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Nata

LumCAT: 1-1008-M
Luminaire: BJB 47.360.1020
Report No: NATA0100
Test No: GC2019102403
LampCAT: BRIDGELUX V10B LES10
Lamp flux(lm): 1478.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 33.8800
Current(A): 0.2970
Power (W): 10.0600
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 1056.94
Efficiency(%): 71.51%
Lumens(lm)/Power(W): 105.06
Central intensity(cd): 8916.047
Maximum intensity(cd): 8916.047
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=15.9
[C90/270]Total=15.9
Field angle(10%Imax): [C0/180]Total=36.9
[C90/270]Total=36.9
Maximum s/h(1/2): C0_180=0.27 C90_270=0.27
Maximum s/h(1/4): C0_180=0.31 C90_270=0.31
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 71.51%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.575%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8916.047	0.000	0	.000%	.000%
1.0	8793.492	8.474	8.474	.573%	.802%
2.0	8393.273	24.668	33.142	1.669%	3.136%
3.0	7770.094	38.657	71.799	2.616%	6.793%
4.0	7159.078	49.973	121.772	3.381%	11.521%
5.0	6489.352	58.715	180.487	3.973%	17.076%
6.0	5807.461	64.623	245.11	4.372%	23.190%
7.0	5084.016	67.603	312.713	4.574%	29.587%
8.0	4439.461	68.158	380.871	4.611%	36.035%
9.0	3856.219	67.232	448.103	4.549%	42.396%
10.0	3340.828	65.131	513.233	4.407%	48.558%
11.0	2912.484	62.483	575.717	4.228%	54.470%
12.0	2529.141	59.485	635.202	4.025%	60.098%
13.0	2179.617	55.881	691.083	3.781%	65.385%
14.0	1871.297	51.851	742.934	3.508%	70.291%
15.0	1619.297	47.920	790.854	3.242%	74.825%
16.0	1340.121	43.364	834.218	2.934%	78.927%
17.0	1156.781	38.883	873.102	2.631%	82.606%
18.0	969.645	35.060	908.162	2.372%	85.923%
19.0	795.375	30.708	938.869	2.078%	88.829%
20.0	624.656	25.991	964.86	1.758%	91.288%
21.0	463.177	20.889	985.749	1.413%	93.264%
22.0	325.427	15.847	1001.596	1.072%	94.763%
23.0	221.386	11.474	1013.07	.776%	95.849%
24.0	114.891	7.352	1020.422	.497%	96.545%
25.0	52.298	3.802	1024.223	.257%	96.904%
26.0	21.825	1.750	1025.973	.118%	97.070%
27.0	13.732	0.870	1026.843	.059%	97.152%
28.0	11.763	0.645	1027.488	.044%	97.213%
29.0	10.540	0.584	1028.072	.039%	97.268%
30.0	9.570	0.543	1028.615	.037%	97.320%
31.0	8.803	0.511	1029.126	.035%	97.368%
32.0	8.135	0.485	1029.611	.033%	97.414%
33.0	7.643	0.465	1030.076	.031%	97.458%
34.0	7.242	0.450	1030.527	.030%	97.501%
35.0	6.905	0.439	1030.966	.030%	97.542%
36.0	6.616	0.431	1031.397	.029%	97.583%
37.0	6.398	0.424	1031.821	.029%	97.623%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	6.202	0.421	1032.242	.028%	97.663%
39.0	6.033	0.418	1032.659	.028%	97.702%
40.0	5.906	0.416	1033.076	.028%	97.742%
41.0	5.787	0.416	1033.492	.028%	97.781%
42.0	5.688	0.417	1033.909	.028%	97.821%
43.0	5.611	0.419	1034.327	.028%	97.860%
44.0	5.534	0.421	1034.748	.028%	97.900%
45.0	5.470	0.423	1035.171	.029%	97.940%
46.0	5.407	0.425	1035.596	.029%	97.980%
47.0	5.351	0.428	1036.024	.029%	98.021%
48.0	5.302	0.431	1036.455	.029%	98.061%
49.0	5.252	0.433	1036.888	.029%	98.102%
50.0	5.217	0.437	1037.325	.030%	98.144%
51.0	5.196	0.441	1037.765	.030%	98.185%
52.0	5.161	0.444	1038.21	.030%	98.228%
53.0	5.126	0.447	1038.657	.030%	98.270%
54.0	5.098	0.451	1039.108	.030%	98.312%
55.0	5.084	0.454	1039.562	.031%	98.355%
56.0	5.048	0.458	1040.02	.031%	98.399%
57.0	5.034	0.461	1040.481	.031%	98.442%
58.0	4.999	0.464	1040.945	.031%	98.486%
59.0	4.985	0.467	1041.412	.032%	98.530%
60.0	4.971	0.470	1041.882	.032%	98.575%
61.0	4.943	0.473	1042.355	.032%	98.620%
62.0	4.943	0.476	1042.832	.032%	98.665%
63.0	4.922	0.480	1043.312	.032%	98.710%
64.0	4.901	0.482	1043.794	.033%	98.756%
65.0	4.887	0.484	1044.278	.033%	98.802%
66.0	4.894	0.488	1044.766	.033%	98.848%
67.0	4.873	0.491	1045.257	.033%	98.894%
68.0	4.845	0.492	1045.749	.033%	98.941%
69.0	4.852	0.495	1046.244	.033%	98.988%
70.0	4.838	0.498	1046.741	.034%	99.035%
71.0	4.830	0.500	1047.241	.034%	99.082%
72.0	4.823	0.502	1047.743	.034%	99.129%
73.0	4.823	0.504	1048.248	.034%	99.177%
74.0	4.809	0.506	1048.754	.034%	99.225%
75.0	4.795	0.507	1049.261	.034%	99.273%

