



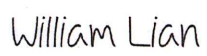
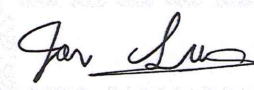

TEST REPORT

Of IES LM-79-08

Kunde: <i>Client:</i>	AOK INDUSTRIAL COMPANY LIMITED
Adresse: <i>Address:</i>	1# Building, Sans Souci Technology Industrial Park, Shajin street, Shenzhen city, Guangdong Provice, China.
Hersteller: <i>Manufacturer:</i>	AOK INDUSTRIAL COMPANY LIMITED
Adresse: <i>Address:</i>	1# Building, Sans Souci Technology Industrial Park, Shajin street, Shenzhen city, Guangdong Provice, China.
Name der Marke: <i>Brand Name:</i>	AOK
Beschreibung des Produkts: <i>Product Description:</i>	LED Flood Light (Sport Light)
Modelle: <i>Models:</i>	AOK-720WiNS-NV-L5-00-4080-30-B
Bewertung: <i>Rating:</i>	100-277Vac, 50/60Hz, 720W, 4000K
Verfahren: <i>Method:</i>	IES LM-79-08: Approved Method for Electrical and Photometric Measurements of Solid-State Lighting Products
Prüfergebnis*: <i>Test result*:</i>	N/A

Datum der Prüfung: <i>Date of Test:</i>	Datum der Emission: <i>Date of Issue:</i>	Klassifizierung: <i>Classification:</i>	Gegenstand der Prüfung: <i>Test item:</i>
2020-12-30 - 2021-01-05	2021-01-05	Commission Test	IES LM-79-08

Prüflabor (Testlabor) / Testing Laboratory:
Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

Test von/Test by:	Check von/Check by:	Genehmigt von/Approved by:
 William Lian/ Project Engineer	 Ian Luo/ Director	 Jesse Liu/ Manager

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
Remark: The duplication of this report or parts of it and its use for advertising purposes is only allowed with permission of the testing laboratory. This report contains the result of examination of the product sample submitted by the appliance. A general statement concerning the quality of the products from the series manufacturer cannot be derived therefore.



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1. Test Method

Test Item.....:	Integrating Sphere Test
Ambient Condition	25.1°C
Stabilization time(h):	0.5h
Orientation(burning position) of SSL product during test	down
Test Method	The sample was tested according to the IES LM-79-2008. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.
Test Item.....:	Goniophotometer Test
Ambient Condition.....:	25.1°C
Total operated time of the product for measurements including stabilization..... (h):	1.0h
Orientation(burning position) of SSL product during test	down
Test Method.....:	The sample was tested according to the IES LM-79-2008. Photometric parameters were measured using a type C goniophotometer and software. The sample reference plane was located at the center of the sample goniometer at a test distance of 26m from the detectors. The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, Luminous efficacy, zonal flux were calculated from the software taken at 1 ° vertical intervals and 22.5 ° horizontal intervals.



2. Product Information

Product description.....:	LED Flood Light (Sport Light)
Model Number.....:	AOK-720WiNS-NV-L5-00-4080-30-B
Rated Inputs.....:	100-277Vac,50/60Hz
Rated Power.....:	720W
Declared CCT.....:	4000K
LED Manufacturer.....:	LUMILEDS
LED Model.....:	L150-4080502400000
Forward current of the LED chip.....:	200mA
LED Driver.....:	INVENTRONICS (EUD-600S560DV & EUK-200S560DV)
LED Driver Set Current.....:	3.7A
SPD.....:	SHENZHEN ZHONGYUAN TECHNOLOGY (ZYS-S20WLED)
Number of LEDs.....:	472 LEDs
LED package current.....:	63mA
Date of Receipt Samples.....:	December 29, 2020
Quantity of Receipt Samples.....:	1 unit

