

Dimming:
PWM/VR/0-10V



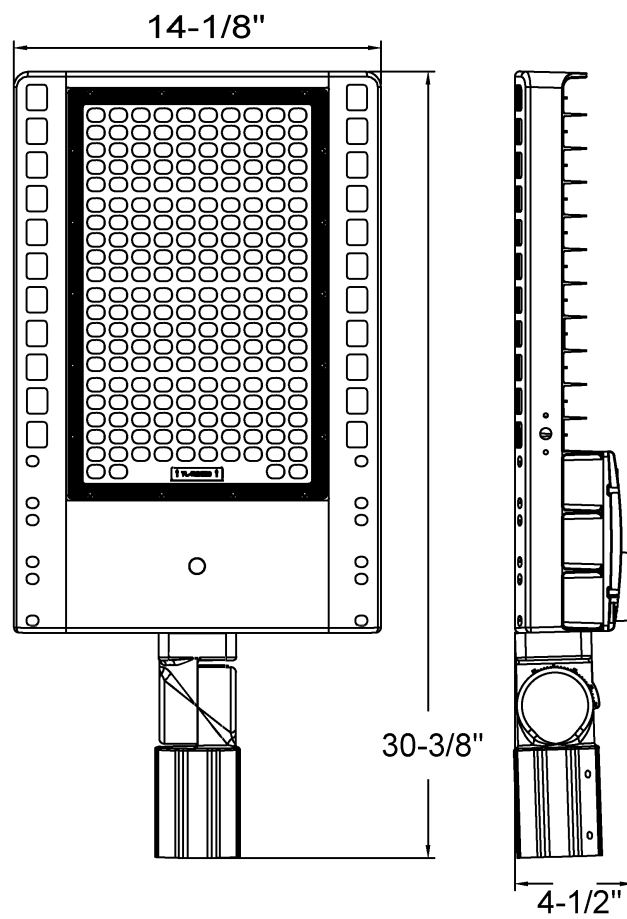
Cat# 71895
380W LED FlatPanel
Slipfitter Mount



QPL ID #
PL21D5Q1B95E

Model: 71895		
OVERALL LAMP PARAMETERS	Input Voltage	347-480 VAC 50/60HZ
	Input Current	2.0A Max
	Input Power	380W
	Power Factor	PF≥ 0.90
	Luminance	46000 LM
	Luminous Efficiency	120 LM/W
	CRI	>80
	Beam Angle	Type II 120x90°
	Main Structure	Aluminium + PC Lens
LED DRIVER	Output Voltage	36-60VDC
	Output Current	8.9A
	Driver Efficiency	88%
LED	LED Manufacturer	Philips
	LED Type	3030 LED
	LED Quantity	150 PCS
	LED Efficacy	150 LM/W
	Color Temperature	5000K
Photocell	-	Not Included
LIFESPAN & ENVIRONMENT	Lifespan	50,000+ Hrs.
	Warranty	5 Years
	IP Rating	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 dimension drawing
	Net Weight	KG
	Gross Weight	KG
	Packing Size	master carton:L*W*Hmm
	Q'ty / Carton	1PCS
	Volume	
	EPA Rating	2.33ft ²

Dimension:



LM-79-08 Test Report

For

Morris Products Inc.

53 Carey Rd. Queensbury, NY 12804

Architectural Flood and Spot Luminaires

Model name(s): 71892, 71895, 71898

Representative (Tested) Model: 71892

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.

