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## Nata

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LumCAT: LN01D03517EE-N

Luminaire: 92.70.307.00

Report No: 210515-B007

Test No: 210515-C007

LampCAT: Bridgelux V6HD LES7

Lamp flux(lm): 917.0

Number of Lamps: 1

Length(mm): 74

Phm Type: C

Voltage(V): 223.0000

Current(A): 0.0730

Power (W): 8.0000

PF: 0.4930

Ballast type: DC

Width(mm): 74

Height(mm): 56

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## Photometric Results

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Lumens(lm): 584.34

Efficiency(%): 63.72%

Lumens(lm)/Power(W): 73.04

Central intensity(cd): 2113.172

Maximum intensity(cd): 2113.172

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=22.4

[C90/270]Total=22.4

Field angle(10%Imax): [C0/180]Total=50.2

[C90/270]Total=50.2

Maximum s/h(1/2): C0\_180=0.38 C90\_270=0.38

Maximum s/h(1/4): C0\_180=0.41 C90\_270=0.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 63.72%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 93.643%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2113.172	0.000	0	.000%	.000%
1.0	2101.078	2.016	2.016	.220%	.345%
2.0	2059.523	5.972	7.988	.651%	1.367%
3.0	1998.000	9.704	17.692	1.058%	3.028%
4.0	1918.336	13.109	30.802	1.430%	5.271%
5.0	1820.320	16.084	46.885	1.754%	8.024%
6.0	1697.766	18.488	65.374	2.016%	11.188%
7.0	1579.148	20.340	85.713	2.218%	14.668%
8.0	1457.297	21.731	107.445	2.370%	18.387%
9.0	1318.240	22.494	129.939	2.453%	22.237%
10.0	1191.340	22.711	152.65	2.477%	26.124%
11.0	1077.497	22.670	175.32	2.472%	30.003%
12.0	958.704	22.259	197.579	2.427%	33.812%
13.0	857.974	21.559	219.138	2.351%	37.502%
14.0	765.429	20.779	239.917	2.266%	41.058%
15.0	678.818	19.827	259.745	2.162%	44.451%
16.0	603.766	18.793	278.538	2.049%	47.667%
17.0	532.505	17.695	296.233	1.930%	50.695%
18.0	470.756	16.542	312.774	1.804%	53.526%
19.0	420.912	15.513	328.288	1.692%	56.181%
20.0	374.295	14.554	342.842	1.587%	58.672%
21.0	334.673	13.614	356.456	1.485%	61.002%
22.0	297.253	12.699	369.155	1.385%	63.175%
23.0	268.460	11.870	381.025	1.294%	65.206%
24.0	237.108	11.054	392.078	1.205%	67.098%
25.0	213.588	10.248	402.326	1.118%	68.852%
26.0	193.247	9.603	411.93	1.047%	70.495%
27.0	175.584	9.024	420.953	.984%	72.039%
28.0	159.342	8.480	429.433	.925%	73.491%
29.0	145.364	7.972	437.405	.869%	74.855%
30.0	132.082	7.491	444.896	.817%	76.137%
31.0	120.403	7.026	451.922	.766%	77.339%
32.0	109.505	6.587	458.509	.718%	78.466%
33.0	100.160	6.177	464.685	.674%	79.523%
34.0	91.603	5.803	470.489	.633%	80.517%
35.0	83.658	5.443	475.932	.594%	81.448%
36.0	76.753	5.108	481.039	.557%	82.322%
37.0	70.854	4.814	485.853	.525%	83.146%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	65.074	4.537	490.39	.495%	83.922%
39.0	59.773	4.261	494.652	.465%	84.652%
40.0	55.202	4.010	498.662	.437%	85.338%
41.0	51.244	3.790	502.452	.413%	85.987%
42.0	47.784	3.598	506.05	.392%	86.602%
43.0	44.100	3.404	509.454	.371%	87.185%
44.0	41.041	3.213	512.667	.350%	87.735%
45.0	38.208	3.046	515.713	.332%	88.256%
46.0	35.557	2.885	518.598	.315%	88.750%
47.0	33.124	2.732	521.329	.298%	89.217%
48.0	30.973	2.591	523.92	.283%	89.661%
49.0	29.116	2.468	526.388	.269%	90.083%
50.0	27.239	2.350	528.738	.256%	90.485%
51.0	25.460	2.230	530.967	.243%	90.867%
52.0	24.026	2.123	533.091	.232%	91.230%
53.0	22.570	2.027	535.118	.221%	91.577%
54.0	21.396	1.938	537.055	.211%	91.908%
55.0	20.271	1.860	538.915	.203%	92.227%
56.0	19.223	1.785	540.7	.195%	92.532%
57.0	18.260	1.714	542.414	.187%	92.825%
58.0	17.395	1.649	544.063	.180%	93.108%
59.0	16.622	1.590	545.653	.173%	93.380%
60.0	15.905	1.537	547.19	.168%	93.643%
61.0	15.230	1.486	548.676	.162%	93.897%
62.0	14.674	1.441	550.116	.157%	94.144%
63.0	14.168	1.403	551.519	.153%	94.384%
64.0	13.802	1.372	552.892	.150%	94.619%
65.0	13.852	1.369	554.26	.149%	94.853%
66.0	14.027	1.391	555.651	.152%	95.091%
67.0	14.337	1.426	557.077	.156%	95.335%
68.0	14.752	1.474	558.551	.161%	95.587%
69.0	15.068	1.521	560.072	.166%	95.847%
70.0	15.384	1.564	561.636	.171%	96.115%
71.0	15.638	1.603	563.24	.175%	96.389%
72.0	15.827	1.636	564.876	.178%	96.669%
73.0	16.066	1.668	566.544	.182%	96.955%
74.0	16.158	1.694	568.238	.185%	97.245%
75.0	16.123	1.706	569.943	.186%	97.537%

