



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 1-0936-N
Luminaire: 92.70.246.00
Report No: 210708-B020
Test No: 210708-C020
LampCAT: Fortimo LED SLM 1204 G7N
Lamp flux(lm): 2446.6
Number of Lamps: 1
Length(mm): 570
Phm Type: C
Voltage(V): 36.1200
Current(A): 0.5100
Power (W): 18.4210
PF: 0.0000
Ballast type: DC
Width(mm): 45
Height(mm): 20

Photometric Results

Lumens(lm): 1929.16
Efficiency(%): 78.85%
Lumens(lm)/Power(W): 104.73
Central intensity(cd): 8000.438
Maximum intensity(cd): 8000.438
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.1
[C90/270]Total=24.1
Field angle(10%Imax): [C0/180]Total=50.1
[C90/270]Total=50.1
Maximum s/h(1/2): C0_180=0.41 C90_270=0.41
Maximum s/h(1/4): C0_180=0.43 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.85%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.011%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8000.438	0.000	0	.000%	.000%
1.0	7955.508	7.635	7.635	.312%	.396%
2.0	7820.789	22.644	30.278	.926%	1.570%
3.0	7613.578	36.914	67.192	1.509%	3.483%
4.0	7338.234	50.048	117.241	2.046%	6.077%
5.0	7028.648	61.806	179.046	2.526%	9.281%
6.0	6628.570	71.772	250.819	2.934%	13.001%
7.0	6209.297	79.684	330.503	3.257%	17.132%
8.0	5809.992	86.020	416.523	3.516%	21.591%
9.0	5353.945	90.478	507	3.698%	26.281%
10.0	4871.109	92.533	599.533	3.782%	31.077%
11.0	4451.063	93.148	692.681	3.807%	35.906%
12.0	4024.758	92.653	785.334	3.787%	40.709%
13.0	3562.945	90.047	875.381	3.680%	45.376%
14.0	3197.813	86.537	961.918	3.537%	49.862%
15.0	2855.109	83.097	1045.015	3.396%	54.169%
16.0	2528.930	78.891	1123.906	3.224%	58.259%
17.0	2253.023	74.468	1198.374	3.044%	62.119%
18.0	2013.680	70.349	1268.723	2.875%	65.766%
19.0	1787.273	66.129	1334.852	2.703%	69.193%
20.0	1598.977	61.978	1396.83	2.533%	72.406%
21.0	1398.002	57.548	1454.378	2.352%	75.389%
22.0	1229.330	52.797	1507.175	2.158%	78.126%
23.0	1099.287	48.861	1556.036	1.997%	80.659%
24.0	953.023	44.871	1600.906	1.834%	82.985%
25.0	805.704	39.990	1640.896	1.634%	85.058%
26.0	677.517	35.012	1675.908	1.431%	86.872%
27.0	558.127	30.230	1706.138	1.236%	88.440%
28.0	434.461	25.130	1731.268	1.027%	89.742%
29.0	340.235	20.268	1751.536	.828%	90.793%
30.0	269.156	16.453	1767.99	.672%	91.646%
31.0	200.862	13.080	1781.07	.535%	92.324%
32.0	145.027	9.909	1790.979	.405%	92.837%
33.0	115.847	7.685	1798.664	.314%	93.236%
34.0	98.269	6.480	1805.144	.265%	93.572%
35.0	89.536	5.833	1810.977	.238%	93.874%
36.0	83.763	5.518	1816.495	.226%	94.160%
37.0	78.202	5.282	1821.777	.216%	94.434%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	73.526	5.064	1826.842	.207%	94.696%
39.0	68.463	4.846	1831.688	.198%	94.948%
40.0	63.682	4.609	1836.297	.188%	95.186%
41.0	59.393	4.383	1840.679	.179%	95.414%
42.0	55.245	4.165	1844.844	.170%	95.630%
43.0	51.012	3.936	1848.78	.161%	95.834%
44.0	47.545	3.720	1852.5	.152%	96.026%
45.0	44.332	3.531	1856.031	.144%	96.209%
46.0	40.465	3.316	1859.347	.136%	96.381%
47.0	37.568	3.104	1862.451	.127%	96.542%
48.0	35.142	2.939	1865.39	.120%	96.695%
49.0	32.442	2.775	1868.166	.113%	96.838%
50.0	29.946	2.601	1870.767	.106%	96.973%
51.0	28.062	2.454	1873.221	.100%	97.100%
52.0	26.002	2.320	1875.541	.095%	97.221%
53.0	24.223	2.185	1877.726	.089%	97.334%
54.0	22.887	2.076	1879.802	.085%	97.442%
55.0	21.677	1.989	1881.791	.081%	97.545%
56.0	20.679	1.914	1883.705	.078%	97.644%
57.0	19.807	1.851	1885.556	.076%	97.740%
58.0	18.970	1.793	1887.35	.073%	97.833%
59.0	18.316	1.743	1889.093	.071%	97.923%
60.0	17.740	1.703	1890.796	.070%	98.011%
61.0	17.149	1.665	1892.461	.068%	98.098%
62.0	16.678	1.630	1894.091	.067%	98.182%
63.0	16.270	1.602	1895.694	.065%	98.265%
64.0	15.841	1.576	1897.269	.064%	98.347%
65.0	15.448	1.548	1898.818	.063%	98.427%
66.0	15.033	1.521	1900.339	.062%	98.506%
67.0	14.625	1.491	1901.83	.061%	98.583%
68.0	14.217	1.461	1903.291	.060%	98.659%
69.0	13.901	1.434	1904.725	.059%	98.734%
70.0	13.570	1.411	1906.136	.058%	98.807%
71.0	13.191	1.383	1907.519	.057%	98.878%
72.0	12.832	1.353	1908.873	.055%	98.948%
73.0	12.480	1.324	1910.196	.054%	99.017%
74.0	12.150	1.295	1911.491	.053%	99.084%
75.0	11.848	1.268	1912.759	.052%	99.150%

