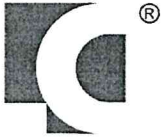




**IESNA
SUSTAINING
MEMBER**

Test Report Number:	LCZP19110124	Total Page:11 Version:1.0
Applicant Name:		
Applicant Address:	5/F BLOCK 2 XIANG AN SOUTH ROAD 10 JUN ZHEN SHUNDE FO SHAN CITY	
Test item:	Wall LED fixture	
Model / Type Reference:		
Date of Issue:	2019-11-13	
Testing Laboratory:	LCTECH Guangdong Testing Services Co., Ltd. 2/F., Building II, Technology and Enterprise Development Center, Guangyuan Road, Xiaolan, Zhongshan, Guangdong, China Tel:+86-760-22833366 Fax:+86-760-22833399 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.1.3	
Test Result:	See the following pages	
Compiled by:	Reviewed by:	
2019-11-13	Kargel Yuan	2019-11-13 Lin Qiu
_____	_____	_____
Date	Name Signature	Date Name Signature
Remark: N/A		
<p>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 the examination of the product sample submitted by the applicant. A general statement concerning the quality of the products from the series manufacture cannot be derived therefore. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.</p>		

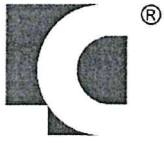


Sample Description			
Luminaire Type	Wall LED fixture	Model/Type	CFKOD15
Input Type	<input checked="" type="checkbox"/> AC <input type="checkbox"/> DC	Rated Voltage	120VAC,60Hz
Rated Wattage	12 W	Lamp Rated Flux	N/A
Lamp Type	LED	Lamp Model	N/A
Power Supply Type	LED driver	Power Supply Model	Not Provided
Luminous Length	100 mm	Luminous Width	100 mm
Luminous Diameter	N/A	Luminous Height	210 mm
Sample Code of lab.	191108104001		

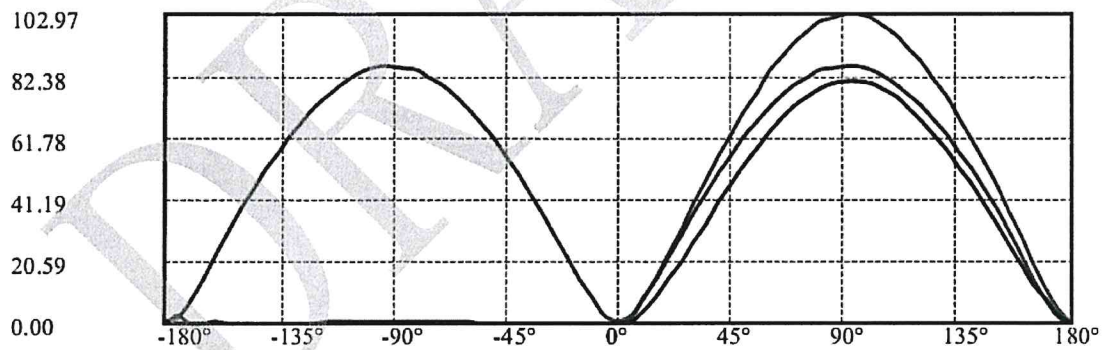
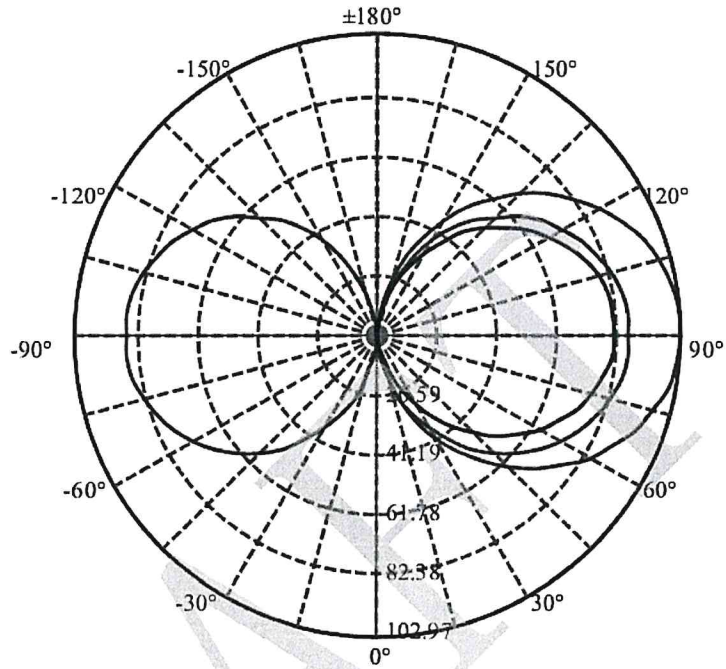
Test Condition			
Temperature	25.0°C	Humidity	65%
Test Equipment	LC-I-902 GMS-2000	Test Mode	C-Gamma
Test Date	2019-11-12	Test Method	Absolutely photometric
Azimuth (C)	15	Elevation (Gamma)	5
Test distance	30.00 m	Uncertainty	Considered
Stabilization	2 hours		