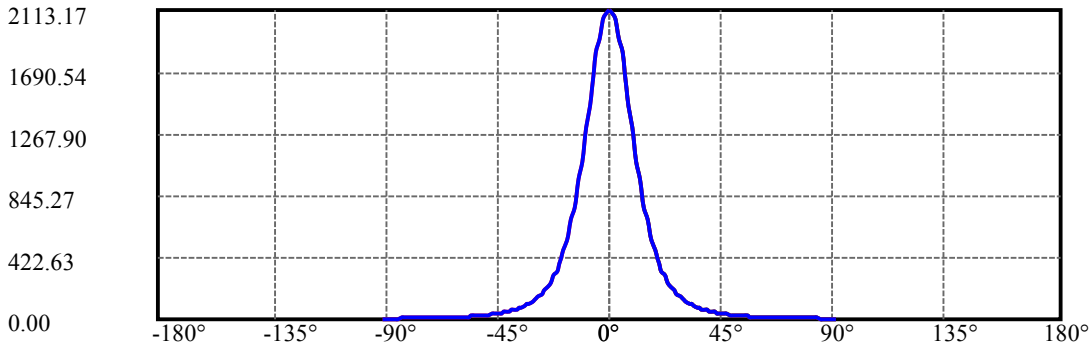
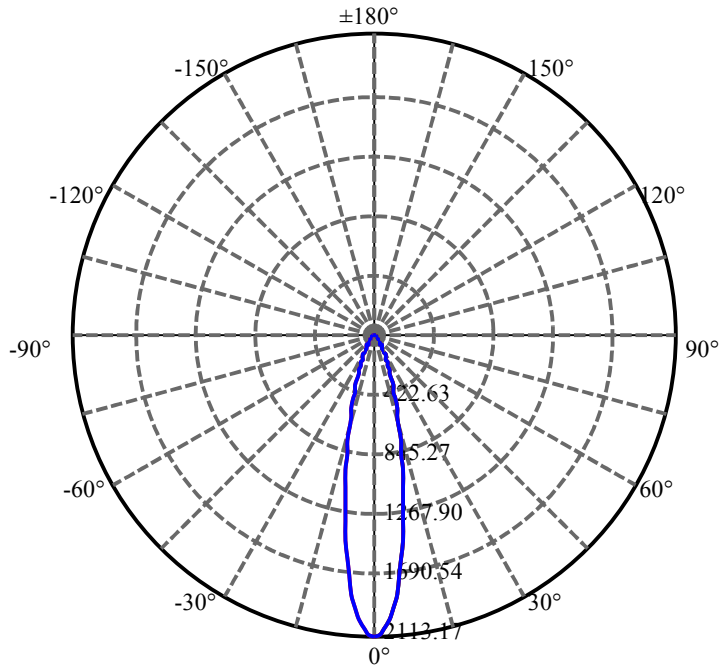
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	15.877	1.699	571.642	.185%	97.827%
77.0	15.230	1.658	573.3	.181%	98.111%
78.0	14.442	1.588	574.889	.173%	98.383%
79.0	13.388	1.495	576.384	.163%	98.639%
80.0	12.319	1.386	577.77	.151%	98.876%
81.0	11.053	1.264	579.034	.138%	99.092%
82.0	9.373	1.108	580.141	.121%	99.282%
83.0	7.165	0.899	581.04	.098%	99.436%
84.0	5.470	0.688	581.729	.075%	99.554%
85.0	4.634	0.551	582.28	.060%	99.648%
86.0	4.015	0.473	582.753	.052%	99.729%
87.0	3.790	0.427	583.18	.047%	99.802%
88.0	3.586	0.404	583.584	.044%	99.871%
89.0	3.417	0.384	583.968	.042%	99.937%
90.0	3.326	0.370	584.338	.040%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	444.90	48.52%	76.14%
0-40	498.66	54.38%	85.34%
0-60	547.19	59.67%	93.64%
0-90	583.97	63.68%	99.94%
0-120	583.97	63.68%	99.94%
0-180	584.34	63.72%	100.00%
60-90	38.31	4.18%	6.56%
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%
0-33.48	467.47	50.98%	80.00%

ZONAL LUMEN SUMMARY

0-10	152.65
10-20	190.19
20-30	102.05
30-40	53.77
40-50	30.08
50-60	18.45
60-70	14.45
70-80	16.13
80-90	6.20
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



