Dimming:
0-10V/PWM/VR

71355A
100W LED Floodlight
Trunnion Mount

RoHS

QPL ID #
PL4986I8PBMB

		Model:	71355A
OVERALL LAMP PARAMETERS		Input Voltage	100-277AC 50/60HZ
		Input Current	1.5A MAX
		Input Power	100W
		Power Factor	PF≥0.90
		Luminance	12316 LM
		Luminous Efficiency	122 LM/W
		CRI	>80
		Beam Angle	90 x 120°
		Main Structure	Aluminium + Tempered Glass
LED DRIVER		Output Voltage	42V DC
		Output Current	2.28A
		Driver Efficiency	89%
LED		LED Manufacturer	Phillips
		LED Type	LumiLED 3030
		LED Quantity	18 PCS
		LED Efficacy	150 Lm/Watt
		Color Temperature	5000K
Photocell		-	Not Included
LIFESPAN & ENVIRONMENT		Lifespan	50,000 Hrs.
		Warranty	5 Years
		IP RatingIP	IP65 Wet Locations
		Operating Temperature	-40F - +131F
		Storage Temperature.Humidity	-40℃—+80℃ , 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 dimensional drawing
		Net Weight	16.94 Lbs
		Packing Size	inner box: \ master carton: L 17" X W 12.5" X H 9.33"
		Q'ty / Carton	1PCS
		Volume	1.15Cbm/carton

LM-79-08 Test Report

For

Morris Products Inc.

53 Carey Rd. Queensbury, NY 12804

Architectural Flood and Spot Luminaires

Model name(s): 71355A,71144A, 71145A

Representative (Tested) Model: 71355A

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

Test & Report By:

Johnson Sun

Engineer: Johnson Sun

Update: Nov.16, 2016

Review By:

Tommy Liang

Manager: Tommy Liang

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

1.1 Product Information:

Organization Name	Morris Products Inc.	
Brand Name	MORRIS	
Model Number	71355A	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Architectural Flood and Spot Luminaires	
Rated Voltage / Frequency	100 -277Vac, 50/60 Hz	
Nominal Power	100W	
Rated Initial Lamp Lumen	--	
Declared CCT	5000K	
LED Manufacturer	Philips Lumileds	
LED Model	L130-2780003000W21	
Sample Number	GZE161105-BU1(4000K),BU2(5000K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Photo

1.2 Test Specifications:

Date of Receipt	: Nov.11,2016
Date of Test	: Nov.12,2016
Test item	1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Electrical Parameters
Reference Standard	1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products 3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 4. CIE 15-2004 Technical Report Colorimetry 5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source 6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

1.3 Test Methods

1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at 25 °C ±1 °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 or rated 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) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25 ºC ±1 ºC. 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 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at 25 ºC ±1 ºC. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

2.1 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-12	Test Ambient:	25.2 ℃
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71355A		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161105-BU1	120.0	60	0.8400	99.37	0.9858	3.45
	277.0	60	0.4042	100.8	0.9002	9.10
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method :

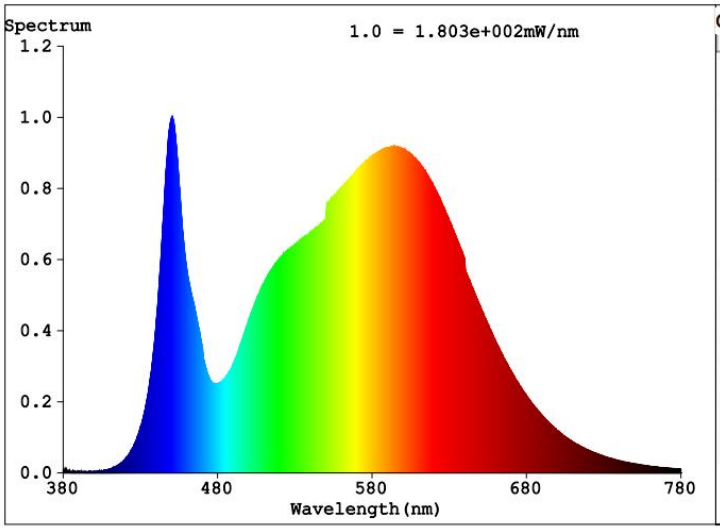
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	3908
Duv	0.0010
Chromaticity (x, y)	x=0.3853 y=0.3819
Chromaticity (u', v')	u'=0.2263 v'=0.5046
Color Rendering Index (CRI)	82.5
R9	7

