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-720WiNS-HV-L5-XX-XX70-15-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-720WiNS-HV-L5-PH-3070-15-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-720WiNS-HV-L5-XX-XX70-15-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	720W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K,4000K,5000K,5700K	
LED Manufacturer	Lumileds	
LED Model	LUXEON 5050	
Sample Number	JAE190905-F1(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-720WiNS-HV-L5-PH-3070-15-B	Total Operating Time (min)	90

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE190905-F1	277.0	60	2.797	772.0	0.9964	3.50
	480.0	60	1.663	761.9	0.9545	7.61
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

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

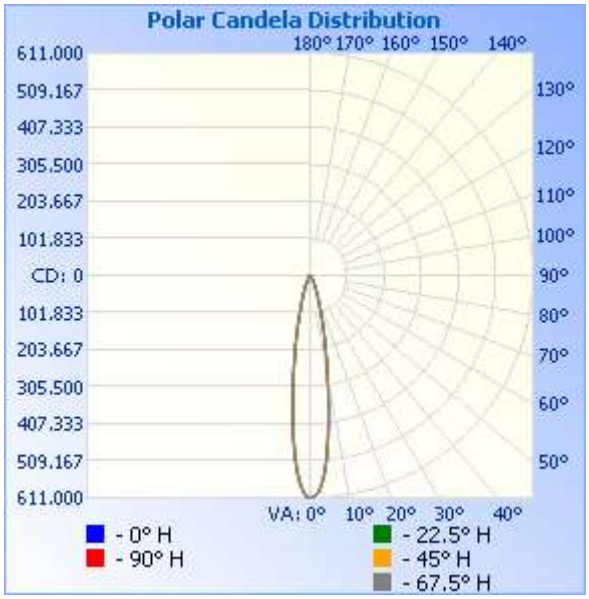
Parameter	Result		DLC V4.4 Pass Criteria	
Test Voltage (V)	277.0	480.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	104958	103064	>=1000 (-10%)	
Luminous Efficacy (lm/W)	135.96	135.27	Standard: >= 100(-3%)	Premium: >= 120(-3%)
Zonal lumens in the 0-90 °zone (%)	99.6	--	>= 85(-3)	
Beam Angle ( )	18.0	--	--	
Center Beam Candle Power (cd)	610712	--	--	

