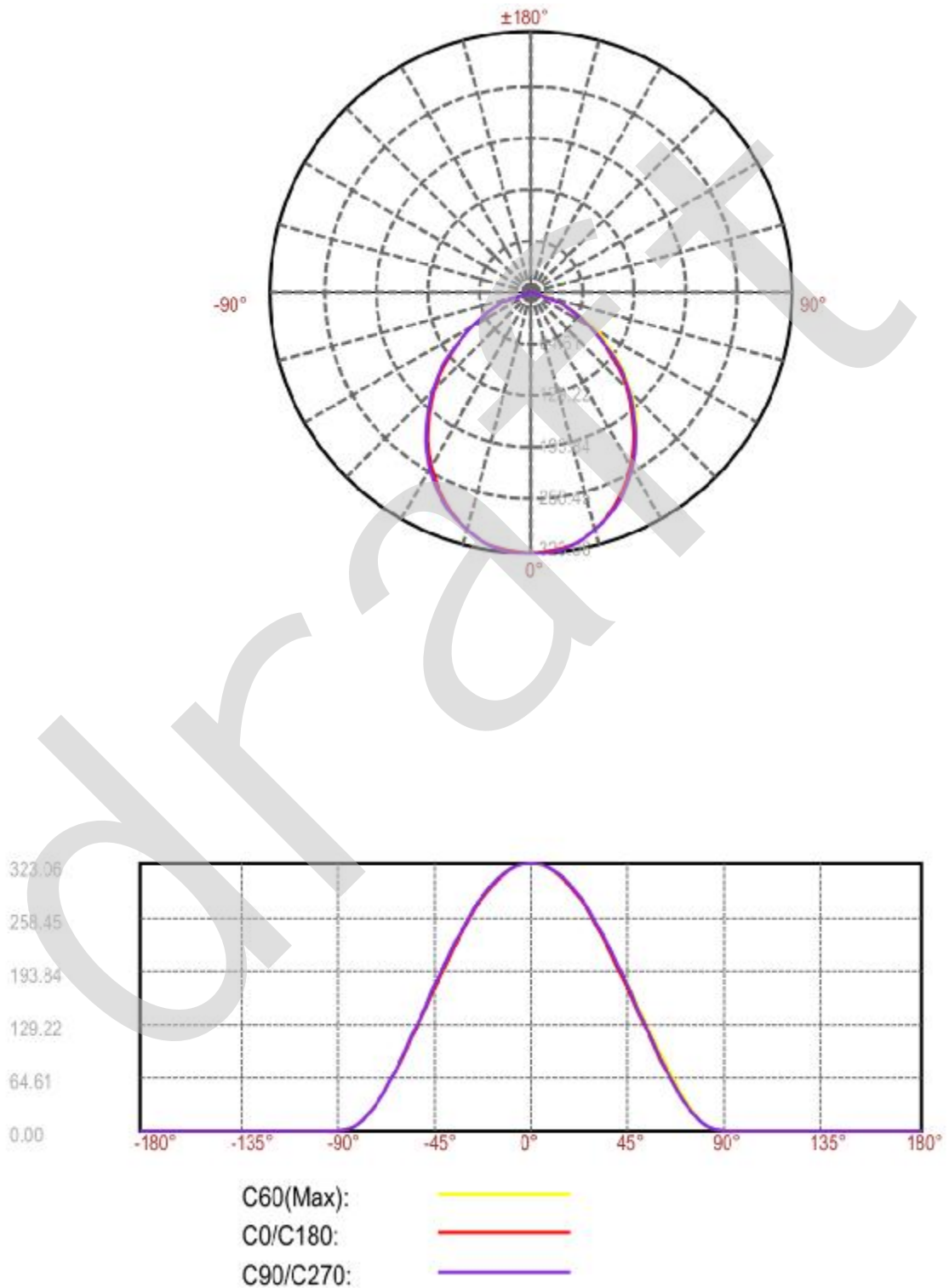


Test Report Number:	LCZP14110321	Total Page(s):	12
Applicant Name:	L-TECH CORPORATION		
Applicant Address:	SHAOGANGTOU DISTRICT, QIAOTOU TOWN, DONGGUAN CITY. GUANGDONG PROVINCE, CHINA		
Test item:	LED Downlight		
Model / Type Reference:	LRTK449-5090		
Date of Issue:	2014-12-01		
Testing Laboratory:	LCTECH (Zhongshan) Testing Service Co., Ltd. 2/F., Technology and Enterprise Development Center, Guangyuan Road, Xiaolan, Zhongshan, Guangdong, China		
Test Specification:	Photometric test (According to IES LM-79-08)		
Test Result:	See following pages		
Compiled by:	Reviewed by:		
<i>2014-12-01</i>	<i>Fish Tan</i>	<i>2014-12-01</i>	<i>Richard Li</i>
_____	_____	_____	_____
<i>Date</i>	<i>Name</i>	<i>Signature</i>	<i>Date</i>
			<i>Name</i>
			<i>Signature</i>
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.</p>			

Sample Description									
Luminaire Type	LED Downlight			Model/Type	LRTK449-5090				
Input Type	<input checked="" type="checkbox"/> AC		<input type="checkbox"/> DC		Rated Voltage	120V 50/60Hz			
Rated Wattage	11 W			Lamp Rated Lumens	Not provided				
