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NT

Client: NT

LumCAT: 61-0246-1

Luminaire: 92.70.458.00

Report No: 20250519-B008

Ballast type: AC

Test No: 20250519-C008

LampCAT: CITIZEN CLU7A2

Lamp flux(lm): 637.6

Number of Lamps: 1

Length(mm): 28

Phm Type: C

Voltage(V): 36.340

Current(A): 0.176

Power (W): 6.395

PF: 0.000

Width(mm): 28

Height(mm): 14

Photometric Results

Lumens(lm): 585.99, Efficiency(%): 91.91% , Luminous Efficacy(lm/W): 91.63

Central intensity(cd): 1271.926, Maximum intensity(cd): 1271.926

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=41.8

[C90/270]Total=41.8

Field angle(10%Imax): [C0/180]Total=58.2

[C90/270]Total=58.2

Maximum s/h(1/2): C0_180=0.69 C90_270=0.69

Maximum s/h(1/4): C0_180=0.63 C90_270=0.63

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.91%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.513%

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2025/5/19
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.30

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1271.926	0.000	0	0.00%	0.00%
1.0	1269.861	1.216	1.216	0.19%	0.21%
2.0	1262.200	3.634	4.85	0.57%	0.83%
3.0	1251.809	6.013	10.863	0.94%	1.85%
4.0	1238.020	8.334	19.197	1.31%	3.28%
5.0	1220.168	10.575	29.772	1.66%	5.08%
6.0	1197.946	12.708	42.48	1.99%	7.25%
7.0	1178.482	14.750	57.231	2.31%	9.77%
8.0	1155.181	16.702	73.932	2.62%	12.62%
9.0	1131.673	18.534	92.466	2.91%	15.78%
10.0	1101.957	20.214	112.679	3.17%	19.23%
11.0	1077.510	21.777	134.457	3.42%	22.95%
12.0	1048.840	23.244	157.701	3.65%	26.91%
13.0	1013.769	24.478	182.179	3.84%	31.09%
14.0	979.484	25.513	207.692	4.00%	35.44%
15.0	948.309	26.466	234.158	4.15%	39.96%
16.0	905.324	27.161	261.319	4.26%	44.59%
17.0	858.096	27.461	288.78	4.31%	49.28%
18.0	815.444	27.593	316.373	4.33%	53.99%
19.0	753.680	27.300	343.673	4.28%	58.65%
20.0	697.746	26.565	370.238	4.17%	63.18%
21.0	630.827	25.511	395.749	4.00%	67.54%
22.0	565.520	24.041	419.79	3.77%	71.64%
23.0	493.938	22.230	442.02	3.49%	75.43%
24.0	421.511	20.015	462.035	3.14%	78.85%
25.0	349.909	17.540	479.576	2.75%	81.84%
26.0	286.747	15.028	494.604	2.36%	84.41%
27.0	243.555	12.974	507.578	2.03%	86.62%
28.0	178.089	10.675	518.253	1.67%	88.44%
29.0	130.880	8.083	526.337	1.27%	89.82%
30.0	86.077	5.858	532.195	0.92%	90.82%
31.0	61.677	4.112	536.306	0.64%	91.52%
32.0	46.416	3.097	539.403	0.49%	92.05%
33.0	34.658	2.388	541.791	0.37%	92.46%
34.0	28.870	1.923	543.714	0.30%	92.79%
35.0	25.659	1.693	545.407	0.27%	93.07%
36.0	23.701	1.572	546.979	0.25%	93.34%
37.0	22.069	1.493	548.472	0.23%	93.60%