Characteristics			
Input Voltage	120.02 V	Input Current	0.104 A
Wattage	11.83 W	Power Factor	0.947
Total lumens	579.13 lm	Luminous Efficacy	48.95 lm/W
Luminaire Efficiency	100%	Central Intensity	0.405 cd
Max intensity	102.974 cd	Angle of max intensity	C=30.0,Gamma=90.0
Maximum S/H	C0_180= 16.53,C90_270= 18.56	CIE Type	General Diffuse

Luminance Data (cd/m ²)									
Gamma	45	50	55	60	65	70	75	80	85
C0	2564	2751	2925	3100	3262	3435	3583	3758	3916
C45	2144	2311	2448	2596	2726	2860	2989	3110	3224
C90	2119	2335	2539	2745	2933	3122	3306	3489	3680



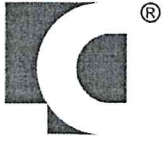
Light Distribution Curve(cd)



C30(Max): ———
C0/C180: ———
C90/C270: ———

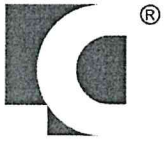
Field angle(10%Imax):C0/180Left:179.9 Right:179.9
 :C90/270Left:79.4 Right:79.4

Beam Angle(50%Imax):C0/180Left:179.4 Right:179.4
 :C90/270Left:179.9 Right:179.9

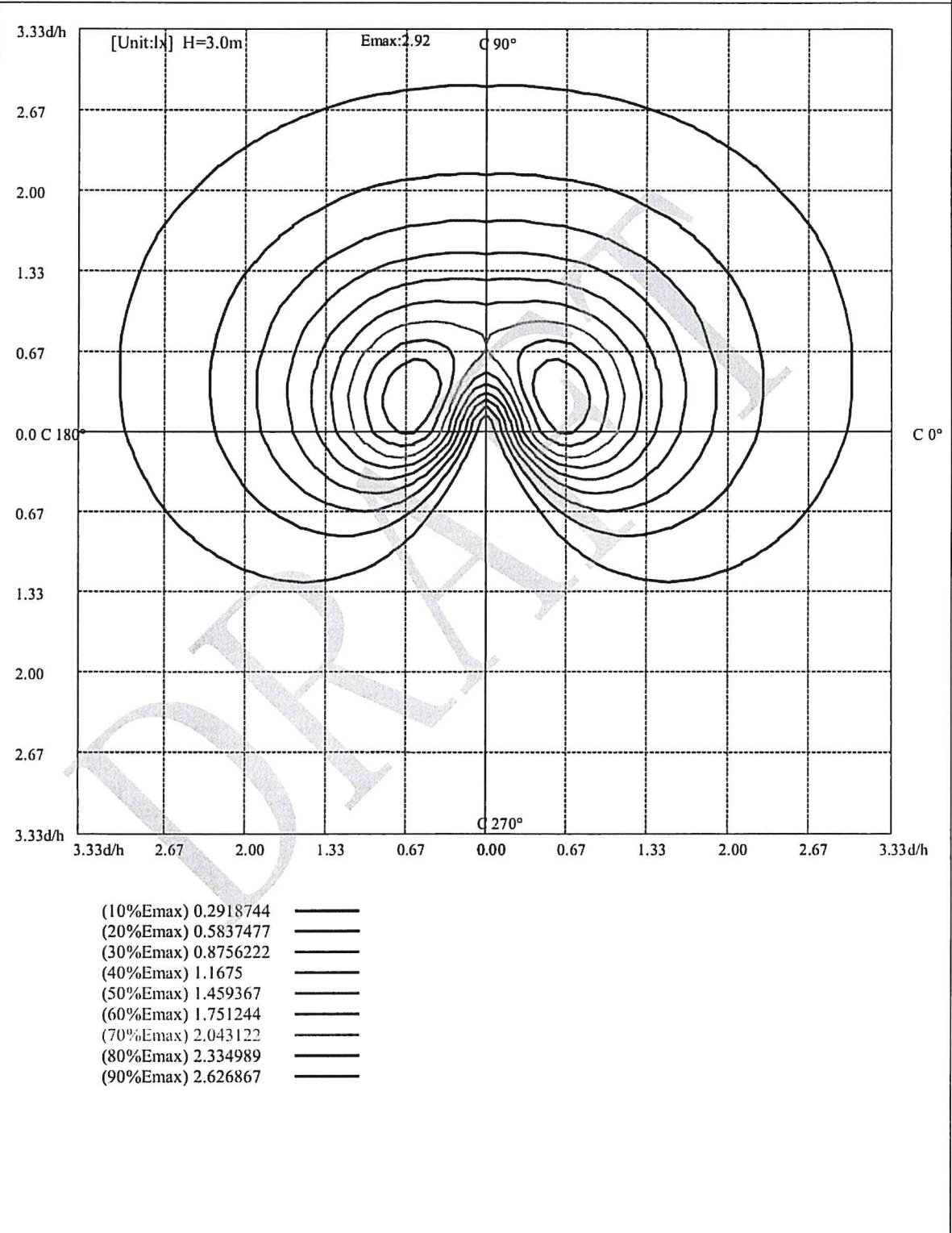


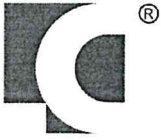
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	0.326	0.000	0	0.00%	0.00%
5.0	1.511	0.022	0.022	0.00%	0.00%
10.0	4.951	0.231	0.253	0.04%	0.04%
15.0	9.286	0.845	1.098	0.15%	0.19%
20.0	14.083	1.926	3.024	0.33%	0.52%
25.0	19.139	3.484	6.508	0.60%	1.12%