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

Report Format Number STD/QR4909-A/2

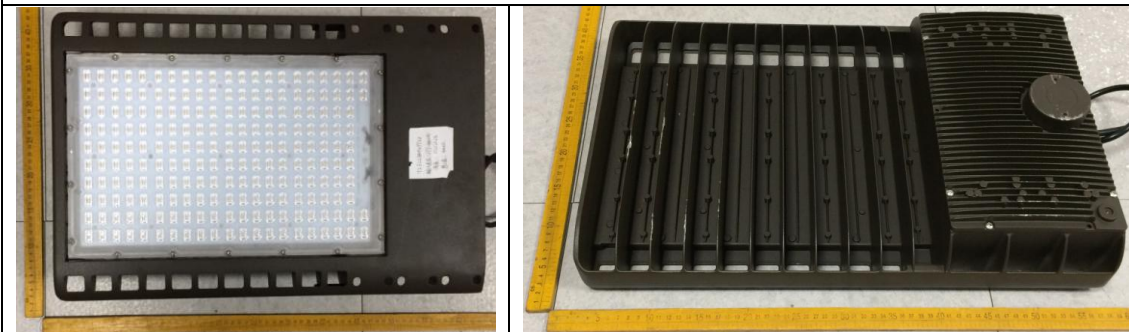
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<http://www.standard-tech.com>

1.1 Product Information:

Organization Name	Morris Products Inc.	
Brand Name	MORRIS	
Model Number	71892	
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	277 -480Vac, 50/60 Hz	
Nominal Power	380W	
Rated Initial Lamp Lumen	--	
Declared CCT	5000K	
LED Manufacturer	Philips Lumileds	
LED Model	L130-2780003000W21	
Sample Number	GZE161105-AM1(4000K),AM2(5700K)	
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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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 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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71892		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161105-AM1	277.0	60	1.391	378.1	0.9815	7.68
	480.0	60	0.8219	373.9	0.9478	11.29
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

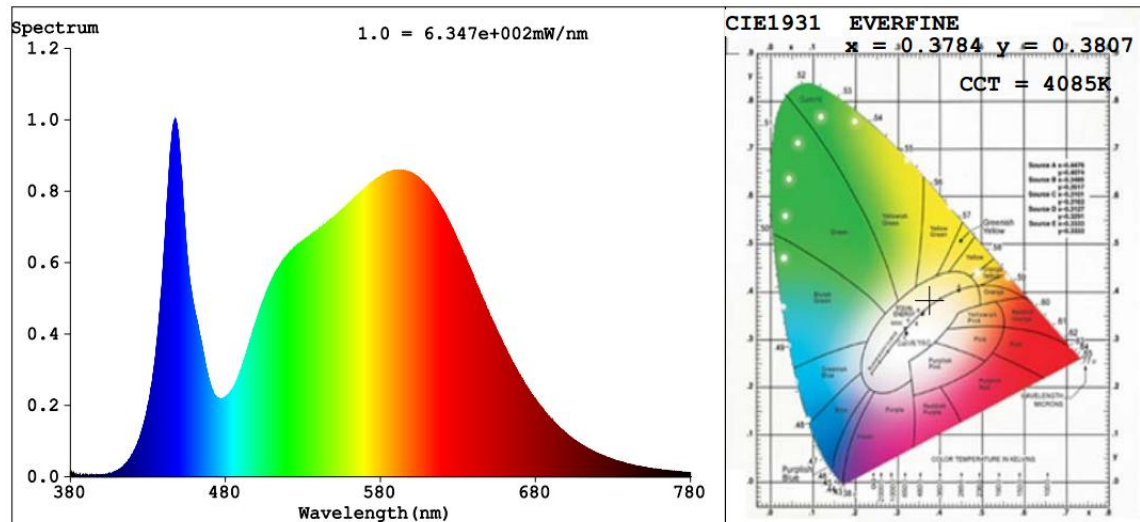
Chromaticity Measurement - Sphere-Spectroradiometer Method :

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	277.0	R1	81	R9	10
Frequency (Hz)	60	R2	87	R10	69
CCT (K)	4085	R3	92	R11	82
Duv	0.0024	R4	83	R12	62
Chromaticity (x, y)	x=0.3784 y=0.3807	R5	81	R13	82
Chromaticity (u', v')	u'=0.2222 v'=0.5030	R6	82	R14	96
Color Rendering Index (CRI)	82.4	R7	87	R15	75
R9	10	R8	66	--	--

