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## Nata

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LumCAT: LN01D02817DA-N

Luminaire: 92.70.307.00

Report No: 211115-B007

Test No: 211115-C007

LampCAT: Bridgelux V6HD LES7

Lamp flux(lm): 1006.7

Number of Lamps: 1

Length(mm): 111

Phm Type: C

Voltage(V): 34.5100

Current(A): 0.2100

Power (W): 7.2470

PF: 0.0000

Ballast type: DC

Width(mm): 111

Height(mm): 0

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## Photometric Results

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Lumens(lm): 625.22

Efficiency(%): 62.11%

Lumens(lm)/Power(W): 86.27

Central intensity(cd): 1870.266

Maximum intensity(cd): 1870.266

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

Beam Angle(50%Imax): [C0/180]Total=26.7

[C90/270]Total=26.7

Field angle(10%Imax): [C0/180]Total=55.6

[C90/270]Total=55.6

Maximum s/h(1/2): C0\_180=0.45 C90\_270=0.45

Maximum s/h(1/4): C0\_180=0.47 C90\_270=0.47

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 62.11%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 95.352%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1870.266	0.000	0	.000%	.000%
1.0	1863.842	1.787	1.787	.177%	.286%
2.0	1842.854	5.320	7.107	.529%	1.137%
3.0	1804.836	8.724	15.831	.867%	2.532%
4.0	1757.034	11.923	27.754	1.184%	4.439%
5.0	1696.011	14.855	42.609	1.476%	6.815%
6.0	1623.710	17.446	60.055	1.733%	9.605%
7.0	1535.948	19.612	79.666	1.948%	12.742%
8.0	1453.041	21.392	101.058	2.125%	16.164%
9.0	1349.437	22.713	123.771	2.256%	19.796%
10.0	1249.971	23.524	147.294	2.337%	23.559%
11.0	1150.288	23.984	171.278	2.383%	27.395%
12.0	1063.460	24.199	195.477	2.404%	31.265%
13.0	965.286	24.076	219.553	2.392%	35.116%
14.0	876.119	23.570	243.123	2.341%	38.886%
15.0	792.167	22.903	266.026	2.275%	42.549%
16.0	710.141	22.013	288.039	2.187%	46.070%
17.0	641.731	21.052	309.092	2.091%	49.437%
18.0	571.275	20.000	329.091	1.987%	52.636%
19.0	511.627	18.840	347.932	1.872%	55.650%
20.0	457.618	17.740	365.671	1.762%	58.487%
21.0	405.147	16.567	382.238	1.646%	61.137%
22.0	362.282	15.422	397.66	1.532%	63.603%
23.0	326.960	14.462	412.122	1.437%	65.916%
24.0	290.713	13.505	425.627	1.342%	68.076%
25.0	255.249	12.414	438.041	1.233%	70.062%
26.0	232.551	11.515	449.555	1.144%	71.904%
27.0	204.250	10.686	460.242	1.062%	73.613%
28.0	182.284	9.786	470.028	.972%	75.178%
29.0	163.200	9.039	479.067	.898%	76.624%
30.0	147.067	8.377	487.444	.832%	77.964%
31.0	131.778	7.760	495.204	.771%	79.205%
32.0	118.826	7.180	502.383	.713%	80.353%
33.0	107.944	6.681	509.064	.664%	81.422%
34.0	97.367	6.213	515.277	.617%	82.415%
35.0	89.039	5.789	521.067	.575%	83.341%
36.0	81.167	5.419	526.486	.538%	84.208%
37.0	74.116	5.064	531.55	.503%	85.018%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	67.797	4.737	536.287	.471%	85.776%
39.0	62.158	4.436	540.723	.441%	86.485%
40.0	57.340	4.168	544.891	.414%	87.152%
41.0	53.173	3.935	548.826	.391%	87.781%
42.0	49.229	3.720	552.546	.370%	88.376%
43.0	45.569	3.512	556.058	.349%	88.938%
44.0	42.559	3.326	559.384	.330%	89.470%
45.0	39.766	3.164	562.548	.314%	89.976%
46.0	37.151	3.008	565.556	.299%	90.457%
47.0	34.828	2.863	568.419	.284%	90.915%
48.0	32.887	2.737	571.156	.272%	91.353%
49.0	30.810	2.616	573.772	.260%	91.771%
50.0	29.018	2.494	576.266	.248%	92.170%
51.0	27.471	2.390	578.656	.237%	92.553%
52.0	25.895	2.290	580.946	.227%	92.919%
53.0	24.521	2.193	583.14	.218%	93.270%
54.0	23.207	2.104	585.243	.209%	93.606%
55.0	21.944	2.015	587.259	.200%	93.928%
56.0	20.779	1.931	589.189	.192%	94.237%
57.0	19.786	1.855	591.044	.184%	94.534%
58.0	18.665	1.778	592.822	.177%	94.818%
59.0	17.747	1.702	594.524	.169%	95.091%
60.0	16.835	1.634	596.158	.162%	95.352%
61.0	15.879	1.561	597.719	.155%	95.602%
62.0	15.088	1.492	599.211	.148%	95.840%
63.0	14.378	1.433	600.644	.142%	96.069%
64.0	13.579	1.372	602.016	.136%	96.289%
65.0	12.907	1.311	603.327	.130%	96.499%
66.0	12.317	1.258	604.586	.125%	96.700%
67.0	11.712	1.208	605.794	.120%	96.893%
68.0	11.174	1.159	606.953	.115%	97.078%
69.0	10.666	1.114	608.067	.111%	97.257%
70.0	10.165	1.070	609.137	.106%	97.428%
71.0	9.725	1.028	610.165	.102%	97.592%
72.0	9.433	0.996	611.161	.099%	97.752%
73.0	9.262	0.978	612.139	.097%	97.908%
74.0	9.396	0.981	613.12	.097%	98.065%
75.0	9.560	1.002	614.121	.099%	98.225%

