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Nata

LumCAT: 2-1562-M	
Luminaire: BJB47.319.6105	
Report No: NT2017072705	Voltage(V): 38.0000
Test No: GC2017072705	Current(A): 0.3500
LampCAT: CXA1512	Power (W): 13.3000
Lamp flux(lm): 1488.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 68	Width(mm): 68
Phm Type: C	Height(mm): 45

Photometric Results

Lumens(lm): 1332.94
Efficiency(%): 89.58%
Lumens(lm)/Power(W): 100.22
Central intensity(cd): 19095.460
Maximum intensity(cd): 19095.460
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=10.0
 [C90/270]Total=10.0
Field angle(10%Imax): [C0/180]Total=19.6
 [C90/270]Total=19.6
Maximum s/h(1/2): C0_180=0.17 C90_270=0.17
Maximum s/h(1/4): C0_180=0.17 C90_270=0.17
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.88%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.432%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	19095.455	4.568	4.568	.307%	.343%
1.0	18650.938	35.695	40.264	2.399%	3.021%
2.0	17333.387	66.337	106.6	4.458%	7.997%
3.0	14675.675	84.227	190.827	5.660%	14.316%
4.0	11966.764	91.540	282.367	6.152%	21.184%
5.0	9548.980	91.265	373.633	6.133%	28.031%
6.0	6787.826	77.807	451.439	5.229%	33.868%
7.0	4645.030	62.078	513.517	4.172%	38.525%
8.0	3283.027	50.105	563.622	3.367%	42.284%
9.0	2472.392	42.413	606.035	2.850%	45.466%
10.0	1784.816	33.987	640.022	2.284%	48.016%
11.0	1297.371	27.147	667.169	1.824%	50.053%
12.0	1100.239	25.085	692.254	1.686%	51.935%
13.0	927.385	22.877	715.131	1.537%	53.651%
14.0	829.181	21.998	737.129	1.478%	55.301%
15.0	762.343	21.637	758.766	1.454%	56.924%
16.0	706.608	21.358	780.124	1.435%	58.527%
17.0	664.995	21.321	801.445	1.433%	60.126%
18.0	631.256	21.391	822.837	1.438%	61.731%
19.0	601.531	21.476	844.312	1.443%	63.342%
20.0	575.924	21.601	865.913	1.452%	64.963%
21.0	554.791	21.803	887.716	1.465%	66.599%
22.0	537.268	22.071	909.787	1.483%	68.254%
23.0	522.631	22.394	932.18	1.505%	69.934%
24.0	511.543	22.816	954.997	1.533%	71.646%
25.0	501.630	23.248	978.245	1.562%	73.390%
26.0	494.374	23.766	1002.01	1.597%	75.173%
27.0	487.779	24.284	1026.294	1.632%	76.995%
28.0	480.475	24.736	1051.03	1.662%	78.851%
29.0	474.075	25.204	1076.235	1.694%	80.742%
30.0	468.315	25.678	1101.912	1.726%	82.668%
31.0	461.171	26.047	1127.959	1.750%	84.622%
32.0	454.256	26.397	1154.357	1.774%	86.603%
33.0	446.841	26.688	1181.044	1.794%	88.605%
34.0	434.242	26.628	1207.673	1.790%	90.603%
35.0	404.796	25.461	1233.134	1.711%	92.513%
36.0	351.377	22.649	1255.783	1.522%	94.212%
37.0	279.712	18.460	1274.243	1.241%	95.597%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	212.186	14.325	1288.568	.963%	96.671%
39.0	126.503	8.730	1297.298	.587%	97.326%
40.0	67.151	4.733	1302.032	.318%	97.682%
41.0	30.629	2.204	1304.235	.148%	97.847%
42.0	16.960	1.244	1305.48	.084%	97.940%
43.0	13.468	1.007	1306.487	.068%	98.016%
44.0	11.367	0.866	1307.353	.058%	98.081%
45.0	9.906	0.768	1308.121	.052%	98.138%
46.0	8.661	0.683	1308.804	.046%	98.190%
47.0	7.812	0.627	1309.431	.042%	98.237%
48.0	7.283	0.594	1310.024	.040%	98.281%
49.0	6.929	0.573	1310.598	.039%	98.324%
50.0	6.497	0.546	1311.143	.037%	98.365%
51.0	6.351	0.541	1311.685	.036%	98.406%
52.0	6.240	0.539	1312.224	.036%	98.446%
53.0	6.136	0.537	1312.761	.036%	98.486%
54.0	6.038	0.536	1313.297	.036%	98.527%
55.0	5.927	0.532	1313.829	.036%	98.567%
56.0	5.830	0.530	1314.359	.036%	98.606%
57.0	5.753	0.529	1314.888	.036%	98.646%
58.0	5.718	0.532	1315.42	.036%	98.686%
59.0	5.649	0.531	1315.951	.036%	98.726%
60.0	5.600	0.532	1316.483	.036%	98.766%
61.0	5.523	0.530	1317.013	.036%	98.805%
62.0	5.482	0.531	1317.544	.036%	98.845%
63.0	5.454	0.533	1318.076	.036%	98.885%
64.0	5.419	0.534	1318.611	.036%	98.925%
65.0	5.440	0.541	1319.151	.036%	98.966%
66.0	5.405	0.541	1319.693	.036%	99.007%
67.0	5.377	0.543	1320.236	.036%	99.047%
68.0	5.315	0.540	1320.776	.036%	99.088%
69.0	5.301	0.543	1321.319	.036%	99.128%
70.0	5.315	0.548	1321.866	.037%	99.170%
71.0	5.343	0.554	1322.42	.037%	99.211%
72.0	5.384	0.562	1322.982	.038%	99.253%
73.0	5.370	0.563	1323.545	.038%	99.296%
74.0	5.363	0.565	1324.11	.038%	99.338%
75.0	5.350	0.567	1324.677	.038%	99.380%

