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Integrating Sphere Test Report

Relevant Standards
IES LM-79-2008
ANSI C78.377-2011, ANSI C82.77-2002
CIE 13.3-1995, CIE 15-2004

Prepared For
Optolum
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United States

Catalog Number
10 B2-RD--358UOD-A072000

Order Number
10520546
Test Number
785419

Test Date
2014-10-15

Prepared By

Handwritten signature of Dane Hernandez-Adams in black ink.

Dane Hernandez-Adams, Technician

Approved By

Handwritten signature of Zachary Mooney in black ink.

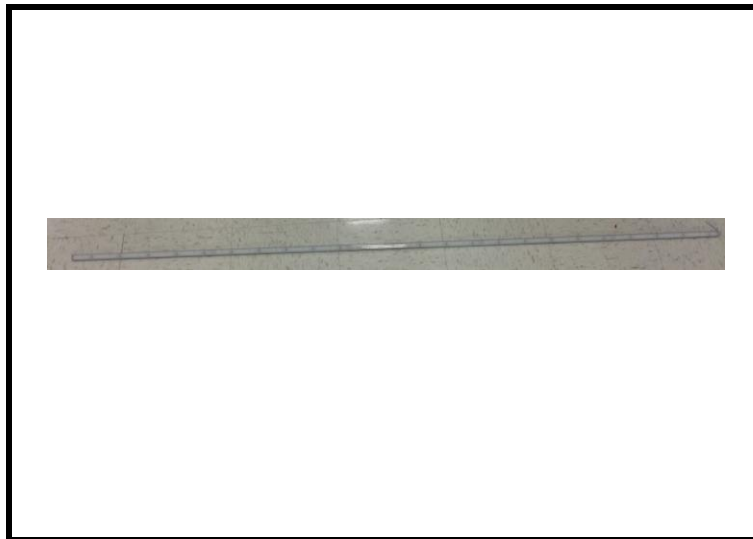
Zachary Mooney, Engineer Project Associate

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Grey aluminum housing, frosted plastic enclosure
Catalog Number: 10 B2-RD--358UOD-A072000
Lamp: 72 white LEDs
Mounting: Surface
Ballast/Driver: One High Perfection Tech. LP1090-24-GG-290

Luminaire



Summary of Results

Radiant Flux: 7919 mW
Luminous Flux: 2465 Lumens
Luminaire Efficacy: 54.9 Lumens/Watt
CCT: 3273 K
CRI (Ra): 83.3
Chromaticity (x): 0.4169
Chromaticity (y): 0.3929
Chromaticity (u): 0.2423
Chromaticity (v): 0.3426
Duv: -0.0015

Test Conditions

Test Temperature: 24.8 °C
Voltage: 120.0 VAC
Current: 0.3815 A
Power: 44.93 W
Power Factor: 0.982
Frequency: 60 Hz
Current THD: 9.19 %

Testing was performed in a 3-meter integrating sphere using the 4 π geometry method.

Absorption correction was employed for this measurement.

