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Nata

LumCAT: 6723-A
Luminaire: TE 2213480-1+92.76.365.00
Report No: GC2017033002
Test No: NT-0010
LampCAT: CREE CXA3050
Lamp flux(lm): 3214.0
Number of Lamps: 1
Length(mm): 160
Phm Type: C

Voltage(V): 35.6000
Current(A): 0.8000
Power (W): 28.4800
PF: 0.0000
Ballast type: DC
Width(mm): 160
Height(mm): 0

Photometric Results

Lumens(lm): 3028.69
Efficiency(%): 94.23%
Lumens(lm)/Power(W): 106.34
Central intensity(cd): 1990.013
Maximum intensity(cd): 1990.220
Angle of maximum intensity: C=0.0 $\gamma=2.0$
Beam Angle(50%Imax): [C0/180]Total=82.2
 [C90/270]Total=82.2
Field angle(10%Imax): [C0/180]Total=100.0
 [C90/270]Total=100.0
Maximum s/h(1/2): C0_180=1.20 C90_270=1.20
Maximum s/h(1/4): C0_180=1.17 C90_270=1.17
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 94.23%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.674%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/3/30
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1990.014	0.000	0	.000%	.000%
1.0	1990.151	1.904	1.904	.059%	.063%
2.0	1990.220	5.713	7.617	.178%	.252%
3.0	1989.945	9.519	17.137	.296%	.566%
4.0	1988.912	13.319	30.455	.414%	1.006%
5.0	1988.293	17.110	47.565	.532%	1.570%
6.0	1986.779	20.890	68.455	.650%	2.260%
7.0	1985.471	24.656	93.111	.767%	3.074%
8.0	1984.714	28.414	121.525	.884%	4.012%
9.0	1983.889	32.163	153.688	1.001%	5.074%
10.0	1983.063	35.899	189.587	1.117%	6.260%
11.0	1982.650	39.626	229.213	1.233%	7.568%
12.0	1981.480	43.334	272.547	1.348%	8.999%
13.0	1979.553	47.007	319.554	1.463%	10.551%
14.0	1977.075	50.644	370.199	1.576%	12.223%
15.0	1972.877	54.227	424.425	1.687%	14.014%
16.0	1967.440	57.737	482.162	1.796%	15.920%
17.0	1959.870	61.159	543.321	1.903%	17.939%
18.0	1950.786	64.478	607.799	2.006%	20.068%
19.0	1940.325	67.697	675.496	2.106%	22.303%
20.0	1927.869	70.799	746.295	2.203%	24.641%
21.0	1911.971	73.733	820.028	2.294%	27.075%
22.0	1894.766	76.498	896.526	2.380%	29.601%
23.0	1875.152	79.103	975.629	2.461%	32.213%
24.0	1848.519	81.413	1057.042	2.533%	34.901%
25.0	1821.197	83.441	1140.483	2.596%	37.656%
26.0	1792.568	85.303	1225.786	2.654%	40.473%
27.0	1758.983	86.889	1312.676	2.703%	43.341%
28.0	1718.930	88.053	1400.729	2.740%	46.249%
29.0	1679.908	88.923	1489.652	2.767%	49.185%
30.0	1636.689	89.547	1579.2	2.786%	52.141%
31.0	1586.725	89.703	1668.903	2.791%	55.103%
32.0	1533.871	89.401	1758.304	2.782%	58.055%
33.0	1480.880	88.816	1847.12	2.763%	60.987%
34.0	1423.277	87.888	1935.008	2.735%	63.889%
35.0	1360.994	86.469	2021.477	2.690%	66.744%
36.0	1300.432	84.740	2106.218	2.637%	69.542%
37.0	1234.715	82.682	2188.9	2.573%	72.272%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	1179.109	80.570	2269.47	2.507%	74.932%
39.0	1114.947	78.302	2347.773	2.436%	77.518%
40.0	1054.440	75.661	2423.433	2.354%	80.016%
41.0	999.941	73.156	2496.589	2.276%	82.431%
42.0	947.149	70.741	2567.33	2.201%	84.767%
43.0	880.937	67.718	2635.047	2.107%	87.003%
44.0	814.670	63.997	2699.044	1.991%	89.116%
45.0	737.728	59.660	2758.705	1.856%	91.086%
46.0	636.032	53.725	2812.43	1.672%	92.860%
47.0	533.283	46.507	2858.936	1.447%	94.395%
48.0	431.670	39.008	2897.945	1.214%	95.683%
49.0	319.788	30.859	2928.804	.960%	96.702%
50.0	199.628	21.656	2950.46	.674%	97.417%
51.0	134.585	14.140	2964.6	.440%	97.884%
52.0	83.610	9.363	2973.963	.291%	98.193%
53.0	30.935	4.983	2978.946	.155%	98.358%
54.0	18.416	2.175	2981.121	.068%	98.429%
55.0	14.411	1.465	2982.586	.046%	98.478%
56.0	13.289	1.252	2983.838	.039%	98.519%
57.0	12.732	1.190	2985.028	.037%	98.558%
58.0	12.346	1.160	2986.187	.036%	98.597%
59.0	12.346	1.154	2987.342	.036%	98.635%
60.0	12.580	1.178	2988.519	.037%	98.674%
61.0	13.131	1.227	2989.746	.038%	98.714%
62.0	13.647	1.290	2991.037	.040%	98.757%
63.0	14.177	1.353	2992.39	.042%	98.802%
64.0	14.790	1.421	2993.811	.044%	98.848%
65.0	15.072	1.478	2995.289	.046%	98.897%
66.0	15.237	1.512	2996.801	.047%	98.947%
67.0	15.299	1.535	2998.337	.048%	98.998%
68.0	15.271	1.549	2999.885	.048%	99.049%
69.0	15.182	1.554	3001.439	.048%	99.100%
70.0	15.010	1.551	3002.99	.048%	99.151%
71.0	14.762	1.539	3004.528	.048%	99.202%
72.0	14.452	1.519	3006.047	.047%	99.252%
73.0	14.074	1.492	3007.539	.046%	99.302%
74.0	13.640	1.457	3008.996	.045%	99.350%
75.0	13.110	1.413	3010.409	.044%	99.396%