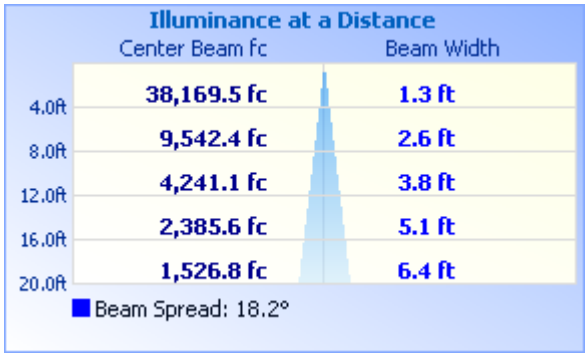
Zonal Lumen Tabulation

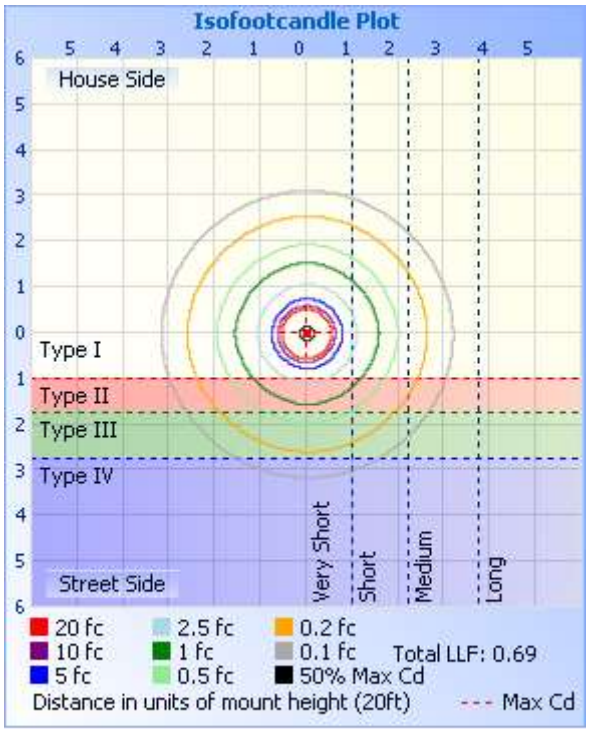
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	87,775.5	83.7%
0-40	92,231.5	88%
0-60	99,306.8	94.7%
60-90	5,075.7	4.8%
70-100	2,290.3	2.2%
90-120	32.3	0%
0-90	104,382.5	99.6%
90-180	433.8	0.4%
0-180	104,816.3	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	39,383.1	37.6%	90-100	10.1	0%
10-20	35,037.7	33.4%	100-110	10.3	0%
20-30	13,354.7	12.7%	110-120	11.8	0%
30-40	4,456.0	4.3%	120-130	14.0	0%
40-50	3,687.4	3.5%	130-140	27.3	0%
50-60	3,387.9	3.2%	140-150	74.0	0.1%
60-70	2,795.5	2.7%	150-160	143.3	0.1%
70-80	1,841.1	1.8%	160-170	108.9	0.1%
80-90	439.1	0.4%	170-180	34.1	0%

