
LumCAT: 1-0871-A	
Luminaire: 92.70.043.00	
Report No: NATA0100	Voltage(V): 35.5900
Test No: GC2019112604	Current(A): 0.0970
LampCAT: LUMINUS CXM-3-AC40	Power (W): 3.4500
Lamp flux(lm): 346.0	PF: 1.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 312.98
Efficiency(%): 90.46%
Lumens(lm)/Power(W): 90.72
Central intensity(cd): 6921.421
Maximum intensity(cd): 6921.421
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=7.1
[C90/270]Total=7.1
Field angle(10%Imax): [C0/180]Total=15.4
[C90/270]Total=15.4
Maximum s/h(1/2): C0_180=0.12 C90_270=0.12
Maximum s/h(1/4): C0_180=0.13 C90_270=0.13
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.46%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.268%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6921.422	0.000	0	.000%	.000%
1.0	6543.281	6.443	6.443	1.862%	2.058%
2.0	5518.547	17.312	23.755	5.004%	7.590%
3.0	4134.797	23.088	46.843	6.673%	14.967%
4.0	2937.023	23.672	70.514	6.842%	22.530%
5.0	1874.897	20.701	91.215	5.983%	29.144%
6.0	1308.916	16.732	107.947	4.836%	34.490%
7.0	862.102	13.475	121.422	3.895%	38.795%
8.0	611.880	10.549	131.971	3.049%	42.166%
9.0	426.649	8.417	140.388	2.433%	44.855%
10.0	324.134	6.794	147.182	1.964%	47.026%
11.0	262.828	5.865	153.047	1.695%	48.900%
12.0	235.378	5.446	158.493	1.574%	50.640%
13.0	216.274	5.360	163.853	1.549%	52.352%
14.0	206.627	5.413	169.266	1.564%	54.082%
15.0	200.222	5.585	174.852	1.614%	55.866%
16.0	193.008	5.762	180.614	1.665%	57.707%
17.0	185.189	5.890	186.503	1.702%	59.589%
18.0	177.666	5.983	192.486	1.729%	61.501%
19.0	170.494	6.057	198.543	1.751%	63.436%
20.0	164.173	6.125	204.668	1.770%	65.393%
21.0	157.570	6.178	210.846	1.786%	67.367%
22.0	151.763	6.216	217.063	1.797%	69.353%
23.0	144.724	6.221	223.284	1.798%	71.341%
24.0	137.728	6.175	229.459	1.785%	73.314%
25.0	131.653	6.125	235.584	1.770%	75.271%
26.0	126.633	6.097	241.681	1.762%	77.219%
27.0	122.020	6.083	247.765	1.758%	79.163%
28.0	119.074	6.104	253.869	1.764%	81.113%
29.0	116.501	6.163	260.032	1.781%	83.082%
30.0	113.055	6.198	266.23	1.791%	85.063%
31.0	109.392	6.190	272.42	1.789%	87.040%
32.0	105.834	6.166	278.586	1.782%	89.011%
33.0	100.392	6.076	284.662	1.756%	90.952%
34.0	86.498	5.656	290.318	1.635%	92.759%
35.0	66.227	4.743	295.061	1.371%	94.274%
36.0	40.514	3.399	298.459	.982%	95.360%
37.0	20.152	1.979	300.438	.572%	95.992%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	8.100	0.943	301.381	.273%	96.294%
39.0	4.662	0.436	301.816	.126%	96.433%
40.0	4.191	0.309	302.125	.089%	96.531%
41.0	3.966	0.290	302.416	.084%	96.624%
42.0	3.832	0.283	302.699	.082%	96.715%
43.0	3.804	0.283	302.982	.082%	96.805%
44.0	3.804	0.287	303.269	.083%	96.897%
45.0	3.797	0.292	303.561	.084%	96.990%
46.0	3.825	0.298	303.859	.086%	97.085%
47.0	3.874	0.306	304.165	.089%	97.183%
48.0	3.881	0.314	304.479	.091%	97.283%
49.0	3.698	0.311	304.79	.090%	97.383%
50.0	3.537	0.302	305.092	.087%	97.479%
51.0	3.333	0.291	305.382	.084%	97.572%
52.0	3.136	0.278	305.66	.080%	97.661%
53.0	3.009	0.267	305.927	.077%	97.746%
54.0	2.848	0.258	306.186	.075%	97.829%
55.0	2.686	0.247	306.433	.071%	97.908%
56.0	2.552	0.237	306.669	.068%	97.983%
57.0	2.440	0.228	306.897	.066%	98.056%
58.0	2.334	0.221	307.118	.064%	98.127%
59.0	2.341	0.219	307.337	.063%	98.197%
60.0	2.384	0.223	307.56	.065%	98.268%
61.0	2.412	0.229	307.789	.066%	98.341%
62.0	2.377	0.231	308.02	.067%	98.415%
63.0	2.299	0.227	308.247	.066%	98.487%
64.0	2.250	0.223	308.47	.065%	98.559%
65.0	2.180	0.219	308.69	.063%	98.629%
66.0	2.046	0.211	308.9	.061%	98.696%
67.0	1.905	0.199	309.099	.057%	98.760%
68.0	1.807	0.188	309.287	.054%	98.820%
69.0	1.751	0.182	309.469	.052%	98.878%
70.0	1.716	0.178	309.647	.051%	98.935%
71.0	1.695	0.176	309.823	.051%	98.991%
72.0	1.695	0.176	309.999	.051%	99.047%
73.0	1.680	0.176	310.176	.051%	99.104%
74.0	1.645	0.175	310.35	.051%	99.159%
75.0	1.652	0.174	310.525	.050%	99.215%