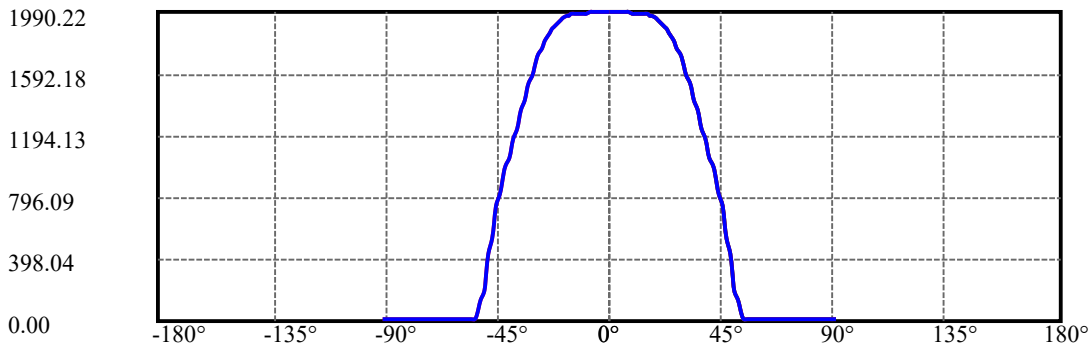
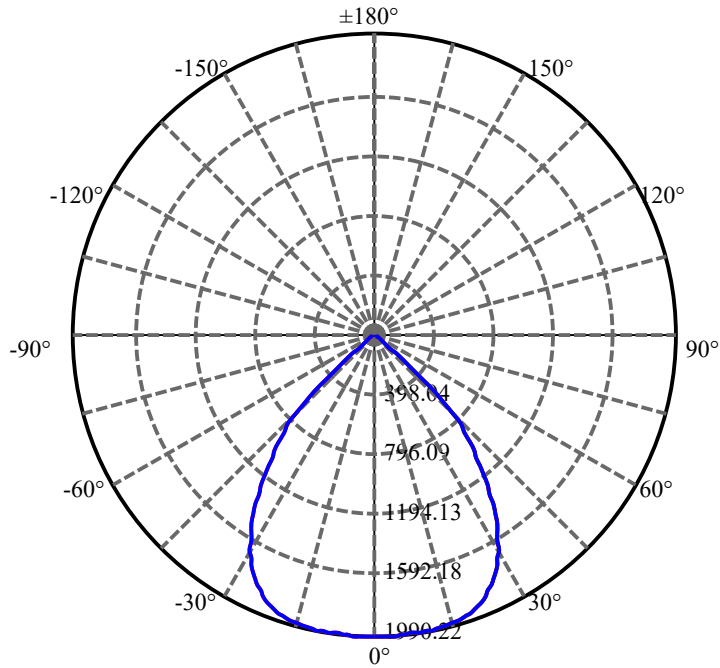
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	12.759	1.373	3011.783	.043%	99.442%
77.0	12.443	1.344	3013.126	.042%	99.486%
78.0	12.147	1.316	3014.443	.041%	99.530%
79.0	11.816	1.288	3015.73	.040%	99.572%
80.0	11.562	1.260	3016.991	.039%	99.614%
81.0	11.355	1.239	3018.23	.039%	99.655%
82.0	11.204	1.223	3019.453	.038%	99.695%
83.0	11.115	1.213	3020.667	.038%	99.735%
84.0	11.039	1.207	3021.873	.038%	99.775%
85.0	10.825	1.193	3023.067	.037%	99.814%
86.0	10.502	1.166	3024.233	.036%	99.853%
87.0	10.302	1.139	3025.371	.035%	99.890%
88.0	10.185	1.122	3026.493	.035%	99.928%
89.0	9.958	1.104	3027.597	.034%	99.964%
90.0	9.931	1.090	3028.688	.034%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1579.20	49.14%	52.14%
0-40	2423.43	75.40%	80.02%
0-60	2988.52	92.98%	98.67%
0-90	3027.60	94.20%	99.96%
0-120	3027.60	94.20%	99.96%
0-180	3028.69	94.23%	100.00%
60-90	40.26	1.25%	1.33%
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%
0-39.99	2422.95	75.39%	80.00%

ZONAL LUMEN SUMMARY

0-10	189.59
10-20	556.71
20-30	832.90
30-40	844.23
40-50	527.03
50-60	38.06
60-70	14.47
70-80	14.00
80-90	10.61
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: —————