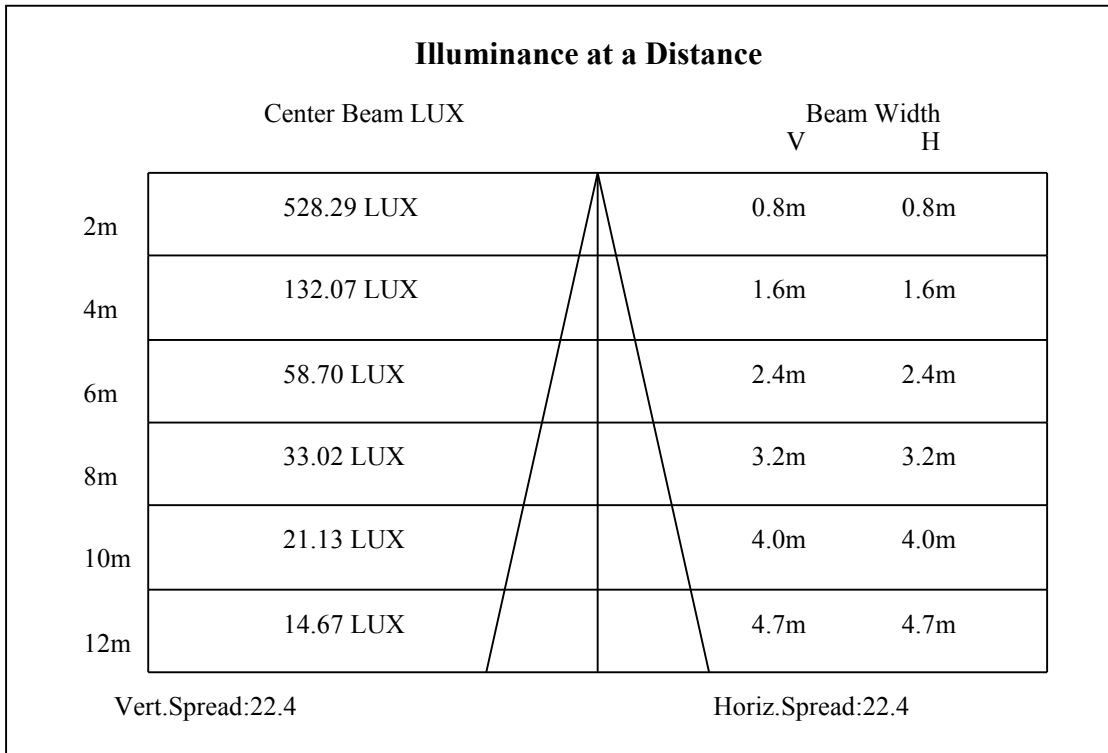
C0(Max): —————

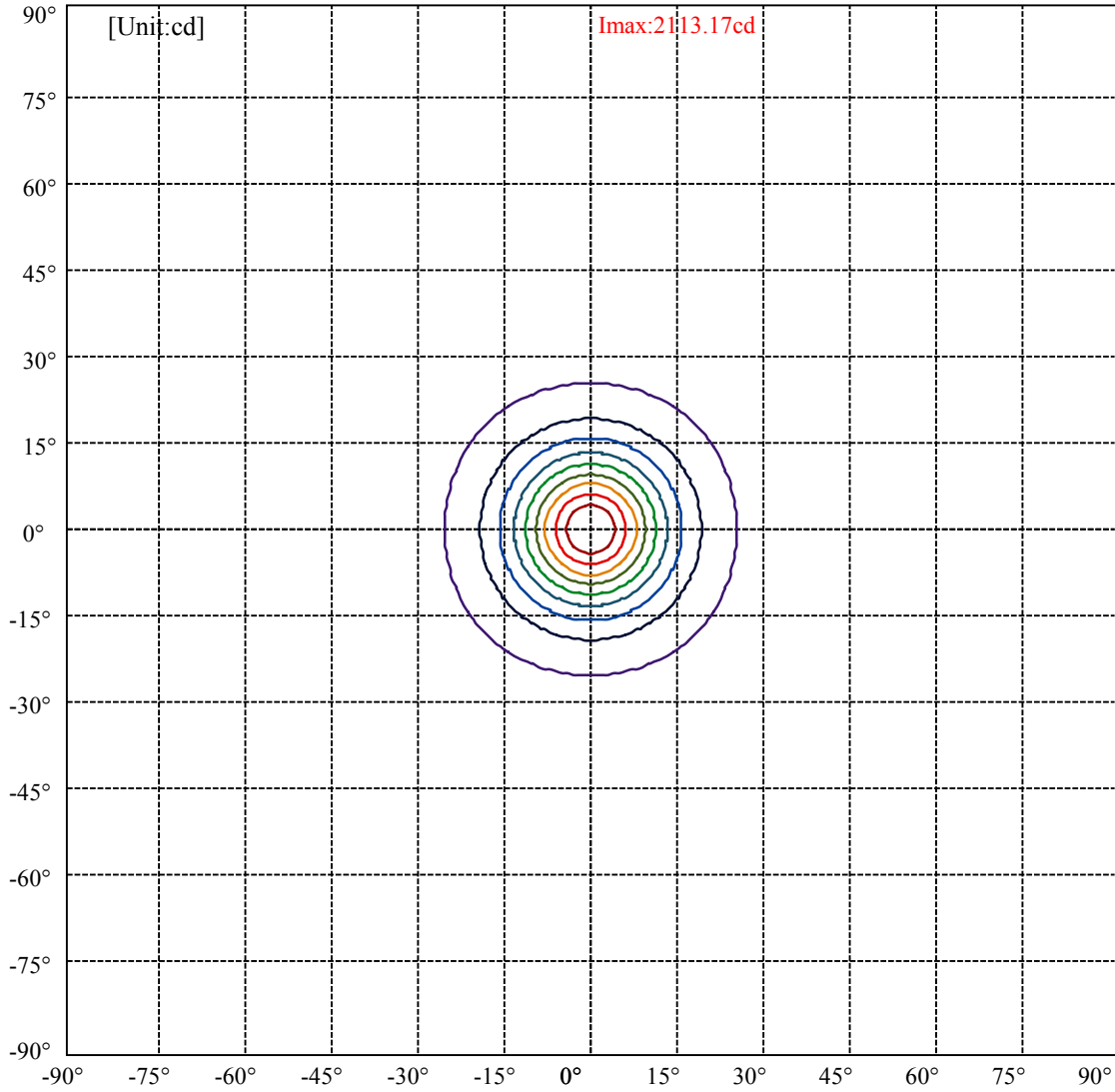
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:25.1 Right:25.1  
:C90/270Left:25.1 Right:25.1

