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Nata

LumCAT: 1-0914-S
Luminaire: 92.70.064.00
Report No: 220526-B010
Test No: 220526-C010
LampCAT: Samsung Samsung LED LCO6D3
Lamp flux(lm): 1605.2
Number of Lamps: 1
Length(mm): 43
Phm Type: C
Voltage(V): 35.4600
Current(A): 0.3810
Power (W): 13.5100
PF: 0.0000
Ballast type: DC
Width(mm): 43
Height(mm): 0

Photometric Results

Lumens(lm): 1242.29
Efficiency(%): 77.39%
Lumens(lm)/Power(W): 91.95
Central intensity(cd): 2936.407
Maximum intensity(cd): 2936.407
Angle of maximum intensity: $C=0.0 \gamma=0.0$
Beam Angle(50%Imax): [C0/180]Total=37.9
[C90/270]Total=37.9
Field angle(10%Imax): [C0/180]Total=60.9
[C90/270]Total=60.9
Maximum s/h(1/2): C0_180=0.62 C90_270=0.62
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 77.39%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.046%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2936.407	0.000	0	.000%	.000%
1.0	2932.822	2.808	2.808	.175%	.226%
2.0	2919.751	8.400	11.208	.523%	.902%
3.0	2894.281	13.905	25.114	.866%	2.022%
4.0	2866.197	19.282	44.396	1.201%	3.574%
5.0	2817.723	24.452	68.848	1.523%	5.542%
6.0	2769.099	29.360	98.208	1.829%	7.905%
7.0	2714.649	34.038	132.246	2.120%	10.645%
8.0	2649.593	38.391	170.636	2.392%	13.736%
9.0	2572.512	42.322	212.959	2.637%	17.142%
10.0	2486.169	45.779	258.738	2.852%	20.828%
11.0	2397.286	48.796	307.534	3.040%	24.755%
12.0	2303.997	51.392	358.925	3.202%	28.892%
13.0	2198.832	53.437	412.363	3.329%	33.194%
14.0	2082.687	54.803	467.166	3.414%	37.605%
15.0	1970.875	55.649	522.815	3.467%	42.085%
16.0	1846.141	55.930	578.745	3.484%	46.587%
17.0	1720.062	55.535	634.28	3.460%	51.057%
18.0	1587.560	54.536	688.816	3.397%	55.447%
19.0	1458.658	52.998	741.814	3.302%	59.713%
20.0	1316.521	50.793	792.607	3.164%	63.802%
21.0	1183.571	48.007	840.614	2.991%	67.667%
22.0	1073.954	45.366	885.98	2.826%	71.318%
23.0	968.124	42.848	928.828	2.669%	74.767%
24.0	856.132	39.885	968.713	2.485%	77.978%
25.0	755.307	36.641	1005.354	2.283%	80.928%
26.0	656.752	33.332	1038.685	2.076%	83.611%
27.0	562.753	29.835	1068.521	1.859%	86.012%
28.0	476.619	26.315	1094.835	1.639%	88.130%
29.0	392.293	22.733	1117.569	1.416%	89.960%
30.0	325.907	19.391	1136.96	1.208%	91.521%
31.0	250.305	16.035	1152.995	.999%	92.812%
32.0	199.597	12.889	1165.884	.803%	93.850%
33.0	138.731	9.967	1175.852	.621%	94.652%
34.0	95.918	7.101	1182.953	.442%	95.224%
35.0	68.006	5.091	1188.044	.317%	95.633%
36.0	46.652	3.651	1191.694	.227%	95.927%
37.0	34.926	2.661	1194.355	.166%	96.141%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	27.367	2.079	1196.434	.130%	96.309%
39.0	20.772	1.643	1198.077	.102%	96.441%
40.0	16.925	1.315	1199.392	.082%	96.547%
41.0	15.581	1.158	1200.55	.072%	96.640%
42.0	14.550	1.095	1201.644	.068%	96.728%
43.0	13.706	1.047	1202.691	.065%	96.812%
44.0	13.034	1.009	1203.7	.063%	96.894%
45.0	12.421	0.978	1204.678	.061%	96.972%
46.0	11.980	0.954	1205.633	.059%	97.049%
47.0	11.547	0.936	1206.568	.058%	97.125%
48.0	11.226	0.921	1207.489	.057%	97.199%
49.0	10.927	0.910	1208.399	.057%	97.272%
50.0	10.636	0.899	1209.298	.056%	97.344%
51.0	10.412	0.891	1210.188	.055%	97.416%
52.0	10.195	0.884	1211.073	.055%	97.487%
53.0	10.001	0.879	1211.951	.055%	97.558%
54.0	9.822	0.874	1212.825	.054%	97.628%
55.0	9.680	0.871	1213.695	.054%	97.698%
56.0	9.531	0.868	1214.563	.054%	97.768%
57.0	9.396	0.865	1215.429	.054%	97.838%
58.0	9.269	0.863	1216.292	.054%	97.907%
59.0	9.150	0.861	1217.153	.054%	97.977%
60.0	9.038	0.859	1218.012	.054%	98.046%
61.0	8.963	0.859	1218.871	.054%	98.115%
62.0	8.888	0.860	1219.732	.054%	98.184%
63.0	8.761	0.858	1220.59	.053%	98.253%
64.0	8.664	0.855	1221.445	.053%	98.322%
65.0	8.612	0.855	1222.3	.053%	98.391%
66.0	8.567	0.857	1223.157	.053%	98.460%
67.0	8.492	0.858	1224.015	.053%	98.529%
68.0	8.470	0.859	1224.874	.054%	98.598%
69.0	8.425	0.862	1225.736	.054%	98.668%
70.0	8.328	0.860	1226.596	.054%	98.737%
71.0	8.283	0.859	1227.455	.053%	98.806%
72.0	8.216	0.858	1228.313	.053%	98.875%
73.0	8.201	0.858	1229.171	.053%	98.944%
74.0	8.171	0.861	1230.032	.054%	99.013%
75.0	8.104	0.860	1230.892	.054%	99.083%