3. Test equipment list

Manufacturer	Description	Equipment ID	Model	Calibration Date	Calibration Due Date
EVERFINE	Full-field Speed Goniophotometer	SLCS-S-112	GO-R5000	2020/07/02	2021/07/01
EVERFINE	Digital Power Meter	SLCS-S-103	PF2010	2020/06/24	2021/06/23
EVERFINE	AC Testing Power Source	SLCS-S-115	DPS1060	2020/06/24	2021/06/23
EVERFINE	Total Spectral Radiant Flux Standard Lamp	SLCS-S-143	D908S	2020/07/02	2021/07/01
SENSING	2 Meter Integrating Sphere	SLCS-S-038	SPR-3000	2020/07/02	2021/07/01
YOKOGAWA	Digital Power Meter	SLCS-S-058	WT310	2020/06/24	2021/06/23
ALL POWER ELECTRONIC	AC Testing Power Source	SLCS-S-111	APW-105N	2020/06/24	2021/06/23
SENSING	Standard Lamp	SLCS-S-118	S11010017	2020/07/02	2021/07/01



4. Integrating Sphere Test Results

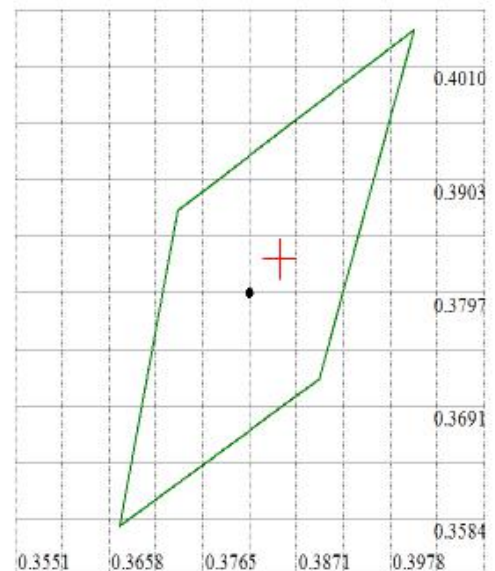
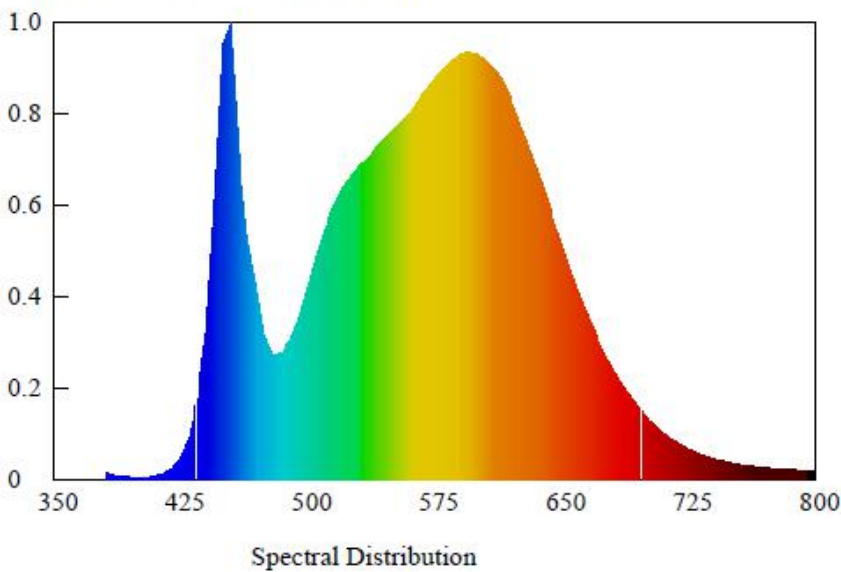
4.1 Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	220.08	60.0	3.2663	0.9943	714.76

Test type	CCT (K)	CRI	Duv	Luminous flux (lm)	Luminous efficacy(lm/W)
Output	3916	84.0	0.00144	110907.80	155.2

