



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
ROLO 2039/4039

Project Number
6012-000171
Test Number
28158

Test Date

2012-01-30

Prepared By

A handwritten signature in black ink, appearing to read 'Kyle Spaziani'.

Kyle Spaziani, Technician

Approved By

A handwritten signature in black ink, appearing to read 'Brian Moyer'.

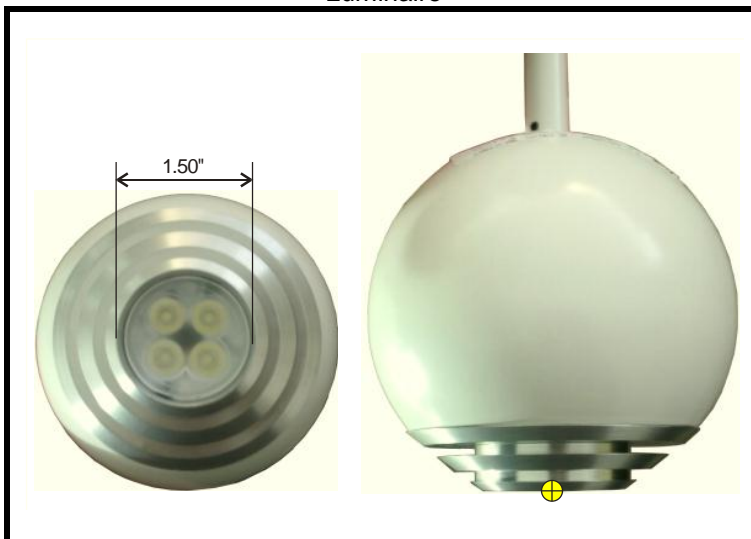
Brian Moyer, Engineer

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Formed white enamel steel housing, machined semi-specular reflector, frosted plastic optic / enclosure
Catalog Number: ROLO 2039/4039
Lamp: Four white LEDs
Mounting: Pendant
Ballast/Driver: One Lightech LED 18 CC 350 PU

Luminaire



Summary of Results

Radiant Flux:	1057 mW
Luminous Flux:	329.1 Lumens
Luminaire Efficacy:	61.4 Lumens/Watt
CCT:	3802 K
CRI (Ra):	83.3
Chromaticity (x):	0.3890
Chromaticity (y):	0.3807
Chromaticity (u):	0.2291
Chromaticity (v):	0.3364
Duv:	-0.0008

Test Conditions

Test Temperature:	24.3 °C
Voltage:	120.0 VAC
Current:	0.04598 A
Power:	5.363 W
Power Factor:	0.972
Frequency:	60 Hz
Current THD:	15.4 %

