Test Report Number:	LCZP24030113	**Total Page:12** **Version:1.0**
Applicant Name:	Access Lighting	
Applicant Address:	14410 Myford Road, Irvine, CA92606, USA	
Test item:	Ceiling LED fixture-3CCT	
Model / Type Reference:	49981LEDDCS-(3000K/3500K/4000K)	
Date of Issue:	2024-03-26	
Testing Laboratory:	**LCTECH Guangdong Testing Services Co., Ltd.** 1/F., Building I, & 2, 3, 4/F., Building II, Technology and Enterprise Development Center, Guangyuan Road, Xiaolan, Zhongshan, Guangdong, China Tel:+86-760-22833366 E-mail:Service@lccert.com http://www.lccert.com	
Test Sites:	1/F., Building I, Technology and Enterprise Development Center, Guangyuan Road, Xiaolan, Zhongshan, Guangdong, China	
Test Specification:	Photometric test (According to IES LM-79-08)	
Report Template No.:	LC-RT-PL-006 Rev.2.1	
Test Result:	See the following pages	

Compiled by:			**Reviewed by**:		
2024-03-26	*Kargel Yuan*		*2024-03-26*	*Lin Qiu*	
Date	*Name*	*Signature*	*Date*	*Name*	*Signature*

Remark:

N/A

Sample Description

Luminaire Type	Ceiling LED fixture-3CCT	Model/Type	49981LEDDCS-(3000K/3500K/4000K)
Input Type	☒ AC ☐ DC	Rated Voltage	120VAC, 60Hz
Rated Wattage	24 W	Lamp Rated Flux	Not Provided
Lamp Type	LED	Lamp Model	Not Provided
Power Supply Type	LED driver	Power Supply Model	Not Provided
Luminous Length	N.A	Luminous Width	N.A
Luminous Diameter	380 mm	Luminous Height	0 mm
Sample Code of lab.	240323108001		

Test Condition

Temperature	25.0℃	Humidity	65%
Test Equipment	LC-I-902 GMS-2000	Test Mode	C-Gamma
Test Date	2024-03-25	Test Method	Absolutely photometric
Azimuth (C)	15	Elevation (Gamma)	5
Test distance	29.97 m	Uncertainty	Considered
Stabilization	2 hours		

Characteristics(3000K)

Input Voltage	120.02 V	Input Current	0.226 A
Wattage	24.51 W	Power Factor	0.906
Total lumens	1434.84 lm	Luminous Efficacy	58.54 lm/W
Luminaire Efficiency	100%	Central Intensity	497.678 cd
Max intensity	497.678 cd	Angle of max intensity	C=30.0,Gamma=0.0
Maximum S/H	C0_180= 1.25, C90_270= 1.26	CIE Type	Direct lighting

Characteristics(3500K)

Input Voltage	120.01 V	Input Current	0.231 A
Wattage	25.36 W	Power Factor	0.915
Total lumens	1574.51 lm	Luminous Efficacy	62.09 lm/W

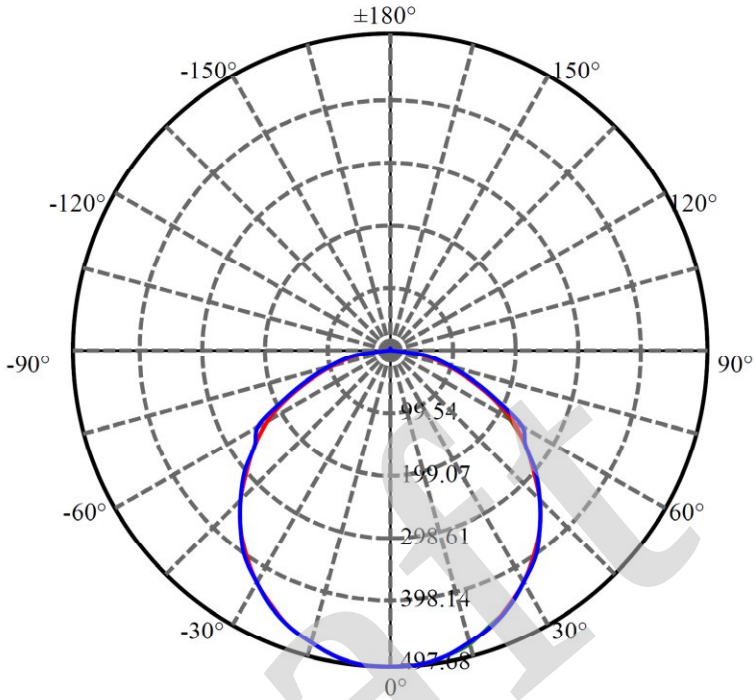
Luminaire Efficiency	100%	Central Intensity	545.672 cd
Max intensity	545.672 cd	Angle of max intensity	C=75.0,Gamma=0.0
Maximum S/H	C0_180= 1.26, C90_270= 1.26	CIE Type	Direct lighting