4.2 Spectrum

Spectroradiometric Parameters



Nominal CCT:LED_4000K
x0=0.3818 y0=0.3797

Chromaticity Coordinates: $x=0.3853$ $y=0.3829$ $u'=0.2259$ $v'=0.505$

Correlated Color Temperature: 3916 K

Colour Fidelity Index: $R_f=82$

Luminous Flux: 110907.80 lm

Chromaticity Difference: +0.00144Duv

Color Ratio: $K_r=38.3\%$ $K_g=52.5\%$ $K_b=9.3\%$

Bandwidth: 25.3nm

Photosynthetically Active Radiation(PAR): 232.29W

Rendering Index: $R_a=84.0$

$R_1=83$ $R_2=90$ $R_3=95$ $R_4=83$ $R_5=82$ $R_6=85$ $R_7=87$ $R_8=67$

$R_9=16$ $R_{10}=75$ $R_{11}=81$ $R_{12}=59$ $R_{13}=85$ $R_{14}=97$ $R_{15}=77$ $R_e=78$

Dominant Wavelength: 577.0 nm(E)

Gamut Index: $R_g=95$

Purity: 0.3057

Peak Wavelength: 455.0 nm

Radiant Flux: 239.148 W

Photosynthetic Photon Flux(PPF):1100.25 μ mol/s



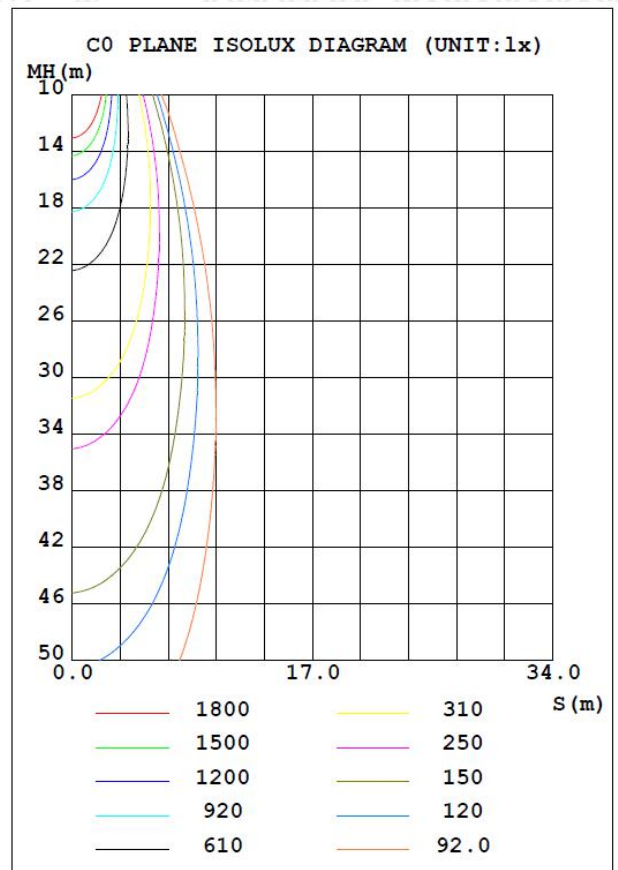
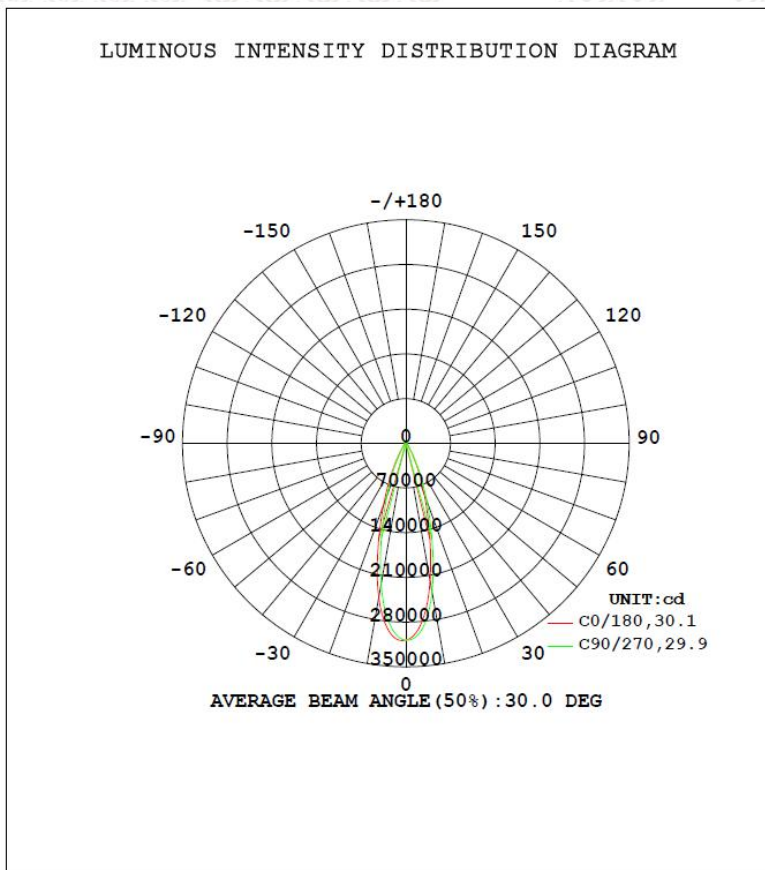
5. Goniophotometer Test results

