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-60-XX
Remark: "XX" refer to CCT as below:40=4000,50=5000,57=5700

Representative (Tested) Model: WPGP-60-40

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

Test & Report By:

Garman Mo

Engineer: Garman Mo

Review By:

Johnson Sun

Manager: Johnson Sun

Date: Jun.26,2019

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-60-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	60W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K,5700K	
LED Manufacturer	LUXEON	
LED Model	LUXEON 3030 2D	
Sample Number	JAE190427-QD1(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° 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.
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 25º C ± 1º 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

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

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE190427-QD1	120.0	60	0.4637	55.34	0.9945	8.43
	277.0	60	0.2095	55.35	0.9540	11.73
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

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

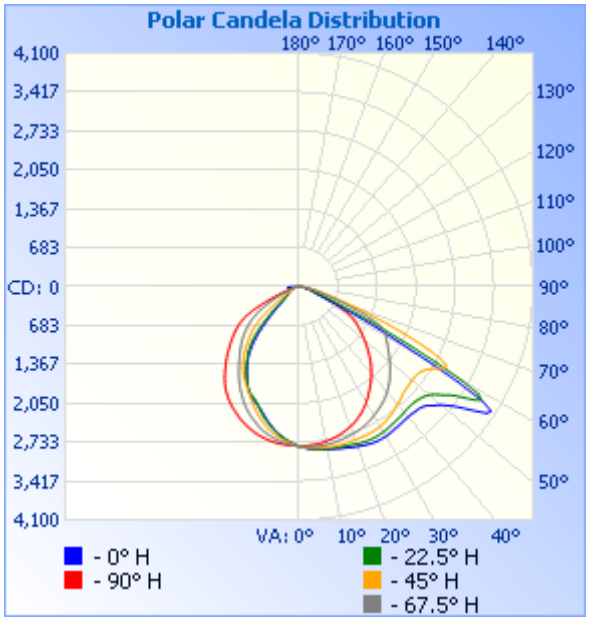
Parameter	Result		DLC V4.4 Pass Criteria	
Test Voltage (V)	120.0	277.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	7627.7	7553.5	>=300 (-10%)	
Luminous Efficacy (lm/W)	137.83	136.47	Standard: >= 95(-3%)	Premium: >= 115(-3%)
Zonal lumens in the 0-90° zone (%)	99.7	--	>= 100(-3)	
Zonal lumens in the 80-90° zone (%)	0.9	--	<=10(+3)	
Beam Angle (°)	102.8	--	--	
Center Beam Candle Power (cd)	2801	--	--	

