

## LM-79-08 Test Report

For

### ATG Electronics

(Brand Name: ATG Electronics)

10588 Monte Vista Ave, Montclair, CA 91763

## Outdoor Full-Cutoff Wall-Mounted Area Luminaires

Model name(s): WPGP-45-XX

Remark: "XX" refer to CCT as below:40=4000,50=5000,57=5700

Representative (Tested) Model: WPGP-45-40

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

Test & Report By:

*Garman Mo*

Engineer: Garman Mo

Date: Jun.26,2019

Review By:

*Johnson Sun*

Manager: Johnson Sun

Note: 1.The results contained in this report pertain only to the tested samples.

2.This report does not imply product certification, approval, or endorsement by A2LA, or any agency of the Federal Government.

## 1.1 Product Information:

Organization Name	ATG Electronics	
Brand Name	ATG Electronics	
Model Number	WPGP-45-XX	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Full-Cutoff Wall-Mounted Area Luminaires	
Rated Voltage / Frequency	120-277Vac, 50/60Hz	
Nominal Power	45W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K,5700K	
LED Manufacturer	LUXEON	
LED Model	LUXEON 3030 2D	
Sample Number	JAE190427-QC1(4000K)	
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	Apr.24,2019
Date of Test	Apr.28,2019
Test item	1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Electrical Parameters
Reference Standard	1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems

**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  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  horizontal intervals.

**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**

<b>Test date</b>	2019-04-28	<b>Test Ambient:</b>	25.1 ° C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	60
<b>Model Number</b>	WPGP-45-40	<b>Total Operating Time (min)</b>	90

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE190427-QC1	120.0	60	0.3692	44.05	0.9943	7.41
	277.0	60	0.1650	44.45	0.9728	10.75
<b>DLC Pass Criteria</b>					$\geq 0.9(-3\%)$	$\leq 20(+5)$

**Photometric Measurement – Goniophotometer Method(Test Distance: 26.000m):**

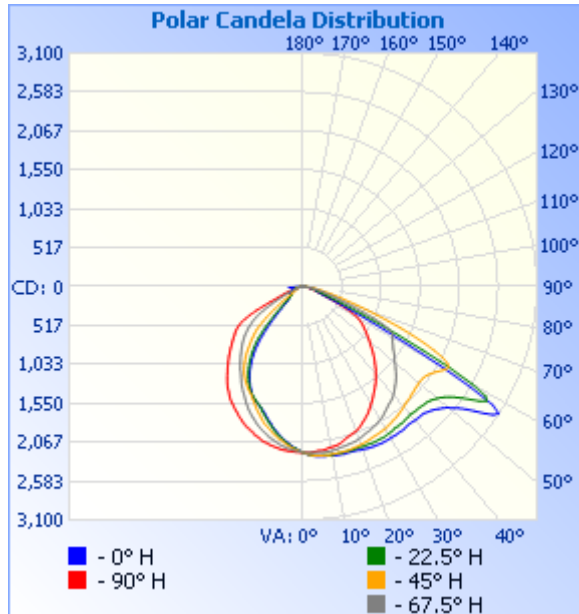
Parameter	Result		DLC V4.4 Pass Criteria	
Test Voltage (V)	120.0	277.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	5938.8	5962.5	$\geq 300 (-10\%)$	
Luminous Efficacy (lm/W)	134.82	134.14	Standard: $\geq 95(-3\%)$	Premium: $\geq 115(-3\%)$
Zonal lumens in the 0-90° zone (%)	99.7	--	$\geq 100(-3)$	
Zonal lumens in the 80-90° zone (%)	1.0	--	$\leq 10(+3)$	
Beam Angle (°)	97.3	--	--	
Center Beam Candle Power (cd)	2203	--	--	

## Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,680.9	28.3%
0-40	2,760.0	46.5%
0-60	5,002.1	84.2%
60-90	917.7	15.5%
70-100	254.1	4.3%
90-120	5.3	0.1%
0-90	5,919.8	99.7%
90-180	18.3	0.3%
0-180	5,938.1	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	207.1	3.5%	90-100	1.5	0%
10-20	585.1	9.9%	100-110	1.5	0%
20-30	888.6	15.0%	110-120	2.3	0%
30-40	1,079.1	18.2%	120-130	2.9	0%
40-50	1,108.7	18.7%	130-140	3.0	0.1%
50-60	1,133.4	19.1%	140-150	2.7	0%
60-70	665.1	11.2%	150-160	2.2	0%
70-80	193.0	3.2%	160-170	1.5	0%
80-90	59.7	1.0%	170-180	0.6	0%