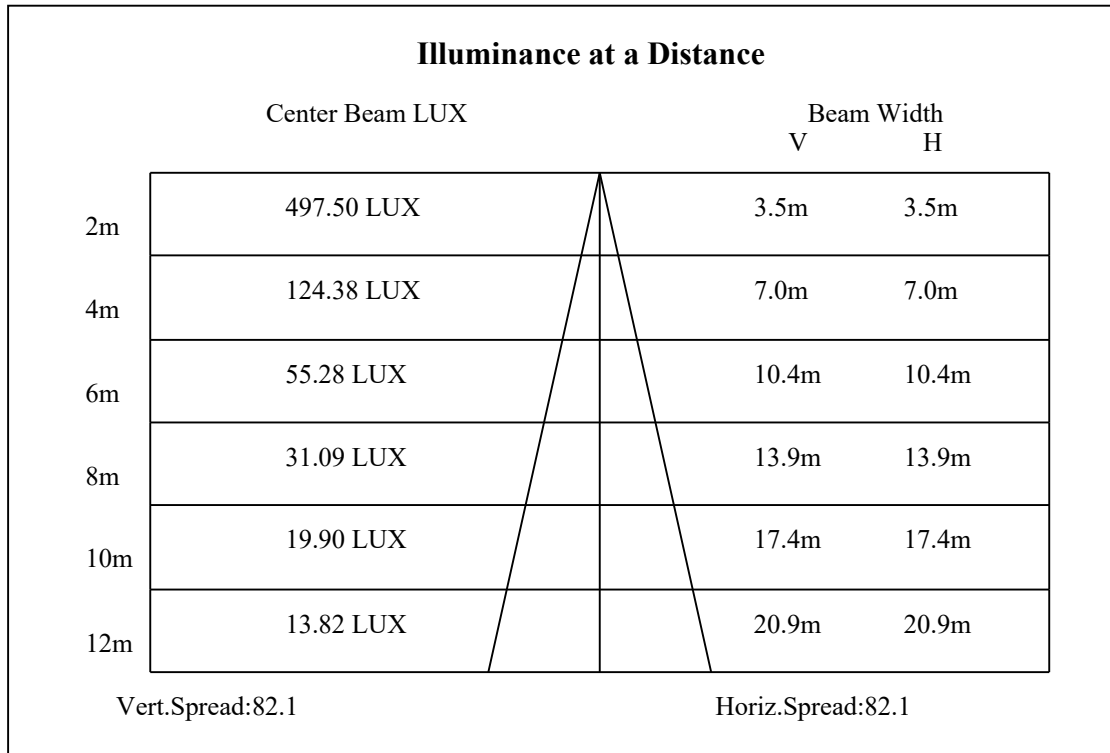
C90/C270: —————

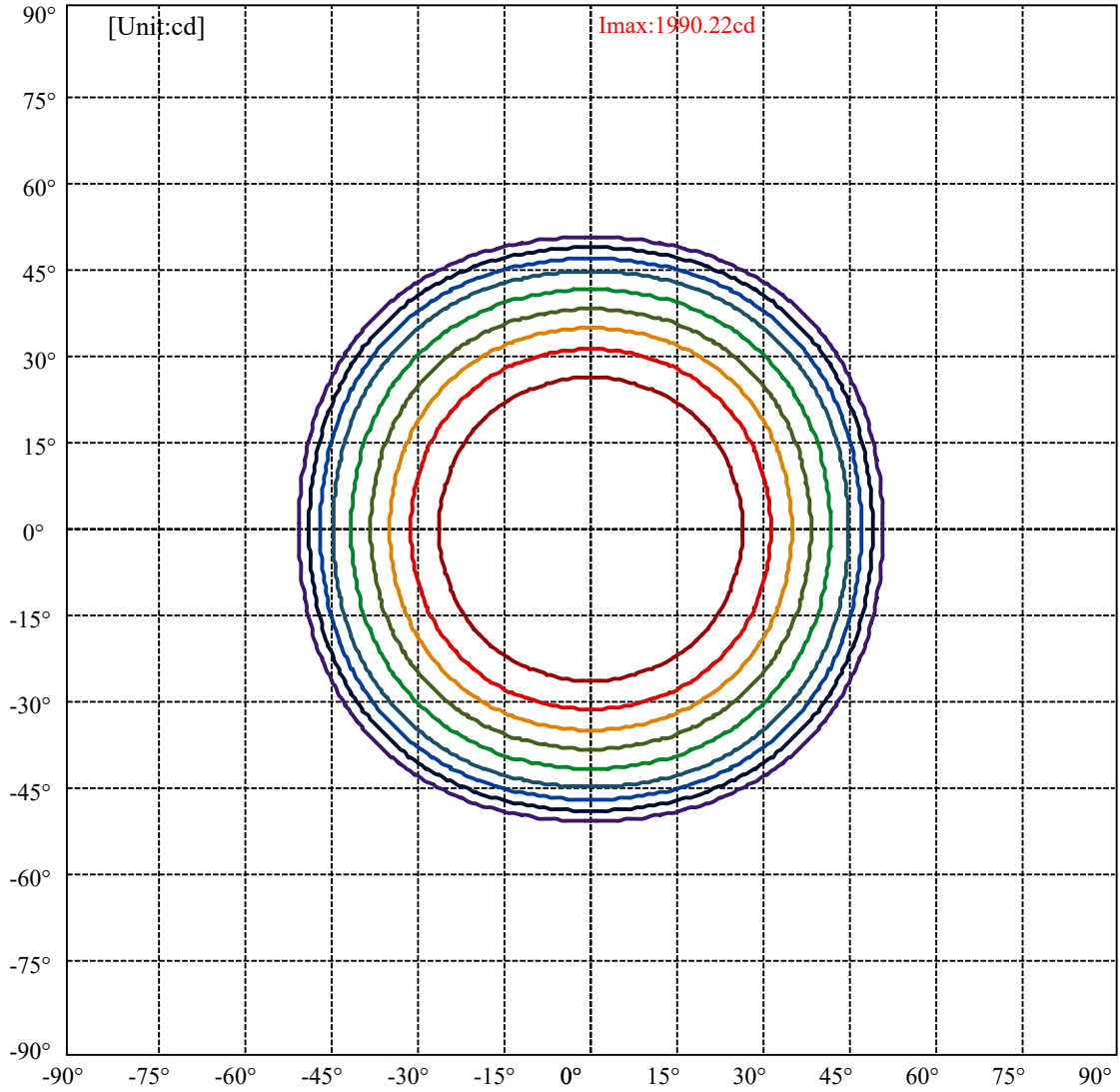
Field angle(10%Imax):C0/180Left:52.0 Right:48.0