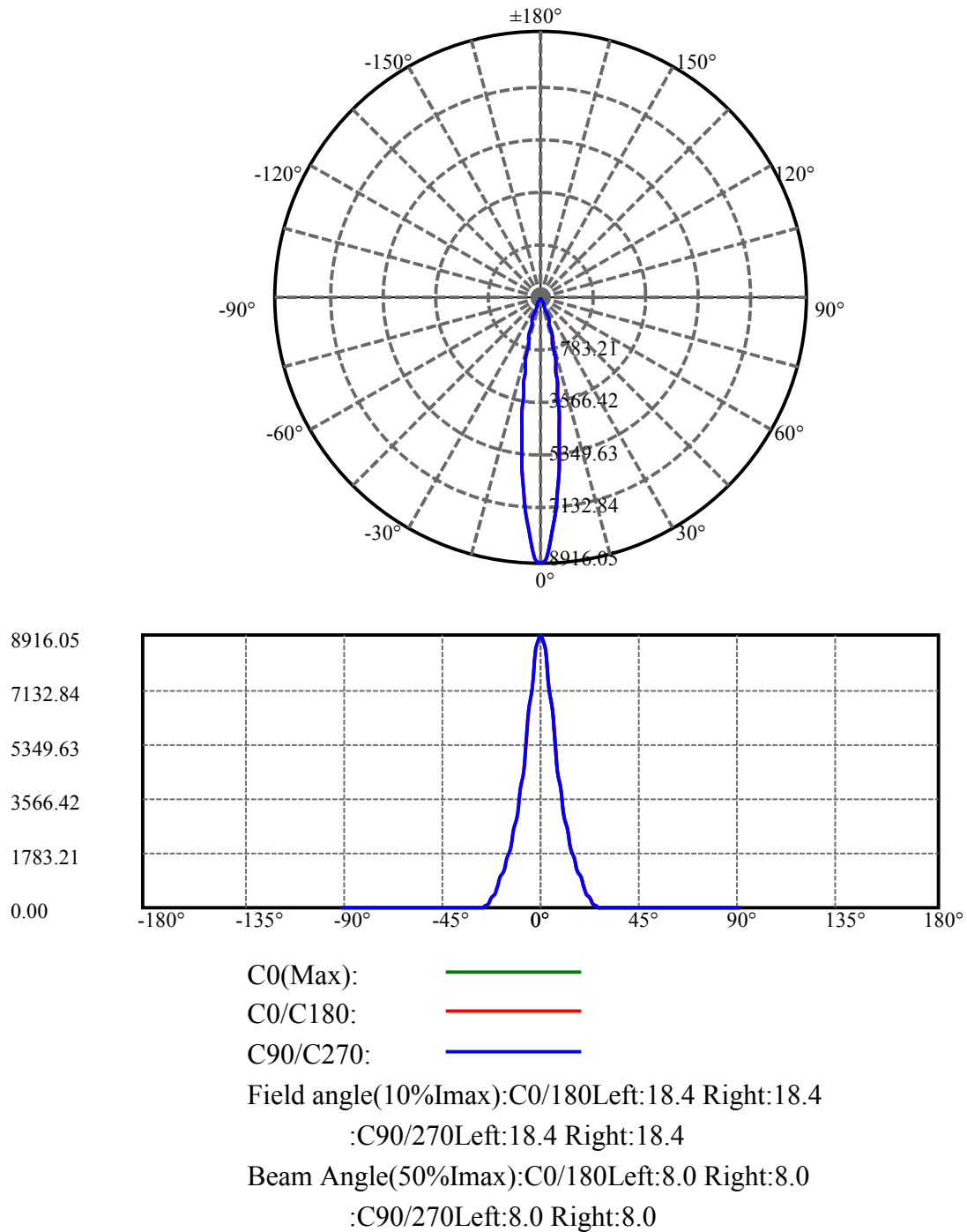
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.788	0.509	1049.77	.034%	99.321%
77.0	4.788	0.511	1050.281	.035%	99.370%
78.0	4.774	0.512	1050.793	.035%	99.418%
79.0	4.767	0.513	1051.305	.035%	99.467%
80.0	4.746	0.513	1051.818	.035%	99.515%
81.0	4.739	0.513	1052.331	.035%	99.564%
82.0	4.711	0.512	1052.844	.035%	99.612%
83.0	4.711	0.512	1053.356	.035%	99.661%
84.0	4.697	0.513	1053.868	.035%	99.709%
85.0	4.690	0.512	1054.381	.035%	99.757%
86.0	4.690	0.513	1054.893	.035%	99.806%
87.0	4.683	0.513	1055.406	.035%	99.855%
88.0	4.676	0.513	1055.919	.035%	99.903%
89.0	4.669	0.512	1056.431	.035%	99.951%
90.0	4.683	0.513	1056.944	.035%	100.000%

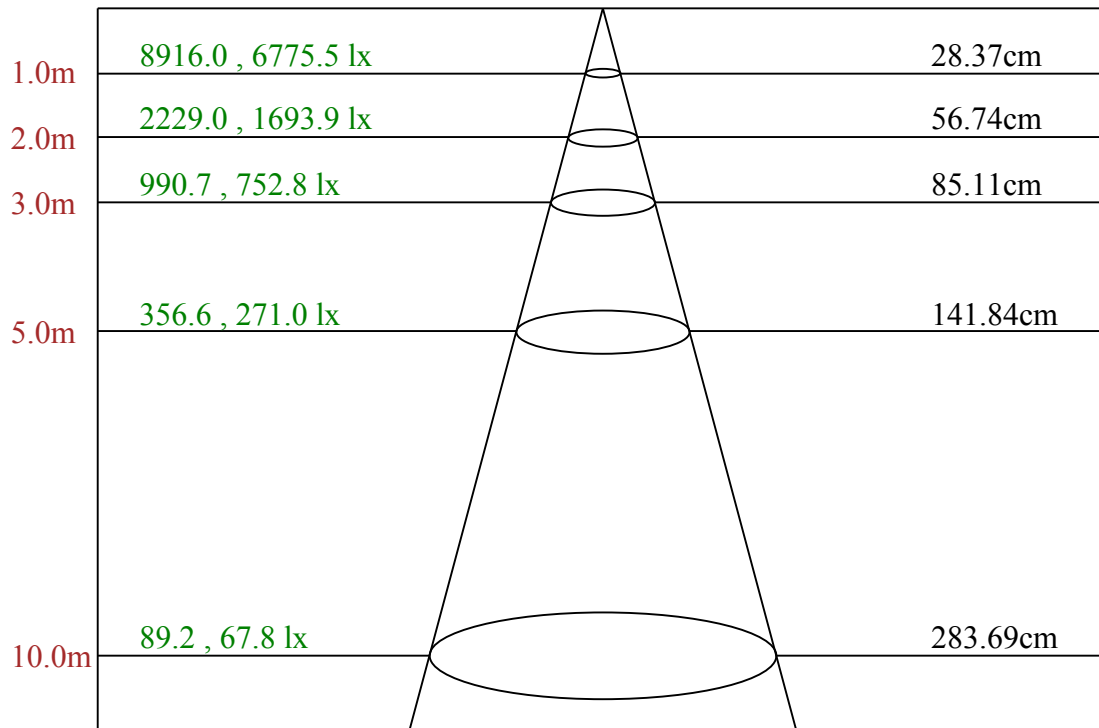
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1028.61	69.60%	97.32%
0-40	1033.08	69.90%	97.74%
0-60	1041.88	70.49%	98.57%
0-90	1056.43	71.48%	99.95%
0-120	1056.43	71.48%	99.95%
0-180	1056.94	71.51%	100.00%
60-90	15.02	1.02%	1.42%
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%
0-16.29	845.56	57.21%	80.00%

