LCTECH

IESNA SUSTAINING MEMBER

Total Page:11
Version:1.0

Test Report Number:	LCZP19100020
Applicant Name:	Zhongshan Bonfire Lighting Company Limited
Applicant Address:	NO.6 West Dong'an Rd, Haizhou Guzhen, Zhongshan, Guangdong, China
Test item:	Eyebrow LED 1-Light Wall Mount
Model / Type Reference:	86163
Date of Issue:	2019-10-15
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**:		
2019-10-15	*Kargel Yuan*	Kargel Yuan	*2019-10-15*	*Lin Qiu*	
Date	*Name*	*Signature*	*Date*	*Name*	*Signature*

Remark:

N/A

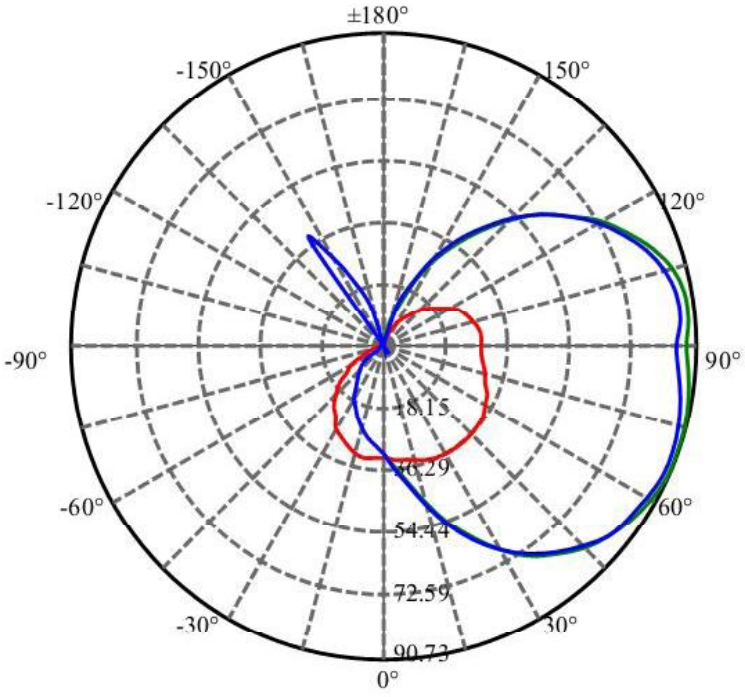
Sample Description			
Luminaire Type	Eyebrow LED 1-Light Wall Mount	Model/Type	86163
Input Type	☒ AC ☐ DC	Rated Voltage	120VAC,60Hz
Rated Wattage	8 W	Lamp Rated Flux	N/A
Lamp Type	LED	Lamp Model	N/A
Power Supply Type	LED driver	Power Supply Model	Not Provided
Luminous Length	130 mm	Luminous Width	60 mm
Luminous Diameter	N/A	Luminous Height	120 mm
Sample Code of lab.	191014106002		

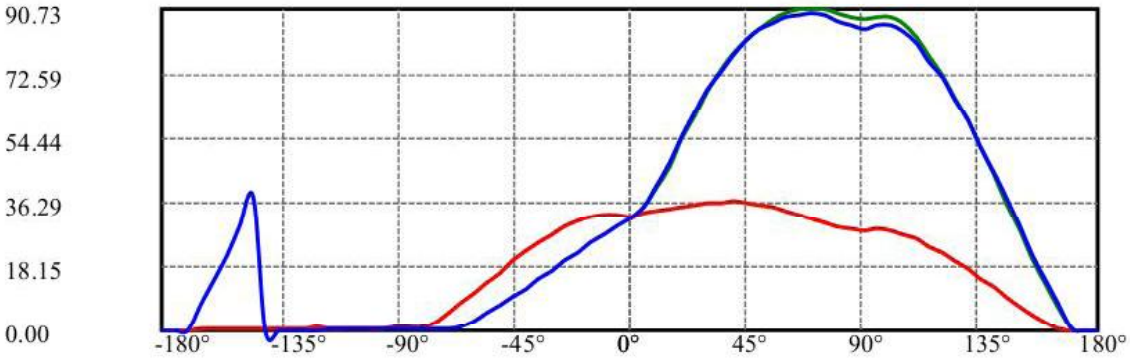
Test Condition			
Temperature	25.0℃	Humidity	65%
Test Equipment	LC-I-902 GMS-2000	Test Mode	C-Gamma
Test Date	2019-10-15	Test Method	Absolutely photometric
Azimuth (C)	15	Elevation (Gamma)	5
Test distance	30.00 m	Uncertainty	Considered
Stabilization	2 hours		

