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Nata

LumCAT: 3-2101-M	
Luminaire: 92.70.136.00	
Report No: GC2017071302	Voltage(V): 51.2500
Test No: NT-0010	Current(A): 0.8000
LampCAT: CITIZEN CLU044	Power (W): 41.0000
Lamp flux(lm): 5855.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 84	Width(mm): 84
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 5159.06
Efficiency(%): 88.11%
Lumens(lm)/Power(W): 125.83
Central intensity(cd): 13476.040
Maximum intensity(cd): 13476.040
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=32.3
 [C90/270]Total=32.3
Field angle(10%Imax): [C0/180]Total=65.5
 [C90/270]Total=65.5
Maximum s/h(1/2): C0_180=0.54 C90_270=0.54
Maximum s/h(1/4): C0_180=0.52 C90_270=0.52
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.11%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.681%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/7/13
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.46

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13476.035	0.000	0	.000%	.000%
1.0	13461.426	12.889	12.889	.220%	.250%
2.0	13436.383	38.606	51.495	.659%	.998%
3.0	13384.210	64.146	115.641	1.096%	2.242%
4.0	13286.124	89.274	204.916	1.525%	3.972%
5.0	13133.082	113.654	318.57	1.941%	6.175%
6.0	12921.606	136.924	455.494	2.339%	8.829%
7.0	12646.130	158.699	614.192	2.710%	11.905%
8.0	12303.177	178.557	792.75	3.050%	15.366%
9.0	11819.565	195.502	988.252	3.339%	19.156%
10.0	11252.614	208.795	1197.046	3.566%	23.203%
11.0	10755.854	219.910	1416.956	3.756%	27.465%
12.0	10085.392	227.825	1644.781	3.891%	31.881%
13.0	9314.339	230.226	1875.007	3.932%	36.344%
14.0	8493.478	227.938	2102.945	3.893%	40.762%
15.0	7673.312	221.945	2324.89	3.791%	45.064%
16.0	6855.303	212.885	2537.775	3.636%	49.191%
17.0	6061.224	201.145	2738.92	3.435%	53.089%
18.0	5324.189	187.721	2926.641	3.206%	56.728%
19.0	4717.725	174.709	3101.35	2.984%	60.115%
20.0	4122.392	161.799	3263.148	2.763%	63.251%
21.0	3594.189	148.174	3411.322	2.531%	66.123%
22.0	3207.063	136.674	3547.996	2.334%	68.772%
23.0	2852.423	127.144	3675.141	2.172%	71.237%
24.0	2585.156	118.885	3794.026	2.030%	73.541%
25.0	2374.376	112.769	3906.795	1.926%	75.727%
26.0	2208.047	108.169	4014.963	1.847%	77.824%
27.0	2086.657	105.071	4120.034	1.795%	79.860%
28.0	1989.266	103.194	4223.228	1.762%	81.860%
29.0	1889.302	101.474	4324.702	1.733%	83.827%
30.0	1770.277	98.808	4423.51	1.688%	85.743%
31.0	1636.157	94.796	4518.306	1.619%	87.580%
32.0	1479.220	89.252	4607.558	1.524%	89.310%
33.0	1301.802	81.930	4689.488	1.399%	90.898%
34.0	1139.084	73.868	4763.356	1.262%	92.330%
35.0	993.061	66.217	4829.573	1.131%	93.613%
36.0	821.244	57.768	4887.341	.987%	94.733%
37.0	671.144	48.673	4936.014	.831%	95.677%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	515.063	39.594	4975.608	.676%	96.444%
39.0	360.796	29.895	5005.504	.511%	97.024%
40.0	254.189	21.448	5026.952	.366%	97.439%
41.0	150.447	14.409	5041.361	.246%	97.719%
42.0	75.464	8.208	5049.569	.140%	97.878%
43.0	48.034	4.575	5054.143	.078%	97.966%
44.0	36.271	3.182	5057.325	.054%	98.028%
45.0	29.210	2.517	5059.842	.043%	98.077%
46.0	26.351	2.173	5062.015	.037%	98.119%
47.0	25.412	2.059	5064.073	.035%	98.159%
48.0	24.960	2.036	5066.11	.035%	98.198%
49.0	24.619	2.036	5068.146	.035%	98.238%
50.0	24.278	2.039	5070.184	.035%	98.277%
51.0	24.014	2.043	5072.227	.035%	98.317%
52.0	23.784	2.051	5074.279	.035%	98.357%
53.0	23.534	2.058	5076.337	.035%	98.396%
54.0	23.325	2.065	5078.402	.035%	98.437%
55.0	23.151	2.075	5080.477	.035%	98.477%
56.0	22.970	2.084	5082.561	.036%	98.517%
57.0	22.817	2.094	5084.654	.036%	98.558%
58.0	22.671	2.104	5086.758	.036%	98.598%
59.0	22.539	2.114	5088.872	.036%	98.639%
60.0	22.442	2.125	5090.997	.036%	98.681%
61.0	22.351	2.138	5093.134	.037%	98.722%
62.0	22.254	2.149	5095.283	.037%	98.764%
63.0	22.177	2.161	5097.444	.037%	98.806%
64.0	22.108	2.173	5099.617	.037%	98.848%
65.0	22.024	2.184	5101.801	.037%	98.890%
66.0	21.975	2.195	5103.997	.037%	98.933%
67.0	21.913	2.207	5106.204	.038%	98.975%
68.0	21.864	2.218	5108.421	.038%	99.018%
69.0	21.808	2.228	5110.649	.038%	99.062%
70.0	21.753	2.237	5112.886	.038%	99.105%
71.0	21.690	2.245	5115.132	.038%	99.148%
72.0	21.655	2.254	5117.386	.038%	99.192%
73.0	21.648	2.264	5119.65	.039%	99.236%
74.0	21.614	2.274	5121.924	.039%	99.280%
75.0	21.572	2.282	5124.206	.039%	99.324%