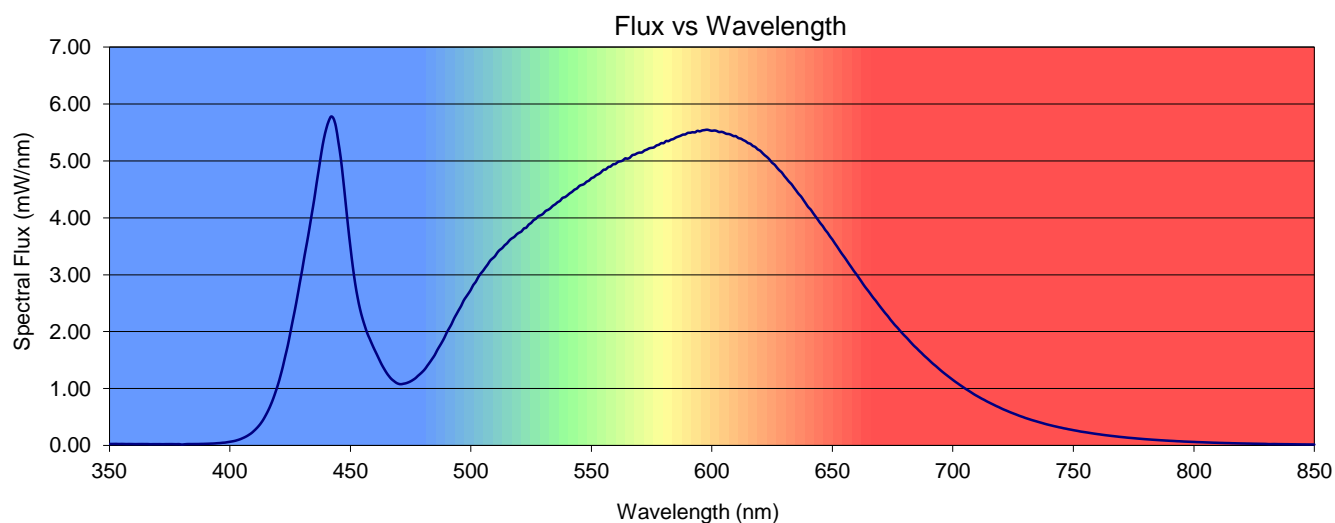
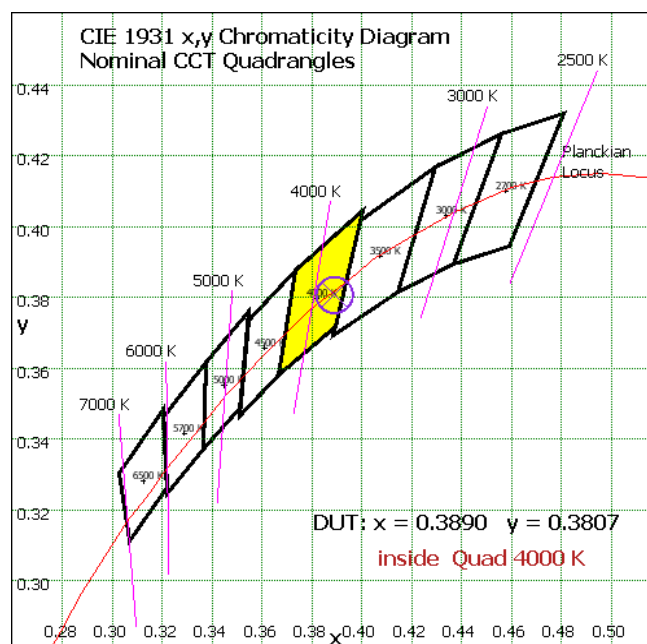
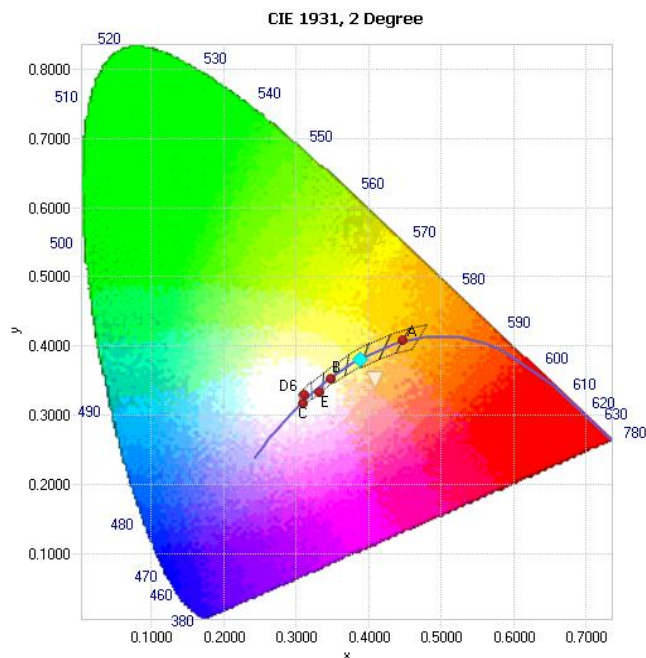


Chromaticity Coordinates

x	y	u	v	u'	v'	Duv
0.3890	0.3807	0.2291	0.3364	0.2291	0.5046	-0.0008

Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
83.3	82.9	86.5	89.5	84.4	82.9	82.3	86.3	71.5	25.5	68.6	85.0	70.0	82.9	93.8