Characteristics			
Input Voltage	120.04 V	Input Current	0.067 A
Wattage	7.81 W	Power Factor	0.970
Total lumens	376.69 lm	Luminous Efficacy	48.23 lm/W
Luminaire Efficiency	100%	Central Intensity	31.774 cd
Max intensity	90.732 cd	Angle of max intensity	C=75.0,Gamma=65.0
Maximum S/H	C0_180= 1.24,C90_270= 2.93	CIE Type	Semi-Direct lighting

Luminance Data (cd/m^2)									
Gamma	45	50	55	60	65	70	75	80	85
C0	2249	2154	2069	1986	1915	1837	1788	1762	1776
C45	4312	4370	4416	4467	4514	4559	4603	4635	4733
C90	8443	8813	9117	9504	9918	10336	10801	11267	11942

Light Distribution Curve(cd)





C75(Max):
C0/C180:
C90/C270:

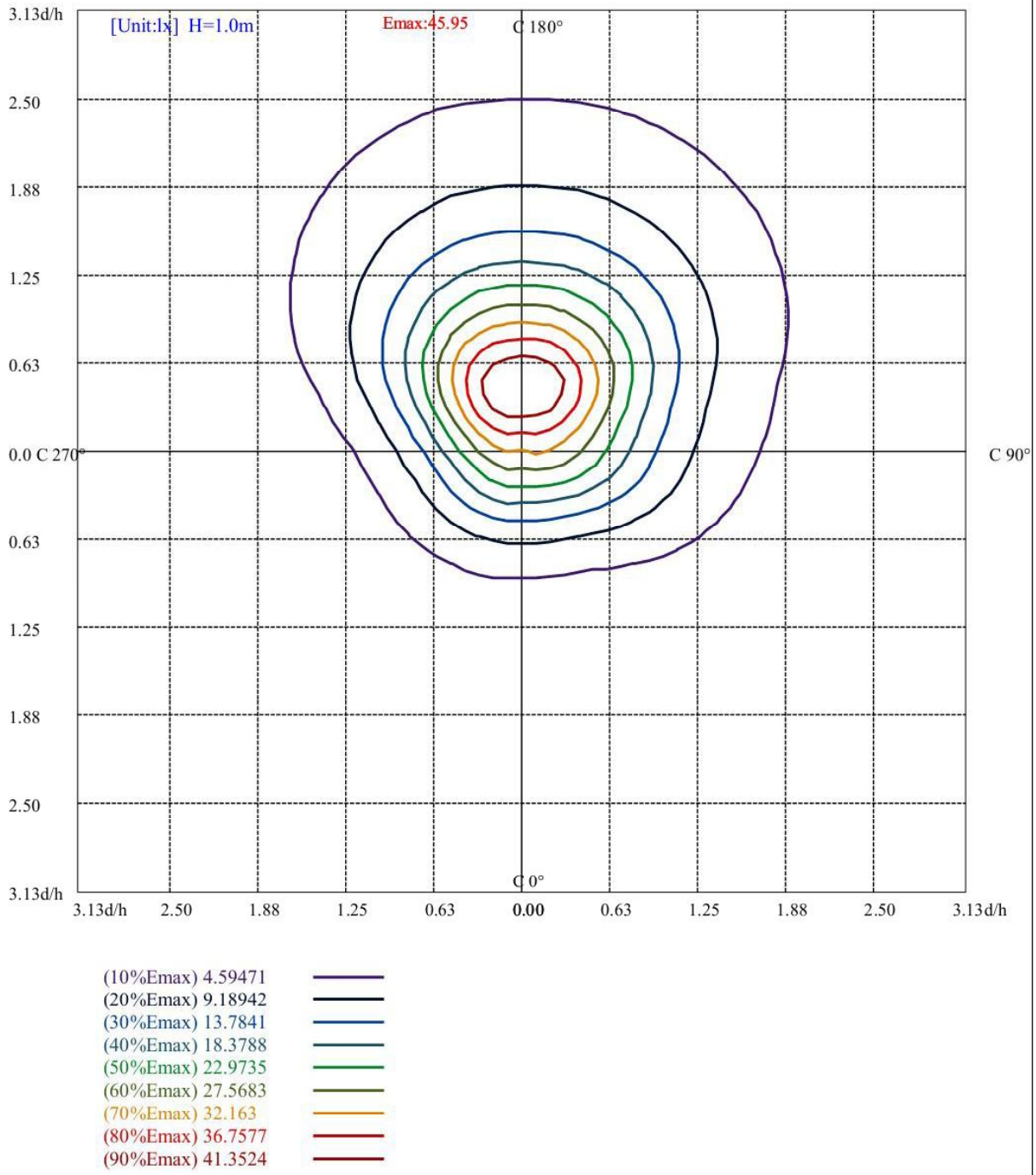
Field angle(10%Imax):C0/180Left:112.6 Right:117.3
:C90/270Left:234.1 Right:94.1