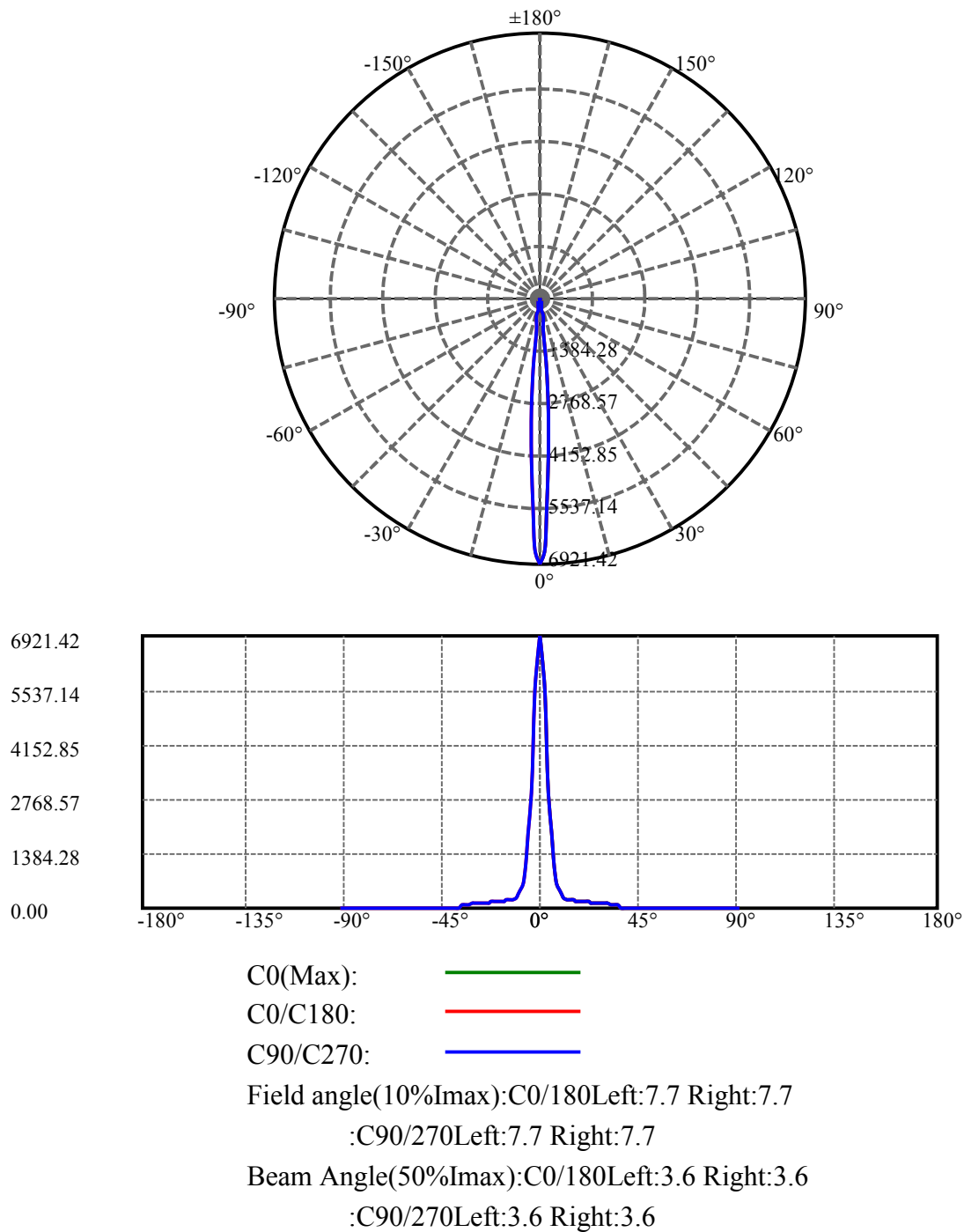
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.624	0.174	310.699	.050%	99.271%
77.0	1.589	0.171	310.87	.050%	99.325%
78.0	1.582	0.170	311.04	.049%	99.380%
79.0	1.575	0.170	311.209	.049%	99.434%
80.0	1.533	0.168	311.377	.048%	99.487%
81.0	1.533	0.166	311.543	.048%	99.540%
82.0	1.491	0.164	311.707	.047%	99.593%
83.0	1.491	0.162	311.869	.047%	99.645%
84.0	1.477	0.162	312.03	.047%	99.696%
85.0	1.477	0.161	312.191	.047%	99.748%
86.0	1.470	0.161	312.353	.047%	99.799%
87.0	1.441	0.159	312.512	.046%	99.850%
88.0	1.434	0.158	312.669	.046%	99.900%
89.0	1.420	0.156	312.826	.045%	99.950%
90.0	1.413	0.155	312.981	.045%	100.000%

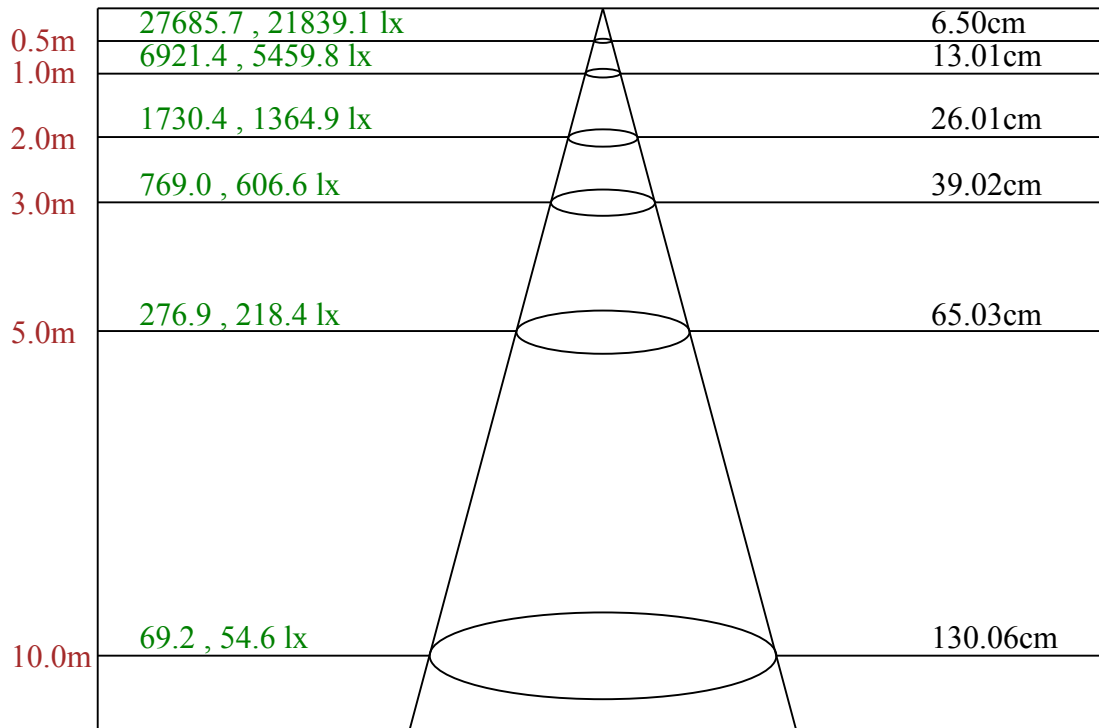
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	266.23	76.95%	85.06%
0-40	302.13	87.32%	96.53%
0-60	307.56	88.89%	98.27%
0-90	312.83	90.41%	99.95%
0-120	312.83	90.41%	99.95%
0-180	312.98	90.46%	100.00%
60-90	5.49	1.59%	1.75%
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%
0-27.43	250.38	72.37%	80.00%