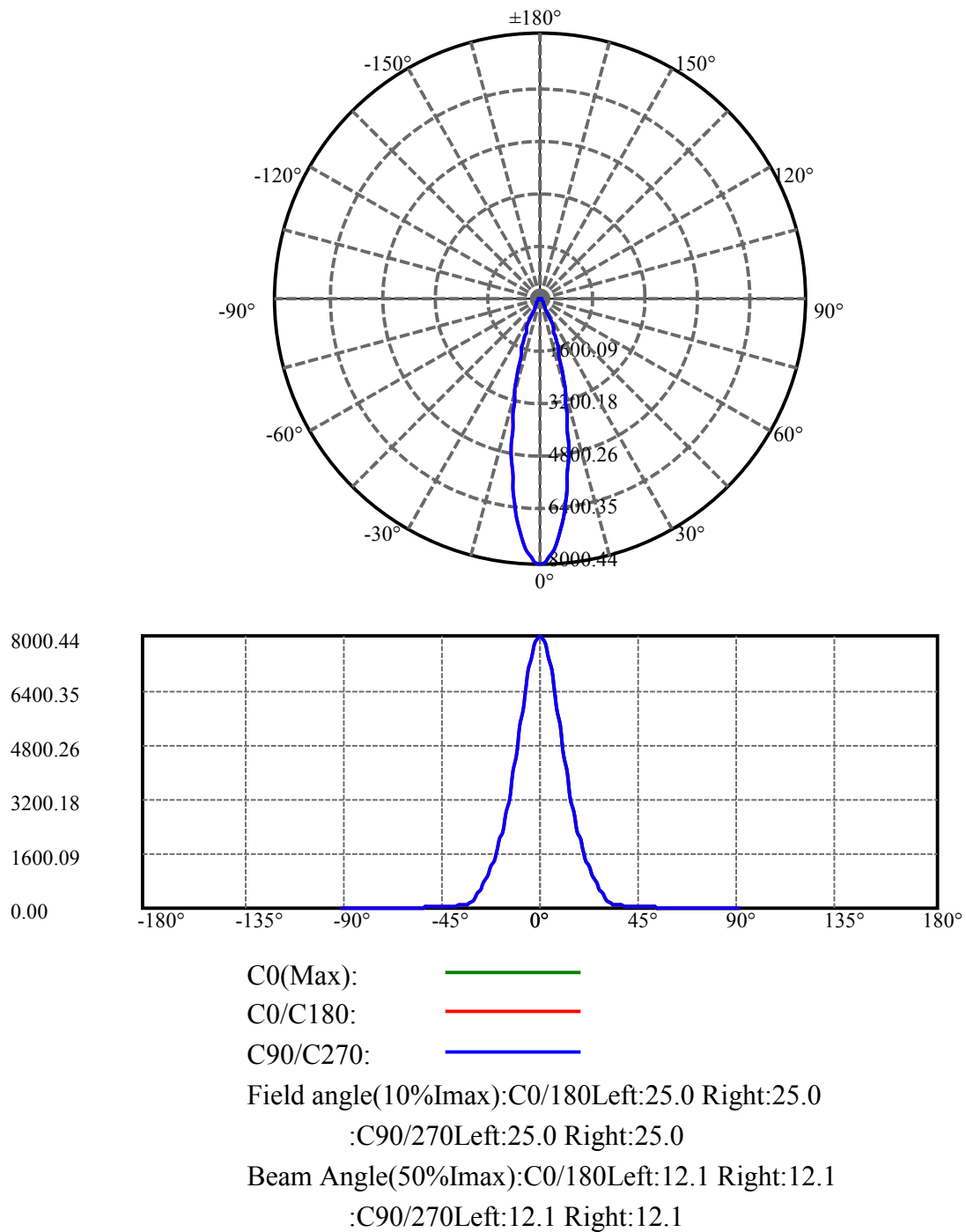
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	11.566	1.243	1914.002	.051%	99.214%
77.0	11.306	1.219	1915.221	.050%	99.278%
78.0	11.053	1.197	1916.418	.049%	99.340%
79.0	10.800	1.174	1917.592	.048%	99.400%
80.0	10.631	1.155	1918.748	.047%	99.460%
81.0	10.505	1.143	1919.891	.047%	99.520%
82.0	10.385	1.133	1921.024	.046%	99.578%
83.0	10.273	1.123	1922.147	.046%	99.637%
84.0	10.062	1.108	1923.254	.045%	99.694%
85.0	9.773	1.083	1924.337	.044%	99.750%
86.0	9.091	1.031	1925.368	.042%	99.804%
87.0	8.810	0.980	1926.348	.040%	99.854%
88.0	8.585	0.953	1927.301	.039%	99.904%
89.0	8.459	0.934	1928.235	.038%	99.952%
90.0	8.374	0.923	1929.158	.038%	100.000%