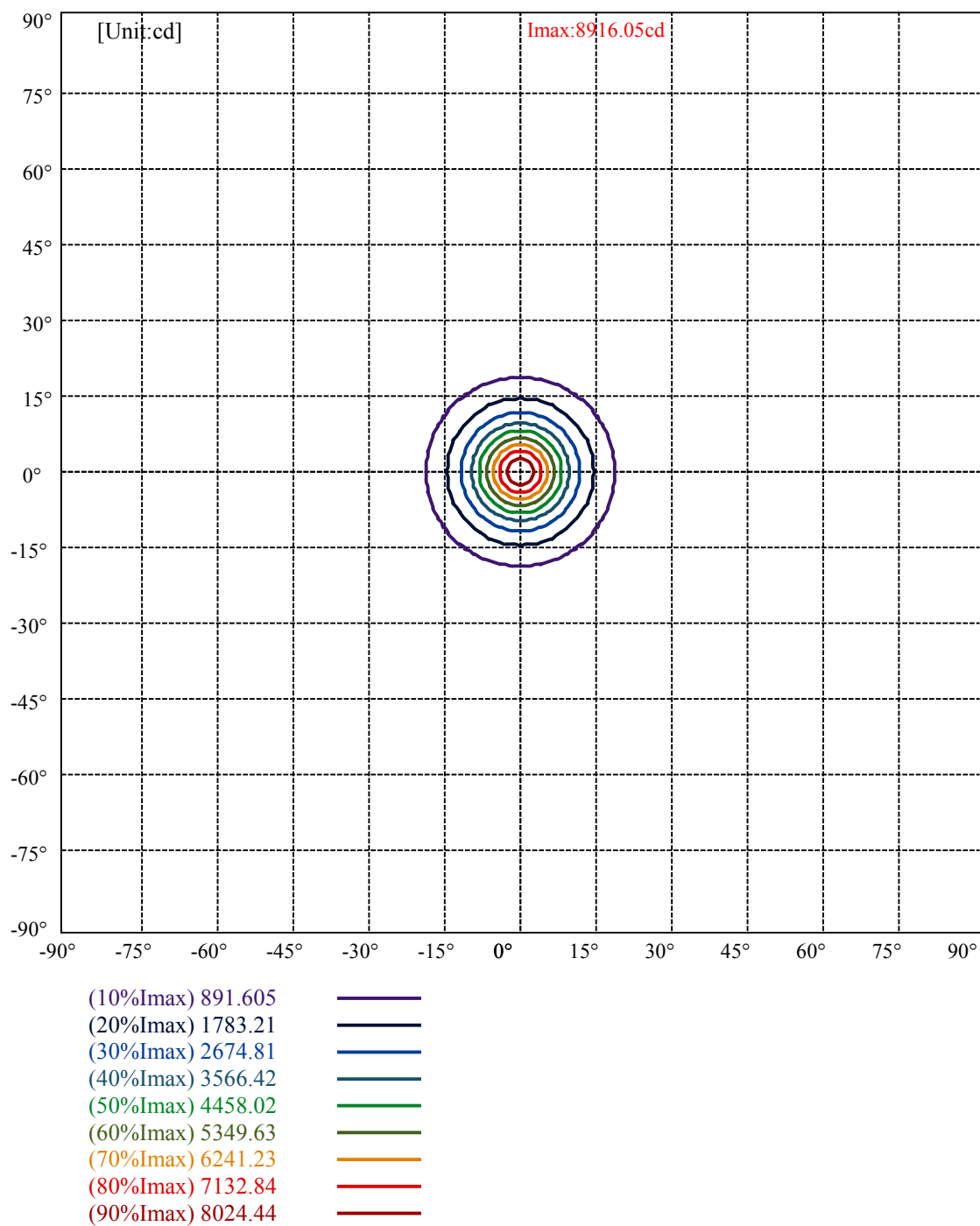
ZONAL LUMEN SUMMARY

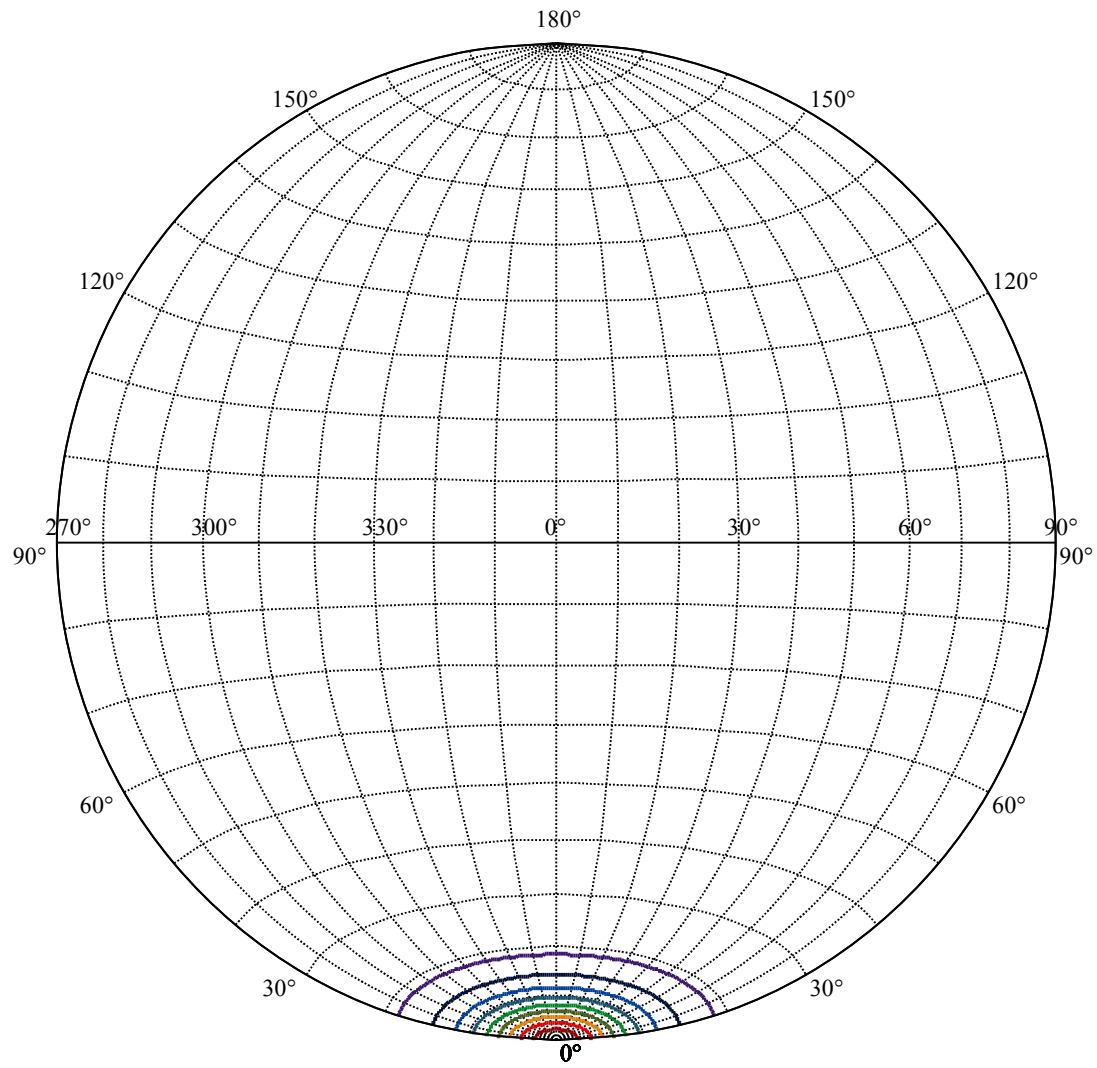
0-10	513.23
10-20	451.63
20-30	63.75
30-40	4.46
40-50	4.25
50-60	4.56
60-70	4.86
70-80	5.08
80-90	4.61
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 16.15