Lamp Type	LED			Lamp Model	Not provided				
Power Supply Type	LED Driver			Power Supply Model	Not provided				
Luminous Length	71 mm			Luminous Width	71 mm				
Luminous Diameter	N.A			Luminous Height	0 mm				
Test Condition									
Temperature	25.0°C			Humidity	60%				
Test Equipment	LC-I-902 GMS-2000			Test Mode	C-Gamma				
Test Date	2014-11-29			Test Method	Absolutely photometric				
Azimuth (C)	15			Elevation (Gamma)	5				
Test distance	29.41 m			Uncertainty	Considered				
Characteristics									
Input Voltage	119.93 V			Input Current	0.089 A				
Wattage	10.61 W			Power Factor	0.994				
Total lumens	713.00 lm			Luminous Efficacy	67.20 lm/W				
Central Intensity	323.060 cd			Max intensity	323.060 cd				
Beam Angle(50%Imax)	93.4°			Angle of max intensity	C=60,Gamma=0				
Maximum S/H	C0=1.16,C90=1.16			CIE Type	Direct lighting				
Luminance Data (cd/m²)									
Gamma	45	50	55	60	65	70	75	80	85
C0	47452	43135	38600	33725	28062	21929	15318	9488	5809
C45	49022	45561	41810	36983	31639	25165	17464	10224	5904
C90	48186	43897	39463	34296	28713	22177	15484	9608	6118