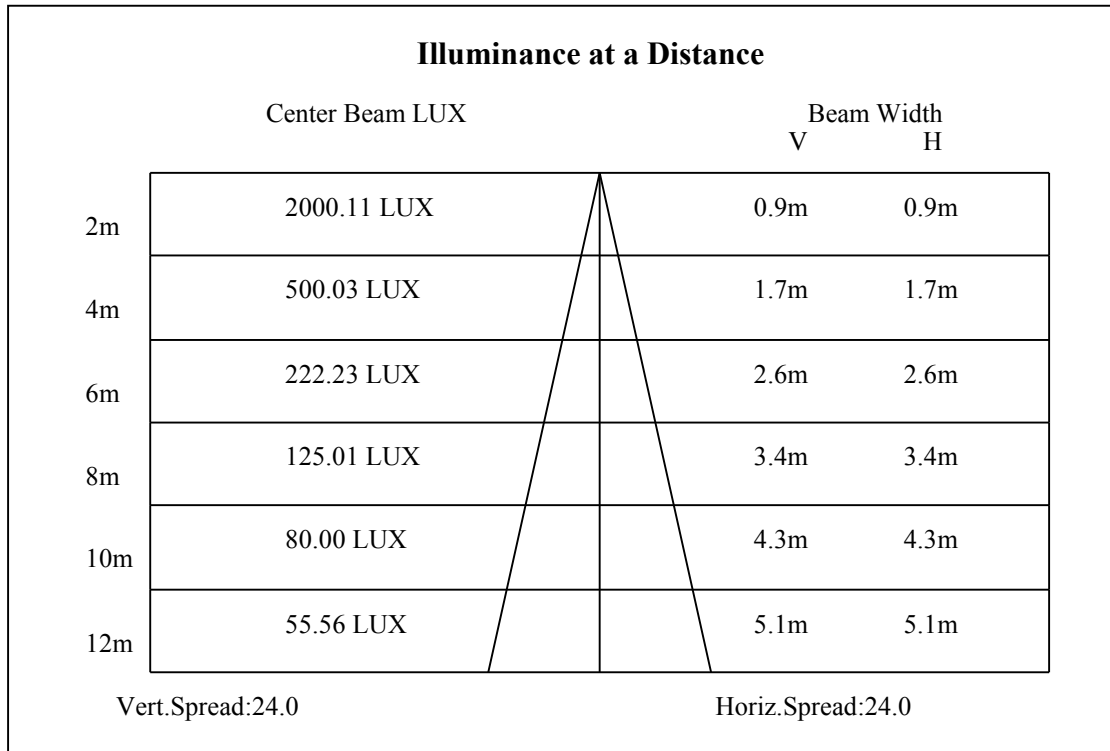
ZONAL LUMEN SUMMARY

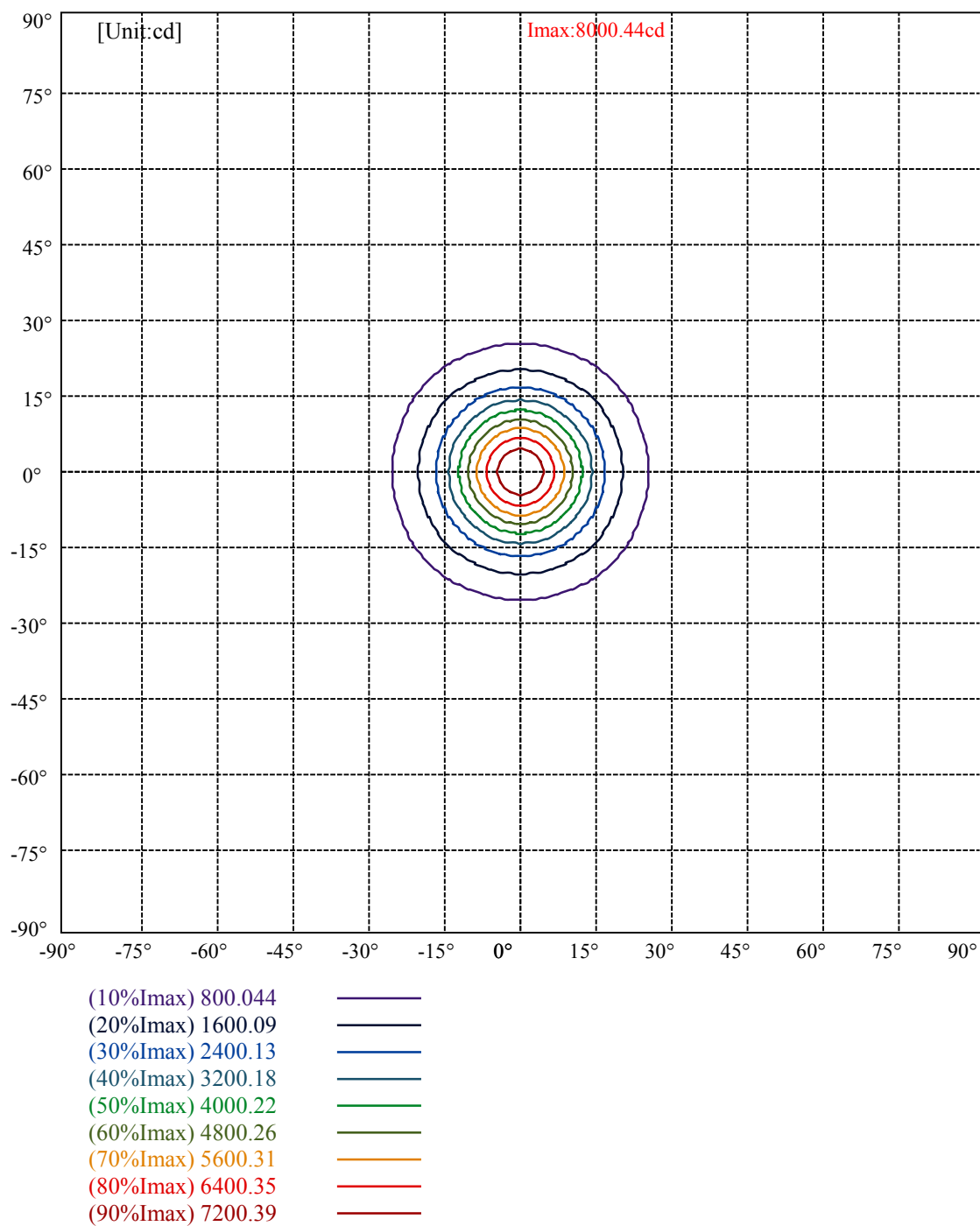
Zone	Lumens	%Lamp	%Fixt
0-30	1767.99	72.26%	91.65%
0-40	1836.30	75.05%	95.19%
0-60	1890.80	77.28%	98.01%
0-90	1928.23	78.81%	99.95%
0-120	1928.23	78.81%	99.95%
0-180	1929.16	78.85%	100.00%
60-90	39.14	1.60%	2.03%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.74	1543.33	63.08%	80.00%