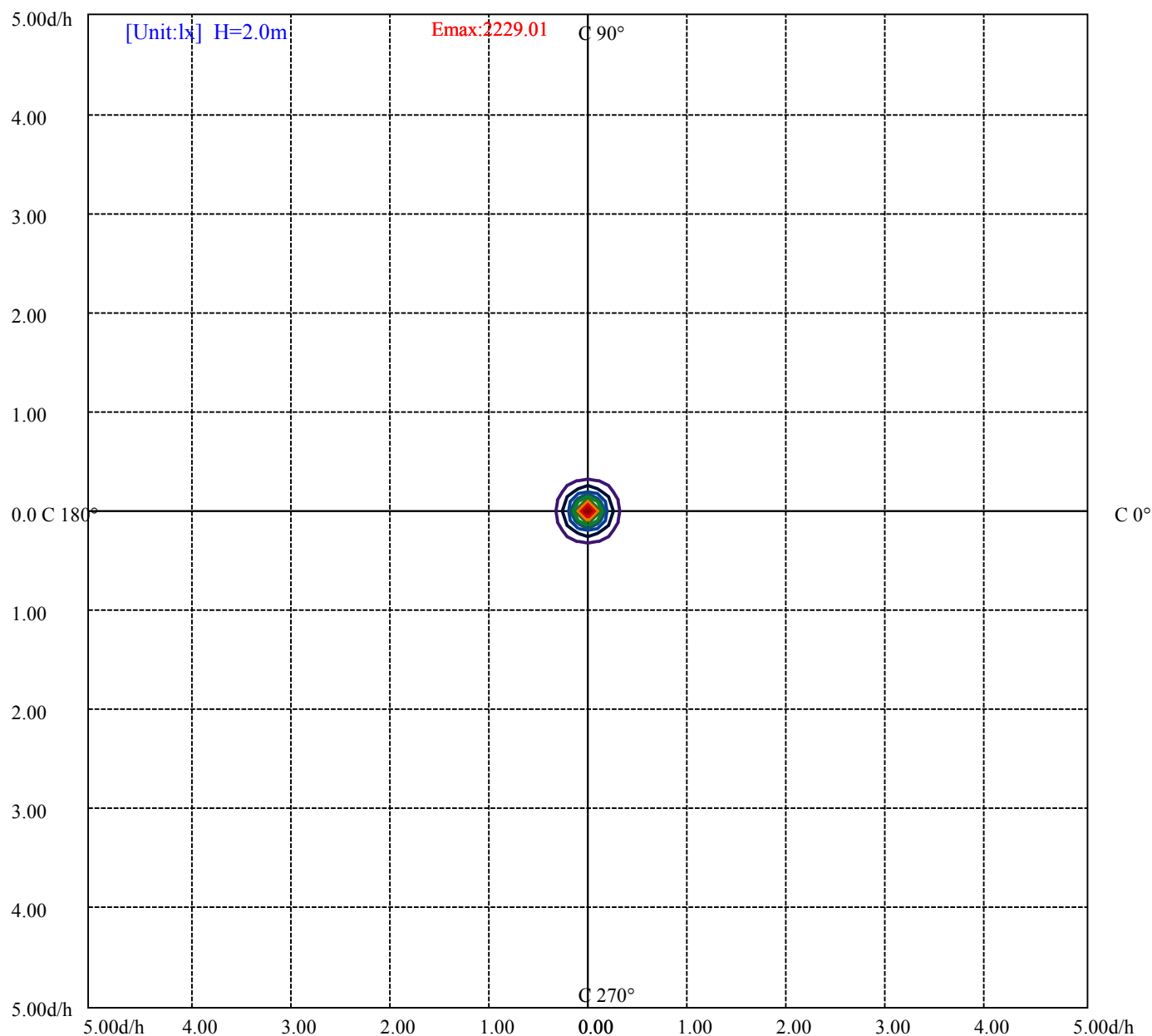











House

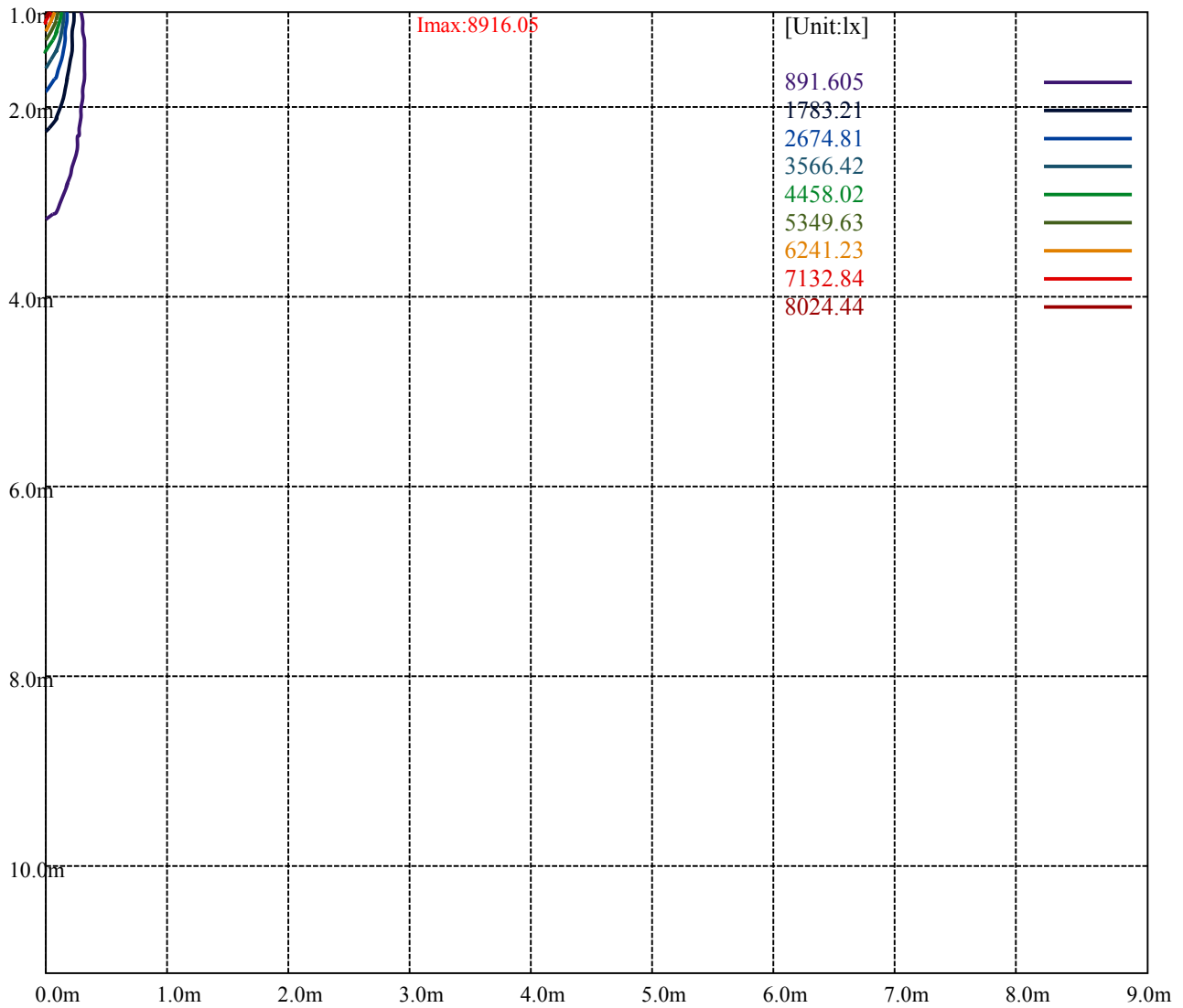
[Unit:cd]

Road

Imax:8916.05	
(10%Imax) 891.605	
(20%Imax) 1783.21	
(30%Imax) 2674.81	
(40%Imax) 3566.42	
(50%Imax) 4458.02	
(60%Imax) 5349.63	
(70%Imax) 6241.23	
(80%Imax) 7132.84	
(90%Imax) 8024.44	