Beam Angle(50%Imax):C0/180Left:87.2 Right:88.2
:C90/270Left:56.9 Right:69.7

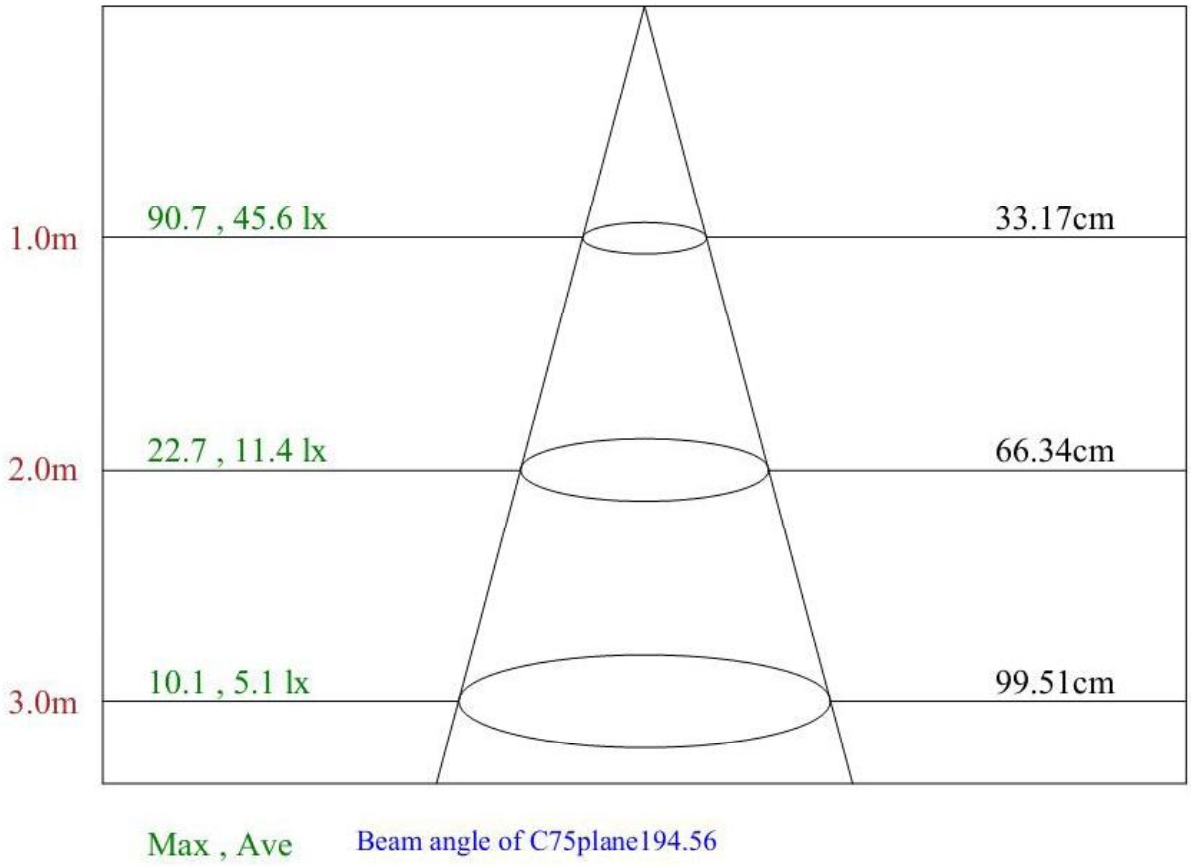
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	31.572	.000	.000	.000%	.000%
5.0	32.524	.766	.766	.203%	.203%
10.0	33.593	2.365	3.131	.628%	.831%
15.0	34.718	4.052	7.184	1.076%	1.907%
20.0	35.952	5.824	13.008	1.546%	3.453%
25.0	36.999	7.651	20.659	2.031%	5.484%
30.0	37.854	9.473	30.132	2.515%	7.999%
35.0	38.435	11.234	41.366	2.982%	10.981%
40.0	38.739	12.876	54.242	3.418%	14.400%
45.0	38.668	14.332	68.574	3.805%	18.204%
50.0	38.334	15.559	84.134	4.131%	22.335%
55.0	37.689	16.530	100.663	4.388%	26.723%
60.0	36.871	17.234	117.898	4.575%	31.298%
65.0	35.930	17.698	135.596	4.698%	35.997%
70.0	35.048	17.972	153.568	4.771%	40.768%
75.0	34.306	18.128	171.696	4.812%	45.580%
80.0	33.725	18.203	189.899	4.832%	50.413%