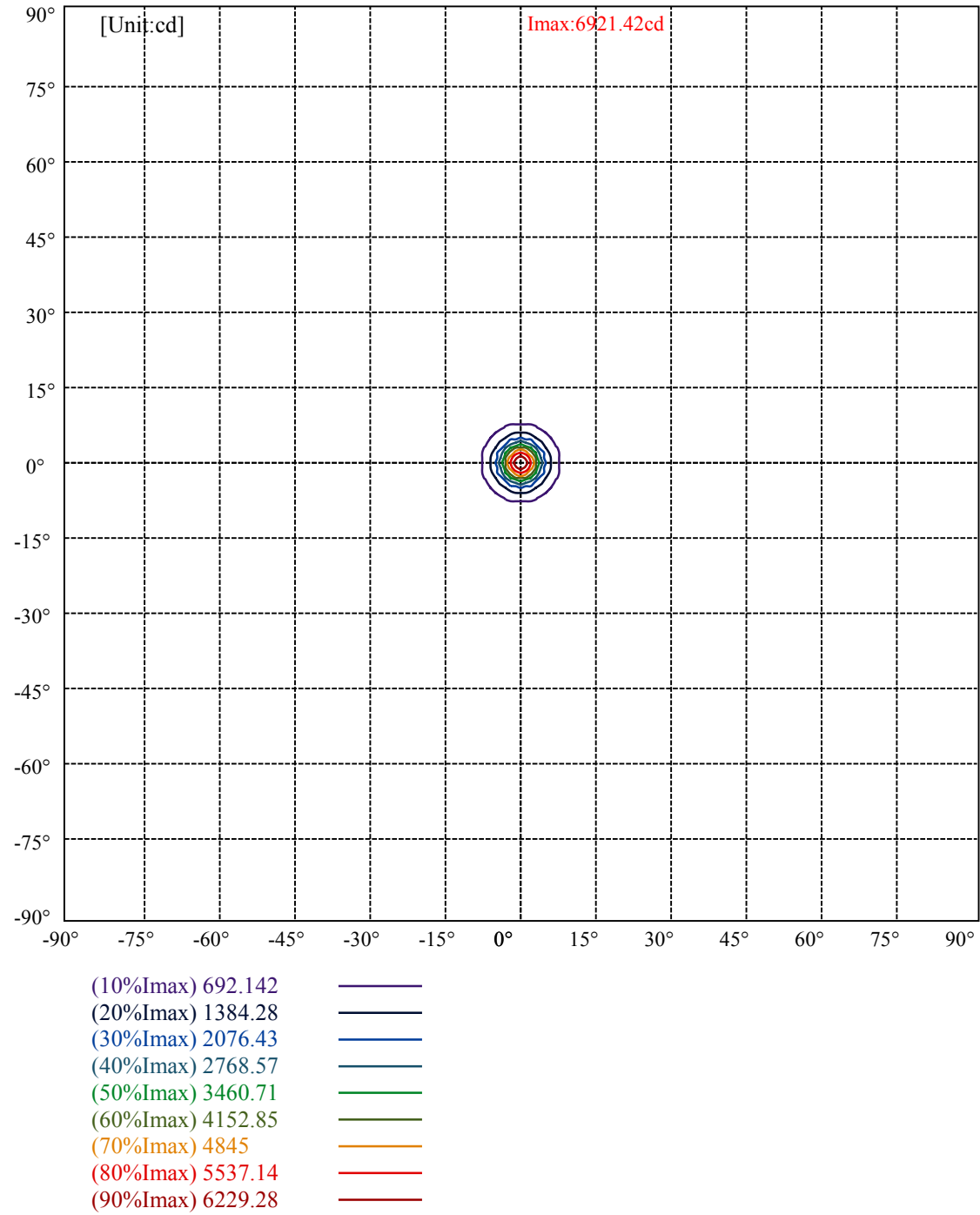
ZONAL LUMEN SUMMARY

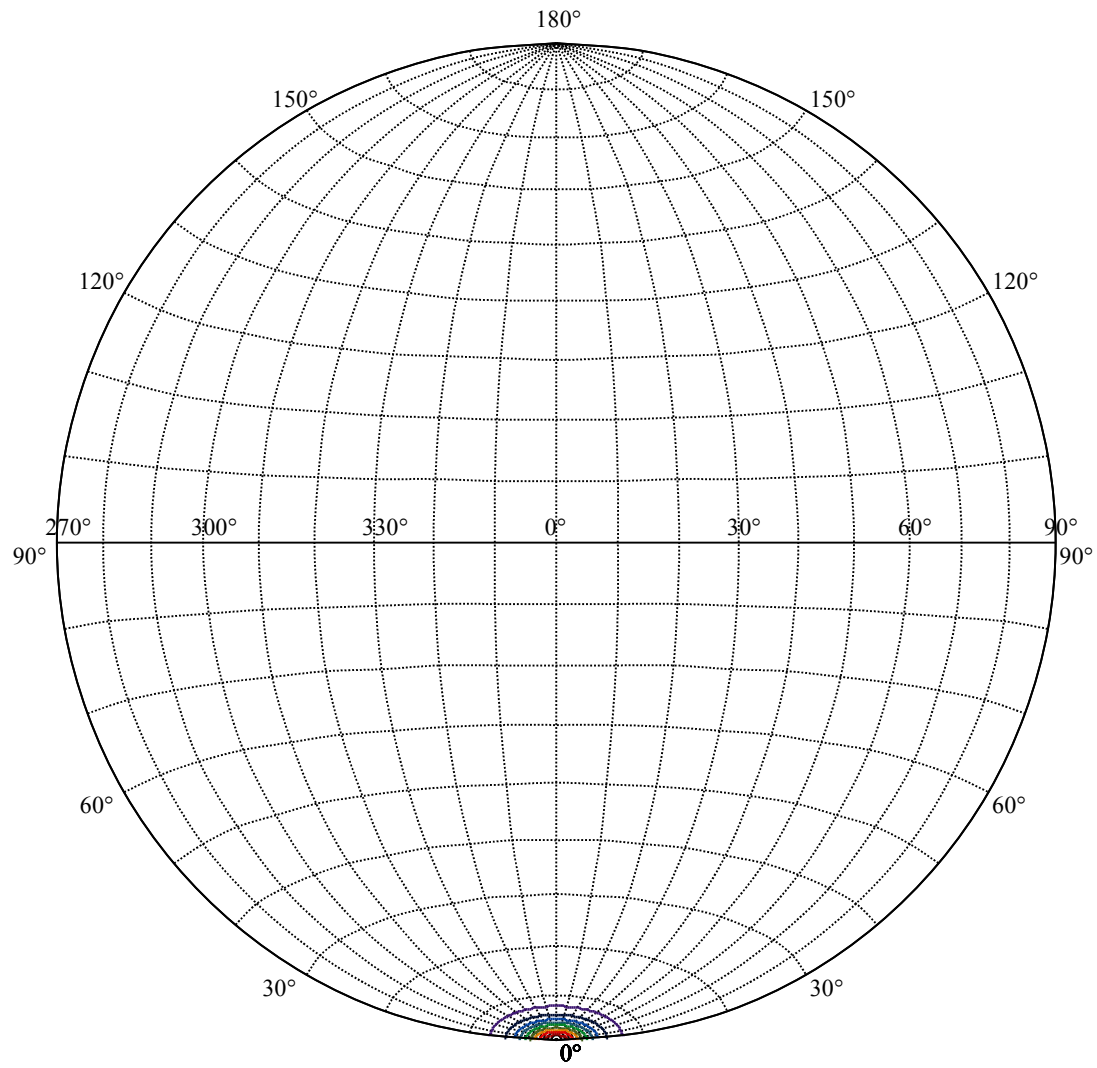
0-10	147.18
10-20	57.49
20-30	61.56
30-40	35.90
40-50	2.97
50-60	2.47
60-70	2.09
70-80	1.73
80-90	1.45
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 7.44