(10%Emax)	222.9008	
(20%Emax)	445.8025	
(30%Emax)	668.7025	
(40%Emax)	891.6025	
(50%Emax)	1114.502	
(60%Emax)	1337.405	
(70%Emax)	1560.305	
(80%Emax)	1783.205	
(90%Emax)	2006.108	



Luminance Table

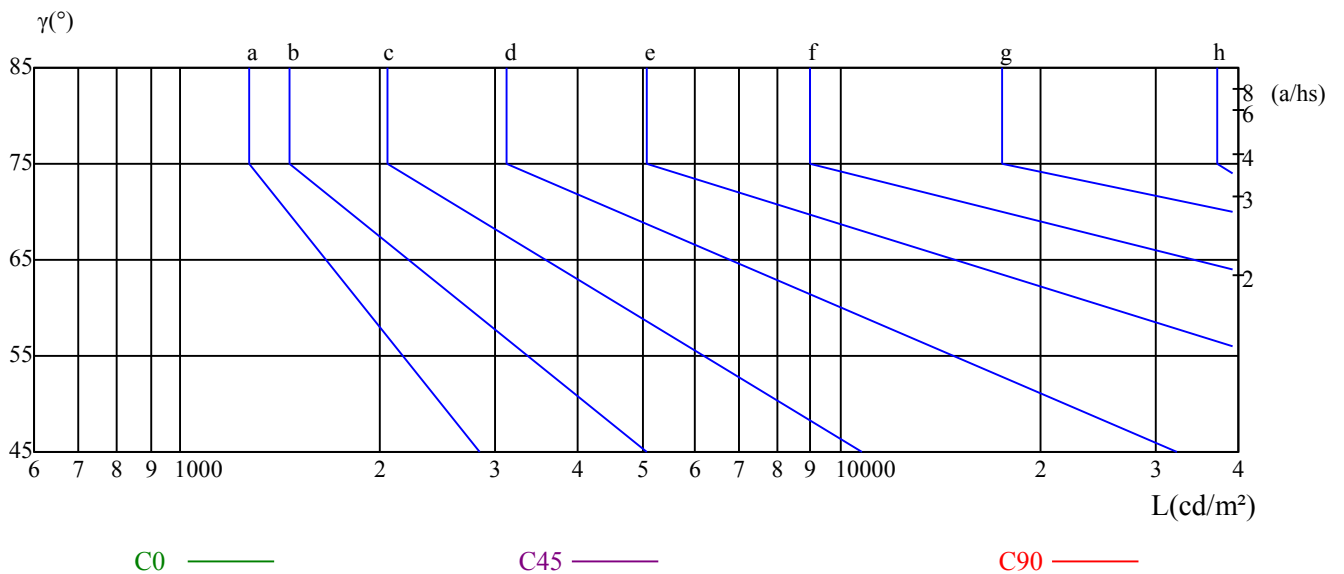
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