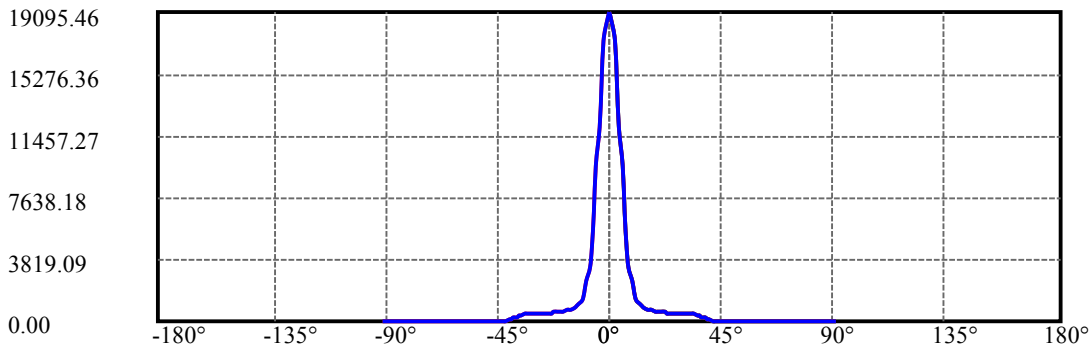
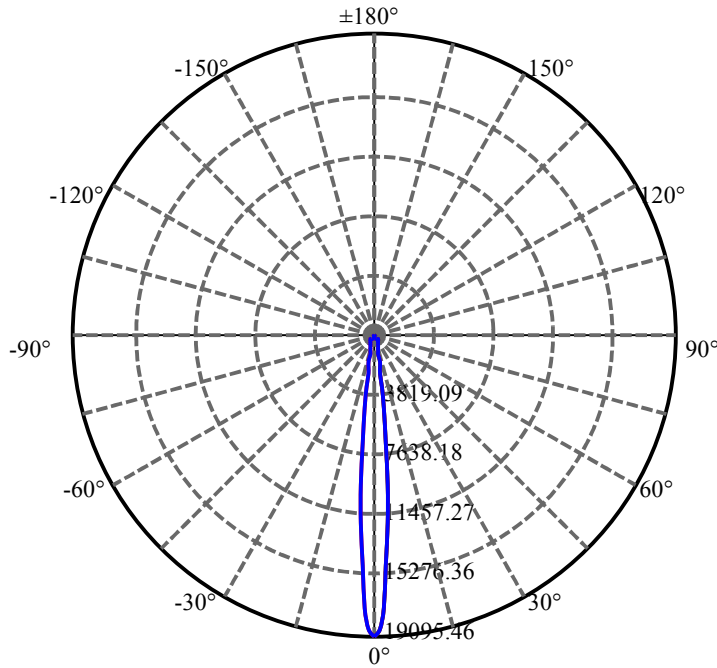
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.363	0.571	1325.248	.038%	99.423%
77.0	5.350	0.572	1325.819	.038%	99.466%
78.0	5.294	0.568	1326.387	.038%	99.509%
79.0	5.266	0.567	1326.954	.038%	99.551%
80.0	5.231	0.565	1327.519	.038%	99.594%
81.0	5.231	0.567	1328.085	.038%	99.636%
82.0	5.266	0.572	1328.657	.038%	99.679%
83.0	5.252	0.572	1329.229	.038%	99.722%
84.0	5.252	0.573	1329.802	.038%	99.765%
85.0	5.252	0.574	1330.376	.039%	99.808%
86.0	5.252	0.575	1330.95	.039%	99.851%
87.0	5.224	0.572	1331.522	.038%	99.894%
88.0	5.169	0.566	1332.089	.038%	99.936%
89.0	5.155	0.565	1332.654	.038%	99.979%
90.0	5.134	0.281	1332.935	.019%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1101.91	74.05%	82.67%
0-40	1302.03	87.50%	97.68%
0-60	1316.48	88.47%	98.77%
0-90	1332.65	89.56%	99.98%
0-120	1332.65	89.56%	99.98%
0-180	1332.94	89.58%	100.00%
60-90	16.70	1.12%	1.25%
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%
0-28.61	1066.35	71.66%	80.00%

ZONAL LUMEN SUMMARY

0-10	640.02
10-20	225.89
20-30	236.00
30-40	200.12
40-50	9.11
50-60	5.34
60-70	5.38
70-80	5.65
80-90	5.13
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