5.1 Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	220.05	60.01	3.2661	0.9944	714.70

Test type	Total Flux (lm)	Luminous efficacy(lm/W)	I _{max} (cd)	Spacing Criteria (0~180°)	Spacing Criteria (90~270°)
Output	110953	155.24	308931	0.53	0.49

5.2 Luminous Intensity Distribution Diagram and C0 Plane Isolux Diagram (Unit : lx)



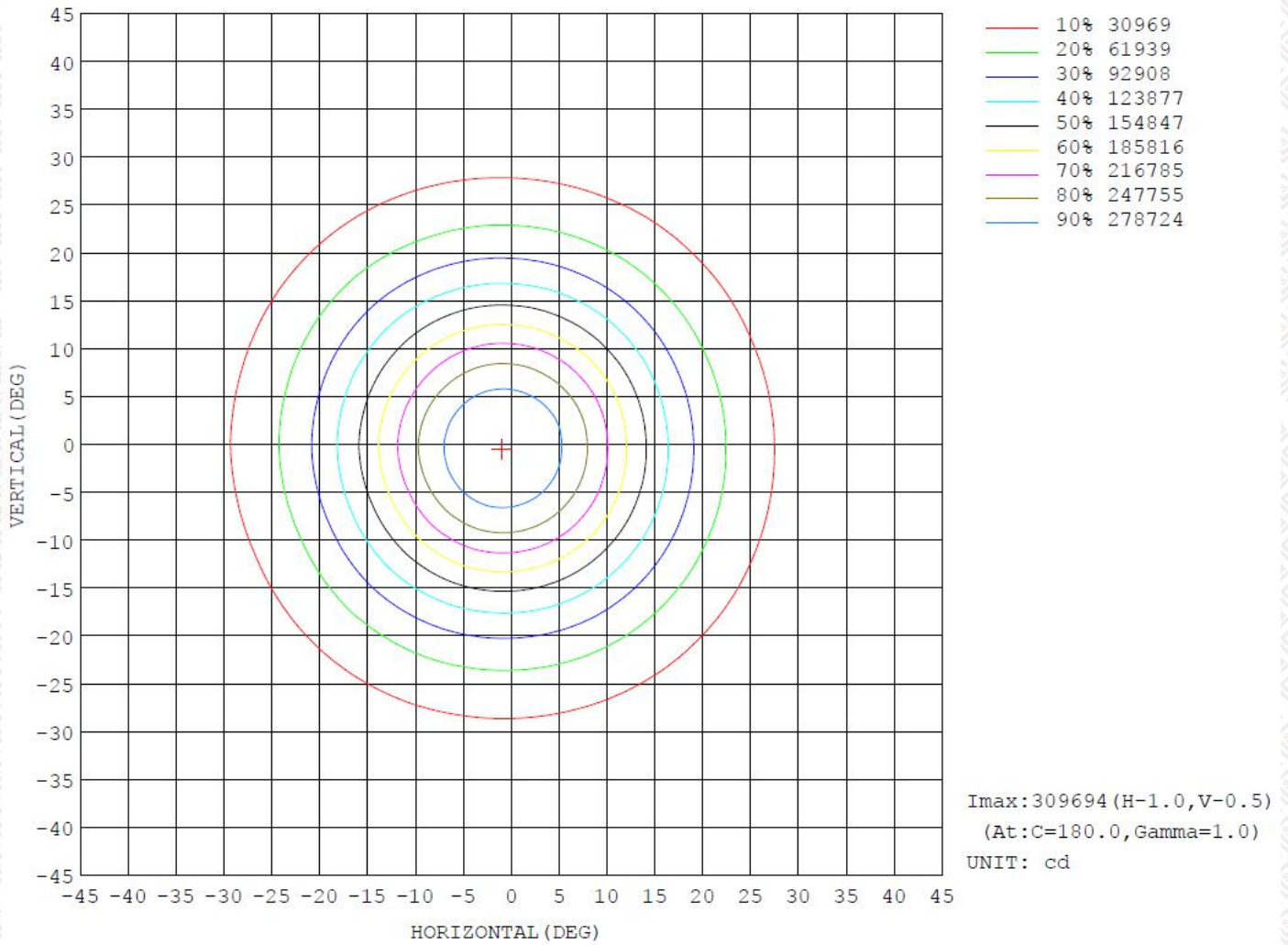


5.3 Zonal Flux Diagram

γ	c0	c45	c90	c135	c180	c225	c270	c315	γ	Φ zone	Φ total	$\%lum, lamp$
10	2187	2263	2367	2429	2453	2355	2245	2172	0- 10	25702	25702	23.2, 23.2
20	837.3	891.4	954.5	1004	1027	962.5	868.4	823.8	10- 20	42352	68054	61.3, 61.3
30	218.5	232.9	251.2	264.0	281.5	251.2	221.9	203.0	20- 30	23196	91250	82.2, 82.2
40	66.27	68.46	72.83	74.70	77.99	73.03	67.85	64.76	30- 40	7951	99201	89.4, 89.4
50	37.85	38.86	39.65	40.68	40.40	39.83	38.66	38.73	40- 50	3908	103109	92.9, 92.9
60	28.20	29.70	29.29	31.20	29.82	30.42	28.72	29.71	50- 60	3024	106133	95.7, 95.7
70	19.54	20.19	20.50	21.54	21.18	20.98	20.04	20.09	60- 70	2434	108567	97.8, 97.8
