LM-79-08 Test Report

For

Antec Lighting Inc

(Brand Name: AOK)

Uniy C, 3979 E Guasti Road, Ontario, CA 91761

Architectural Flood and Spot Luminaires

Model name(s): AOK-315WiNS-HV-L5-XX-XX70-30-B

Remark: The first "XX" can be "00" means without sensor & non-dimming, or can be "DV" means dimmable or "PH" means photocell. The second "XX" can be 30/40/50/57 refers to CCT.

Representative (Tested) Model: AOK-315WiNS-HV-L5-PH-3070-30-B

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

Test & Report By:

Leo Wang

Engineer: Leo Wang

Review By:

Garman Mo

Manager: Garman Mo

Date: Sept.18,2019

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	Antec Lighting Inc	
Brand Name	AOK Quality, Honesty, Service and Innovation	
Model Number	AOK-315WiNS-HV-L5-XX-XX70-30-B	
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, 50/60Hz	
Nominal Power	315W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K,4000K,5000K,5700K	
LED Manufacturer	Lumileds	
LED Model	LUXEON 5050	
Sample Number	JAE190905-B1(3000K)	
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	Sept.13,2019
Date of Test	Sept.16,2019
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. 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

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 277 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) 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 277 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	2019-09-16	Test Ambient:	25.1 ºC
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	AOK-315WiNS-HV-L5-PH-3070-30-B	Total Operating Time (min)	90

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE190905-B1	277.0	60	1.155	318.7	0.9963	5.59
	480.0	60	0.6769	312.9	0.9630	9.72
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

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

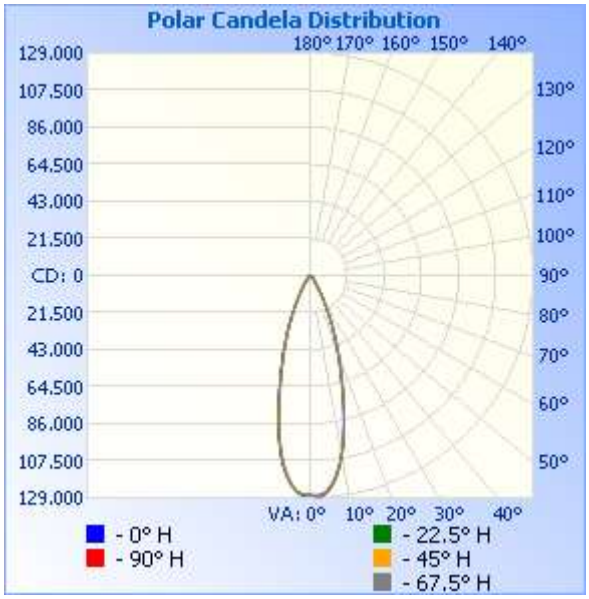
Parameter	Result		DLC V4.4 Pass Criteria	
Test Voltage (V)	277.0	480.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	50640	50289	>=1000 (-10%)	
Luminous Efficacy (lm/W)	158.90	160.72	Standard: >= 100(-3%)	Premium: >= 120(-3%)
Zonal lumens in the 0-90 °zone (%)	99.6	--	>= 85(-3)	
Beam Angle ( )	32.4	--	--	
Center Beam Candle Power (cd)	127354	--	--	