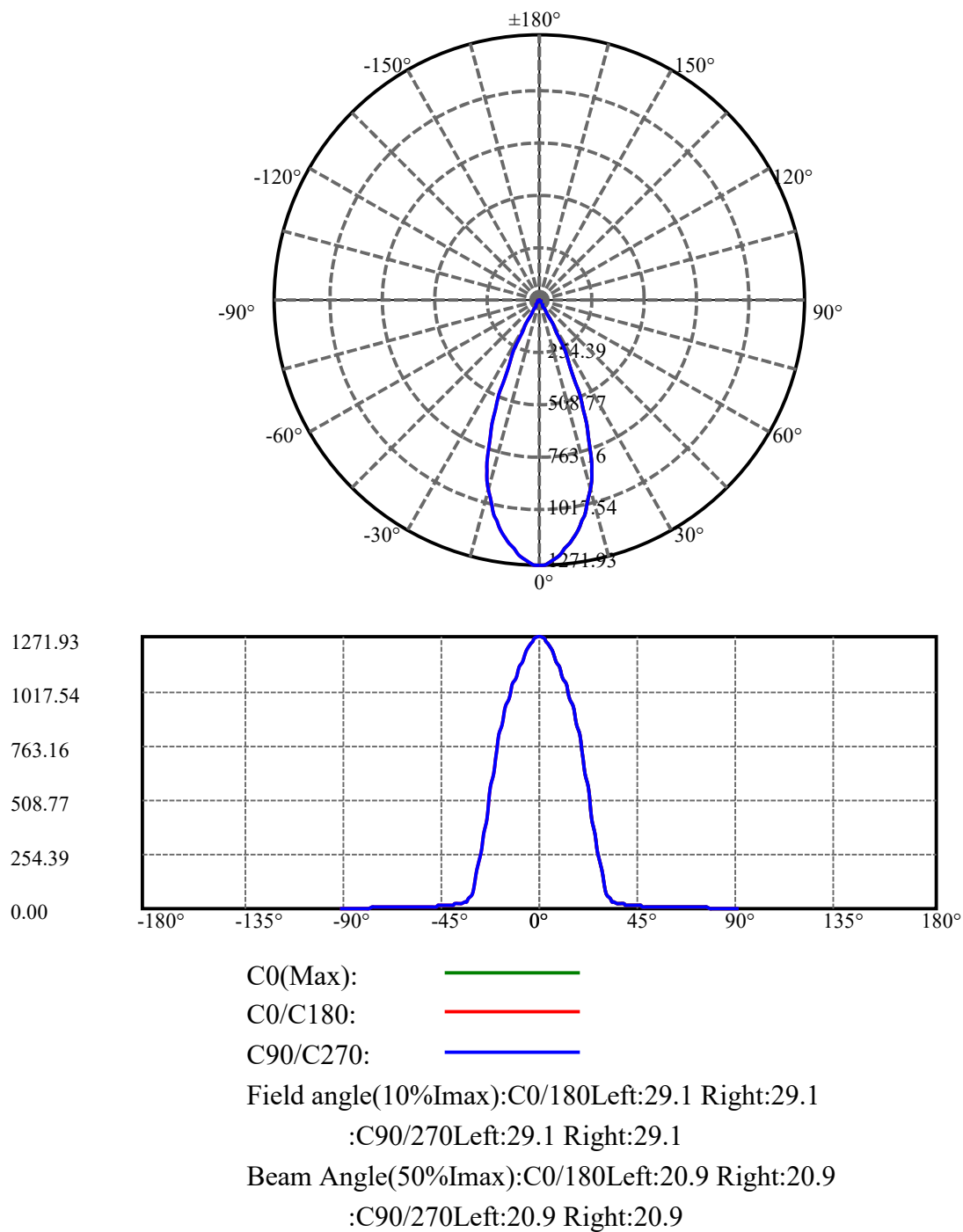
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	20.517	1.421	549.893	0.22%	93.84%
39.0	19.271	1.358	551.251	0.21%	94.07%
40.0	17.739	1.291	552.542	0.20%	94.29%
41.0	16.500	1.219	553.761	0.19%	94.50%
42.0	15.301	1.155	554.917	0.18%	94.70%
43.0	14.208	1.093	556.01	0.17%	94.88%
44.0	13.329	1.039	557.049	0.16%	95.06%
45.0	12.616	0.997	558.046	0.16%	95.23%
46.0	12.070	0.965	559.012	0.15%	95.40%
47.0	11.644	0.943	559.955	0.15%	95.56%
48.0	11.337	0.929	560.884	0.15%	95.72%
49.0	11.058	0.920	561.804	0.14%	95.87%
50.0	10.805	0.912	562.715	0.14%	96.03%
51.0	10.598	0.906	563.621	0.14%	96.18%
52.0	10.378	0.900	564.521	0.14%	96.34%
53.0	10.178	0.894	565.415	0.14%	96.49%
54.0	9.965	0.888	566.303	0.14%	96.64%
55.0	9.739	0.880	567.182	0.14%	96.79%
56.0	9.512	0.870	568.052	0.14%	96.94%
57.0	9.326	0.861	568.914	0.14%	97.09%
58.0	9.046	0.850	569.763	0.13%	97.23%
59.0	8.786	0.834	570.597	0.13%	97.37%
60.0	8.586	0.821	571.418	0.13%	97.51%
61.0	8.313	0.806	572.224	0.13%	97.65%
62.0	8.053	0.789	573.013	0.12%	97.79%
63.0	7.774	0.770	573.782	0.12%	97.92%
64.0	7.434	0.746	574.529	0.12%	98.04%
65.0	7.054	0.717	575.246	0.11%	98.17%
66.0	6.728	0.688	575.933	0.11%	98.28%
67.0	6.361	0.658	576.591	0.10%	98.40%
68.0	5.968	0.625	577.216	0.10%	98.50%
69.0	5.582	0.589	577.805	0.09%	98.60%
70.0	5.216	0.555	578.36	0.09%	98.70%
71.0	4.869	0.521	578.881	0.08%	98.79%
72.0	4.583	0.491	579.373	0.08%	98.87%
73.0	4.403	0.470	579.843	0.07%	98.95%
74.0	4.237	0.454	580.297	0.07%	99.03%
75.0	4.103	0.441	580.737	0.07%	99.10%