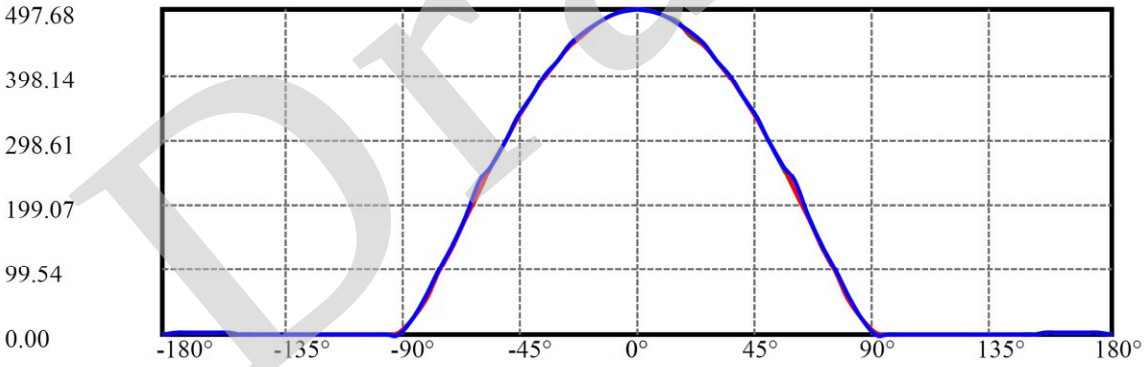
Characteristics(4000K)			
Input Voltage	120.01 V	Input Current	0.226 A
Wattage	24.54 W	Power Factor	0.906
Total lumens	1507.54 lm	Luminous Efficacy	61.43 lm/W
Luminaire Efficiency	100%	Central Intensity	522.064 cd
Max intensity	522.064 cd	Angle of max intensity	C=0.0,Gamma=0.0
Maximum S/H	C0_180= 1.26, C90_270= 1.25	CIE Type	Direct lighting

Luminance Data (cd/m^2)(3000K)

Gamma	45	50	55	60	65	70	75	80	85
C0	3247	3181	3118	3024	2899	2733	2545	2271	1901
C45	3248	3188	3123	3037	2929	2774	2577	2356	2004
C90	3262	3211	3140	3272	2959	2821	2638	2404	2042

Light Distribution Curve(cd) (3000K)





C30(Max):

C0/C180:

C90/C270:

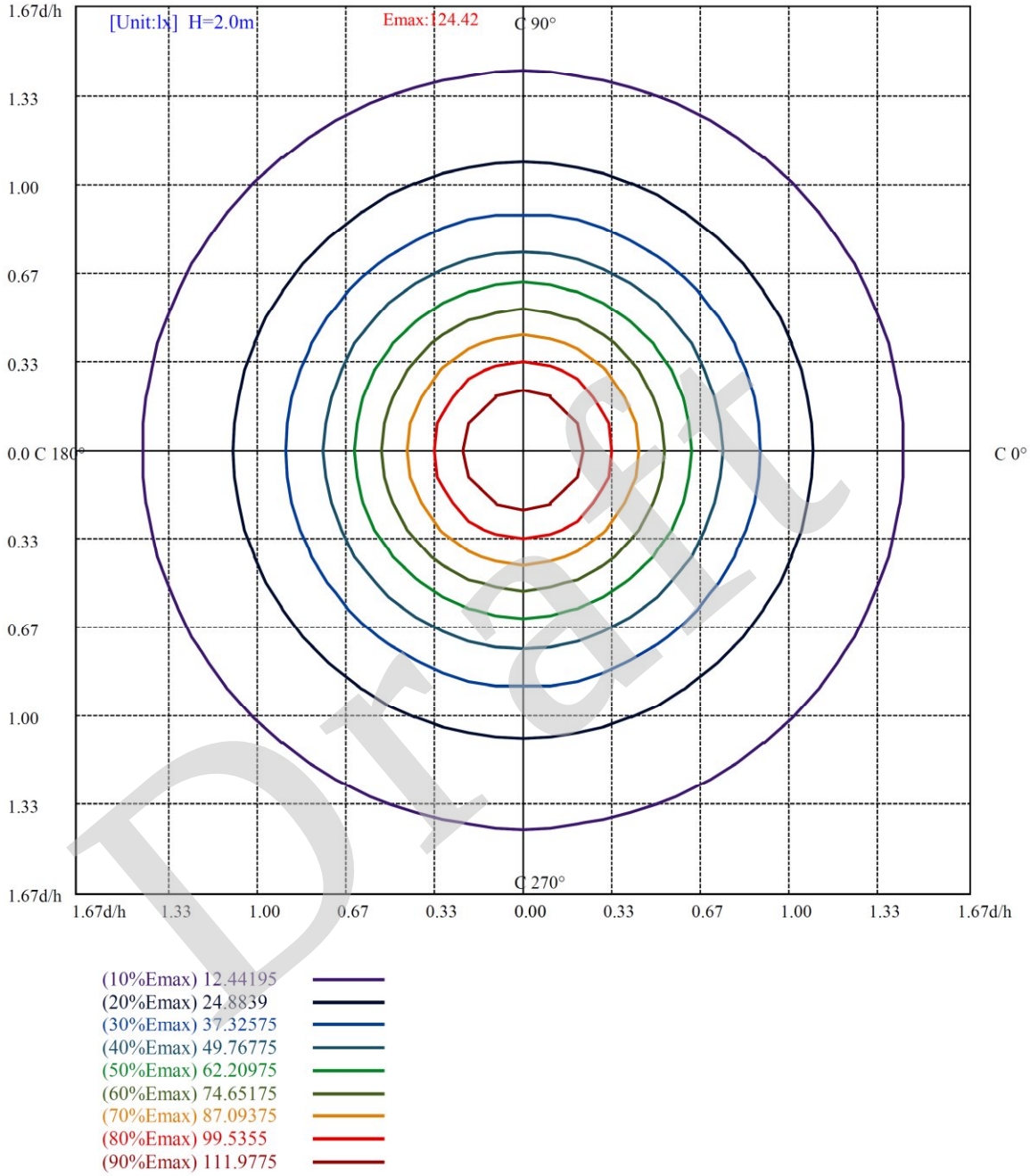
Field angle(10%Imax):C0/180Left:81.1 Right:81.1
:C90/270Left:81.5 Right:81.5