C0(Max): —————

C0/C180: —————

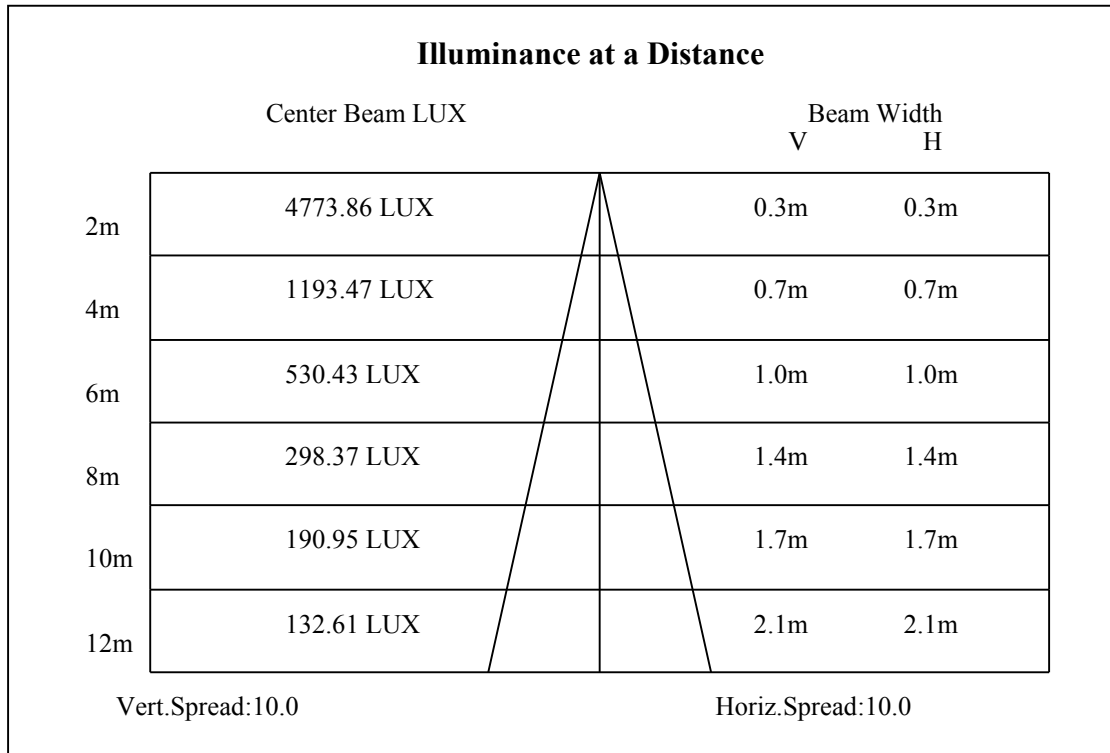
C90/C270: —————

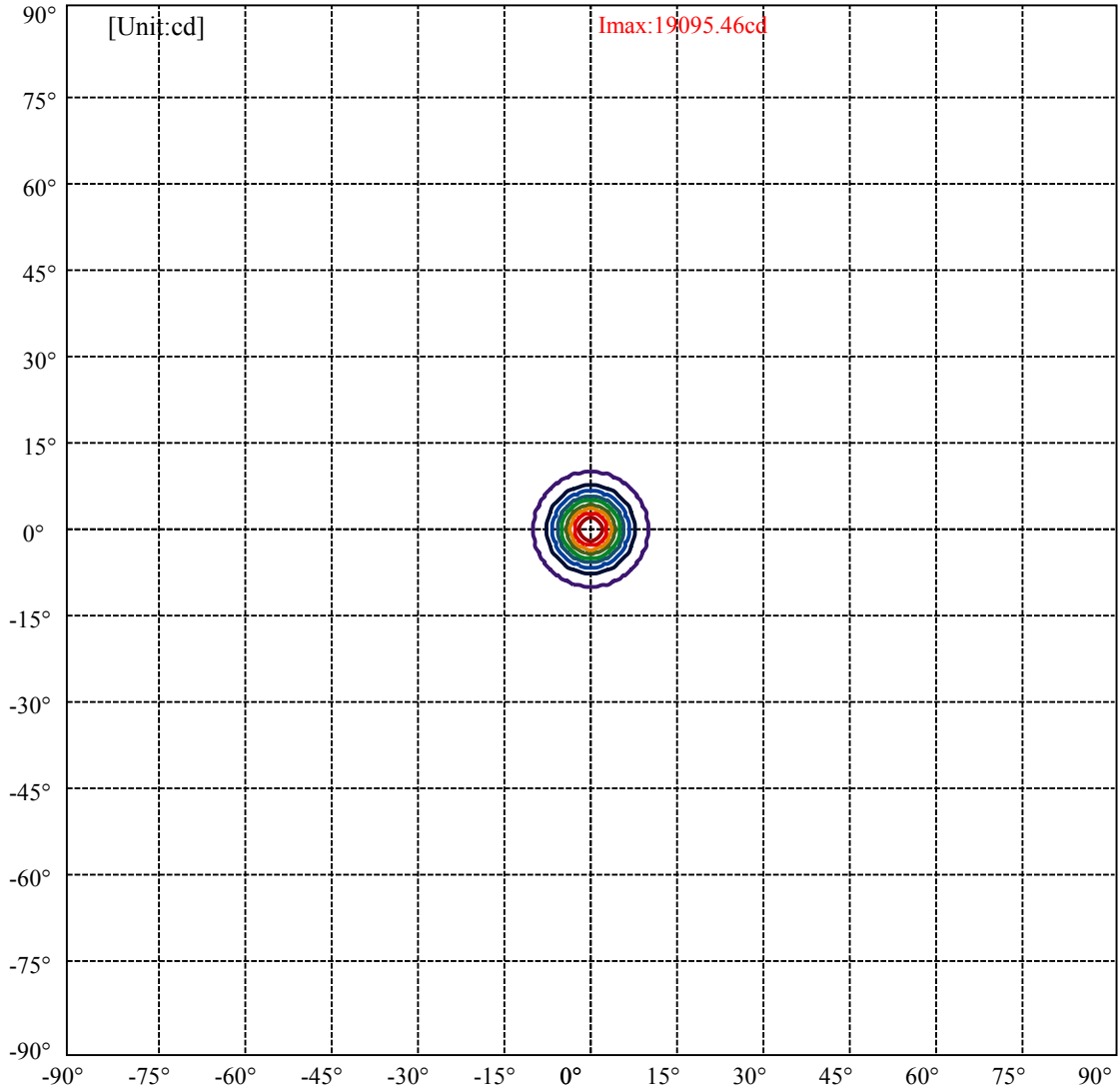
Field angle(10%Imax):C0/180Left:9.8 Right:9.8