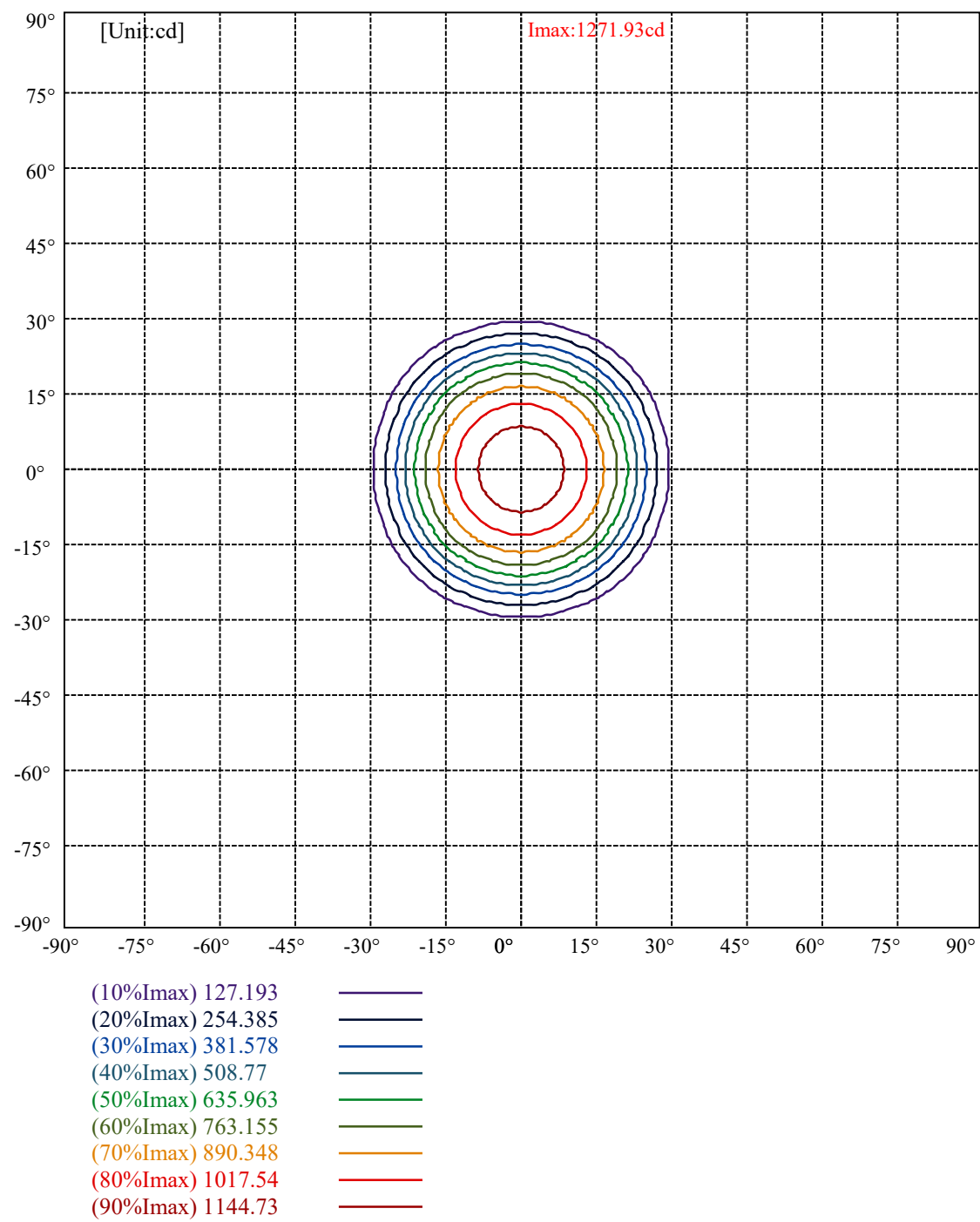
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.970	0.429	581.166	0.07%	99.18%
77.0	3.810	0.415	581.581	0.07%	99.25%
78.0	3.677	0.401	581.982	0.06%	99.32%
79.0	3.537	0.388	582.369	0.06%	99.38%
80.0	3.504	0.380	582.749	0.06%	99.45%
81.0	3.451	0.376	583.125	0.06%	99.51%
82.0	3.164	0.359	583.484	0.06%	99.57%
83.0	2.971	0.334	583.817	0.05%	99.63%
84.0	2.871	0.318	584.135	0.05%	99.68%
85.0	2.811	0.310	584.445	0.05%	99.74%
86.0	2.884	0.311	584.757	0.05%	99.79%
87.0	2.911	0.317	585.074	0.05%	99.84%
88.0	2.991	0.323	585.397	0.05%	99.90%
89.0	2.678	0.311	585.708	0.05%	99.95%
90.0	2.438	0.280	585.988	0.04%	100.00%

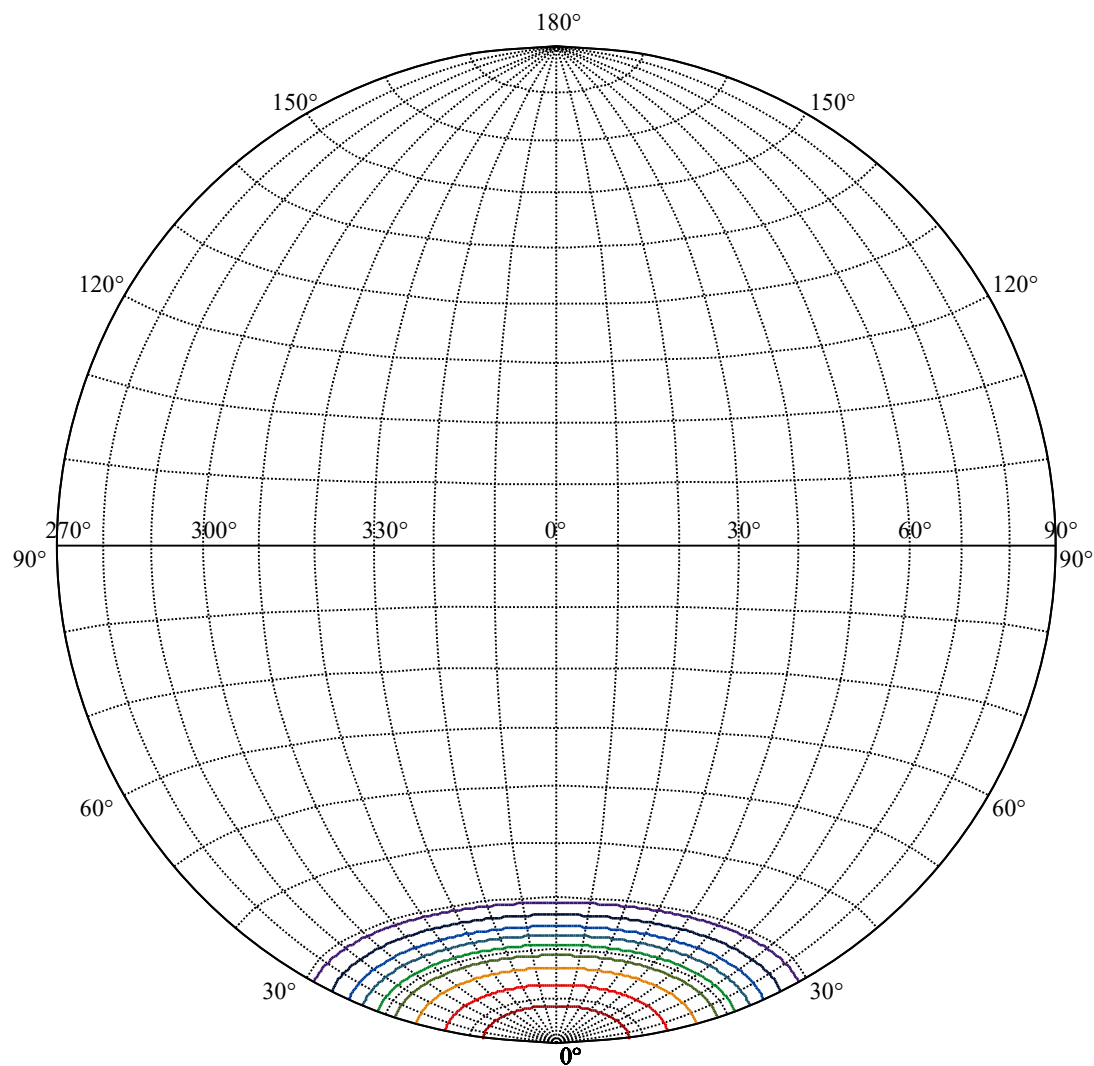
ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	532.19	83.47%	90.82%
0-40	552.54	86.67%	94.29%
0-60	571.42	89.63%	97.51%
0-90	585.71	91.87%	99.95%
0-120	585.71	91.87%	99.95%
0-180	585.99	91.91%	100.00%
60-90	14.29	2.24%	2.44%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-24.39	468.79	73.53%	80.00%

