



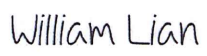


TEST REPORT

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 Province, 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 Province, 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-580WiNS-NV-L5-00-4080-30-B
Bewertung: <i>Rating:</i>	100-277Vac, 50/60Hz, 580W, 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-580WiNS-NV-L5-00-4080-30-B
Rated Inputs.....:	100-277Vac,50/60Hz
Rated Power.....:	580W
Declared CCT.....:	4000K
LED Manufacturer.....:	LUMILEDS
LED Model.....:	L150-4080502400000
Forward current of the LED chip.....:	200mA
LED Driver.....:	INVENTRONICS (EUD-600S740DV)
LED Driver Set Current.....:	5.6A
SPD.....:	SHENZHEN ZHONGYUAN TECHNOLOGY (ZYS-S20WLED)
Number of LEDs.....:	472 LEDs
LED package current.....:	48mA
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

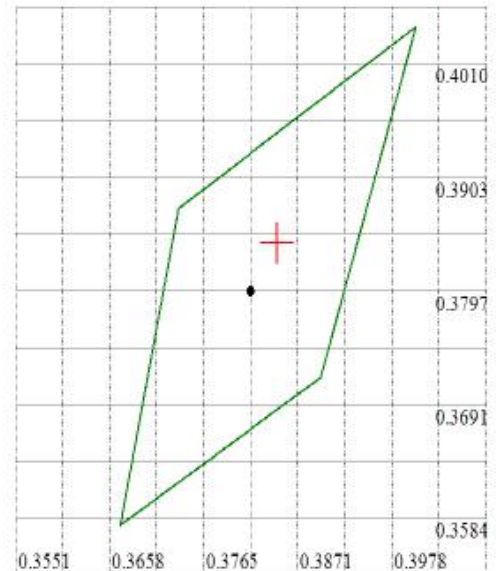
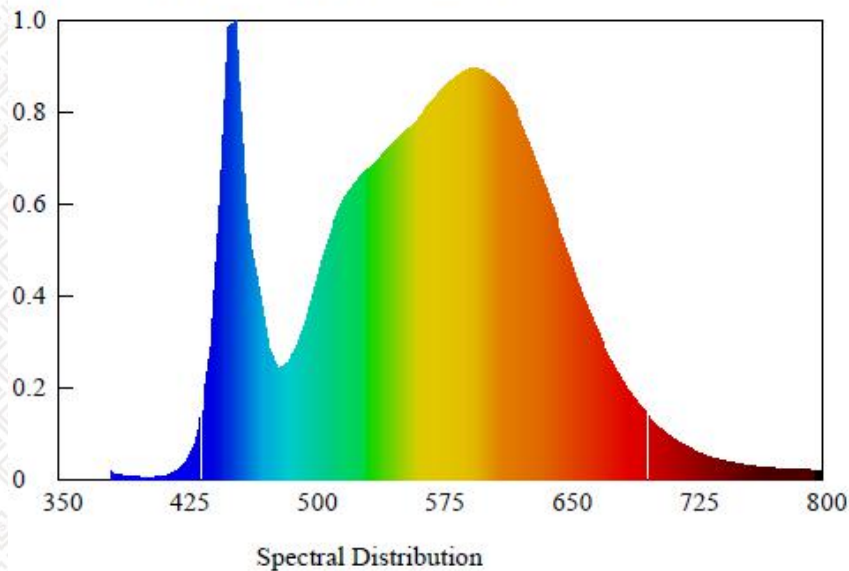
4.1 Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	220.03	60.0	2.6463	0.9972	580.63

Test type	CCT (K)	CRI	Duv	Luminous flux (lm)	Luminous efficacy(lm/W)
Output	3938	83.7	0.00219	90112.16	155.2