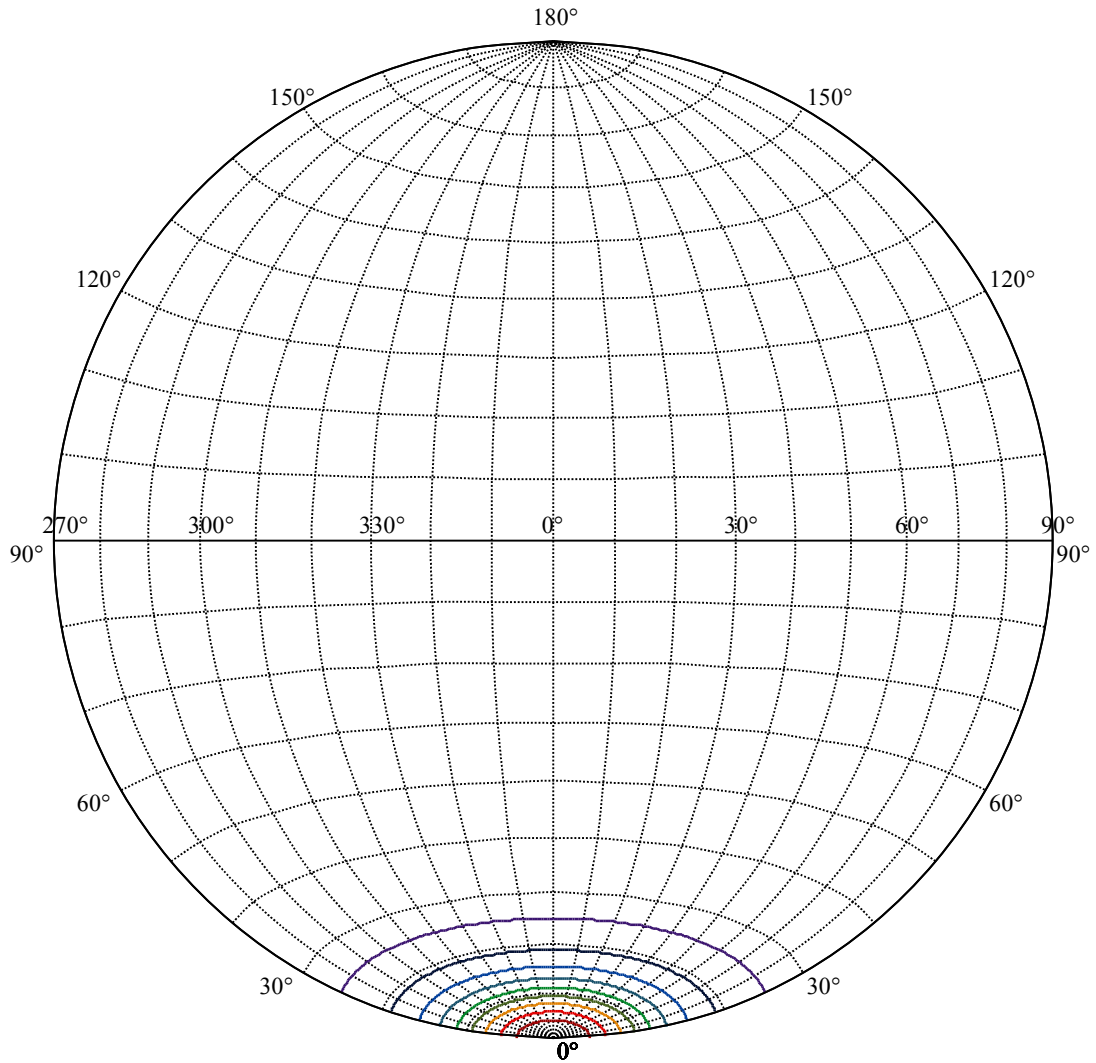
Beam Angle(50%Imax):C0/180Left:11.2 Right:11.2  
:C90/270Left:11.2 Right:11.2





(10%Imax) 211.317	—
(20%Imax) 422.634	—
(30%Imax) 633.952	—
(40%Imax) 845.269	—
(50%Imax) 1056.59	—
(60%Imax) 1267.9	—
(70%Imax) 1479.22	—
(80%Imax) 1690.54	—
(90%Imax) 1901.85	—





House

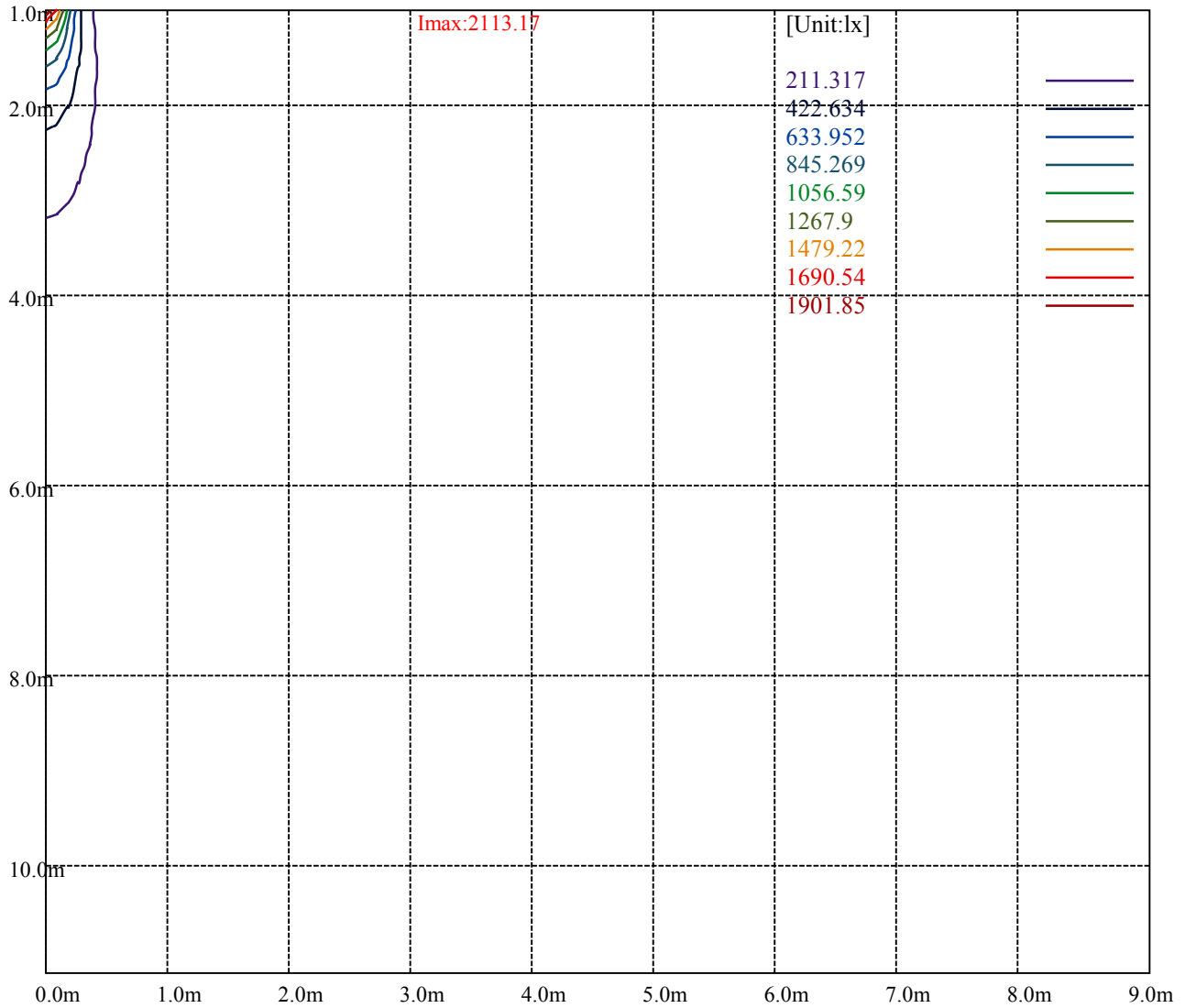
[Unit:cd]