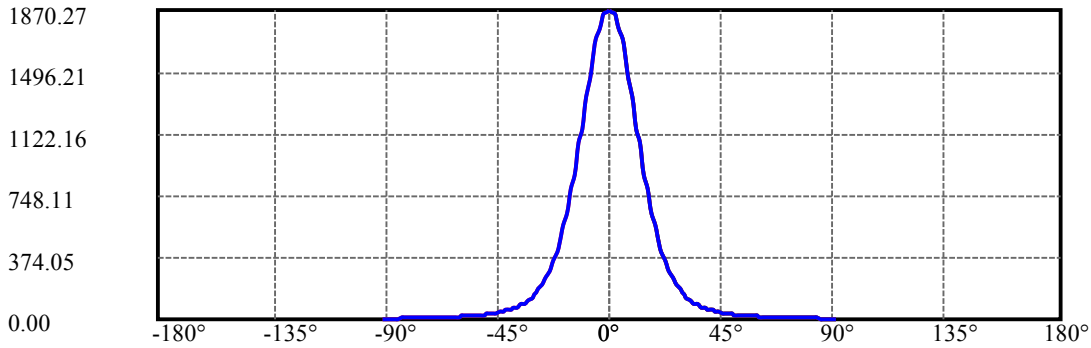
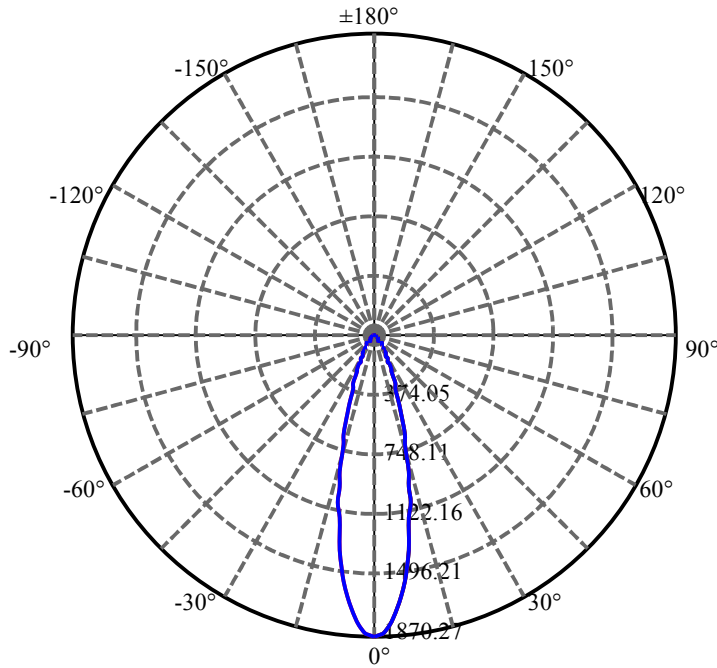
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.874	1.032	615.153	.102%	98.390%
77.0	10.143	1.067	616.22	.106%	98.561%
78.0	10.360	1.098	617.318	.109%	98.736%
79.0	10.726	1.133	618.451	.113%	98.917%
80.0	10.307	1.134	619.585	.113%	99.099%
81.0	9.508	1.072	620.656	.106%	99.270%
82.0	8.037	0.951	621.608	.095%	99.422%
83.0	6.752	0.804	622.412	.080%	99.551%
84.0	5.139	0.648	623.059	.064%	99.655%
85.0	4.250	0.512	623.572	.051%	99.737%
86.0	3.331	0.414	623.986	.041%	99.803%
87.0	2.943	0.343	624.33	.034%	99.858%
88.0	2.726	0.311	624.64	.031%	99.907%
89.0	2.607	0.292	624.932	.029%	99.954%
90.0	2.622	0.287	625.219	.028%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	487.44	48.42%	77.96%
0-40	544.89	54.13%	87.15%
0-60	596.16	59.22%	95.35%
0-90	624.93	62.08%	99.95%
0-120	624.93	62.08%	99.95%
0-180	625.22	62.11%	100.00%
60-90	30.41	3.02%	4.86%
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%
0-31.69	500.18	49.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	147.29
10-20	218.38
20-30	121.77
30-40	57.45
40-50	31.38
50-60	19.89
60-70	12.98
70-80	10.45
80-90	5.35
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: —————