4.2 Spectrum

Spectroradiometric Parameters



Nominal CCT:LED_4000K
x0=0.3818 y0=0.3797

Chromaticity Coordinates: $x=0.3848$ $y=0.3842$ $u'=0.225$ $v'=0.5055$

Correlated Color Temperature: 3938 K

Colour Fidelity Index: $R_f=82$

Luminous Flux: 90112.16 lm

Chromaticity Difference: $+0.00219D_{uv}$

Color Ratio: $K_r=38.0\%$ $K_g=52.8\%$ $K_b=9.2\%$

Bandwidth: 16.6nm

Photosynthetically Active Radiation(PAR): 243.58W

Rendering Index: $R_a=83.7$

$R_1=82$ $R_2=89$ $R_3=94$ $R_4=83$ $R_5=81$ $R_6=85$ $R_7=88$ $R_8=67$

$R_9=16$ $R_{10}=74$ $R_{11}=81$ $R_{12}=57$ $R_{13}=85$ $R_{14}=97$ $R_{15}=77$ $R_e=77$

Dominant Wavelength: 577.0 nm(E)

Gamut Index: $R_g=95$

Purity: 0.3080

Peak Wavelength: 455.0 nm

Radiant Flux: 250.703 W

Photosynthetic Photon Flux(PPF):1153.55 $\mu\text{mol/s}$



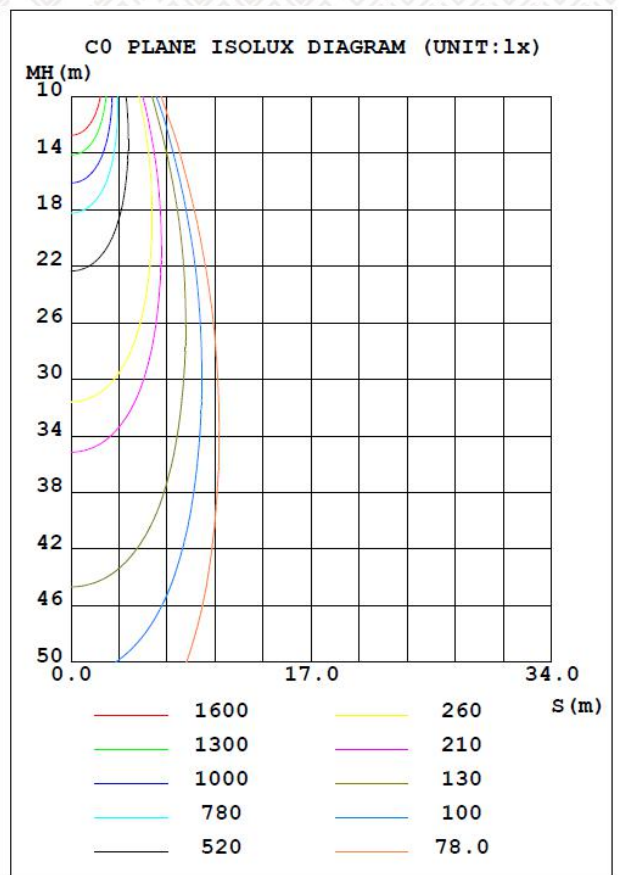
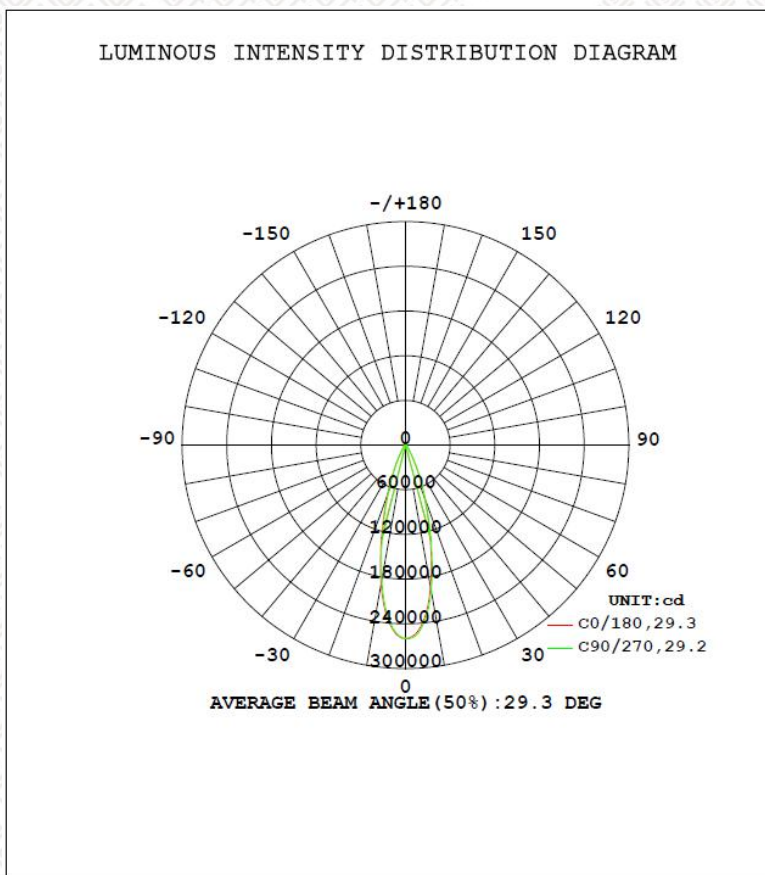
5. Goniophotometer Test results