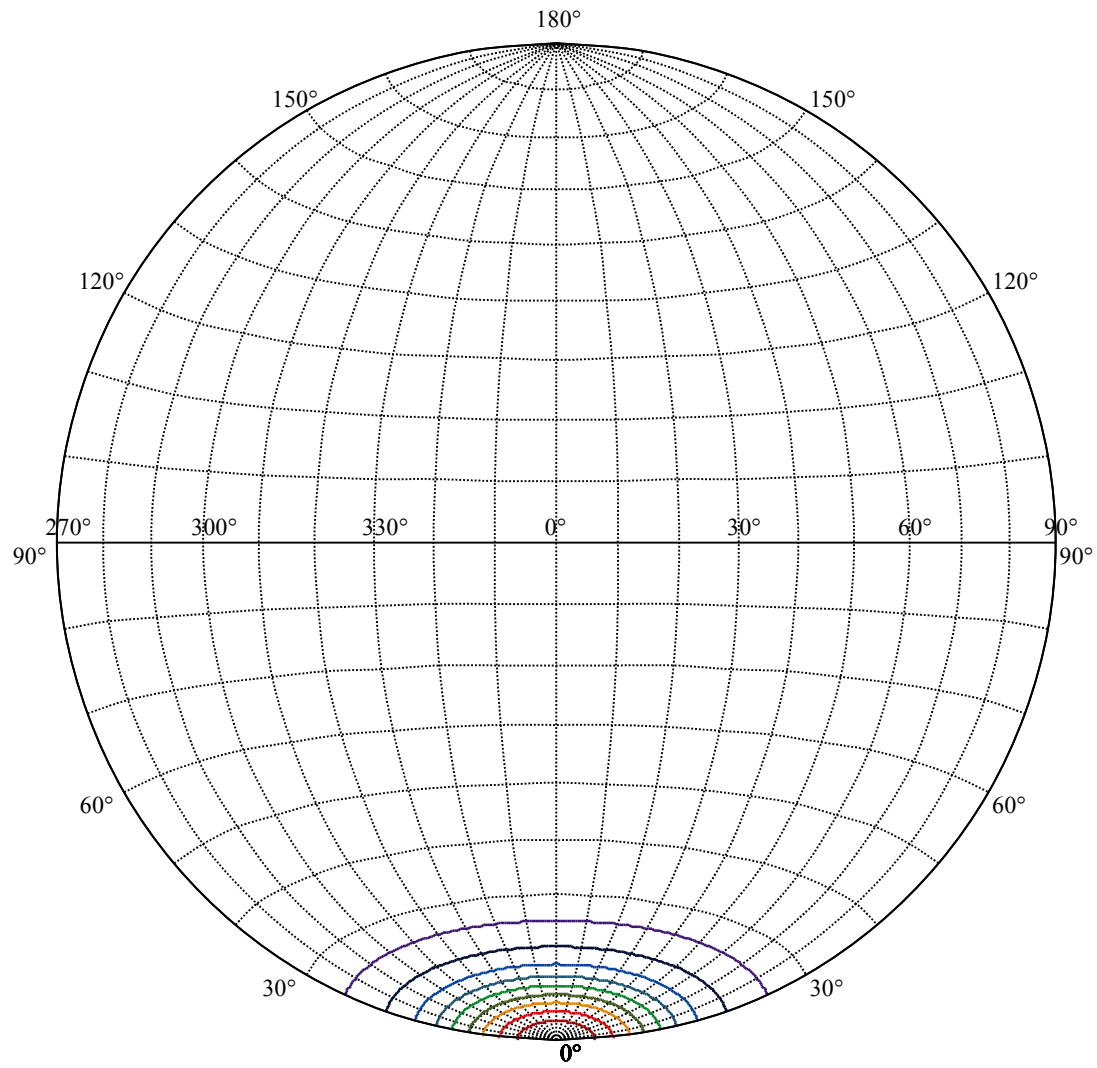
ZONAL LUMEN SUMMARY

0-10	599.53
10-20	797.30
20-30	371.16
30-40	68.31
40-50	34.47
50-60	20.03
60-70	15.34
70-80	12.61
80-90	9.49
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