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	0.0278	422	1.39	494	2.31	566	5.06	638	4.31	710	0.871	782	0.105
351	0.0273	423	1.57	495	2.38	567	5.10	639	4.25	711	0.847	783	0.102
352	0.0278	424	1.75	496	2.45	568	5.11	640	4.19	712	0.823	784	0.0987
353	0.0279	425	1.96	497	2.55	569	5.13	641	4.15	713	0.802	785	0.0960
354	0.0263	426	2.18	498	2.61	570	5.15	642	4.08	714	0.778	786	0.0932
355	0.0276	427	2.39	499	2.67	571	5.15	643	4.03	715	0.756	787	0.0907
356	0.0266	428	2.61	500	2.74	572	5.18	644	3.97	716	0.735	788	0.0882
357	0.0255	429	2.86	501	2.82	573	5.20	645	3.91	717	0.715	789	0.0855
358	0.0262	430	3.09	502	2.87	574	5.22	646	3.86	718	0.694	790	0.0831
359	0.0258	431	3.34	503	2.95	575	5.23	647	3.79	719	0.675	791	0.0808
360	0.0249	432	3.57	504	3.02	576	5.24	648	3.74	720	0.654	792	0.0787
361	0.0245	433	3.81	505	3.07	577	5.27	649	3.67	721	0.634	793	0.0760
362	0.0253	434	4.07	506	3.13	578	5.28	650	3.62	722	0.617	794	0.0743
363	0.0256	435	4.33	507	3.18	579	5.31	651	3.55	723	0.599	795	0.0721
364	0.0256	436	4.61	508	3.25	580	5.31	652	3.49	724	0.581	796	0.0695
365	0.0252	437	4.88	509	3.29	581	5.35	653	3.43	725	0.565	797	0.0679
366	0.0251	438	5.15	510	3.33	582	5.35	654	3.37	726	0.549	798	0.0661
367	0.0228	439	5.39	511	3.39	583	5.37	655	3.31	727	0.532	799	0.0644
368	0.0238	440	5.57	512	3.44	584	5.38	656	3.25	728	0.516	800	0.0627
369	0.0239	441	5.70	513	3.47	585	5.41	657	3.18	729	0.502	801	0.0606
370	0.0240	442	5.78	514	3.52	586	5.43	658	3.12	730	0.485	802	0.0589
371	0.0243	443	5.74	515	3.55	587	5.44	659	3.06	731	0.472	803	0.0575
372	0.0227	444	5.60	516	3.60	588	5.46	660	3.01	732	0.458	804	0.0562
373	0.0241	445	5.34	517	3.64	589	5.46	661	2.95	733	0.445	805	0.0545
374	0.0244	446	5.05	518	3.66	590	5.49	662	2.88	734	0.433	806	0.0530
375	0.0248	447	4.68	519	3.71	591	5.49	663	2.82	735	0.420	807	0.0515
376	0.0246	448	4.27	520	3.74	592	5.50	664	2.76	736	0.408	808	0.0498
377	0.0237	449	3.87	521	3.76	593	5.50	665	2.71	737	0.396	809	0.0486
378	0.0234	450	3.49	522	3.81	594	5.53	666	2.65	738	0.383	810	0.0472
379	0.0246	451	3.14	523	3.83	595	5.52	667	2.59	739	0.372	811	0.0457
380	0.0169	452	2.84	524	3.88	596	5.54	668	2.54	740	0.361	812	0.0448
381	0.0204	453	2.60	525	3.91	597	5.54	669	2.49	741	0.351	813	0.0434
382	0.0243	454	2.40	526	3.96	598	5.55	670	2.43	742	0.341	814	0.0428
383	0.0258	455	2.24	527	3.98	599	5.54	671	2.38	743	0.331	815	0.0416
384	0.0255	456	2.10	528	4.03	600	5.53	672	2.32	744	0.321	816	0.0400