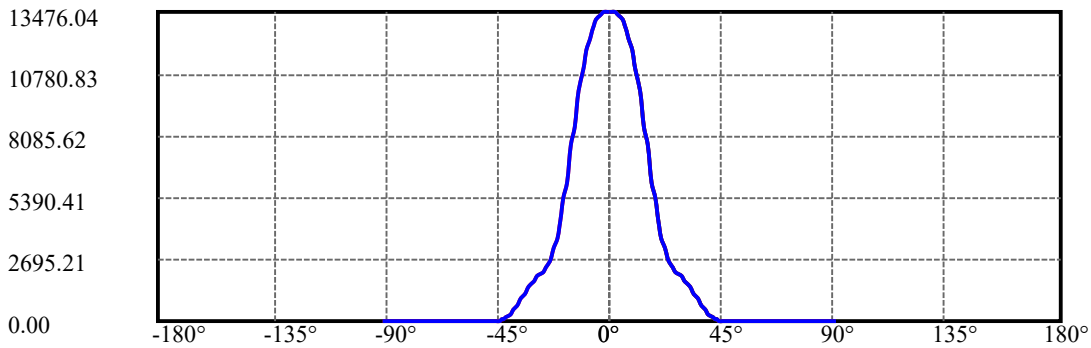
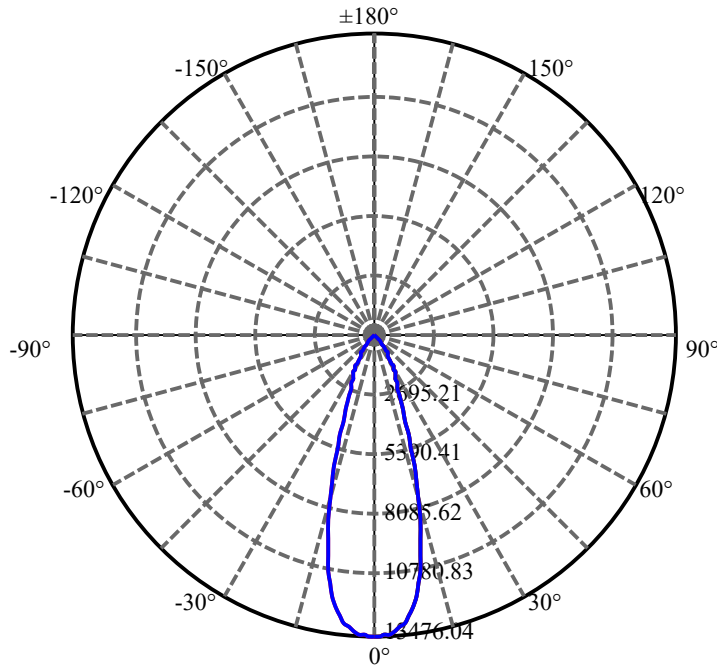
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	21.551	2.289	5126.495	.039%	99.369%
77.0	21.509	2.296	5128.791	.039%	99.413%
78.0	21.495	2.302	5131.093	.039%	99.458%
79.0	21.488	2.310	5133.403	.039%	99.503%
80.0	21.482	2.317	5135.719	.040%	99.548%
81.0	21.461	2.322	5138.042	.040%	99.593%
82.0	21.482	2.329	5140.37	.040%	99.638%
83.0	21.468	2.335	5142.705	.040%	99.683%
84.0	21.475	2.339	5145.044	.040%	99.728%
85.0	21.454	2.343	5147.387	.040%	99.774%
86.0	21.419	2.343	5149.731	.040%	99.819%
87.0	21.287	2.337	5152.068	.040%	99.864%
88.0	21.266	2.331	5154.399	.040%	99.910%
89.0	21.266	2.331	5156.73	.040%	99.955%
90.0	21.273	2.332	5159.063	.040%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	4423.51	75.55%	85.74%
0-40	5026.95	85.86%	97.44%
0-60	5091.00	86.95%	98.68%
0-90	5156.73	88.07%	99.95%
0-120	5156.73	88.07%	99.95%
0-180	5159.06	88.11%	100.00%
60-90	67.86	1.16%	1.32%
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%
0-27.07	4127.25	70.49%	80.00%

ZONAL LUMEN SUMMARY

0-10	1197.05
10-20	2066.10
20-30	1160.36
30-40	603.44
40-50	43.23
50-60	20.81
60-70	21.89
70-80	22.83
80-90	21.01
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