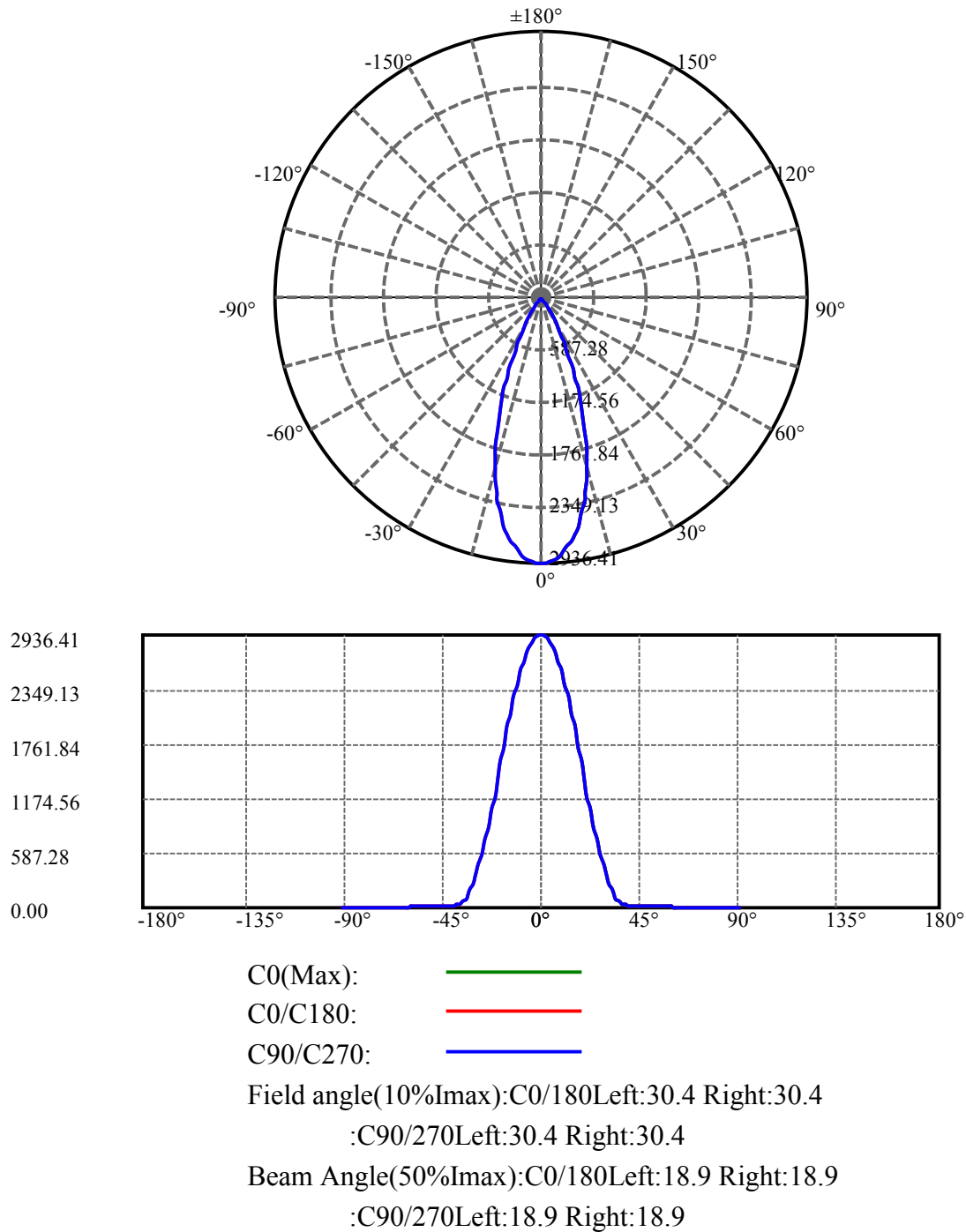
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.014	0.856	1231.748	.053%	99.151%
77.0	7.999	0.854	1232.601	.053%	99.220%
78.0	7.917	0.852	1233.453	.053%	99.289%
79.0	7.828	0.846	1234.299	.053%	99.357%
80.0	7.716	0.838	1235.137	.052%	99.424%
81.0	7.611	0.829	1235.966	.052%	99.491%
82.0	7.492	0.819	1236.785	.051%	99.557%
83.0	7.350	0.807	1237.592	.050%	99.622%
84.0	7.088	0.787	1238.379	.049%	99.685%
85.0	6.535	0.744	1239.122	.046%	99.745%
86.0	6.087	0.690	1239.812	.043%	99.801%
87.0	5.684	0.644	1240.456	.040%	99.852%
88.0	5.609	0.619	1241.075	.039%	99.902%
89.0	5.527	0.610	1241.685	.038%	99.951%
90.0	5.482	0.604	1242.289	.038%	100.000%