Beam Angle(50%Imax):C0/180Left:56.2 Right:56.2
:C90/270Left:57.4 Right:57.4

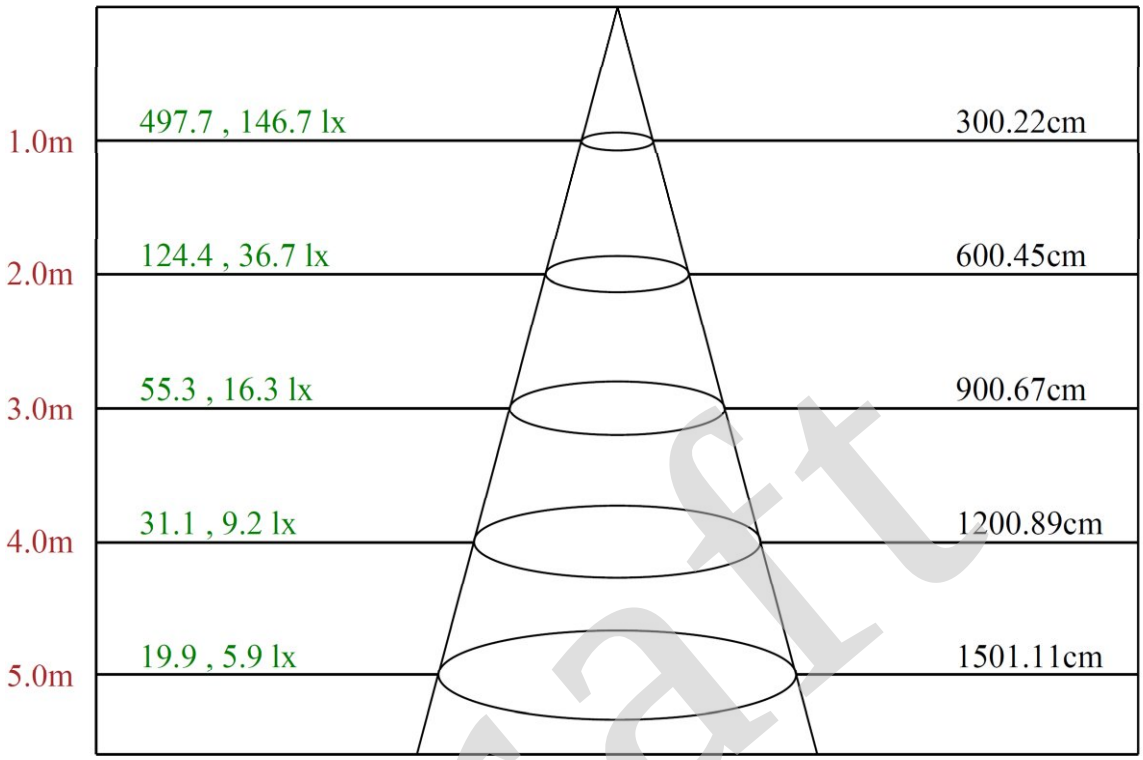
Zonal flux distribution table(3000K)

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	497.678	0.000	0	0.00%	0.00%
5.0	495.307	11.871	11.871	0.83%	0.83%
10.0	488.476	35.193	47.064	2.45%	3.28%
15.0	477.515	57.302	104.366	3.99%	7.27%
20.0	462.321	77.456	181.822	5.40%	12.67%
25.0	443.014	94.953	276.774	6.62%	19.29%
30.0	420.143	109.233	386.008	7.61%	26.90%
35.0	393.939	119.879	505.887	8.35%	35.26%
40.0	364.783	126.587	632.474	8.82%	44.08%
45.0	331.490	128.921	761.395	8.99%	53.06%
50.0	296.154	126.825	888.219	8.84%	61.90%
55.0	258.761	120.657	1008.876	8.41%	70.31%
60.0	220.533	110.787	1119.664	7.72%	78.03%
65.0	178.592	97.028	1216.692	6.76%	84.80%
70.0	137.092	79.933	1296.625	5.57%	90.37%
75.0	96.668	61.101	1357.726	4.26%	94.63%
80.0	59.836	41.876	1399.602	2.92%	97.54%
85.0	25.259	23.122	1422.724	1.61%	99.16%
90.0	1.541	7.338	1430.062	0.51%	99.67%
95.0	0.412	0.535	1430.597	0.04%	99.70%
100.0	0.385	0.217	1430.814	0.02%	99.72%
105.0	0.367	0.201	1431.015	0.01%	99.73%
110.0	0.374	0.194	1431.209	0.01%	99.75%
115.0	0.397	0.195	1431.404	0.01%	99.76%
120.0	0.487	0.215	1431.619	0.01%	99.78%
125.0	0.572	0.245	1431.863	0.02%	99.79%
130.0	0.610	0.257	1432.12	0.02%	99.81%
135.0	0.647	0.254	1432.375	0.02%	99.83%
140.0	0.793	0.267	1432.641	0.02%	99.85%
145.0	1.018	0.302	1432.944	0.02%	99.87%
150.0	1.332	0.346	1433.29	0.02%	99.89%
155.0	1.677	0.381	1433.67	0.03%	99.92%
160.0	1.890	0.374	1434.045	0.03%	99.94%
165.0	2.077	0.327	1434.371	0.02%	99.97%
170.0	2.223	0.255	1434.627	0.02%	99.99%
175.0	2.455	0.167	1434.794	0.01%	100.00%
180.0	1.291	0.045	1434.839	0.00%	100.00%