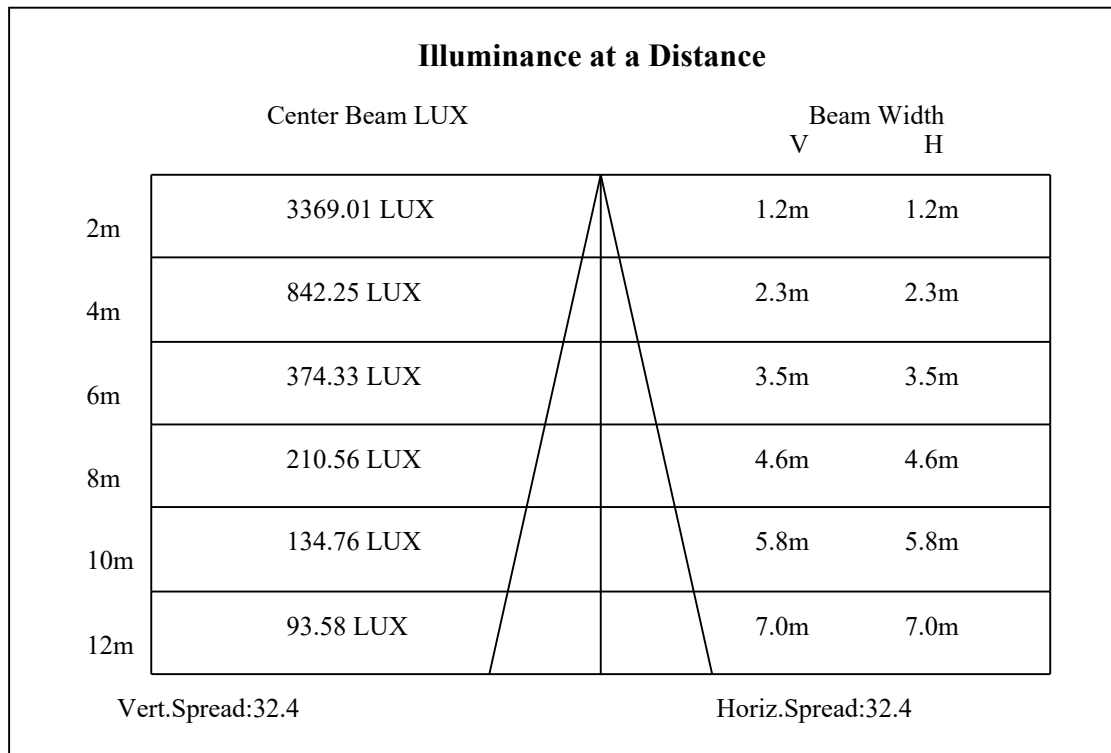
C0(Max): ———

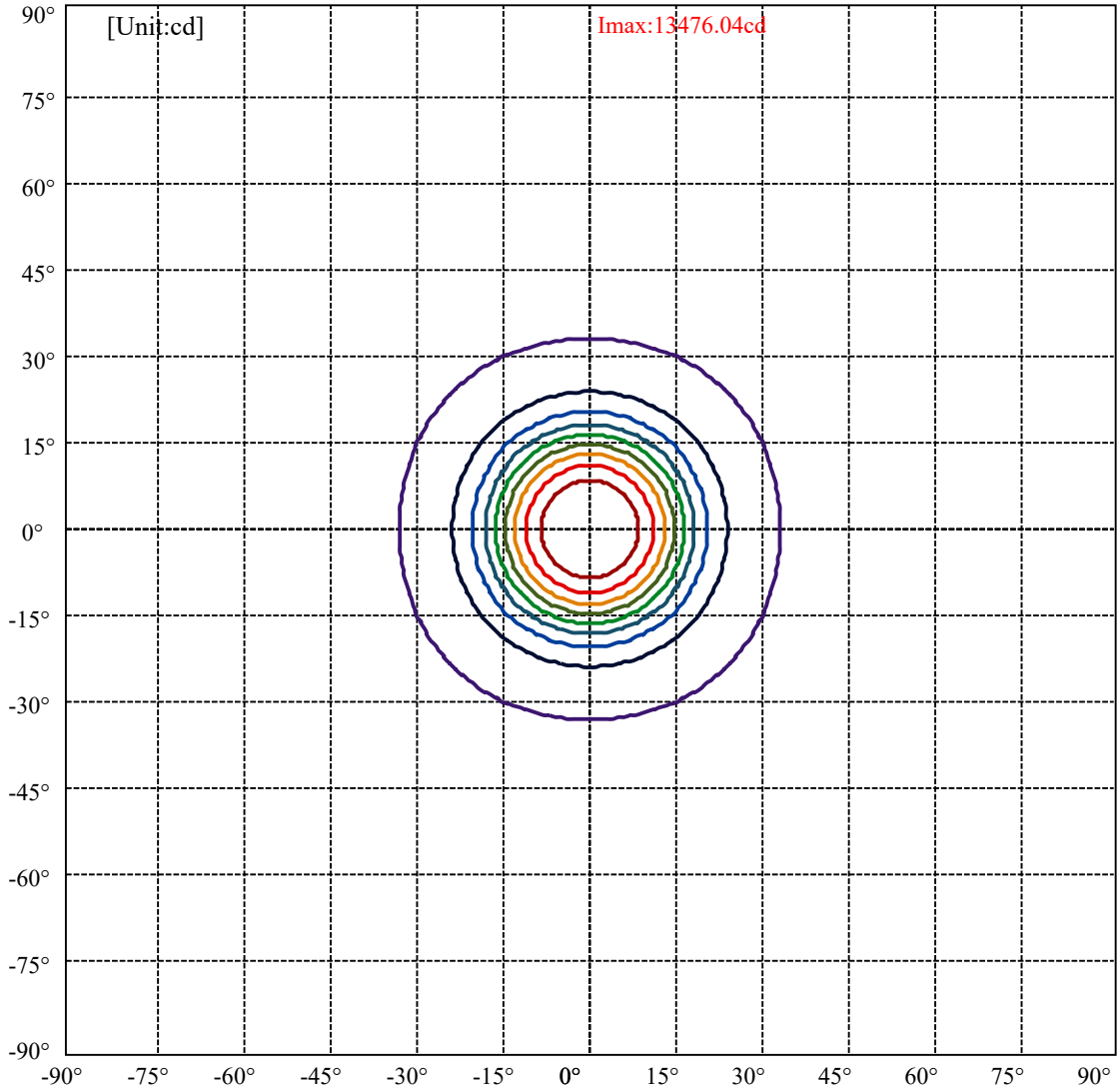
C0/C180: ———

C90/C270: ———

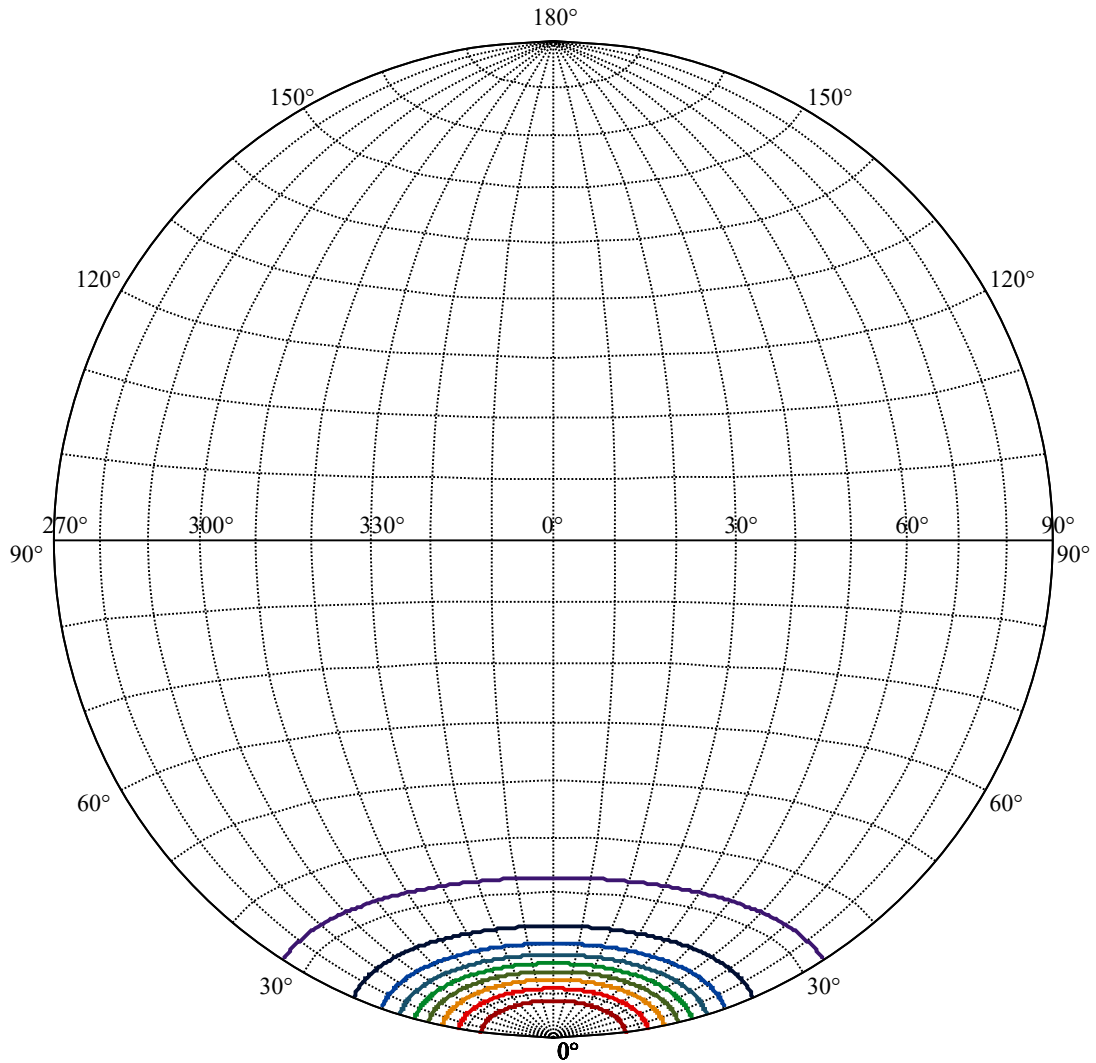
Field angle(10%Imax):C0/180Left:32.7 Right:32.7
:C90/270Left:32.7 Right:32.7