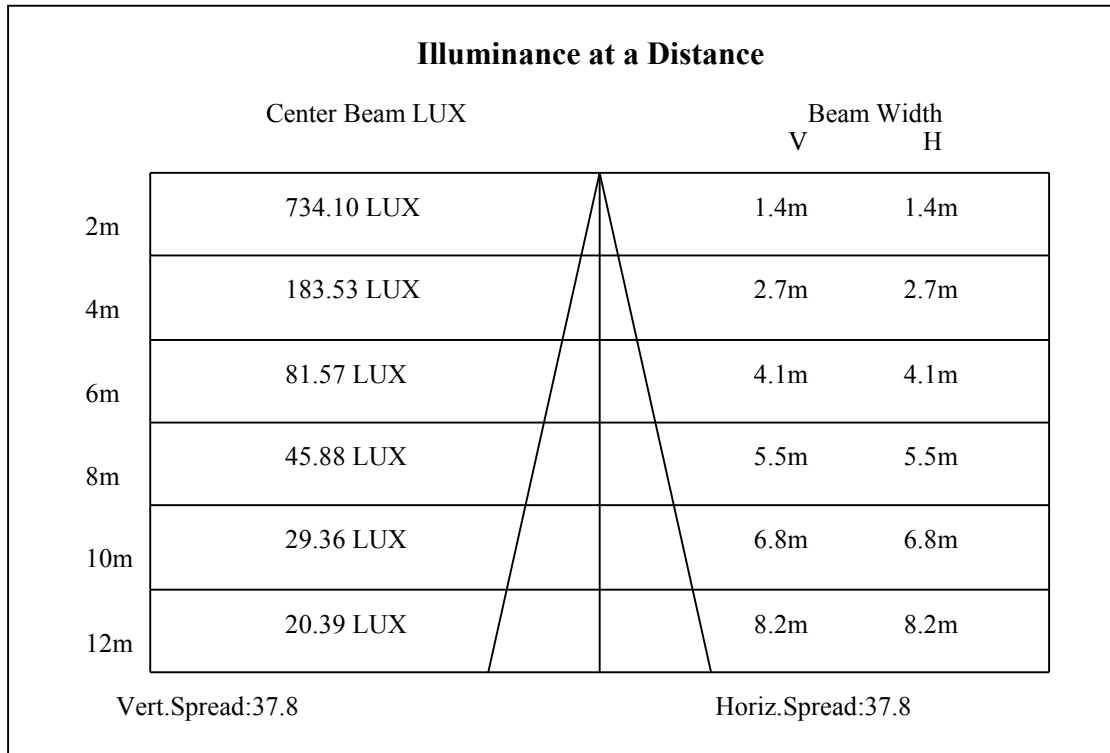
ZONAL LUMEN SUMMARY

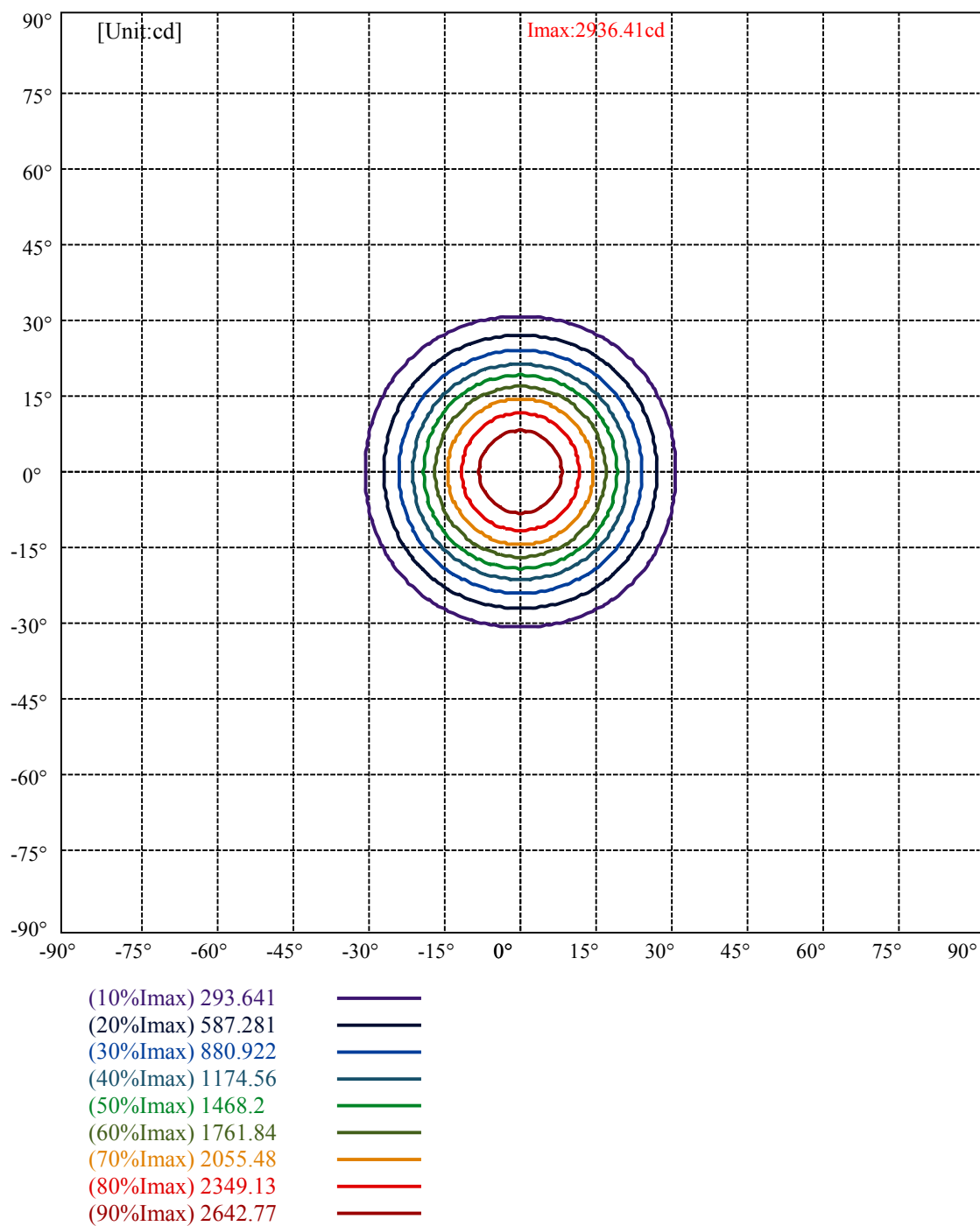
Zone	Lumens	%Lamp	%Fixt
0-30	1136.96	70.83%	91.52%
0-40	1199.39	74.72%	96.55%
0-60	1218.01	75.88%	98.05%
0-90	1241.69	77.35%	99.95%
0-120	1241.69	77.35%	99.95%
0-180	1242.29	77.39%	100.00%
60-90	24.53	1.53%	1.97%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-24.69	993.83	61.91%	80.00%