Road

**Imax:2113.17**

(10%Imax) 211.317	—
(20%Imax) 422.634	—
(30%Imax) 633.952	—
(40%Imax) 845.269	—
(50%Imax) 1056.59	—
(60%Imax) 1267.9	—
(70%Imax) 1479.22	—
(80%Imax) 1690.54	—
(90%Imax) 1901.85	—





Luminance Table

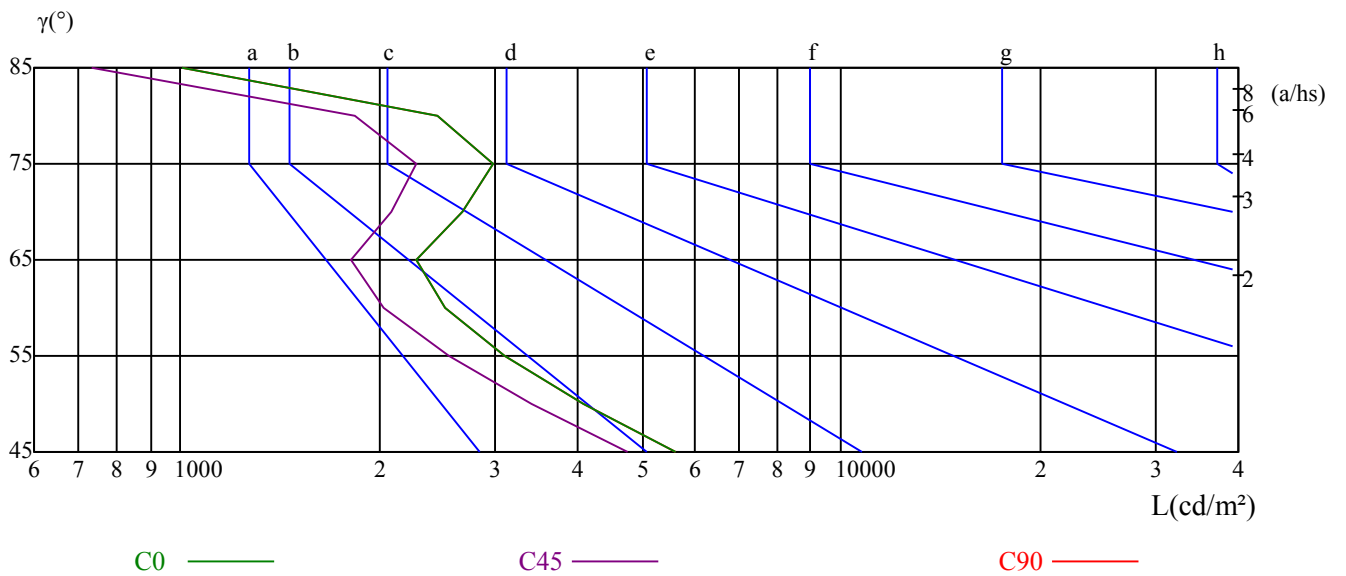
$\gamma$	45	50	55	60	65	70	75	80	85
C0	5617	4069	3102	2514	2282	2668	2975	2448	1006
C45	4766	3401	2553	2036	1816	2085	2278	1833	734
C90	5617	4069	3102	2514	2282	2668	2975	2448	1006