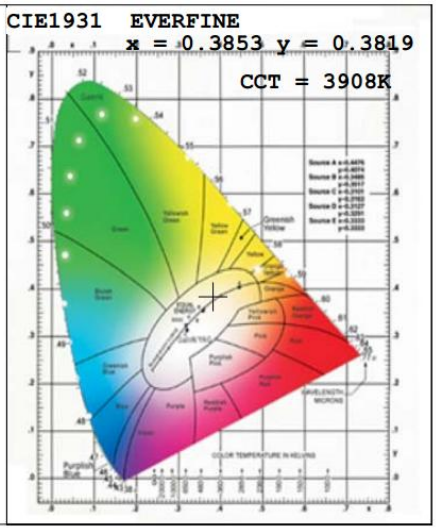
Special Color Rendering Indices			
R1	80	R9	7
R2	89	R10	73
R3	95	R11	80
R4	81	R12	61
R5	80	R13	82
R6	84	R14	97
R7	86	R15	74
R8	64	--	--

Photometric Measurement – Goniophotometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	120.0	277.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	11745	11667	>=1000 (-10%)	
Luminous Efficacy (lm/W)	118.19	115.74	Standard: >= 100(-3%)	Premium: >= 120(-3%)
Zonal lumens in the 0-90 °zone (%)	99.8	--	>=85(-3)	
Beam Angle ( )	100.4	--	--	
Center Beam Candle Power (cd)	4418	--	--	