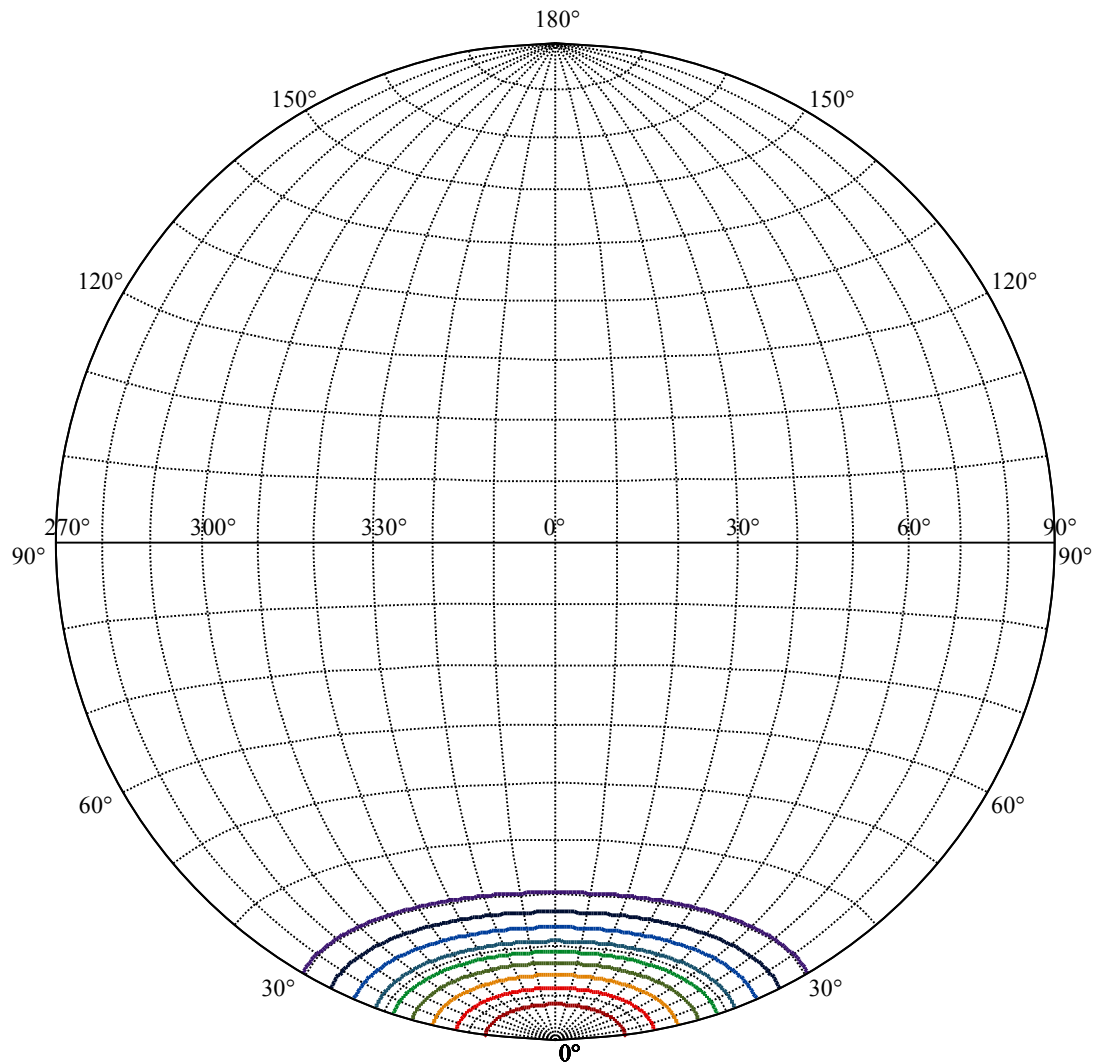
ZONAL LUMEN SUMMARY

0-10	258.74
10-20	533.87
20-30	344.35
30-40	62.43
40-50	9.91
50-60	8.71
60-70	8.58
70-80	8.54
80-90	6.55
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00









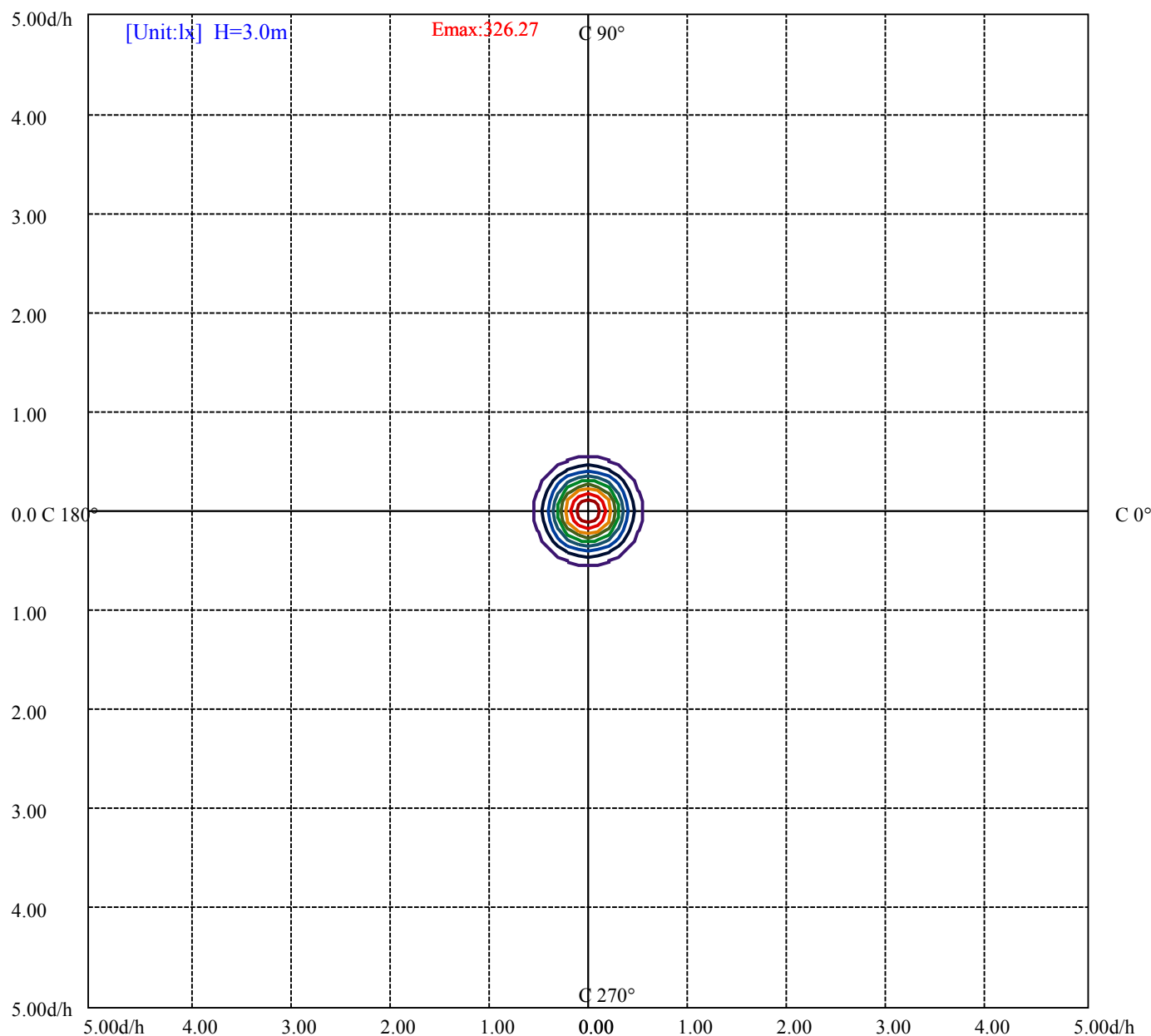
House

[Unit:cd]