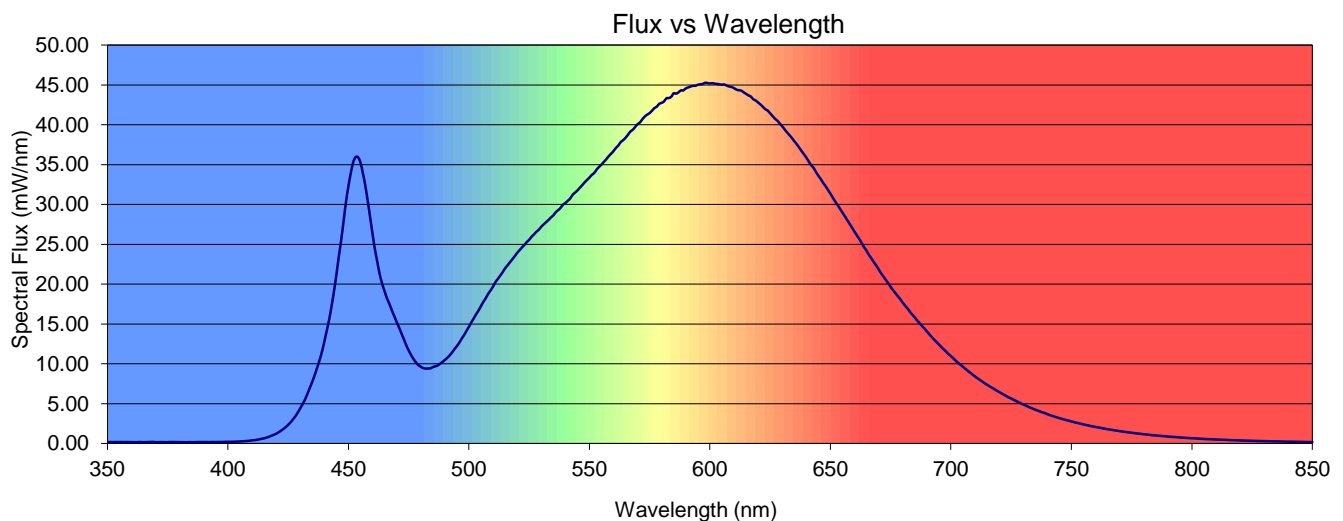
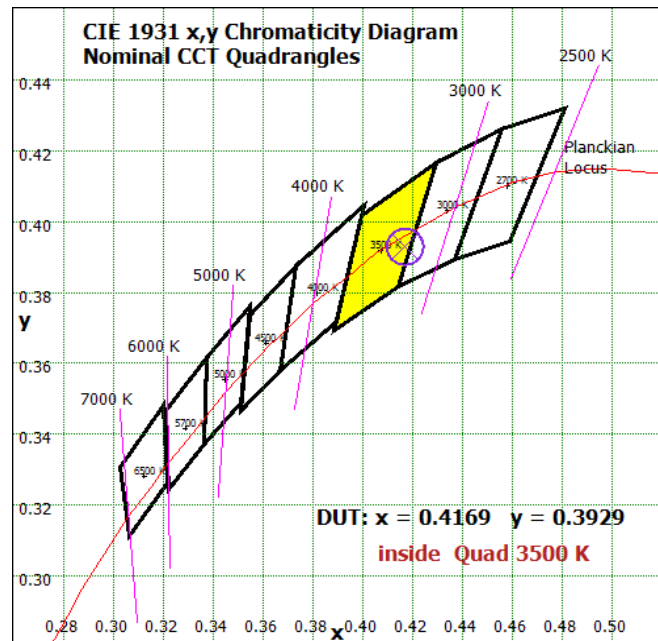
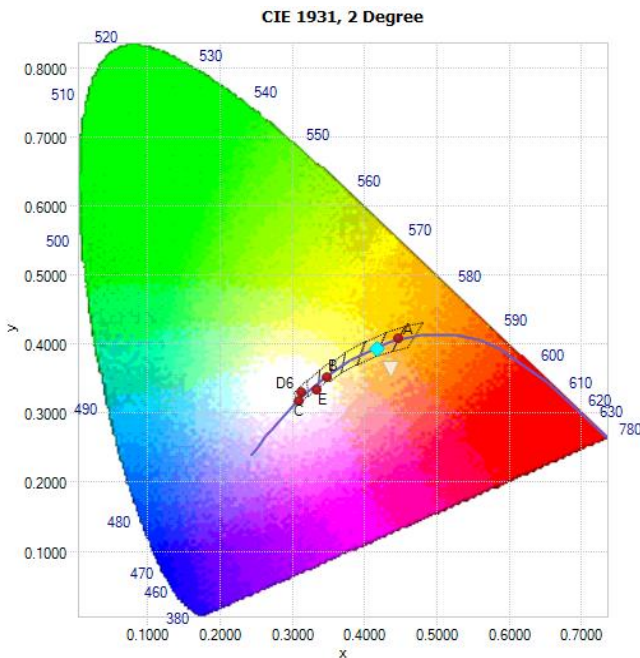