5.1 Test Data

Test type	Voltage (V AC)	Frequency (Hz)	Current (A)	Power Factor	Power (W)
Input	219.98	60.01	2.6476	0.9970	580.68

Test type	Total Flux (lm)	Luminous efficacy(lm/W)	Imax (cd)	Spacing Criteria (0~180°)	Spacing Criteria (90~270°)
Output	90145.1	155.24	259983	0.48	0.47

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



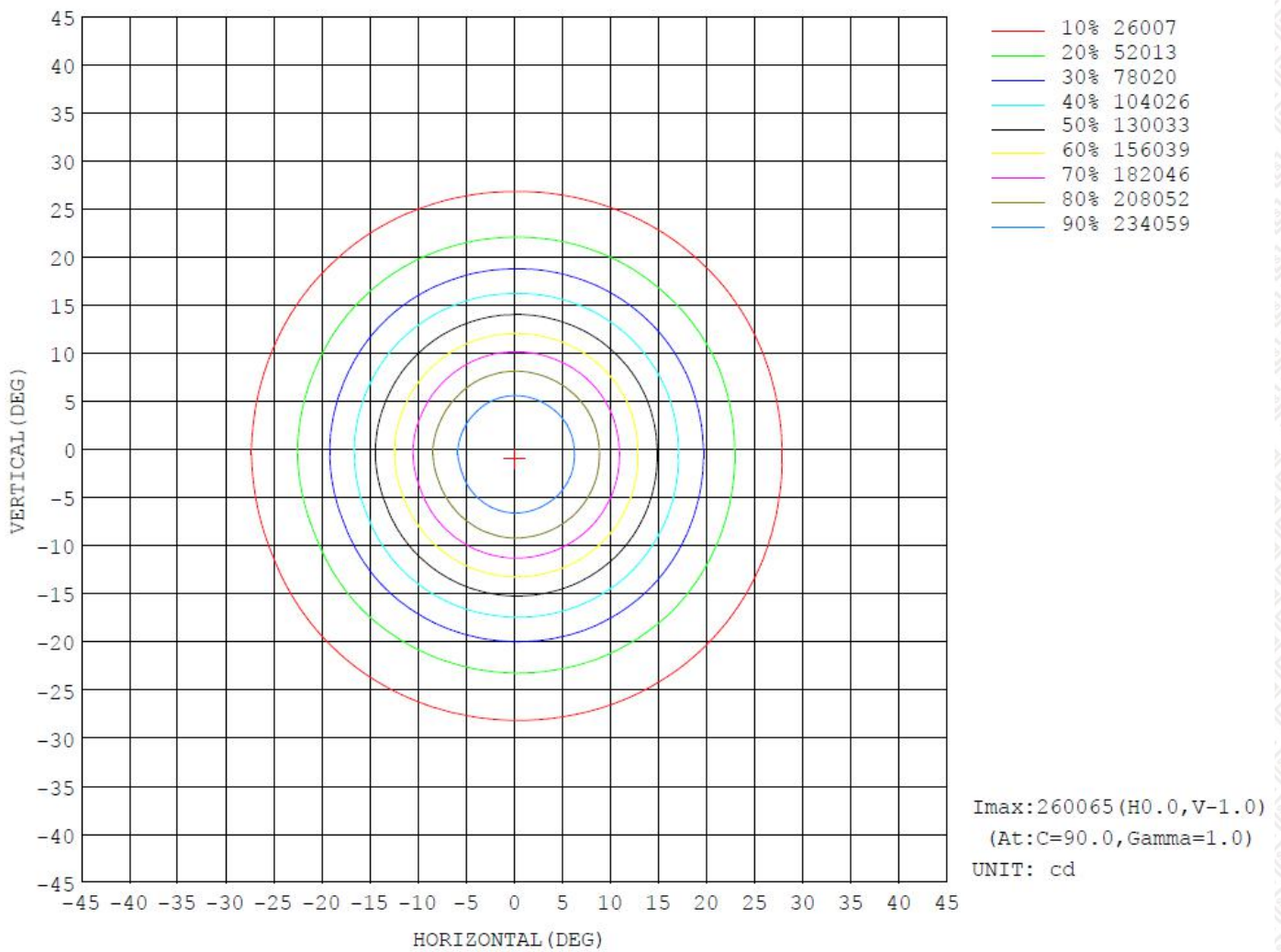


5.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
10	1939	1986	1988	1934	1892	1839	1840	1884	0- 10	21492	21492	23.8, 23.8
20	749.3	787.3	778.7	743.5	709.0	678.9	673.3	707.2	10- 20	34439	55931	62, 62
30	192.4	200.1	199.8	185.1	173.1	159.5	159.2	168.7	20- 30	17827	73758	81.8, 81.8
40	59.52	60.49	60.78	58.01	57.15	54.84	55.52	56.68	30- 40	6105	79863	88.6, 88.6
50	35.28	34.90	36.08	35.00	34.96	34.25	35.39	34.84	40- 50	3341	83204	92.3, 92.3
60	25.67	27.38	26.12	27.71	25.55	27.14	25.58	27.78	50- 60	2708	85911	95.3, 95.3
70	17.75	18.31	18.03	18.44	17.80	18.05	17.69	18.39	60- 70	2154	88065	97.7, 97.7
