

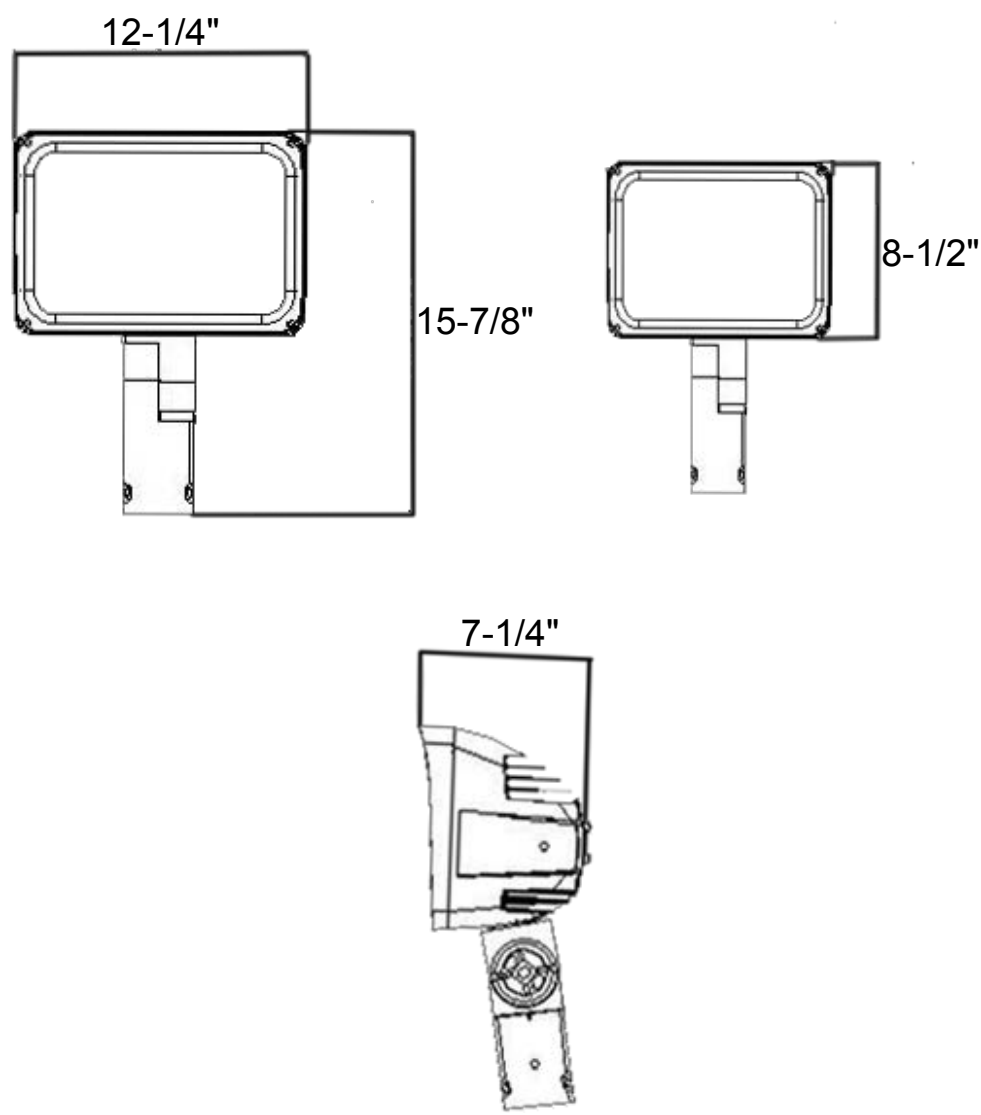


71353
LED Floodlight



Model :		71353
OVERALL LAMP PARAMETERS	Input Voltage	100-277AC 50/60HZ
	Input Current	0.85A MAX
	Input Power	78 W
	Power Factor	PF≥0.90
	Luminance	6185 LM
	Luminous Efficiency	83 LM/W
	CRI	84
	Beam Angle	120°
	Main Structure	Aluminium + Tempered Glass
LED DRIVER	Output Voltage	42VDC
	Output Current	1.95A
	Driver Efficiency	89%
LED	LED Manufacturer	cree
	LED Type	CXA2520
	LED Quantity	2 PCS
	LED Efficacy	110 LM/W
	Color Temperature	WW/NW/CW (5191K)
Photocell	-	Sold Separately
LIFESPAN & ENVIRONMENT	Lifespan	50000 Hrs.
	Warranty	5 Years
	IP Rating IP	IP65 Wet Locations
	Operating Temperature	-40F - +131F
	Storage Temperature.Humidity	-40F - +176F , 10—90% RH
SAFETY&EMC	Safety Norms	UL1598,UL8750, EN60598, EN61347-2-13, EN62031, EN62471
	Withstand Voltage	I/P-FG: 2121VDC
	Grounding Resistance	≤0.5Ω,OK
	Electromagnetic Compatibility	EN55015, EN61000-2-3, EN61000-3-3, EN61547
OTHERS	Dimension	Pls refer to attached dimension drawing
	Gross Weight	18.7 Lbs
	Packing Size	inner box: \ master carton: L 17" X W 12.5" X H 9.33"
	Qty / Carton	1PCS
	Volume	1.15Cbm/carton