85.0	33.226	18.192	208.091	4.829%	55.242%
90.0	32.768	18.070	226.161	4.797%	60.039%
95.0	32.948	17.994	244.154	4.777%	64.816%
100.0	32.656	17.826	261.980	4.732%	69.548%
105.0	31.725	17.227	279.207	4.573%	74.121%
110.0	30.162	16.176	295.383	4.294%	78.415%
115.0	28.181	14.773	310.156	3.922%	82.337%
120.0	25.983	13.168	323.324	3.496%	85.833%
125.0	23.459	11.429	334.752	3.034%	88.867%
130.0	20.785	9.620	344.372	2.554%	91.421%
135.0	19.938	8.229	352.601	2.184%	93.605%
140.0	18.798	7.172	359.773	1.904%	95.509%
145.0	18.816	6.276	366.049	1.666%	97.175%
150.0	14.987	4.978	371.026	1.321%	98.496%
155.0	10.224	3.190	374.217	.847%	99.343%
160.0	5.292	1.627	375.844	.432%	99.775%
165.0	2.528	.644	376.489	.171%	99.947%
170.0	.435	.176	376.664	.047%	99.993%
175.0	.173	.022	376.686	.006%	99.999%
180.0	.083	.003	376.689	.001%	100.000%

ISO illuminance diagram(Lux)