80	8.480	8.805	8.632	8.749	8.508	8.343	8.046	8.711	70- 80	1403	89468	99.2, 99.2
90	0.0626	0.0867	0.0788	0.0621	0.0518	0.0519	0.0518	0.0667	80- 90	369.2	89838	99.7, 99.7
100	0.0447	0.0462	0.0432	0.0433	0.0480	0.0480	0.0488	0.0488	90-100	5.320	89843	99.7, 99.7
110	0.0441	0.0489	0.0432	0.0432	0.0598	0.0630	0.0668	0.0653	100-110	5.260	89848	99.7, 99.7
120	0.0558	0.0551	0.0542	0.0541	0.0787	0.0826	0.0888	0.0866	110-120	6.155	89854	99.7, 99.7
130	0.1273	0.1272	0.1163	0.1108	0.1298	0.1385	0.1142	0.1480	120-130	8.074	89862	99.7, 99.7
140	0.4172	0.2995	0.3339	0.3317	0.4377	0.4447	0.5021	0.4908	130-140	18.66	89881	99.7, 99.7
150	1.374	1.149	1.112	1.247	1.448	1.555	1.464	1.537	140-150	51.75	89933	99.8, 99.8
160	2.423	2.390	1.992	2.263	3.086	3.172	2.916	3.092	150-160	93.34	90026	99.9, 99.9
170	3.296	3.367	2.967	3.194	3.554	3.800	3.437	3.607	160-170	84.76	90111	100, 100
180	3.983	3.897	3.700	3.781	3.994	4.055	3.708	3.777	170-180	34.29	90145	100, 100
DEG	LUMINOUS INTENSITY: *100cd									UNIT: lm		