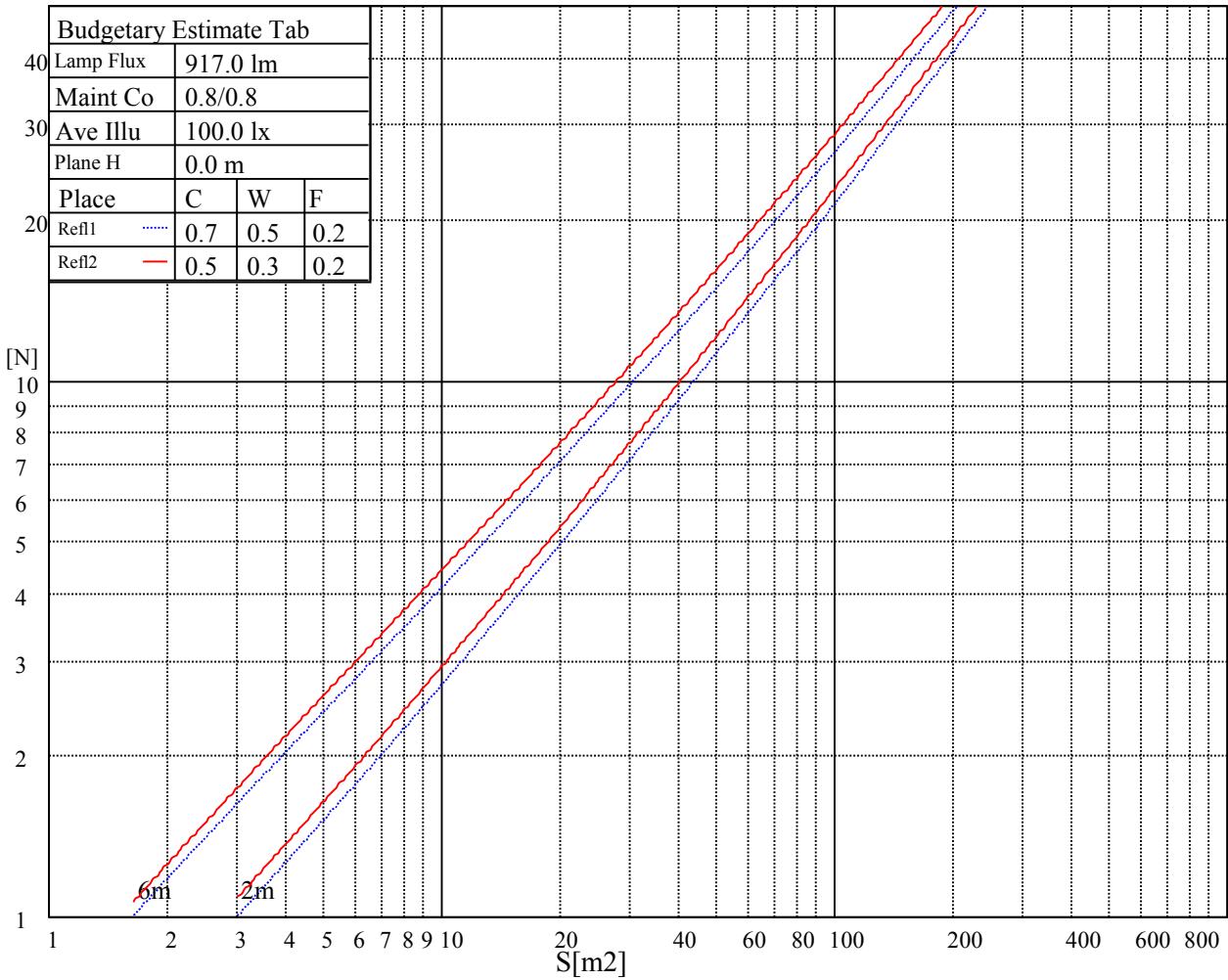
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5985	5985	5985	11376	11376	11376	9709	9709	9709

Glare Table

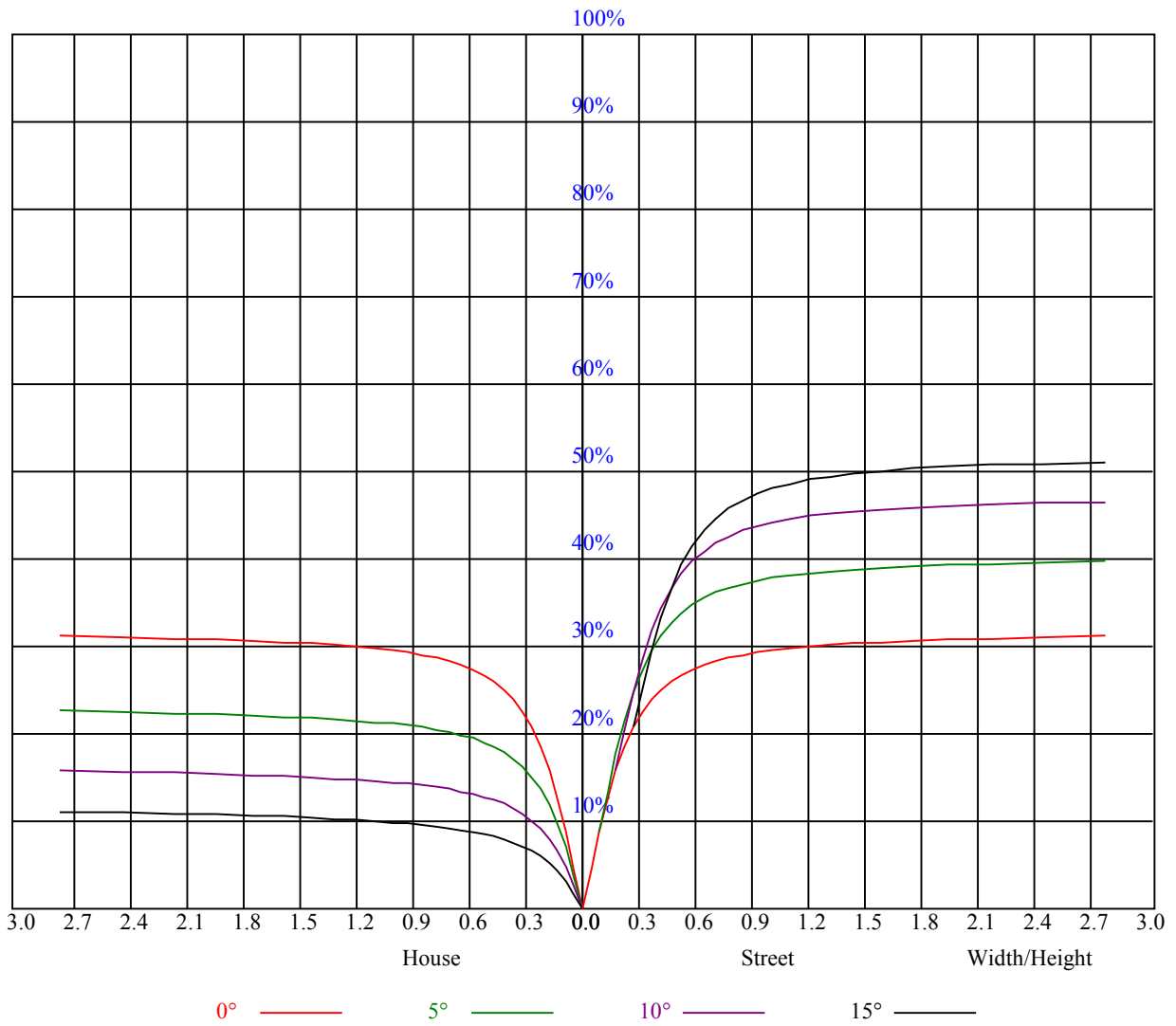
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.76	0.76	0.76	0.74	0.74	0.74	0.71	0.71	0.71	0.68	0.68	0.68	0.65	0.65	0.65	0.64
1	0.70	0.68	0.67	0.69	0.67	0.66	0.66	0.65	0.64	0.64	0.63	0.62	0.62	0.61	0.60	0.59
2	0.65	0.63	0.60	0.64	0.62	0.60	0.62	0.60	0.58	0.60	0.59	0.57	0.58	0.57	0.56	0.55
3	0.61	0.58	0.56	0.60	0.58	0.55	0.59	0.56	0.54	0.57	0.55	0.53	0.56	0.54	0.53	0.52
4	0.58	0.55	0.52	0.57	0.54	0.52	0.56	0.53	0.51	0.55	0.52	0.50	0.53	0.51	0.50	0.49
5	0.55	0.51	0.49	0.54	0.51	0.49	0.53	0.50	0.48	0.52	0.50	0.48	0.51	0.49	0.47	0.46
6	0.52	0.49	0.46	0.52	0.49	0.46	0.51	0.48	0.46	0.50	0.47	0.46	0.49	0.47	0.45	0.44
7	0.50	0.47	0.44	0.50	0.46	0.44	0.49	0.46	0.44	0.48	0.45	0.44	0.47	0.45	0.43	0.42
8	0.48	0.45	0.42	0.48	0.44	0.42	0.47	0.44	0.42	0.46	0.44	0.42	0.46	0.43	0.42	0.41
9	0.46	0.43	0.40	0.46	0.43	0.40	0.45	0.42	0.40	0.45	0.42	0.40	0.44	0.42	0.40	0.39
10	0.44	0.41	0.39	0.44	0.41	0.39	0.44	0.41	0.39	0.43	0.41	0.39	0.43	0.40	0.39	0.38