Chromaticity Coordinates

x	y	u	v	u'	v'	Duv
0.4169	0.3929	0.2423	0.3426	0.2423	0.5139	-0.0015

Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
83.3	81.7	89.7	94.9	80.5	80.8	85.0	86.4	67.0	22.5	74.9	77.5	62.7	83.4	97.0





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
350	0.157	422	1.60	494	11.8	566	38.7	638	36.7	710	8.42	782	1.10
351	0.191	423	1.82	495	12.2	567	39.1	639	36.3	711	8.20	783	1.07
352	0.172	424	2.06	496	12.6	568	39.4	640	35.9	712	7.99	784	1.04
353	0.188	425	2.34	497	13.2	569	39.7	641	35.4	713	7.79	785	1.01
354	0.182	426	2.66	498	13.6	570	40.1	642	34.9	714	7.57	786	0.985
355	0.183	427	3.02	499	14.1	571	40.3	643	34.6	715	7.38	787	0.961
356	0.191	428	3.42	500	14.6	572	40.7	644	34.1	716	7.19	788	0.929
357	0.177	429	3.89	501	15.2	573	41.0	645	33.6	717	7.00	789	0.903
358	0.189	430	4.40	502	15.7	574	41.3	646	33.2	718	6.83	790	0.874
359	0.182	431	4.95	503	16.2	575	41.5	647	32.7	719	6.64	791	0.853
360	0.175	432	5.51	504	16.7	576	41.8	648	32.3	720	6.47	792	0.830
361	0.179	433	6.23	505	17.2	577	42.1	649	31.8	721	6.29	793	0.811
362	0.159	434	6.99	506	17.8	578	42.3	650	31.4	722	6.13	794	0.788
363	0.187	435	7.75	507	18.2	579	42.6	651	30.9	723	5.95	795	0.760
364	0.181	436	8.56	508	18.8	580	42.7	652	30.4	724	5.80	796	0.738
365	0.170	437	9.48	509	19.2	581	42.9	653	29.9	725	5.65	797	0.717
366	0.175	438	10.4	510	19.7	582	43.3	654	29.5	726	5.49	798	0.699
367	0.189	439	11.5	511	20.2	583	43.4	655	29.0	727	5.35	799	0.681
368	0.196	440	12.8	512	20.6	584	43.5	656	28.5	728	5.20	800	0.663
369	0.198	441	14.1	513	21.1	585	43.9	657	28.0	729	5.05	801	0.645
370	0.168	442	15.5	514	21.5	586	43.9	658	27.5	730	4.91	802	0.629
371	0.169	443	17.2	515	22.0	587	44.1	659	27.1	731	4.77	803	0.612
372	0.175	444	19.0	516	22.3	588	44.3	660	26.6	732	4.63	804	0.593
373	0.176	445	21.1	517	22.7	589	44.3	661	26.1	733	4.50	805	0.571
374	0.167	446	23.4	518	23.1	590	44.6	662	25.7	734	4.37	806	0.557
375	0.168	447	25.5	519	23.5	591	44.7	663	25.1	735	4.24	807	0.545
376	0.189	448	27.9	520	23.9	592	44.8	664	24.6	736	4.14	808	0.533
377	0.186	449	30.3	521	24.2	593	44.9	665	24.2	737	4.02	809	0.520
378	0.185	450	32.3	522	24.6	594	44.9	666	23.7	738	3.91	810	0.506
379	0.182	451	33.9	523	24.9	595	45.0	667	23.2	739	3.81	811	0.490
380	0.169	452	35.3	524	25.3	596	45.1	668	22.8	740	3.68	812	0.483
381	0.172	453	35.9	525	25.6	597	45.1	669	22.3	741	3.57	813	0.471
382	0.164	454	35.9	526	25.9	598	45.3	670	21.9	742	3.48	814	0.461
383	0.156	455	35.3	527	26.2	599	45.2	671	21.4	743	3.37	815	0.442