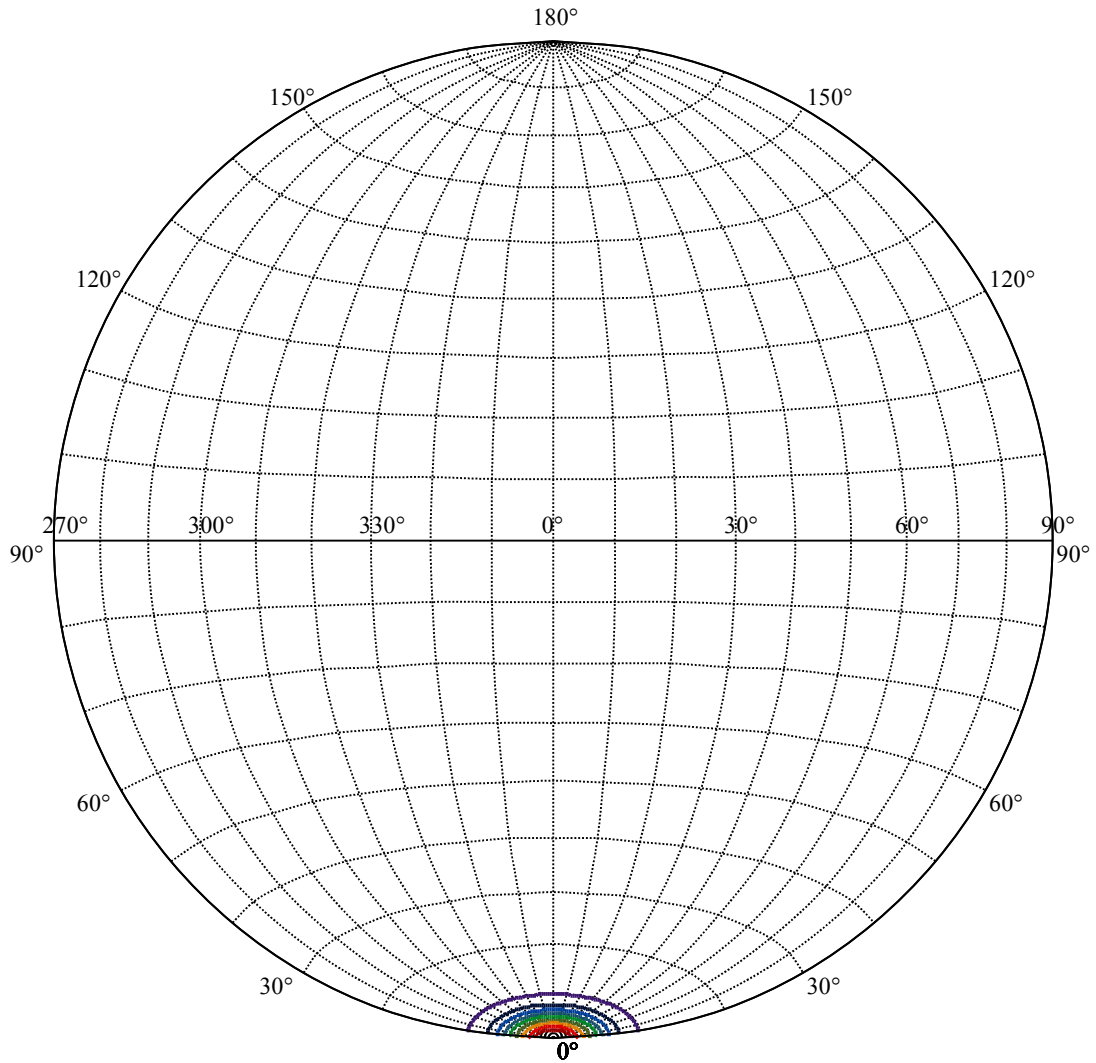
:C90/270Left:9.8 Right:9.8

Beam Angle(50%Imax):C0/180Left:5.0 Right:5.0

:C90/270Left:5.0 Right:5.0







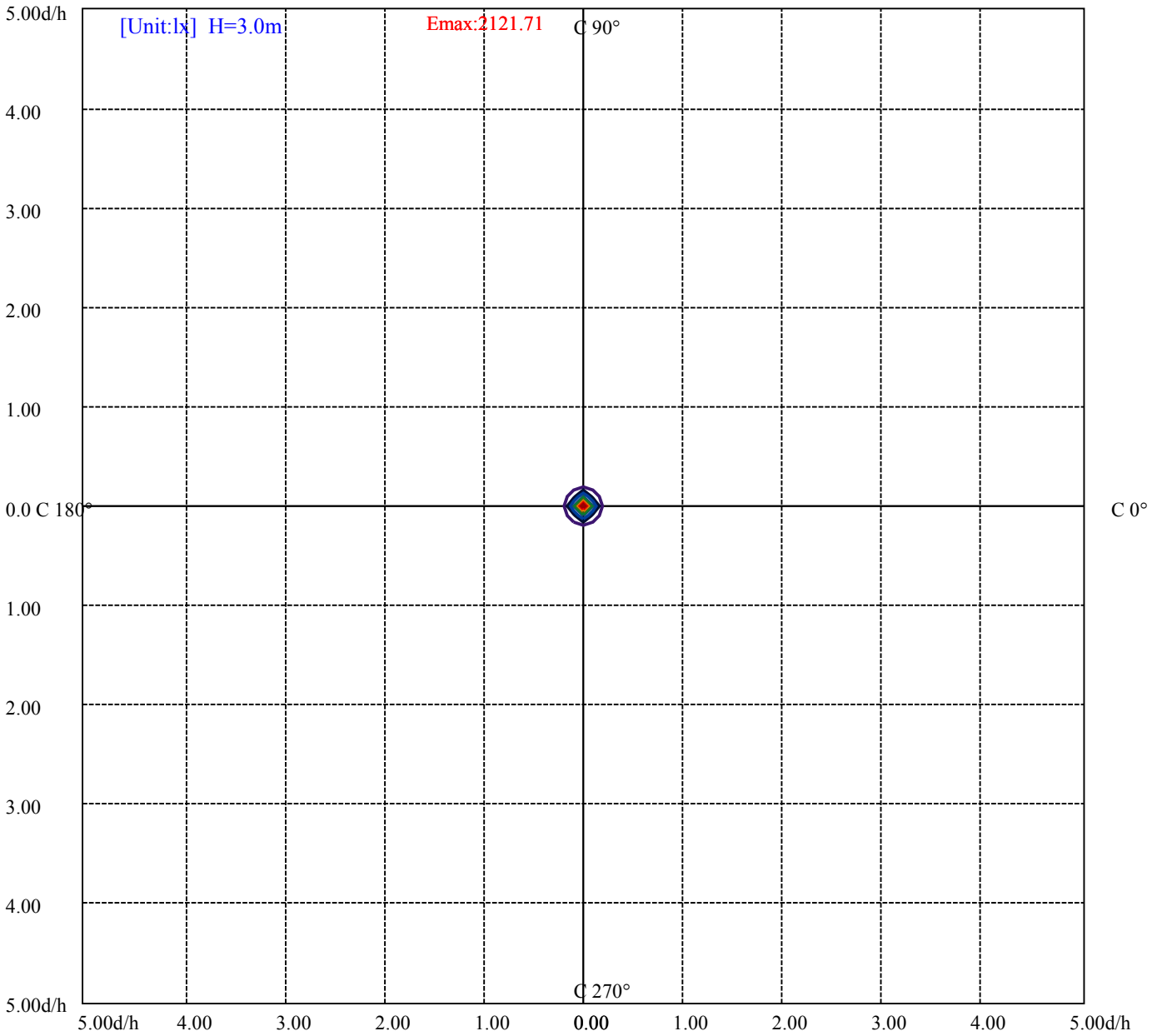
House

[Unit:cd]