Spectral Power Distribution & Chromaticity Diagram

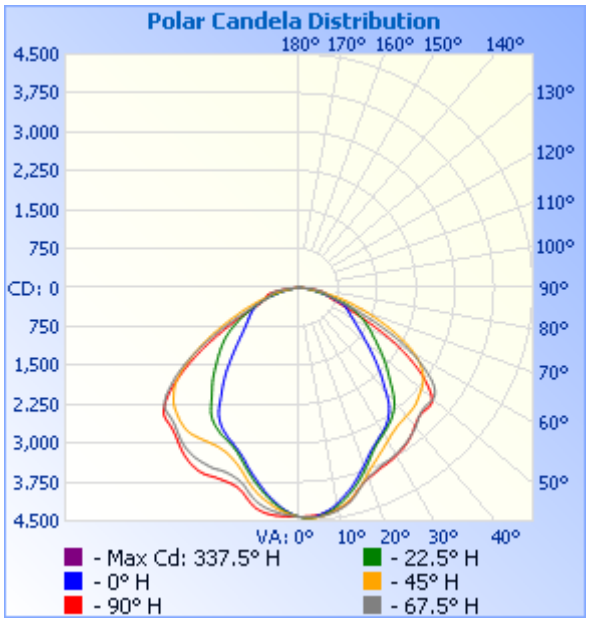


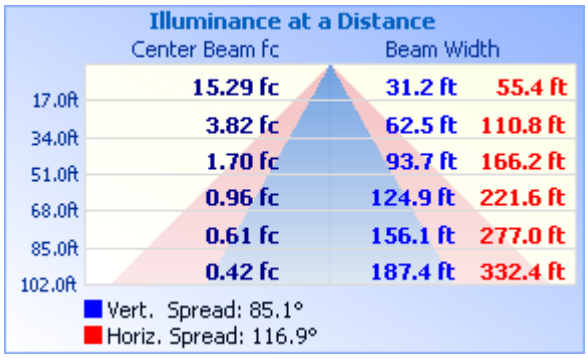


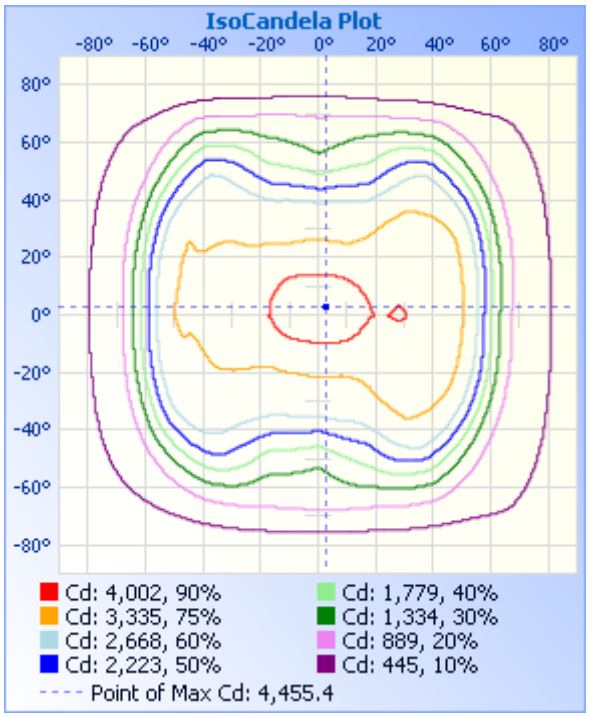
Zonal Lumen Tabulation

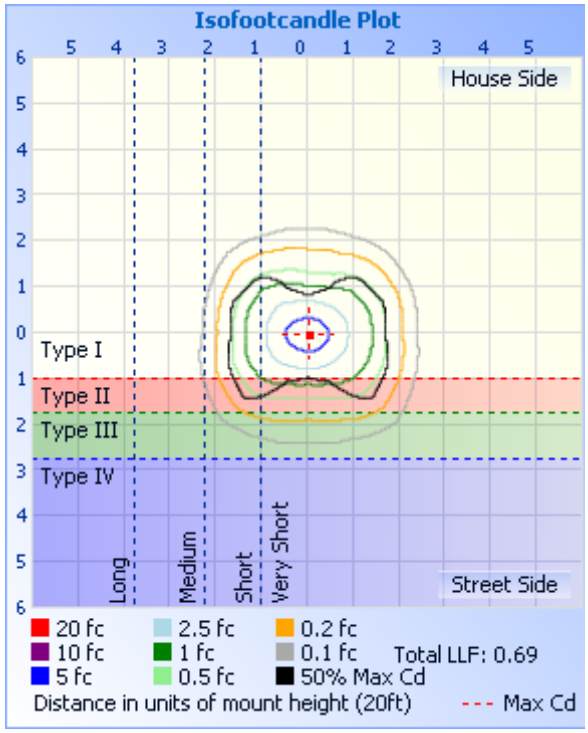
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	3,171.1	27%
0-40	5,248.7	44.7%
0-60	9,603.0	81.8%
60-90	2,116.3	18%
70-100	761.5	6.5%
90-120	6.0	0.1%
0-90	11,719.2	99.8%
90-180	23.9	0.2%
0-180	11,743.1	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	411.8	3.5%	90-100	0.9	0%
10-20	1,114.6	9.5%	100-110	1.8	0%
20-30	1,644.7	14.0%	110-120	3.3	0%
30-40	2,077.7	17.7%	120-130	4.2	0%
40-50	2,254.1	19.2%	130-140	4.2	0%
50-60	2,100.2	17.9%	140-150	3.6	0%
60-70	1,355.7	11.5%	150-160	3.0	0%
70-80	628.3	5.4%	160-170	2.0	0%
80-90	132.2	1.1%	170-180	0.8	0%