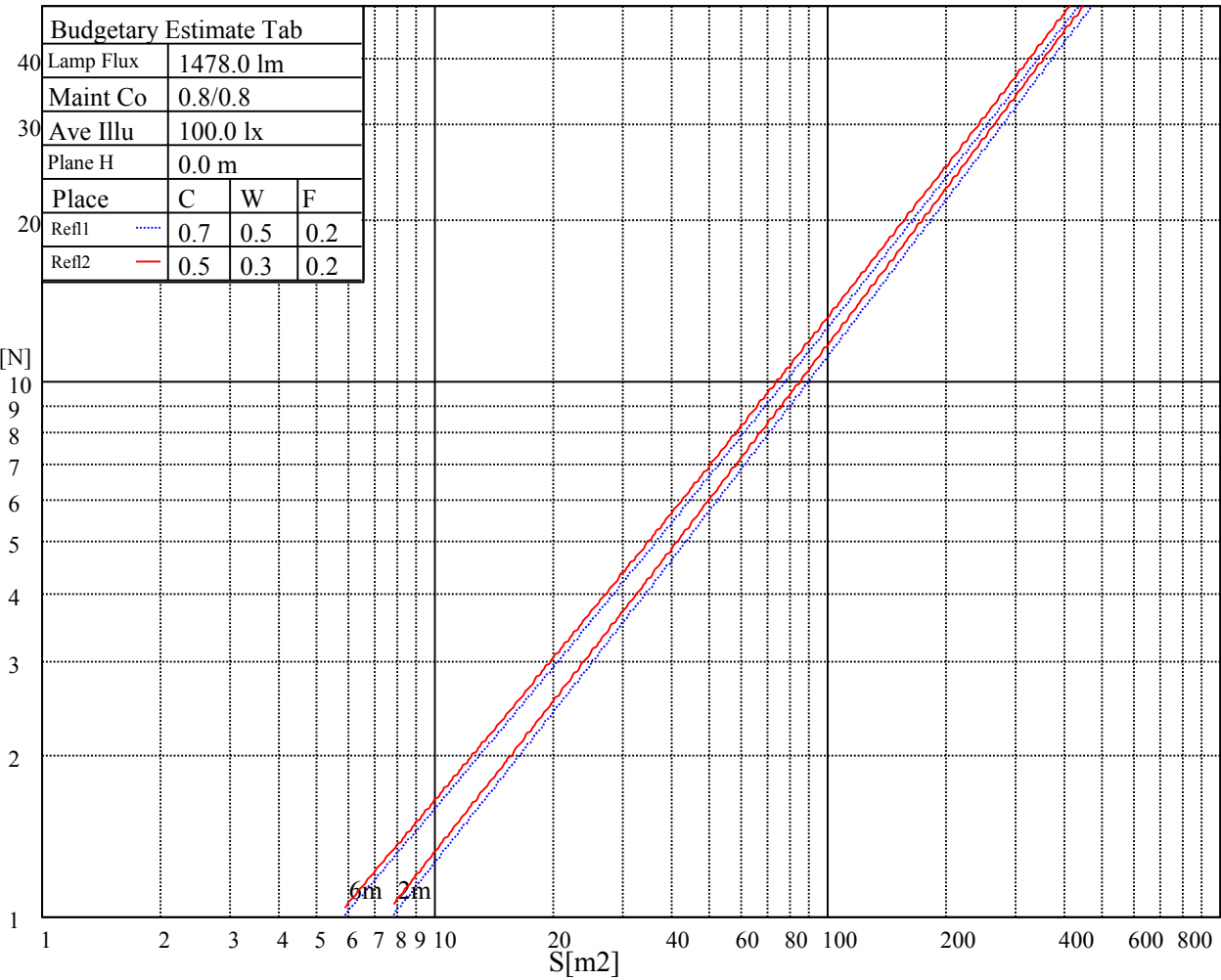
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

