



Integrating Sphere Test Report

Relevant Standards

LM-79-2008

Prepared For
Beta LED a Division of Ruud Lighting Inc.

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Sturtevant, WI 53177-1854

Catalog Number

STR-LWY-2S-**-06-D-UL-700-43K OR BXSL0F06D-UD7 (700mA)

LTL Test Number

21888

Test Date

2010-12-19

Prepared By

Signature

Name and Title: Brian Moyer, Engineer

Approved By

Signature

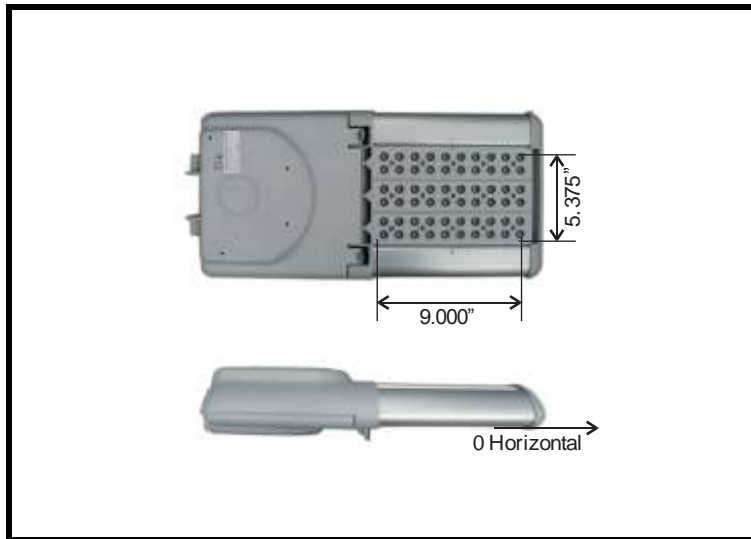
Name and Title: Michael Grather, PDE

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Cast aluminum housing, extruded aluminum heatsinks, no enclosure
Catalog Number: STR-LWY-2S-**-06-D-UL-700-43K OR BXSL0F06D-UD7 (700mA)
Lamp: 60 white LEDs with clear plastic optics below each
Ballast/Driver: One Beta CE366X01R0

Luminaire



Summary of Results

Radiant Flux: 31510 mW
Luminous Flux: 10320 Lumens
Luminaire Efficacy: 76.90 Lumens/Watt
CCT: 4440 K
CRI (Ra): 73.8
Chromaticity (x): 0.3642
Chromaticity (y): 0.3726
Chromaticity (u): 0.2161
Chromaticity (v): 0.3316
Duv: 0.0032

Test Conditions

Test Temperature: 25.5 °C
Voltage: 240.0 VAC
Current: 0.5682 A
Power: 134.2 W
Power Factor: 0.984
Frequency: 60 Hz

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.

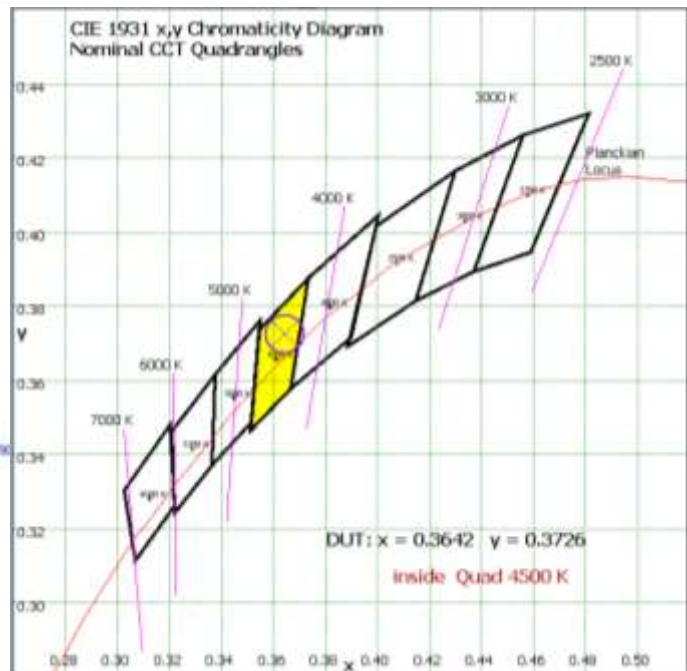
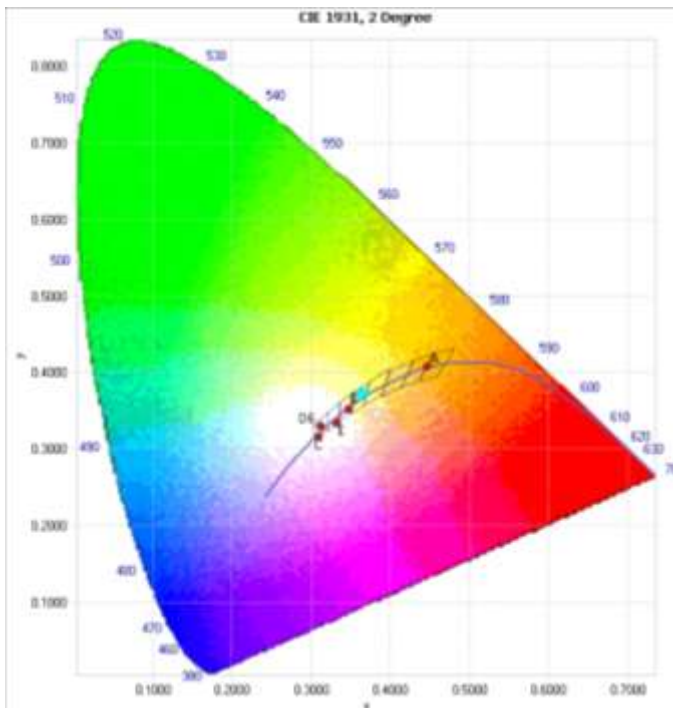