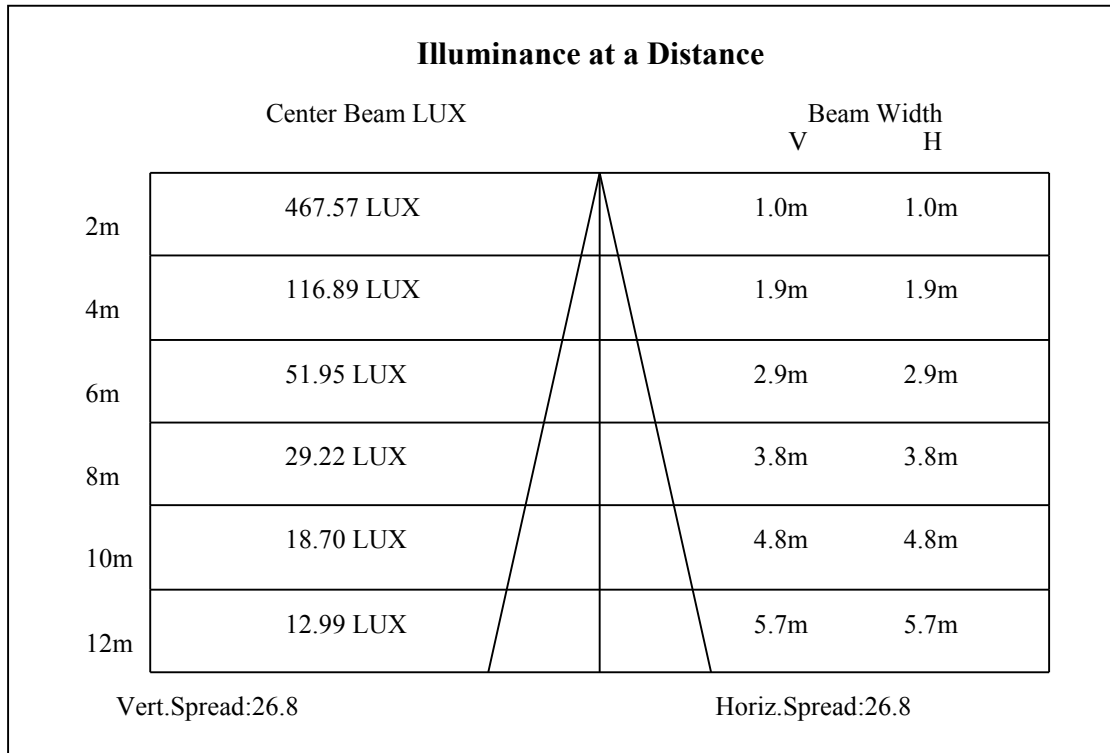
C90/C270: —————

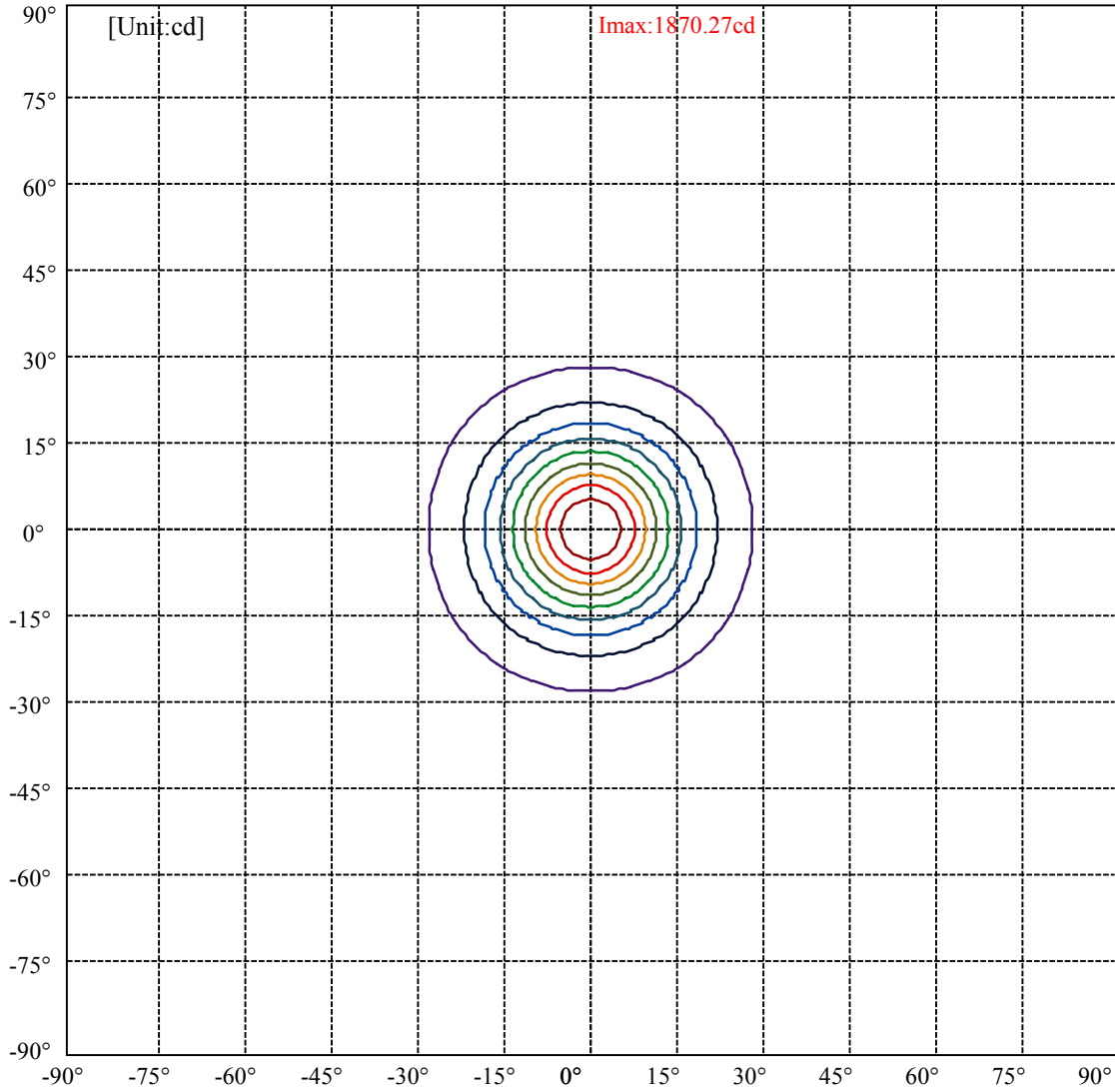
Field angle(10%Imax):C0/180Left:27.8 Right:27.8