ZONAL LUMEN SUMMARY

0-10	112.68
10-20	257.56
20-30	161.96
30-40	20.35
40-50	10.17
50-60	8.70
60-70	6.94
70-80	4.39
80-90	2.96
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





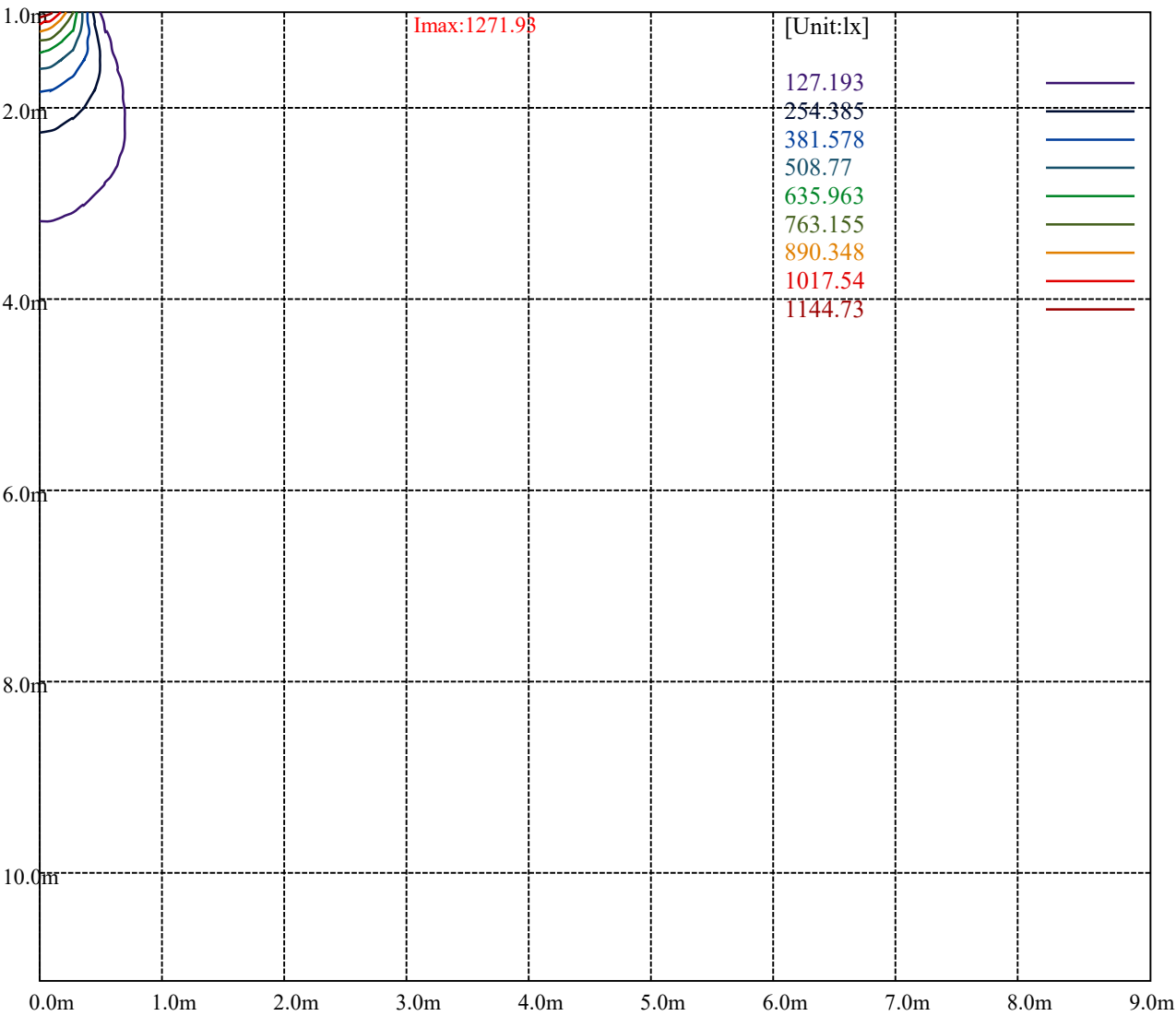


House

[Unit:cd]

Road

Imax:1271.93	
(10%Imax) 127.193	
(20%Imax) 254.385	
(30%Imax) 381.578	
(40%Imax) 508.77	
(50%Imax) 635.963	
(60%Imax) 763.155	
(70%Imax) 890.348	
(80%Imax) 1017.54	
(90%Imax) 1144.73	