:C90/270Left:52.0 Right:48.0

Beam Angle(50%Imax):C0/180Left:43.1 Right:39.1

:C90/270Left:43.1 Right:39.1



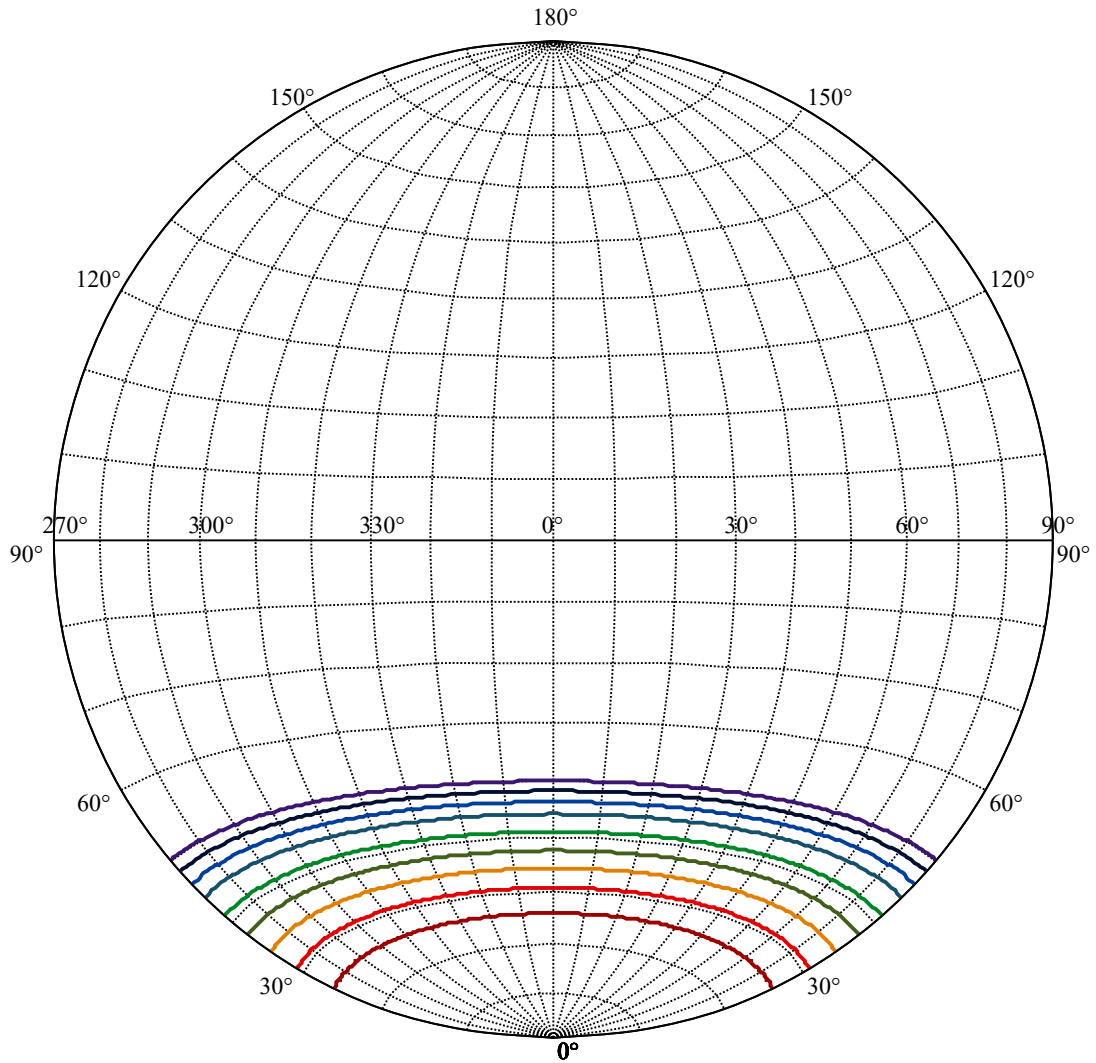


(10%Imax) 199.022	—
(20%Imax) 398.044	—
(30%Imax) 597.066	—
(40%Imax) 796.088	—
(50%Imax) 995.11	—
(60%Imax) 1194.13	—
(70%Imax) 1393.15	—
(80%Imax) 1592.18	—
(90%Imax) 1791.2	—

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/3/30
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42



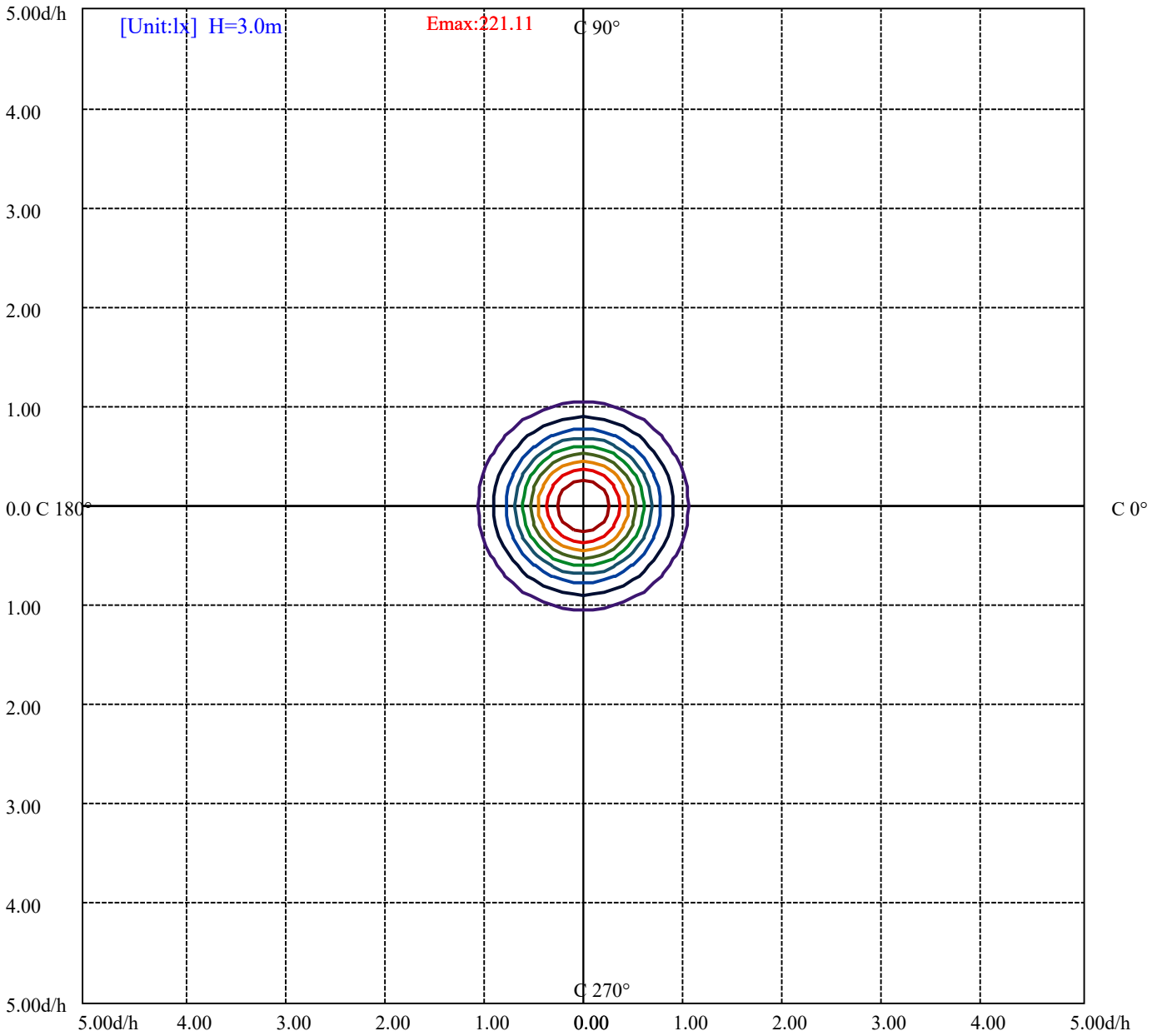
House

[Unit:cd]