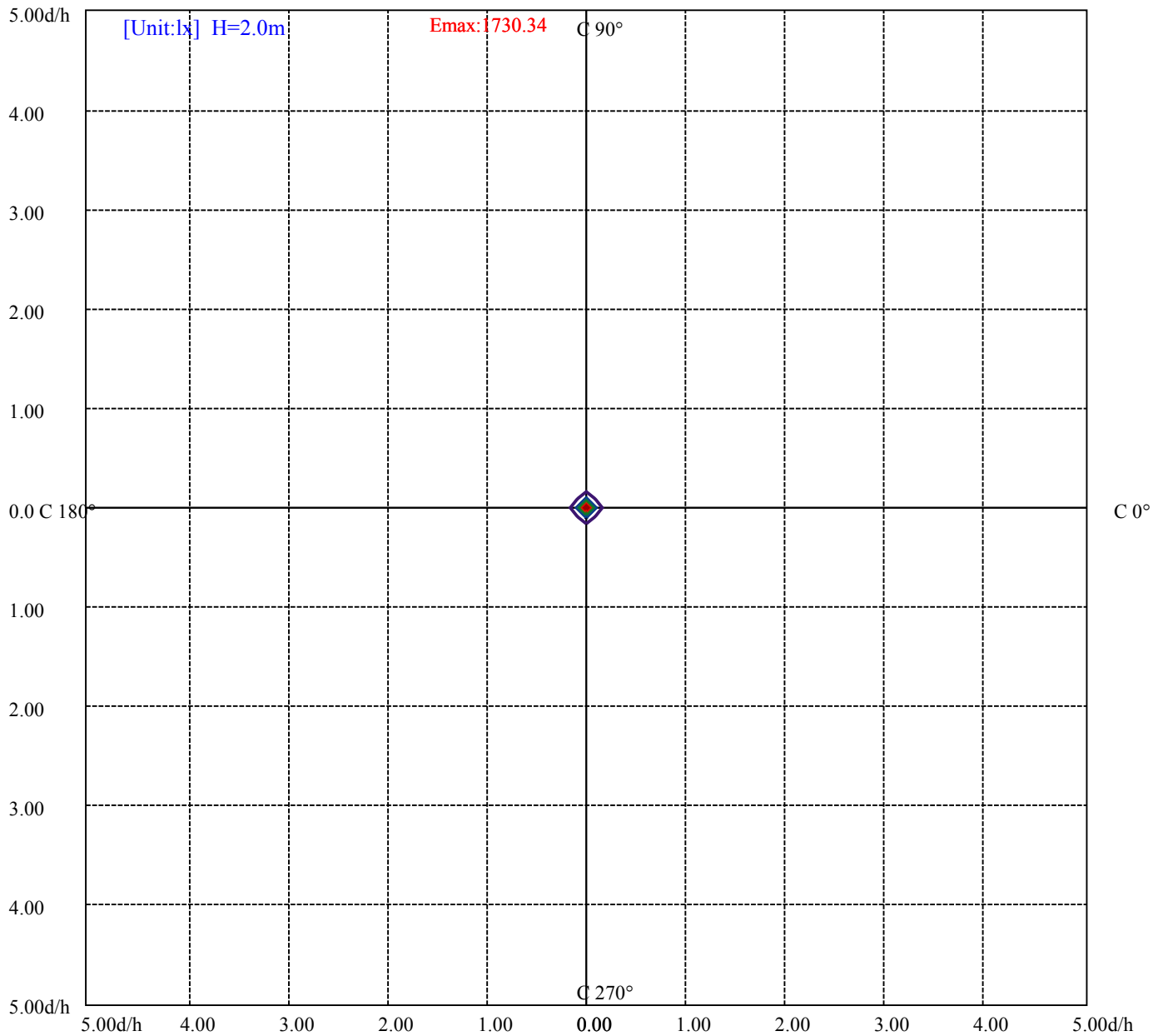


House

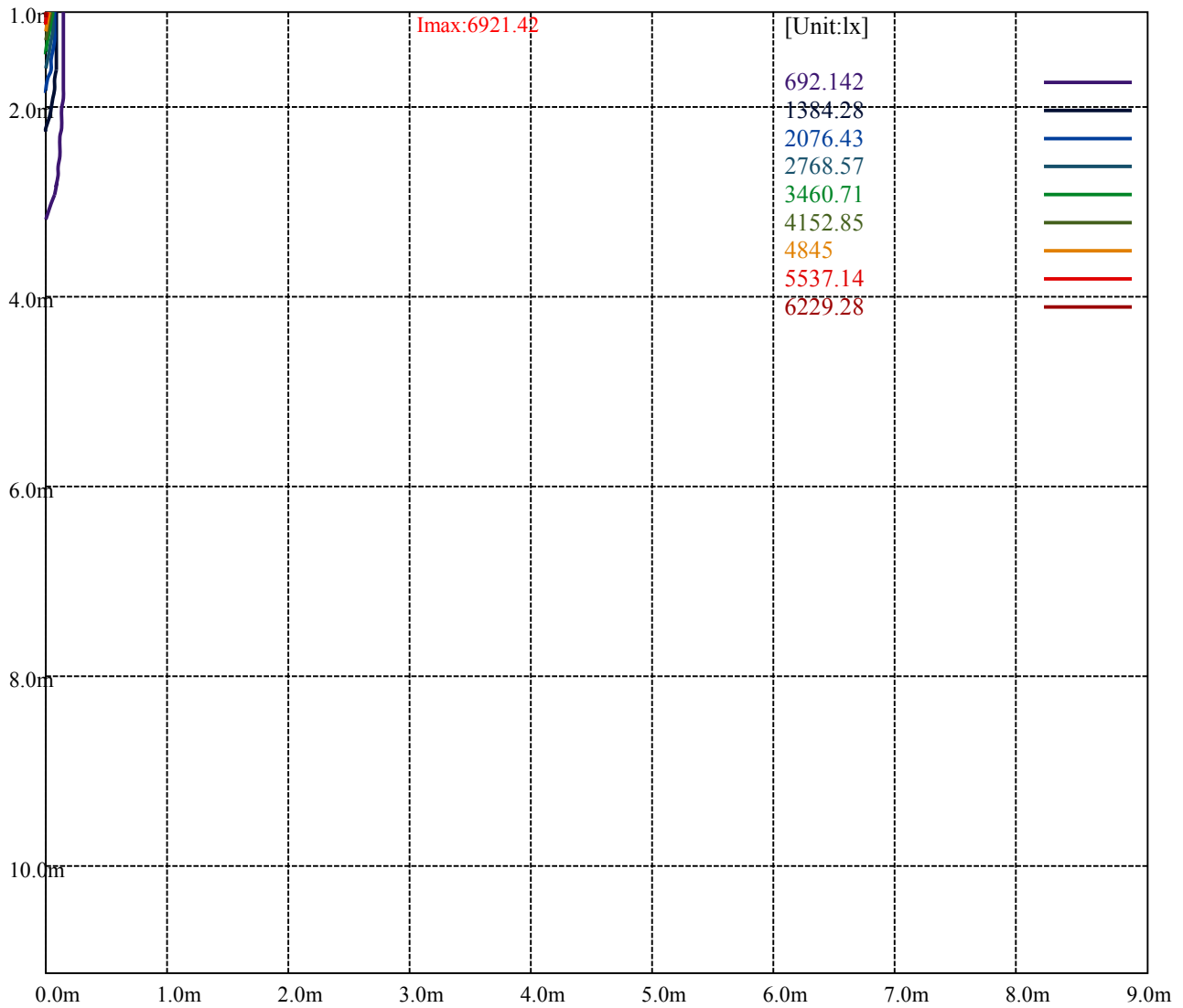
[Unit:cd]

Road

Imax:6921.42	
(10%Imax) 692.142	_____
(20%Imax) 1384.28	_____
(30%Imax) 2076.43	_____
(40%Imax) 2768.57	_____
(50%Imax) 3460.71	_____
(60%Imax) 4152.85	_____
(70%Imax) 4845	_____
(80%Imax) 5537.14	_____
(90%Imax) 6229.28	_____