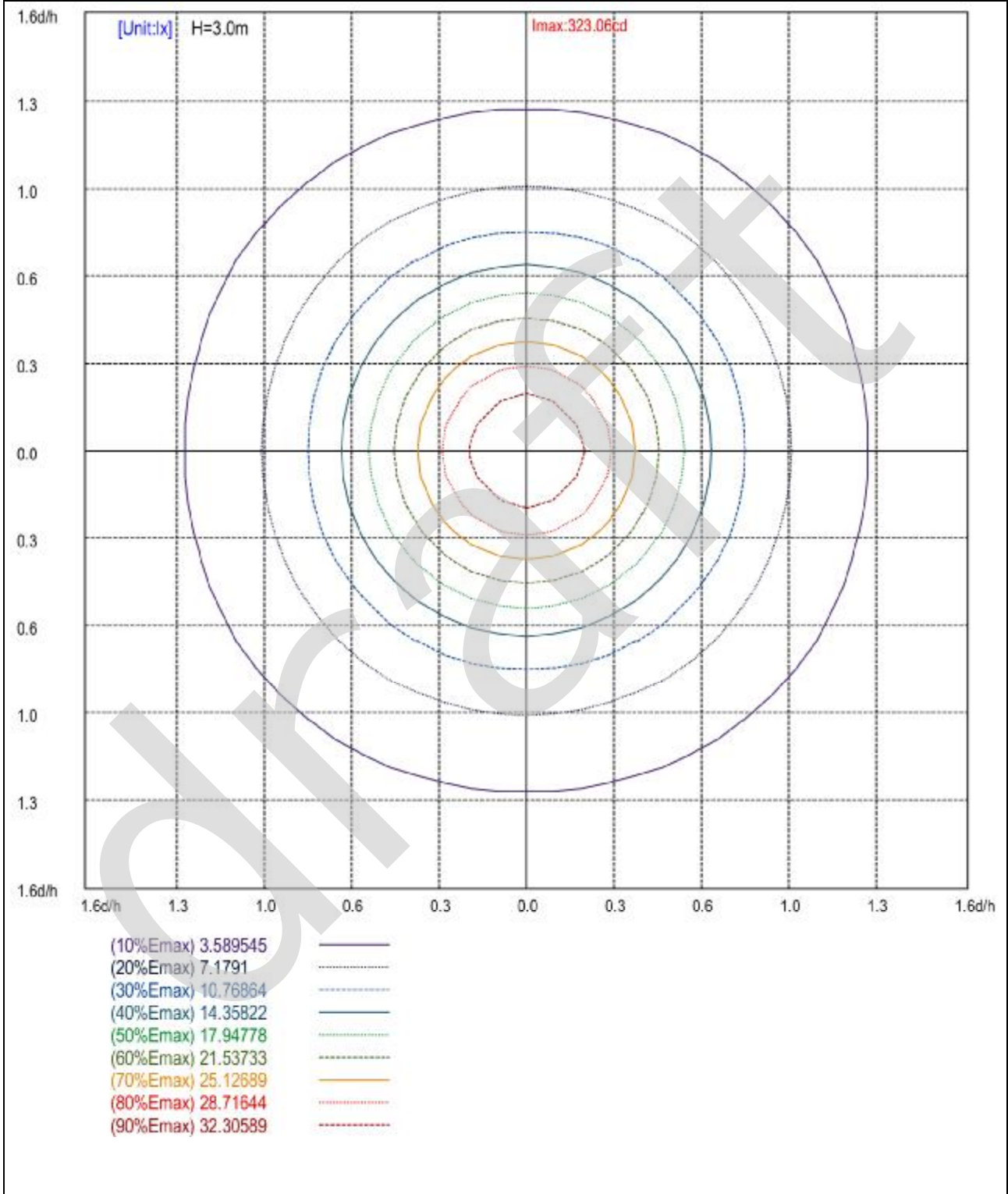
Light Distribution Curve(cd)