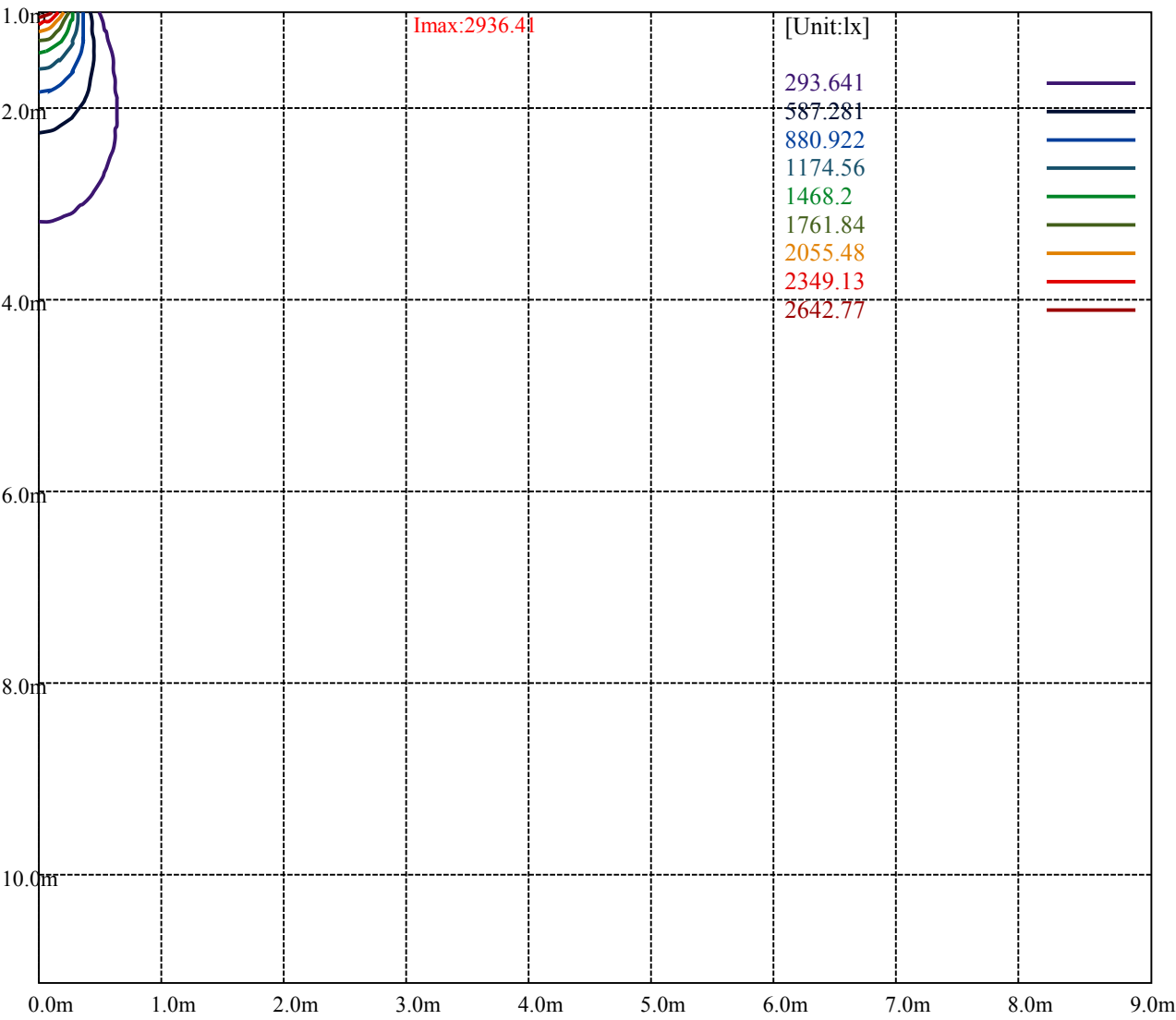
Road

Imax:2936.41

(10%Imax)	293.641	—
(20%Imax)	587.281	—
(30%Imax)	880.922	—
(40%Imax)	1174.56	—
(50%Imax)	1468.2	—
(60%Imax)	1761.84	—
(70%Imax)	2055.48	—
(80%Imax)	2349.13	—
(90%Imax)	2642.77	—



(10%Emax)	32.62678	
(20%Emax)	65.25345	
(30%Emax)	97.88022	
(40%Emax)	130.5067	
(50%Emax)	163.1333	
(60%Emax)	195.76	
(70%Emax)	228.3867	
(80%Emax)	261.0144	
(90%Emax)	293.6411	



Luminance Table

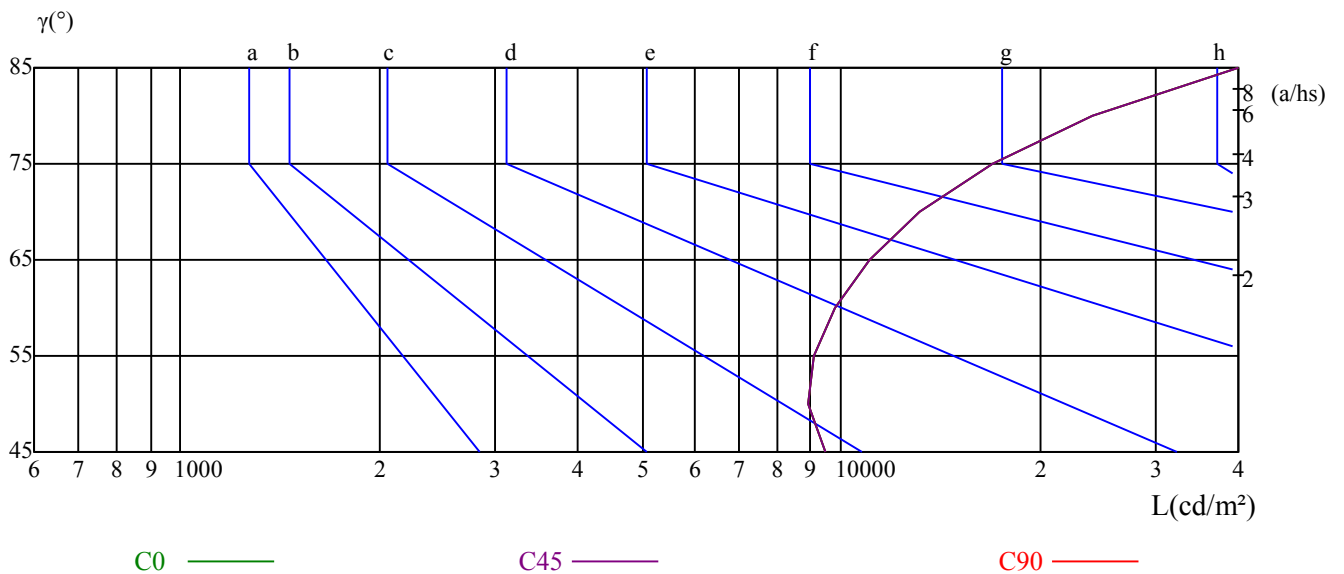
γ	45	50	55	60	65	70	75	80	85
C0	9500	8949	9127	9776	11021	13169	16934	24030	40555
C45	9500	8949	9127	9776	11021	13169	16934	24030	40555
C90	9500	8949	9127	9776	11021	13169	16934	24030	40555