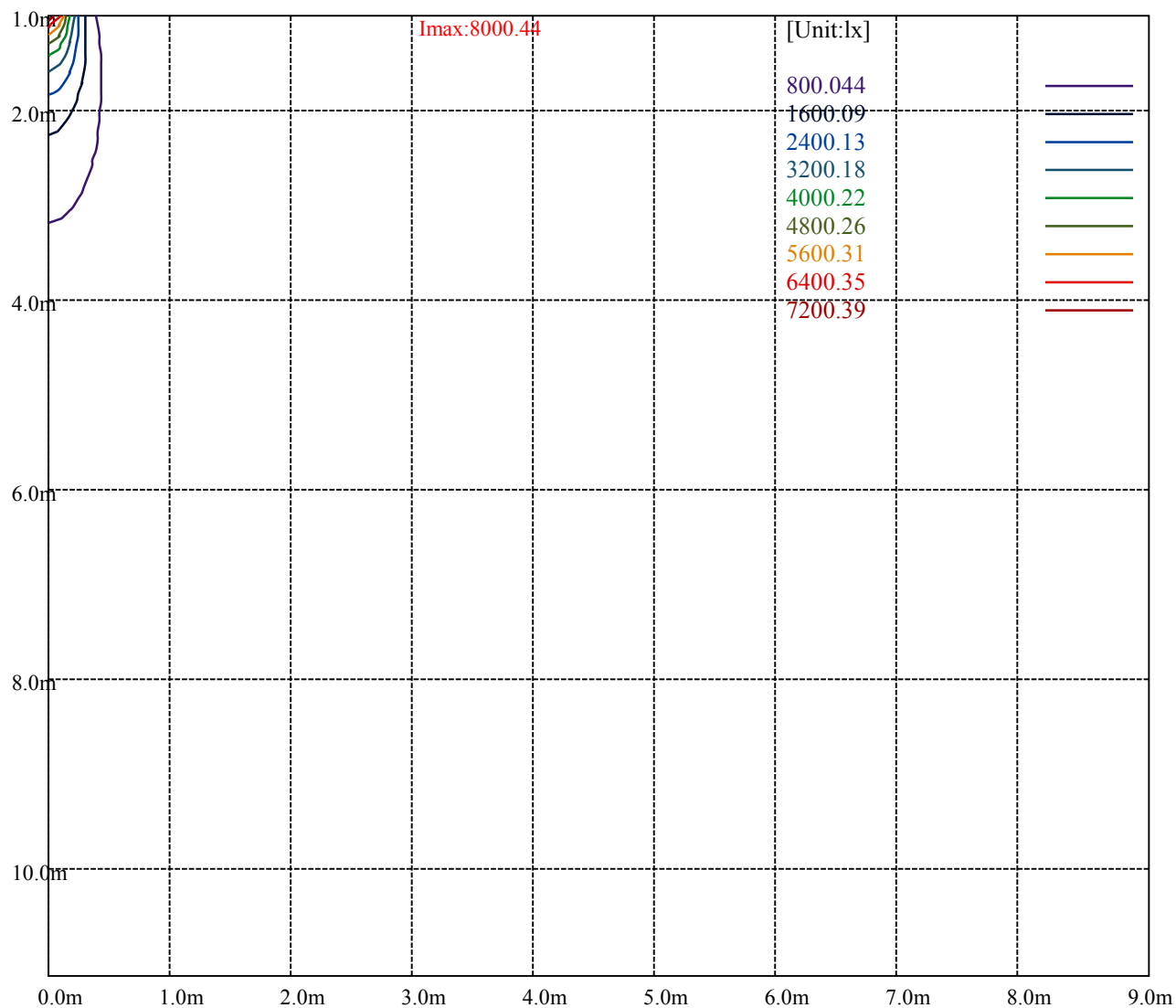


House

[Unit:cd]

Road

Imax:8000.44	
(10%Imax) 800.044	_____
(20%Imax) 1600.09	_____
(30%Imax) 2400.13	_____
(40%Imax) 3200.18	_____
(50%Imax) 4000.22	_____
(60%Imax) 4800.26	_____
(70%Imax) 5600.31	_____
(80%Imax) 6400.35	_____
(90%Imax) 7200.39	_____



Luminance Table

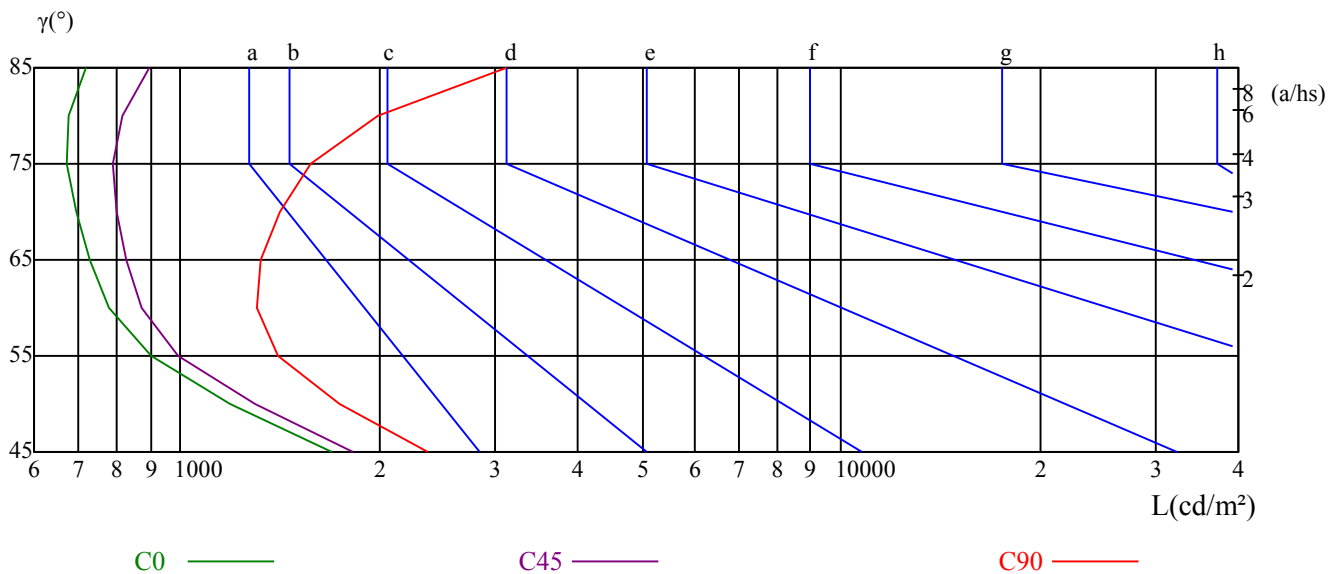
γ	45	50	55	60	65	70	75	80	85
C0	1692	1187	901	782	730	696	671	678	719
C45	1825	1294	993	871	825	801	788	817	897
C90	2361	1743	1403	1304	1325	1411	1578	1991	3120