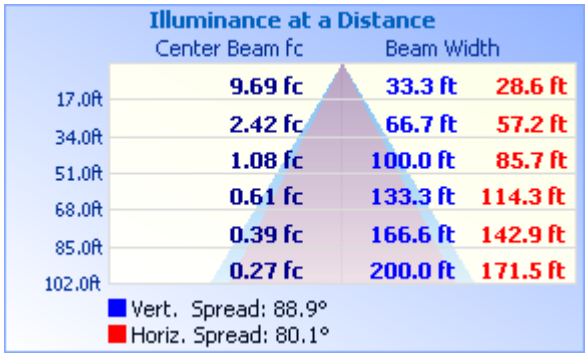
Zonal Lumen Tabulation

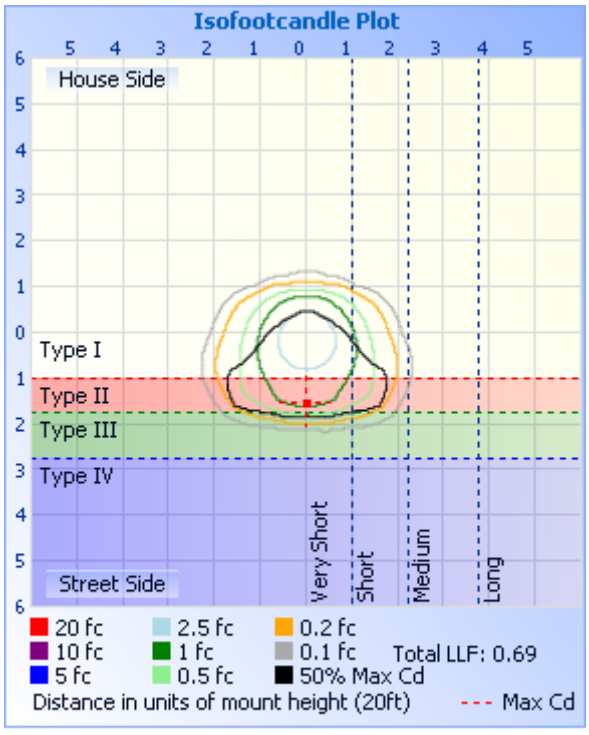
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,164.9	28.4%
0-40	3,560.2	46.7%
0-60	6,457.0	84.7%
60-90	1,148.2	15.1%
70-100	308.9	4%
90-120	5.6	0.1%
0-90	7,605.2	99.7%
90-180	21.9	0.3%
0-180	7,627.1	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	264.3	3.5%	90-100	1.2	0%
10-20	751.9	9.9%	100-110	1.7	0%
20-30	1,148.7	15.1%	110-120	2.7	0%
30-40	1,395.3	18.3%	120-130	3.7	0%
40-50	1,439.7	18.9%	130-140	3.8	0%
50-60	1,457.2	19.1%	140-150	3.4	0%
60-70	840.6	11.0%	150-160	2.8	0%
70-80	236.4	3.1%	160-170	1.8	0%
80-90	71.2	0.9%	170-180	0.8	0%