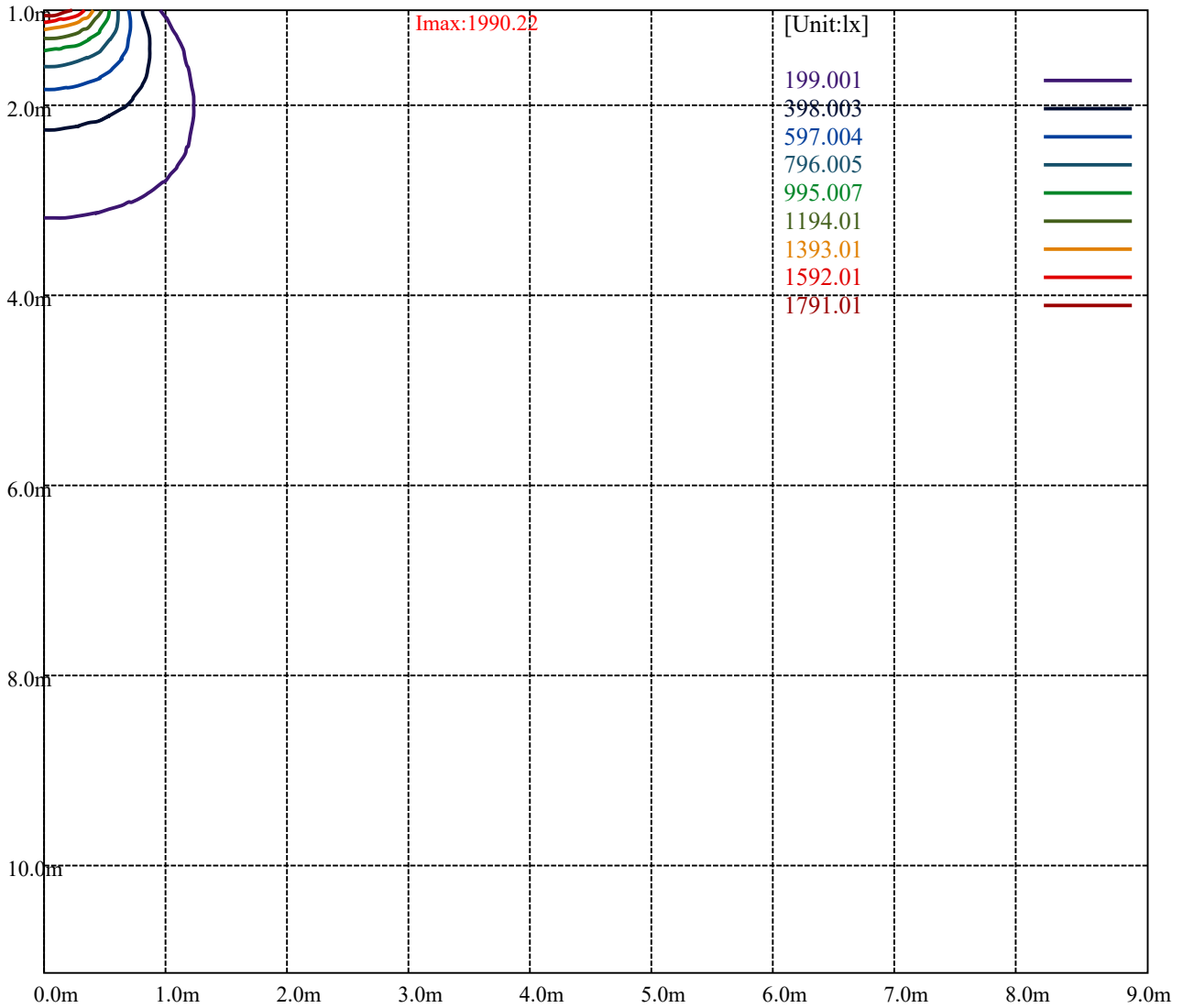
Road

Imax:1990.22

(10%Imax) 199.022	—
(20%Imax) 398.044	—
(30%Imax) 597.066	—
(40%Imax) 796.088	—
(50%Imax) 995.11	—
(60%Imax) 1194.13	—
(70%Imax) 1393.15	—
(80%Imax) 1592.18	—
(90%Imax) 1791.2	—



(10%Emax) 22.11122	—
(20%Emax) 44.22255	—
(30%Emax) 66.33378	—
(40%Emax) 88.445	—
(50%Emax) 110.5563	—
(60%Emax) 132.6678	—
(70%Emax) 154.7789	—
(80%Emax) 176.89	—
(90%Emax) 199.0011	—



Luminance Table

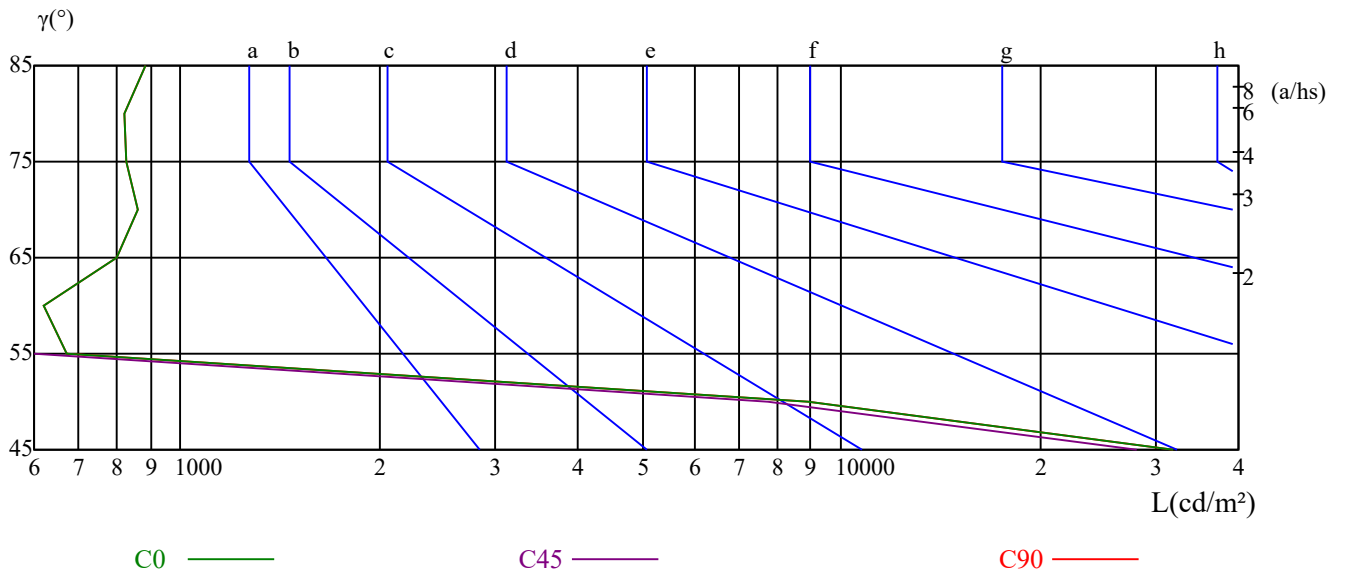
γ	45	50	55	60	65	70	75	80	85
C0	31760	8915	674	622	798	862	829	820	882
C45	28093	7775	579	526	662	700	657	631	654
C90	31760	8915	674	622	798	862	829	820	882