30.0	24.183	5.482	11.99	0.95%	2.07%
35.0	29.168	7.856	19.847	1.36%	3.43%
40.0	33.942	10.529	30.376	1.82%	5.25%
45.0	38.510	13.415	43.791	2.32%	7.56%
50.0	42.969	16.464	60.255	2.84%	10.40%
55.0	46.923	19.546	79.801	3.37%	13.78%
60.0	50.711	22.568	102.368	3.90%	17.68%
65.0	53.861	25.422	127.79	4.39%	22.07%
70.0	56.696	27.994	155.784	4.83%	26.90%
75.0	58.965	30.232	186.016	5.22%	32.12%
80.0	60.758	32.035	218.051	5.53%	37.65%
85.0	61.812	33.305	251.356	5.75%	43.40%
90.0	62.266	33.973	285.329	5.87%	49.27%
95.0	62.105	34.054	319.383	5.88%	55.15%
100.0	61.276	33.525	352.908	5.79%	60.94%
105.0	59.824	32.403	385.311	5.60%	66.53%
110.0	57.769	30.737	416.048	5.31%	71.84%
115.0	55.159	28.594	444.642	4.94%	76.78%
120.0	52.139	26.084	470.726	4.50%	81.28%
125.0	48.644	23.296	494.022	4.02%	85.30%
130.0	44.882	20.336	514.358	3.51%	88.82%
135.0	40.595	17.272	531.63	2.98%	91.80%
140.0	36.192	14.218	545.848	2.46%	94.25%
145.0	31.538	11.300	557.148	1.95%	96.20%
150.0	26.464	8.541	565.689	1.47%	97.68%
155.0	21.284	6.043	571.732	1.04%	98.72%
160.0	15.977	3.908	575.64	0.67%	99.40%
165.0	10.666	2.196	577.836	0.38%	99.78%
170.0	5.817	0.978	578.813	0.17%	99.95%
175.0	2.258	0.289	579.102	0.05%	100.00%
180.0	0.060	0.028	579.13	0.00%	100.00%