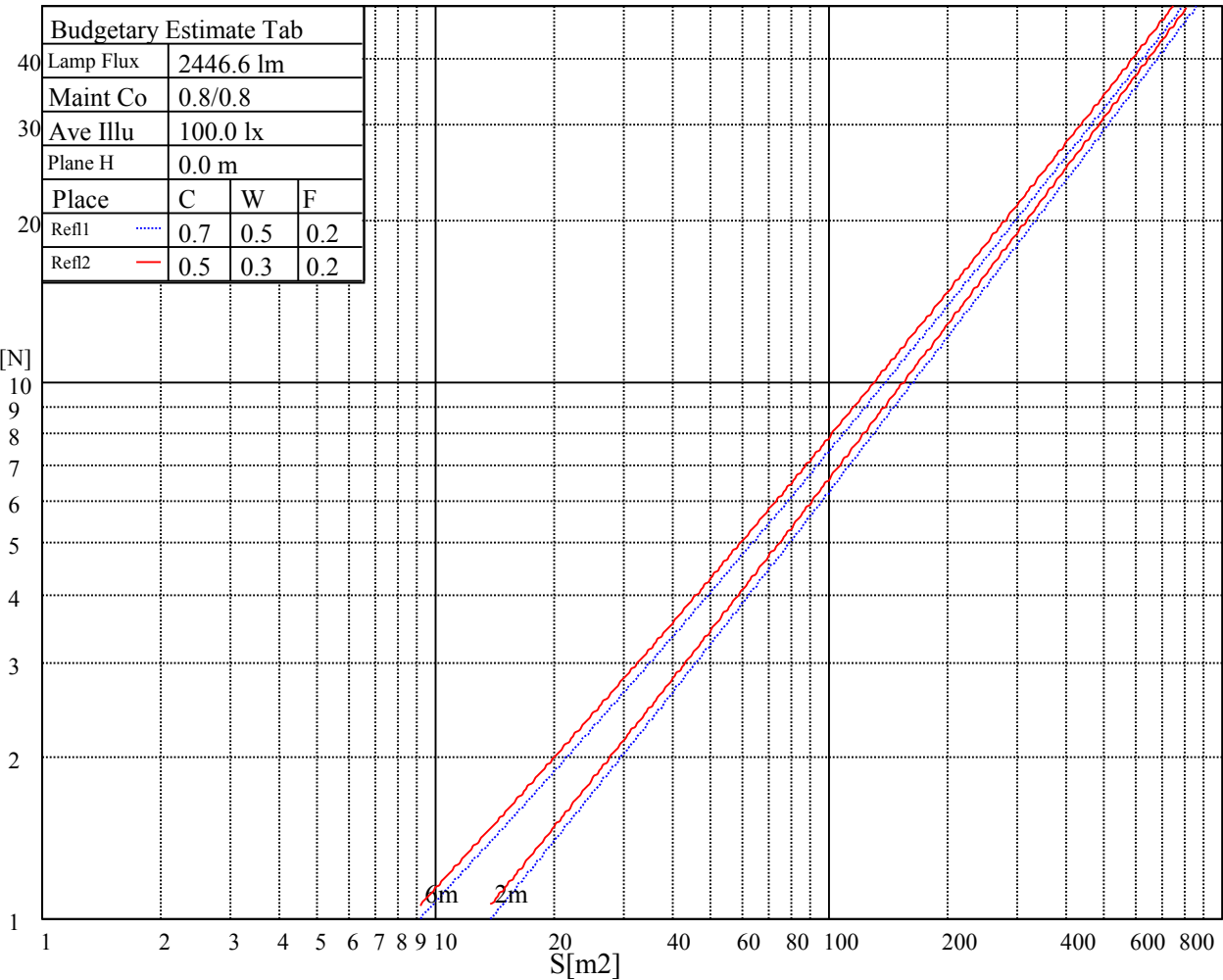
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1425	1425	1425	1785	1785	1785	4372	4372	4372

Glare Table

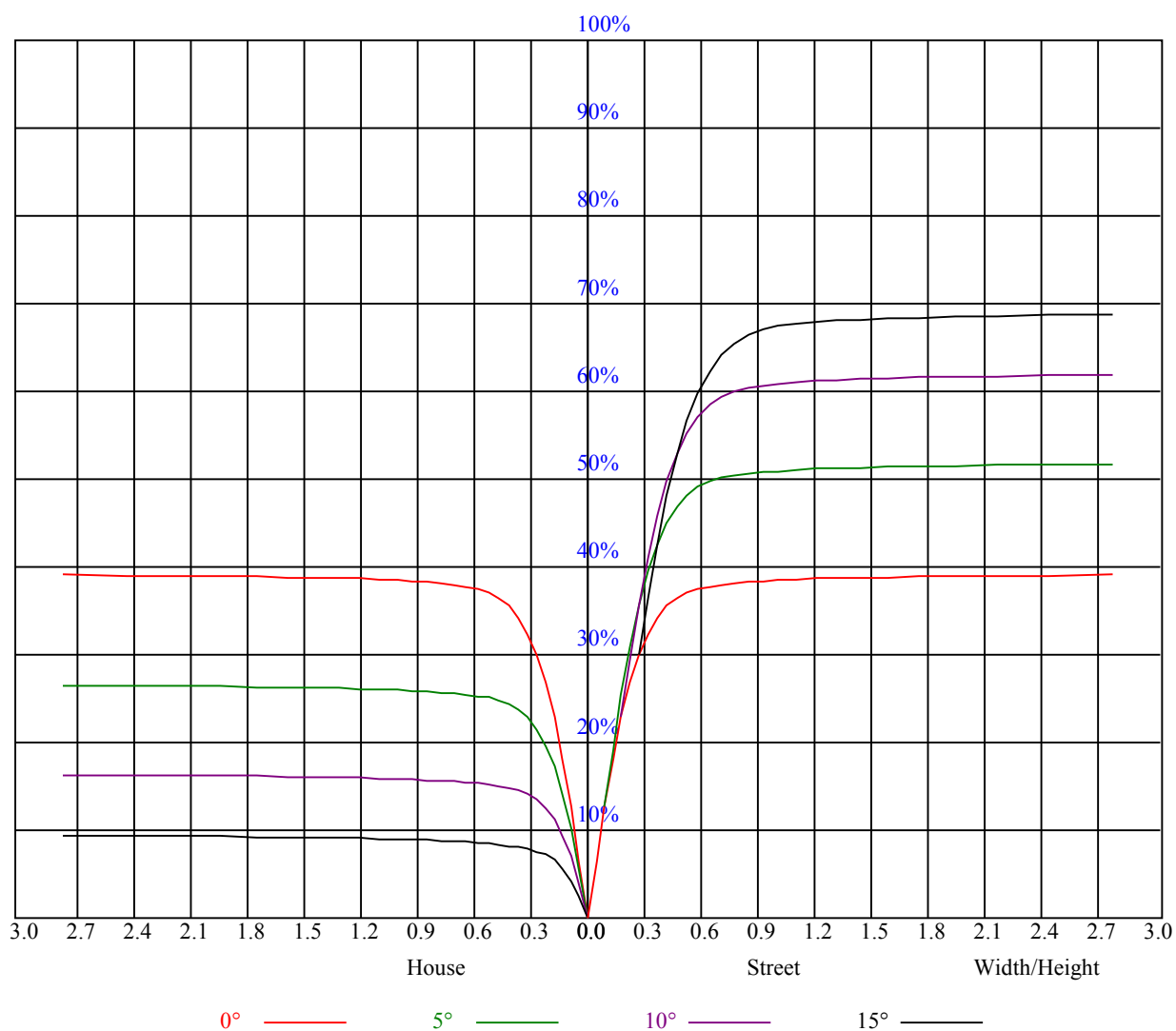
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.80	0.80	0.80	0.79
1	0.88	0.87	0.85	0.87	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.78	0.77	0.77	0.75
2	0.84	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.78	0.76	0.75	0.75	0.74	0.73	0.72
3	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.73	0.71	0.70	0.69
4	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.67	0.66
5	0.73	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.64
6	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.63	0.62
7	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.62	0.61	0.60
8	0.65	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.59	0.58
9	0.63	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.56
10	0.61	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.54