:C90/270Left:27.8 Right:27.8

Beam Angle(50%Imax):C0/180Left:13.3 Right:13.3

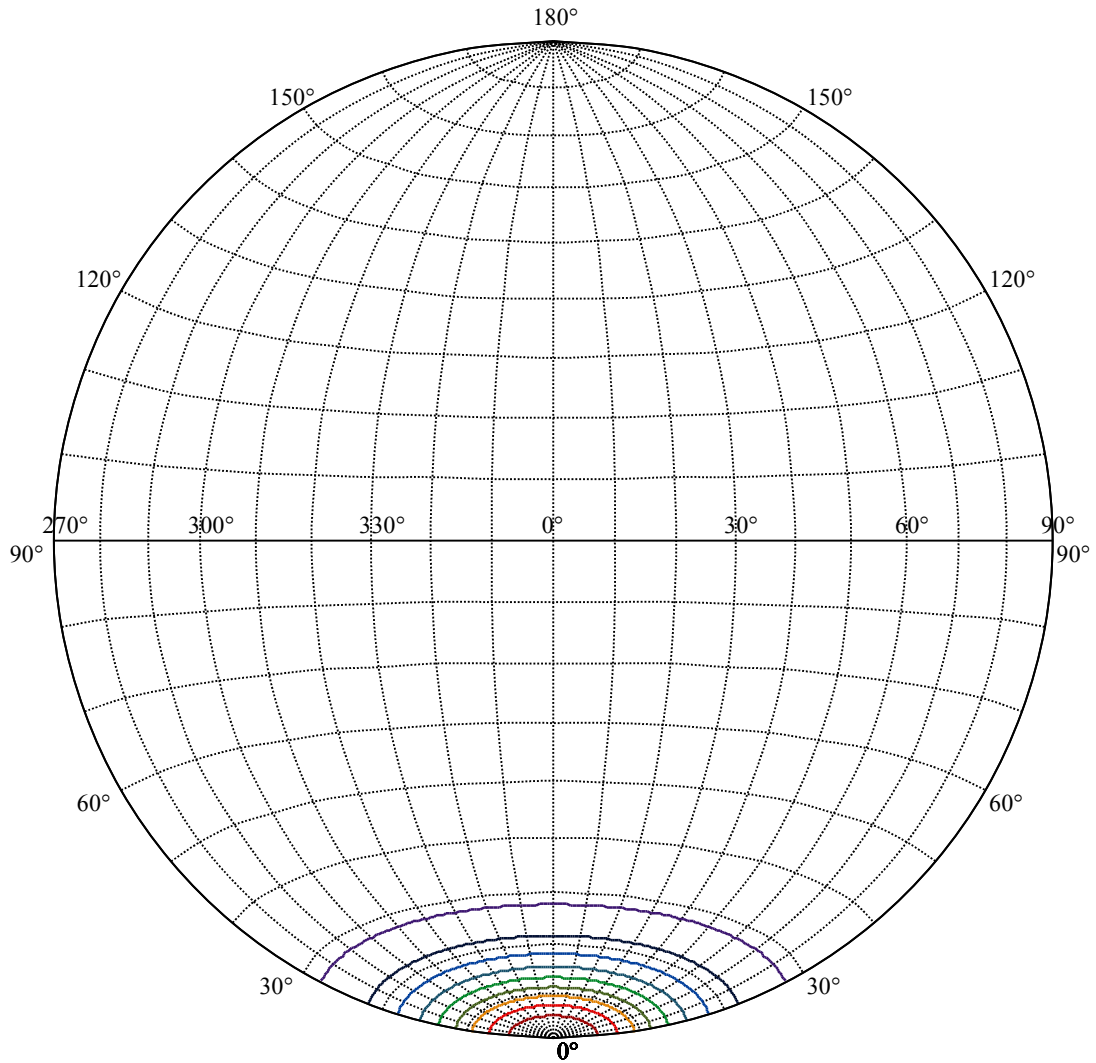
:C90/270Left:13.3 Right:13.3





(10%Imax) 187.027	—
(20%Imax) 374.053	—
(30%Imax) 561.08	—
(40%Imax) 748.106	—
(50%Imax) 935.133	—
(60%Imax) 1122.16	—
(70%Imax) 1309.19	—
(80%Imax) 1496.21	—
(90%Imax) 1683.24	—





House

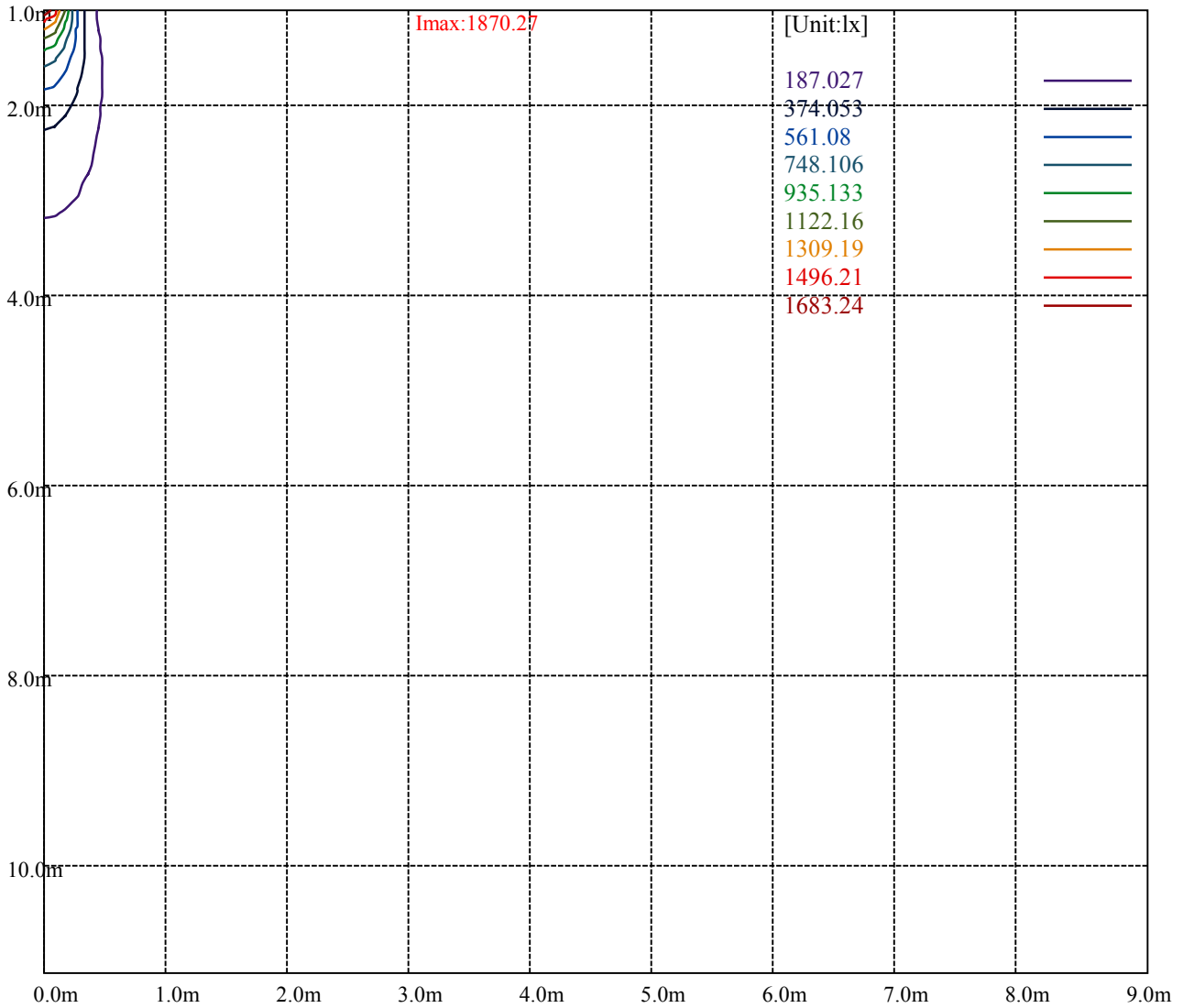
[Unit:cd]