Photometric Data







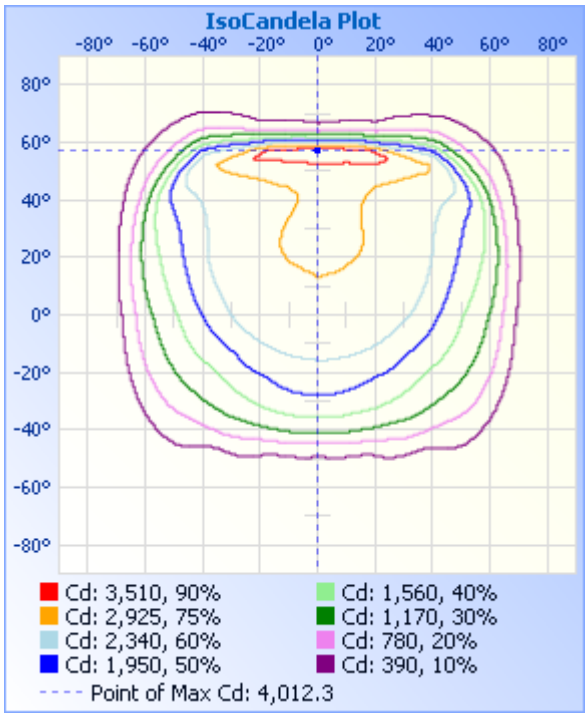


Table--1 UNIT: cd

γ (DEG) \ C(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	2801	2801	2801	2801	2801	2801	2801	2801	2801	2801	2801	2801	2801	2801	2801	2801
5	2788	2822	2843	2861	2869	2857	2848	2821	2788	2754	2721	2702	2694	2696	2721	2761
10	2759	2825	2858	2891	2899	2887	2867	2819	2756	2677	2603	2552	2540	2553	2611	2687
15	2705	2794	2857	2916	2938	2907	2870	2790	2701	2566	2449	2362	2350	2371	2458	2584
20	2620	2758	2850	2959	2988	2940	2863	2752	2616	2413	2247	2169	2183	2172	2273	2438
25	2516	2709	2860	2998	3033	2962	2861	2699	2503	2234	2040	2053	2063	2046	2071	2268
30	2387	2643	2837	2991	3037	2950	2835	2616	2349	2016	1876	1850	1830	1847	1904	2065
35	2233	2560	2795	2958	3003	2909	2775	2521	2160	1790	1678	1598	1572	1597	1719	1841
40	2028	2446	2744	2934	2981	2873	2688	2399	1970	1571	1424	1309	1194	1310	1476	1628
45	1801	2290	2665	2947	3010	2866	2608	2249	1751	1382	1167	841	661	855	1214	1437
50	1581	2133	2629	3063	3234	2961	2572	2076	1515	1183	850	387	344	393	897	1239
55	1368	1987	2701	3490	3822	3343	2606	1906	1291	952	416	257	266	250	455	1011
60	1127	1859	2989	3224	2580	3304	2875	1758	1055	662	208	214	228	206	214	720
65	688	1580	2135	954	580	1104	2264	1509	643	371	157	188	204	179	155	389
70	312	816	887	341	282	353	1013	776	307	179	124	155	172	149	121	192
75	157	396	396	221	202	226	449	374	162	97.5	97.0	128	150	122	92.4	98.3
80	86.0	190	207	137	114	142	229	181	90.1	61.8	73.8	96.8	112	92.2	70.4	60.9
85	39.0	84.3	87.1	62.2	49.3	64.9	96.5	83.3	41.6	40.4	55.6	68.5	82.5	64.1	52.8	40.5
90	1.44	3.52	4.13	3.34	3.82	5.26	7.04	5.26	1.38	1.69	1.20	1.31	1.98	1.24	1.31	1.10
95	0.67	0.78	1.05	0.85	0.84	0.83	1.05	1.10	0.68	1.09	1.15	0.85	0.90	0.83	1.37	1.00
100	0.73	0.62	0.57	0.58	0.63	0.52	0.53	0.73	0.88	1.72	1.99	1.16	0.95	1.15	2.16	1.68
105	1.50	0.67	0.47	0.42	0.58	0.47	0.42	0.84	1.35	2.60	3.29	2.43	1.90	2.34	3.36	2.57
110	2.33	1.14	0.47	0.42	0.58	0.42	0.42	1.26	2.18	3.27	4.02	3.86	3.42	3.74	4.04	3.35
115	3.10	1.86	0.73	0.42	0.58	0.42	0.74	2.14	2.65	4.11	4.60	4.49	4.96	4.47	4.57	3.93
120	3.93	2.44	1.46	0.68	0.58	0.62	1.41	2.56	3.11	4.73	5.64	5.45	5.64	5.46	5.46	4.30
125	4.45	3.01	1.78	1.58	1.42	1.55	1.99	3.30	3.63	5.24	5.85	7.08	7.69	6.76	5.77	4.82
130	5.13	3.63	2.14	2.43	2.10	2.39	2.46	3.77	4.30	5.24	5.85	8.20	8.69	8.16	5.98	4.82
135	5.44	4.05	2.77	3.12	2.79	3.22	2.83	4.14	4.77	5.24	5.74	7.77	8.53	7.68	5.71	5.03
140	5.70	4.52	3.34	3.70	3.37	3.68	3.25	4.56	4.98	5.71	5.28	7.51	7.85	7.07	5.30	5.55
145	5.80	4.62	4.28	4.55	3.95	4.21	3.41	4.87	5.39	5.82	5.49	7.03	7.53	7.07	5.93	5.87
150	6.01	4.67	5.38	5.07	5.00	4.99	4.56	5.04	5.55	5.87	5.96	6.87	7.58	7.07	7.40	6.08
155	5.86	5.19	6.42	5.87	5.74	5.30	5.66	5.97	5.23	6.13	6.27	6.82	6.95	6.80	6.87	6.23
160	5.55	5.87	6.63	6.24	6.00	5.87	6.13	6.18	5.44	5.87	6.32	6.71	6.74	6.60	6.66	6.29
165	5.96	6.07	6.74	6.61	6.27	6.13	6.61	6.18	5.91	5.87	6.32	6.77	6.74	6.55	6.66	6.29
170	6.48	6.65	7.94	7.55	7.26	7.32	7.76	6.55	6.79	6.75	7.58	8.73	9.06	8.68	8.24	8.13
175	6.58	7.37	8.46	8.14	8.74	7.84	8.34	6.81	6.94	6.91	7.99	9.09	9.22	9.45	8.39	8.80
180	6.58	7.63	8.30	8.51	9.11	8.26	8.34	6.97	6.48	6.49	7.68	8.41	8.37	8.99	8.29	8.33

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 ********