384	0.184	456	33.9	528	26.6	600	45.2	672	21.0	744	3.28	816	0.429
385	0.166	457	32.4	529	26.8	601	45.2	673	20.5	745	3.19	817	0.414
386	0.171	458	30.5	530	27.2	602	45.2	674	20.1	746	3.10	818	0.407
387	0.178	459	28.4	531	27.5	603	45.1	675	19.7	747	3.01	819	0.395
388	0.186	460	26.3	532	27.8	604	45.1	676	19.2	748	2.93	820	0.385
389	0.184	461	24.4	533	28.0	605	45.0	677	18.9	749	2.85	821	0.379
390	0.176	462	22.8	534	28.4	606	45.0	678	18.5	750	2.78	822	0.368
391	0.187	463	21.2	535	28.6	607	44.9	679	18.1	751	2.69	823	0.358
392	0.174	464	20.1	536	29.0	608	44.8	680	17.7	752	2.61	824	0.350
393	0.183	465	19.1	537	29.3	609	44.7	681	17.3	753	2.55	825	0.339
394	0.192	466	18.2	538	29.5	610	44.6	682	16.9	754	2.47	826	0.331
395	0.176	467	17.5	539	30.0	611	44.4	683	16.5	755	2.40	827	0.320
396	0.191	468	16.8	540	30.2	612	44.3	684	16.2	756	2.33	828	0.316
397	0.193	469	16.0	541	30.4	613	44.3	685	15.8	757	2.27	829	0.303
398	0.196	470	15.3	542	30.7	614	44.1	686	15.4	758	2.20	830	0.298
399	0.213	471	14.6	543	31.2	615	43.9	687	15.1	759	2.14	831	0.291
400	0.210	472	13.8	544	31.5	616	43.7	688	14.8	760	2.08	832	0.283
401	0.215	473	13.1	545	31.7	617	43.5	689	14.4	761	2.03	833	0.278
402	0.221	474	12.3	546	32.1	618	43.2	690	14.1	762	1.97	834	0.271
403	0.234	475	11.7	547	32.4	619	43.0	691	13.7	763	1.91	835	0.266
404	0.244	476	11.1	548	32.8	620	42.8	692	13.4	764	1.85	836	0.259
405	0.252	477	10.6	549	33.1	621	42.5	693	13.0	765	1.80	837	0.253
406	0.281	478	10.2	550	33.4	622	42.3	694	12.8	766	1.75	838	0.244
407	0.300	479	9.85	551	33.7	623	41.9	695	12.4	767	1.70	839	0.240
408	0.319	480	9.64	552	33.9	624	41.8	696	12.1	768	1.66	840	0.229
409	0.352	481	9.48	553	34.4	625	41.4	697	11.8	769	1.61	841	0.230
410	0.391	482	9.40	554	34.7	626	41.1	698	11.6	770	1.56	842	0.223
411	0.425	483	9.42	555	35.0	627	40.8	699	11.2	771	1.51	843	0.217
412	0.467	484	9.43	556	35.3	628	40.5	700	11.0	772	1.47	844	0.210
413	0.524	485	9.58	557	35.7	629	40.2	701	10.7	773	1.43	845	0.208
414	0.595	486	9.69	558	36.0	630	39.8	702	10.4	774	1.39	846	0.200
415	0.653	487	9.78	559	36.4	631	39.4	703	10.1	775	1.35	847	0.193
416	0.748	488	10.0	560	36.7	632	39.0	704	9.87	776	1.31	848	0.192
417	0.839	489	10.2	561	37.1	633	38.7	705	9.64	777	1.27	849	0.183
418	0.966	490	10.5	562	37.4	634	38.3	706	9.37	778	1.24	850	0.182
419	1.08	491	10.7	563	37.8	635	37.9	707	9.13	779	1.20		
420	1.23	492	11.0	564	38.1	636	37.6	708	8.90	780	1.17		
421	1.40	493	11.4	565	38.4	637	37.1	709	8.65	781	1.14		