ISO illuminance diagram(Lux) (3000K)



Lux distance Curve(3000K)



Max , Ave Beam angle of C30 plane 112.66

Utilization factor table(3000K)

RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.04	0.99	0.95	1.01	0.97	0.94	0.97	0.94	0.91	0.93	0.90	0.88	0.89	0.87	0.85	0.83
2	0.90	0.83	0.77	0.88	0.82	0.76	0.85	0.79	0.75	0.81	0.77	0.73	0.78	0.74	0.71	0.69
3	0.79	0.71	0.64	0.77	0.70	0.64	0.74	0.68	0.62	0.72	0.66	0.61	0.69	0.64	0.60	0.58
4	0.70	0.61	0.54	0.69	0.60	0.54	0.66	0.59	0.53	0.64	0.57	0.52	0.61	0.56	0.52	0.49
5	0.62	0.53	0.47	0.61	0.53	0.46	0.59	0.52	0.46	0.57	0.50	0.45	0.55	0.49	0.45	0.43
6	0.56	0.47	0.41	0.55	0.47	0.40	0.53	0.46	0.40	0.52	0.45	0.40	0.50	0.44	0.39	0.37
7	0.51	0.42	0.36	0.50	0.42	0.36	0.48	0.41	0.35	0.47	0.40	0.35	0.46	0.40	0.35	0.33
8	0.46	0.38	0.32	0.46	0.38	0.32	0.44	0.37	0.32	0.43	0.36	0.31	0.42	0.36	0.31	0.29
9	0.43	0.34	0.29	0.42	0.34	0.29	0.41	0.34	0.28	0.40	0.33	0.28	0.39	0.33	0.28	0.26
10	0.39	0.31	0.26	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.30	0.26	0.36	0.30	0.26	0.24

Intensity data(cd) (3000K)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	497.68	496.61	491.19	481.05	467.36	448.86	428.05	401.11	372.39
15.0	497.68	496.70	491.17	481.11	466.67	448.23	427.20	400.21	372.50
30.0	497.68	496.61	490.90	481.35	466.89	448.78	426.47	400.59	371.50
45.0	497.68	496.43	490.98	480.71	466.33	447.67	425.25	400.79	370.24
60.0	497.68	496.07	490.33	479.94	465.42	448.75	425.54	399.65	370.53
75.0	497.68	493.64	488.61	478.56	462.40	443.55	420.93	396.78	367.33
90.0	497.68	497.23	490.81	478.71	465.25	447.19	423.52	398.14	368.97
105.0	497.68	496.24	490.03	479.42	464.67	445.60	423.11	398.02	367.25
120.0	497.68	495.42	489.11	478.73	464.57	445.54	423.17	396.01	365.34
135.0	497.68	497.32	489.45	479.60	464.42	444.99	423.48	397.27	367.27
150.0	497.68	495.96	488.82	478.89	450.61	444.20	422.06	395.50	365.24
165.0	497.68	496.32	489.33	478.98	464.73	445.03	422.07	394.84	362.16
180.0	497.68	494.03	485.94	473.05	456.42	435.61	411.43	385.46	354.70
195.0	497.68	493.76	486.10	472.91	456.96	436.56	412.33	384.71	354.06
210.0	497.68	494.11	485.90	473.67	457.08	436.64	414.06	386.49	356.06
225.0	497.68	494.46	486.34	474.82	458.39	438.29	414.27	386.94	358.19
240.0	497.68	494.45	486.93	474.92	457.98	439.79	415.06	389.16	358.88
255.0	497.68	492.83	484.30	474.52	459.08	438.97	415.09	388.52	358.54
270.0	497.68	494.61	486.93	475.10	460.83	441.95	418.65	393.27	363.19
285.0	497.68	494.53	487.06	476.09	460.44	440.20	416.82	392.26	383.45
300.0	497.68	494.25	487.39	476.12	473.41	440.85	417.93	392.68	360.56
315.0	497.68	496.32	489.18	477.71	462.88	441.29	418.96	391.31	362.75
330.0	497.68	493.97	487.83	476.63	461.00	441.76	418.36	392.34	361.27
345.0	497.68	495.50	488.78	477.80	461.92	442.04	419.62	392.48	362.43
360.0	497.68	496.61	491.19	481.05	467.36	448.86	428.05	401.11	372.39