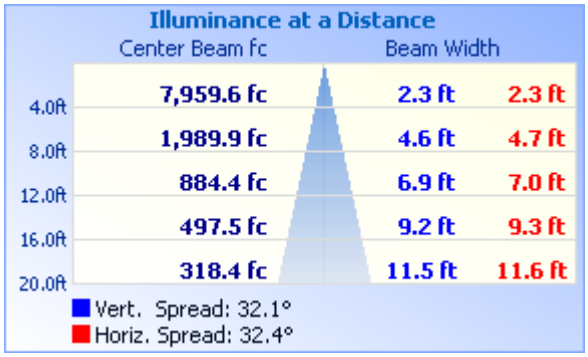
Zonal Lumen Tabulation

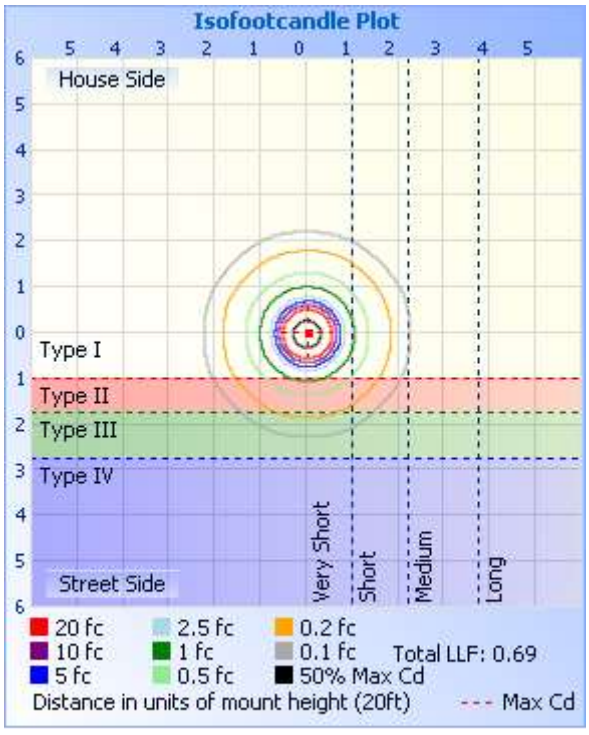
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	42,423.0	83.8%
0-40	46,268.3	91.4%
0-60	48,838.1	96.5%
60-90	1,570.2	3.1%
70-100	671.9	1.3%
90-120	10.4	0%
0-90	50,408.3	99.6%
90-180	203.2	0.4%
0-180	50,611.5	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	11,100.9	21.9%	90-100	2.9	0%
10-20	19,580.8	38.7%	100-110	3.2	0%
20-30	11,741.3	23.2%	110-120	4.3	0%
30-40	3,845.3	7.6%	120-130	8.1	0%
40-50	1,421.6	2.8%	130-140	20.7	0%
50-60	1,148.2	2.3%	140-150	42.4	0.1%
60-70	901.2	1.8%	150-160	57.9	0.1%
70-80	547.8	1.1%	160-170	45.6	0.1%
80-90	121.2	0.2%	170-180	18.1	0%