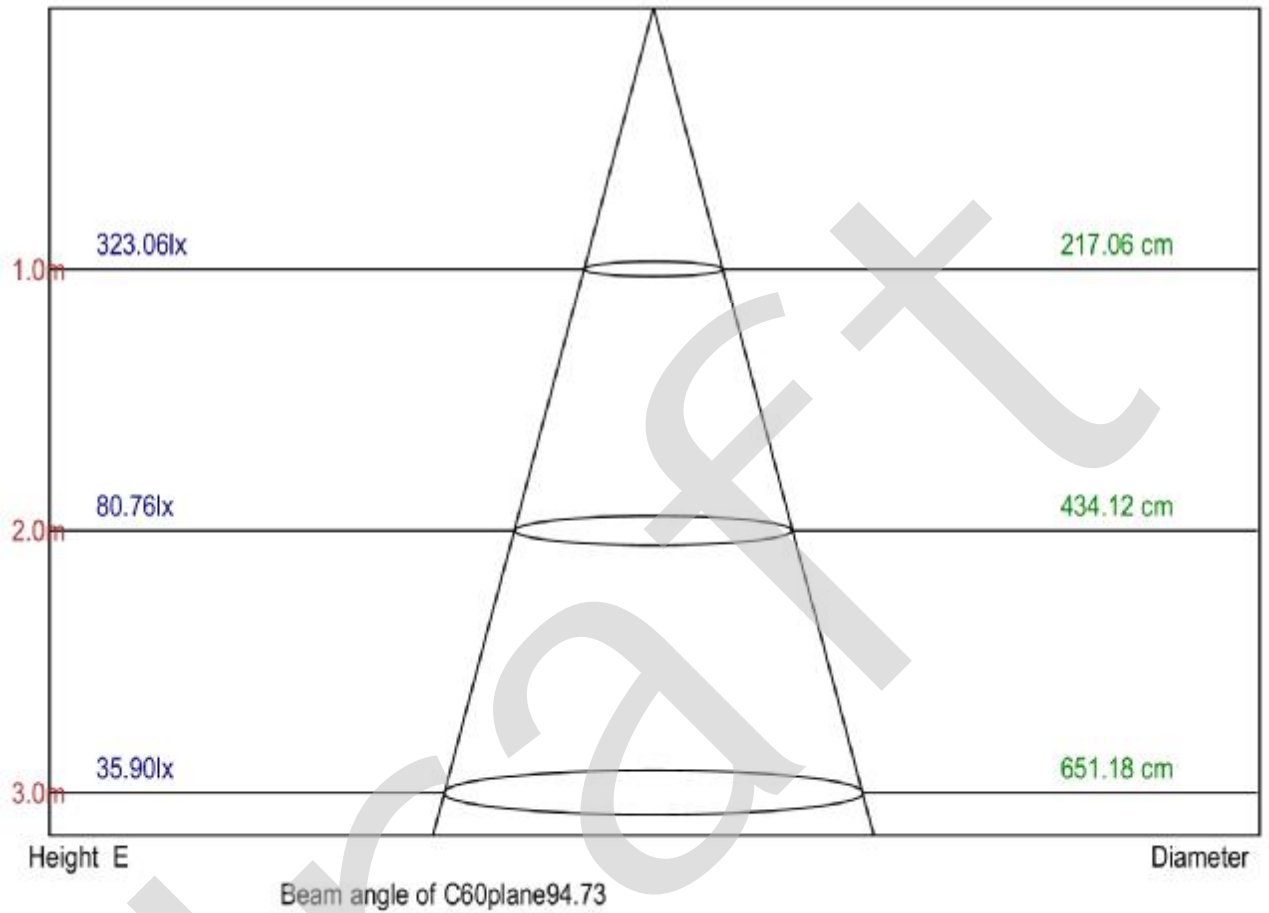
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(lm)	Eff Sum(lm)
0.0	323.060	.000	.000	.000%	.000%
5.0	321.088	7.701	7.701	1.080%	1.080%
10.0	314.664	22.743	30.443	3.190%	4.270%
15.0	304.044	36.701	67.145	5.148%	9.417%
20.0	289.725	48.935	116.080	6.863%	16.281%
25.0	271.322	58.844	174.923	8.253%	24.534%
30.0	249.736	65.940	240.864	9.248%	33.782%
35.0	225.533	69.987	310.850	9.816%	43.598%
40.0	199.552	70.922	381.772	9.947%	53.545%
45.0	172.591	68.905	450.678	9.664%	63.210%
50.0	144.494	64.072	514.749	8.986%	72.196%
55.0	116.653	56.782	571.531	7.964%	80.160%
60.0	89.507	47.653	619.184	6.684%	86.843%
65.0	64.020	37.323	656.507	5.235%	92.078%
70.0	40.808	26.543	683.050	3.723%	95.801%
75.0	21.485	16.282	699.333	2.284%	98.084%
80.0	8.756	8.092	707.424	1.135%	99.219%
85.0	2.635	3.095	710.520	.434%	99.654%
90.0	.407	.833	711.353	.117%	99.770%
95.0	.184	.162	711.515	.023%	99.793%
100.0	.177	.098	711.613	.014%	99.807%
105.0	.202	.101	711.714	.014%	99.821%
110.0	.209	.107	711.822	.015%	99.836%
115.0	.231	.111	711.933	.016%	99.852%
120.0	.234	.113	712.046	.016%	99.868%
125.0	.238	.109	712.155	.015%	99.883%
130.0	.234	.103	712.258	.014%	99.897%
135.0	.256	.099	712.357	.014%	99.911%
140.0	.224	.089	712.446	.012%	99.924%
145.0	.281	.084	712.530	.012%	99.935%
150.0	.328	.090	712.620	.013%	99.948%
155.0	.375	.089	712.708	.012%	99.961%
160.0	.443	.086	712.794	.012%	99.973%
165.0	.544	.081	712.876	.011%	99.984%
170.0	.577	.067	712.942	.009%	99.993%
175.0	.562	.041	712.983	.006%	99.999%
180.0	.584	.014	712.997	.002%	100.001%

ISO illuminance diagram(lux)