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	7978.50	8017.31	7964.44	7812.00	7609.50	7335.56	6953.06	6597.56	6230.81
45.0	8016.75	7958.81	7809.75	7577.44	7309.13	6999.75	6607.69	6159.94	5759.44
90.0	7986.38	7867.69	7691.06	7419.38	7079.06	6742.13	6351.19	5842.13	5424.75
135.0	8020.13	7939.69	7754.06	7515.56	7221.94	6913.13	6440.63	6046.31	5635.13
180.0	7978.50	7844.06	7633.13	7378.31	7038.00	6693.75	6255.56	5792.06	5362.31
225.0	8016.75	7991.44	7862.63	7675.31	7416.00	7117.31	6717.38	6302.81	5901.19
270.0	7986.38	8020.69	7952.06	7814.25	7584.19	7274.25	6914.81	6560.44	6176.81
315.0	8020.13	8004.38	7899.19	7716.38	7448.06	7153.31	6788.25	6373.13	5989.50
360.0	7978.50	8017.31	7964.44	7812.00	7609.50	7335.56	6953.06	6597.56	6230.81
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5743.69	5330.25	4913.44	4444.31	3983.63	3593.25	3185.44	2858.63	2525.63
45.0	5287.50	4807.13	4379.63	3981.94	3499.31	3142.69	2824.31	2512.69	2236.50
90.0	4996.13	4470.19	4059.00	3674.81	3266.44	2899.13	2607.19	2318.06	2088.00
135.0	5110.88	4676.06	4250.25	3800.81	3377.81	3034.69	2685.94	2419.88	2148.75
180.0	4930.31	4394.25	3988.13	3599.44	3152.81	2826.00	2533.50	2214.00	1982.81
225.0	5482.69	4950.56	4525.88	4102.31	3597.75	3224.25	2890.13	2548.13	2244.94
270.0	5684.63	5275.13	4853.81	4381.31	3911.06	3521.25	3115.69	2744.44	2447.44
315.0	5595.75	5065.31	4638.38	4213.13	3714.75	3341.25	2998.69	2615.63	2350.13
360.0	5743.69	5330.25	4913.44	4444.31	3983.63	3593.25	3185.44	2858.63	2525.63
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2242.69	2017.69	1792.13	1589.06	1420.88	1276.31	1101.38	960.19	826.31
45.0	2012.63	1790.44	1589.63	1416.38	1255.50	1117.13	962.44	807.75	680.06
90.0	1854.56	1649.25	1478.81	1330.31	1111.56	1008.23	872.49	708.69	586.74
135.0	1905.19	1716.19	1519.31	1330.88	1188.00	1053.00	878.06	749.25	618.19
180.0	1776.94	1550.25	1405.13	1110.21	1092.83	939.49	791.72	669.94	539.38
225.0	2013.19	1780.88	1598.06	1391.63	1114.82	1097.61	963.17	798.58	675.56
270.0	2190.94	1937.25	1715.63	1517.06	1350.56	1186.31	1044.56	893.81	766.13
315.0	2113.31	1856.25	1693.13	1498.50	1300.50	1116.23	1010.36	857.42	727.76
360.0	2242.69	2017.69	1792.13	1589.06	1420.88	1276.31	1101.38	960.19	826.31
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	683.44	552.38	446.63	344.81	284.63	196.31	150.92	119.36	104.18
45.0	584.44	433.69	339.19	289.13	184.50	140.23	109.86	94.67	86.63
90.0	475.26	365.18	268.76	202.11	137.42	106.48	91.35	83.08	78.75
135.0	496.69	375.75	288.56	241.43	150.02	114.81	94.67	84.60	78.24
180.0	436.33	334.29	246.15	184.84	138.94	105.24	91.46	83.81	78.08
225.0	563.57	434.98	345.99	270.45	194.96	149.18	117.84	98.78	90.17
270.0	616.50	507.38	410.63	326.25	289.13	184.05	141.24	112.44	101.53
315.0	608.79	472.05	375.98	294.24	227.31	163.91	129.43	109.41	98.72
360.0	683.44	552.38	446.63	344.81	284.63	196.31	150.92	119.36	104.18
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	95.85	89.16	83.48	76.95	72.11	66.66	61.43	56.93	52.93
45.0	82.13	76.73	71.94	67.61	62.72	58.05	54.00	50.12	46.41
90.0	73.86	69.24	65.76	61.48	56.87	53.55	50.01	45.90	43.20
135.0	74.31	69.41	66.09	61.43	56.98	53.72	49.61	46.24	43.48
180.0	73.41	69.13	65.25	60.13	56.53	52.48	49.22	45.68	42.81
225.0	84.88	78.81	74.81	69.92	64.52	60.86	56.81	51.58	48.26
270.0	93.60	87.36	80.94	75.83	70.93	66.09	61.03	56.59	52.59
315.0	92.08	85.78	79.93	74.36	68.79	63.73	59.85	55.07	50.68
360.0	95.85	89.16	83.48	76.95	72.11	66.66	61.43	56.93	52.93