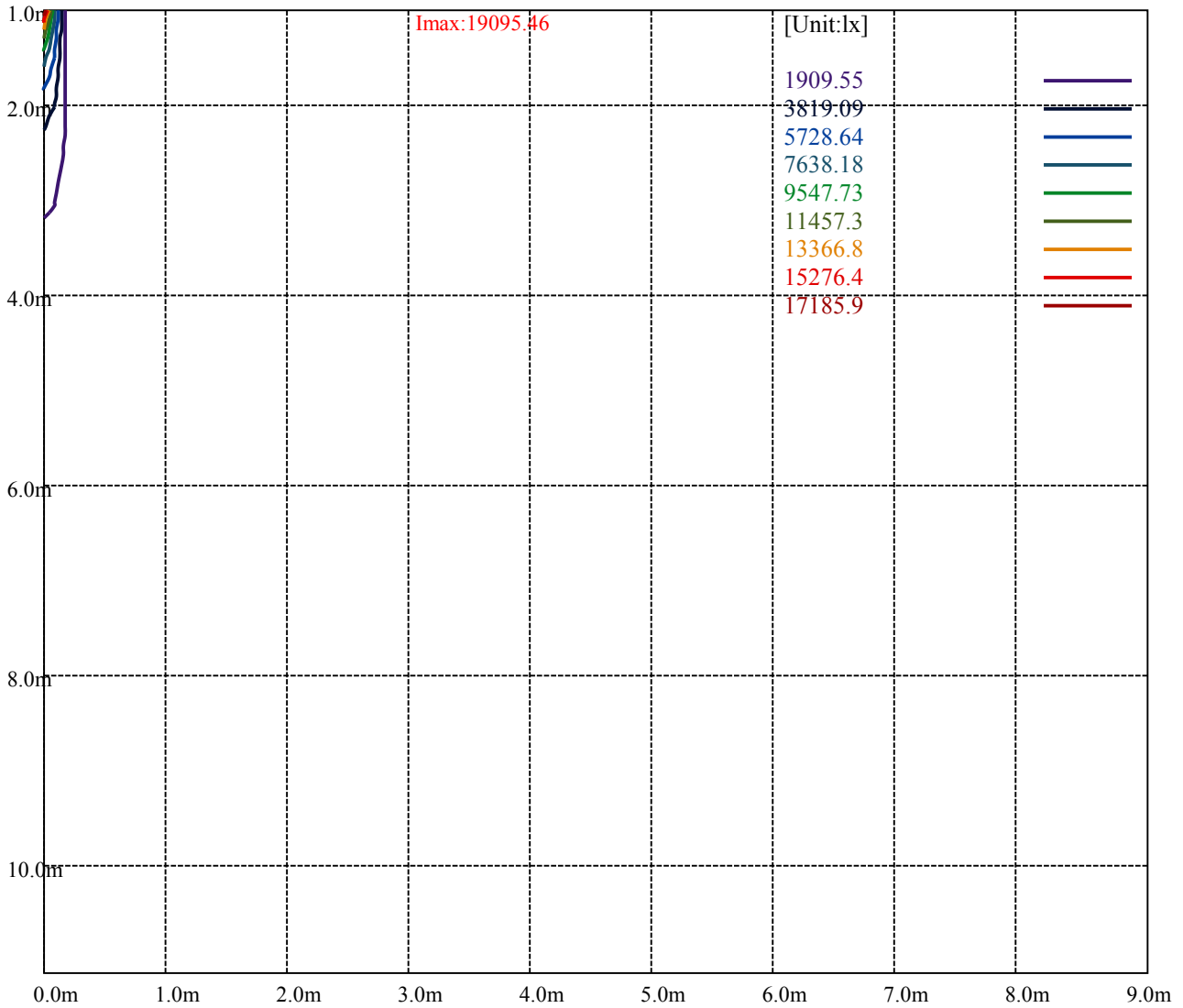
Road

Imax:19095.46

(10%Imax) 1909.55	—
(20%Imax) 3819.09	—
(30%Imax) 5728.64	—
(40%Imax) 7638.18	—
(50%Imax) 9547.73	—
(60%Imax) 11457.3	—
(70%Imax) 13366.8	—
(80%Imax) 15276.4	—
(90%Imax) 17185.9	—



- (10%Emax) 212.1711
- (20%Emax) 424.3422
- (30%Emax) 636.5134
- (40%Emax) 848.6844
- (50%Emax) 1060.854
- (60%Emax) 1273.022
- (70%Emax) 1485.2
- (80%Emax) 1697.367
- (90%Emax) 1909.533



Luminance Table

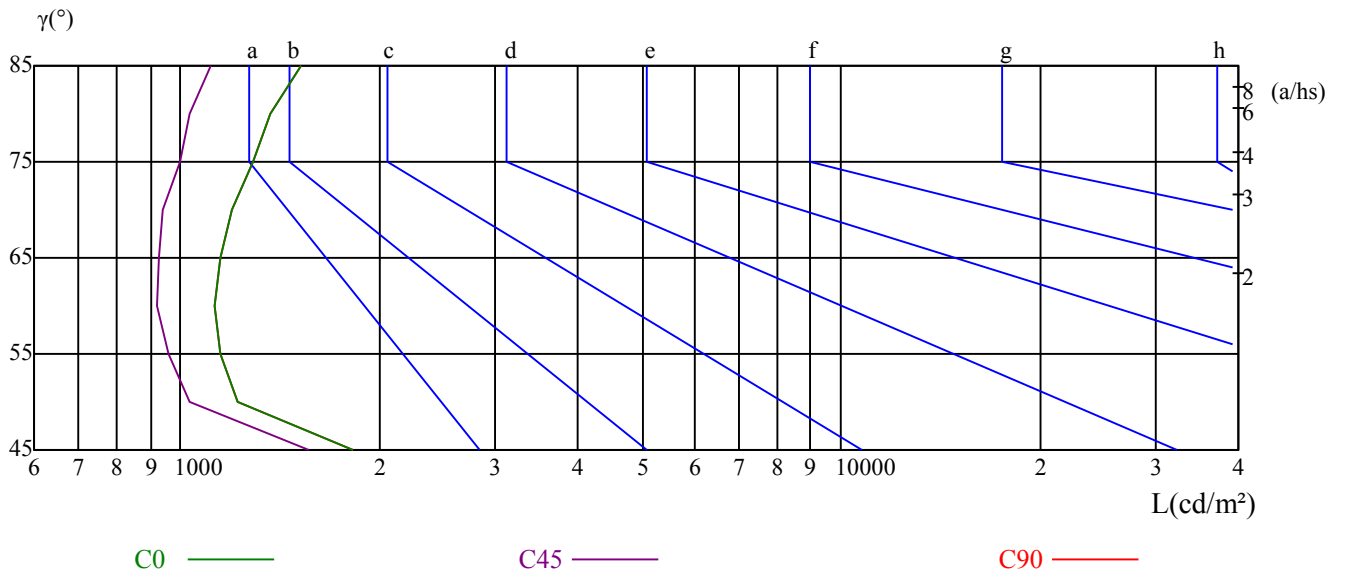
γ	45	50	55	60	65	70	75	80	85
C0	1823	1222	1149	1129	1151	1192	1288	1371	1522
C45	1565	1033	956	924	926	941	995	1033	1114
C90	1823	1222	1149	1129	1151	1192	1288	1371	1522