Dimension : **71353**



LM-79-08 Test Report

For

MORRIS Products Inc.
53 Carey Rd.
Queensbury, NY 12804

Architectural Flood and Spot Luminaires

Model name(s): 71352, 71353

Representative (Tested) Model: 71352

Model Difference: All construction and rating are the same, except CCT

Test & Report By:

Review By:

Engineer: Sean Zhuo

Manager: Tommy Liang

Date: Sep.16,2014

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

Address: 8th floor, Block B, No. 11 Caipin Road, Guangzhou Science City, Tianhe, Guangzhou 510663, China

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Fax: 8620-32290422

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U.S. Department of Energy

Lighting Facts™ Uniform LM-79 Reporting Template

Laboratory Information:

Name of Test Laboratory	Standard-Tech Co. Ltd
Date of Test Report	Sep.16,2014
Test Report No.	GZE140709-K
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	MORRIS Products Inc.		
Brand Name	MORRIS		
Model Number	71352		
SKU (if available)	N/A		
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Wall-Mounted Area Luminaires		
Luminaire Aperture (for downlights)	--	in. mm mm s	
Luminaire Length	--		
Luminaires Width	--		
Number of Units (modular products)	N/A		

Integrating Sphere

Goniophotometer

Electrical Measurements:

	Output	Output	
Input Wattage	78.80	--	W
Input Current	0.6630	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9910	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	6585.6	--	lm
Initial Lumen Efficacy	83.57	--	lm/w
Correlated color temperature / CCT	5191	--	K
Color rendering index / CRI	84.1	--	
R9 Value	21	--	
Duv	-0.0006	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)	-----	--	
Beam angle (if applicable)		--	
Zonal lumens in the 0°-60° zone		--	
Zonal lumens in the 60°-90° zone		--	
Zonal lumens in the 90°-120° zone		--	
Zonal lumens in the 120°-180° zone		--	

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Test Specifications:	
Date of Receipt	: Sep.15,2014
Date of Test	: Sep.15,2014
Test item	: Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters
Reference Standard	IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources CIE 15-2004 Technical Report Colorimetry IESNA LM-16-93 Practical Guide to Colorimetry of Light Source IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

Test Methods

1. Photometric and Electrical measurements – Light Distribution Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals.

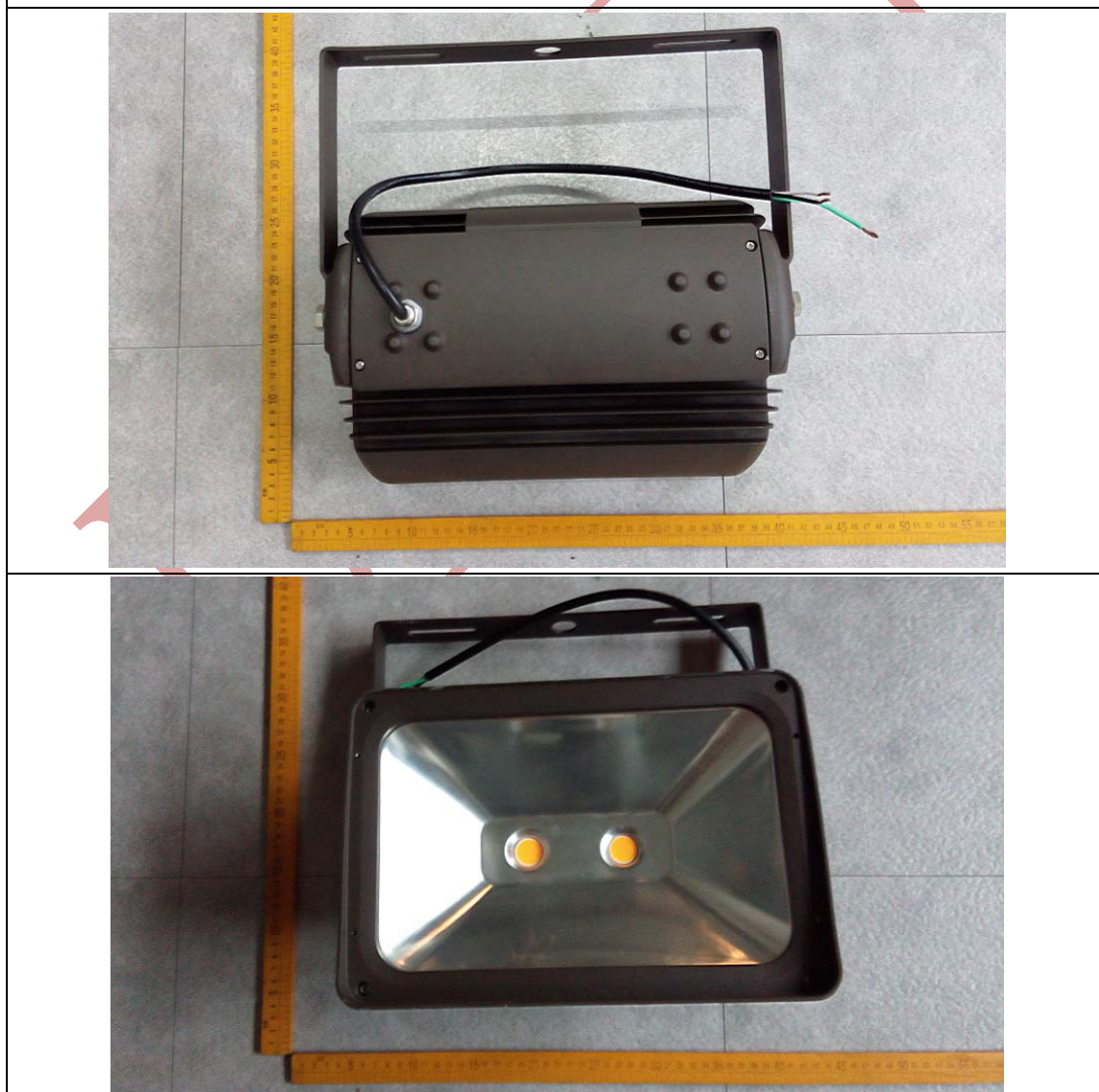
2. Photometric and Electrical Measurements – Integrating Sphere Method:

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at least 5 nm intervals over the range of 380 to 780 nm.

1. Product Information:

Brand Name	MORRIS
Model Number	71352
Luminaire Type	Architectural Flood and Spot Luminaires
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60 Hz
Nominal Power	80W
Rated Initial Lamp Lumen	--
Declared CCT	3000K,3500K,4000K,4500K,5000K
LED Manufacturer	CREE
LED Model	CXA2520
Sample Receipt Date	Sep.15,2014
Sample Number	140709-29(3000K),30(5000K)

Photo



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2.1 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

IES LM-79 2008

Test date	2014-09-15	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71352		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
140709-29	120.1	60	0.6724	79.95	0.9910	9.13
	277.0	60	0.3023	80.29	0.9588	13.52

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	83.2
R9	12
CCT (K)	3074
Chromaticity (x, y)	x=0.4328 y=0.4044
Chromaticity (u', v')	u'=0.2478 v'=0.5209
Duv	0.0007

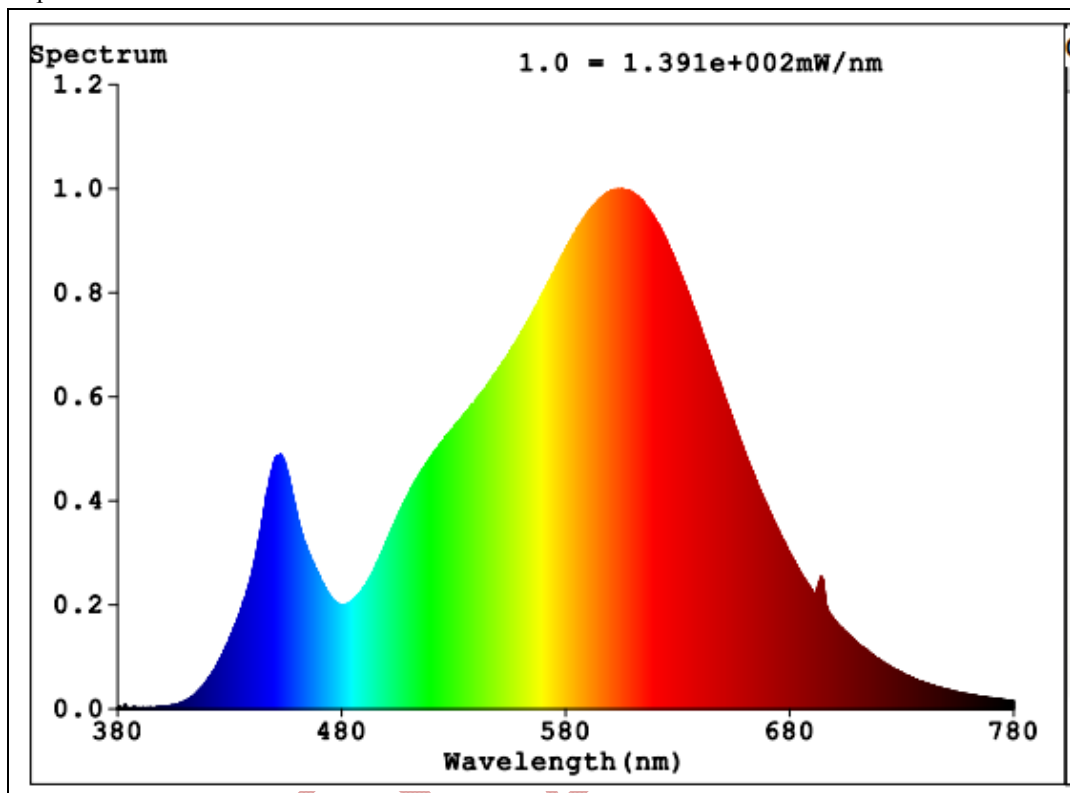
Special Color Rendering Indices			
R1	81	R9	12
R2	90	R10	77
R3	97	R11	80
R4	81	R12	70
R5	81	R13	83
R6	87	R14	98
R7	85	R15	75
R8	62	--	--