Polar Candela Distribution
180° 170° 160° 150° 140°
4,500
3,750
3,000
2,250
1,500
750
CD: 0
750
1,500
2,250
3,000
3,750
4,500
130°
120°
110°
100°
90°
80°
70°
60°
50°
VA: 0° 10° 20° 30° 40°
- Max Cd: 337.5° H
- 22.5° H
- 0° H
- 45° H
- 90° H
- 67.5° H


Illuminance at a Distance
Center Beam fc
Beam Width
17.0ft
34.0ft
51.0ft
68.0ft
85.0ft
102.0ft
15.29 fc 31.2 ft 55.4 ft
3.82 fc 62.5 ft 110.8 ft
1.70 fc 93.7 ft 166.2 ft
0.96 fc 124.9 ft 221.6 ft
0.61 fc 156.1 ft 277.0 ft
0.42 fc 187.4 ft 332.4 ft
Vert. Spread: 85.1°
Horiz. Spread: 116.9°


IsoCandela Plot
-80° -60° -40° -20° 0° 20° 40° 60° 80°
80°
60°
40°
20°
0°
-20°
-40°
-60°
-80°
Cd: 4,002, 90%
Cd: 1,779, 40%
Cd: 3,335, 75%
Cd: 1,334, 30%
Cd: 2,668, 60%
Cd: 889, 20%
Cd: 2,223, 50%
Cd: 445, 10%
Point of Max Cd: 4,455.4


Isofootcandle Plot
5 4 3 2 1 0 1 2 3 4 5
House Side
Type I
Type II
Type III
Type IV
Long
Medium
Short
Very Short
Street Side
20 fc
10 fc
5 fc
2.5 fc
1 fc
0.5 fc
0.2 fc
0.1 fc
50% Max Cd
Total LLF: 0.69
Distance in units of mount height (20ft)
Max Cd