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	2143.13	2116.69	2058.19	1972.69	1878.19	1783.69	1625.63	1503.56	1397.25
45.0	2097.56	2049.19	1944.00	1850.06	1757.25	1600.88	1479.94	1372.50	1225.69
90.0	2092.50	2037.94	1963.69	1879.88	1767.94	1659.38	1526.63	1391.63	1271.25
135.0	2119.50	2117.25	2084.63	2027.81	1952.44	1863.00	1731.38	1616.63	1497.94
180.0	2143.13	2145.94	2126.25	2072.25	1995.19	1906.88	1787.63	1657.69	1533.94
225.0	2097.56	2132.44	2144.81	2124.56	2087.44	2017.69	1932.19	1825.88	1700.44
270.0	2092.50	2113.31	2112.75	2081.81	2030.63	1955.81	1847.81	1746.00	1631.81
315.0	2119.50	2095.88	2041.88	1974.94	1877.63	1775.25	1650.94	1519.31	1400.06
360.0	2143.13	2116.69	2058.19	1972.69	1878.19	1783.69	1625.63	1503.56	1397.25
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1231.88	1116.56	1019.25	887.06	780.19	703.69	605.25	535.50	473.63
45.0	1098.56	1003.50	878.06	786.38	703.13	611.44	548.44	491.06	427.50
90.0	1110.54	1004.46	917.38	823.95	720.28	646.09	578.76	505.13	452.70
135.0	1346.06	1225.69	1110.94	989.44	876.38	786.94	695.81	623.25	550.13
180.0	1409.06	1257.75	1111.50	1029.71	914.91	811.52	728.21	652.11	568.86
225.0	1580.63	1447.88	1308.94	1113.58	1071.06	953.10	844.43	756.28	675.68
270.0	1489.50	1371.94	1253.81	1124.44	1002.38	901.13	797.06	712.69	626.63
315.0	1279.69	1102.95	1020.09	915.08	795.49	709.54	632.59	554.12	484.93
360.0	1231.88	1116.56	1019.25	887.06	780.19	703.69	605.25	535.50	473.63
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	408.38	362.25	322.31	287.44	246.54	220.33	192.32	173.14	156.49
45.0	382.50	343.13	301.50	286.88	242.78	213.92	194.06	177.08	159.41
90.0	405.73	361.18	327.77	291.94	259.88	236.08	211.73	190.74	174.04
135.0	484.88	432.00	380.25	339.75	302.63	287.44	238.33	214.76	194.74
180.0	510.58	458.38	406.86	361.86	326.81	291.54	260.44	236.25	211.89
225.0	588.83	528.30	474.47	416.03	374.91	338.29	301.16	269.27	244.52
270.0	552.94	496.13	439.88	391.50	354.38	320.63	286.31	255.60	232.99
315.0	432.23	385.93	341.33	302.01	270.11	239.46	212.51	191.87	171.90
360.0	408.38	362.25	322.31	287.44	246.54	220.33	192.32	173.14	156.49
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	139.67	126.73	115.93	104.91	95.74	88.26	81.00	74.93	68.79
45.0	143.94	131.79	120.32	110.42	100.41	91.46	83.93	76.33	69.69
90.0	158.06	140.63	128.70	117.34	106.54	96.81	89.21	81.51	74.76
135.0	178.09	160.20	147.77	133.65	121.95	112.05	101.48	92.70	85.56
180.0	195.69	177.75	159.30	145.69	134.49	119.70	109.01	99.90	90.56
225.0	220.67	208.01	189.79	167.91	153.11	139.50	127.01	115.71	106.20
270.0	212.23	189.23	173.25	159.02	142.54	130.78	120.15	109.74	99.73
315.0	156.32	140.40	127.86	117.73	108.45	97.48	89.49	82.01	73.97
360.0	139.67	126.73	115.93	104.91	95.74	88.26	81.00	74.93	68.79
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	63.28	58.89	54.90	50.40	47.08	44.16	40.84	38.19	35.94
45.0	64.46	59.85	54.51	50.79	47.48	44.21	41.12	38.08	35.10
90.0	69.64	64.52	58.95	54.00	49.11	45.56	42.92	39.94	37.74
135.0	77.57	71.16	65.19	59.85	55.18	51.41	47.59	43.99	41.23
180.0	83.93	77.74	71.10	65.14	60.53	55.69	51.53	47.42	43.37
225.0	95.40	87.69	80.44	73.74	67.56	62.33	59.06	53.49	49.39
270.0	91.63	83.59	76.89	70.09	64.01	59.40	54.84	50.96	47.76
315.0	68.12	63.39	58.61	54.17	50.68	47.19	44.38	40.73	37.80
360.0	63.28	58.89	54.90	50.40	47.08	44.16	40.84	38.19	35.94