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	341.98	305.52	270.14	230.74	189.66	147.69	106.17	66.60	31.57
15.0	340.61	305.95	268.80	229.24	188.34	148.61	107.09	67.53	32.25
30.0	339.46	304.57	267.27	229.88	188.92	147.15	105.84	66.57	33.20
45.0	339.79	304.79	267.64	228.17	187.27	147.79	104.48	67.42	32.15
60.0	338.27	303.23	267.93	228.50	187.64	146.24	105.20	65.95	32.62
75.0	336.99	302.88	265.36	226.40	185.64	146.41	105.39	65.89	30.97
90.0	336.54	301.95	263.65	226.62	185.70	144.34	103.42	64.58	29.35
105.0	336.31	301.14	263.64	223.97	183.13	141.58	102.63	63.86	29.05
120.0	332.96	298.32	262.78	223.08	181.86	140.72	99.95	61.34	27.06
135.0	334.83	299.04	261.54	221.59	180.47	138.72	97.78	61.27	27.11
150.0	332.36	297.58	259.72	222.05	180.23	136.50	97.39	59.08	25.66
165.0	333.21	298.99	261.23	221.74	180.17	137.79	98.39	59.73	26.23
180.0	321.17	284.98	246.39	205.94	164.14	122.26	84.03	47.30	16.27
195.0	320.47	284.30	247.95	205.36	165.89	124.11	83.84	47.22	15.95
210.0	322.59	286.45	248.08	207.92	166.43	124.84	84.78	47.92	17.67
225.0	323.18	286.93	250.67	210.75	169.58	128.15	88.05	50.72	18.31
240.0	325.72	289.88	250.81	210.76	170.43	131.01	89.07	53.50	20.43
255.0	325.32	291.84	251.89	214.10	173.79	132.41	92.19	83.13	21.81
270.0	329.59	294.18	256.52	245.86	175.50	134.31	93.75	56.00	22.04
285.0	328.22	292.51	254.64	215.42	175.94	135.64	94.89	57.03	23.39
300.0	327.91	294.44	256.82	216.86	175.73	134.41	94.54	56.38	24.27
315.0	328.86	292.90	254.94	216.44	177.58	133.39	94.89	56.84	23.32
330.0	330.01	292.43	256.65	216.18	175.71	133.97	93.05	55.11	23.49
345.0	329.40	292.91	255.24	215.21	176.45	132.16	93.22	55.10	22.06
360.0	341.98	305.52	270.14	230.74	189.66	147.69	106.17	66.60	31.57

Intensity data(cd) (3000K)