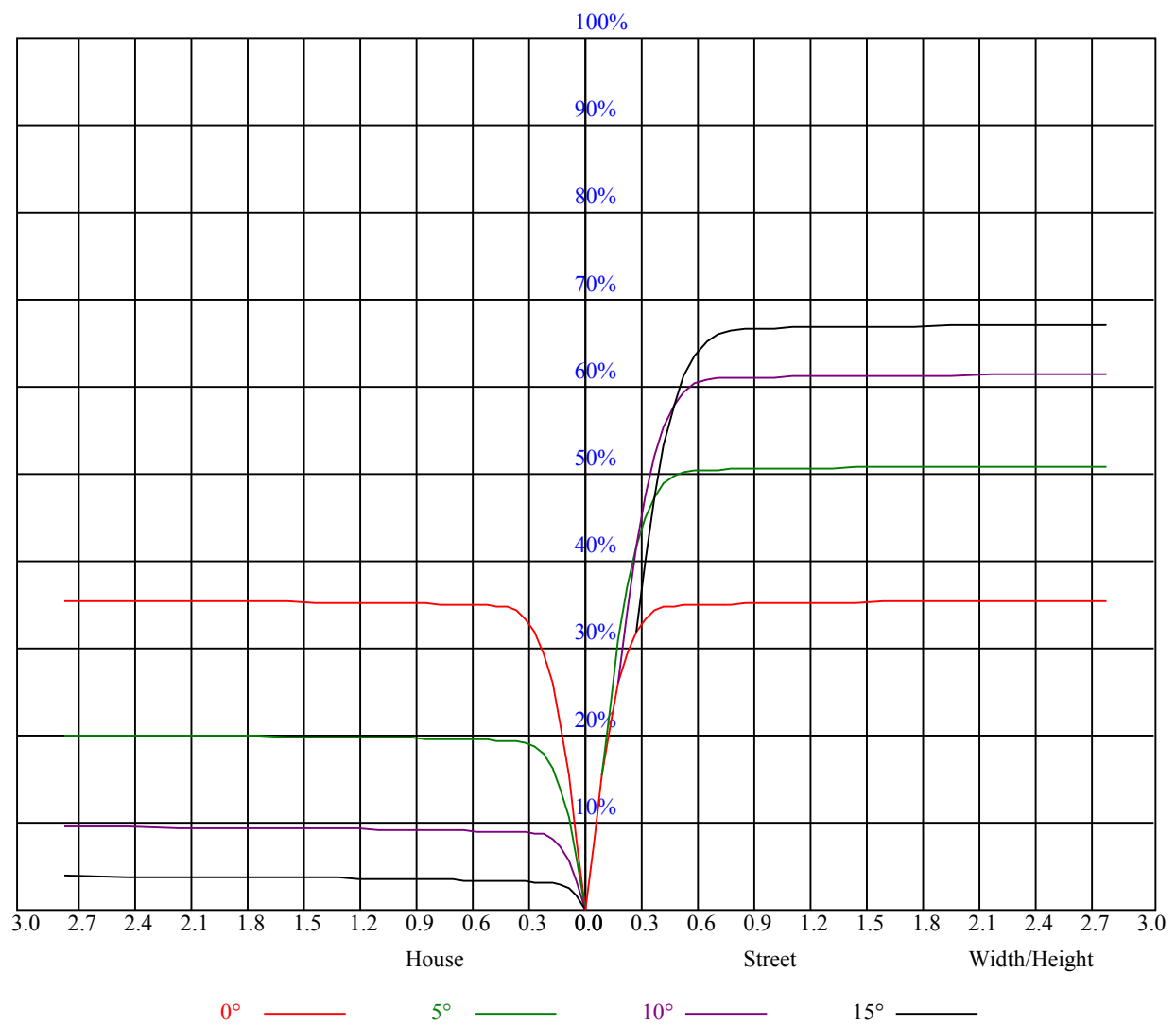
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.85	0.85	0.85	0.83	0.83	0.83	0.79	0.79	0.79	0.76	0.76	0.76	0.73	0.73	0.73	0.72
1	0.81	0.80	0.78	0.79	0.78	0.77	0.77	0.76	0.75	0.74	0.73	0.73	0.72	0.71	0.71	0.69
2	0.78	0.76	0.74	0.76	0.75	0.73	0.74	0.73	0.71	0.72	0.71	0.70	0.70	0.69	0.69	0.68
3	0.75	0.72	0.70	0.74	0.72	0.70	0.72	0.70	0.69	0.70	0.69	0.68	0.69	0.68	0.67	0.66
4	0.72	0.70	0.68	0.72	0.69	0.67	0.70	0.68	0.67	0.69	0.67	0.66	0.68	0.66	0.65	0.64
5	0.70	0.68	0.66	0.70	0.67	0.65	0.69	0.66	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.63
6	0.68	0.66	0.64	0.68	0.65	0.64	0.67	0.65	0.63	0.66	0.64	0.63	0.65	0.64	0.63	0.62
7	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.62	0.65	0.63	0.62	0.64	0.63	0.61	0.61
8	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.61	0.64	0.62	0.60	0.63	0.61	0.60	0.60
9	0.64	0.61	0.60	0.64	0.61	0.60	0.63	0.61	0.59	0.63	0.61	0.59	0.62	0.60	0.59	0.58
10	0.63	0.60	0.58	0.62	0.60	0.58	0.62	0.60	0.58	0.61	0.60	0.58	0.61	0.59	0.58	0.57



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	8854.88	8958.94	8715.94	8253.56	7588.13	6897.94	6337.69	5519.25	4866.19
45.0	8937.00	8903.25	8510.06	7968.94	7443.56	6598.69	5962.50	5388.19	4598.44
90.0	8897.06	8602.88	8101.13	7360.88	6745.50	6108.75	5382.00	4659.75	4079.25
135.0	8975.25	8756.44	8247.94	7652.81	6966.00	6347.25	5631.75	4899.38	4299.19
180.0	8854.88	8560.13	8043.19	7229.81	6690.38	6061.50	5325.19	4611.38	4034.81
225.0	8937.00	8723.25	8282.25	7578.00	6978.38	6346.69	5623.88	4894.31	4223.81
270.0	8897.06	8941.50	8662.50	8179.88	7521.19	6834.94	6202.69	5460.19	4813.88
315.0	8975.25	8901.56	8583.19	7936.88	7339.50	6719.06	5994.00	5239.69	4600.13
360.0	8854.88	8958.94	8715.94	8253.56	7588.13	6897.94	6337.69	5519.25	4866.19
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4271.63	3625.31	3186.00	2791.69	2357.44	2055.38	1783.69	1487.81	1281.94
45.0	3968.44	3546.00	3013.31	2640.94	2310.75	1950.19	1701.00	1481.06	1230.75
90.0	3528.00	3053.81	2684.81	2317.50	2030.63	1743.19	1495.13	1121.96	1098.45
135.0	3718.69	3222.00	2829.94	2477.81	2091.38	1823.06	1586.25	1328.06	1135.69
180.0	3544.31	3012.75	2642.06	2272.50	1982.25	1690.88	1465.88	1112.01	1041.81
225.0	3709.13	3209.06	2808.56	2413.13	2103.75	1770.19	1537.88	1323.56	1102.16
270.0	4154.63	3645.56	3150.00	2754.56	2323.69	2022.75	1753.88	1459.69	1254.38
315.0	3954.94	3412.13	2985.19	2565.00	2237.06	1914.75	1630.69	1406.81	1109.08
360.0	4271.63	3625.31	3186.00	2791.69	2357.44	2055.38	1783.69	1487.81	1281.94
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1092.38	898.31	716.06	565.31	408.94	297.00	163.35	81.11	35.94
45.0	1036.69	867.38	671.63	521.44	378.00	295.31	135.39	69.13	23.96
90.0	883.58	719.78	564.81	386.78	265.78	166.61	75.43	30.83	14.51
135.0	951.75	765.56	596.81	445.50	293.06	176.23	95.68	41.57	16.14
180.0	848.64	666.56	515.87	362.59	231.41	140.57	73.29	25.14	14.29
225.0	906.58	743.79	588.83	411.41	285.08	179.94	91.01	36.06	17.49
270.0	1064.25	891.56	690.75	541.69	402.75	291.94	151.59	80.16	29.53
315.0	973.29	810.06	652.50	470.70	338.40	223.48	133.37	54.39	22.73
360.0	1092.38	898.31	716.06	565.31	408.94	297.00	163.35	81.11	35.94
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	16.54	13.33	11.87	10.69	9.68	8.89	8.27	7.71	7.31
45.0	13.89	12.09	10.74	9.79	9.06	8.38	7.93	7.48	7.09
90.0	11.76	10.58	9.68	8.78	8.27	7.71	7.26	6.98	6.75
135.0	12.26	10.91	9.84	9.00	8.33	7.76	7.37	7.03	6.69
180.0	12.04	10.52	9.56	8.83	8.16	7.59	7.20	6.86	6.64
225.0	13.39	11.59	10.46	9.45	8.72	8.04	7.54	7.20	6.81
270.0	15.47	12.88	11.25	10.18	9.23	8.44	7.93	7.43	7.03
315.0	14.51	12.21	10.91	9.84	9.00	8.27	7.65	7.26	6.92
360.0	16.54	13.33	11.87	10.69	9.68	8.89	8.27	7.71	7.31
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	6.98	6.69	6.47	6.24	6.13	5.96	5.85	5.74	5.68
45.0	6.86	6.64	6.41	6.24	6.13	6.02	5.91	5.79	5.74
90.0	6.47	6.24	6.13	5.96	5.85	5.79	5.68	5.63	5.51
135.0	6.47	6.30	6.08	5.96	5.85	5.74	5.68	5.63	5.51
180.0	6.36	6.19	6.02	5.91	5.74	5.68	5.57	5.51	5.46
225.0	6.53	6.30	6.13	5.96	5.79	5.68	5.57	5.51	5.46
270.0	6.69	6.47	6.24	6.02	5.91	5.74	5.63	5.57	5.46
315.0	6.58	6.36	6.13	5.96	5.85	5.68	5.63	5.51	5.46
360.0	6.98	6.69	6.47	6.24	6.13	5.96	5.85	5.74	5.68