Lux distance Curve



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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.10	1.10	1.10	1.02	1.02	1.02	0.89	0.89	0.89	0.77	0.77	0.77	0.65	0.65	0.65	0.60
1	0.89	0.83	0.78	0.83	0.78	0.73	0.71	0.67	0.63	0.60	0.57	0.54	0.50	0.48	0.46	0.41
2	0.75	0.67	0.60	0.70	0.62	0.56	0.60	0.54	0.49	0.50	0.46	0.42	0.42	0.38	0.35	0.31
3	0.65	0.55	0.48	0.60	0.52	0.45	0.51	0.45	0.39	0.43	0.38	0.34	0.36	0.32	0.28	0.24
4	0.56	0.47	0.39	0.52	0.44	0.37	0.45	0.38	0.32	0.38	0.32	0.28	0.31	0.27	0.23	0.19
5	0.50	0.40	0.33	0.46	0.37	0.31	0.39	0.32	0.27	0.33	0.28	0.23	0.27	0.23	0.19	0.16
6	0.44	0.35	0.28	0.41	0.33	0.26	0.35	0.28	0.23	0.30	0.24	0.20	0.25	0.20	0.16	0.14
7	0.40	0.31	0.24	0.37	0.29	0.23	0.32	0.25	0.20	0.27	0.21	0.17	0.22	0.18	0.14	0.12
8	0.36	0.27	0.21	0.33	0.25	0.20	0.29	0.22	0.17	0.24	0.19	0.15	0.20	0.16	0.13	0.10
9	0.32	0.24	0.19	0.30	0.23	0.17	0.26	0.20	0.15	0.22	0.17	0.13	0.19	0.14	0.11	0.09
10	0.30	0.22	0.16	0.28	0.20	0.15	0.24	0.18	0.14	0.21	0.15	0.12	0.17	0.13	0.10	0.08

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	31.77	33.21	33.66	34.38	35.01	35.55	36.00	36.27	36.36
15.0	31.68	33.12	35.01	36.54	37.99	39.43	40.60	41.86	42.85
30.0	31.41	34.11	36.54	39.34	42.40	45.46	48.43	51.58	54.28
45.0	31.59	34.65	38.44	42.40	47.35	52.03	57.16	61.93	66.07
60.0	31.32	35.01	39.61	45.01	51.58	57.43	64.27	69.67	74.44
75.0	31.32	35.01	40.15	46.45	53.92	61.03	67.78	73.81	78.49
90.0	31.32	35.19	40.60	47.17	54.91	61.84	68.14	73.54	77.95
105.0	31.32	35.19	40.15	47.35	53.92	61.30	67.60	72.91	77.68
120.0	31.32	34.92	39.61	45.37	51.49	57.79	63.64	68.41	72.73
135.0	31.59	34.65	38.35	42.22	46.90	51.31	54.82	58.33	60.94
150.0	31.77	34.11	36.72	38.80	40.87	42.67	44.11	45.46	46.27
165.0	32.13	33.66	34.83	35.19	34.92	34.56	34.02	32.76	31.59
180.0	32.31	32.76	32.85	32.31	31.05	29.25	27.18	24.66	22.32
195.0	31.68	31.59	30.51	29.07	27.45	24.93	22.41	19.98	17.55
210.0	31.41	30.87	29.70	27.90	25.74	23.49	20.88	18.45	15.84
225.0	31.59	30.60	28.89	26.82	24.48	22.05	19.53	17.01	14.40
240.0	31.32	29.70	28.26	26.01	23.58	21.06	18.54	15.93	13.50
255.0	31.32	29.43	27.45	25.29	22.95	20.34	17.73	15.03	12.69
270.0	31.32	29.16	27.00	24.66	22.05	19.71	17.10	14.49	11.97
285.0	31.32	29.34	27.45	25.02	22.77	20.07	17.64	15.12	12.42
300.0	31.32	30.15	28.17	26.19	24.03	21.60	19.17	16.65	14.13
315.0	31.59	30.60	29.34	27.81	26.37	24.48	22.50	20.79	18.99
330.0	31.77	31.41	30.69	29.88	29.16	28.35	27.18	26.19	25.02
345.0	32.13	32.04	32.22	32.04	31.95	32.22	32.04	31.59	31.23
360.0	31.77	33.21	33.66	34.38	35.01	35.55	36.00	36.27	36.36