385	0.0259	457	1.97	529	4.05	601	5.53	673	2.27	745	0.313	817	0.0393
386	0.0259	458	1.88	530	4.07	602	5.53	674	2.22	746	0.303	818	0.0378
387	0.0264	459	1.78	531	4.12	603	5.51	675	2.17	747	0.295	819	0.0372
388	0.0280	460	1.69	532	4.14	604	5.51	676	2.11	748	0.286	820	0.0359
389	0.0286	461	1.60	533	4.17	605	5.50	677	2.07	749	0.278	821	0.0354
390	0.0302	462	1.51	534	4.21	606	5.48	678	2.02	750	0.270	822	0.0343
391	0.0312	463	1.42	535	4.24	607	5.47	679	1.97	751	0.262	823	0.0337
392	0.0334	464	1.35	536	4.27	608	5.46	680	1.93	752	0.254	824	0.0328
393	0.0348	465	1.28	537	4.30	609	5.44	681	1.89	753	0.246	825	0.0317
394	0.0377	466	1.22	538	4.35	610	5.43	682	1.84	754	0.239	826	0.0312
395	0.0412	467	1.17	539	4.36	611	5.40	683	1.79	755	0.233	827	0.0302
396	0.0437	468	1.14	540	4.39	612	5.39	684	1.75	756	0.227	828	0.0295
397	0.0487	469	1.10	541	4.43	613	5.37	685	1.71	757	0.220	829	0.0289
398	0.0515	470	1.08	542	4.46	614	5.35	686	1.66	758	0.213	830	0.0277
399	0.0588	471	1.08	543	4.49	615	5.31	687	1.63	759	0.207	831	0.0248
400	0.0655	472	1.08	544	4.51	616	5.30	688	1.58	760	0.200	832	0.0250
401	0.0727	473	1.09	545	4.56	617	5.26	689	1.54	761	0.195	833	0.0260
402	0.0810	474	1.11	546	4.58	618	5.24	690	1.51	762	0.189	834	0.0254
403	0.0931	475	1.13	547	4.59	619	5.20	691	1.47	763	0.183	835	0.0246
404	0.106	476	1.15	548	4.63	620	5.18	692	1.43	764	0.178	836	0.0241
405	0.124	477	1.18	549	4.65	621	5.14	693	1.39	765	0.173	837	0.0235
406	0.142	478	1.22	550	4.70	622	5.10	694	1.36	766	0.168	838	0.0230
407	0.164	479	1.26	551	4.71	623	5.06	695	1.32	767	0.163	839	0.0228
408	0.191	480	1.30	552	4.75	624	5.02	696	1.28	768	0.158	840	0.0221
409	0.220	481	1.35	553	4.77	625	4.97	697	1.25	769	0.153	841	0.0215
410	0.258	482	1.41	554	4.80	626	4.94	698	1.22	770	0.149	842	0.0209
411	0.299	483	1.46	555	4.84	627	4.88	699	1.18	771	0.145	843	0.0203
412	0.345	484	1.53	556	4.85	628	4.83	700	1.15	772	0.140	844	0.0200
413	0.400	485	1.59	557	4.89	629	4.80	701	1.12	773	0.136	845	0.0190
414	0.465	486	1.67	558	4.90	630	4.74	702	1.09	774	0.133	846	0.0190
415	0.542	487	1.74	559	4.94	631	4.69	703	1.06	775	0.129	847	0.0185
416	0.624	488	1.82	560	4.95	632	4.64	704	1.03	776	0.125	848	0.0184
417	0.718	489	1.89	561	4.98	633	4.59	705	1.00	777	0.121	849	0.0178
418	0.826	490	1.98	562	4.99	634	4.53	706	0.977	778	0.118	850	0.0175
419	0.947	491	2.06	563	5.01	635	4.48	707	0.950	779	0.114		
420	1.08	492	2.14	564	5.04	636	4.42	708	0.922	780	0.111		
421	1.23	493	2.23	565	5.04	637	4.38	709	0.895	781	0.108		