(10%E _{max}) 173.034	—
(20%E _{max}) 346.0675	—
(30%E _{max}) 519.1025	—
(40%E _{max}) 692.1375	—
(50%E _{max}) 865.17	—
(60%E _{max}) 1038.205	—
(70%E _{max}) 1211.24	—
(80%E _{max}) 1384.272	—
(90%E _{max}) 1557.307	—



Luminance Table

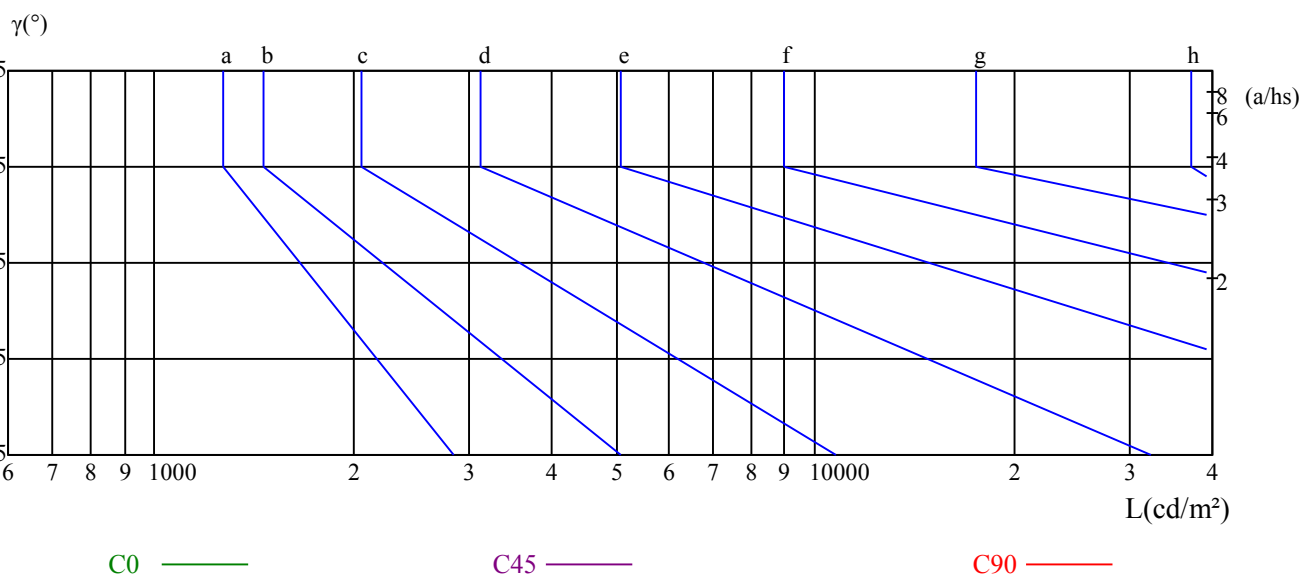
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