5.4 Isocandela Diagram





5.5 Luminous Distribution Intensity Data

Table--1

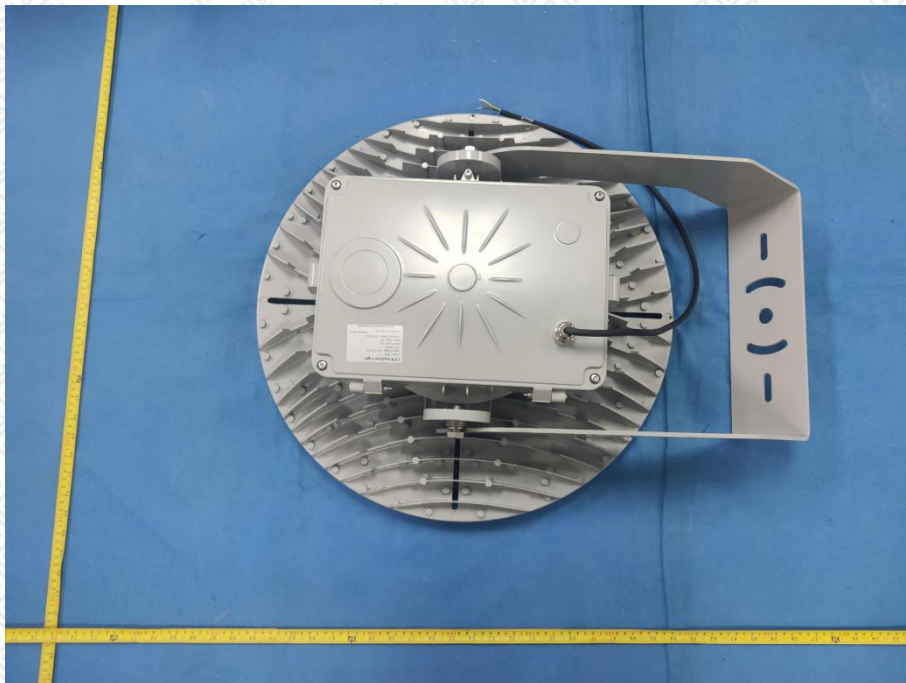
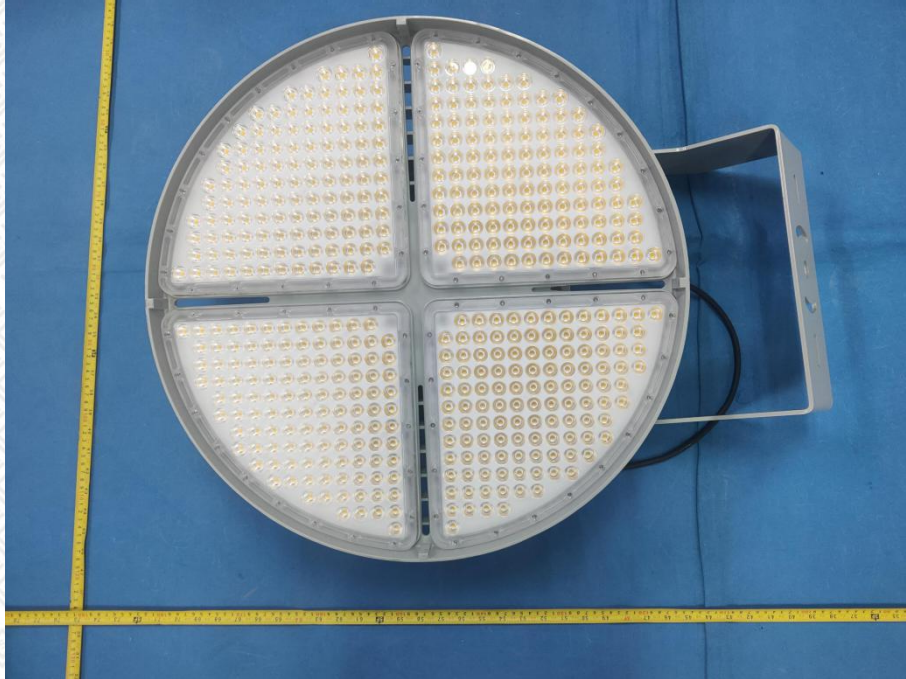
UNIT: x100cd