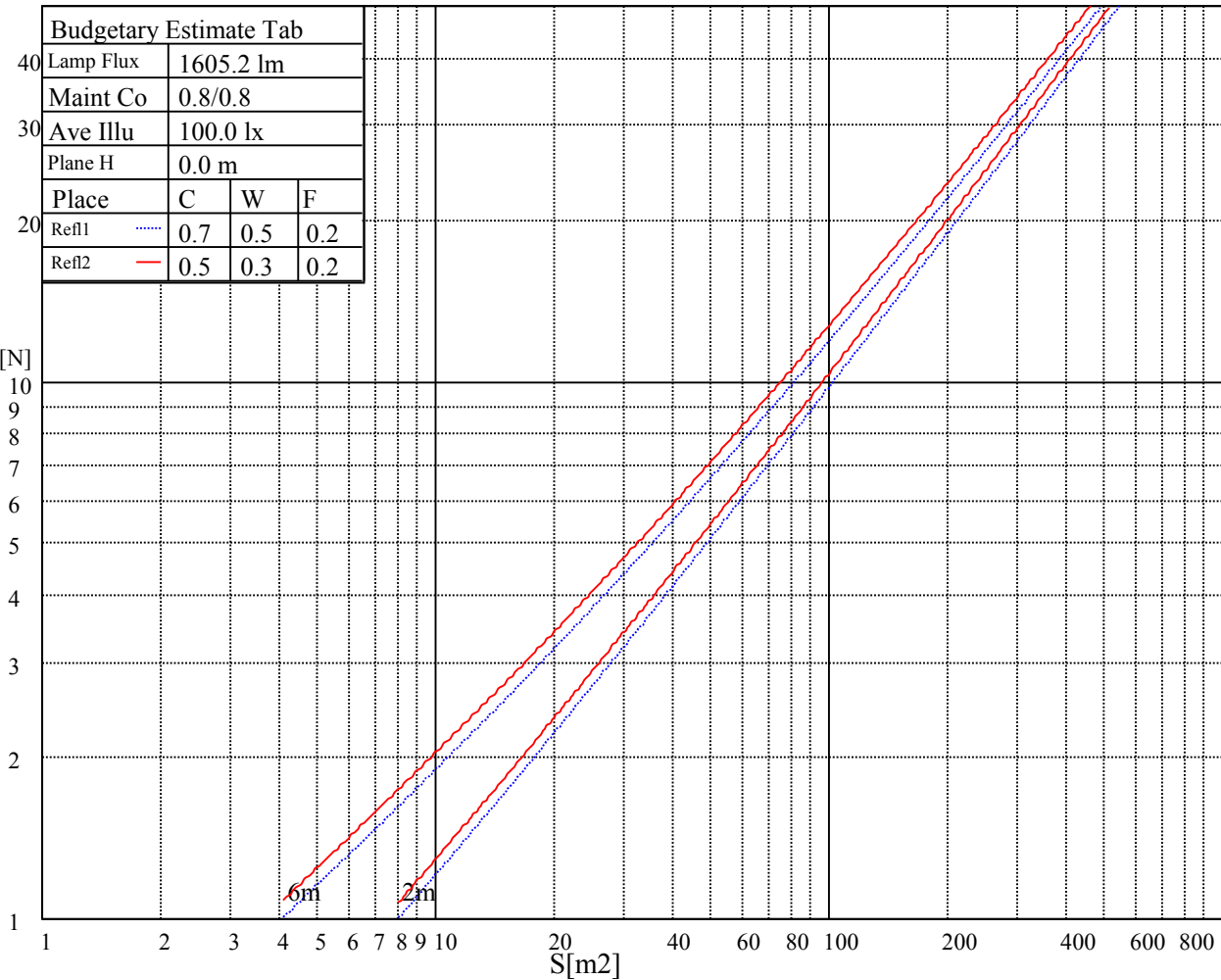
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11021	11021	11021	16934	16934	16934	40555	40555	40555