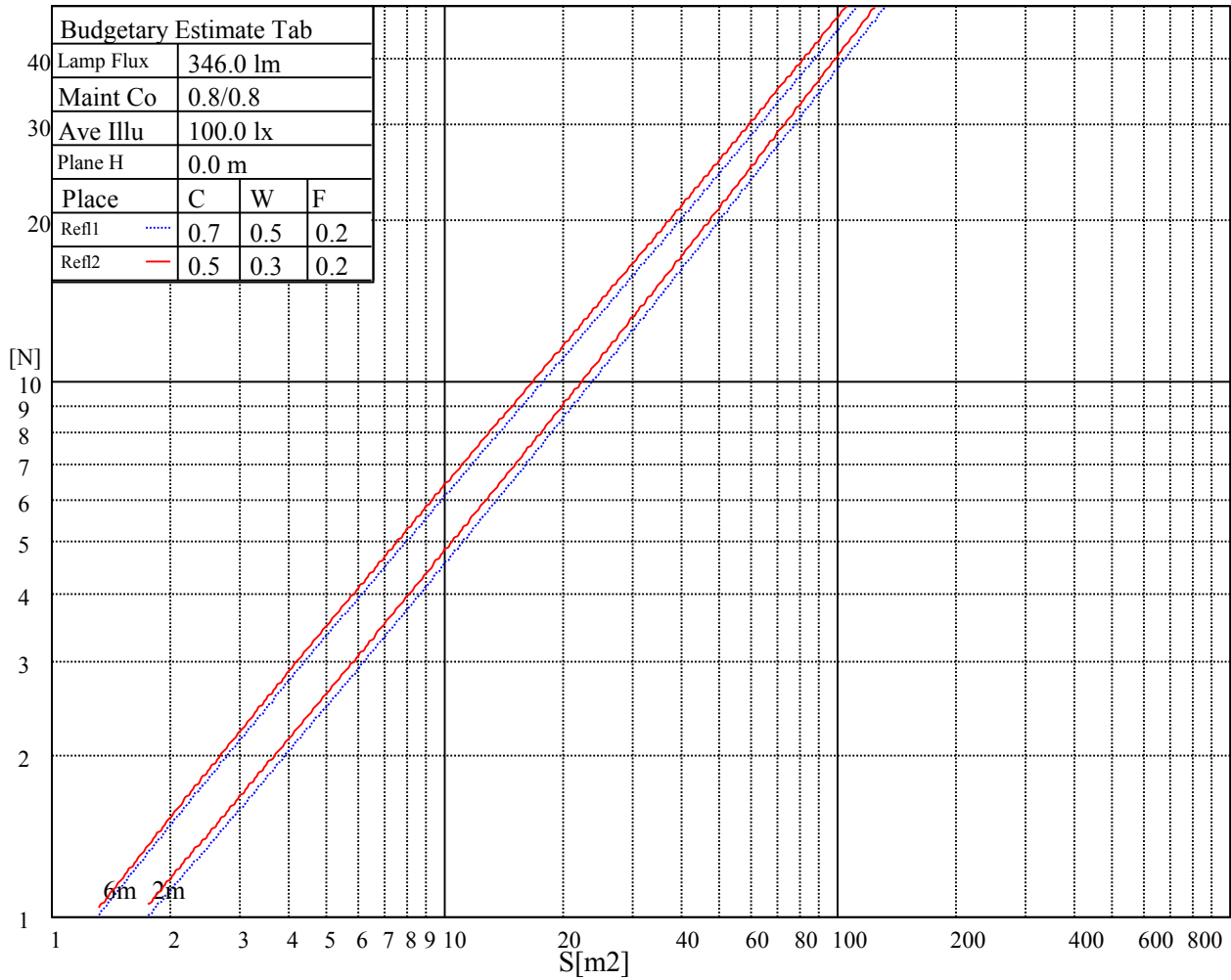
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