Photometric Measurement – Goniophotometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	277.0	480.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	43365	44475	>=1000 (-10%)	
Luminous Efficacy (lm/W)	114.69	118.95	Standard: >= 100(-3%)	Premium: >= 120(-3%)
Zonal lumens in the 0-90 °zone (%)	100	--	>=85(-3)	
Beam Angle (°)	99.8	--	--	
Center Beam Candle Power (cd)	16046	--	--	

Spectral Power Distribution & Chromaticity Diagram



Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	11,639.3	26.8%
0-40	19,437.7	44.8%
0-60	35,040.8	80.8%
60-90	8,312.8	19.2%
70-100	3,499.8	8.1%
90-120	0	0%
0-90	43,353.7	100%
90-180	0	0%
0-180	43,353.7	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	1,490.0	3.4%	90-100	0	0%
10-20	4,052.8	9.3%	100-110	0	0%
20-30	6,096.4	14.1%	110-120	0	0%
30-40	7,798.4	18.0%	120-130	0	0%
40-50	8,296.4	19.1%	130-140	0	0%
50-60	7,306.8	16.9%	140-150	0	0%
60-70	4,813.0	11.1%	150-160	0	0%
70-80	2,751.4	6.3%	160-170	0	0%
80-90	748.4	1.7%	170-180	0	0%

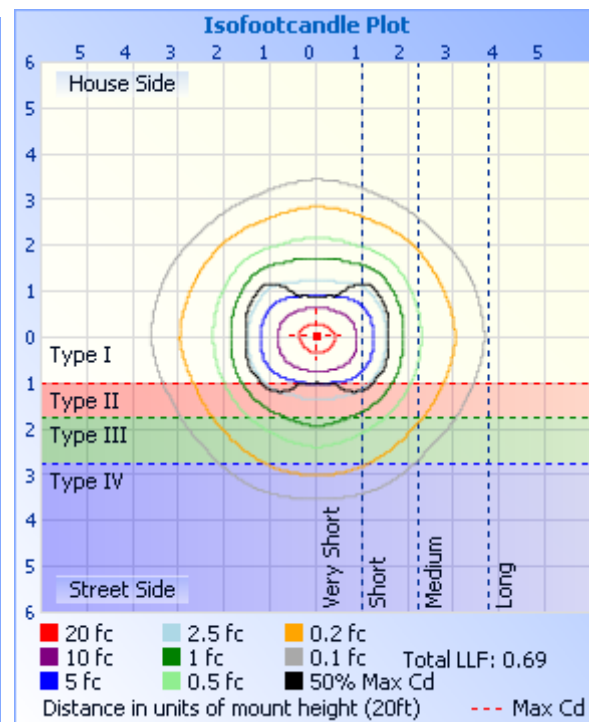
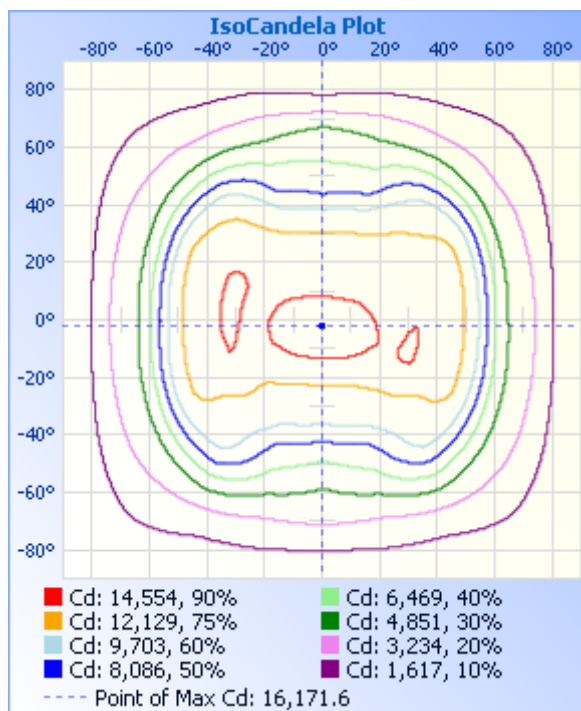
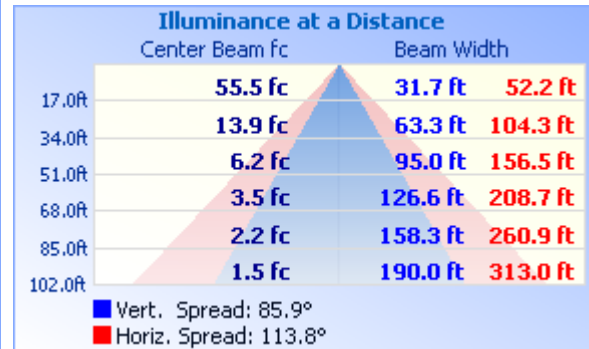
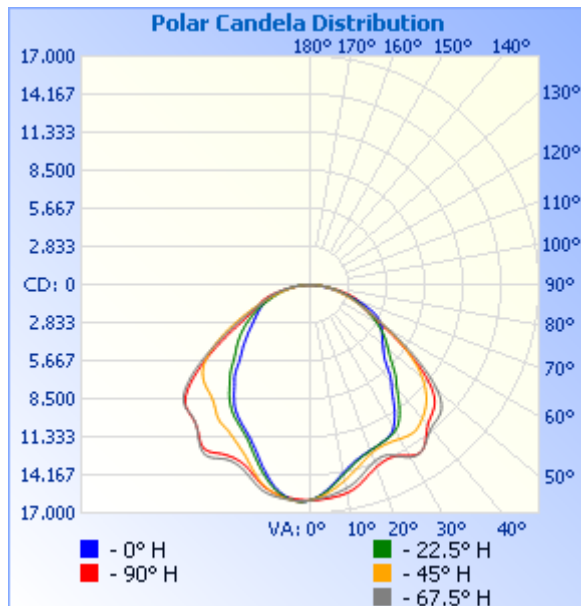