Beam Angle(50%Imax):C0/180Left:16.1 Right:16.1
:C90/270Left:16.1 Right:16.1





(10%Imax) 1347.6	—
(20%Imax) 2695.21	—
(30%Imax) 4042.81	—
(40%Imax) 5390.41	—
(50%Imax) 6738.02	—
(60%Imax) 8085.62	—
(70%Imax) 9433.22	—
(80%Imax) 10780.8	—
(90%Imax) 12128.4	—



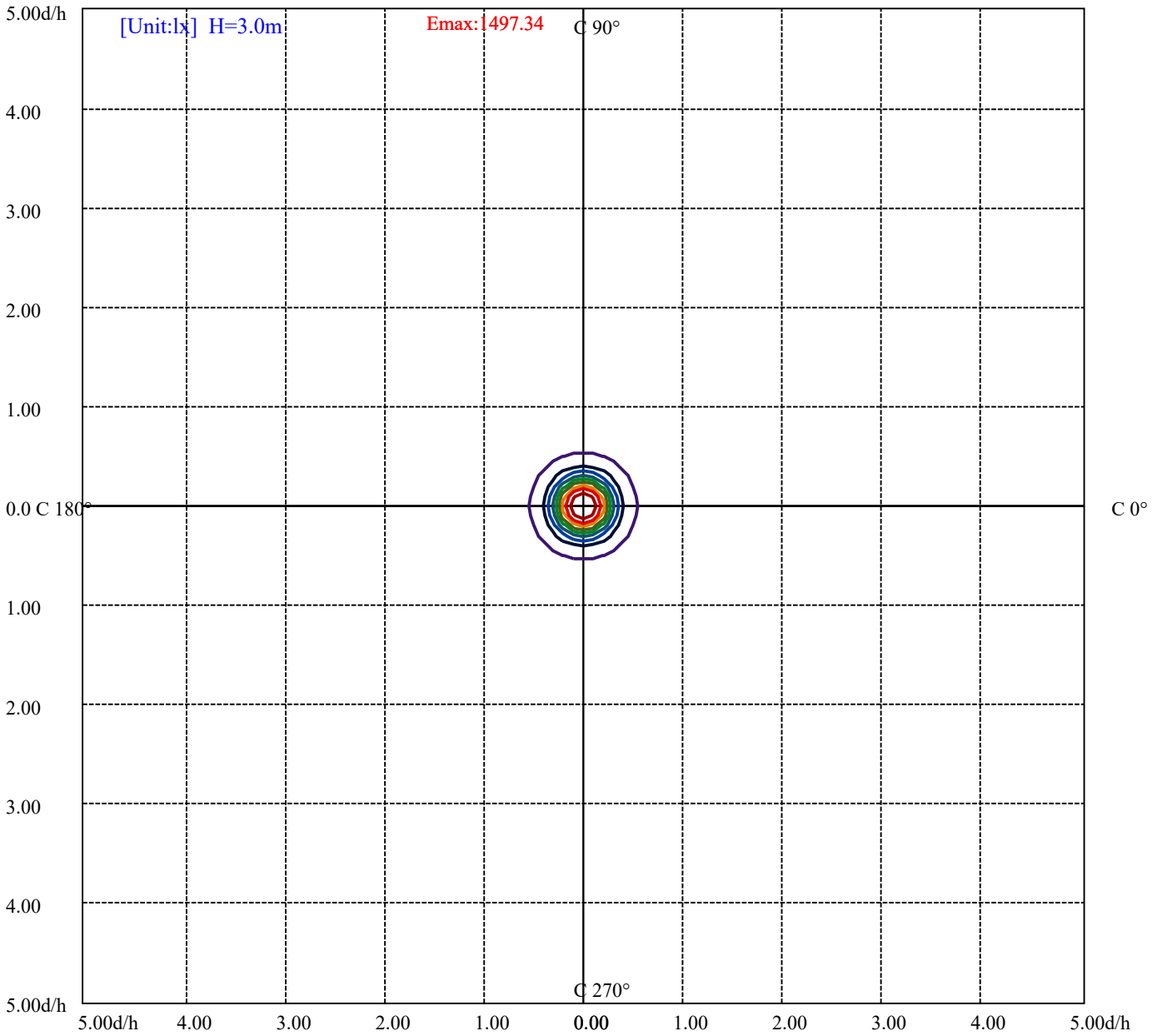
House

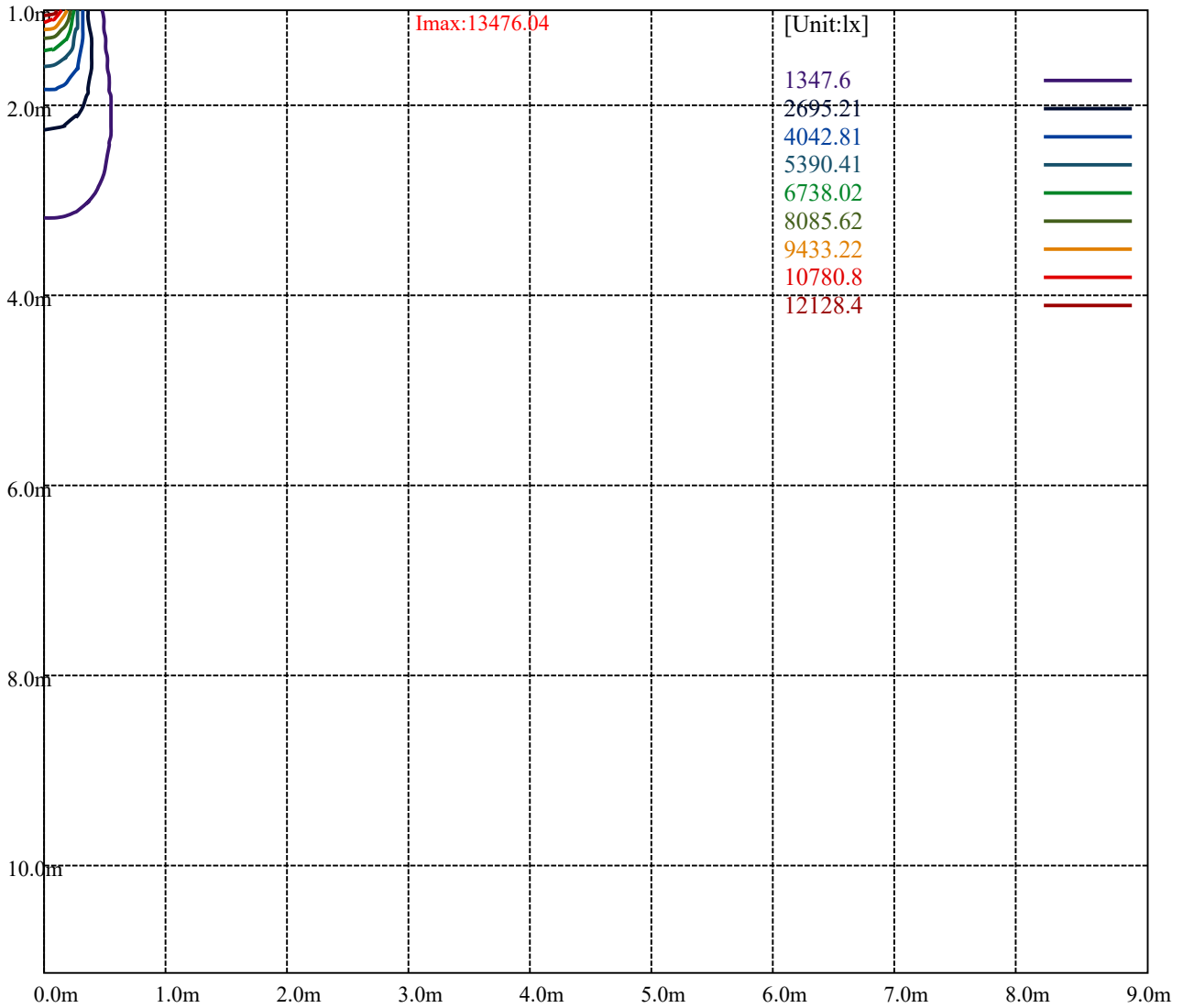
[Unit:cd]

Road

Imax:13476.04

(10%Imax)	1347.6	—