Road

**Imax:1870.27**

(10%Imax) 187.027	—
(20%Imax) 374.053	—
(30%Imax) 561.08	—
(40%Imax) 748.106	—
(50%Imax) 935.133	—
(60%Imax) 1122.16	—
(70%Imax) 1309.19	—
(80%Imax) 1496.21	—
(90%Imax) 1683.24	—





Luminance Table

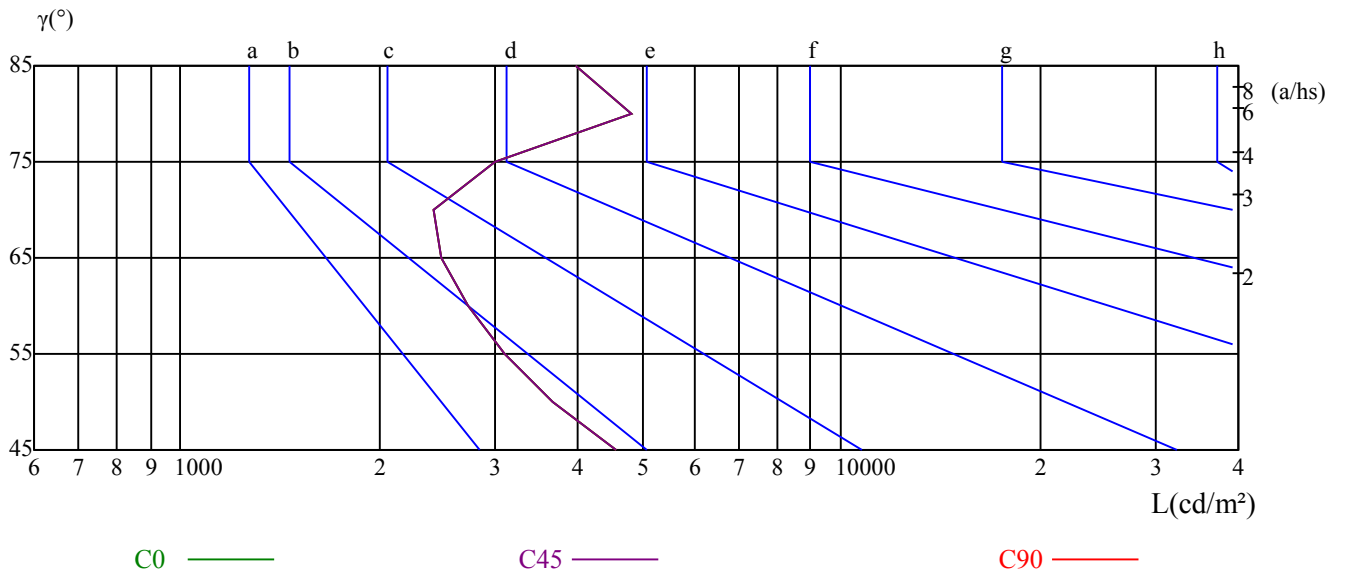
$\gamma$	45	50	55	60	65	70	75	80	85
C0	4564	3664	3105	2733	2479	2412	2998	4818	3958
C45	4564	3664	3105	2733	2479	2412	2998	4818	3958
C90	4564	3664	3105	2733	2479	2412	2998	4818	3958