80	8.431	9.211	9.755	10.59	10.74	10.10	9.154	9.054	70- 80	1589	110157	99.3, 99.3
90	0.0714	0.0792	0.0990	0.0814	0.0777	0.0697	0.0684	0.0722	80- 90	412.0	110569	99.7, 99.7
100	0.0544	0.0559	0.0541	0.0549	0.0577	0.0583	0.0590	0.0614	90-100	6.486	110575	99.7, 99.7
110	0.0544	0.0559	0.0541	0.0541	0.0698	0.0738	0.0784	0.0776	100-110	6.365	110581	99.7, 99.7
120	0.0747	0.0729	0.0678	0.0654	0.0902	0.0948	0.1003	0.1058	110-120	7.432	110589	99.7, 99.7
130	0.1768	0.1715	0.1540	0.1420	0.1425	0.1532	0.1368	0.1898	120-130	9.867	110599	99.7, 99.7
140	0.6063	0.4557	0.4647	0.4204	0.4914	0.4773	0.5951	0.6519	130-140	23.60	110622	99.7, 99.7
150	1.936	1.596	1.547	1.628	1.623	1.657	1.683	1.952	140-150	64.99	110687	99.8, 99.8
160	3.274	3.197	2.734	2.903	3.623	3.608	3.390	3.760	150-160	116.2	110804	99.9, 99.9
170	4.250	4.385	3.869	4.054	4.376	4.634	4.216	4.409	160-170	106.3	110910	100, 100
180	5.053	4.963	4.683	4.719	5.063	5.169	4.701	4.711	170-180	43.18	110953	100, 100
DEG	LUMINOUS INTENSITY: *100cd									UNIT: lm		