Lux distance Curve



Utilization factor table

RHOCC	80			70			60			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	1.19	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	1.06	1.02	0.99	1.04	1.01	0.98	1.00	0.97	0.94	0.98	0.94	0.92	0.92	0.90	0.89	0.87
2	0.94	0.88	0.83	0.92	0.87	0.82	0.89	0.84	0.80	0.85	0.82	0.78	0.83	0.79	0.77	0.74
3	0.84	0.76	0.70	0.82	0.75	0.70	0.79	0.73	0.69	0.77	0.72	0.67	0.74	0.70	0.66	0.64
4	0.75	0.67	0.61	0.74	0.66	0.60	0.71	0.66	0.59	0.69	0.63	0.59	0.67	0.62	0.58	0.56
5	0.67	0.59	0.53	0.66	0.59	0.53	0.64	0.57	0.52	0.62	0.56	0.52	0.61	0.55	0.51	0.49
6	0.61	0.53	0.47	0.60	0.52	0.47	0.58	0.51	0.46	0.57	0.51	0.46	0.55	0.50	0.45	0.43
7	0.56	0.47	0.42	0.55	0.47	0.42	0.53	0.46	0.41	0.52	0.46	0.41	0.51	0.45	0.41	0.39
8	0.51	0.43	0.37	0.50	0.43	0.37	0.48	0.42	0.37	0.48	0.42	0.37	0.47	0.41	0.37	0.35
9	0.47	0.39	0.34	0.46	0.39	0.34	0.45	0.38	0.34	0.44	0.38	0.34	0.43	0.38	0.33	0.32
10	0.44	0.36	0.31	0.43	0.36	0.31	0.42	0.36	0.31	0.41	0.35	0.31	0.40	0.36	0.30	0.29

Draft

Intensity data(cd)								
$\gamma/C(^{\circ})$	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0
0	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595
5	321.1128	321.0096	321.3722	320.8977	320.8948	321.0682	321.4554	321.0682
10	314.5807	314.254	314.904	314.607	314.6171	314.8131	314.996	314.8131
15	303.7659	303.5486	304.0233	304.1655	304.205	304.1425	304.5915	304.1425
20	288.928	288.8718	289.8533	289.7679	290.0912	290.1172	290.372	290.1172
25	270.1967	270.224	271.4442	271.6951	271.886	271.5898	271.9908	271.5898
30	247.875	248.2305	249.7038	250.1422	250.7152	250.422	250.5315	250.422
35	223.1308	223.6902	225.6917	226.3839	226.9254	225.9209	226.0376	225.9209
40	196.1371	197.5958	199.7113	201.0906	201.0138	199.9696	199.7229	199.9696
45	169.1433	170.358	173.0817	174.7384	174.5828	172.3302	171.7608	172.3302
50	139.7704	141.6304	145.7599	147.6296	147.0046	143.9331	142.2381	143.9331
55	111.6087	113.7012	117.8758	120.888	119.0583	115.5361	114.1026	115.5361
60	85.00426	86.67974	90.96461	93.21684	91.84807	88.61088	86.44398	88.61088
65	59.78417	61.72883	65.46019	67.40505	66.06653	62.98426	61.16973	62.98426
70	37.80851	39.34638	41.98883	43.38742	42.08177	40.01992	38.23651	40.01992
75	19.98573	20.82807	22.21648	22.78525	21.97166	21.01641	20.20205	21.01641
80	8.30576	8.633284	8.869285	8.949825	8.896891	8.830783	8.410297	8.830783
85	2.552291	2.568568	2.574247	2.594093	2.727508	2.727154	2.687827	2.727154
90	0.1730367	0.3021682	0.3245078	0.410725	0.5411803	0.4978167	0.5635766	0.4978167
95	0.2162959	0.1942971	0.17306	0.1729442	0.1731758	0.1947938	0.1734082	0.1947938
100	0.1730367	0.1942971	0.216325	0.1728747	0.1515346	0.1515114	0.1734082	0.1515114
105	0.259555	0.1943894	0.1947128	0.1945448	0.2164698	0.1731526	0.2167602	0.1731526
110	0.259555	0.237464	0.2379372	0.1297081	0.238111	0.2164408	0.1300561	0.2164408
115	0.2162959	0.2158344	0.1946722	0.2162149	0.2597521	0.2597289	0.2601123	0.2597289
120	0.2162959	0.237464	0.2379372	0.2377809	0.2814049	0.1947996	0.2167602	0.1947996
125	0.2162959	0.258909	0.2596711	0.2161455	0.2814049	0.1947996	0.2167602	0.1947996
130	0.259555	0.2373717	0.25959	0.2161802	0.2164698	0.2164408	0.2601123	0.2164408
135	0.2162959	0.2158344	0.2812022	0.259451	0.2597637	0.2597289	0.3034644	0.2597289
140	0.2162959	0.2159267	0.1946722	0.2378156	0.2597637	0.2380819	0.1734082	0.2380819
145	0.3028142	0.2805386	0.2812428	0.2810169	0.2814281	0.2813701	0.2601123	0.2813701
150	0.3893325	0.3237055	0.3245078	0.3675237	0.2597637	0.324664	0.3468164	0.324664
155	0.3460734	0.4100392	0.3461606	0.4107597	0.3896456	0.3463052	0.3468164	0.3463052
160	0.4325917	0.4748357	0.4758744	0.3891244	0.4329396	0.4328815	0.4768726	0.4328815
165	0.51911	0.6043363	0.562445	0.5187978	0.5411803	0.519452	0.5202246	0.519452
170	0.5623692	0.5611694	0.6273628	0.6053045	0.5628098	0.5411048	0.5635766	0.5411048
175	0.5623692	0.5612618	0.60571	0.5188325	0.5411686	0.5627576	0.6069287	0.5627576
180	0.6056283	0.6043363	0.60571	0.5620338	0.6061153	0.5627402	0.5202246	0.5627402