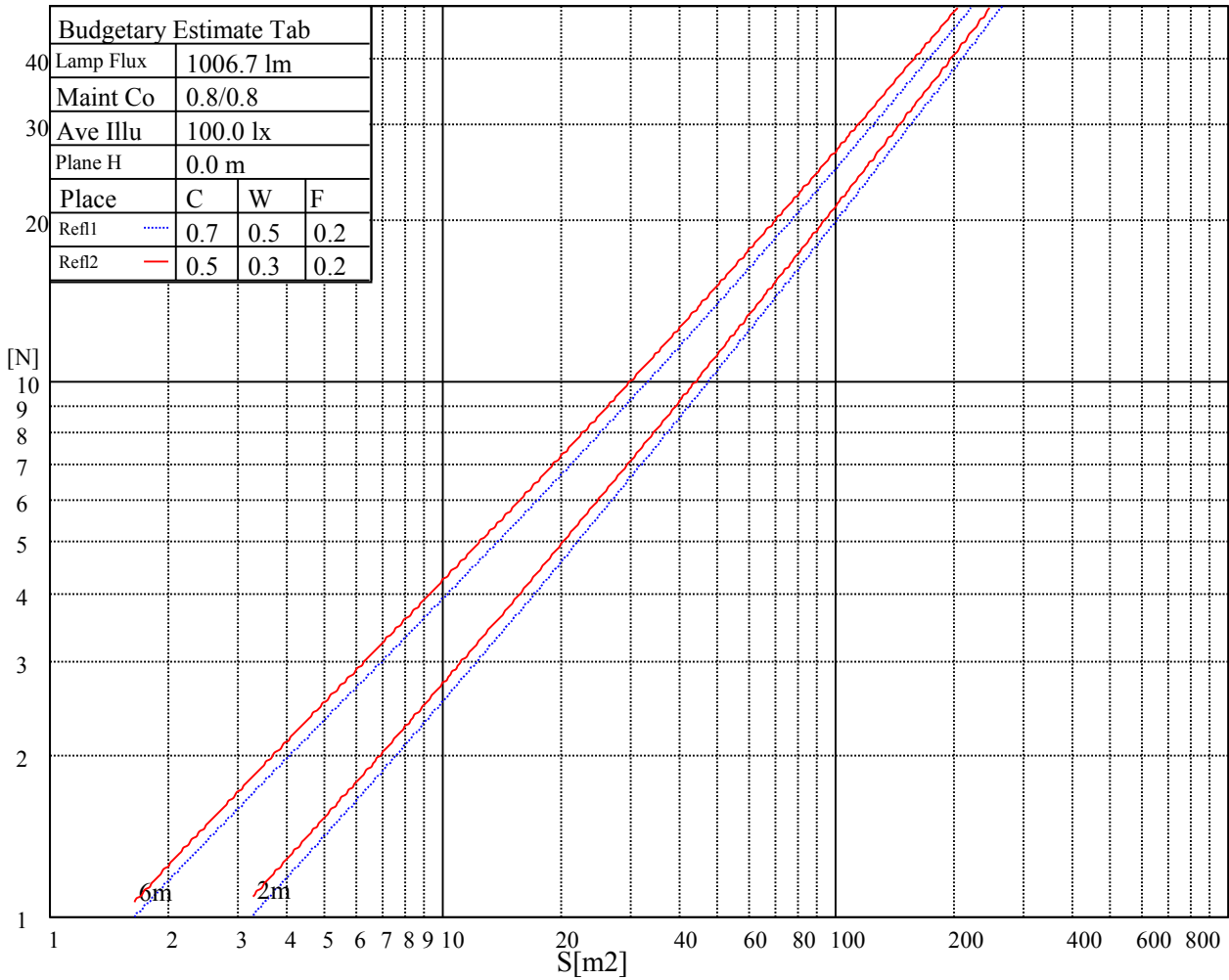
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2479	2479	2479	2998	2998	2998	3958	3958	3958

Glare Table

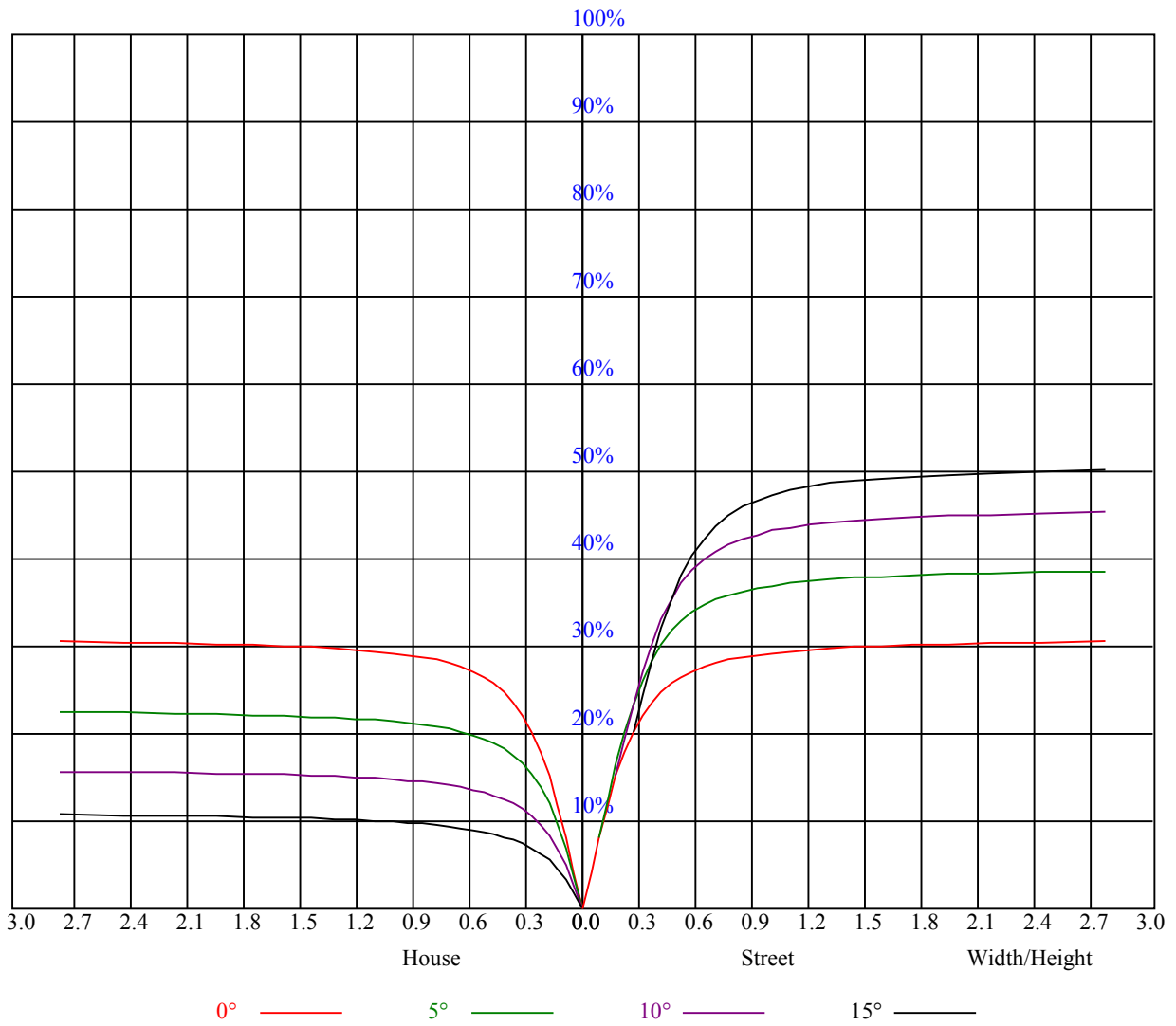
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.74	0.74	0.74	0.72	0.72	0.72	0.69	0.69	0.69	0.66	0.66	0.66	0.63	0.63	0.63	0.62
1	0.69	0.67	0.66	0.67	0.66	0.65	0.65	0.64	0.63	0.62	0.62	0.61	0.60	0.60	0.59	0.58
2	0.64	0.62	0.59	0.63	0.61	0.59	0.61	0.59	0.58	0.59	0.58	0.56	0.57	0.56	0.55	0.54
3	0.60	0.57	0.55	0.59	0.57	0.54	0.58	0.55	0.54	0.56	0.54	0.53	0.55	0.53	0.52	0.51
4	0.57	0.54	0.51	0.56	0.53	0.51	0.55	0.52	0.50	0.54	0.51	0.50	0.52	0.51	0.49	0.48
5	0.54	0.51	0.48	0.53	0.50	0.48	0.52	0.49	0.47	0.51	0.49	0.47	0.50	0.48	0.47	0.46
6	0.51	0.48	0.45	0.51	0.48	0.45	0.50	0.47	0.45	0.49	0.47	0.45	0.48	0.46	0.44	0.44
7	0.49	0.46	0.43	0.49	0.45	0.43	0.48	0.45	0.43	0.47	0.45	0.43	0.46	0.44	0.42	0.42
8	0.47	0.43	0.41	0.46	0.43	0.41	0.46	0.43	0.41	0.45	0.43	0.41	0.45	0.42	0.41	0.40
9	0.45	0.42	0.39	0.45	0.42	0.39	0.44	0.41	0.39	0.44	0.41	0.39	0.43	0.41	0.39	0.38
10	0.43	0.40	0.38	0.43	0.40	0.38	0.42	0.40	0.38	0.42	0.39	0.38	0.42	0.39	0.38	0.37