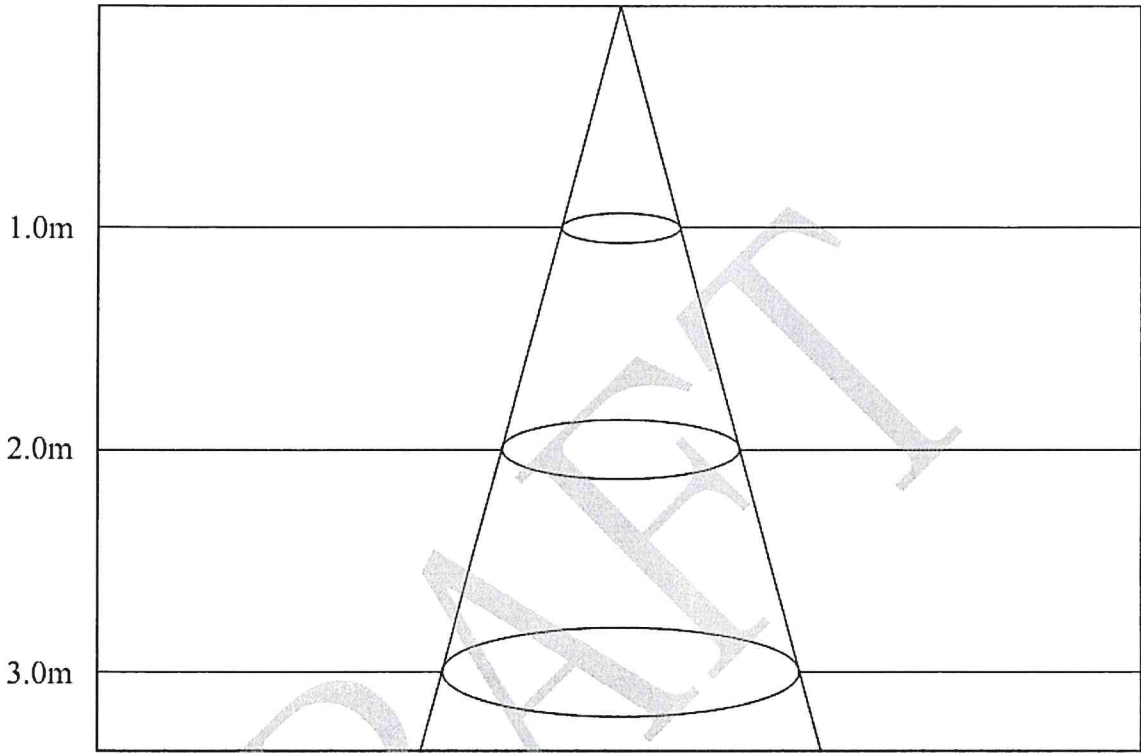


ISO illuminance diagram(Lux)