## Photometric Data



**Illuminance at a Distance**

	Center Beam fc	Beam Width	
17.0ft	7.62 fc	33.3 ft	29.7 ft
34.0ft	1.91 fc	66.7 ft	59.4 ft
51.0ft	0.85 fc	100.0 ft	89.2 ft
68.0ft	0.48 fc	133.3 ft	118.9 ft
85.0ft	0.30 fc	166.6 ft	148.6 ft
102.0ft	0.21 fc	200.0 ft	178.3 ft

■ Vert. Spread: 88.9°  
■ Horiz. Spread: 82.3°

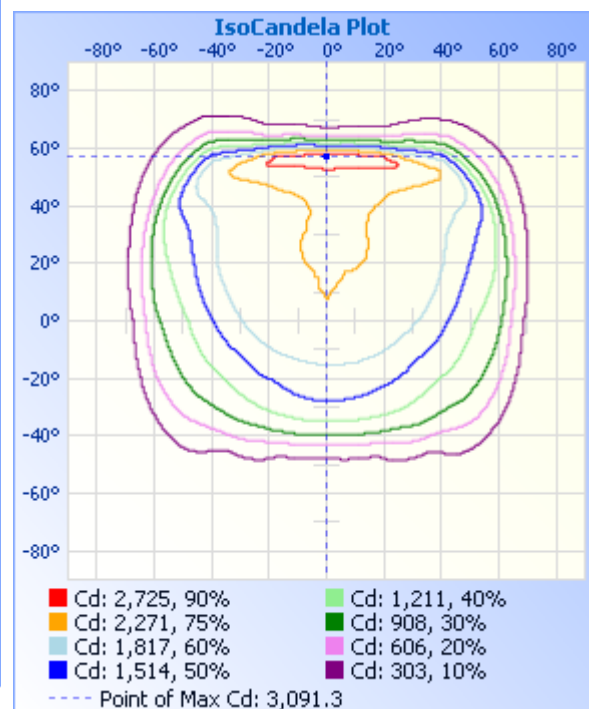
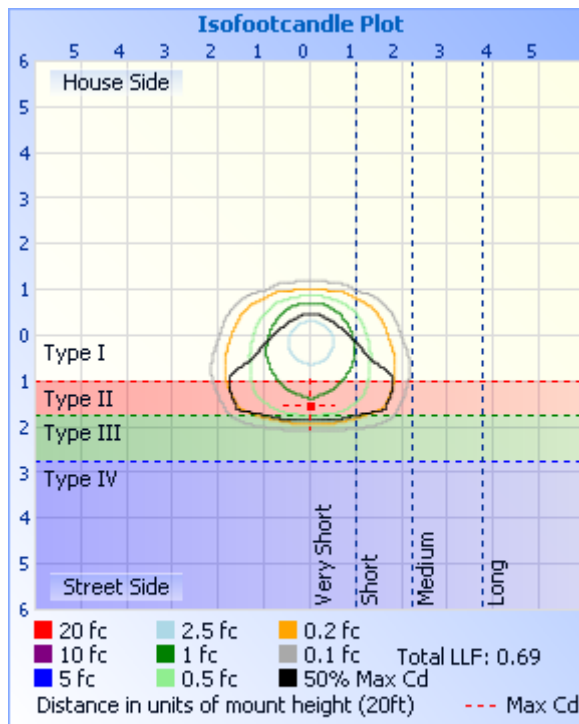