(20%Imax)	2695.21	—
(30%Imax)	4042.81	—
(40%Imax)	5390.41	—
(50%Imax)	6738.02	—
(60%Imax)	8085.62	—
(70%Imax)	9433.22	—
(80%Imax)	10780.8	—
(90%Imax)	12128.4	—





Luminance Table

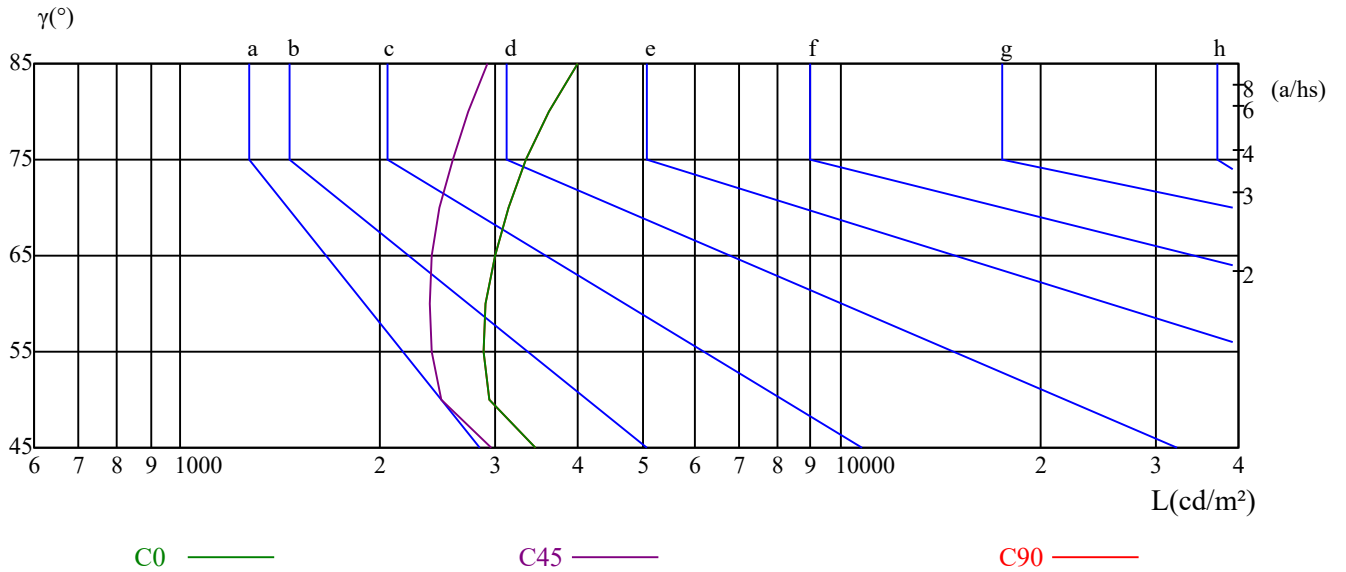
γ	45	50	55	60	65	70	75	80	85
C0	3447	2928	2878	2901	2989	3133	3335	3615	3994
C45	2960	2477	2397	2377	2406	2473	2577	2725	2925
C90	3447	2928	2878	2901	2989	3133	3335	3615	3994