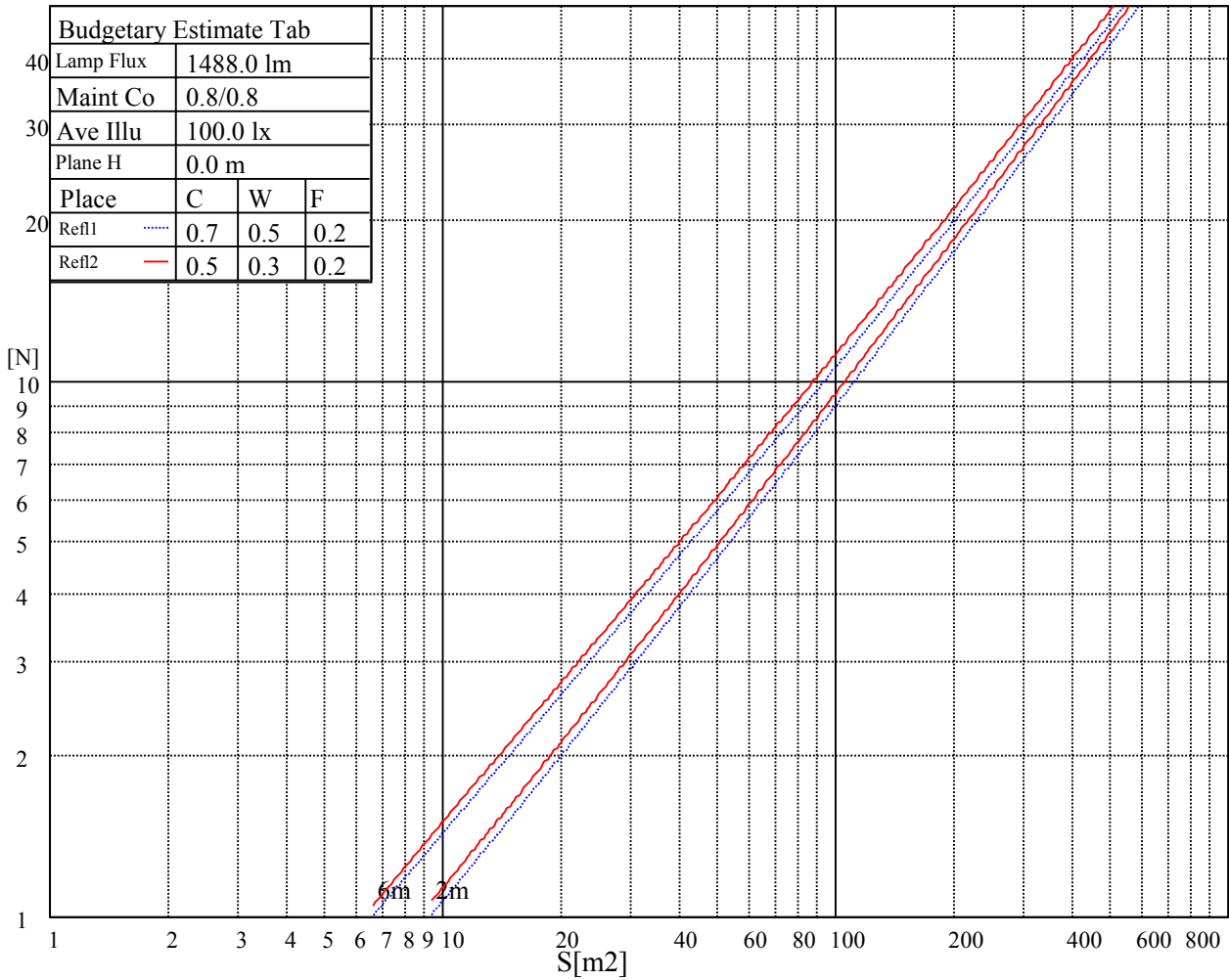
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2784	2784	2784	4470	4470	4470	13032	13032	13032