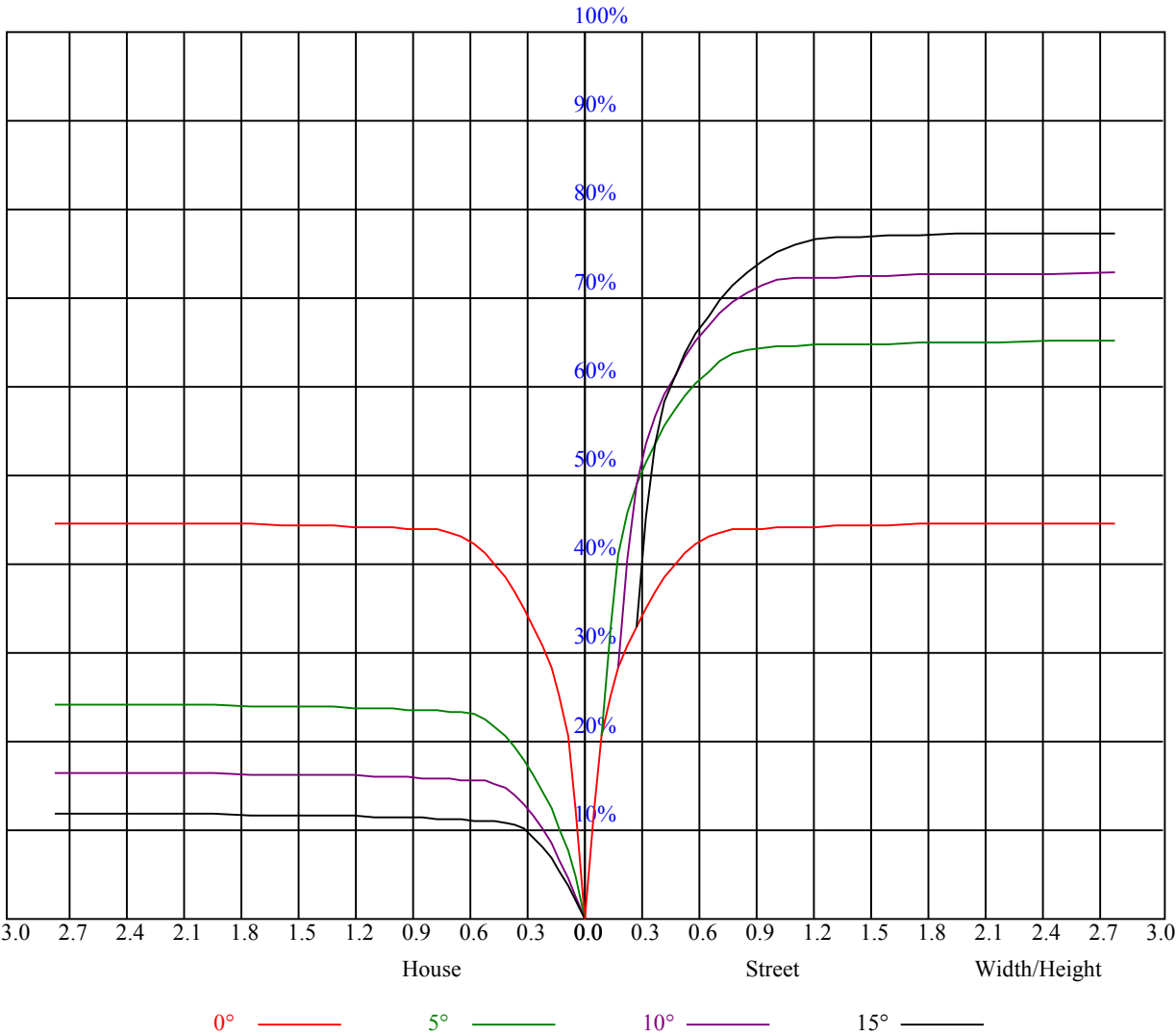
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOC	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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.02	1.00	0.98	1.00	0.98	0.96	0.96	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.96	0.93	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.87	0.86	0.84	0.83
3	0.92	0.88	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.85	0.83	0.81	0.80
4	0.88	0.84	0.81	0.87	0.84	0.81	0.85	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.81	0.78	0.84	0.80	0.78	0.82	0.79	0.77	0.81	0.78	0.76	0.80	0.78	0.76	0.75
6	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
7	0.79	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
8	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
9	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
10	0.72	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.65



Intensity data(cd)

C/ γ (°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	7194.94	6339.94	4694.63	3326.63	2233.69	1345.50	916.88	647.44	451.69
45.0	6994.13	6026.06	4521.94	3184.31	2036.25	1319.06	912.94	613.69	441.00
90.0	6733.69	5896.13	4629.94	3167.44	2071.13	1104.08	1008.73	643.33	460.58
135.0	6762.94	7032.38	6400.13	5004.00	3624.19	2397.94	1605.38	1125.56	824.06
180.0	7194.94	7368.75	6655.50	5237.44	3830.63	2525.63	1724.06	1078.26	749.59
225.0	6994.13	7149.38	6615.56	5103.00	3955.50	2772.56	1789.31	1099.58	797.57
270.0	6733.69	6768.56	6084.56	4867.88	3647.81	2445.75	1571.63	1070.44	745.88
315.0	6762.94	5765.06	4546.13	3187.69	2097.00	1088.66	942.41	618.53	424.69
360.0	7194.94	6339.94	4694.63	3326.63	2233.69	1345.50	916.88	647.44	451.69
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	327.38	284.06	226.58	208.46	201.38	198.51	196.82	195.13	193.22
45.0	324.56	284.63	230.34	214.43	202.56	196.54	194.18	182.42	164.59
90.0	346.89	267.24	237.21	223.31	211.44	199.13	186.75	173.81	163.07
135.0	509.06	372.38	302.06	261.17	232.26	220.67	212.91	203.01	194.96
180.0	532.35	373.61	283.50	242.83	221.91	209.81	203.51	197.72	192.94
225.0	560.87	382.84	299.87	254.03	227.19	210.99	202.44	196.14	188.49
270.0	489.38	366.19	290.25	258.69	218.14	205.93	199.46	194.74	190.46
315.0	322.71	262.13	232.82	220.11	215.33	211.44	205.71	201.09	193.78
360.0	327.38	284.06	226.58	208.46	201.38	198.51	196.82	195.13	193.22
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	186.64	180.23	172.18	164.64	162.17	154.18	146.25	139.78	134.72
45.0	149.57	135.62	125.27	123.98	130.05	128.81	118.35	111.60	108.90
90.0	154.97	147.77	144.34	140.01	135.84	131.12	130.73	129.15	125.21
135.0	186.41	176.79	169.99	160.99	151.88	142.54	135.17	129.71	125.27
180.0	184.50	177.08	168.69	160.88	152.04	146.14	140.40	134.16	128.14
225.0	183.26	177.86	173.76	163.18	146.14	131.57	118.29	110.03	106.82
270.0	186.24	181.18	179.10	174.21	169.76	164.87	160.59	154.18	146.42
315.0	189.73	187.43	180.06	172.69	166.22	158.57	152.04	144.62	137.59
360.0	186.64	180.23	172.18	164.64	162.17	154.18	146.25	139.78	134.72
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	127.46	122.85	118.80	114.92	110.81	107.78	102.49	79.37	57.88
45.0	104.01	103.50	103.73	100.18	94.73	90.39	80.27	57.04	36.90
90.0	121.33	117.39	113.91	111.09	108.00	105.41	95.46	70.26	46.18
135.0	120.94	117.73	114.86	111.94	109.52	106.93	103.89	95.51	75.71
180.0	124.54	120.77	116.72	113.79	111.21	107.38	104.91	101.76	81.73
225.0	107.38	110.93	114.75	111.94	108.11	104.63	100.52	94.95	83.98
270.0	138.66	132.69	128.03	123.36	119.87	115.54	111.43	107.27	91.13
315.0	131.85	126.73	121.22	117.23	112.89	108.62	104.18	85.84	56.31
360.0	127.46	122.85	118.80	114.92	110.81	107.78	102.49	79.37	57.88
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	26.66	9.17	4.33	4.11	3.88	3.83	3.94	4.16	4.33
45.0	19.74	8.33	6.47	5.85	5.18	4.78	4.39	4.16	4.11
90.0	19.24	5.57	4.50	4.05	3.71	3.49	3.32	3.26	3.32
135.0	49.44	24.19	6.41	3.66	3.38	3.21	3.15	3.15	3.26
180.0	54.62	30.38	9.23	3.88	3.54	3.32	3.15	3.15	3.26
225.0	58.95	33.92	15.86	6.36	5.40	4.95	4.61	4.39	4.28
270.0	66.66	38.48	13.61	5.40	4.67	4.39	4.16	4.11	4.16
315.0	28.80	11.19	4.39	3.99	3.77	3.77	3.94	4.05	3.71
360.0	26.66	9.17	4.33	4.11	3.88	3.83	3.94	4.16	4.33