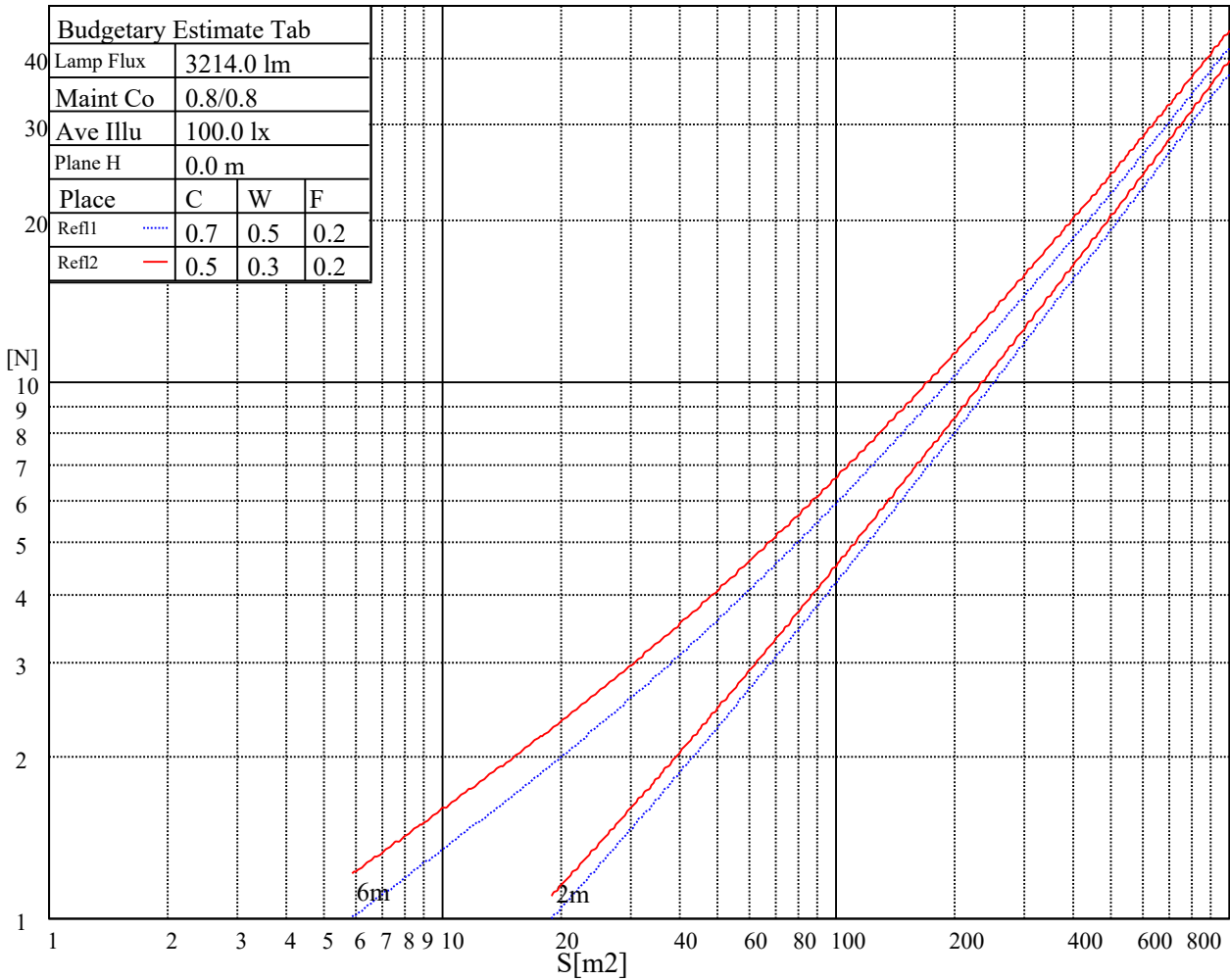
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1585	1585	1585	2251	2251	2251	5520	5520	5520