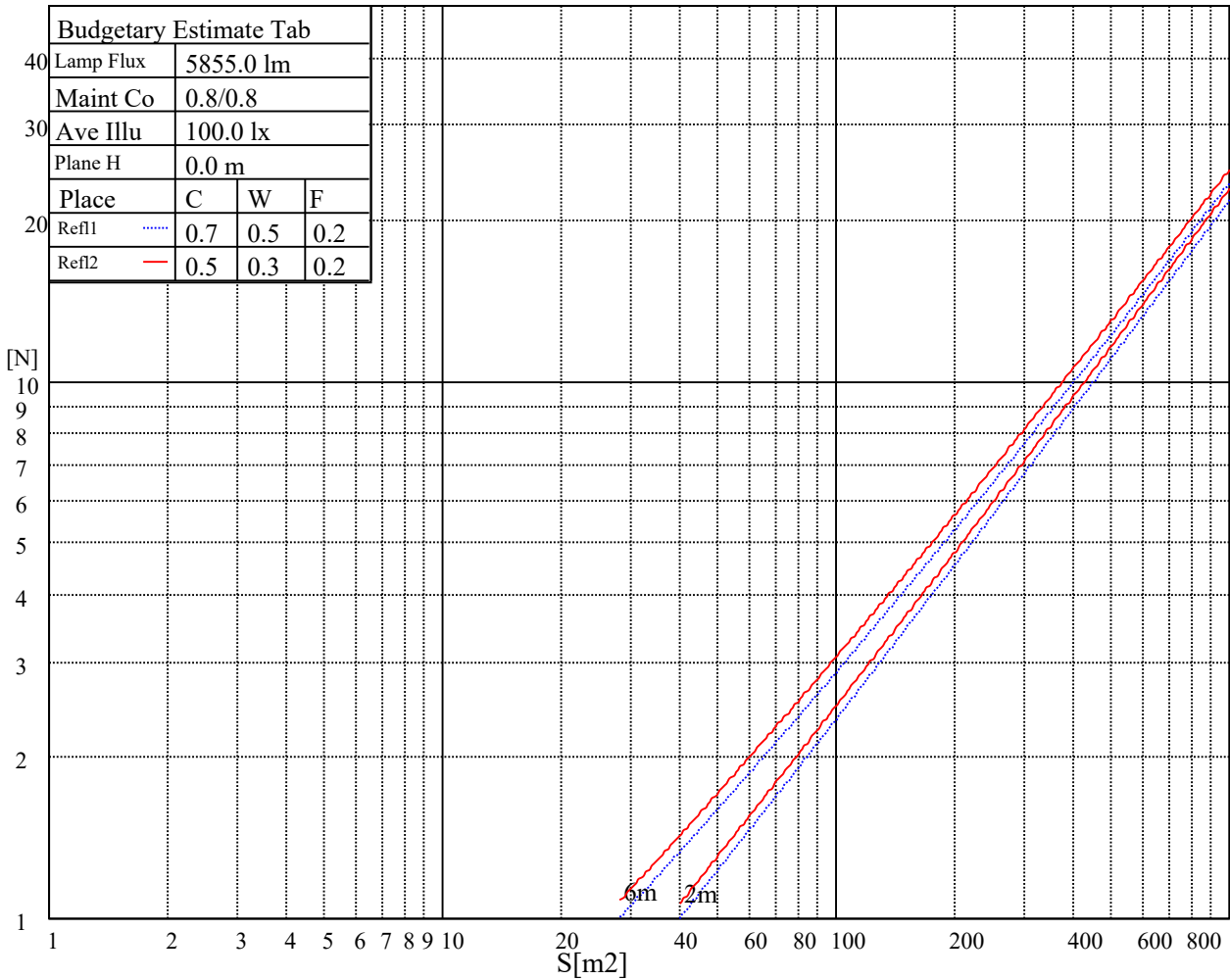
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7213	7213	7213	11536	11536	11536	34070	34070	34070