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	3.94	3.32	2.81	2.48	2.25	2.19	2.14	2.03	2.03
45.0	4.16	4.44	4.73	4.73	4.16	3.77	3.66	3.77	4.05
90.0	3.43	3.83	4.28	4.73	4.89	4.61	4.16	3.66	3.49
135.0	3.71	4.05	4.39	4.56	4.33	3.83	3.09	2.53	2.08
180.0	3.43	3.71	4.16	4.56	4.56	4.22	3.60	2.87	2.36
225.0	4.11	3.94	3.94	4.05	4.33	5.01	5.68	6.08	5.91
270.0	4.39	4.67	4.44	3.83	3.04	2.70	2.42	2.31	2.25
315.0	3.21	2.64	2.25	2.14	2.03	1.97	1.91	1.86	1.91
360.0	3.94	3.32	2.81	2.48	2.25	2.19	2.14	2.03	2.03
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	1.97	1.97	1.97	2.03	2.03	2.14	2.36	2.59	2.64
45.0	4.05	3.83	3.60	3.43	3.21	2.98	2.87	2.87	2.64
90.0	3.54	3.54	3.26	2.87	2.36	2.25	2.19	2.25	2.25
135.0	1.91	1.86	1.86	1.86	1.80	1.86	1.86	1.86	1.97
180.0	2.08	1.97	2.03	2.03	2.19	2.42	2.70	2.76	2.64
225.0	5.23	4.33	3.71	3.15	2.70	2.48	2.31	2.14	2.08
270.0	2.14	2.14	2.19	2.31	2.48	2.70	2.87	2.93	2.93
315.0	1.86	1.86	1.80	1.86	1.91	1.91	1.91	1.91	1.86
360.0	1.97	1.97	1.97	2.03	2.03	2.14	2.36	2.59	2.64
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	2.53	2.42	2.19	2.03	1.86	1.74	1.74	1.69	1.63
45.0	2.36	2.14	2.03	1.91	1.91	1.80	1.86	1.80	1.80
90.0	2.08	1.91	1.86	1.80	1.69	1.74	1.69	1.69	1.63
135.0	2.08	2.25	2.31	2.19	2.08	1.91	1.74	1.69	1.69
180.0	2.48	2.36	2.48	2.25	2.03	1.91	1.74	1.69	1.63
225.0	2.03	2.08	2.03	1.97	1.86	1.80	1.74	1.74	1.74
270.0	2.98	2.98	2.76	2.42	2.08	1.86	1.80	1.80	1.74
315.0	1.86	1.86	1.80	1.80	1.74	1.69	1.69	1.63	1.69
360.0	2.53	2.42	2.19	2.03	1.86	1.74	1.74	1.69	1.63
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.63	1.63	1.58	1.63	1.58	1.52	1.52	1.52	1.52
45.0	1.86	1.80	1.86	1.80	1.74	1.74	1.74	1.69	1.63
90.0	1.63	1.63	1.63	1.63	1.58	1.58	1.52	1.58	1.52
135.0	1.63	1.63	1.58	1.58	1.58	1.52	1.52	1.52	1.46
180.0	1.63	1.63	1.63	1.58	1.58	1.58	1.58	1.52	1.46
225.0	1.80	1.74	1.69	1.74	1.74	1.69	1.69	1.69	1.63
270.0	1.74	1.74	1.63	1.69	1.63	1.58	1.58	1.58	1.58
315.0	1.63	1.63	1.58	1.58	1.58	1.52	1.52	1.52	1.46
360.0	1.63	1.63	1.58	1.63	1.58	1.52	1.52	1.52	1.52
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	1.52	1.46	1.46	1.46	1.52	1.46	1.41	1.41	1.41
45.0	1.63	1.58	1.58	1.46	1.46	1.46	1.41	1.41	1.35
90.0	1.52	1.46	1.46	1.46	1.46	1.46	1.46	1.41	1.41
135.0	1.52	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46
180.0	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46
225.0	1.63	1.52	1.52	1.52	1.46	1.46	1.46	1.46	1.41
270.0	1.52	1.52	1.52	1.52	1.52	1.46	1.41	1.46	1.46
315.0	1.46	1.46	1.46	1.46	1.46	1.52	1.46	1.41	1.41
360.0	1.52	1.46	1.46	1.46	1.52	1.46	1.41	1.41	1.41

Intensity data(cd)

Appendix Page: 18 Total:18

C/ γ (°)	90.0
0.0	1.41
45.0	1.35
90.0	1.41
135.0	1.46
180.0	1.46
225.0	1.41
270.0	1.41
315.0	1.41
360.0	1.41