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	49.84	45.39	41.79	39.09	36.00	32.79	30.99	28.46	26.10
45.0	43.54	39.21	36.68	34.54	31.44	29.31	27.45	25.20	23.46
90.0	39.99	36.68	34.48	31.95	29.53	27.51	25.65	23.74	22.50
135.0	40.73	36.90	34.65	32.51	29.70	27.96	26.21	24.30	22.89
180.0	39.32	36.39	33.75	31.50	29.53	27.28	25.48	23.96	22.61
225.0	45.28	40.78	37.97	35.72	33.08	30.38	28.52	26.33	24.58
270.0	48.43	45.17	41.46	38.48	35.55	32.91	30.60	28.52	26.33
315.0	47.53	43.20	39.77	37.35	34.71	31.44	29.59	27.51	25.31
360.0	49.84	45.39	41.79	39.09	36.00	32.79	30.99	28.46	26.10
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	24.75	23.12	21.94	20.98	19.97	19.18	18.51	17.78	17.21
45.0	22.28	21.09	20.08	19.29	18.45	17.83	17.27	16.71	16.26
90.0	21.38	20.31	19.52	18.79	18.00	17.49	17.04	16.54	16.09
135.0	21.99	20.76	20.03	19.29	18.45	17.94	17.44	16.93	16.48
180.0	21.43	20.48	19.58	18.84	18.23	17.66	17.21	16.71	16.31
225.0	23.01	21.83	20.81	19.80	18.96	18.28	17.72	17.10	16.65
270.0	24.58	23.23	22.05	21.04	20.08	19.35	18.56	17.89	17.38
315.0	23.68	22.61	21.43	20.42	19.63	18.79	18.17	17.55	17.04
360.0	24.75	23.12	21.94	20.98	19.97	19.18	18.51	17.78	17.21
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	16.76	16.26	15.86	15.41	14.91	14.51	14.18	13.84	13.44
45.0	15.86	15.47	15.08	14.68	14.23	13.84	13.56	13.28	12.83
90.0	15.81	15.53	15.02	14.63	14.29	13.95	13.61	13.33	12.94
135.0	16.14	15.75	15.41	15.02	14.63	14.23	13.95	13.61	13.22
180.0	15.98	15.58	15.19	14.85	14.51	14.01	13.73	13.39	12.99
225.0	16.14	15.69	15.36	14.91	14.57	14.12	13.78	13.39	13.11
270.0	16.88	16.31	15.98	15.53	15.02	14.68	14.34	13.95	13.56
315.0	16.59	16.14	15.69	15.24	14.85	14.40	14.06	13.78	13.44
360.0	16.76	16.26	15.86	15.41	14.91	14.51	14.18	13.84	13.44
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	13.11	12.66	12.32	11.98	11.70	11.48	11.19	10.80	10.52
45.0	12.49	12.15	11.87	11.53	11.19	10.91	10.63	10.41	10.18
90.0	12.60	12.26	11.87	11.64	11.48	11.19	11.03	10.97	11.08
135.0	12.88	12.54	12.21	11.93	11.53	11.31	11.03	10.80	10.63
180.0	12.66	12.38	12.04	11.76	11.42	11.08	10.80	10.52	10.29
225.0	12.71	12.38	12.04	11.76	11.48	11.19	10.91	10.52	10.29
270.0	13.22	12.83	12.54	12.21	11.98	11.81	11.64	11.42	11.31
315.0	12.99	12.66	12.32	11.98	11.76	11.48	11.19	10.97	10.74
360.0	13.11	12.66	12.32	11.98	11.70	11.48	11.19	10.80	10.52
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	10.35	10.07	9.96	9.73	9.56	9.34	9.06	8.83	8.66
45.0	10.01	9.84	9.73	9.51	9.28	9.00	8.72	8.49	8.33
90.0	11.19	10.86	10.52	9.90	9.23	8.89	8.61	8.38	8.38
135.0	10.46	10.24	10.07	9.84	9.39	9.06	8.72	8.49	8.38
180.0	10.18	9.96	9.62	9.45	9.17	8.89	8.61	8.38	8.38
225.0	10.07	9.84	9.68	9.45	9.28	9.11	8.83	8.61	8.38
270.0	11.25	11.98	12.43	12.60	12.49	9.23	9.00	8.78	8.61
315.0	10.52	10.29	10.18	10.01	9.79	9.23	8.94	8.72	8.55
360.0	10.35	10.07	9.96	9.73	9.56	9.34	9.06	8.83	8.66

Intensity data(cd)

Appendix Page: 18 Total:18

C/ γ (°)	90.0
0.0	8.44
45.0	8.33
90.0	8.33
135.0	8.38
180.0	8.44
225.0	8.33
270.0	8.38
315.0	8.38
360.0	8.44