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	36.18	35.64	34.92	33.93	32.85	31.41	30.24	29.25	28.71
15.0	43.48	43.84	43.75	43.66	43.12	42.49	41.50	40.33	39.52
30.0	56.98	58.69	60.31	61.21	61.93	62.47	61.75	61.48	60.85
45.0	69.67	72.64	74.89	76.69	77.86	78.40	78.31	77.41	76.96
60.0	78.22	82.09	84.61	86.41	87.13	87.49	87.49	86.95	86.23
75.0	82.18	85.24	87.67	89.56	90.73	90.64	90.64	89.74	88.66
90.0	82.09	85.06	86.68	88.30	89.29	89.38	88.84	87.22	85.96
105.0	81.28	84.61	86.41	88.21	88.93	89.38	88.84	87.31	86.14
120.0	75.61	77.68	79.66	80.74	80.74	80.83	80.11	79.21	77.59
135.0	62.65	63.82	64.81	64.72	64.27	63.73	62.74	61.66	60.67
150.0	46.54	46.45	45.73	44.74	43.75	42.40	40.78	39.97	39.07
165.0	30.06	28.17	26.01	24.03	21.87	19.53	17.64	16.38	15.66
180.0	19.44	16.56	13.68	10.62	7.65	4.86	2.52	1.26	0.99
195.0	14.85	12.24	9.54	6.84	4.41	2.25	0.90	0.27	0.27
210.0	13.32	10.71	8.28	5.76	3.60	1.80	0.63	0.45	0.45
225.0	11.88	9.36	6.93	4.68	2.70	1.26	0.54	0.54	0.63
240.0	10.80	8.37	6.03	3.87	2.07	0.72	0.54	0.63	0.72
255.0	10.17	7.74	5.49	3.24	1.44	0.72	0.54	0.72	0.63
270.0	9.63	7.20	5.04	2.97	1.35	0.63	0.54	0.72	0.72
285.0	9.90	7.65	5.22	3.15	1.44	0.63	0.63	0.81	0.72
300.0	11.70	9.18	6.84	4.59	2.79	1.62	1.53	1.53	1.62
315.0	17.01	15.03	13.05	11.16	9.36	8.10	7.74	7.83	7.83
330.0	23.76	22.32	20.70	18.99	17.55	16.11	15.30	15.12	14.85
345.0	30.60	29.70	28.26	26.82	25.47	24.30	23.04	22.59	21.96
360.0	36.18	35.64	34.92	33.93	32.85	31.41	30.24	29.25	28.71

Intensity data(cd)