Chromaticity Coordinates

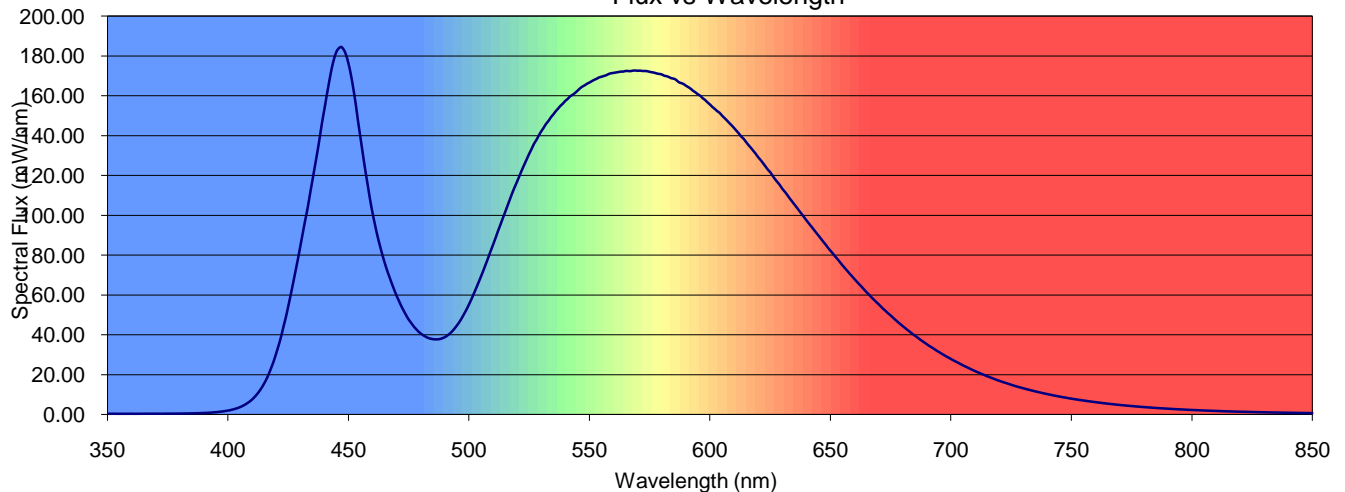
x	y	u	v	u'	v'	Duv
0.3642	0.3726	0.2161	0.3316	0.2161	0.4973	0.0032

Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
73.8	71.2	77.7	81.8	74.3	70.8	68.5	83.9	62.0	-12.2	45.9	69.4	44.0	71.7	89.4