5.4 Isocandela Diagram





5.5 Luminous Distribution Intensity Data

Table--1

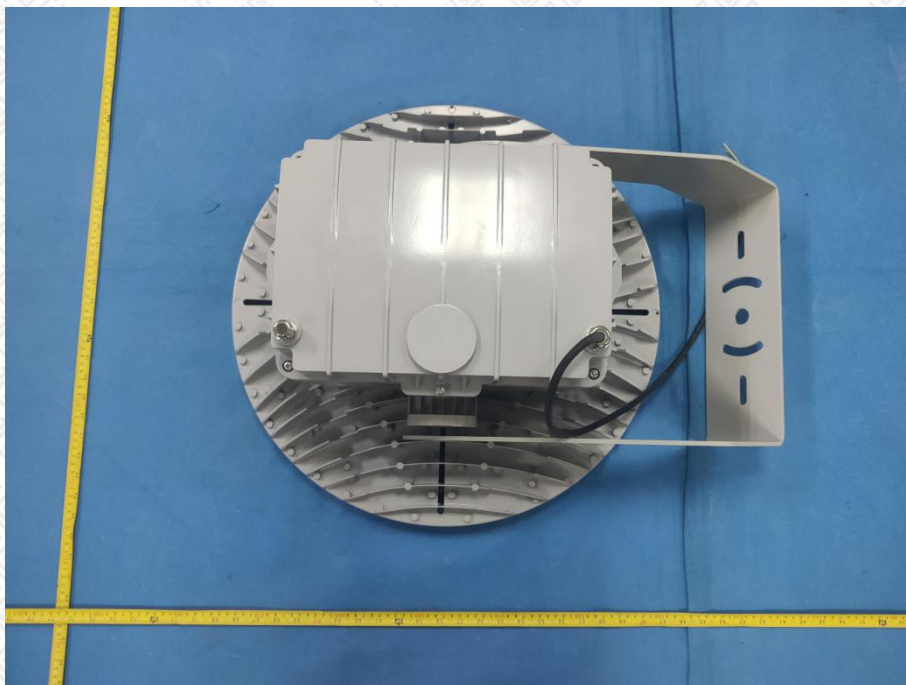
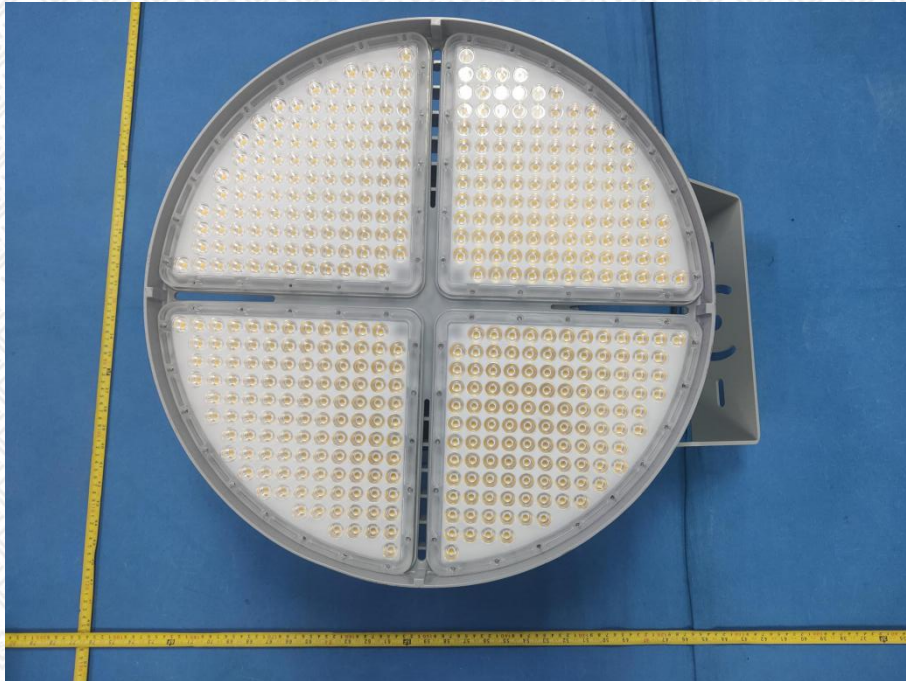
UNIT: x100cd