Glare Table

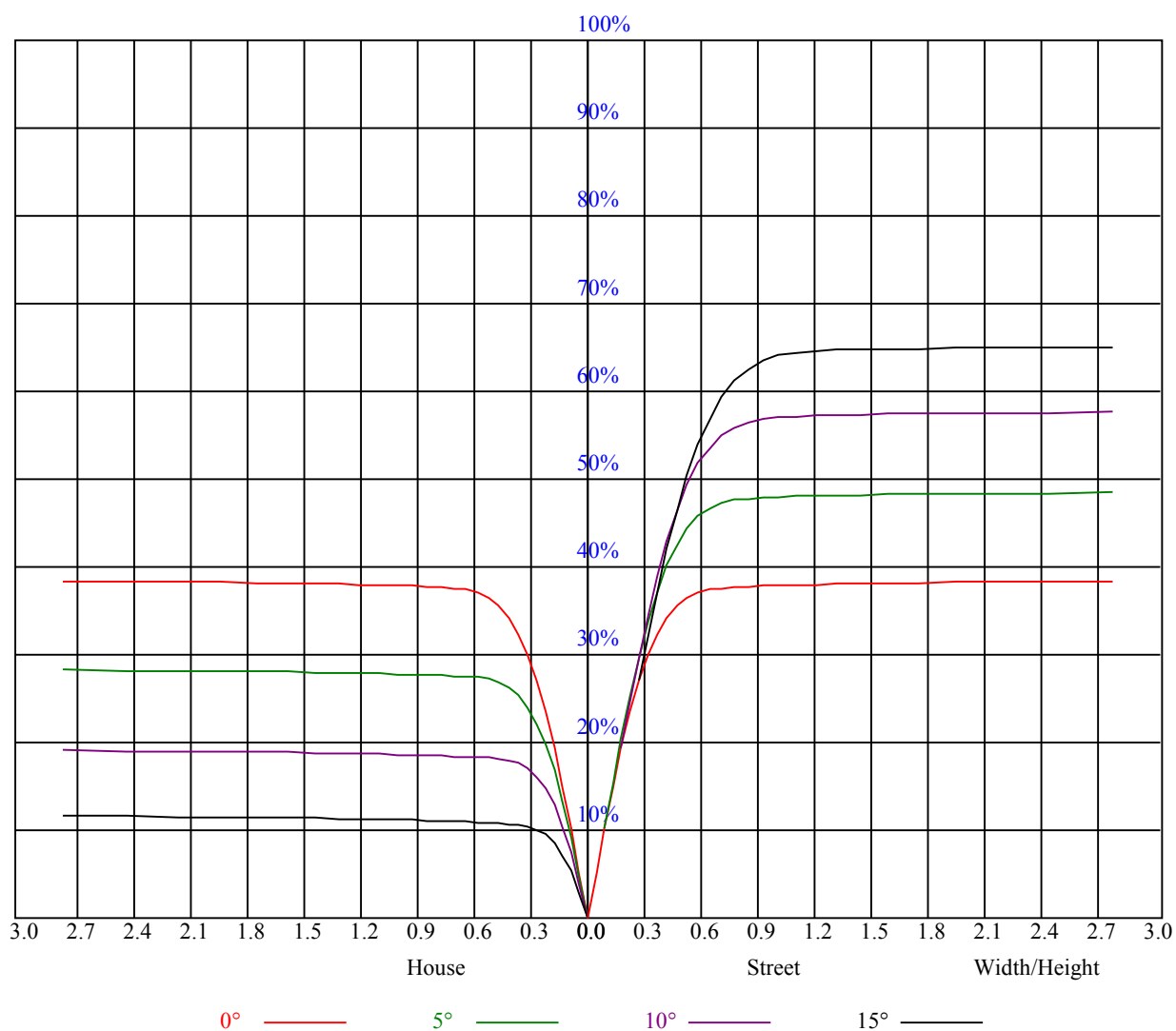
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.79	0.79	0.79	0.77
1	0.86	0.85	0.83	0.85	0.83	0.82	0.82	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.75	0.73
2	0.81	0.79	0.76	0.80	0.78	0.76	0.78	0.76	0.74	0.75	0.74	0.72	0.73	0.72	0.71	0.70
3	0.77	0.74	0.71	0.76	0.73	0.71	0.74	0.72	0.70	0.72	0.70	0.69	0.71	0.69	0.67	0.66
4	0.73	0.70	0.67	0.73	0.69	0.67	0.71	0.68	0.66	0.69	0.67	0.65	0.68	0.66	0.64	0.63
5	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.63	0.62	0.61
6	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.62	0.59	0.63	0.61	0.59	0.58
7	0.64	0.60	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.56
8	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.56	0.54	0.54
9	0.59	0.55	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.57	0.55	0.52	0.57	0.54	0.52	0.51
10	0.57	0.53	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.55	0.53	0.50	0.55	0.52	0.50	0.50



Intensity data(cd)

Appendix Page: 16 Total:18

C/ γ (°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	2936.86	2939.84	2941.04	2932.07	2903.99	2866.94	2820.93	2782.10	2727.12
45.0	2940.44	2935.66	2902.20	2858.58	2823.92	2770.74	2705.01	2649.44	2593.87
90.0	2933.27	2911.16	2884.87	2844.24	2806.59	2742.66	2679.32	2601.64	2509.02
135.0	2935.06	2926.10	2901.60	2870.53	2837.67	2768.35	2713.38	2653.63	2577.74
180.0	2936.86	2923.11	2895.63	2855.59	2823.32	2776.72	2726.52	2663.19	2594.47
225.0	2940.44	2944.62	2938.65	2926.10	2907.58	2864.55	2840.06	2790.46	2733.70
270.0	2933.27	2942.23	2945.82	2941.64	2922.51	2889.65	2853.80	2814.36	2761.18
315.0	2935.06	2939.84	2948.21	2925.50	2903.99	2862.16	2813.76	2762.38	2699.64
360.0	2936.86	2939.84	2941.04	2932.07	2903.99	2866.94	2820.93	2782.10	2727.12
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2650.64	2581.33	2501.85	2424.77	2305.27	2207.27	2105.69	1973.04	1857.12
45.0	2491.10	2401.47	2318.41	2197.71	2082.99	1989.17	1850.55	1713.71	1606.16
90.0	2427.76	2323.79	2218.03	2111.07	2002.32	1852.34	1738.81	1613.93	1471.71
135.0	2493.49	2406.25	2311.84	2221.61	2115.85	1998.73	1883.41	1762.11	1623.49
180.0	2517.39	2416.41	2320.80	2228.19	2127.20	2012.48	1903.13	1771.67	1654.56
225.0	2673.34	2599.25	2520.97	2431.94	2345.30	2228.19	2123.62	2011.88	1885.20
270.0	2693.66	2622.55	2537.71	2452.86	2345.30	2233.56	2126.01	2000.53	1868.47
315.0	2632.71	2538.30	2448.67	2363.82	2266.43	2139.75	2035.78	1922.25	1793.78
360.0	2650.64	2581.33	2501.85	2424.77	2305.27	2207.27	2105.69	1973.04	1857.12
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1734.03	1612.13	1469.92	1331.29	1218.36	1088.70	969.79	871.79	765.43
45.0	1453.79	1336.07	1218.36	1074.95	968.59	874.18	746.91	657.88	573.03
90.0	1334.88	1181.43	1079.85	953.66	855.66	748.11	652.50	558.87	457.89
135.0	1503.38	1379.69	1224.93	1114.39	1005.04	892.71	779.18	685.37	589.76
180.0	1510.55	1362.37	1181.91	1111.82	987.66	891.45	786.23	670.43	581.69
225.0	1754.94	1630.66	1488.44	1354.60	1180.18	1110.39	1000.08	889.72	780.25
270.0	1749.56	1627.67	1470.52	1348.62	1227.92	1103.04	982.94	886.73	779.18
315.0	1659.34	1539.23	1398.22	1179.22	1148.21	1036.41	931.43	821.66	726.77
360.0	1734.03	1612.13	1469.92	1331.29	1218.36	1088.70	969.79	871.79	765.43
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	648.92	559.29	475.04	398.55	315.50	306.53	192.88	131.87	91.18
45.0	471.45	393.17	315.50	264.53	176.21	124.23	81.62	52.34	40.51
90.0	388.15	317.05	230.05	181.35	129.31	82.76	62.86	46.85	36.27
135.0	507.30	430.22	348.96	304.14	214.81	148.96	108.15	67.76	46.85
180.0	498.04	398.13	329.66	260.76	191.99	140.90	99.43	58.74	44.52
225.0	688.53	587.97	490.63	411.70	336.35	254.19	194.08	143.53	92.50
270.0	672.82	586.18	494.16	414.09	332.23	305.93	197.48	140.84	106.36
315.0	626.81	540.94	454.36	372.14	306.05	233.28	173.34	125.42	85.86
360.0	648.92	559.29	475.04	398.55	315.50	306.53	192.88	131.87	91.18
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	60.23	43.26	34.36	24.20	17.03	15.83	14.82	13.92	13.21
45.0	32.74	23.72	17.69	16.25	15.24	14.34	13.38	12.79	12.19
90.0	28.26	22.71	19.60	17.63	16.31	15.12	14.34	13.56	13.03
135.0	38.06	30.71	22.05	19.18	17.69	16.25	15.06	14.16	13.38
180.0	35.19	24.92	17.99	15.77	14.58	13.92	13.21	12.49	12.07
225.0	58.86	43.98	35.02	23.84	17.27	15.72	14.76	13.80	13.03
270.0	66.68	48.82	38.48	28.32	19.90	17.21	15.77	14.82	13.98
315.0	53.18	41.29	33.76	20.97	17.39	16.25	15.06	14.10	13.38
360.0	60.23	43.26	34.36	24.20	17.03	15.83	14.82	13.92	13.21