Glare Table

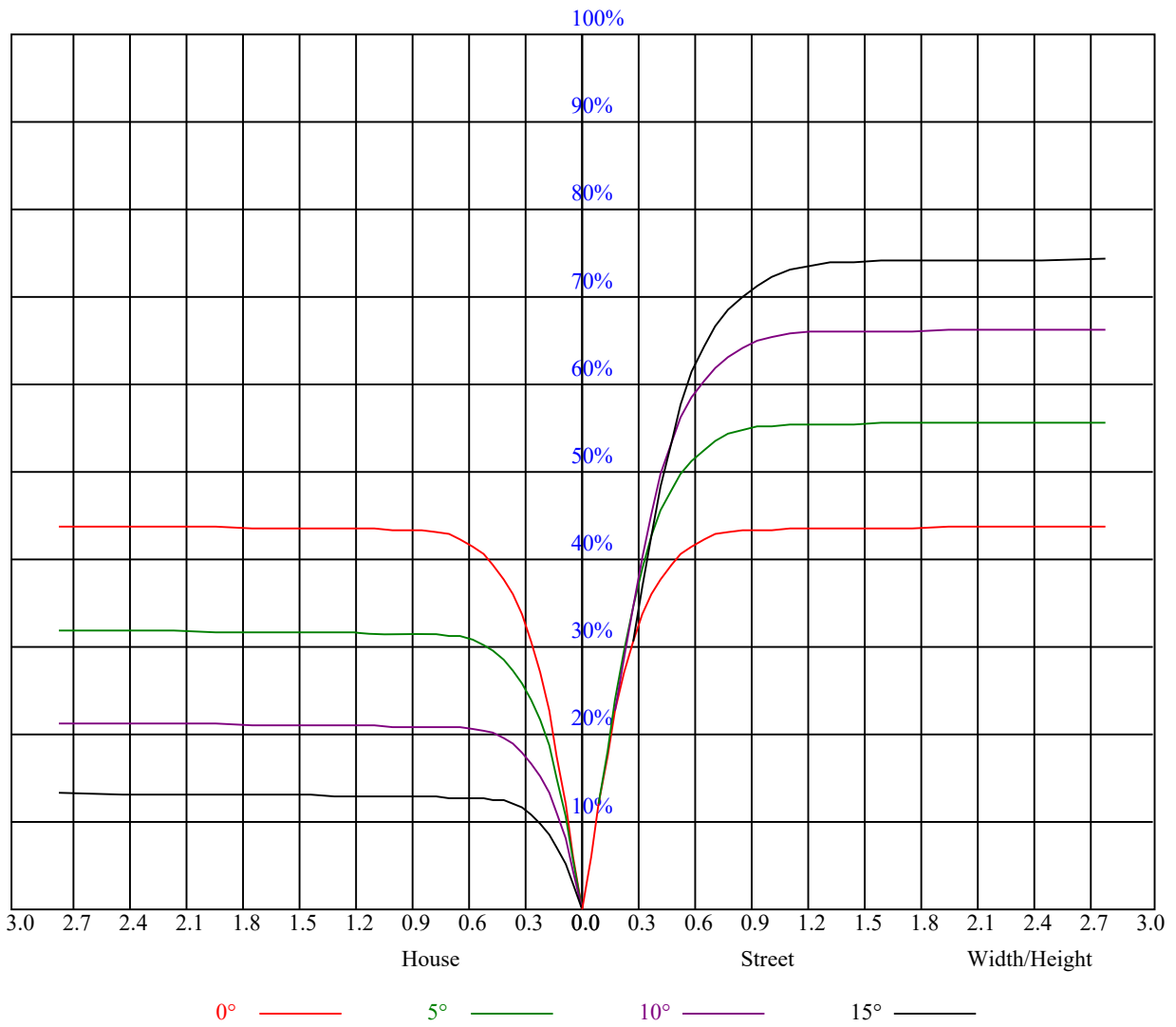
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.98	0.96	0.95	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.90	0.87	0.91	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.83	0.84	0.82	0.81	0.79
3	0.88	0.84	0.81	0.87	0.83	0.81	0.85	0.82	0.79	0.82	0.80	0.78	0.81	0.79	0.77	0.76
4	0.84	0.80	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
6	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
7	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.67	0.64	0.63
8	0.70	0.66	0.63	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.65	0.62	0.59	0.58
10	0.65	0.60	0.58	0.64	0.60	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.56



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	13450.99	13473.25	13478.82	13450.99	13389.77	13328.56	13117.08	12927.87	12677.43
45.0	13495.51	13495.51	13473.25	13450.99	13361.95	13183.86	12989.08	12760.91	12382.48
90.0	13473.25	13467.69	13434.30	13378.64	13284.04	13105.95	12900.04	12582.83	12182.14
135.0	13484.38	13450.99	13428.73	13361.95	13261.78	13100.39	12877.78	12610.65	12321.26
180.0	13450.99	13406.47	13373.08	13289.60	13128.21	12939.00	12655.17	12287.87	11876.05
225.0	13495.51	13467.69	13439.86	13356.38	13261.78	13105.95	12900.04	12605.09	12209.96
270.0	13473.25	13467.69	13434.30	13400.91	13306.30	13161.60	12966.82	12749.78	12432.57
315.0	13484.38	13462.12	13428.73	13384.21	13295.17	13139.34	12966.82	12644.04	12343.52
360.0	13450.99	13473.25	13478.82	13450.99	13389.77	13328.56	13117.08	12927.87	12677.43
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	12276.74	11870.49	11386.32	10768.58	10039.55	9327.21	8475.74	7685.49	6806.19
45.0	11948.40	11480.93	10846.50	10239.89	9438.51	8575.91	7796.79	6923.06	6088.29
90.0	11742.49	11041.83	10515.37	9851.45	9129.09	8183.57	7402.78	6626.99	5816.15
135.0	11775.88	11280.58	10790.85	9983.90	9176.95	8509.13	7540.79	6672.63	6027.07
180.0	11067.99	10695.12	10042.33	9363.38	8413.41	7632.06	6865.74	6038.20	5271.32
225.0	11798.14	11086.36	10648.93	9987.24	9286.58	8339.95	7566.95	6796.73	5971.97
270.0	11981.79	11525.45	11007.89	10312.24	9549.81	8826.34	7952.61	7078.88	6327.59
315.0	11965.09	11040.16	10808.65	10176.45	9480.81	8553.65	7785.10	7020.45	6181.22
360.0	12276.74	11870.49	11386.32	10768.58	10039.55	9327.21	8475.74	7685.49	6806.19
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	6004.81	5342.55	4663.60	4068.13	3606.22	3216.66	2810.41	2670.16	2375.77
45.0	5398.21	4791.60	4101.52	3600.66	3205.53	2821.54	2536.60	2345.71	2219.94
90.0	5080.99	4505.00	3918.43	3413.11	3041.92	2695.76	2465.37	2273.37	2125.89
135.0	5208.99	4624.65	4101.52	3494.92	3149.88	2843.80	2518.23	2322.34	2193.23
180.0	4666.94	4068.13	3605.67	3162.12	2836.01	2550.51	2333.47	2188.22	2064.12
225.0	5233.48	4647.47	4060.34	3560.03	3181.60	2820.98	2570.55	2353.51	2182.66
270.0	5576.29	4952.99	4329.69	3784.31	3366.92	2982.93	2832.67	2451.45	2279.49
315.0	5423.80	4809.41	4198.36	3670.22	3268.42	2887.21	2613.96	2390.24	2223.28
360.0	6004.81	5342.55	4663.60	4068.13	3606.22	3216.66	2810.41	2670.16	2375.77
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	2230.52	2095.84	2011.25	1918.31	1794.76	1670.10	1529.86	1357.34	1180.93
45.0	2068.01	1986.21	1923.88	1786.42	1655.08	1532.65	1345.10	1184.27	1051.82
90.0	2032.95	1947.25	1826.49	1706.28	1571.60	1388.51	1097.95	1078.64	909.57
135.0	2054.10	1972.29	1866.00	1738.00	1584.96	1429.69	1263.29	1087.43	929.94
180.0	1976.19	1867.11	1735.22	1604.44	1461.97	1271.64	1098.40	968.28	782.18
225.0	2094.73	2003.46	1879.91	1765.27	1637.27	1461.97	1312.82	1098.45	1002.12
270.0	2128.67	2035.18	1955.60	1837.06	1702.38	1568.26	1401.86	1229.34	1074.63
315.0	2108.08	2006.80	1916.08	1806.45	1681.23	1510.94	1365.13	1108.91	1013.30
360.0	2230.52	2095.84	2011.25	1918.31	1794.76	1670.10	1529.86	1357.34	1180.93
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	1026.22	853.70	701.77	531.47	371.20	291.61	149.87	72.35	49.75
45.0	849.80	700.10	555.96	380.10	290.50	152.21	68.01	46.47	35.17
90.0	747.18	606.66	450.50	300.91	188.16	97.17	54.37	40.29	29.55
135.0	754.64	610.50	456.90	316.10	286.61	112.03	55.32	43.30	33.45
180.0	637.49	501.53	355.00	224.83	130.73	64.44	46.08	35.78	29.38
225.0	804.89	653.85	510.83	343.15	227.11	133.40	67.06	46.19	36.28
270.0	900.44	747.40	576.55	412.38	281.04	213.70	82.42	50.53	40.51
315.0	849.30	695.42	513.00	377.43	258.17	139.02	80.58	49.36	36.06
360.0	1026.22	853.70	701.77	531.47	371.20	291.61	149.87	72.35	49.75