Photometric Data







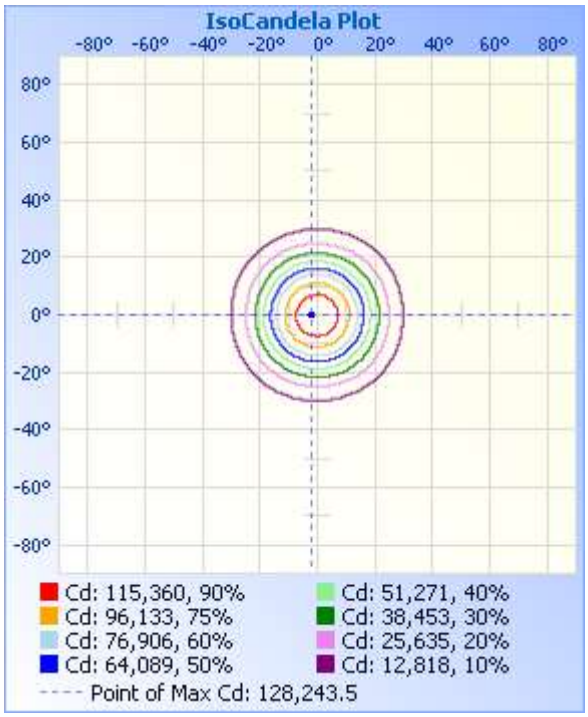


Table--1 UNIT: ×100cd

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	1274	1274	1274	1274	1274	1274	1274	1274	1274	1274	1274	1274	1274	1274	1274	1274
5	1218	1220	1221	1229	1239	1247	1245	1248	1252	1246	1236	1228	1221	1223	1217	1216
10	1002	1012	1019	1033	1047	1053	1054	1054	1057	1049	1042	1027	1011	1007	999	997
15	680	695	704	717	733	746	744	744	746	737	720	701	690	684	675	673
20	425	434	440	450	460	472	472	468	473	464	450	439	432	428	422	421
25	239	244	251	257	263	268	270	268	268	263	253	246	241	238	236	237
30	114	119	125	129	134	134	136	139	133	130	126	122	117	112	113	115
35	50.5	51.3	55.3	60.7	60.8	60.8	64.2	66.1	64.4	60.5	60.4	58.5	52.9	50.2	50.4	51.5
40	24.2	24.6	24.9	25.5	25.7	26.6	27.4	28.0	29.4	26.6	25.4	24.3	23.5	23.3	23.3	23.8
45	17.7	18.0	17.9	18.3	17.9	18.3	18.0	18.3	17.8	17.8	17.5	17.8	17.3	17.6	17.4	18.0
50	14.7	15.0	14.9	15.2	14.8	15.1	14.9	15.3	14.8	14.9	14.6	14.9	14.5	14.7	14.6	15.1
55	12.8	12.9	12.8	13.1	12.8	12.9	12.8	13.1	12.7	12.7	12.5	12.7	12.4	12.6	12.5	12.9
60	11.0	11.3	11.0	11.3	11.0	11.2	11.0	11.3	11.0	11.0	10.7	10.9	10.6	10.9	10.7	11.2
65	9.12	9.52	8.99	9.33	9.12	9.41	9.01	9.35	9.04	9.27	8.68	8.95	8.76	9.14	8.74	9.22
70	7.15	7.54	7.10	7.30	7.17	7.49	7.14	7.35	7.17	7.35	6.84	6.92	6.82	7.18	6.85	7.19
75	5.20	5.43	5.22	5.37	5.30	5.49	5.31	5.47	5.33	5.37	5.02	4.97	4.85	5.04	4.94	5.21
80	3.08	3.30	3.13	3.19	3.20	3.36	3.25	3.32	3.26	3.29	2.90	2.76	2.72	2.86	2.82	3.02
85	0.92	0.97	0.98	0.96	0.98	1.05	1.08	1.10	1.03	0.91	0.80	0.65	0.59	0.68	0.76	0.90
90	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
95	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
100	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.03
105	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
110	0.04	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.04
115	0.05	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.03	0.04	0.03	0.04	0.04
120	0.07	0.06	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.05	0.06	0.05
125	0.11	0.11	0.08	0.07	0.07	0.08	0.07	0.08	0.07	0.09	0.08	0.09	0.08	0.09	0.09	0.10
130	0.21	0.19	0.12	0.13	0.12	0.12	0.12	0.14	0.13	0.15	0.14	0.16	0.16	0.18	0.18	0.18
135	0.37	0.33	0.20	0.25	0.23	0.23	0.18	0.26	0.22	0.26	0.22	0.28	0.27	0.32	0.29	0.32
140	0.62	0.55	0.28	0.44	0.42	0.43	0.24	0.43	0.38	0.43	0.31	0.46	0.44	0.52	0.35	0.50
145	0.96	0.82	0.54	0.71	0.46	0.73	0.38	0.68	0.61	0.67	0.49	0.71	0.48	0.84	0.67	0.73
150	1.31	1.08	1.01	0.98	1.05	1.11	0.72	1.02	0.90	0.92	0.75	1.04	0.96	1.15	1.28	0.94
155	1.60	1.35	1.40	1.33	1.42	1.42	0.97	1.39	1.17	1.17	0.83	1.36	1.20	1.31	1.59	0.87
160	1.76	1.53	1.61	1.57	1.72	1.60	1.36	1.57	1.36	1.39	1.02	1.62	1.42	1.47	1.63	1.17
165	1.86	1.73	1.70	1.53	1.61	1.54	1.66	1.63	1.53	1.51	1.44	1.73	1.48	1.56	1.71	1.65
170	1.91	1.97	1.84	1.88	1.66	1.78	1.88	1.77	1.66	1.65	1.73	1.80	1.91	1.78	1.92	1.92
175	1.93	2.09	1.87	1.96	2.05	1.82	1.95	1.86	1.77	1.77	1.94	1.87	2.01	2.06	1.95	1.96
180	1.83	2.00	1.79	1.88	2.03	1.80	1.89	1.93	1.84	1.84	2.00	1.80	1.89	1.98	1.77	1.89

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	2019-07-03	2020-07-02
ST-R-358	Power Meter for Goniophotometer	2019-06-27	2020-06-26
Expand Uncertainty: Photometric Measurement(Goniophotometer):2.76%, k=2			

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