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	2597	2597	2597	2597	2597	2597	2597	2597	2597	2597	2597	2597	2597	2597	2597	2597			
5	2436	2452	2458	2463	2465	2456	2439	2418	2412	2397	2387	2389	2389	2393	2404	2424			
10	1939	1970	1986	1989	1988	1965	1934	1900	1892	1860	1839	1837	1840	1853	1884	1920			
15	1281	1313	1337	1340	1331	1308	1278	1239	1232	1207	1188	1177	1179	1197	1230	1262			
20	749	770	787	790	779	762	744	710	709	690	679	671	673	686	707	733			
25	390	404	412	413	410	397	382	364	365	350	340	337	338	346	358	377			
30	192	199	200	201	200	195	185	176	173	165	159	158	159	163	169	179			
35	95.1	97.5	98.3	98.0	97.9	94.5	90.7	87.3	88.0	84.8	82.8	82.0	83.1	83.8	86.5	90.4			
40	59.5	60.2	60.5	60.3	60.8	59.2	58.0	56.8	57.1	55.5	54.8	54.5	55.5	55.4	56.7	58.1			
45	43.0	42.6	43.1	42.9	43.9	42.6	42.4	41.8	42.2	40.9	41.0	40.6	42.0	41.1	41.9	42.4			
50	35.3	34.1	34.9	34.3	36.1	34.4	35.0	34.2	35.0	33.4	34.3	33.5	35.4	33.7	34.8	34.5			
55	30.4	29.4	30.9	29.8	31.0	29.9	31.3	29.9	30.1	29.2	30.8	29.3	30.4	29.4	31.3	30.1			
60	25.7	25.3	27.4	25.8	26.1	25.7	27.7	25.8	25.5	25.2	27.1	25.2	25.6	25.2	27.8	26.1			
65	21.6	21.1	22.7	21.4	21.9	21.4	22.9	21.5	21.6	21.0	22.5	21.1	21.6	21.1	22.9	21.7			
70	17.7	17.2	18.3	17.3	18.0	17.4	18.4	17.4	17.8	17.1	18.0	17.0	17.7	17.1	18.4	17.6			
75	13.7	13.3	13.8	13.3	13.9	13.3	13.8	13.2	13.7	13.1	13.4	12.8	13.5	13.0	13.7	13.5			
80	8.48	8.52	8.80	8.55	8.63	8.51	8.75	8.37	8.51	8.25	8.34	7.95	8.05	8.16	8.71	8.70			
85	3.08	3.29	3.42	3.26	3.10	3.12	3.14	2.96	3.03	2.94	2.87	2.73	2.72	2.86	3.19	3.36			
90	0.06	0.07	0.09	0.09	0.08	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.06	0.07	0.07			
95	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
100	0.04	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
105	0.04	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.05			
110	0.04	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.06			
115	0.05	0.05	0.05	0.06	0.05	0.05	0.04	0.05	0.07	0.07	0.07	0.08	0.08	0.08	0.07	0.07			
120	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.06	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.08			
125	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.09	0.10	0.10	0.09	0.10	0.08	0.10	0.10			
130	0.13	0.13	0.13	0.12	0.12	0.10	0.11	0.13	0.13	0.14	0.14	0.13	0.11	0.13	0.15	0.14			
135	0.23	0.21	0.19	0.22	0.21	0.19	0.15	0.22	0.23	0.25	0.23	0.27	0.29	0.27	0.25	0.25			
140	0.42	0.39	0.30	0.40	0.33	0.33	0.33	0.40	0.44	0.48	0.44	0.56	0.50	0.58	0.49	0.48			
145	0.77	0.78	0.54	0.70	0.62	0.65	0.68	0.72	0.82	0.90	0.88	1.02	0.94	0.95	0.93	0.92			
150	1.37	1.46	1.15	1.15	1.11	1.17	1.25	1.25	1.45	1.61	1.55	1.68	1.46	1.66	1.54	1.64			
155	1.95	2.01	1.81	1.58	1.54	1.73	1.80	1.76	2.29	2.53	2.46	2.51	1.99	2.42	2.16	2.51			
160	2.42	2.43	2.39	2.02	1.99	2.23	2.26	2.31	3.09	3.28	3.17	3.24	2.92	2.63	3.09	3.18			
165	2.78	2.74	2.82	2.35	2.35	2.46	2.63	2.73	3.43	3.52	3.60	3.49	3.30	3.39	3.41	3.49			
170	3.30	3.27	3.37	3.05	2.97	3.12	3.19	3.27	3.55	3.57	3.80	3.60	3.44	3.35	3.61	3.59			
175	3.84	3.79	3.74	3.54	3.53	3.55	3.67	3.78	3.87	3.85	3.92	3.74	3.63	3.56	3.63	3.72			
180	3.98	4.03	3.90	3.68	3.70	3.72	3.78	3.93	3.99	4.02	4.05	3.94	3.71	3.73	3.78	3.80			



6. Photo of sample

Photo document





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