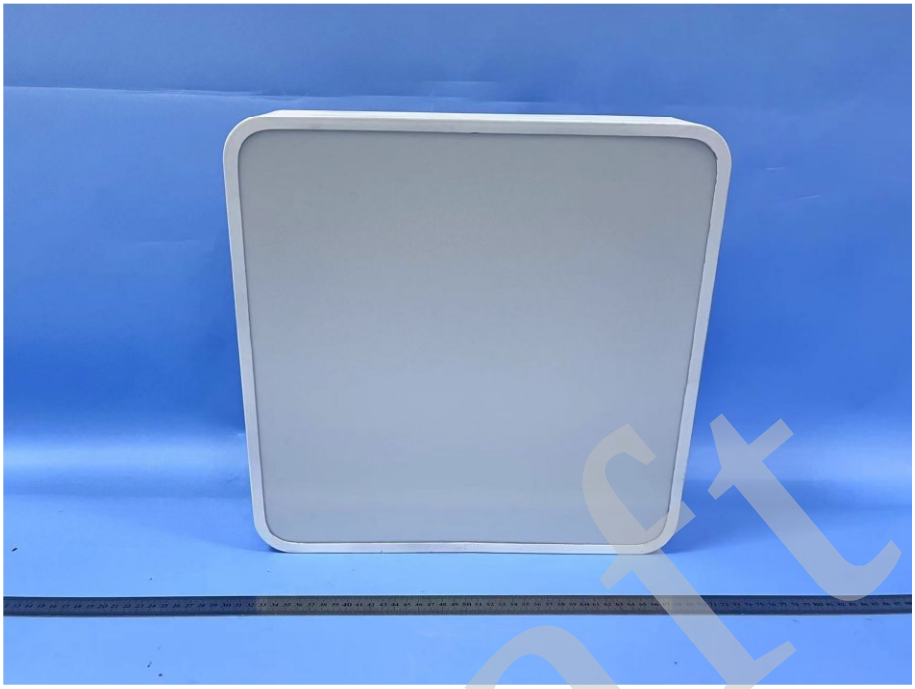
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	4.98	0.18	0.09	0.09	0.00	0.18	0.27	0.44	0.53
15.0	4.19	0.18	0.09	0.09	0.09	0.09	0.27	0.53	0.62
30.0	4.37	0.18	0.09	0.09	0.09	0.09	0.27	0.45	0.54
45.0	3.21	0.18	0.18	0.09	0.09	0.18	0.27	0.54	0.54
60.0	3.23	0.18	0.18	0.09	0.09	0.18	0.27	0.54	0.63
75.0	1.97	0.27	0.09	0.09	0.09	0.09	0.27	0.54	0.54
90.0	1.17	0.09	0.18	0.09	0.18	0.18	0.36	0.45	0.63
105.0	1.17	0.18	0.09	0.00	0.00	0.18	0.27	0.54	0.63
120.0	1.17	0.18	0.09	0.09	0.09	0.09	0.36	0.45	0.54
135.0	0.72	0.09	0.09	0.18	0.18	0.09	0.36	0.54	0.72
150.0	0.54	0.18	0.18	0.09	0.18	0.18	0.27	0.54	0.63
165.0	0.73	0.18	0.18	0.18	0.18	0.18	0.27	0.45	0.54
180.0	0.71	0.71	0.71	0.62	0.71	0.71	0.71	0.71	0.62
195.0	0.80	0.62	0.71	0.62	0.71	0.71	0.71	0.71	0.71
210.0	0.80	0.71	0.71	0.71	0.71	0.62	0.71	0.62	0.62
225.0	0.80	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
240.0	0.81	0.72	0.72	0.63	0.63	0.63	0.72	0.72	0.63
255.0	0.81	0.72	0.63	0.63	0.63	0.63	0.63	0.63	0.63
270.0	0.81	0.72	0.63	0.72	0.63	0.72	0.72	0.63	0.63
285.0	0.81	0.54	0.63	0.63	0.54	0.63	0.63	0.63	0.63
300.0	0.72	0.63	0.72	0.63	0.63	0.63	0.72	0.63	0.63
315.0	0.81	0.63	0.54	0.63	0.63	0.63	0.63	0.63	0.63
330.0	0.81	0.63	0.54	0.63	0.63	0.63	0.72	0.63	0.54
345.0	0.82	0.54	0.54	0.54	0.64	0.64	0.64	0.54	0.64
360.0	4.98	0.18	0.09	0.09	0.00	0.18	0.27	0.44	0.53