Glare Table

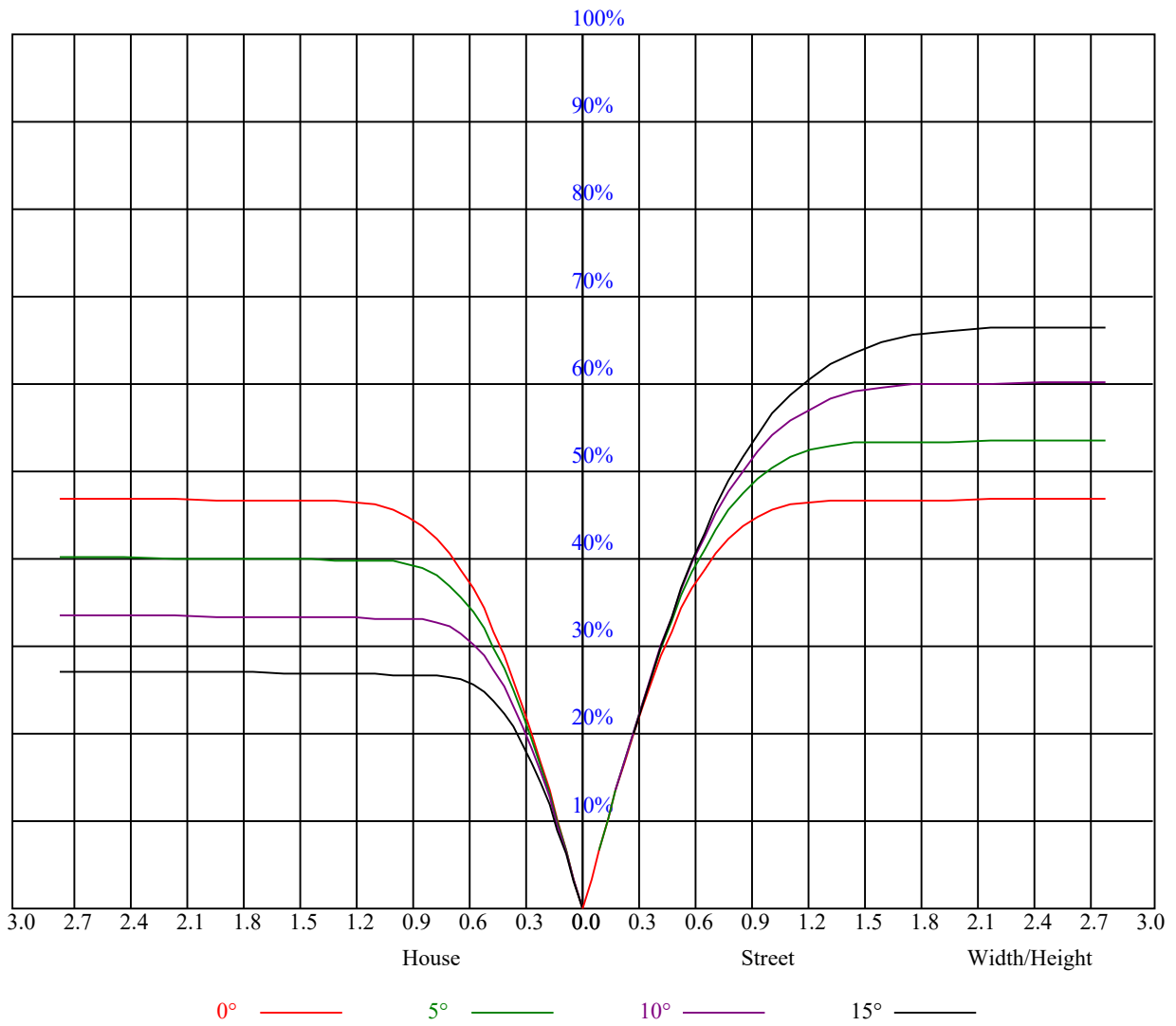
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.12	1.12	1.12	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.03	1.00	0.98	1.01	0.99	0.97	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.86
2	0.95	0.90	0.87	0.93	0.89	0.86	0.90	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.80	0.79
3	0.87	0.82	0.77	0.86	0.81	0.77	0.83	0.79	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.71
4	0.80	0.74	0.70	0.79	0.73	0.69	0.77	0.72	0.68	0.75	0.71	0.67	0.73	0.70	0.67	0.65
5	0.74	0.68	0.63	0.73	0.67	0.63	0.71	0.66	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.59
6	0.68	0.62	0.57	0.67	0.61	0.57	0.66	0.61	0.57	0.65	0.60	0.56	0.63	0.59	0.56	0.54
7	0.63	0.57	0.52	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.51	0.59	0.54	0.51	0.50
8	0.59	0.52	0.48	0.58	0.52	0.48	0.57	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.46
9	0.55	0.48	0.44	0.54	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.43	0.42
10	0.51	0.45	0.41	0.51	0.45	0.41	0.50	0.44	0.40	0.49	0.44	0.40	0.48	0.44	0.40	0.39



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	1989.74	1989.74	1990.84	1991.94	1991.39	1991.39	1991.39	1991.94	1993.04
45.0	1988.64	1987.54	1986.99	1985.33	1983.68	1982.58	1980.93	1979.28	1978.18
90.0	1989.74	1989.19	1988.09	1984.78	1983.13	1980.93	1977.08	1974.87	1972.67
135.0	1991.94	1991.94	1991.39	1990.84	1989.19	1988.09	1986.99	1984.23	1982.58
180.0	1989.74	1989.74	1989.19	1989.74	1988.64	1987.54	1984.78	1983.13	1981.48
225.0	1988.64	1989.19	1990.29	1991.39	1991.39	1991.39	1990.29	1989.19	1987.54
270.0	1989.74	1990.84	1991.39	1991.39	1990.29	1990.29	1988.09	1985.88	1985.33
315.0	1991.94	1993.04	1993.59	1994.14	1993.59	1994.14	1994.69	1995.24	1996.90
360.0	1989.74	1989.74	1990.84	1991.94	1991.39	1991.39	1991.39	1991.94	1993.04
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1994.14	1995.79	1997.45	1999.65	2002.95	2003.50	2003.50	2001.30	1998.00
45.0	1976.52	1974.87	1974.32	1972.67	1969.37	1966.06	1960.56	1954.50	1945.14
90.0	1970.47	1968.27	1965.51	1961.11	1955.60	1949.55	1941.84	1932.48	1921.47
135.0	1980.38	1977.63	1973.77	1969.37	1962.76	1956.15	1948.45	1937.99	1925.87
180.0	1980.38	1978.73	1977.08	1973.22	1968.82	1962.76	1954.50	1945.69	1934.13
225.0	1986.43	1985.33	1985.33	1983.13	1981.48	1979.28	1975.42	1970.47	1963.86
270.0	1985.33	1985.33	1986.43	1988.09	1988.64	1989.74	1989.74	1988.09	1984.78
315.0	1997.45	1998.55	2001.30	2004.60	2006.81	2009.56	2009.01	2009.01	2005.70
360.0	1994.14	1995.79	1997.45	1999.65	2002.95	2003.50	2003.50	2001.30	1998.00
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1993.04	1986.43	1978.18	1968.82	1954.50	1938.54	1920.37	1895.59	1871.37
45.0	1935.78	1924.77	1910.46	1895.59	1876.32	1851.55	1821.82	1792.64	1757.95
90.0	1908.25	1894.49	1877.97	1854.30	1832.28	1807.50	1772.27	1741.98	1708.95
135.0	1913.21	1897.79	1880.18	1861.46	1838.33	1814.11	1783.83	1750.24	1719.96
180.0	1918.72	1904.95	1889.54	1865.86	1844.39	1820.16	1790.43	1757.40	1724.92
225.0	1955.60	1945.69	1934.68	1919.82	1904.95	1887.88	1860.91	1836.13	1809.70
270.0	1980.38	1972.67	1963.86	1954.50	1941.84	1929.73	1911.56	1888.43	1864.76
315.0	2001.30	1995.79	1988.09	1975.42	1965.51	1951.75	1926.97	1907.15	1882.93
360.0	1993.04	1986.43	1978.18	1968.82	1954.50	1938.54	1920.37	1895.59	1871.37
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1839.98	1803.65	1767.86	1729.32	1678.67	1633.52	1585.62	1520.66	1463.40
45.0	1723.27	1680.87	1636.28	1591.13	1538.28	1475.51	1425.41	1371.45	1299.88
90.0	1668.76	1622.51	1578.47	1526.71	1476.06	1414.95	1351.63	1295.48	1230.51
135.0	1685.28	1635.18	1592.78	1543.23	1479.92	1424.86	1369.25	1305.94	1243.17
180.0	1685.83	1645.64	1596.64	1549.29	1491.48	1430.92	1373.66	1309.24	1251.43
225.0	1777.77	1742.54	1710.05	1669.86	1630.22	1580.12	1525.61	1473.86	1411.65
270.0	1838.88	1804.75	1774.47	1741.98	1697.39	1657.75	1615.35	1561.95	1503.59
315.0	1852.10	1816.31	1782.73	1741.98	1701.79	1653.34	1600.49	1547.64	1484.32
360.0	1839.98	1803.65	1767.86	1729.32	1678.67	1633.52	1585.62	1520.66	1463.40
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	1404.49	1336.77	1268.50	1209.04	1145.72	1093.42	1037.26	982.21	937.06
45.0	1242.07	1183.71	1122.60	1062.59	1011.39	950.82	897.42	843.46	764.73
90.0	1165.54	1097.88	1048.66	981.66	929.68	881.95	824.97	740.95	650.44
135.0	1187.57	1122.60	1066.99	1008.08	946.42	895.22	841.81	764.18	679.40
180.0	1187.02	1092.32	1065.01	1011.28	946.53	899.07	855.74	774.53	686.94
225.0	1349.43	1292.72	1234.92	1161.14	1093.31	1046.29	988.04	932.71	887.62
270.0	1450.19	1395.13	1330.16	1264.65	1198.03	1139.67	1078.00	1018.54	967.34
315.0	1417.15	1356.59	1296.03	1221.15	1164.44	1093.09	1053.94	990.91	943.83
360.0	1404.49	1336.77	1268.50	1209.04	1145.72	1093.42	1037.26	982.21	937.06