γ (DEG) \ C (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
0	4418	4418	4418	4418	4418	4418	4418	4418	4418	4418	4418	4418	4418	4418	4418	4418
5	4417	4447	4430	4421	4402	4426	4438	4429	4397	4339	4286	4244	4232	4259	4303	4363
10	4363	4380	4322	4263	4223	4270	4331	4354	4329	4209	4075	3978	3954	4002	4112	4253
15	4115	4144	4090	4001	3960	4023	4130	4159	4128	3990	3811	3684	3645	3707	3843	3990
20	3994	3929	3787	3693	3646	3720	3833	3897	3910	3747	3515	3391	3369	3414	3579	3841
25	4009	3907	3600	3403	3384	3424	3595	3773	3806	3615	3300	3216	3207	3258	3458	3851
30	4010	3957	3507	3250	3212	3247	3411	3710	3737	3516	3176	3058	3027	3147	3449	3847
35	3893	3897	3508	3100	3005	3093	3279	3623	3636	3428	3100	2797	2639	2956	3492	3787
40	3711	3769	3503	2813	2586	2849	3221	3490	3470	3328	3010	2392	2214	2608	3474	3638
45	3611	3598	3393	2428	2138	2458	3174	3346	3379	3211	2839	2037	1797	2312	3357	3513
50	3329	3517	3218	2098	1729	2123	3064	3356	3337	3207	2677	1700	1466	2021	3147	3373
55	2630	3116	2979	1812	1417	1805	2913	3113	2851	2945	2455	1434	1244	1755	2731	2817
60	1769	2402	2494	1585	1188	1548	2572	2497	2095	2322	1993	1221	1103	1430	2101	2006
65	1055	1563	1862	1314	1033	1297	2008	1683	1253	1510	1413	998	968	1067	1463	1203
70	724	929	1248	983	841	1000	1390	952	733	847	904	765	772	759	941	750
75	646	652	736	553	517	601	845	593	552	540	537	474	446	470	583	586
80	497	502	306	264	278	257	354	445	452	391	257	211	160	217	288	487
85	169	183	108	22.4	11.4	41.2	119	190	165	144	36.5	3.64	3.53	3.81	42.1	168
90	1.80	1.91	1.29	0.64	0.48	0.83	1.39	1.96	1.22	1.27	0.69	0.11	0.21	0.32	0.79	1.11
95	1.01	1.06	0.80	0.42	0.26	0.43	0.96	1.11	0.90	0.85	0.75	0.27	0.21	0.48	0.96	1.00
100	1.06	1.32	1.05	0.53	0.48	0.43	1.22	1.16	1.06	1.27	1.43	0.74	0.48	0.90	1.59	1.33
105	2.17	2.48	1.90	0.69	0.63	0.95	2.02	2.11	1.76	2.13	2.13	1.17	0.85	1.28	2.50	2.44
110	3.55	3.71	2.75	1.37	1.32	1.91	3.13	3.44	2.76	3.18	2.86	1.75	1.27	1.71	3.03	3.50
115	4.72	4.72	3.44	1.64	1.69	2.23	4.03	4.86	3.71	4.14	3.66	1.96	1.96	2.18	3.77	4.28
120	5.72	5.30	4.19	2.48	2.12	2.86	5.25	5.71	4.56	4.93	4.45	2.76	2.18	2.88	4.19	4.49
125	6.62	6.25	4.66	3.65	3.70	4.04	5.47	6.66	5.30	5.46	4.56	3.66	3.39	3.72	4.19	4.97
130	7.21	6.46	4.51	4.18	3.97	4.84	5.57	7.19	6.47	5.88	4.72	4.29	4.13	4.41	4.67	5.29
135	7.26	6.46	4.56	4.77	4.66	5.42	5.63	7.09	6.52	5.83	4.71	4.98	4.93	5.00	4.45	5.34
140	7.10	6.41	4.72	5.24	4.98	5.85	5.57	7.09	6.78	6.31	4.66	5.51	5.30	5.10	4.30	5.82
145	6.84	5.30	4.98	5.56	5.03	5.85	4.94	6.56	6.89	6.25	4.88	5.99	5.40	5.69	4.89	5.97
150	6.84	5.45	6.30	5.93	6.19	6.27	5.83	6.56	6.78	6.62	5.88	6.30	6.36	6.33	6.48	6.35
155	6.20	5.99	7.21	6.89	6.62	6.54	6.84	6.77	6.57	6.78	6.52	6.52	6.41	6.43	6.48	6.45
160	5.99	6.30	7.26	7.10	6.99	6.80	7.22	6.98	6.36	6.46	6.79	6.73	6.63	6.43	6.74	6.66
165	6.46	6.31	7.32	7.31	7.15	7.13	7.27	6.77	7.05	6.57	7.00	7.10	6.94	6.97	7.06	7.14
170	7.36	7.31	8.48	8.21	8.09	8.34	8.86	6.98	8.16	8.01	8.22	9.01	9.29	9.21	8.92	9.15
175	7.84	8.11	9.12	8.74	9.69	8.99	9.44	7.35	8.37	8.27	8.37	9.11	9.63	10.0	9.18	9.62
180	7.85	8.27	8.48	8.69	9.54	8.99	9.18	7.67	7.90	7.84	8.00	8.53	8.48	9.57	8.86	9.09

BUG Rating: B3-U2-G1

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	1625.9	13.8
FM - Front-Medium(30-60)	3333	28.4
FH - Front-High(60-80)	1079.3	9.2
FVH - Front-Very High(80-90)	75.79	0.6
Total Forward Light	6126.2	52.2
BL - Back-Low(0-30)	1545.3	13.2
BM - Back-Medium(30-60)	3100.2	26.4
BH - Back-High(60-80)	904.64	7.7
BVH - Back-Very High(80-90)	56.446	0.5
Total Back Light	5618.3	47.8
UL - Uplight-Low(90-100)	0.94594	0.0
UH - Uplight-High(100-180)	23.036	0.2
Total Up Light	23.982	0.2