Luminance Table

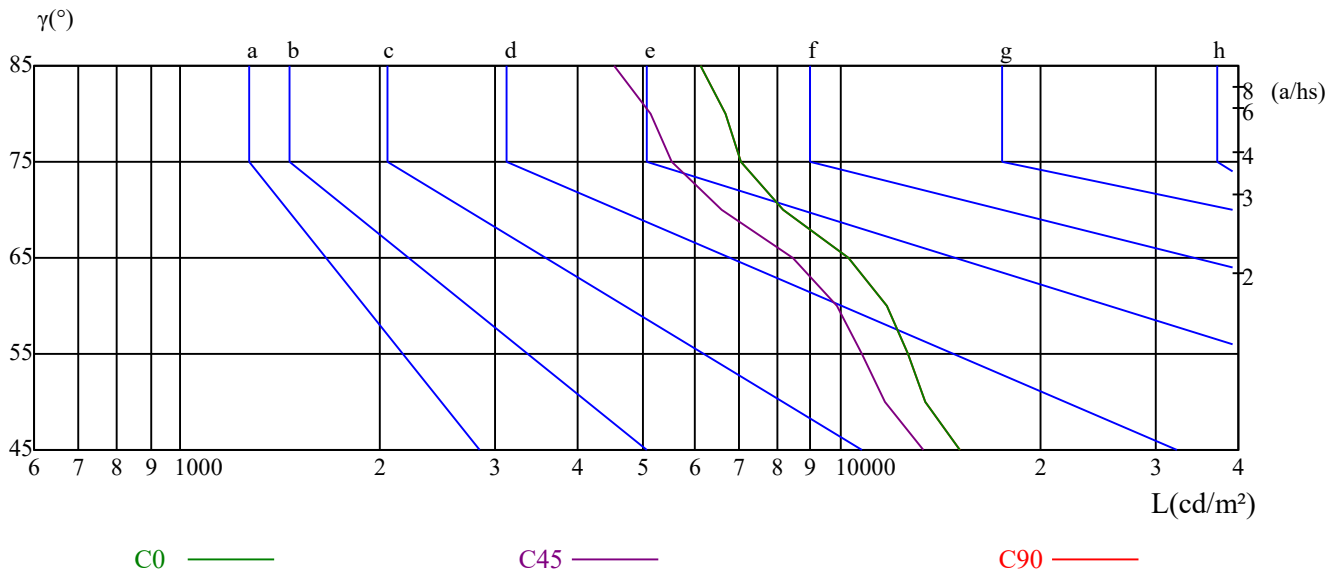
γ	45	50	55	60	65	70	75	80	85
C0	15172	13435	12635	11738	10274	8194	7056	6710	6126
C45	13331	11635	10775	9846	8461	6610	5557	5137	4530
C90	15172	13435	12635	11738	10274	8194	7056	6710	6126

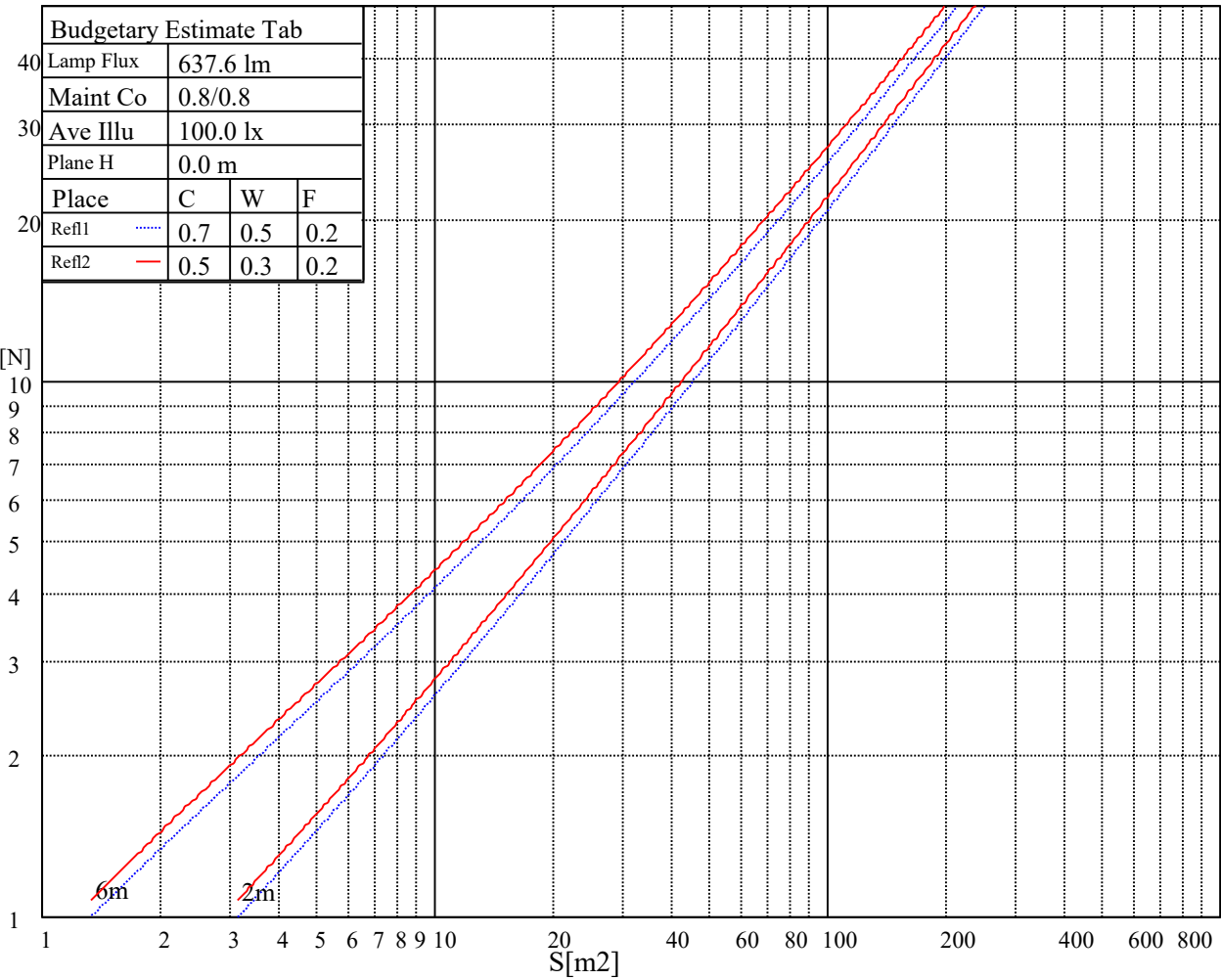
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
21291	21291	21291	20222	20222	20222	41139	41139	41139