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	886.41	807.13	720.14	620.49	482.84	365.57	291.80	123.82	42.12
45.0	666.73	553.32	430.54	316.02	287.94	73.72	26.98	17.78	13.38
90.0	535.92	409.62	294.55	181.52	74.71	24.33	17.51	13.93	13.10
135.0	581.40	445.96	338.60	280.24	118.04	32.59	20.59	15.14	13.93
180.0	591.20	475.52	354.51	245.28	127.46	42.83	21.97	15.14	14.09
225.0	818.19	724.43	623.79	500.08	386.55	255.96	135.44	55.88	24.61
270.0	921.64	853.37	772.44	676.09	568.18	419.53	298.41	283.54	65.85
315.0	900.34	818.91	731.70	633.64	512.58	382.48	264.00	143.64	60.40
360.0	886.41	807.13	720.14	620.49	482.84	365.57	291.80	123.82	42.12
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	22.85	15.14	14.15	13.43	12.44	12.17	11.84	11.51	11.40
45.0	12.72	12.44	12.11	11.84	11.62	11.45	11.45	11.95	12.88
90.0	12.50	12.17	11.89	11.67	11.45	11.34	11.34	11.78	12.28
135.0	13.27	12.94	12.61	12.33	12.28	12.99	14.76	16.57	17.51
180.0	13.49	13.05	12.66	12.33	12.44	13.27	14.53	16.30	17.12
225.0	16.35	15.31	14.20	13.21	12.83	12.55	12.33	13.10	14.53
270.0	29.90	19.77	15.25	14.20	13.27	12.88	12.55	12.28	12.06
315.0	26.26	14.48	13.43	12.83	12.44	12.11	11.84	11.56	11.40
360.0	22.85	15.14	14.15	13.43	12.44	12.17	11.84	11.51	11.40
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	11.95	12.39	12.55	12.77	13.05	13.21	13.32	13.27	13.10
45.0	12.94	12.88	12.77	12.66	12.55	12.33	12.11	11.84	11.62
90.0	12.61	12.99	13.27	13.21	12.99	12.83	12.50	12.22	12.06
135.0	17.56	17.18	16.52	16.19	15.97	15.53	15.25	14.87	14.31
180.0	17.73	18.22	18.44	18.44	18.39	18.33	18.28	18.06	17.67
225.0	16.79	18.72	19.66	20.10	20.15	20.04	19.88	19.71	19.43
270.0	12.33	13.21	14.04	14.81	15.42	15.97	16.24	16.35	16.30
315.0	11.51	12.72	13.32	13.71	13.87	13.93	13.87	13.76	13.60
360.0	11.95	12.39	12.55	12.77	13.05	13.21	13.32	13.27	13.10
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	12.99	12.77	12.39	11.84	11.56	11.40	11.23	11.12	11.01
45.0	11.45	11.34	11.18	11.01	10.96	10.85	10.85	10.79	10.79
90.0	11.84	11.67	11.56	11.40	11.23	11.12	11.01	10.96	11.07
135.0	14.04	13.76	13.27	12.83	12.61	12.28	11.89	11.56	11.34
180.0	17.07	16.30	15.64	15.03	14.20	13.60	13.10	12.61	12.11
225.0	18.77	17.84	16.79	15.31	14.59	14.09	13.60	12.99	12.61
270.0	16.19	15.97	15.64	15.14	14.76	14.31	13.87	13.21	12.50
315.0	13.27	12.94	12.66	12.33	12.17	11.89	11.62	11.29	11.07
360.0	12.99	12.77	12.39	11.84	11.56	11.40	11.23	11.12	11.01
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	10.85	10.74	10.68	10.57	10.52	10.41	10.35	9.97	9.86
45.0	10.74	10.85	10.96	11.01	10.68	10.08	10.08	10.02	10.02
90.0	11.12	11.18	11.23	11.29	10.57	9.97	9.91	9.91	9.97
135.0	11.18	11.07	11.01	10.96	10.90	10.19	9.91	9.91	9.86
180.0	11.67	11.34	11.12	10.90	10.79	10.57	9.86	9.86	9.80
225.0	12.28	12.00	11.73	11.56	11.40	11.29	11.12	10.90	10.08
270.0	12.06	11.73	11.51	11.40	11.23	11.07	10.85	10.79	10.19
315.0	10.96	10.74	10.68	10.63	10.52	10.46	10.35	10.13	9.91
360.0	10.85	10.74	10.68	10.57	10.52	10.41	10.35	9.97	9.86

Intensity data(cd)

C/γ(°)	90.0
0.0	9.80
45.0	10.02
90.0	9.91
135.0	9.91
180.0	9.80
225.0	10.08
270.0	10.02
315.0	9.91
360.0	9.80