BUG(Back,Up,Glare) Rating	B3-U2-G1

Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	5606.6	11.718	5618.3
Street Side	6114	12.264	6126.2

2.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-12	Test Ambient:	25.2 ºC
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71355A		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161105-BU2	120.0	60	0.8371	99.02	0.9858	3.49
	277.0	60	0.4026	100.4	0.9002	9.14
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method :

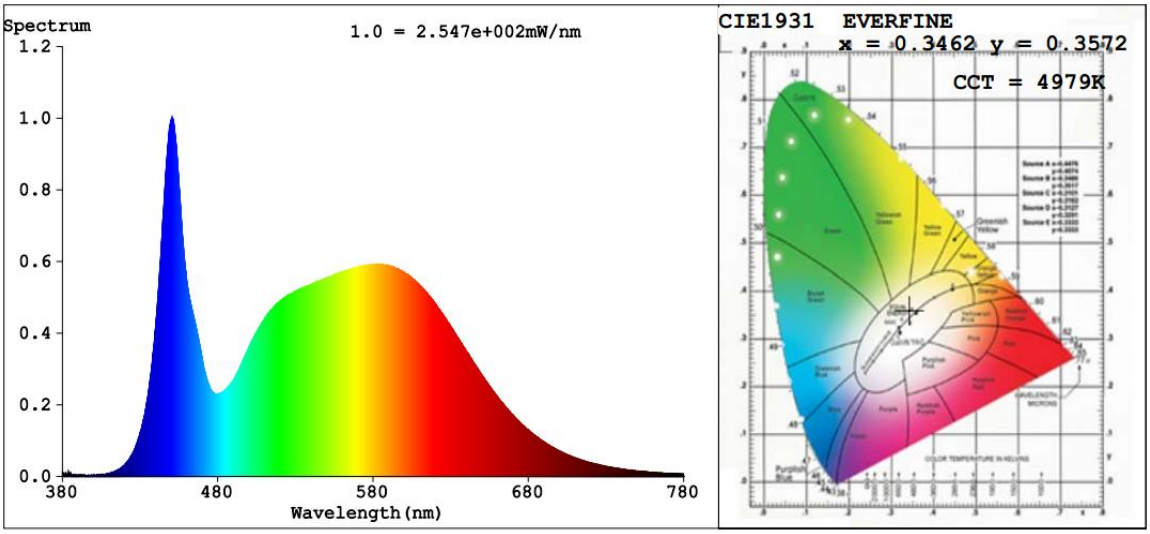
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	4979
Duv	0.0024
Chromaticity (x, y)	x=0.3462 y=0.3572
Chromaticity (u', v')	u'=0.2100 v'=0.4876
Color Rendering Index (CRI)	83.2
R9	11

Special Color Rendering Indices			
R1	81	R9	11
R2	88	R10	71
R3	93	R11	81
R4	82	R12	56
R5	81	R13	83
R6	83	R14	96
R7	88	R15	76
R8	69	--	--

Photometric Measurement – Sphere-Spectroradiometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	120.0	277.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	12316	12234	>=1000 (-10%)	
Luminous Efficacy (lm/W)	124.38	121.85	Standard: >= 100(-3%)	Premium: >= 120(-3%)

Spectral Power Distribution & Chromaticity Diagram



3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2016-07-01	2017-06-30
ST-R-331	Spectral analysis system HAAS-2000	2016-07-01	2017-06-30
D204	Standard Lamp	2016-07-01	2017-06-30
PF2010	Power Meter for Integrating Sphere	2016-07-01	2017-06-30
EE-09	Goniophotometer system	2016-07-01	2017-06-30
D908S	Standard Lamp	2016-07-01	2017-06-30
PF210	Power Meter for Goniophotometer	2016-07-01	2017-06-30
ST-R-181A	Temperature Tester	2016-07-01	2017-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

******** END OF REPORT ********

Dimensions： 71355A