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	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083	3083			
5	2823	2840	2862	2890	2919	2945	2959	2957	2965	2946	2916	2884	2853	2827	2814	2811			
10	2187	2217	2263	2316	2367	2409	2429	2430	2453	2410	2355	2299	2245	2199	2172	2168			
15	1424	1458	1503	1552	1597	1640	1664	1660	1690	1651	1598	1533	1476	1438	1415	1407			
20	837	859	891	927	955	983	1004	1000	1027	1000	962	913	868	842	824	817			
25	442	455	474	496	515	531	542	540	568	551	526	486	460	439	426	423			
30	219	225	233	239	251	261	264	264	281	268	251	237	222	210	203	202			
35	107	109	112	116	122	125	126	126	135	129	122	115	110	105	103	102			
40	66.3	66.6	68.5	69.9	72.8	73.6	74.7	74.6	78.0	75.4	73.0	69.5	67.8	65.3	64.8	64.4			
45	47.2	46.8	48.3	48.6	50.4	50.4	51.5	51.2	52.7	51.4	50.7	48.8	48.6	47.1	47.5	46.9			
50	37.8	37.4	38.9	38.4	39.7	39.3	40.7	39.9	40.4	39.4	39.8	38.3	38.7	37.6	38.7	37.8			
55	32.6	32.5	34.1	33.3	33.8	33.8	35.4	34.4	34.2	33.8	34.7	33.1	33.1	32.7	34.2	33.0			
60	28.2	27.8	29.7	28.7	29.3	29.2	31.2	29.9	29.8	29.3	30.4	28.6	28.7	28.1	29.7	28.3			
65	24.0	23.4	25.1	24.1	24.9	24.5	26.4	25.0	25.5	24.5	25.8	24.0	24.4	23.5	25.1	23.7			
70	19.5	18.9	20.2	19.4	20.5	20.0	21.5	20.5	21.2	20.1	21.0	19.5	20.0	19.0	20.1	19.1			
75	14.7	14.3	14.9	14.7	15.8	15.4	16.3	15.8	16.6	15.6	15.8	14.8	15.3	14.4	14.8	14.4			
80	8.43	8.70	9.21	9.24	9.75	10.0	10.6	10.3	10.7	10.2	10.1	9.43	9.15	8.81	9.05	8.79			
85	2.59	2.84	3.16	3.31	3.51	3.92	4.06	3.93	4.03	3.91	3.80	3.50	3.09	2.89	2.85	2.84			
90	0.07	0.08	0.08	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07			
95	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06			
100	0.05	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06			
105	0.05	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07			
110	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08			
115	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.08	0.08	0.08	0.09	0.09	0.10	0.09	0.09			
120	0.07	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.09	0.09	0.09	0.09	0.10	0.10	0.11	0.10			
125	0.11	0.11	0.11	0.11	0.10	0.09	0.10	0.09	0.10	0.11	0.11	0.09	0.11	0.10	0.13	0.12			
130	0.18	0.18	0.17	0.16	0.15	0.13	0.14	0.15	0.14	0.15	0.15	0.14	0.14	0.16	0.19	0.18			
135	0.32	0.30	0.28	0.30	0.29	0.26	0.20	0.26	0.25	0.26	0.25	0.30	0.34	0.34	0.33	0.35			
140	0.61	0.57	0.46	0.57	0.46	0.45	0.42	0.47	0.49	0.51	0.48	0.60	0.60	0.72	0.65	0.68			
145	1.12	1.14	0.78	0.99	0.88	0.86	0.88	0.85	0.92	0.98	0.92	1.08	1.08	1.15	1.20	1.24			
150	1.94	2.06	1.60	1.63	1.55	1.54	1.63	1.53	1.62	1.75	1.66	1.84	1.68	1.99	1.95	2.15			
155	2.69	2.80	2.46	2.26	2.12	2.29	2.27	2.16	2.63	2.83	2.71	2.83	2.31	2.86	2.72	3.19			
160	3.27	3.31	3.20	2.80	2.73	2.96	2.90	2.87	3.62	3.78	3.61	3.67	3.39	3.18	3.76	3.94			
165	3.69	3.68	3.74	3.19	3.13	3.28	3.39	3.43	4.17	4.26	4.31	4.10	3.95	4.15	4.14	4.30			
170	4.25	4.27	4.38	3.99	3.87	4.04	4.05	4.06	4.38	4.41	4.63	4.35	4.22	4.13	4.41	4.41			
175	4.89	4.87	4.82	4.61	4.51	4.47	4.59	4.67	4.88	4.86	4.92	4.66	4.55	4.48	4.51	4.62			
180	5.05	5.13	4.96	4.66	4.68	4.68	4.72	4.88	5.06	5.10	5.17	4.94	4.70	4.68	4.71	4.76			