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.1
Frequency (Hz)	60
Total Luminous (lm)	6281.5
Luminous Efficacy (lm/W)	78.56
Beam Angle°	99.8
Center Beam Candle Power (cd)	3016
S/MH(C0/180)	1.28
S/MH(C90/270)	1.29

Spectral Power Distribution

Spectral Power Distribution:



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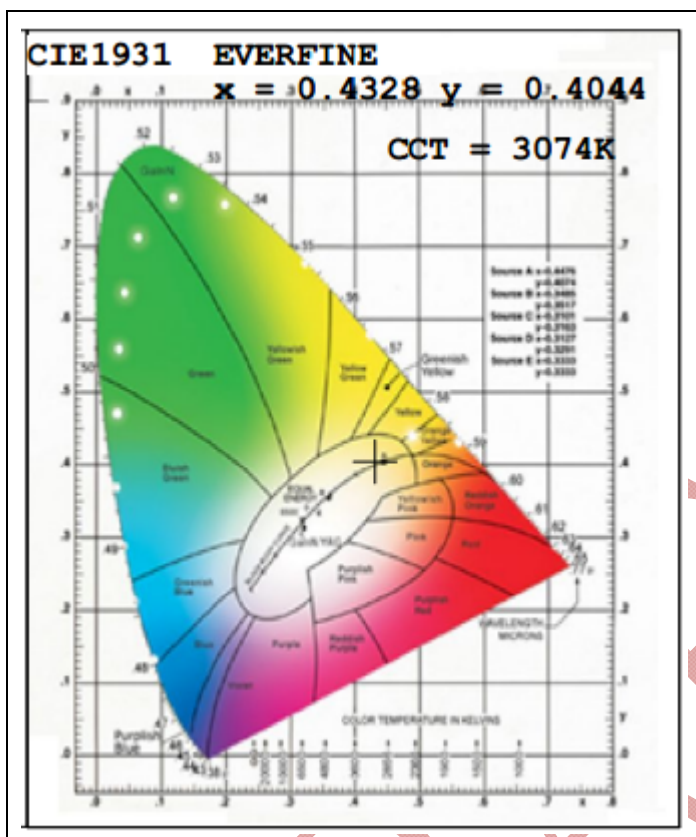
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Chromaticity Diagram



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Zonal Lumen Tabulation

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Luminaire
0-30	2,293.5	36.5%	36.5%
0-40	3,784.1	60.2%	60.3%
0-60	6,072.1	96.7%	96.7%
60-90	192.8	3.1%	3.1%
70-100	20.7	0.3%	0.3%
90-120	1.9	0%	0%
0-90	6,264.9	99.7%	99.8%
90-180	15.5	0.2%	0.2%
0-180	6,280.4	100%	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	276.4	4.4%	90-100	0.0	0%
10-20	799.7	12.7%	100-110	0.4	0%
20-30	1,217.3	19.4%	110-120	1.4	0%
30-40	1,490.7	23.7%	120-130	2.5	0%
40-50	1,461.6	23.3%	130-140	3.1	0%
50-60	826.3	13.2%	140-150	3.1	0%
60-70	172.1	2.7%	150-160	2.6	0%
70-80	17.6	0.3%	160-170	1.7	0%
80-90	3.1	0.0%	170-180	0.7	0%

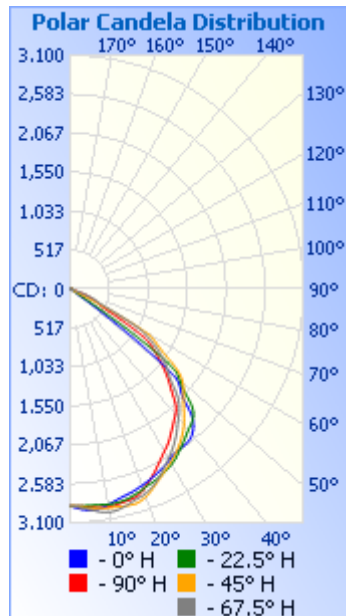
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Photometric Data