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	1880.42	1882.22	1869.67	1840.99	1803.34	1745.38	1674.28	1602.57	1523.70
45.0	1864.89	1842.18	1805.14	1759.13	1695.19	1619.90	1542.22	1447.22	1360.57
90.0	1858.91	1837.40	1800.95	1732.24	1678.46	1607.95	1517.72	1419.73	1328.90
135.0	1876.84	1864.89	1836.21	1792.59	1741.80	1671.89	1588.83	1506.37	1420.33
180.0	1880.42	1863.10	1833.82	1787.81	1726.86	1661.73	1585.84	1480.08	1390.45
225.0	1864.89	1871.46	1865.49	1839.19	1806.33	1759.72	1692.80	1616.32	1539.83
270.0	1858.91	1873.85	1870.86	1857.12	1820.67	1771.08	1722.08	1639.62	1564.93
315.0	1876.84	1875.64	1860.71	1829.63	1783.62	1730.44	1665.91	1575.68	1495.62
360.0	1880.42	1882.22	1869.67	1840.99	1803.34	1745.38	1674.28	1602.57	1523.70
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1417.34	1328.31	1235.69	1132.91	1030.74	941.11	846.10	756.47	681.78
45.0	1258.40	1153.83	1061.81	972.18	866.42	785.75	710.46	626.21	564.66
90.0	1174.68	1117.68	1028.29	941.88	849.33	762.03	689.67	614.74	553.07
135.0	1306.80	1214.18	1120.37	1018.19	920.79	838.33	750.50	672.82	607.69
180.0	1298.43	1166.20	1086.85	998.83	904.18	814.85	740.76	663.62	599.80
225.0	1444.83	1345.04	1192.13	1135.36	1056.61	958.56	857.33	790.47	717.51
270.0	1484.86	1376.71	1287.08	1198.05	1085.11	996.68	911.83	812.04	736.75
315.0	1410.17	1297.83	1190.10	1110.27	1009.11	911.65	830.68	744.76	672.58
360.0	1417.34	1328.31	1235.69	1132.91	1030.74	941.11	846.10	756.47	681.78
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	606.49	545.54	483.40	427.83	383.02	338.80	303.54	265.42	237.64
45.0	506.11	447.55	396.16	352.54	313.11	303.54	246.18	220.85	196.23
90.0	489.44	432.97	388.21	343.52	304.14	273.19	245.70	215.53	194.20
135.0	540.76	486.99	432.01	378.83	343.58	301.75	281.38	238.65	214.69
180.0	533.59	474.38	426.99	379.19	336.59	302.89	272.53	238.89	214.87
225.0	626.81	574.82	520.03	451.61	412.24	371.07	329.54	292.37	263.15
270.0	668.04	598.13	534.79	482.80	429.62	387.20	344.18	305.93	301.75
315.0	598.96	532.64	479.34	424.84	375.97	337.25	302.65	264.35	237.88
360.0	606.49	545.54	483.40	427.83	383.02	338.80	303.54	265.42	237.64
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	207.10	185.95	167.49	149.38	133.79	121.60	109.47	98.89	90.65
45.0	174.60	157.87	140.96	127.69	114.79	103.61	94.83	86.16	78.40
90.0	175.37	156.55	139.88	126.86	114.19	103.07	94.41	85.75	78.93
135.0	193.36	170.06	153.45	138.57	122.55	111.50	101.70	91.00	83.36
180.0	193.48	172.03	152.91	138.03	124.88	110.72	100.80	91.06	83.42
225.0	234.05	210.69	187.44	167.19	151.35	135.58	121.66	110.60	100.74
270.0	241.58	214.33	193.18	174.54	154.22	139.94	127.03	112.93	102.95
315.0	214.45	190.79	170.30	154.28	138.45	124.58	113.65	102.54	93.87
360.0	207.10	185.95	167.49	149.38	133.79	121.60	109.47	98.89	90.65
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	83.24	75.77	69.25	63.46	59.04	55.09	50.73	47.62	44.87
45.0	72.42	67.58	60.71	56.41	52.94	48.34	44.64	42.01	38.66
90.0	72.12	66.03	61.13	56.17	51.75	48.16	44.93	41.35	38.78
135.0	76.66	69.85	63.76	59.10	54.43	50.49	46.61	43.20	40.51
180.0	75.83	69.13	63.88	58.62	54.02	50.43	47.15	43.98	41.11
225.0	89.93	82.28	75.47	67.94	62.62	58.02	53.66	48.94	45.59
270.0	93.99	84.91	76.90	70.51	64.23	59.39	54.55	50.19	46.79
315.0	85.15	77.38	71.29	65.07	59.69	55.45	51.57	47.26	44.16
360.0	83.24	75.77	69.25	63.46	59.04	55.09	50.73	47.62	44.87