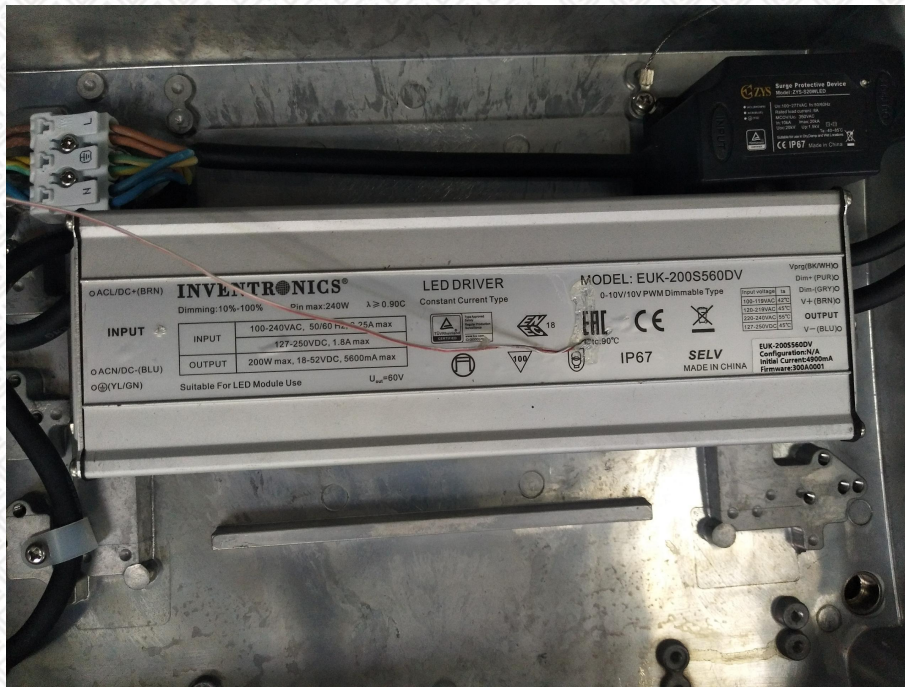


6. Photo of sample

Photo document







----- End of test report -----