Intensity data(cd)										Appendix Page: 17 Total:18	
C/ γ (°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0		
0.0	12.61	12.19	11.77	11.53	11.23	10.99	10.76	10.52	10.40		
45.0	11.53	11.11	10.76	10.46	10.16	9.98	9.80	9.68	9.50		
90.0	12.49	12.07	11.53	11.17	10.93	10.58	10.28	9.98	9.74		
135.0	12.61	12.13	11.71	11.35	10.99	10.70	10.46	10.22	10.04		
180.0	11.71	11.47	11.23	11.05	10.76	10.52	10.40	10.22	10.04		
225.0	12.43	11.95	11.35	10.93	10.64	10.34	10.10	9.92	9.80		
270.0	13.27	12.73	12.25	11.89	11.53	11.17	10.88	10.64	10.34		
315.0	12.73	12.19	11.77	11.41	11.17	10.82	10.64	10.40	10.16		
360.0	12.61	12.19	11.77	11.53	11.23	10.99	10.76	10.52	10.40		
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0		
0.0	10.22	10.04	9.92	9.80	9.68	9.56	9.44	9.32	9.20		
45.0	9.38	9.26	9.20	9.14	9.02	8.96	8.78	8.72	8.66		
90.0	9.56	9.38	9.20	9.02	8.78	8.54	8.54	8.60	8.60		
135.0	9.86	9.68	9.50	9.38	9.26	9.14	9.02	8.96	8.84		
180.0	9.92	9.80	9.68	9.56	9.38	9.32	9.26	9.14	9.02		
225.0	9.62	9.56	9.44	9.32	9.32	9.26	9.14	9.08	9.02		
270.0	10.10	9.92	9.68	9.44	9.32	9.14	8.96	8.84	8.78		
315.0	9.92	9.80	9.62	9.50	9.38	9.26	9.14	9.02	8.96		
360.0	10.22	10.04	9.92	9.80	9.68	9.56	9.44	9.32	9.20		
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0		
0.0	9.14	9.02	8.96	8.84	8.72	8.66	8.60	8.54	8.48		
45.0	8.54	8.48	8.43	8.31	8.25	8.19	8.13	8.07	8.01		
90.0	8.19	8.01	8.01	8.13	8.13	8.13	8.13	7.83	7.83		
135.0	8.78	8.66	8.54	8.48	8.37	8.31	8.25	8.19	8.13		
180.0	8.96	8.90	8.90	8.90	8.84	8.90	8.90	8.84	8.66		
225.0	8.90	8.84	8.78	8.72	8.66	8.66	8.60	8.60	8.54		
270.0	8.66	8.60	8.54	8.48	8.43	8.43	8.43	8.25	8.31		
315.0	8.90	8.78	8.72	8.66	8.54	8.48	8.37	8.31	8.31		
360.0	9.14	9.02	8.96	8.84	8.72	8.66	8.60	8.54	8.48		
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0		
0.0	8.48	8.48	8.43	8.43	8.37	8.31	8.25	8.25	8.13		
45.0	7.89	7.89	7.83	7.77	7.77	7.77	7.65	7.53	7.47		
90.0	7.89	7.89	7.89	7.71	7.59	7.71	7.65	7.53	7.29		
135.0	8.01	7.95	7.89	7.83	7.71	7.65	7.59	7.47	7.41		
180.0	8.54	8.60	8.60	8.60	8.43	8.43	8.25	8.19	8.01		
225.0	8.48	8.48	8.48	8.43	8.31	8.31	8.19	8.13	8.07		
270.0	8.25	8.19	8.19	8.13	8.07	8.01	8.01	7.83	7.77		
315.0	8.19	8.13	8.07	7.95	7.89	7.83	7.77	7.71	7.59		
360.0	8.48	8.48	8.43	8.43	8.37	8.31	8.25	8.25	8.13		
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0		
0.0	8.01	7.89	7.71	7.41	7.17	6.21	5.80	5.74	5.68		
45.0	7.35	7.23	7.11	6.99	5.74	5.62	5.62	5.56	5.44		
90.0	7.29	7.23	7.11	6.33	5.68	5.56	5.56	5.44	5.44		
135.0	7.29	7.23	7.11	6.99	6.04	5.68	5.62	5.56	5.44		
180.0	7.95	7.59	7.29	6.87	5.92	5.74	5.68	5.68	5.44		
225.0	7.89	7.77	7.59	7.47	7.41	7.29	5.80	5.68	5.62		
270.0	7.65	7.59	7.53	7.41	7.23	6.75	5.74	5.62	5.56		
315.0	7.47	7.41	7.35	7.23	7.11	5.86	5.68	5.62	5.62		
360.0	8.01	7.89	7.71	7.41	7.17	6.21	5.80	5.74	5.68		

Intensity data(cd)

Appendix Page: 18 Total:18

C/ γ (°)	90.0
0.0	5.62
45.0	5.38
90.0	5.38
135.0	5.44
180.0	5.38
225.0	5.62
270.0	5.50
315.0	5.56
360.0	5.62