Lux distance Curve



Max , Ave Beam angle of C30 plane 352.41

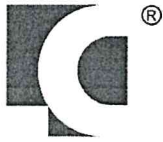
DRAFT



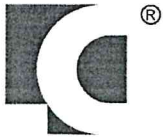
Utilization factor table

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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.07	1.07	1.07	0.99	0.99	0.99	0.83	0.83	0.83	0.69	0.69	0.69	0.55	0.55	0.55	0.49
1	0.85	0.79	0.73	0.77	0.72	0.67	0.64	0.60	0.56	0.51	0.48	0.45	0.40	0.37	0.35	0.29
2	0.71	0.62	0.55	0.64	0.57	0.50	0.52	0.47	0.41	0.42	0.37	0.33	0.31	0.28	0.25	0.20
3	0.60	0.51	0.43	0.55	0.46	0.39	0.44	0.38	0.32	0.35	0.30	0.25	0.26	0.22	0.19	0.14
4	0.52	0.42	0.35	0.47	0.39	0.32	0.38	0.31	0.26	0.30	0.25	0.20	0.22	0.18	0.15	0.11
5	0.46	0.36	0.29	0.41	0.33	0.26	0.34	0.27	0.21	0.26	0.21	0.16	0.19	0.15	0.12	0.08
6	0.40	0.31	0.24	0.37	0.28	0.22	0.30	0.23	0.18	0.23	0.18	0.14	0.17	0.13	0.10	0.06
7	0.36	0.27	0.20	0.33	0.24	0.19	0.27	0.20	0.15	0.21	0.15	0.11	0.15	0.11	0.08	0.05
8	0.32	0.24	0.17	0.29	0.21	0.16	0.24	0.17	0.13	0.19	0.14	0.10	0.14	0.10	0.07	0.04
9	0.29	0.21	0.15	0.27	0.19	0.14	0.22	0.15	0.11	0.17	0.12	0.08	0.13	0.09	0.06	0.03
10	0.27	0.19	0.13	0.24	0.17	0.12	0.20	0.14	0.10	0.16	0.11	0.07	0.12	0.08	0.05	0.03

