



Photometric Test Report

Relevant Standards

- IES LM-79-2019
- ANSI C82.77-10-2014

Prepared For

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Catalog Number

AOK-180WPLB-HV-L2-00-3080-T301-A

Project Number

4791629986

Report Number

4791629986-6a

Test Date

2025-03-13

Issue Date

2025-03-27

Revision Date

N/A

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The results contained in this report pertain only to the tested sample.

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1.0 Test List

Sample Received Date: 2025-02-26

Test No.	Test Item	Sample ID	Model Number	Test Conducted By
1	Goniophotometer Test	8175164	AOK-180WPLB-HV-L2-00-3080-T301-A	Ray Huang
2	THD and PF Test	8175164	AOK-180WPLB-HV-L2-00-3080-T301-A	Ray Huang

Remark (if any)

1. UL test equipment information is recorded on Meter Use in UL's Aurora database.

2.0 Product Description

Luminaire Description: Outdoor Pole/Arm-Mounted Area and Roadway Luminaires

Model Number: AOK-180WPLB-HV-L2-00-3080-T301-A

Electrical Ratings and CCT: 200-488Vac, 50/60 Hz, 180W/150W/115W adjustable, 3000K, default power setting is 180W.

Driver Model Number: BQ-200K4-260-AD

LED Package: L128-xx80RC35004W4, Lumileds Holding B.V.

Family Model and Variation: AOK-XXXWPLB-HV-L2-XX-xx80-T#-Y, where "XXX" represents default power setting, can be 180=180W, 150=150W, 115=115W. "XX" represents sensor, can be 00=No sensor, PIR=PIR sensor, MS=Motion sensor, DV= Dimmable, PH=Photocontrol. "xx" represents CCT, can be 30=3000K, 40=4000K, 50=5000K. "T#" represents different lens, can be T301, T501. "Y" represents mounting bracket, can be A, B, D, E, F, G.

Photos of Luminaire Characteristics



3.0 LM-79 Measurement and Test Results

3.1 Goniophotometer Test

Model No.	AOK-180WPLB-HV-L2-00-3080-T301-A	Sample ID.	8175164
Operate time (Min.)	60	Stabilization time (Min.)	50

Test Method

- 1.The sample was tested according to the IES LM-79-2019, and the product is assume to be brand new without seasoning.
- 2.Photometric paramters were measured using a type C goniophotometer and software.
- 3.The ambient temperature shall be maintained at 25° C ± 0.9° C, measured at a point not more than 1.5 m from the sample and at the same height as the sample. The reference standard lamp is power 400W omni-directional Incandescent lamp and was calibrated by National Institute of Metrology, China.
- 4.The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals. Photometric distance was more than five times of the largest dimension of the test SSL product.

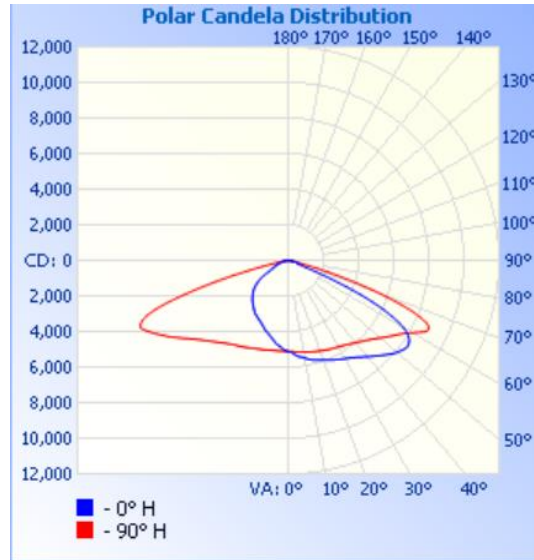
Goniophotometer Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Orientation
24.9	277.05	60	0.645	177.85	0.9953	Horizontal

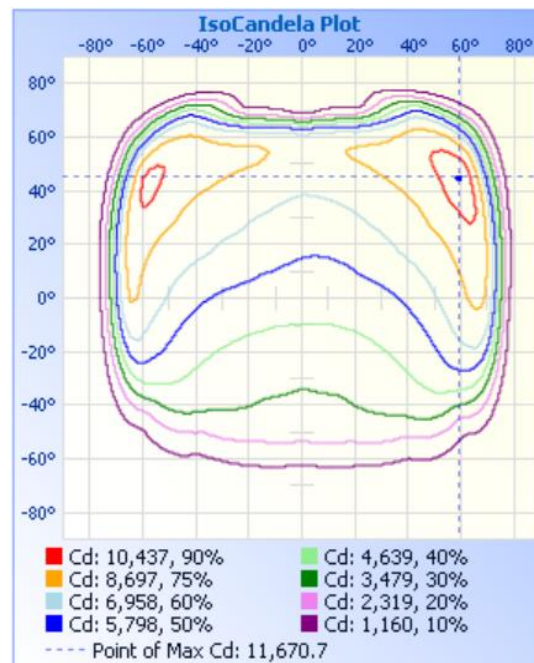
Test Result

Zone Light Distribution (ZLD)		Beam Angle (50%)		Flux (lm)	Luminous Efficacy (lm/W)
0~90°	80°~90°	Horizontal Spread	Vertical Spread		
100.0%	0.8%	136	89	25863.8	145.4
BUG Ratings					
Backlight	Uplight	Glare			
3	0	3			

3.1 Goniophotometer Test (Cont'd)
Light Distribution Curve



IsoCandela Plot



3.1 Goniophotometer Test (Cont'd)

Zonal Lumen Summary

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	4,381.3	16.9%
0-40	7,820.3	30.2%
0-60	17,902.2	69.2%
60-90	7,961.5	30.8%
70-100	2,613.6	10.1%
90-120	0	0%
0-90	25,863.8	100%
90-180	0	0%
0-180	25,863.8	100%