Glare Table

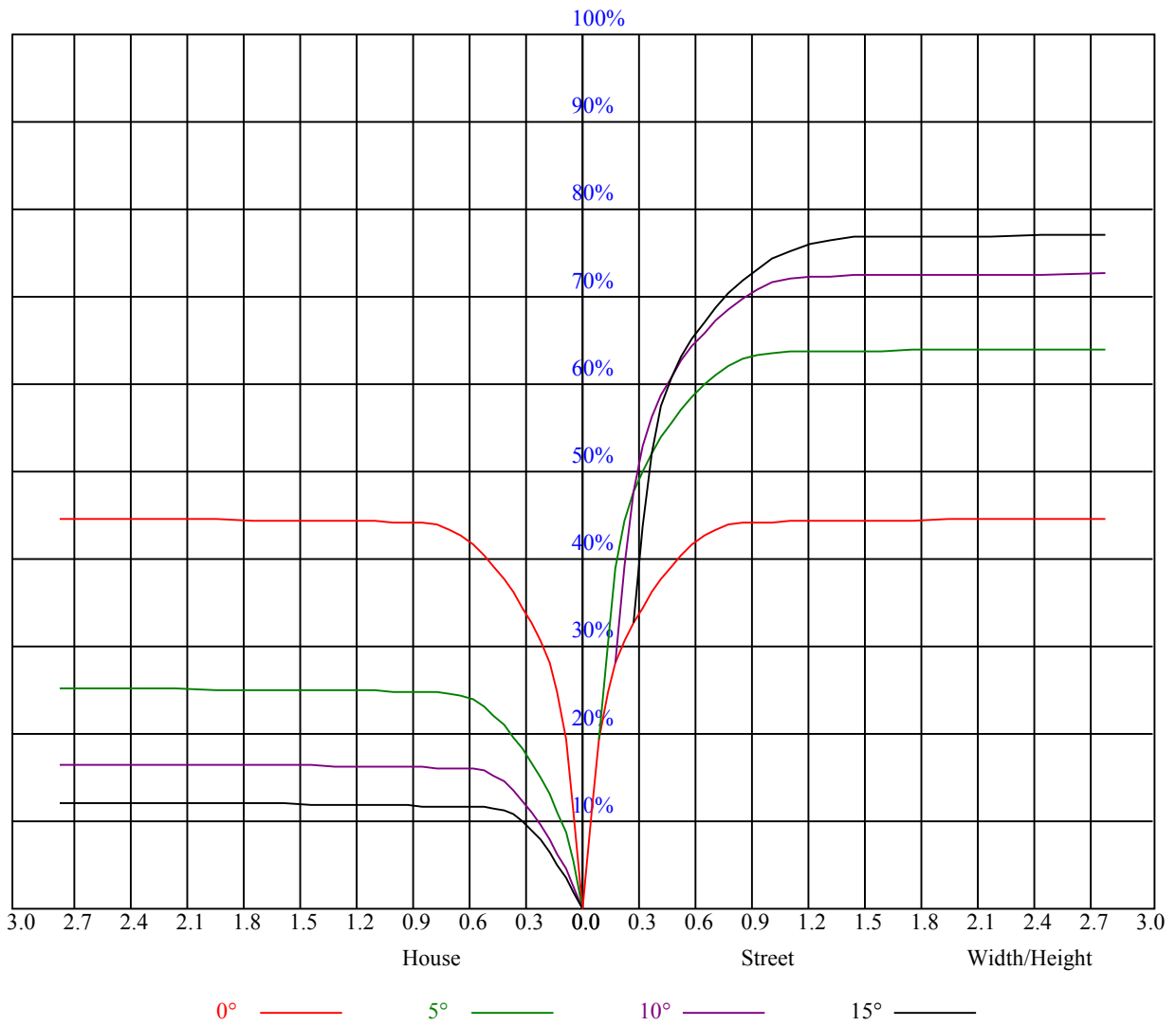
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.96	0.93	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.84	0.82
3	0.91	0.88	0.85	0.90	0.87	0.84	0.88	0.85	0.83	0.86	0.83	0.82	0.84	0.82	0.80	0.79
4	0.87	0.83	0.81	0.86	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
5	0.84	0.80	0.77	0.83	0.79	0.77	0.82	0.78	0.76	0.80	0.78	0.75	0.79	0.77	0.75	0.74
6	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
7	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
8	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
9	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.66
10	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.64



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	18921.54	19366.76	18810.24	17457.91	14986.98	11853.79	9009.99	6266.37	4424.30
45.0	19088.50	19483.63	18949.37	17658.25	15309.76	12276.74	9082.34	6516.80	4552.30
90.0	19249.89	18960.50	17903.12	15254.10	10844.27	10145.84	7171.27	4784.37	3319.62
135.0	19121.89	18732.33	17329.91	15348.71	12443.70	9705.64	6861.84	4619.08	3266.75
180.0	18921.54	17725.03	15788.36	11094.70	9713.43	7140.66	4803.29	3179.38	2284.50
225.0	19088.50	17691.64	15699.32	10667.86	9623.27	7010.43	4920.16	3166.58	2285.05
270.0	19249.89	18609.90	17040.52	15170.63	11825.97	9026.69	6539.06	4262.91	3044.14
315.0	19121.89	18637.72	17146.26	14753.24	10986.74	9232.04	5914.65	4364.75	3087.55
360.0	18921.54	19366.76	18810.24	17457.91	14986.98	11853.79	9009.99	6266.37	4424.30

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2994.06	2866.06	1614.45	1293.34	1058.49	906.01	815.85	743.51	691.75
45.0	3049.71	2414.17	1603.32	1277.20	1031.78	906.56	820.86	746.29	702.88
90.0	2366.31	1657.30	1223.78	1091.38	916.97	826.93	762.04	708.39	665.54
135.0	2893.88	1712.96	1361.24	1125.83	939.96	844.79	779.12	725.14	683.40
180.0	1679.01	1218.77	1090.88	929.83	833.38	758.75	702.66	663.81	628.14
225.0	1726.87	1219.33	1094.44	952.76	843.57	769.49	722.08	678.06	644.17
270.0	2921.71	1615.57	1299.46	1084.09	910.46	820.30	756.31	701.77	659.47
315.0	2147.60	1574.38	1091.38	1047.47	884.47	800.60	739.83	685.91	644.61
360.0	2994.06	2866.06	1614.45	1293.34	1058.49	906.01	815.85	743.51	691.75

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	653.91	628.31	590.46	567.09	550.95	528.69	516.45	507.54	496.97
45.0	665.04	628.86	598.25	574.32	552.62	533.70	520.90	508.66	500.86
90.0	632.42	600.37	576.16	553.51	535.20	521.73	509.77	499.92	492.46
135.0	650.01	616.06	588.24	566.53	545.94	529.80	517.00	505.87	499.19
180.0	592.97	567.81	548.56	527.91	514.22	503.48	495.30	486.06	481.05
225.0	612.39	585.18	565.59	545.78	529.41	518.34	509.16	499.42	493.24
270.0	627.75	597.70	572.65	554.85	537.04	524.24	513.66	504.76	497.53
315.0	615.56	587.96	567.48	548.34	532.75	521.07	510.10	500.81	493.69
360.0	653.91	628.31	590.46	567.09	550.95	528.69	516.45	507.54	496.97