Illuminance Plots

Illuminance at a Distance			
	Center Beam fc	Beam Width	
17.0ft	9.99 fc	38.3 ft	41.6 ft
34.0ft	2.50 fc	76.7 ft	83.3 ft
51.0ft	1.11 fc	115.0 ft	124.9 ft
68.0ft	0.62 fc	153.3 ft	166.6 ft
85.0ft	0.40 fc	191.6 ft	208.2 ft
102.0ft	0.28 fc	230.0 ft	249.9 ft
■ Vert. Spread: 96.8° ■ Horiz. Spread: 101.5°			

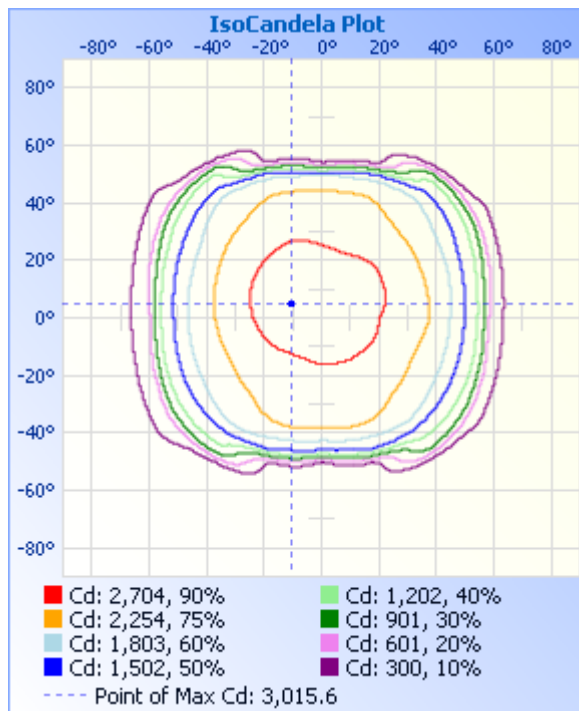
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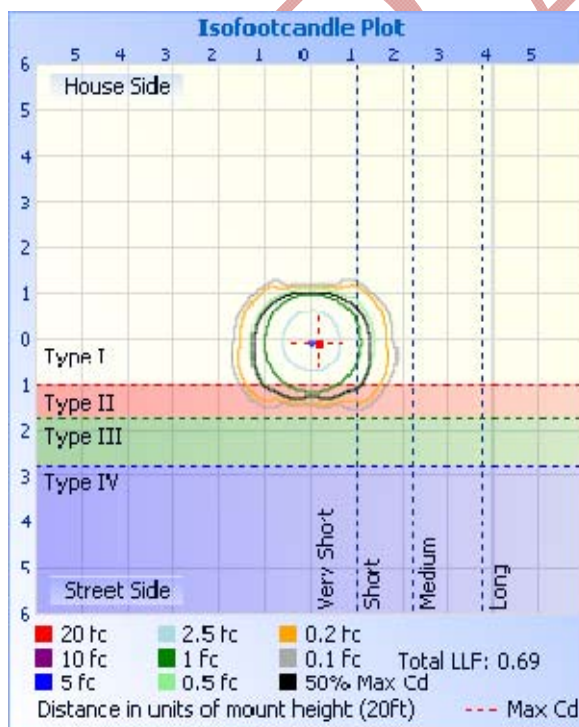
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ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	2888	2888	2888	2888	2888	2888	2888	2888	2888	2888	2888	2888	2888	2888	2888	2888	2888
1	2906	2890	2893	2894	2887	2877	2875	2882	2871	2884	2883	2889	2894	2900	2902	2895	2906
2	2923	2892	2900	2903	2889	2871	2866	2872	2854	2880	2880	2897	2902	2913	2915	2897	2923
3	2936	2893	2908	2917	2893	2870	2861	2862	2840	2874	2877	2906	2908	2924	2926	2896	2936
4	2947	2892	2917	2933	2902	2873	2859	2851	2833	2866	2873	2913	2911	2931	2936	2895	2947
5	2953	2891	2927	2948	2913	2874	2859	2837	2827	2856	2871	2917	2915	2936	2944	2897	2953
6	2957	2895	2935	2963	2920	2874	2859	2821	2823	2841	2869	2917	2917	2941	2950	2901	2957
7	2955	2898	2941	2981	2929	2875	2858	2804	2816	2827	2867	2918	2919	2941	2953	2906	2955
8	2946	2900	2945	2997	2937	2872	2854	2789	2809	2812	2865	2915	2919	2937	2952	2910	2946
9	2931	2903	2950	3010	2941	2871	2848	2774	2799	2798	2861	2908	2913	2930	2946	2913	2931
10	2915	2909	2955	3016	2942	2873	2838	2760	2788	2786	2853	2896	2904	2921	2938	2913	2915
11	2899	2913	2960	3015	2942	2873	2824	2747	2775	2775	2841	2882	2893	2912	2928	2914	2899
12	2881	2913	2965	3009	2937	2873	2807	2736	2764	2761	2828	2862	2880	2900	2917	2912	2881
13	2867	2909	2972	2999	2930	2866	2784	2727	2750	2747	2808	2840	2866	2888	2908	2907	2867
14	2854	2904	2978	2986	2923	2854	2756	2716	2736	2736	2785	2818	2848	2876	2897	2902	2854
15	2843	2898	2982	2971	2918	2836	2730	2704	2719	2722	2759	2797	2829	2866	2885	2893	2843
16	2834	2887	2985	2953	2914	2817	2704	2690	2700	2707	2734	2778	2807	2855	2872	2882	2834
17	2823	2874	2987	2937	2908	2794	2681	2673	2680	2691	2709	2759	2779	2845	2855	2865	2823
18	2811	2862	2978	2926	2895	2769	2658	2653	2660	2676	2684	2737	2750	2835	2841	2844	2811
19	2797	2850	2964	2917	2873	2739	2640	2632	2643	2662	2662	2709	2723	2819	2826	2823	2797
20	2785	2833	2944	2903	2843	2705	2625	2611	2624	2645	2642	2683	2697	2796	2814	2800	2785
21	2772	2818	2919	2885	2810	2671	2611	2590	2610	2627	2622	2656	2674	2774	2803	2775	2772
22	2759	2806	2888	2863	2776	2639	2598	2570	2598	2609	2603	2629	2654	2750	2791	2751	2759
23	2745	2797	2858	2839	2742	2609	2584	2551	2586	2590	2586	2602	2635	2723	2777	2726	2745
24	2730	2786	2828	2812	2707	2584	2569	2532	2575	2570	2568	2576	2617	2694	2758	2701	2730
25	2715	2772	2797	2781	2673	2560	2551	2517	2564	2553	2547	2548	2594	2667	2729	2677	2715
26	2701	2759	2767	2747	2636	2539	2532	2508	2552	2533	2522	2517	2569	2636	2696	2656	2701
27	2683	2745	2741	2712	2601	2512	2510	2502	2541	2515	2497	2485	2538	2601	2659	2637	2683
28	2668	2730	2717	2678	2564	2484	2485	2496	2528	2498	2470	2454	2505	2566	2622	2617	2668
29	2654	2712	2692	2646	2531	2453	2458	2493	2516	2485	2440	2425	2470	2531	2588	2599	2654