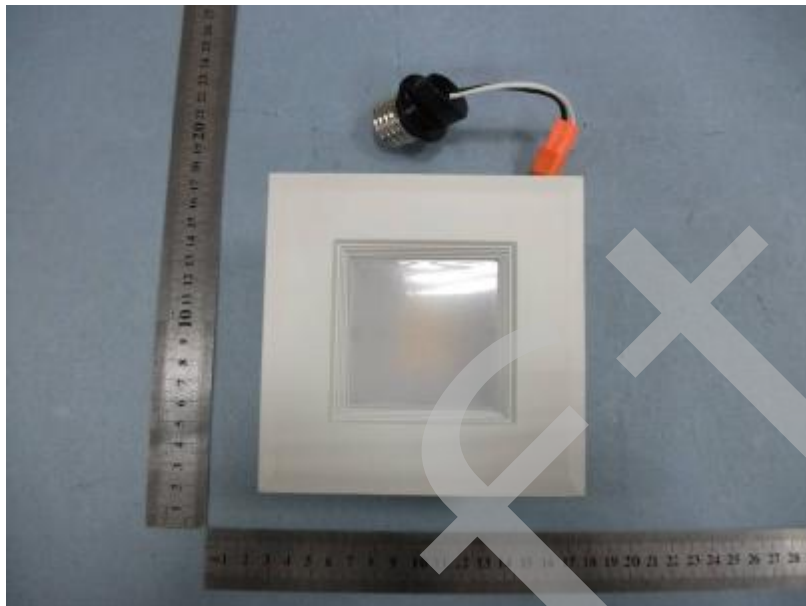
Intensity data(cd)								
$\gamma/C(^{\circ})$	120.0	135.0	150.0	165.0	180.0	195.0	210.0	225.0
0	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595
5	320.8948	320.8977	321.3722	321.0096	321.1128	321.0096	321.3722	320.8977
10	314.6171	314.607	314.904	314.254	314.5807	314.254	314.904	314.607
15	304.205	304.1655	304.0233	303.5486	303.7659	303.5486	304.0233	304.1655
20	290.0912	289.7679	289.8533	288.8718	288.928	288.8718	289.8533	289.7679
25	271.886	271.6951	271.4442	270.224	270.1967	270.224	271.4442	271.6951
30	250.7152	250.1422	249.7038	248.2305	247.875	248.2305	249.7038	250.1422
35	226.9254	226.3839	225.6917	223.6902	223.1308	223.6902	225.6917	226.3839
40	201.0138	201.0906	199.7113	197.5958	196.1371	197.5958	199.7113	201.0906
45	174.5828	174.7384	173.0817	170.358	169.1433	170.358	173.0817	174.7384
50	147.0046	147.6296	145.7599	141.6304	139.7704	141.6304	145.7599	147.6296
55	119.0583	120.888	117.8758	113.7012	111.6087	113.7012	117.8758	120.888
60	91.84807	93.21684	90.96461	86.67974	85.00426	86.67974	90.96461	93.21684
65	66.06653	67.40505	65.46019	61.72883	59.78417	61.72883	65.46019	67.40505
70	42.08177	43.38742	41.98883	39.34638	37.80851	39.34638	41.98883	43.38742
75	21.97166	22.78525	22.21648	20.82807	19.98573	20.82807	22.21648	22.78525
80	8.896891	8.949825	8.869285	8.633284	8.30576	8.633284	8.869285	8.949825
85	2.727508	2.594093	2.574247	2.568568	2.552291	2.568568	2.574247	2.594093
90	0.5411803	0.410725	0.3245078	0.3021682	0.1730367	0.3021682	0.3245078	0.410725
95	0.1731758	0.1729442	0.17306	0.1942971	0.2162959	0.1942971	0.17306	0.1729442
100	0.1515346	0.1728747	0.216325	0.1942971	0.1730367	0.1942971	0.216325	0.1728747
105	0.2164698	0.1945448	0.1947128	0.1943894	0.259555	0.1943894	0.1947128	0.1945448
110	0.238111	0.1297081	0.2379372	0.237464	0.259555	0.237464	0.2379372	0.1297081
115	0.2597521	0.2162149	0.1946722	0.2158344	0.2162959	0.2158344	0.1946722	0.2162149
120	0.2814049	0.2377809	0.2379372	0.237464	0.2162959	0.237464	0.2379372	0.2377809
125	0.2814049	0.2161455	0.2596711	0.258909	0.2162959	0.258909	0.2596711	0.2161455
130	0.2164698	0.2161802	0.25959	0.2373717	0.259555	0.2373717	0.25959	0.2161802
135	0.2597637	0.259451	0.2812022	0.2158344	0.2162959	0.2158344	0.2812022	0.259451
140	0.2597637	0.2378156	0.1946722	0.2159267	0.2162959	0.2159267	0.1946722	0.2378156
145	0.2814281	0.2810169	0.2812428	0.2805386	0.3028142	0.2805386	0.2812428	0.2810169
150	0.2597637	0.3675237	0.3245078	0.3237055	0.3893325	0.3237055	0.3245078	0.3675237
155	0.3896456	0.4107597	0.3461606	0.4100392	0.3460734	0.4100392	0.3461606	0.4107597
160	0.4329396	0.3891244	0.4758744	0.4748357	0.4325917	0.4748357	0.4758744	0.3891244
165	0.5411803	0.5187978	0.562445	0.6043363	0.51911	0.6043363	0.562445	0.5187978
170	0.5628098	0.6053045	0.6273628	0.5611694	0.5623692	0.5611694	0.6273628	0.6053045
175	0.5411686	0.5188325	0.60571	0.5612618	0.5623692	0.5612618	0.60571	0.5188325
180	0.6061153	0.5620338	0.60571	0.6043363	0.6056283	0.6043363	0.60571	0.5620338