Lumens Per Zone

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	489.7	1.9%	90-100	0	0%
10-20	1,461.3	5.6%	100-110	0	0%
20-30	2,430.3	9.4%	110-120	0	0%
30-40	3,439.0	13.3%	120-130	0	0%
40-50	4,539.4	17.6%	130-140	0	0%
50-60	5,542.6	21.4%	140-150	0	0%
60-70	5,347.9	20.7%	150-160	0	0%
70-80	2,411.5	9.3%	160-170	0	0%
80-90	202.0	0.8%	170-180	0	0%

3.1 Goniophotometer Test (Cont'd)

Intensity Data(cd)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	5116	5116	5116	5116	5116	5116	5116	5116	5116	5116	5116	5116	5116	5116	5116	5116	5116
1	5146	5157	5151	5130	5110	5093	5085	5089	5091	5093	5090	5092	5091	5106	5123	5143	5154
2	5152	5162	5157	5133	5110	5090	5079	5080	5083	5087	5087	5087	5091	5109	5124	5147	5161
3	5237	5243	5224	5176	5128	5071	5039	5024	5016	5022	5038	5063	5094	5141	5181	5221	5243
4	5308	5318	5286	5222	5143	5060	4994	4959	4941	4953	4989	5037	5097	5174	5234	5291	5318
5	5368	5374	5336	5257	5157	5051	4959	4904	4881	4896	4947	5021	5105	5199	5276	5342	5375
6	5413	5420	5378	5286	5170	5039	4928	4859	4831	4848	4914	5007	5111	5222	5312	5383	5418
7	5450	5457	5412	5310	5178	5031	4902	4821	4786	4811	4886	4993	5114	5237	5338	5414	5455
8	5478	5483	5438	5332	5188	5022	4875	4781	4744	4771	4856	4978	5116	5252	5362	5442	5484
9	5519	5531	5484	5366	5201	5011	4841	4732	4684	4718	4816	4959	5119	5275	5392	5482	5525
10	5573	5591	5540	5411	5221	4995	4795	4664	4607	4647	4765	4939	5127	5308	5434	5533	5580
11	5624	5647	5601	5457	5239	4983	4752	4597	4532	4578	4721	4922	5139	5342	5486	5581	5631
12	5675	5702	5656	5500	5259	4973	4712	4534	4464	4516	4672	4903	5153	5380	5530	5627	5678
13	5715	5749	5709	5545	5280	4964	4675	4480	4403	4458	4632	4891	5167	5411	5571	5668	5717
14	5755	5793	5756	5587	5296	4953	4641	4429	4345	4402	4596	4881	5183	5447	5612	5701	5758
15	5788	5833	5805	5621	5313	4946	4610	4379	4289	4355	4563	4869	5194	5479	5652	5733	5792
16	5818	5875	5852	5658	5329	4938	4582	4336	4238	4309	4532	4860	5208	5508	5687	5764	5820
17	5847	5908	5893	5694	5343	4928	4555	4294	4194	4266	4504	4853	5223	5539	5722	5796	5850
18	5873	5945	5936	5729	5359	4920	4527	4253	4146	4225	4477	4844	5238	5569	5757	5822	5876
19	5901	5986	5982	5770	5379	4909	4497	4210	4094	4181	4450	4836	5255	5602	5792	5858	5909
20	5939	6035	6037	5821	5399	4895	4459	4163	4035	4126	4414	4829	5274	5645	5837	5902	5942
25	6157	6314	6368	6083	5510	4847	4309	3936	3779	3896	4267	4802	5407	5908	6132	6138	6153
30	6375	6590	6680	6336	5619	4819	4209	3789	3602	3748	4186	4809	5554	6184	6447	6383	6378
35	6649	6947	7033	6657	5776	4801	4126	3649	3396	3597	4120	4832	5736	6511	6801	6716	6654
40	7050	7411	7485	7077	6014	4813	4026	3444	3147	3402	4051	4882	6022	6990	7286	7163	7058
45	7530	7947	7985	7558	6335	4852	3848	3221	2883	3199	3938	4954	6391	7561	7834	7693	7540
50	8053	8484	8481	8095	6772	4886	3560	2851	2573	2835	3711	5018	6888	8183	8399	8257	8052
55	8330	8856	8989	8790	7341	4854	2992	2319	2123	2352	3192	5044	7575	8962	8987	8721	8316
60	7596	8594	9408	9601	8122	4317	2143	1689	1401	1767	2423	4793	8369	9940	9532	8553	7524
65	4567	6397	9539	10767	8838	3060	1231	1004	893	1018	1450	3592	9137	10984	9855	6455	4495
70	730	2539	8239	10368	5953	1393	873	690	679	711	942	1776	8098	11558	8922	2704	708
75	568	586	5639	5514	1743	569	577	466	437	490	651	676	3247	7898	6427	606	565
80	304	435	1234	845	332	255	276	256	255	280	324	343	420	2223	1780	443	290
85	136	138	200	143	111	92	89	91	70	99	118	120	180	261	232	148	135
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4 THD and PF Test

Model No.	AOK-180WPLB-HV-L2-00-3080-T301-A	Sample ID.	8175164
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Test Method

1. The samples were tested according to the ANSI C82.77-10-2014.
2. The ambient temperature condition was maintained at 25° C ± 1° C. The sample measurement was made using a digital power meter and power supply. The sample was operated at rated voltage and stabilized before measurement. The total harmonic distortion were calculated from the digital power meter.

Test Results

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Current THD
25.2	200	60	0.900	179.7	0.9988	4.22%
	277	60	0.645	177.8	0.9952	5.39%
	480	60	0.399	180.5	0.9436	14.14%



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