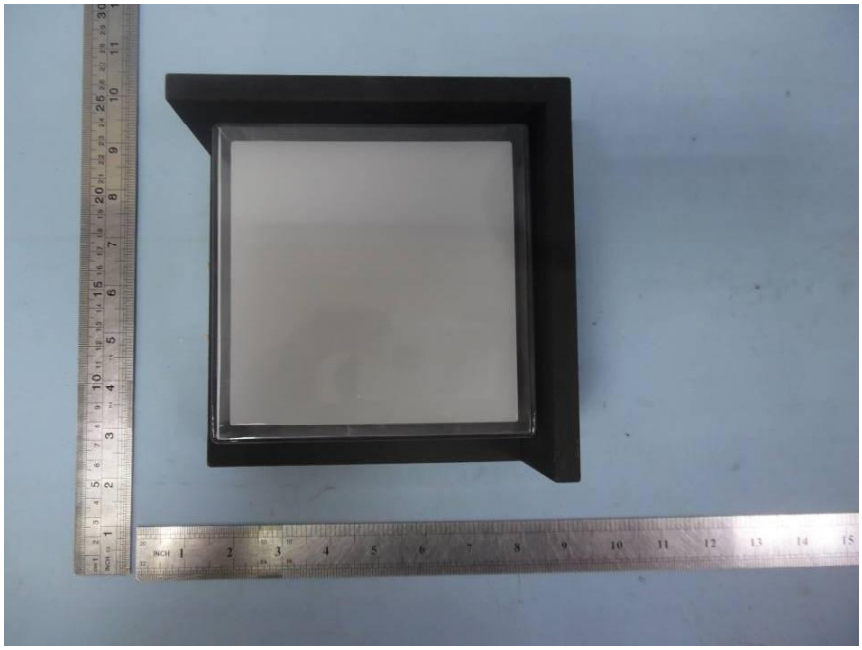
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	28.35	28.53	28.17	27.18	25.74	23.94	21.87	19.62	17.37
15.0	38.53	38.89	38.26	36.72	34.65	32.04	29.34	26.28	22.86
30.0	60.04	59.77	58.96	56.53	53.11	48.97	44.38	39.43	34.20
45.0	76.15	76.78	75.52	73.09	69.40	64.72	59.23	53.02	46.72
60.0	85.33	85.87	85.15	83.53	79.39	74.26	68.86	62.20	55.45
75.0	87.67	88.66	88.39	86.68	82.99	77.77	72.37	65.71	59.14
90.0	85.06	86.32	86.41	84.25	81.37	76.33	71.38	65.62	59.23
105.0	85.33	86.32	85.78	84.52	81.01	76.69	71.38	65.44	58.60
120.0	76.33	77.14	76.87	75.25	71.92	68.05	63.10	57.70	51.49
135.0	59.68	59.32	59.05	57.34	54.55	51.22	47.35	42.76	37.72
150.0	37.99	37.72	37.35	35.64	33.48	31.05	27.99	24.66	21.42
165.0	15.21	14.58	13.95	12.96	11.79	10.35	9.00	7.74	6.39
180.0	0.90	0.81	0.81	0.81	0.72	0.72	0.90	0.81	0.72
195.0	0.36	0.36	0.27	0.36	0.27	0.18	0.18	0.18	0.18
210.0	0.54	0.45	0.45	0.36	0.36	0.36	0.18	0.09	0.09
225.0	0.54	0.63	0.63	0.54	0.54	0.27	0.27	0.18	0.09
240.0	0.72	0.63	0.72	0.54	0.45	0.36	0.27	0.18	0.09
255.0	0.72	0.81	0.63	0.63	0.45	0.45	0.36	0.18	0.18
270.0	0.81	0.72	0.81	0.54	0.54	0.45	0.27	0.18	0.09
285.0	0.72	0.72	0.72	0.63	0.45	0.45	0.27	0.18	0.09
300.0	1.62	1.53	1.44	1.35	1.17	0.90	0.81	0.63	0.45
315.0	7.65	7.65	7.38	7.11	6.66	6.03	5.40	4.77	3.87
330.0	14.67	14.76	14.49	14.04	13.23	12.33	11.43	10.08	8.82
345.0	21.51	21.78	21.51	20.79	19.62	18.45	17.01	15.39	13.59
360.0	28.35	28.53	28.17	27.18	25.74	23.94	21.87	19.62	17.37