Intensity data(cd)								
$\gamma/C(^{\circ})$	240.0	255.0	270.0	285.0	300.0	315.0	330.0	345.0
0	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595	323.0595
5	320.8948	321.0682	321.4554	321.0682	320.8948	320.8977	321.3722	321.0096
10	314.6171	314.8131	314.996	314.8131	314.6171	314.607	314.904	314.254
15	304.205	304.1425	304.5915	304.1425	304.205	304.1655	304.0233	303.5486
20	290.0912	290.1172	290.372	290.1172	290.0912	289.7679	289.8533	288.8718
25	271.886	271.5898	271.9908	271.5898	271.886	271.6951	271.4442	270.224
30	250.7152	250.422	250.5315	250.422	250.7152	250.1422	249.7038	248.2305
35	226.9254	225.9209	226.0376	225.9209	226.9254	226.3839	225.6917	223.6902
40	201.0138	199.9696	199.7229	199.9696	201.0138	201.0906	199.7113	197.5958
45	174.5828	172.3302	171.7608	172.3302	174.5828	174.7384	173.0817	170.358
50	147.0046	143.9331	142.2381	143.9331	147.0046	147.6296	145.7599	141.6304
55	119.0583	115.5361	114.1026	115.5361	119.0583	120.888	117.8758	113.7012
60	91.84807	88.61088	86.44398	88.61088	91.84807	93.21684	90.96461	86.67974
65	66.06653	62.98426	61.16973	62.98426	66.06653	67.40505	65.46019	61.72883
70	42.08177	40.01992	38.23651	40.01992	42.08177	43.38742	41.98883	39.34638
75	21.97166	21.01641	20.20205	21.01641	21.97166	22.78525	22.21648	20.82807
80	8.896891	8.830783	8.410297	8.830783	8.896891	8.949825	8.869285	8.633284
85	2.727508	2.727154	2.687827	2.727154	2.727508	2.594093	2.574247	2.568568
90	0.5411803	0.4978167	0.5635766	0.4978167	0.5411803	0.410725	0.3245078	0.3021682
95	0.1731758	0.1947938	0.1734082	0.1947938	0.1731758	0.1729442	0.17306	0.1942971
100	0.1515346	0.1515114	0.1734082	0.1515114	0.1515346	0.1728747	0.216325	0.1942971
105	0.2164698	0.1731526	0.2167602	0.1731526	0.2164698	0.1945448	0.1947128	0.1943894
110	0.238111	0.2164408	0.1300561	0.2164408	0.238111	0.1297081	0.2379372	0.237464
115	0.2597521	0.2597289	0.2601123	0.2597289	0.2597521	0.2162149	0.1946722	0.2158344
120	0.2814049	0.1947996	0.2167602	0.1947996	0.2814049	0.2377809	0.2379372	0.237464
125	0.2814049	0.1947996	0.2167602	0.1947996	0.2814049	0.2161455	0.2596711	0.258909
130	0.2164698	0.2164408	0.2601123	0.2164408	0.2164698	0.2161802	0.25959	0.2373717
135	0.2597637	0.2597289	0.3034644	0.2597289	0.2597637	0.259451	0.2812022	0.2158344
140	0.2597637	0.2380819	0.1734082	0.2380819	0.2597637	0.2378156	0.1946722	0.2159267
145	0.2814281	0.2813701	0.2601123	0.2813701	0.2814281	0.2810169	0.2812428	0.2805386
150	0.2597637	0.324664	0.3468164	0.324664	0.2597637	0.3675237	0.3245078	0.3237055
155	0.3896456	0.3463052	0.3468164	0.3463052	0.3896456	0.4107597	0.3461606	0.4100392
160	0.4329396	0.4328815	0.4768726	0.4328815	0.4329396	0.3891244	0.4758744	0.4748357
165	0.5411803	0.519452	0.5202246	0.519452	0.5411803	0.5187978	0.562445	0.6043363
170	0.5628098	0.5411048	0.5635766	0.5411048	0.5628098	0.6053045	0.6273628	0.5611694
175	0.5411686	0.5627576	0.6069287	0.5627576	0.5411686	0.5188325	0.60571	0.5612618
180	0.6061153	0.5627402	0.5202246	0.5627402	0.6061153	0.5620338	0.60571	0.6043363

Intensity data(cd)

$\psi/C(^{\circ})$	360.0
0	323.0595
5	321.1128
10	314.5807
15	303.7659
20	288.928
25	270.1967
30	247.875
35	223.1308
40	196.1371
45	169.1433
50	139.7704
55	111.6087
60	85.00426
65	59.78417
70	37.80851
75	19.98573
80	8.30576
85	2.552291
90	0.1730367
95	0.2162959
100	0.1730367
105	0.259555
110	0.259555
115	0.2162959
120	0.2162959
125	0.2162959
130	0.259555
135	0.2162959
140	0.2162959
145	0.3028142
150	0.3893325
155	0.3460734
160	0.4325917
165	0.51911
170	0.5623692
175	0.5623692
180	0.6056283

Photo of Test Sample



Picture 1



Picture 2

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