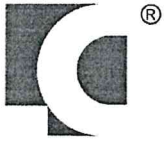
DRAFT



Intensity data(cd)									
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	0.45	3.69	9.45	16.11	23.40	30.69	37.81	44.83	51.49
15.0	0.45	1.71	7.11	14.22	22.23	30.06	37.99	46.18	53.47
30.0	0.36	1.71	7.47	14.85	22.59	31.05	39.34	47.44	55.18
45.0	0.27	1.71	6.75	13.50	21.15	29.16	37.08	44.83	52.39
60.0	0.27	1.17	5.85	11.70	18.36	25.65	32.76	40.06	47.17
75.0	0.27	0.81	4.68	9.63	15.39	22.05	28.62	35.55	42.22
90.0	0.27	0.81	4.05	8.91	14.67	20.34	27.09	33.57	40.06
105.0	0.27	1.08	4.86	9.99	15.75	22.23	29.16	36.09	42.31
120.0	0.36	1.53	6.12	11.88	18.72	26.19	33.21	40.42	47.80
135.0	0.36	2.07	7.38	14.49	21.87	29.79	38.17	45.55	53.11
150.0	0.27	2.25	8.10	15.39	23.58	32.22	40.42	48.61	56.53
165.0	0.36	2.16	8.01	15.21	23.31	31.23	39.52	47.26	54.82
180.0	0.36	1.98	7.11	13.41	20.61	27.99	35.19	42.04	48.79
195.0	0.45	3.15	7.56	12.96	18.72	24.39	29.79	35.37	40.42
210.0	0.36	1.98	5.13	8.64	12.42	16.20	19.98	23.67	27.18
225.0	0.27	1.08	2.52	4.32	6.21	8.19	10.08	12.15	14.13
240.0	0.27	0.45	0.72	0.99	1.35	1.89	2.34	2.70	3.24
255.0	0.27	0.27	0.18	0.27	0.09	0.09	0.09	0.09	0.09
270.0	0.27	0.18	0.27	0.27	0.09	0.18	0.18	0.18	0.09
285.0	0.27	0.27	0.27	0.18	0.18	0.18	0.18	0.18	0.09
300.0	0.36	0.36	0.63	0.90	1.26	1.71	2.16	2.61	3.06
315.0	0.36	0.99	2.43	4.05	5.85	7.92	9.90	11.88	13.68
330.0	0.27	1.89	4.77	8.37	11.97	15.75	19.62	23.49	27.09
345.0	0.36	2.97	7.38	12.60	18.18	24.12	29.70	35.28	40.24
360.0	0.45	3.69	9.45	16.11	23.40	30.69	37.81	44.83	51.49
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	57.52	63.10	68.05	73.00	77.05	80.38	82.72	84.97	86.14
15.0	60.94	67.87	73.90	79.75	84.07	88.93	92.62	94.96	96.94
30.0	62.56	70.12	76.33	82.90	88.12	92.71	96.67	99.91	101.44
45.0	59.68	66.88	72.64	79.30	83.80	88.75	92.89	95.23	97.30
60.0	54.01	60.67	66.52	72.64	77.86	81.55	85.60	88.66	90.46
75.0	48.70	54.82	60.76	66.07	70.57	74.80	78.40	81.19	82.90
90.0	46.45	52.57	58.24	63.64	68.23	72.28	75.61	78.22	80.20
105.0	49.06	55.54	61.48	66.79	71.92	76.06	79.75	82.54	83.98
120.0	54.46	61.48	67.96	73.63	78.85	83.17	87.22	90.10	91.99
135.0	60.67	67.96	74.53	80.20	85.96	90.46	94.06	97.48	99.10
150.0	63.91	71.02	77.59	84.16	89.11	94.42	98.02	101.17	102.25
165.0	62.02	68.50	74.89	81.01	85.15	89.56	92.80	95.77	97.30
180.0	54.91	60.76	66.16	70.75	74.71	78.67	81.19	83.53	84.52
195.0	45.10	49.69	53.38	56.80	60.04	62.38	64.18	65.89	66.43
210.0	30.33	33.57	36.00	38.62	40.60	42.58	43.57	44.56	45.19
225.0	15.84	17.64	19.17	20.61	21.78	22.86	23.67	24.21	24.66
240.0	3.69	4.23	4.77	5.13	5.58	5.94	6.30	6.57	6.75
255.0	0.09	0.27	0.18	0.36	0.45	0.54	0.63	0.63	0.81
270.0	0.09	0.09	0.27	0.36	0.45	0.45	0.72	0.72	0.81
285.0	0.09	0.18	0.27	0.36	0.54	0.54	0.72	0.72	0.81
300.0	3.51	3.96	4.50	4.95	5.40	5.85	6.12	6.39	6.57
315.0	15.66	17.46	18.81	20.34	21.69	22.77	23.49	24.03	24.48
330.0	30.15	33.39	36.27	38.62	40.87	42.67	43.93	44.74	45.64
345.0	44.83	49.51	53.47	57.07	59.86	62.38	64.27	65.98	66.79
360.0	57.52	63.10	68.05	73.00	77.05	80.38	82.72	84.97	86.14