Photometric Data







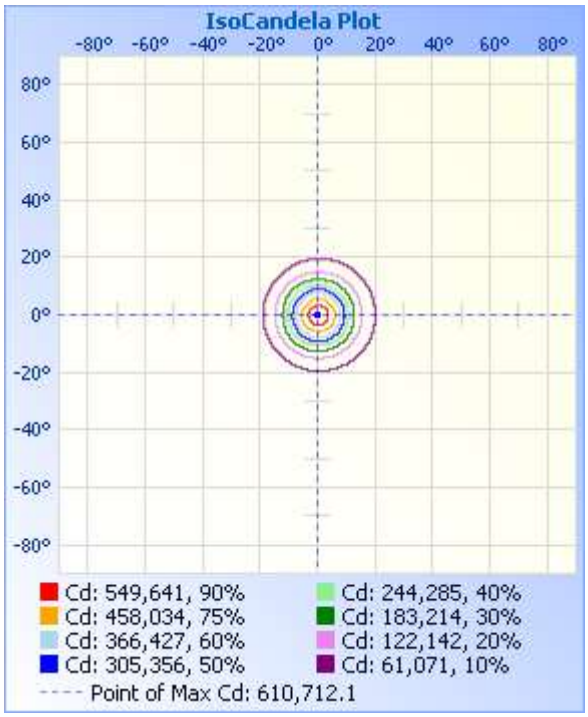


Table--1 UNIT: ×100cd

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	6107	6107	6107	6107	6107	6107	6107	6107	6107	6107	6107	6107	6107	6107	6107	6107
5	4967	5001	5046	5104	5116	5109	5104	5104	5067	4992	4907	4873	4877	4891	4894	4922
10	2623	2666	2707	2718	2735	2755	2739	2685	2647	2626	2625	2594	2543	2544	2585	2619
15	1232	1259	1280	1286	1292	1292	1278	1272	1208	1190	1160	1151	1131	1135	1168	1189
20	591	591	599	599	593	579	551	554	539	533	511	521	537	542	559	569
25	318	313	304	310	302	280	263	262	266	255	242	247	263	275	274	294
30	143	148	142	146	141	130	122	121	121	113	108	109	113	121	123	134
35	65.1	66.2	64.9	65.0	64.6	64.4	63.1	63.1	64.0	63.3	61.8	61.2	61.0	61.8	62.0	64.0
40	53.4	54.4	52.2	53.4	53.0	54.1	52.2	53.8	53.6	54.1	52.0	53.0	52.5	53.3	51.9	53.6
45	48.4	48.6	46.6	48.0	47.8	48.2	46.7	48.3	48.3	48.2	46.4	47.5	47.3	47.5	46.2	48.3
50	44.3	43.8	41.9	43.0	43.7	43.5	42.1	43.5	44.1	43.4	41.7	42.6	42.9	42.6	41.4	43.2
55	39.2	38.2	37.0	37.7	38.6	38.0	37.3	38.3	39.1	37.9	36.9	37.2	37.8	37.0	36.6	37.7
60	36.2	32.5	32.5	31.9	35.5	32.2	32.8	32.7	36.5	32.6	32.3	31.5	35.0	31.5	32.0	32.2
65	29.6	28.3	27.7	27.6	29.1	28.0	28.2	28.6	29.9	28.3	27.5	27.3	28.3	27.2	27.2	27.9
70	24.4	23.8	22.9	23.0	23.9	23.5	23.3	24.2	24.8	23.8	22.6	22.7	23.1	22.6	22.4	23.4
75	18.2	18.0	17.6	17.4	17.7	17.8	17.9	18.4	18.5	18.0	17.3	16.8	16.7	16.8	17.2	17.7
80	11.0	11.1	11.0	10.8	10.8	11.0	11.3	11.3	11.4	11.0	10.6	10.2	9.90	10.1	10.5	10.9
85	3.24	3.40	3.32	3.62	3.53	3.84	3.58	3.73	3.71	3.48	3.08	3.05	2.66	2.99	3.02	3.23
90	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11
95	0.10	0.10	0.10	0.09	0.09	0.09	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.09
100	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.09
105	0.11	0.10	0.10	0.09	0.10	0.09	0.10	0.11	0.10	0.09	0.09	0.09	0.09	0.08	0.09	0.10
110	0.13	0.12	0.11	0.11	0.12	0.11	0.11	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.11
115	0.14	0.14	0.13	0.12	0.13	0.12	0.12	0.14	0.12	0.12	0.11	0.11	0.12	0.09	0.11	0.13
120	0.15	0.14	0.14	0.13	0.12	0.13	0.14	0.14	0.13	0.13	0.13	0.13	0.12	0.11	0.12	0.13
125	0.16	0.16	0.14	0.15	0.18	0.16	0.14	0.16	0.13	0.15	0.14	0.16	0.17	0.14	0.13	0.15
130	0.20	0.18	0.16	0.19	0.22	0.20	0.18	0.21	0.19	0.21	0.20	0.26	0.22	0.20	0.18	0.21
135	0.34	0.31	0.25	0.33	0.38	0.37	0.28	0.35	0.33	0.36	0.32	0.46	0.38	0.36	0.27	0.37
140	0.67	0.64	0.34	0.59	0.63	0.62	0.43	0.61	0.60	0.63	0.45	0.75	0.61	0.65	0.41	0.77
145	1.35	1.26	0.67	1.12	0.83	1.15	0.87	1.12	1.19	1.27	0.74	1.47	0.82	1.33	1.09	1.53
150	2.45	2.15	1.23	2.07	2.26	2.25	1.38	2.07	2.16	2.39	0.80	2.80	2.37	2.46	2.48	2.37
155	3.83	3.24	2.36	3.28	3.80	3.67	1.92	3.36	3.36	3.49	1.71	4.26	3.37	3.45	3.85	2.26
160	4.47	3.60	3.69	4.11	4.72	4.40	3.22	3.98	4.05	4.12	3.67	4.71	4.52	4.15	3.91	2.92
165	4.27	3.85	4.19	3.39	3.79	3.17	4.03	3.92	4.01	4.00	3.75	3.68	3.42	3.34	3.71	3.89
170	3.81	3.92	4.03	3.73	3.29	3.52	4.08	3.83	3.70	3.68	3.67	3.38	3.89	3.35	3.72	3.85
175	3.35	3.62	3.65	3.51	3.69	3.30	3.69	3.50	3.25	3.25	3.43	3.31	3.54	3.57	3.42	3.50
180	3.04	3.28	3.22	3.27	3.30	3.13	3.28	3.20	3.05	3.06	3.29	3.23	3.26	3.32	3.13	3.30

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 ********