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	489.18	483.06	475.26	470.26	464.69	457.46	451.33	445.77	434.64
45.0	493.07	485.84	479.72	474.15	465.80	459.68	453.00	444.10	434.08
90.0	485.73	478.05	471.93	465.86	458.96	451.33	444.27	435.92	411.15
135.0	491.96	484.17	477.49	471.37	463.02	457.46	449.66	441.87	411.82
180.0	475.54	468.70	462.63	457.46	451.61	444.32	435.75	413.66	364.07
225.0	487.90	480.33	474.32	468.14	459.79	452.73	444.93	416.94	372.31
270.0	491.96	484.73	478.60	473.04	466.36	459.68	451.89	441.87	409.04
315.0	486.90	478.94	472.65	466.25	459.13	451.39	443.88	433.80	401.25
360.0	489.18	483.06	475.26	470.26	464.69	457.46	451.33	445.77	434.64

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	404.59	350.05	289.39	185.15	114.42	52.48	22.37	16.42	13.25
45.0	404.03	342.81	284.94	190.05	112.08	54.59	21.59	15.14	12.74
90.0	360.57	287.27	215.32	134.29	66.34	29.33	16.97	13.52	11.41
135.0	357.28	291.06	237.13	128.00	74.85	27.32	16.36	14.19	11.69
180.0	289.50	208.03	138.02	69.51	27.77	16.14	12.91	10.74	9.52
225.0	295.90	203.30	139.02	68.73	25.10	15.97	13.02	10.74	9.68
270.0	352.83	284.38	196.06	117.70	60.55	24.04	15.97	13.41	11.19
315.0	346.32	270.80	197.62	118.59	56.10	25.15	16.47	13.58	11.46
360.0	404.59	350.05	289.39	185.15	114.42	52.48	22.37	16.42	13.25

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	11.24	10.07	9.13	8.29	7.62	6.85	6.68	6.51	6.29
45.0	11.07	9.91	9.02	8.13	7.35	6.79	6.51	6.40	6.29
90.0	9.79	8.13	7.35	7.01	6.68	6.51	6.40	6.34	6.23
135.0	10.24	9.07	8.13	7.62	7.35	6.62	6.46	6.34	6.23
180.0	8.63	7.74	6.96	6.46	6.29	6.18	6.07	6.01	5.95
225.0	8.74	7.68	6.79	6.51	6.29	6.18	6.07	6.01	5.95
270.0	9.68	8.40	7.68	7.29	7.12	6.34	6.23	6.07	6.07
315.0	9.85	8.29	7.46	6.96	6.73	6.51	6.40	6.23	6.07
360.0	11.24	10.07	9.13	8.29	7.62	6.85	6.68	6.51	6.29
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.18	6.12	5.95	5.90	5.84	5.73	5.68	5.62	5.57
45.0	6.18	6.07	5.95	5.90	5.90	5.79	5.73	5.62	5.62
90.0	6.12	5.95	5.90	5.79	5.79	5.73	5.68	5.57	5.51
135.0	6.12	6.07	6.01	5.84	5.79	5.68	5.68	5.62	5.57
180.0	5.84	5.68	5.62	5.57	5.57	5.57	5.51	5.45	5.40
225.0	5.84	5.73	5.62	5.62	5.57	5.51	5.45	5.40	5.34
270.0	5.95	5.84	5.73	5.68	5.62	5.57	5.51	5.45	5.40
315.0	6.07	5.95	5.84	5.73	5.68	5.62	5.57	5.45	5.45
360.0	6.18	6.12	5.95	5.90	5.84	5.73	5.68	5.62	5.57
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.57	5.45	5.45	5.45	5.45	5.34	5.34	5.34	5.34
45.0	5.57	5.62	5.57	5.51	5.45	5.40	5.40	5.40	5.40
90.0	5.51	5.51	5.51	5.45	5.40	5.34	5.34	5.34	5.40
135.0	5.57	5.45	5.45	5.40	5.40	5.34	5.34	5.34	5.34
180.0	5.34	5.34	5.40	5.34	5.34	5.29	5.29	5.29	5.45
225.0	5.34	5.29	5.34	5.34	5.29	5.29	5.23	5.23	5.23
270.0	5.34	5.34	5.40	5.40	5.34	5.29	5.23	5.29	5.29
315.0	5.40	5.34	5.40	5.34	5.34	5.23	5.23	5.29	5.29
360.0	5.57	5.45	5.45	5.45	5.45	5.34	5.34	5.34	5.34
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.34	5.34	5.34	5.34	5.45	5.57	5.57	5.40	5.23
45.0	5.40	5.40	5.29	5.29	5.29	5.29	5.29	5.29	5.29
90.0	5.29	5.29	5.23	5.29	5.29	5.29	5.29	5.23	5.23
135.0	5.34	5.29	5.29	5.23	5.29	5.23	5.23	5.23	5.23
180.0	5.90	5.84	6.01	5.95	5.90	5.62	5.29	5.29	5.18
225.0	5.29	5.29	5.29	5.23	5.23	5.23	5.18	5.23	5.23
270.0	5.29	5.29	5.23	5.23	5.23	5.29	5.29	5.29	5.29
315.0	5.23	5.23	5.23	5.23	5.23	5.29	5.23	5.18	5.18
360.0	5.34	5.34	5.34	5.34	5.45	5.57	5.57	5.40	5.23
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.23	5.29	5.23	5.23	5.23	5.18	5.18	5.23	5.12
45.0	5.23	5.23	5.23	5.29	5.23	5.23	5.23	5.18	5.18
90.0	5.29	5.34	5.40	5.34	5.34	5.34	5.34	5.18	5.12
135.0	5.23	5.23	5.23	5.18	5.18	5.18	5.29	5.18	5.12
180.0	5.12	5.23	5.18	5.18	5.18	5.18	5.12	5.12	5.18
225.0	5.23	5.23	5.23	5.18	5.18	5.23	5.12	5.18	5.18
270.0	5.34	5.34	5.34	5.40	5.40	5.45	5.18	5.12	5.18
315.0	5.18	5.23	5.18	5.23	5.29	5.23	5.34	5.18	5.18
360.0	5.23	5.29	5.23	5.23	5.23	5.18	5.18	5.23	5.12

Intensity data(cd)

C/γ(°)	90.0
0.0	5.12
45.0	5.12
90.0	5.12
135.0	5.18
180.0	5.18
225.0	5.12
270.0	5.12
315.0	5.12
360.0	5.12