Intensity data(cd)

C/ γ (°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	5.63	5.51	5.46	5.46	5.34	5.29	5.29	5.23	5.23
45.0	5.68	5.57	5.51	5.46	5.40	5.40	5.34	5.34	5.29
90.0	5.46	5.46	5.34	5.34	5.29	5.29	5.23	5.23	5.18
135.0	5.46	5.46	5.34	5.34	5.29	5.23	5.23	5.18	5.12
180.0	5.40	5.29	5.29	5.23	5.18	5.12	5.12	5.12	5.06
225.0	5.34	5.29	5.29	5.18	5.18	5.12	5.12	5.06	5.01
270.0	5.40	5.34	5.29	5.18	5.18	5.12	5.12	5.06	5.06
315.0	5.40	5.34	5.29	5.23	5.18	5.18	5.12	5.06	5.06
360.0	5.63	5.51	5.46	5.46	5.34	5.29	5.29	5.23	5.23
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.18	5.18	5.12	5.12	5.06	5.06	5.01	5.01	5.01
45.0	5.23	5.23	5.18	5.18	5.18	5.12	5.12	5.06	5.06
90.0	5.18	5.18	5.12	5.12	5.06	5.06	5.06	5.06	5.06
135.0	5.12	5.12	5.12	5.06	5.01	5.01	5.01	4.95	4.95
180.0	5.06	5.01	5.01	4.95	4.95	4.89	4.89	4.89	4.89
225.0	5.01	4.95	4.95	4.95	4.89	4.89	4.89	4.84	4.84
270.0	5.01	5.01	4.95	4.95	4.89	4.89	4.89	4.89	4.89
315.0	5.01	5.01	4.95	4.95	4.95	4.89	4.89	4.84	4.84
360.0	5.18	5.18	5.12	5.12	5.06	5.06	5.01	5.01	5.01
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.01	4.95	4.95	4.95	4.89	4.89	4.89	4.84	4.84
45.0	5.06	5.01	5.01	5.01	5.01	4.95	4.95	4.95	4.95
90.0	5.01	5.01	5.01	5.01	5.01	4.95	5.01	4.95	4.95
135.0	4.95	4.89	4.89	4.89	4.89	4.84	4.84	4.84	4.84
180.0	4.84	4.84	4.84	4.84	4.78	4.78	4.78	4.78	4.78
225.0	4.84	4.84	4.78	4.78	4.78	4.78	4.78	4.78	4.73
270.0	4.84	4.84	4.84	4.84	4.84	4.78	4.78	4.78	4.78
315.0	4.84	4.84	4.78	4.84	4.78	4.78	4.78	4.78	4.78
360.0	5.01	4.95	4.95	4.95	4.89	4.89	4.89	4.84	4.84
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.84	4.84	4.78	4.78	4.78	4.78	4.78	4.78	4.78
45.0	4.95	4.95	4.95	4.89	4.89	4.89	4.84	4.84	4.78
90.0	4.95	4.95	4.95	4.95	4.89	4.89	4.89	4.84	4.78
135.0	4.84	4.84	4.78	4.78	4.78	4.78	4.78	4.78	4.73
180.0	4.78	4.73	4.78	4.73	4.73	4.73	4.73	4.73	4.73
225.0	4.73	4.78	4.73	4.73	4.73	4.73	4.73	4.73	4.73
270.0	4.78	4.78	4.78	4.78	4.78	4.78	4.73	4.73	4.73
315.0	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73
360.0	4.84	4.84	4.78	4.78	4.78	4.78	4.78	4.78	4.78
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.78	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73
45.0	4.78	4.73	4.73	4.67	4.73	4.73	4.73	4.67	4.67
90.0	4.73	4.73	4.73	4.73	4.67	4.73	4.67	4.67	4.67
135.0	4.73	4.78	4.73	4.73	4.67	4.67	4.67	4.67	4.67
180.0	4.73	4.67	4.73	4.73	4.67	4.67	4.67	4.67	4.67
225.0	4.73	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.61
270.0	4.73	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67
315.0	4.73	4.73	4.73	4.67	4.73	4.67	4.67	4.67	4.67
360.0	4.78	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73

Intensity data(cd)

Appendix Page: 18 Total:18

C/ $\gamma(^{\circ})$	90.0
0.0	4.73
45.0	4.67
90.0	4.67
135.0	4.67
180.0	4.73
225.0	4.67
270.0	4.67
315.0	4.67
360.0	4.73