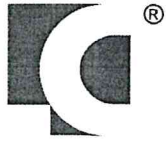
Intensity data(cd)									
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	86.14	85.42	84.79	82.45	79.30	76.06	71.83	67.60	62.11
15.0	97.93	98.11	96.76	94.24	91.81	88.21	83.26	78.40	72.82
30.0	102.70	102.61	101.35	99.19	95.95	91.54	86.95	80.92	75.34
45.0	98.20	98.29	97.21	95.05	91.72	87.49	82.72	77.05	71.65
60.0	91.27	90.82	89.83	87.76	84.88	81.37	76.60	71.47	65.98
75.0	83.44	83.44	82.63	80.92	78.04	74.62	70.12	65.62	60.40
90.0	80.65	80.38	80.02	77.77	75.25	71.47	67.42	62.83	57.43
105.0	85.06	84.61	83.80	81.82	78.67	74.71	71.02	65.53	60.49
120.0	92.62	92.71	91.45	89.11	86.05	82.00	76.60	71.47	66.16
135.0	100.27	99.64	98.29	96.22	92.35	88.21	83.53	77.77	71.74
150.0	103.24	103.33	101.53	99.28	96.13	91.63	86.86	81.19	74.98
165.0	97.66	97.66	96.85	94.33	91.27	87.40	82.99	77.77	71.92
180.0	84.97	85.42	84.07	82.36	79.66	76.69	73.00	68.59	63.73
195.0	66.97	66.43	65.26	64.00	61.93	59.41	56.08	52.48	48.61
210.0	45.55	45.46	44.56	43.66	42.22	40.33	38.35	35.82	32.94
225.0	24.75	24.03	22.95	21.60	20.34	18.72	17.10	15.21	13.32
240.0	6.84	6.66	6.48	6.21	5.94	5.49	5.22	4.68	4.14
255.0	0.81	0.72	0.63	0.54	0.54	0.36	0.27	0.09	0.09
270.0	0.72	0.72	0.63	0.54	0.54	0.45	0.27	0.09	0.09
285.0	0.81	0.72	0.63	0.54	0.45	0.36	0.27	0.18	0.09
300.0	6.75	6.57	6.48	6.21	6.03	5.58	5.13	4.68	4.23
315.0	24.57	24.57	24.12	23.58	22.68	21.69	20.52	18.99	17.37
330.0	45.64	45.55	44.74	43.84	42.49	40.69	38.53	36.09	33.03
345.0	66.79	66.61	65.53	64.54	62.20	59.32	56.71	52.93	48.52
360.0	86.14	85.42	84.79	82.45	79.30	76.06	71.83	67.60	62.11
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	56.08	49.96	43.48	36.27	28.89	21.24	13.59	6.66	0.72
15.0	65.98	59.68	52.12	44.38	36.72	27.90	19.53	11.07	4.23
30.0	68.50	61.57	53.74	45.91	37.26	28.89	19.98	11.34	4.23
45.0	65.08	58.06	50.77	43.03	35.01	26.73	18.36	10.53	3.87
60.0	59.77	53.29	46.27	38.89	31.41	23.85	16.38	9.36	3.15
75.0	54.28	48.43	41.59	34.83	27.90	20.97	14.31	8.01	2.61
90.0	51.85	46.18	39.52	32.58	26.10	19.35	13.05	7.38	2.52
105.0	54.28	47.80	41.77	34.56	27.90	21.24	14.49	8.46	3.06
120.0	59.77	52.66	46.18	38.89	31.14	23.94	16.38	9.36	3.87
135.0	64.54	57.25	50.59	42.58	34.29	26.73	18.36	10.80	4.14
150.0	68.05	60.58	53.29	45.28	36.63	28.26	19.44	10.98	4.23
165.0	65.62	58.87	51.67	43.75	35.82	27.36	18.45	10.08	3.51
180.0	57.97	52.21	45.73	38.98	31.95	24.12	15.84	7.92	2.88
195.0	43.93	39.16	34.02	28.35	22.32	15.66	8.91	3.69	0.81
210.0	29.97	26.64	22.86	18.45	14.22	8.73	4.68	2.07	0.27
225.0	11.34	9.81	8.46	6.66	4.77	2.97	1.71	0.90	0.27
240.0	3.60	3.06	2.43	1.71	0.99	0.63	0.45	0.36	0.09
255.0	0.09	0.09	0.09	0.18	0.09	0.45	0.09	0.09	2.61
270.0	0.09	0.18	0.09	0.09	0.09	0.45	0.09	0.09	2.52
285.0	0.18	0.18	0.09	0.09	0.09	0.09	0.09	0.09	0.09
300.0	3.69	3.24	2.70	2.16	1.71	1.26	0.72	0.27	3.87
315.0	15.57	13.86	11.88	9.54	7.65	5.31	3.33	1.44	0.09
330.0	29.88	26.73	23.22	19.26	15.12	10.89	6.93	3.24	0.18
345.0	44.20	39.16	34.38	28.71	22.68	16.38	10.80	5.40	0.36
360.0	56.08	49.96	43.48	36.27	28.89	21.24	13.59	6.66	0.72