Glare Table

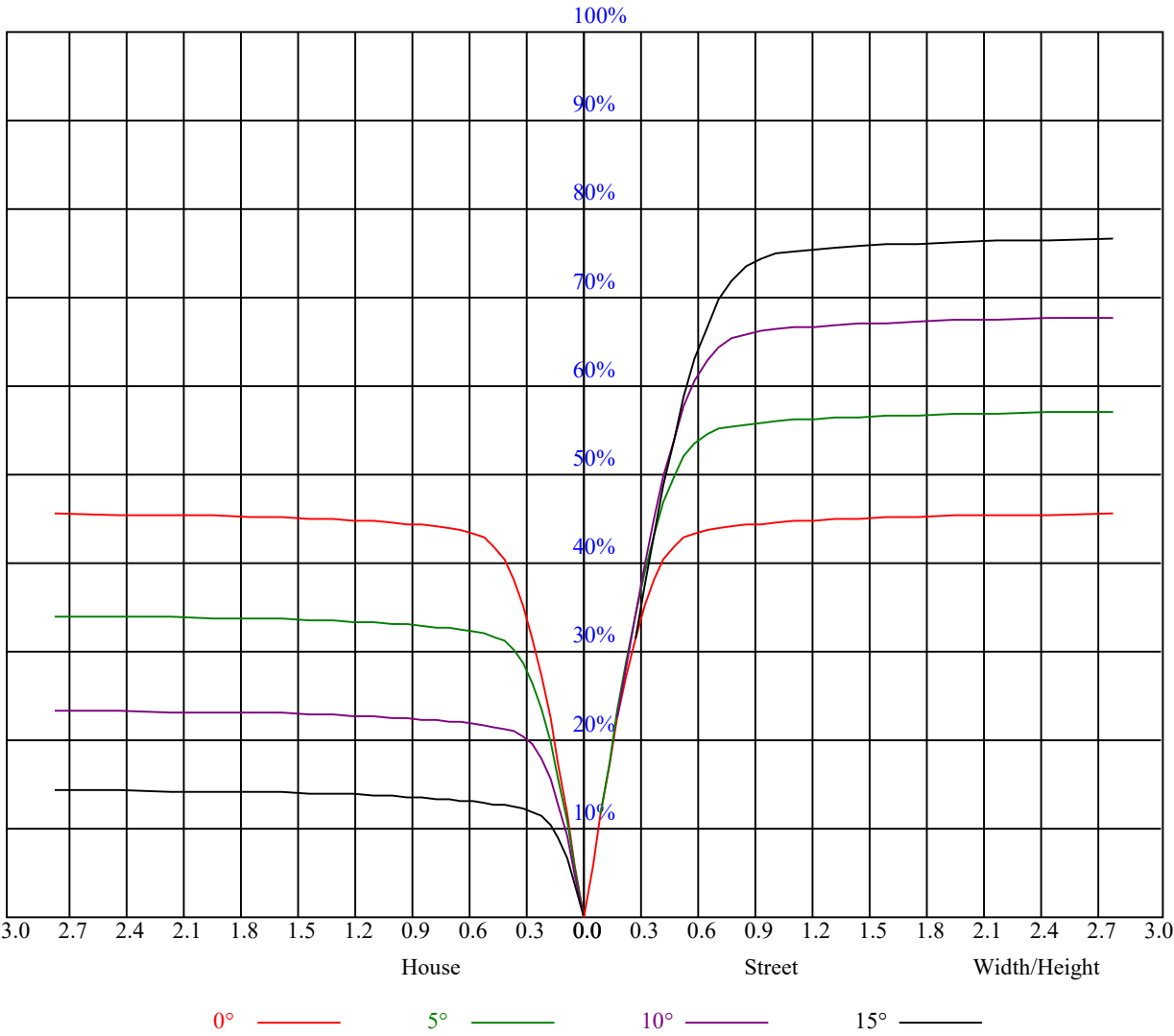
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