Flux vs Wavelength





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	0.439	422	39.0	494	43.2	566	172	638	101	710	21.9	782	3.62
351	0.422	423	44.0	495	44.7	567	172	639	99.2	711	21.3	783	3.53
352	0.434	424	48.8	496	46.5	568	173	640	97.6	712	20.8	784	3.43
353	0.433	425	54.3	497	48.4	569	173	641	96.1	713	20.3	785	3.34
354	0.409	426	60.0	498	50.6	570	173	642	94.6	714	19.8	786	3.27
355	0.421	427	65.9	499	52.8	571	173	643	93.0	715	19.3	787	3.18
356	0.424	428	71.9	500	55.3	572	172	644	91.5	716	18.8	788	3.12
357	0.424	429	77.9	501	57.9	573	172	645	90.0	717	18.4	789	3.04
358	0.419	430	84.4	502	60.7	574	172	646	88.4	718	17.9	790	2.97
359	0.425	431	90.8	503	63.5	575	172	647	86.8	719	17.4	791	2.90
360	0.437	432	97.3	504	66.4	576	172	648	85.4	720	17.0	792	2.82
361	0.414	433	103	505	69.4	577	172	649	83.7	721	16.6	793	2.76
362	0.421	434	110	506	72.4	578	171	650	82.3	722	16.2	794	2.70
363	0.428	435	117	507	75.6	579	171	651	80.9	723	15.8	795	2.63
364	0.438	436	124	508	78.8	580	171	652	79.4	724	15.4	796	2.58
365	0.432	437	131	509	82.1	581	170	653	78.0	725	15.0	797	2.51
366	0.446	438	139	510	85.3	582	170	654	76.4	726	14.6	798	2.45
367	0.446	439	146	511	88.6	583	169	655	74.9	727	14.2	799	2.38
368	0.447	440	153	512	92.0	584	169	656	73.5	728	13.9	800	2.34
369	0.449	441	160	513	95.1	585	169	657	72.2	729	13.6	801	2.28
370	0.444	442	167	514	98.4	586	168	658	70.7	730	13.2	802	2.23
371	0.452	443	173	515	102	587	167	659	69.4	731	12.9	803	2.18
372	0.439	444	179	516	105	588	166	660	68.0	732	12.6	804	2.12
373	0.453	445	182	517	108	589	166	661	66.7	733	12.3	805	2.07
374	0.460	446	184	518	111	590	165	662	65.4	734	12.0	806	2.02
375	0.478	447	185	519	114	591	164	663	64.1	735	11.7	807	1.97
376	0.483	448	183	520	117	592	164	664	62.8	736	11.4	808	1.93
377	0.481	449	181	521	120	593	163	665	61.4	737	11.1	809	1.88
378	0.506	450	176	522	123	594	162	666	60.2	738	10.8	810	1.83
379	0.505	451	171	523	126	595	161	667	58.9	739	10.6	811	1.80
380	0.524	452	164	524	128	596	160	668	57.8	740	10.3	812	1.75
381	0.522	453	156	525	131	597	159	669	56.5	741	10.0	813	1.70
382	0.563	454	147	526	133	598	158	670	55.4	742	9.79	814	1.67
383	0.573	455	139	527	136	599	157	671	54.2	743	9.54	815	1.63
384	0.594	456	131	528	138	600	156	672	53.0	744	9.31	816	1.59
385	0.635	457	122	529	140	601	154	673	51.9	745	9.09	817	1.56
386	0.649	458	115	530	142	602	153	674	50.8	746	8.85	818	1.52
387	0.685	459	108	531	144	603	152	675	49.8	747	8.64	819	1.49
388	0.711	460	101	532	146	604	151	676	48.6	748	8.43	820	1.46
389	0.773	461	95.3	533	147	605	150	677	47.5	749	8.21	821	1.42
390	0.822	462	89.8	534	149	606	149	678	46.5	750	8.02	822	1.39
391	0.874	463	85.0	535	151	607	148	679	45.5	751	7.81	823	1.36
392	0.939	464	80.5	536	152	608	146	680	44.4	752	7.63	824	1.33
393	1.01	465	76.3	537	154	609	145	681	43.5	753	7.44	825	1.30
394	1.12	466	72.5	538	155	610	144	682	42.5	754	7.25	826	1.27
395	1.21	467	69.1	539	156	611	142	683	41.6	755	7.08	827	1.25
396	1.34	468	65.7	540	157	612	141	684	40.6	756	6.91	828	1.21
397	1.48	469	62.6	541	158	613	140	685	39.7	757	6.74	829	1.19
398	1.63	470	59.6	542	160	614	138	686	38.8	758	6.57	830	1.16
399	1.84	471	56.9	543	161	615	137	687	37.9	759	6.41	831	1.14
400	2.03	472	54.3	544	161	616	135	688	37.0	760	6.26	832	1.12
401	2.28	473	52.0	545	163	617	134	689	36.2	761	6.09	833	1.08
402	2.57	474	49.8	546	164	618	132	690	35.3	762	5.94	834	1.06
403	2.92	475	47.7	547	165	619	131	691	34.5	763	5.79	835	1.04
404	3.30	476	46.1	548	165	620	129	692	33.8	764	5.65	836	1.02
405	3.76	477	44.4	549	166	621	128	693	33.0	765	5.50	837	0.997
406	4.31	478	43.0	550	167	622	126	694	32.2	766	5.36	838	0.970
407	4.97	479	41.7	551	167	623	125	695	31.5	767	5.24	839	0.955
408	5.74	480	40.7	552	168	624	123	696	30.7	768	5.11	840	0.933
409	6.58	481	39.8	553	169	625	122	697	30.0	769	4.98	841	0.912
410	7.57	482	39.1	554	169	626	120	698	29.3	770	4.85	842	0.885
411	8.80	483	38.5	555	170	627	118	699	28.6	771	4.73	843	0.874
412	10.2	484	38.1	556	170	628	117	700	27.9	772	4.62	844	0.860
413	11.7	485	37.9	557	170	629	115	701	27.3	773	4.50	845	0.830
414	13.6	486	37.8	558	171	630	113	702	26.6	774	4.40	846	0.819
415	15.6	487	37.8	559	171	631	112	703	26.0	775	4.30	847	0.802
416	18.0	488	38.0	560	172	632	110	704	25.4	776	4.18	848	0.784
417	20.6	489	38.4	561	172	633	109	705	24.7	777	4.08	849	0.769
418	23.7	490	38.9	562	172	634	107	706	24.2	778	3.99	850	0.758
419	26.9	491	39.7	563	172	635	106	707	23.6	779	3.89		
420	30.7	492	40.6	564	172	636	104	708	23.0	780	3.79		
421	34.7	493	41.8	565	172	637	102	709	22.4	781	3.71		