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	38.51	29.33	26.32	25.60	25.04	24.60	24.32	24.04	23.82
45.0	26.55	25.60	25.04	24.60	24.32	24.04	23.82	23.60	23.43
90.0	26.21	25.43	24.93	24.60	24.32	24.04	23.76	23.60	23.37
135.0	28.10	25.82	25.38	24.99	24.71	24.43	24.21	23.93	23.65
180.0	25.49	24.99	24.60	24.38	24.10	23.82	23.60	23.43	23.15
225.0	29.38	25.93	25.27	24.82	24.54	24.21	23.87	23.65	23.43
270.0	30.11	26.77	25.88	25.32	24.88	24.54	24.15	23.93	23.65
315.0	29.33	26.94	25.88	25.38	25.04	24.54	24.38	24.10	23.76
360.0	38.51	29.33	26.32	25.60	25.04	24.60	24.32	24.04	23.82
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	23.54	23.32	23.15	22.93	22.76	22.59	22.54	22.43	22.32
45.0	23.21	23.10	22.87	22.82	22.65	22.54	22.43	22.37	22.26
90.0	23.21	23.04	22.87	22.76	22.59	22.48	22.37	22.32	22.20
135.0	23.48	23.26	23.10	22.98	22.82	22.71	22.59	22.43	22.32
180.0	23.04	22.87	22.76	22.59	22.54	22.37	22.26	22.26	22.20
225.0	23.21	23.04	22.87	22.71	22.54	22.43	22.37	22.26	22.20
270.0	23.43	23.26	23.04	22.82	22.65	22.54	22.43	22.37	22.26
315.0	23.48	23.32	23.10	22.93	22.82	22.65	22.54	22.37	22.26
360.0	23.54	23.32	23.15	22.93	22.76	22.59	22.54	22.43	22.32
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	22.26	22.15	22.09	22.04	21.98	21.98	21.87	21.87	21.76
45.0	22.15	22.15	22.09	22.04	21.93	21.93	21.82	21.82	21.76
90.0	22.15	22.09	21.98	21.93	21.87	21.82	21.82	21.76	21.70
135.0	22.32	22.20	22.15	22.09	21.98	21.93	21.87	21.76	21.70
180.0	22.15	22.04	21.93	21.87	21.82	21.82	21.76	21.70	21.59
225.0	22.09	22.04	21.93	21.93	21.87	21.82	21.76	21.70	21.65
270.0	22.15	22.09	21.98	21.93	21.93	21.82	21.82	21.70	21.70
315.0	22.15	22.09	22.04	21.98	21.93	21.82	21.76	21.70	21.65
360.0	22.26	22.15	22.09	22.04	21.98	21.98	21.87	21.87	21.76
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	21.70	21.70	21.65	21.65	21.65	21.59	21.59	21.54	21.54
45.0	21.70	21.70	21.59	21.59	21.59	21.54	21.54	21.54	21.54
90.0	21.65	21.65	21.59	21.59	21.54	21.54	21.48	21.48	21.48
135.0	21.65	21.65	21.59	21.54	21.54	21.48	21.48	21.43	21.37
180.0	21.59	21.59	21.59	21.59	21.54	21.48	21.48	21.43	21.48
225.0	21.65	21.65	21.65	21.54	21.48	21.48	21.48	21.48	21.48
270.0	21.65	21.65	21.65	21.54	21.54	21.48	21.48	21.54	21.48
315.0	21.65	21.59	21.59	21.54	21.54	21.48	21.43	21.48	21.48
360.0	21.70	21.70	21.65	21.65	21.65	21.59	21.59	21.54	21.54
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	21.54	21.54	21.54	21.59	21.48	21.43	21.31	21.26	21.26
45.0	21.48	21.54	21.48	21.48	21.54	21.43	21.31	21.37	21.37
90.0	21.54	21.48	21.54	21.48	21.54	21.54	21.26	21.26	21.20
135.0	21.37	21.43	21.37	21.37	21.43	21.37	21.26	21.20	21.26
180.0	21.48	21.48	21.48	21.54	21.37	21.31	21.20	21.20	21.20
225.0	21.43	21.43	21.43	21.43	21.43	21.37	21.37	21.31	21.31
270.0	21.43	21.48	21.43	21.48	21.43	21.48	21.31	21.26	21.26
315.0	21.43	21.48	21.48	21.43	21.43	21.43	21.26	21.26	21.26
360.0	21.54	21.54	21.54	21.59	21.48	21.43	21.31	21.26	21.26

Intensity data(cd)

C/ γ (°)	90.0
0.0	21.20
45.0	21.37
90.0	21.26
135.0	21.26
180.0	21.20
225.0	21.31
270.0	21.31
315.0	21.26
360.0	21.20