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	33.58	31.39	29.59	27.84	26.49	25.09	23.79	22.78	21.71
45.0	32.74	30.99	29.36	28.01	26.66	25.54	23.96	22.73	21.09
90.0	35.78	33.64	31.39	29.59	28.29	25.88	23.34	21.88	20.53
135.0	37.63	34.76	32.29	30.09	28.58	27.28	24.86	23.46	21.99
180.0	40.61	37.35	34.59	32.23	29.76	27.39	25.93	24.64	23.18
225.0	45.06	42.41	38.53	34.71	32.12	29.87	27.96	26.49	25.20
270.0	45.00	41.12	38.48	36.23	33.36	30.77	28.97	26.55	24.64
315.0	35.27	32.79	30.77	29.08	27.68	26.10	24.86	23.68	22.22
360.0	33.58	31.39	29.59	27.84	26.49	25.09	23.79	22.78	21.71
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	20.76	19.86	18.90	17.83	17.04	16.26	15.41	14.68	14.06
45.0	20.03	18.96	17.83	17.10	16.31	15.47	14.74	14.18	13.61
90.0	19.52	18.56	17.61	16.82	16.14	15.47	14.91	14.29	13.84
135.0	20.81	19.74	18.79	17.89	16.93	16.20	15.36	14.74	14.18
180.0	22.11	21.15	19.97	18.73	17.78	16.88	15.98	15.08	14.34
225.0	23.68	22.39	21.54	20.81	20.14	19.63	19.18	18.84	18.56
270.0	23.40	21.83	20.64	19.46	18.23	17.33	16.59	15.69	15.08
315.0	20.87	19.69	18.51	17.44	16.59	15.75	15.08	14.34	13.73
360.0	20.76	19.86	18.90	17.83	17.04	16.26	15.41	14.68	14.06
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.50	12.88	12.43	11.93	11.53	11.03	10.63	10.18	9.73
45.0	13.11	12.54	12.09	11.87	11.53	10.97	10.41	9.90	9.28
90.0	13.50	14.23	16.88	19.41	22.16	25.59	28.18	30.54	33.02
135.0	13.56	12.94	12.43	11.98	11.36	10.86	10.46	10.13	9.62
180.0	13.73	13.11	12.43	11.98	11.53	10.97	10.58	10.24	10.01
225.0	18.23	18.00	17.78	17.16	15.98	14.85	13.61	12.71	11.81
270.0	14.46	14.01	14.63	16.26	19.41	23.06	26.38	29.42	32.06
315.0	13.28	12.71	12.15	11.64	11.19	10.69	10.29	9.96	9.56
360.0	13.50	12.88	12.43	11.93	11.53	11.03	10.63	10.18	9.73
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	9.34	9.00	8.66	8.83	9.23	9.11	8.72	7.99	7.54
45.0	8.83	8.38	8.04	7.48	7.20	6.81	6.41	6.08	5.79
90.0	35.16	37.07	38.76	39.38	38.19	35.78	33.53	30.88	27.73
135.0	9.28	8.83	8.44	8.04	7.54	7.20	6.86	6.36	5.96
180.0	10.07	10.24	9.56	8.78	7.93	7.20	6.81	6.36	5.91
225.0	10.69	9.90	9.23	8.83	8.44	8.04	7.65	7.43	6.75
270.0	34.09	36.34	38.19	39.60	40.78	40.39	38.59	35.38	32.68
315.0	9.17	8.78	8.38	8.04	7.71	7.31	6.98	6.64	6.19
360.0	9.34	9.00	8.66	8.83	9.23	9.11	8.72	7.99	7.54
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.98	6.41	5.79	4.89	4.56	4.22	3.88	3.77	3.94
45.0	5.51	5.29	5.06	4.84	4.67	4.16	3.88	3.83	3.83
90.0	22.84	15.69	7.82	5.12	4.56	3.71	3.66	3.32	3.21
135.0	5.63	5.29	4.89	4.50	4.22	3.77	3.60	3.32	3.09
180.0	5.63	5.23	4.84	4.50	4.11	3.71	3.49	3.21	3.04
225.0	6.30	5.96	5.51	5.12	4.84	4.28	3.94	3.71	3.38
270.0	29.76	25.59	18.28	9.96	5.63	4.28	4.05	3.71	3.38
315.0	5.79	5.51	5.12	4.84	4.50	3.99	3.83	3.83	3.49
360.0	6.98	6.41	5.79	4.89	4.56	4.22	3.88	3.77	3.94

Intensity data(cd)

<b>C/γ(°)</b>	<b>90.0</b>
<b>0.0</b>	<b>3.71</b>
<b>45.0</b>	<b>3.88</b>
<b>90.0</b>	<b>3.32</b>
<b>135.0</b>	<b>2.93</b>
<b>180.0</b>	<b>2.81</b>
<b>225.0</b>	<b>3.32</b>
<b>270.0</b>	<b>3.21</b>
<b>315.0</b>	<b>3.43</b>
<b>360.0</b>	<b>3.71</b>