Table--1 UNIT: °C

C (DEG) Y (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	2203	2203	2203	2203	2203	2203	2203	2203	2203	2203	2203	2203	2203	2203	2203	2203	
5	2193	2222	2250	2244	2262	2252	2252	2216	2189	2161	2127	2101	2102	2106	2128	2162	
10	2161	2219	2253	2259	2274	2265	2258	2213	2163	2100	2027	1971	1969	1988	2021	2091	
15	2116	2198	2244	2268	2280	2260	2257	2184	2109	1999	1893	1815	1815	1833	1906	1999	
20	2033	2169	2230	2283	2306	2261	2233	2155	2041	1870	1725	1666	1686	1684	1758	1883	
25	1942	2131	2225	2304	2318	2269	2201	2102	1939	1718	1572	1577	1592	1589	1608	1751	
30	1838	2078	2211	2303	2323	2257	2178	2039	1801	1559	1450	1427	1416	1449	1499	1598	
35	1716	2007	2193	2276	2319	2235	2132	1950	1653	1386	1303	1219	1184	1242	1364	1436	
40	1568	1924	2165	2274	2315	2214	2076	1864	1498	1236	1103	947	834	968	1173	1295	
45	1406	1809	2104	2301	2348	2235	2029	1739	1331	1090	879	536	409	549	943	1154	
50	1251	1679	2094	2390	2498	2312	1993	1591	1153	939	591	261	248	263	635	1010	
55	1108	1581	2152	2670	2931	2580	2034	1458	1002	749	272	201	209	197	291	829	
60	944	1502	2341	2611	2109	2592	2191	1368	846	499	159	176	193	171	159	556	
65	479	1246	1793	792	499	866	1775	1142	451	269	127	158	172	153	125	278	
70	232	600	767	273	220	298	887	545	222	135	104	131	161	127	101	143	
75	119	303	333	176	162	182	390	282	121	76.9	83.5	122	153	116	80.5	76.9	
80	65.1	141	169	115	94.9	120	192	138	66.8	51.1	65.4	88.8	108	83.7	61.5	50.8	
85	28.7	62.1	70.7	53.7	43.0	58.5	79.7	62.2	30.3	38.6	53.0	60.5	102	55.6	47.5	38.2	
90	1.00	2.19	2.94	2.28	2.04	2.91	4.75	2.95	4.39	0.89	1.20	12.9	1.52	1.04	10.4	0.94	
95	0.68	0.78	1.10	0.95	0.89	0.78	0.95	0.89	1.41	0.99	1.28	0.90	1.10	0.97	1.26	0.99	
100	0.68	0.64	0.63	0.58	0.68	0.64	0.63	0.68	0.83	1.57	1.89	1.16	1.10	1.00	1.90	1.36	
105	1.09	0.73	0.54	0.59	0.56	0.60	0.49	0.63	1.30	2.29	2.98	2.16	1.63	2.03	2.84	2.09	
110	1.72	0.99	0.56	0.62	0.64	0.59	0.47	0.99	1.87	2.87	3.40	3.27	2.94	3.17	3.31	2.72	
115	2.39	1.56	0.73	0.65	0.71	0.58	0.63	1.57	2.34	3.49	3.76	3.69	4.05	3.69	3.57	3.19	
120	2.96	1.87	1.04	0.68	0.79	0.57	1.05	2.04	2.68	3.86	4.70	4.59	4.63	4.37	4.33	3.55	
125	3.33	2.44	1.55	1.15	0.89	1.09	1.74	2.56	3.12	4.11	4.91	5.74	6.10	5.47	4.62	3.78	
130	4.11	2.74	1.72	1.74	1.57	1.71	1.94	2.98	3.69	4.19	4.86	6.54	6.74	6.55	4.89	3.84	
135	4.23	3.17	2.30	2.42	2.30	2.44	2.50	3.26	4.00	4.27	4.70	6.22	6.81	6.03	4.41	4.02	
140	4.31	3.52	2.66	2.90	2.57	2.91	2.60	3.60	4.21	4.60	4.39	5.90	6.15	5.69	4.51	4.39	
145	4.57	3.70	3.34	3.48	3.09	3.48	2.68	3.76	4.35	4.74	4.49	5.81	5.97	5.63	4.73	4.65	
150	4.68	3.88	4.28	3.95	4.04	3.95	3.72	4.23	4.39	4.95	4.81	5.57	5.95	5.61	5.77	4.83	
155	4.68	4.22	4.96	4.69	4.47	4.34	4.30	4.70	4.39	4.93	4.95	5.46	5.84	5.30	5.40	4.95	
160	4.42	4.37	5.25	5.11	4.88	4.63	5.09	4.91	4.48	4.69	5.08	5.41	5.64	5.32	5.38	5.00	
165	4.78	4.79	5.61	5.31	5.07	5.05	5.09	5.03	4.89	4.86	5.22	5.38	5.45	5.39	5.35	5.02	
170	5.04	5.26	6.27	5.95	5.67	5.72	6.08	5.15	5.23	5.36	6.22	6.85	7.25	7.08	6.38	6.39	
175	5.22	5.83	6.69	6.37	6.82	6.14	6.61	5.43	5.40	5.49	6.30	6.98	7.09	7.49	6.55	6.74	
180	5.35	6.04	6.74	6.75	7.04	6.50	6.87	5.54	5.20	5.21	6.11	6.69	6.72	7.02	6.56	6.64	



**3. Test Equipment**

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-355	Goniophotometer system	Verified by D908S standard lamp	
ST-R-359	Standard Lamp	2018-07-04	2019-07-03
ST-R-358	Power Meter for Goniophotometer	2018-06-28	2019-06-27
Expand Uncertainty: Photometric Measurement(Goniophotometer):2.76%, k=2			

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