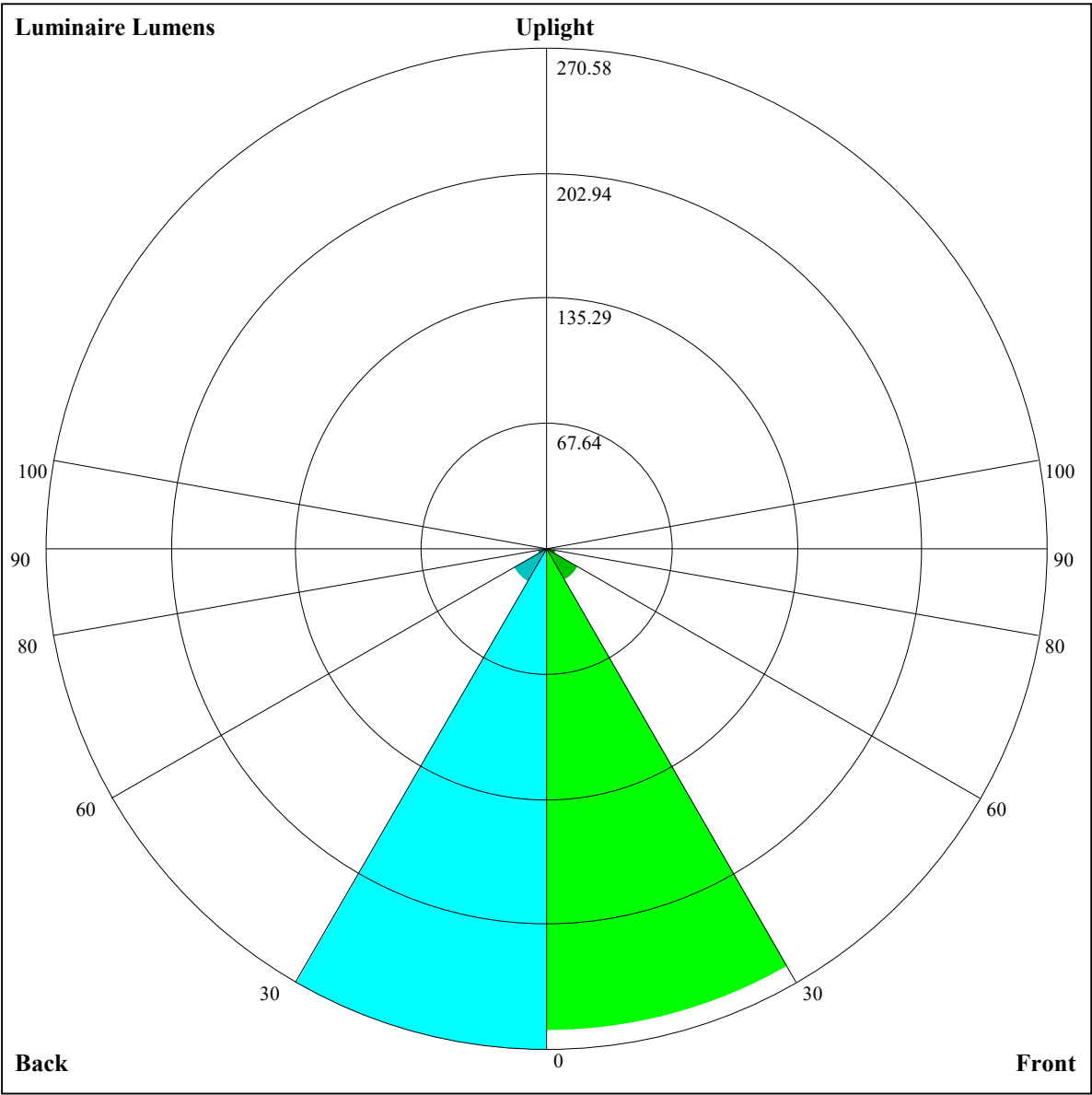
Luminance Limiting Curve





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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	1.00	0.98	1.00	0.98	0.97	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.84	0.82
3	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.86	0.82	0.79	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.80	0.78	0.76	0.74
5	0.82	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.71
6	0.79	0.74	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
7	0.75	0.71	0.67	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
8	0.72	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.62
9	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60
10	0.67	0.62	0.59	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.58





Luminaire Lumens:

FL=260.89,FM=19.72,FH=5.67,FVH=1.65

BL=270.58,BM=20.5,BH=5.72,BVH=1.64

UL=0,UH=0

BUG Rating:B1-U0-G0

Intensity data(cd)

Appendix Page: 17 Total:19

C/ γ (°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	1269.53	1259.40	1243.95	1236.49	1218.90	1187.46	1174.14	1148.03	1124.05
45.0	1281.25	1266.86	1248.74	1225.83	1198.65	1170.41	1139.50	1109.66	1080.35
90.0	1256.74	1238.09	1203.98	1177.87	1144.30	1123.51	1058.71	1044.75	1008.62
135.0	1280.19	1271.66	1256.21	1231.16	1210.91	1183.20	1153.89	1124.05	1095.27
180.0	1269.53	1275.92	1276.99	1273.26	1266.33	1254.07	1237.55	1222.10	1200.25
225.0	1281.25	1287.65	1292.98	1292.44	1289.78	1280.19	1273.79	1259.94	1242.88
270.0	1256.74	1274.86	1289.24	1295.11	1299.90	1297.24	1293.51	1283.38	1271.13
315.0	1280.19	1284.45	1285.51	1282.32	1275.39	1265.26	1252.47	1235.95	1218.90
360.0	1269.53	1259.40	1243.95	1236.49	1218.90	1187.46	1174.14	1148.03	1124.05
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1113.92	1053.17	1046.30	1016.61	982.83	945.84	901.99	851.36	797.59
45.0	1049.97	1022.79	993.49	962.04	933.80	902.36	868.79	831.48	785.65
90.0	974.03	939.88	907.85	878.17	846.88	813.47	792.21	752.83	689.15
135.0	1065.43	1037.72	1010.54	982.29	951.92	918.35	880.51	840.01	797.91
180.0	1173.07	1146.96	1119.25	1089.41	1058.50	1026.53	993.49	955.65	916.75
225.0	1222.10	1198.65	1173.07	1144.30	1122.45	1048.05	1029.72	981.23	925.70
270.0	1256.21	1239.15	1217.30	1192.79	1165.08	1132.57	1095.80	1053.17	1006.81
315.0	1198.65	1177.34	1152.29	1125.11	1048.69	1048.69	1023.97	976.86	945.20
360.0	1113.92	1053.17	1046.30	1016.61	982.83	945.84	901.99	851.36	797.59
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	752.29	678.43	625.52	557.25	485.95	413.90	341.00	271.51	210.60
45.0	734.50	701.46	643.90	584.75	524.00	458.99	392.91	327.89	276.73
90.0	659.57	607.19	550.86	489.63	427.07	364.72	301.83	239.49	185.02
135.0	750.48	697.73	663.62	574.63	535.72	470.18	403.57	338.02	299.12
180.0	871.45	828.82	756.34	688.13	629.51	554.91	480.30	403.03	327.89
225.0	890.10	795.62	752.45	675.61	593.60	512.12	430.42	351.45	276.04
270.0	976.97	921.01	830.42	787.79	713.18	637.51	559.17	480.84	403.03
315.0	888.18	799.19	758.85	688.83	615.13	539.19	462.88	387.05	315.53
360.0	752.29	678.43	625.52	557.25	485.95	413.90	341.00	271.51	210.60
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	159.44	117.34	84.73	60.06	43.06	32.45	26.80	23.98	22.44
45.0	276.73	141.96	100.77	69.81	48.97	35.81	28.40	25.85	23.13
90.0	138.66	99.55	68.48	46.79	34.37	28.03	24.83	23.23	21.85
135.0	299.12	159.28	116.44	83.35	59.79	43.86	34.05	28.78	25.85
180.0	285.79	285.79	146.97	107.27	77.64	56.65	42.37	33.52	28.35
225.0	209.59	154.22	110.52	77.75	54.94	40.45	32.03	27.60	25.31
270.0	328.96	273.00	273.00	135.89	96.72	77.86	46.79	34.90	30.43
315.0	250.14	193.55	146.12	107.70	77.91	56.22	41.99	33.09	27.92
360.0	159.44	117.34	84.73	60.06	43.06	32.45	26.80	23.98	22.44
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	21.10	19.61	18.28	17.48	15.77	14.60	14.12	13.16	12.42
45.0	21.96	21.21	19.72	18.23	16.79	15.35	14.02	13.00	12.26
90.0	20.52	19.13	17.80	16.73	15.40	14.18	13.22	12.47	11.99
135.0	23.87	22.38	20.78	18.97	17.91	16.57	15.24	14.12	13.22
180.0	26.54	24.41	22.12	21.16	19.72	18.23	16.79	15.45	14.39
225.0	23.93	22.59	21.10	20.20	17.91	16.95	15.45	14.18	13.22
270.0	26.11	23.98	22.44	21.05	19.77	18.54	17.16	15.99	14.87
315.0	25.58	23.23	21.90	20.36	18.65	17.59	16.41	15.29	14.28
360.0	21.10	19.61	18.28	17.48	15.77	14.60	14.12	13.16	12.42