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	42.01	39.44	37.35	35.49	33.28	31.61	30.12	28.56	27.19
45.0	36.03	34.12	31.67	29.88	28.20	26.35	24.92	23.60	22.05
90.0	36.39	34.00	31.85	30.06	28.20	26.47	25.04	23.48	22.23
135.0	37.82	35.37	33.40	31.67	29.64	28.14	26.65	25.22	23.84
180.0	38.72	36.57	34.18	32.45	30.83	28.98	27.55	26.29	25.04
225.0	42.48	39.38	36.57	34.30	32.03	29.94	28.20	26.41	24.98
270.0	43.32	40.15	37.64	35.31	32.63	30.65	28.86	26.95	25.34
315.0	41.35	38.18	35.97	33.94	31.67	30.00	28.44	26.65	25.51
360.0	42.01	39.44	37.35	35.49	33.28	31.61	30.12	28.56	27.19
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	26.05	24.86	23.60	22.65	21.51	20.67	19.72	18.76	17.99
45.0	20.85	19.78	18.52	17.63	16.79	15.77	14.94	14.22	13.32
90.0	20.91	19.66	18.64	17.69	16.49	15.72	14.82	13.92	13.21
135.0	22.65	21.45	20.32	19.42	18.40	17.51	16.67	15.72	15.00
180.0	23.78	22.71	21.57	20.67	19.66	18.70	17.75	16.79	15.95
225.0	23.42	21.99	20.79	19.66	18.40	17.45	16.55	15.48	14.64
270.0	23.90	22.47	21.09	19.96	18.76	17.75	16.67	15.66	14.76
315.0	24.08	22.65	21.69	20.61	19.30	18.40	17.57	16.49	15.83
360.0	26.05	24.86	23.60	22.65	21.51	20.67	19.72	18.76	17.99
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	17.33	16.37	15.72	15.12	14.40	13.80	13.38	12.73	12.25
45.0	12.67	11.95	11.35	10.76	10.28	9.68	9.26	8.78	8.31
90.0	12.49	11.77	11.11	10.52	9.92	9.44	8.90	8.43	8.01
135.0	14.28	13.38	12.79	12.25	11.59	11.11	10.64	10.16	9.68
180.0	15.30	14.64	13.92	13.38	12.91	12.37	11.83	11.47	11.23
225.0	13.92	13.15	12.37	11.77	11.17	10.64	10.04	9.50	9.02
270.0	13.98	13.09	12.43	11.77	11.05	10.52	9.98	9.44	8.90
315.0	15.06	14.28	13.56	12.97	12.37	11.83	11.29	10.82	10.40
360.0	17.33	16.37	15.72	15.12	14.40	13.80	13.38	12.73	12.25
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	11.83	12.01	13.27	15.00	17.51	18.64	19.06	20.14	19.84
45.0	7.89	7.53	7.05	6.63	6.27	6.45	6.93	6.45	4.96
90.0	7.53	7.11	6.69	6.27	5.74	5.38	5.08	4.72	4.36
135.0	9.26	8.84	8.48	8.07	7.71	8.07	8.60	9.68	9.92
180.0	12.07	13.21	15.42	17.51	20.08	22.05	22.95	23.00	21.27
225.0	8.54	8.01	7.65	7.23	6.75	6.39	6.87	8.48	8.60
270.0	8.43	7.95	7.53	7.05	6.69	6.27	5.80	5.50	5.14
315.0	9.92	9.44	9.08	8.72	8.25	7.89	7.59	7.83	8.37
360.0	11.83	12.01	13.27	15.00	17.51	18.64	19.06	20.14	19.84
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	18.94	16.43	14.52	10.88	7.11	4.90	4.00	3.29	2.81
45.0	4.48	4.18	3.88	3.70	2.93	2.69	2.57	2.51	2.57
90.0	4.12	3.76	3.47	3.11	2.81	2.57	2.57	2.57	2.57
135.0	8.48	6.87	5.80	5.02	3.64	3.11	2.69	2.63	2.57
180.0	19.12	16.37	11.71	4.84	3.70	3.23	2.81	2.69	2.57
225.0	8.31	5.44	4.48	4.12	3.88	3.17	2.87	2.69	2.57
270.0	4.78	4.42	4.12	3.82	3.53	3.17	2.81	2.63	2.57
315.0	7.83	6.81	6.04	5.62	6.39	3.82	3.23	2.81	2.63
360.0	18.94	16.43	14.52	10.88	7.11	4.90	4.00	3.29	2.81

Intensity data(cd)

C/ $\gamma$ (°)	90.0
0.0	2.69
45.0	2.51
90.0	2.51
135.0	2.57
180.0	2.99
225.0	2.57
270.0	2.57
315.0	2.57
360.0	2.69