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30	2634	2695	2667	2612	2499	2422	2428	2489	2502	2474	2408	2393	2436	2493	2557	2582	2634
31	2614	2674	2642	2579	2473	2389	2396	2483	2486	2463	2376	2357	2402	2456	2526	2566	2614
32	2597	2651	2618	2545	2444	2354	2362	2474	2467	2449	2346	2320	2371	2426	2495	2546	2597
33	2586	2625	2591	2512	2412	2320	2330	2462	2449	2436	2317	2280	2348	2397	2465	2527	2586
34	2581	2599	2560	2476	2376	2285	2300	2446	2429	2420	2289	2236	2328	2369	2435	2507	2581
35	2577	2573	2531	2438	2339	2243	2273	2426	2408	2403	2259	2193	2307	2342	2404	2484	2577
36	2575	2546	2500	2402	2304	2199	2249	2403	2376	2381	2228	2151	2286	2312	2368	2463	2575
37	2572	2520	2466	2360	2271	2155	2226	2374	2327	2354	2196	2112	2263	2280	2334	2440	2572
38	2565	2494	2432	2317	2237	2115	2204	2336	2233	2316	2161	2079	2231	2245	2298	2420	2565
39	2551	2469	2394	2277	2207	2078	2177	2281	2103	2260	2122	2047	2189	2209	2264	2399	2551
40	2525	2447	2352	2243	2179	2047	2149	2195	1961	2168	2079	2010	2124	2173	2228	2379	2525
41	2493	2427	2310	2208	2149	2017	2116	2075	1863	2040	2035	1964	2037	2138	2187	2365	2493
42	2453	2409	2265	2171	2106	1987	2078	1944	1801	1912	1987	1904	1948	2099	2147	2348	2453
43	2400	2387	2218	2129	2044	1950	2036	1841	1747	1820	1933	1831	1873	2047	2104	2328	2400
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46	2087	2262	2097	1948	1848	1786	1870	1669	1537	1639	1730	1642	1708	1828	1975	2196	2087
47	2023	2162	2064	1864	1794	1735	1794	1610	1251	1574	1640	1587	1651	1760	1939	2092	2023
48	1971	2051	2032	1794	1737	1686	1699	1523	885	1465	1527	1531	1590	1697	1906	1984	1971
49	1922	1968	1997	1738	1680	1635	1584	1294	529	1222	1412	1472	1525	1639	1872	1916	1922
50	1835	1911	1960	1695	1619	1578	1476	968	234	889	1322	1409	1459	1583	1837	1857	1835
51	1554	1855	1916	1652	1557	1517	1393	620	124	548	1256	1344	1394	1531	1794	1797	1554
52	1166	1796	1859	1606	1495	1452	1326	317	104	275	1200	1278	1336	1482	1738	1708	1166
53	753	1624	1783	1553	1435	1388	1263	167	92	158	1142	1210	1279	1432	1655	1446	753
54	388	1291	1683	1495	1377	1322	1197	140	83	136	1080	1144	1222	1381	1547	1073	388
55	180	894	1568	1434	1321	1258	1128	124	75	122	1011	1078	1120	1327	1454	678	180
56	147	497	1475	1368	1259	1192	1045	112	68	111	897	975	935	1263	1379	332	147
57	133	214	1406	1302	1163	1120	858	102	62	100	670	798	737	1192	1311	163	133
58	124	143	1344	1236	981	1012	592	91	53	90	406	603	558	1113	1245	137	124
59	115	125	1282	1168	782	834	322	81	44	79	165	449	461	961	1159	124	115
60	107	115	1210	1091	598	642	121	69	37	64	72	383	411	765	943	115	107
61	99	107	1005	940	501	488	81	55	33	49	59	338	369	566	643	106	99