Intensity data(cd)

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C/ γ (°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	11.94	11.56	11.19	10.98	10.76	10.55	10.34	10.18	10.02
45.0	11.67	11.30	11.08	10.87	10.66	10.44	10.28	10.07	9.86
90.0	11.62	11.30	11.03	10.87	10.60	10.39	10.13	9.97	9.75
135.0	12.52	11.94	11.56	11.24	10.98	10.71	10.50	10.28	10.07
180.0	13.43	12.68	12.15	11.78	11.51	11.24	10.98	10.76	10.55
225.0	12.42	11.88	11.46	11.24	10.98	10.71	10.50	10.28	10.13
270.0	13.91	13.06	12.42	11.94	11.56	11.24	11.14	10.82	10.60
315.0	13.43	12.84	12.26	11.78	11.40	11.14	10.92	10.66	10.44
360.0	11.94	11.56	11.19	10.98	10.76	10.55	10.34	10.18	10.02
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.70	9.49	9.27	9.06	8.79	8.47	8.37	7.99	7.62
45.0	9.65	9.59	9.33	9.17	8.95	8.63	8.47	8.21	7.94
90.0	9.49	9.27	9.01	8.74	8.47	8.21	7.94	7.78	7.46
135.0	9.81	9.54	9.33	9.06	8.79	8.63	8.26	8.10	7.83
180.0	10.39	10.07	9.81	9.65	9.38	9.06	8.90	8.58	8.31
225.0	9.91	9.65	9.43	9.27	9.06	8.74	8.58	8.31	8.05
270.0	10.55	10.23	10.13	9.97	9.59	9.49	9.22	9.06	8.85
315.0	10.23	10.07	9.81	9.70	9.33	9.06	8.95	8.47	8.37
360.0	9.70	9.49	9.27	9.06	8.79	8.47	8.37	7.99	7.62
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.41	7.03	6.66	6.34	5.97	5.54	5.17	4.80	4.48
45.0	7.62	7.25	6.93	6.61	6.18	5.86	5.44	5.12	4.74
90.0	7.25	6.87	6.34	6.08	5.76	5.38	4.90	4.58	4.42
135.0	7.41	7.09	6.71	6.34	5.97	5.54	5.22	4.85	4.42
180.0	8.10	7.78	7.41	7.03	6.71	6.29	5.92	5.54	5.17
225.0	7.83	7.46	7.09	6.77	6.39	6.02	5.65	5.28	5.01
270.0	8.53	8.26	7.94	7.67	7.30	6.87	6.50	6.08	5.65
315.0	8.05	7.73	7.35	6.98	6.61	6.23	5.86	5.49	5.06
360.0	7.41	7.03	6.66	6.34	5.97	5.54	5.17	4.80	4.48
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.26	4.16	4.00	3.78	3.62	3.41	3.30	3.14	2.93
45.0	4.53	4.37	4.21	4.10	4.00	3.84	3.62	3.46	3.36
90.0	4.26	4.10	3.94	3.84	3.73	3.52	3.36	3.25	3.20
135.0	4.21	4.10	4.00	3.84	3.73	3.68	3.57	3.52	4.21
180.0	4.80	4.48	4.26	4.16	4.00	3.78	3.62	3.52	3.25
225.0	4.64	4.48	4.32	4.26	4.10	3.94	3.84	3.68	3.52
270.0	5.22	4.90	4.74	4.58	4.37	4.26	4.16	4.00	3.89
315.0	4.74	4.64	4.42	4.26	4.21	4.05	3.94	3.73	3.68
360.0	4.26	4.16	4.00	3.78	3.62	3.41	3.30	3.14	2.93
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.82	2.77	2.61	2.50	2.40	2.24	2.13	2.03	1.92
45.0	3.20	2.98	2.98	2.82	2.77	2.72	2.72	2.93	2.93
90.0	3.09	2.88	2.72	2.61	2.77	3.30	3.20	3.04	2.77
135.0	4.00	3.04	2.82	2.88	2.88	3.14	3.14	3.04	2.03
180.0	3.09	2.88	2.77	2.66	2.40	2.34	2.18	2.08	1.87
225.0	3.36	3.25	3.09	2.98	2.88	2.88	2.82	2.72	2.93
270.0	3.73	3.68	3.52	3.36	3.25	3.09	3.62	5.12	4.42
315.0	4.32	3.84	3.25	3.14	3.14	3.36	3.46	2.98	2.56
360.0	2.82	2.77	2.61	2.50	2.40	2.24	2.13	2.03	1.92

Intensity data(cd)

C/ $\gamma(^{\circ})$	90.0
0.0	1.87
45.0	2.93
90.0	2.61
135.0	1.76
180.0	1.81
225.0	2.98
270.0	3.20
315.0	2.34
360.0	1.87