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	14.76	12.42	9.72	7.02	4.59	2.52	0.81	0.18	0.09
15.0	19.62	16.47	13.05	9.81	6.93	4.32	2.07	0.54	0.18
30.0	28.80	23.49	18.27	13.14	8.73	5.04	2.16	0.81	0.27
45.0	39.70	32.76	25.74	18.99	12.60	7.29	2.70	0.99	0.27
60.0	47.71	40.24	31.95	24.03	16.56	10.44	4.41	0.99	0.27
75.0	51.85	43.75	36.09	27.99	20.52	13.05	7.02	0.81	0.27
90.0	51.94	44.29	37.54	29.43	21.42	13.86	7.83	0.63	0.27
105.0	51.13	44.38	36.45	28.62	20.43	13.41	6.93	0.72	0.18
120.0	44.83	38.26	31.32	24.12	17.10	10.71	5.13	0.72	0.18
135.0	32.67	27.36	21.87	16.56	11.25	6.75	2.52	0.72	0.27
150.0	18.00	14.67	11.25	8.01	5.13	2.88	1.35	0.45	0.27
165.0	5.13	3.96	2.97	2.43	1.62	1.26	0.90	0.63	0.18
180.0	0.81	0.81	0.63	0.54	0.45	0.36	0.36	0.18	0.09
195.0	19.62	16.47	0.09	9.81	0.09	0.09	0.18	0.09	0.18
210.0	28.80	0.09	18.27	0.09	0.09	0.09	0.09	0.09	0.27
225.0	0.09	32.76	0.09	18.99	12.60	7.29	2.70	0.09	0.09
240.0	0.09	40.24	31.95	24.03	16.56	10.44	4.41	0.09	0.09
255.0	0.09	0.09	36.09	27.99	20.52	0.09	0.09	0.81	0.09
270.0	0.09	0.09	37.54	29.43	21.42	13.86	7.83	0.09	0.09
285.0	0.09	0.09	36.45	28.62	20.43	0.09	0.09	0.09	0.09
300.0	0.36	0.27	0.27	0.18	0.18	0.18	0.09	0.09	0.18
315.0	3.24	2.43	1.80	1.08	0.63	0.27	0.18	0.18	0.09
330.0	7.38	6.12	4.50	3.24	1.98	0.90	0.27	0.18	0.09
345.0	11.70	9.63	7.65	5.49	3.51	1.80	0.54	0.27	0.09
360.0	14.76	12.42	9.72	7.02	4.59	2.52	0.81	0.18	0.09

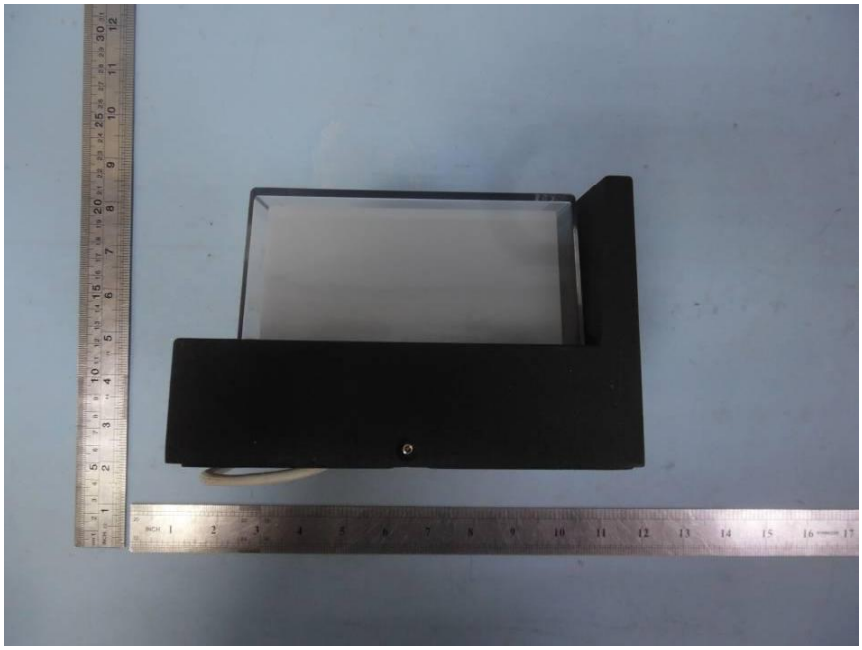
Intensity data(cd)

C/γ(°)	180.0
0.0	0.00
15.0	0.09
30.0	0.09
45.0	0.09
60.0	0.09
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	0.09
180.0	0.00
195.0	0.09
210.0	0.09
225.0	0.09
240.0	0.09
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	0.09
360.0	0.00

Appendix A Product Photo



Picture 1



Picture 2

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