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.71	0.89	1.24	1.69	1.96	2.22	2.40	2.40	2.58
15.0	0.71	0.89	1.25	1.60	2.05	2.23	2.85	2.58	2.49
30.0	0.62	0.89	1.16	1.52	1.96	2.14	2.32	2.41	2.41
45.0	0.63	0.89	1.25	1.43	1.96	2.14	2.32	2.50	2.50
60.0	0.63	0.90	1.16	1.52	2.06	2.06	2.24	2.33	2.51
75.0	0.72	0.90	1.17	1.44	1.97	2.24	2.33	2.42	2.51
90.0	0.63	0.90	1.26	1.63	1.99	2.26	2.35	2.44	2.53
105.0	0.72	0.81	1.26	1.62	1.98	2.25	2.34	2.43	2.52
120.0	0.72	0.81	1.17	1.53	1.98	2.16	2.35	2.44	2.53
135.0	0.72	0.99	1.17	1.54	2.08	2.17	2.35	2.35	2.62
150.0	0.63	0.90	1.36	1.54	1.99	2.17	2.35	2.44	2.62
165.0	0.64	0.91	1.27	1.63	2.00	2.63	2.36	2.36	2.63
180.0	0.62	0.71	0.80	1.07	1.33	1.60	1.87	2.13	2.49
195.0	0.62	0.71	0.89	1.07	1.51	1.51	1.96	1.96	2.41
210.0	0.62	0.71	0.89	1.16	1.34	1.52	1.87	2.05	2.41
225.0	0.63	0.71	0.71	1.16	1.25	1.52	1.79	1.96	2.32
240.0	0.63	0.63	0.81	1.16	1.25	1.61	1.70	1.97	2.24
255.0	0.54	0.72	0.99	1.08	1.35	1.53	1.71	1.97	2.24
270.0	0.72	0.72	0.72	1.17	1.35	1.63	1.81	2.08	2.44
285.0	0.54	0.72	0.81	1.08	1.26	1.53	1.80	1.98	2.43
300.0	0.63	0.72	0.81	0.99	1.35	1.53	1.53	1.98	2.44
315.0	0.63	0.63	0.72	1.08	1.36	1.54	1.72	2.08	2.35
330.0	0.63	0.63	0.72	1.08	1.36	1.54	1.72	1.99	2.35
345.0	0.64	0.73	0.82	1.18	1.54	1.63	1.82	2.09	2.36
360.0	0.71	0.89	1.24	1.69	1.96	2.22	2.40	2.40	2.58

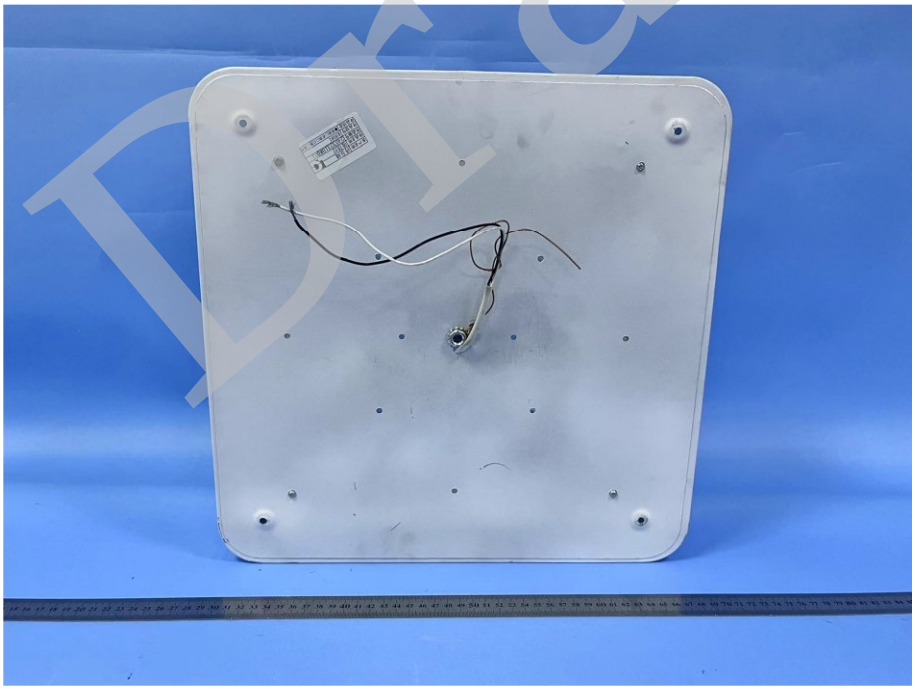
Intensity data(cd) (3000K)

C/γ(°)	180.0
0.0	2.49
15.0	2.58
30.0	2.59
45.0	2.50
60.0	2.60
75.0	2.60
90.0	2.62
105.0	2.61
120.0	2.62
135.0	2.62
150.0	2.62
165.0	2.54
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	2.49

Appendix A Product Photo



Picture 1



Picture 2

****End of test report****