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62	87	99	707	752	457	428	70	43	29	39	53	294	331	419	330	99	87
63	72	92	377	566	421	385	62	34	26	31	47	248	295	366	116	91	72
64	57	83	146	454	386	346	55	29	24	27	40	208	264	329	83	78	57
65	44	69	95	408	350	307	46	25	22	24	33	178	230	297	76	63	44
66	34	54	83	372	318	273	36	22	20	21	27	152	201	265	68	48	34
67	28	41	73	338	288	242	29	20	19	19	23	128	172	232	60	35	28
68	24	31	63	302	259	210	24	18	17	18	21	102	143	198	50	27	24
69	20	25	51	267	225	178	21	17	16	16	19	50	78	166	39	22	20
70	18	21	39	230	194	134	19	16	15	15	17	21	23	138	28	18	18
71	16	18	29	197	84	28	17	15	14	14	15	18	18	39	21	16	16
72	14	16	22	134	23	19	15	14	13	13	14	16	16	17	16	13	14
73	13	14	18	27	18	17	14	13	12	12	13	15	15	15	14	12	13
74	11	12	15	17	17	15	13	11	11	11	12	14	14	14	12	11	11
75	10	11	13	15	15	14	12	10	10	10	11	13	13	12	10	10	10
76	9	10	11	14	14	13	11	9	9	9	10	12	12	11	9	9	9
77	8	9	10	13	13	12	10	8	8	8	9	11	11	10	8	8	8
78	8	8	9	11	12	11	9	7	7	7	8	10	10	9	7	7	8
79	7	7	8	10	10	10	8	7	6	6	6	9	9	8	6	6	7
80	6	7	7	9	9	9	6	6	5	5	5	8	8	7	6	6	6
81	6	6	6	8	8	8	5	5	4	4	4	7	7	6	5	5	6
82	5	5	5	7	7	7	4	3	3	3	3	5	6	5	4	4	5
83	4	5	4	6	7	6	3	3	3	3	2	4	5	4	4	4	4
84	4	4	4	5	6	4	2	3	3	3	2	2	3	3	3	3	4
85	3	3	3	4	4	3	2	2	3	2	2	1	2	2	2	2	3
86	2	2	3	3	3	1	1	2	3	2	1	1	1	1	2	1	2
87	1	1	2	2	2	1	1	2	2	2	1	0	0	1	1	1	1
88	1	1	1	1	0	0	1	2	1	1	1	0	0	0	1	1	1
89	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	1
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2.2 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2014-09-15	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71352		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
140709-30	120.0	60	0.6626	78.80	0.9910	8.83
	277.0	60	0.3019	79.98	0.9564	13.76