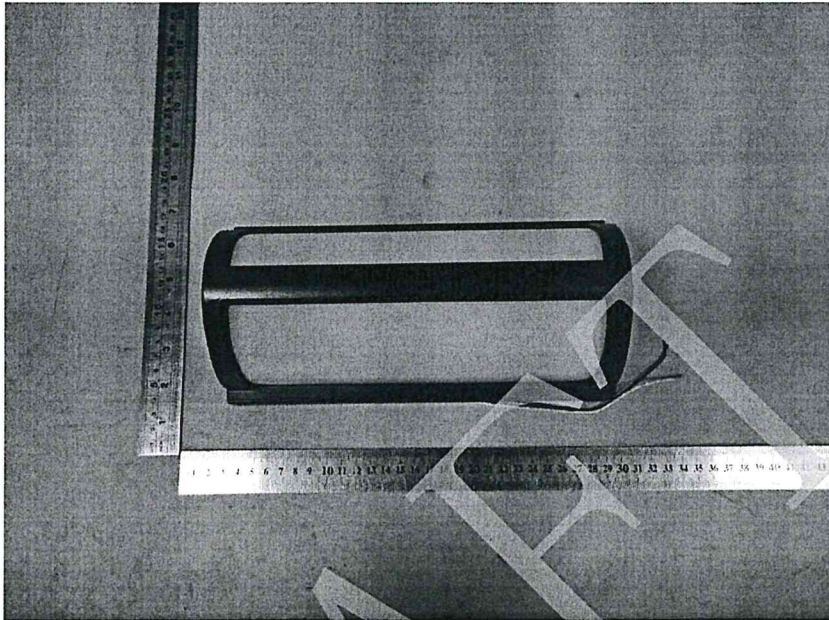
Intensity data(cd)

<i>C</i> / γ (°)	180.0
0.0	0.00
15.0	0.00
30.0	0.09
45.0	0.09
60.0	0.00
75.0	0.09
90.0	0.09
105.0	0.09
120.0	0.09
135.0	0.09
150.0	0.09
165.0	0.00
180.0	0.00
195.0	0.00
210.0	0.09
225.0	0.09
240.0	0.00
255.0	0.09
270.0	0.09
285.0	0.09
300.0	0.09
315.0	0.09
330.0	0.09
345.0	0.00
360.0	0.00

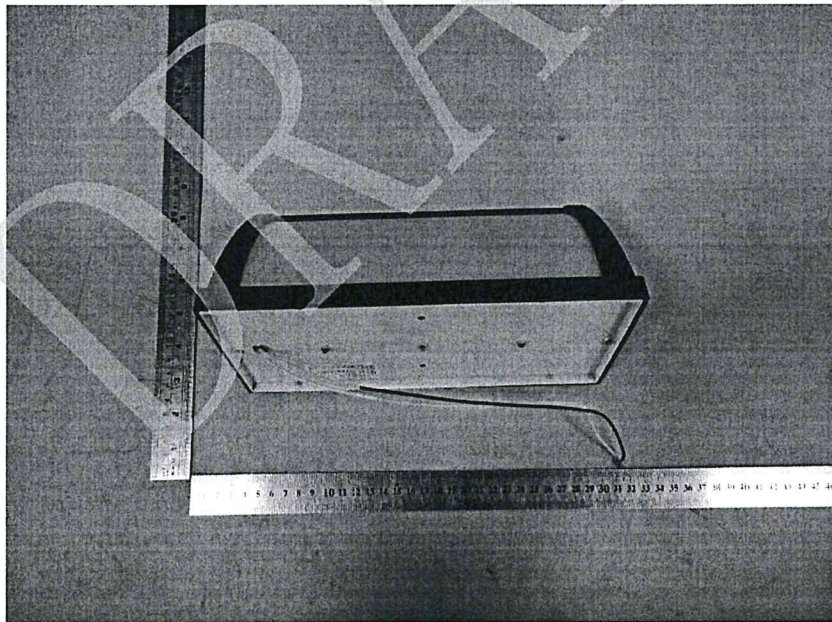
DRAFT



Appendix A Product Photo



Picture 1



Picture 2

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