664	5.48	736	0.928	808	0.121		
377	0.0300	449	3.87	521	4.32	593	9.08	665	5.38	737	0.903	809	0.117		
378	0.0296	450	4.19	522	4.38	594	9.14	666	5.28	738	0.878	810	0.114		
379	0.0300	451	4.52	523	4.45	595	9.18	667	5.17	739	0.855	811	0.112		
380	0.0285	452	4.83	524	4.50	596	9.24	668	5.07	740	0.830	812	0.108		
381	0.0278	453	5.12	525	4.56	597	9.27	669	4.97	741	0.807	813	0.106		
382	0.0296	454	5.39	526	4.61	598	9.30	670	4.88	742	0.786	814	0.104		
383	0.0293	455	5.57	527	4.66	599	9.33	671	4.79	743	0.763	815	0.0998		
384	0.0286	456	5.71	528	4.73	600	9.35	672	4.69	744	0.743	816	0.0969		
385	0.0298	457	5.77	529	4.77	601	9.40	673	4.59	745	0.722	817	0.0951		
386	0.0276	458	5.76	530	4.84	602	9.41	674	4.50	746	0.703	818	0.0919		
387	0.0261	459	5.69	531	4.88	603	9.41	675	4.40	747	0.683	819	0.0898		
388	0.0286	460	5.58	532	4.93	604	9.45	676	4.31	748	0.663	820	0.0872		
389	0.0281	461	5.43	533	5.00	605	9.44	677	4.23	749	0.644	821	0.0850		
390	0.0290	462	5.26	534	5.04	606	9.43	678	4.13	750	0.628	822	0.0832		
391	0.0288	463	5.09	535	5.12	607	9.46	679	4.04	751	0.610	823	0.0807		
392	0.0305	464	4.90	536	5.16	608	9.46	680	3.96	752	0.593	824	0.0788		
393	0.0298	465	4.76	537	5.21	609	9.43	681	3.88	753	0.576	825	0.0768		
394	0.0300	466	4.60	538	5.27	610	9.45	682	3.79	754	0.560	826	0.0751		
395	0.0308	467	4.47	539	5.33	611	9.44	683	3.70	755	0.545	827	0.0723		
396	0.0315	468	4.34	540	5.41	612	9.43	684	3.62	756	0.530	828	0.0713		
397	0.0333	469	4.25	541	5.45	613	9.40	685	3.55	757	0.515	829	0.0693		
398	0.0348	470	4.13	542	5.53	614	9.41	686	3.46	758	0.500	830	0.0670		
399	0.0367	471	4.02	543	5.57	615	9.37	687	3.38	759	0.488	831	0.0655		
400	0.0379	472	3.90	544	5.62	616	9.36	688	3.30	760	0.474	832	0.0633		
401	0.0414	473	3.77	545	5.69	617	9.32	689	3.24	761	0.459	833	0.0630		
402	0.0439	474	3.64	546	5.74	618	9.32	690	3.16	762	0.446	834	0.0610		
403	0.0484	475	3.56	547	5.82	619	9.27	691	3.09	763	0.434	835	0.0591		
404	0.0516	476	3.42	548	5.88	620	9.23	692	3.01	764	0.421	836	0.0571		
405	0.0565	477	3.29	549	5.95	621	9.19	693	2.94	765	0.410	837	0.0553		
406	0.0624	478	3.18	550	6.02	622	9.13	694	2.87	766	0.397	838	0.0545		
407	0.0694	479	3.07	551	6.10	623	9.10	695	2.80	767	0.387	839	0.0531		
408	0.0775	480	3.00	552	6.15	624	9.03	696	2.73	768	0.376	840	0.0523		
409	0.0857	481	2.91	553	6.23	625	8.97	697	2.66	769	0.366	841	0.0500		
410	0.0961	482	2.84	554	6.29	626	8.94	698	2.60	770	0.354	842	0.0493		
411	0.107	483	2.79	555	6.38	627	8.86	699	2.53	771	0.344	843	0.0485		
412	0.121	484	2.76	556	6.44	628	8.78	700	2.47	772	0.335	844	0.0467		
413	0.136	485	2.73	557	6.53	629	8.71	701	2.41	773	0.322	845	0.0456		
414	0.152	486	2.71	558	6.61	630	8.67	702	2.35	774	0.315	846	0.0447		
415	0.170	487	2.71	559	6.65	631	8.59	703	2.29	775	0.307	847	0.0434		
416	0.192	488	2.70	560	6.76	632	8.51	704	2.22	776	0.298	848	0.0424		
417	0.215	489	2.70	561	6.81	633	8.45	705	2.17	777	0.290	849	0.0416		
418	0.239	490	2.70	562	6.88	634	8.36	706	2.12	778	0.283	850	0.0406		
419	0.269	491	2.72	563	6.97	635	8.28	707	2.06	779	0.274				
420	0.299	492	2.73	564	7.03	636	8.19	708	2.01	780	0.267				
421	0.333	493	2.74	565	7.10	637	8.13	709	1.95	781	0.258				