Table--1

UNIT: ×10cd

C (DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	
0	1605	1605	1605	1605	1605	1605	1605	1605	1605	1605	1605	1605	1605	1605	1605	1605	
5	1596	1573	1550	1533	1526	1534	1554	1580	1596	1610	1609	1607	1605	1607	1610	1609	
10	1572	1525	1467	1433	1421	1434	1480	1540	1574	1586	1562	1538	1525	1540	1571	1594	
15	1505	1448	1383	1355	1348	1357	1400	1472	1514	1525	1474	1413	1387	1419	1493	1542	
20	1428	1372	1320	1313	1310	1313	1334	1400	1443	1444	1352	1277	1254	1287	1376	1463	
25	1409	1358	1298	1289	1287	1289	1314	1400	1420	1405	1260	1183	1168	1194	1296	1439	
30	1443	1383	1293	1257	1235	1260	1326	1483	1470	1421	1200	1116	1096	1129	1241	1484	
35	1424	1384	1283	1142	1085	1159	1340	1475	1475	1437	1177	1030	985	1045	1201	1436	
40	1333	1330	1219	982	937	1002	1297	1398	1360	1337	1124	923	869	929	1124	1332	
45	1299	1313	1130	843	784	875	1221	1365	1300	1286	1083	801	723	807	1087	1302	
50	1175	1234	1019	727	707	758	1092	1241	1167	1222	1051	709	622	712	1042	1213	
55	916	995	861	647	652	674	900	968	908	1011	947	622	532	624	933	977	
60	646	701	656	564	609	575	672	684	638	734	761	526	463	527	747	713	
65	466	467	477	476	541	472	484	477	464	502	549	424	407	422	543	503	
70	388	333	341	379	414	373	344	355	395	371	369	324	341	321	370	375	
75	299	249	238	267	253	268	236	267	309	294	239	237	253	234	238	286	
80	166	158	148	163	133	167	145	164	178	197	146	162	157	158	143	180	
85	52.6	60.4	65.4	65.5	43.9	70.9	64.2	64.6	61.3	84.4	71.5	83.0	64.6	80.9	67.1	68.7	
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Laboratory: Standard-Tech Co. Ltd Testing Center