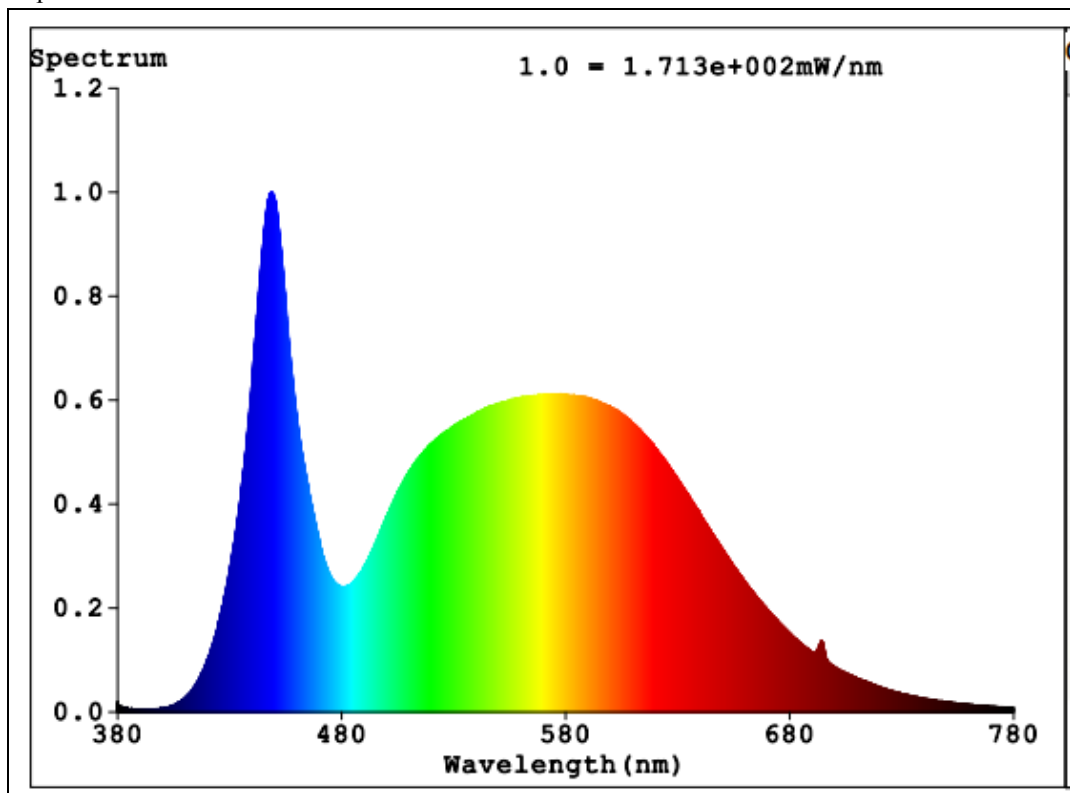
Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	84.1
R9	21
CCT (K)	5191
Chromaticity (x, y)	x=0.3399 y=0.3461
Chromaticity (u', v')	u'=0.2100 v'=0.4812
Duv	-0.0006
Total Luminous (lm)	6585.6
Luminous Efficacy (lm/W)	83.57

Special Color Rendering Indices			
R1	84	R9	21
R2	87	R10	69
R3	89	R11	85
R4	85	R12	66
R5	85	R13	84
R6	83	R14	94
R7	87	R15	80
R8	73	--	--

Spectral Power Distribution

Spectral Power Distribution:



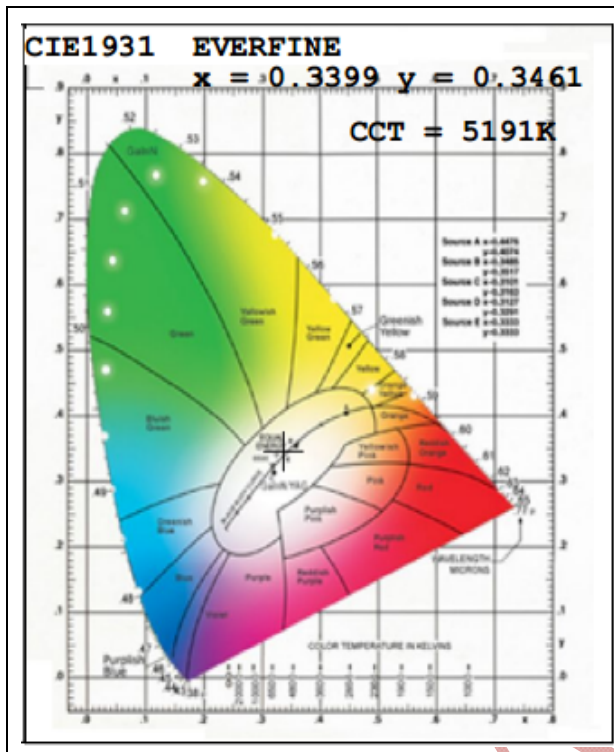
Laboratory: Standard-Tech Co. Ltd Testing Center
NVLAP CODE: 201011-0

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Chromaticity Diagram



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3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2014-07-01	2015-06-30
ST-R-331	Spectral analysis system HAAS-2000	2014-07-01	2015-06-30
D204	Standard Lamp	2014-07-01	2015-06-30
PF2010	Power Meter for Integrating Sphere	2014-07-01	2015-06-30
EE-09	Goniophotometer system	2014-07-01	2015-06-30
D908S	Standard Lamp	2014-07-01	2015-06-30
PF210	Power Meter for Goniophotometer	2014-07-01	2015-06-30
ST-R-181A	Temperature Tester	2014-07-01	2015-06-30

******* END OF DATASHEET PACKAGE *******

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