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BUG Rating: B5-U0-G3**IESNA Luminaire Flux Distribution Table:**

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	5808.9	13.4
FM - Front-Medium(30-60)	11923	27.5
FH - Front-High(60-80)	3792	8.7
FVH - Front-Very High(80-90)	353.17	0.8
Total Forward Light	21877	50.4

BL - Back-Low(0-30)	5831.6	13.4
BM - Back-Medium(30-60)	11488	26.5
BH - Back-High(60-80)	3772.6	8.7
BVH - Back-Very High(80-90)	395.12	0.9
Total Back Light	21488	49.6

UL - Uplight-Low(90-100)	0	0.0
UH - Uplight-High(100-180)	0	0.0
Total Up Light	0	0.0

BUG(Back,Up,Glare) Rating	B5-U0-G3
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	21488	0	21488
Street Side	21877	0	21877

2.2 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction QD25)*

Test date	2016-11-12	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71892		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161105-	277.0	60	1.393	378.9	0.9819	7.62
AM2	480.0	60	0.8233	374.7	0.9482	11.23
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

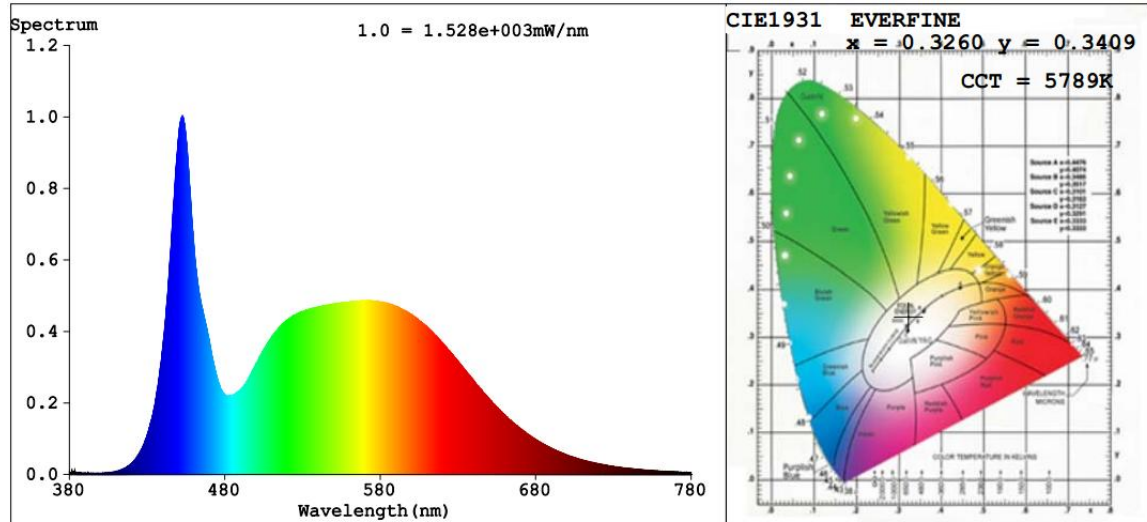
Chromaticity Measurement - Sphere-Spectroradiometer Method :

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	277.0	R1	82	R9	11
Frequency (Hz)	60	R2	88	R10	71
CCT (K)	5789	R3	91	R11	82
Duv	0.0028	R4	83	R12	58
Chromaticity (x, y)	x=0.3260 y=0.3409	R5	82	R13	84
Chromaticity (u', v')	u'=0.2025 v'=0.4765	R6	83	R14	95
Color Rendering Index (CRI)	83.5	R7	88	R15	78
R9	11	R8	70	--	--

Photometric Measurement – Sphere-Spectroradiometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	277.0	480.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	46894	48094	$\geq 1000 (-10\%)$	
Luminous Efficacy (lm/W)	123.76	128.35	Standard: $\geq 100(-3\%)$	Premium: $\geq 120(-3\%)$

Spectral Power Distribution & 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	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 *******

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