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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

LumCAT: 1687-M
Luminaire: 92.70.124.00

Report No: NATA0100	Voltage(V): 34.8500
Test No: GC2019062811	Current(A): 0.2490
LampCAT: TRIDONIC SLE 9MM G7	Power (W): 8.6780
Lamp flux(lm): 1073.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 46	Width(mm): 46
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 982.18
Efficiency(%): 91.54%
Lumens(lm)/Power(W): 113.18
Central intensity(cd): 2938.500
Maximum intensity(cd): 2938.500
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=23.9
[C90/270]Total=23.9
Field angle(10%Imax): [C0/180]Total=77.1
[C90/270]Total=77.1
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
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(%): 91.54%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.843%

Equipment: GMS1980	Date: 2019/6/28	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2938.500	0.000	0	.000%	.000%
1.0	2927.531	2.807	2.807	.262%	.286%
2.0	2888.719	8.348	11.155	.778%	1.136%
3.0	2820.305	13.654	24.809	1.273%	2.526%
4.0	2722.992	18.555	43.364	1.729%	4.415%
5.0	2589.258	22.853	66.217	2.130%	6.742%
6.0	2457.422	26.522	92.739	2.472%	9.442%
7.0	2308.008	29.579	122.318	2.757%	12.454%
8.0	2144.531	31.866	154.184	2.970%	15.698%
9.0	1980.281	33.429	187.613	3.116%	19.102%
10.0	1816.734	34.362	221.975	3.202%	22.600%
11.0	1638.070	34.521	256.495	3.217%	26.115%
12.0	1463.484	33.904	290.4	3.160%	29.567%
13.0	1266.539	32.398	322.798	3.019%	32.865%
14.0	1117.575	30.516	353.315	2.844%	35.972%
15.0	971.677	28.682	381.997	2.673%	38.893%
16.0	839.482	26.539	408.535	2.473%	41.595%
17.0	725.393	24.369	432.905	2.271%	44.076%
18.0	634.830	22.427	455.332	2.090%	46.359%
19.0	570.832	20.976	476.308	1.955%	48.495%
20.0	516.248	19.897	496.204	1.854%	50.521%
21.0	478.716	19.105	515.31	1.781%	52.466%
22.0	453.614	18.736	534.045	1.746%	54.373%
23.0	431.796	18.578	552.624	1.731%	56.265%
24.0	414.225	18.497	571.121	1.724%	58.148%
25.0	399.488	18.502	589.623	1.724%	60.032%
26.0	386.276	18.548	608.171	1.729%	61.920%
27.0	375.286	18.632	626.803	1.736%	63.817%
28.0	366.490	18.780	645.583	1.750%	65.729%
29.0	356.407	18.913	664.496	1.763%	67.655%
30.0	349.080	19.048	683.544	1.775%	69.594%
31.0	342.534	19.247	702.79	1.794%	71.554%
32.0	336.361	19.450	722.24	1.813%	73.534%
33.0	330.764	19.654	741.894	1.832%	75.535%
34.0	326.278	19.884	761.778	1.853%	77.560%
35.0	321.792	20.127	781.904	1.876%	79.609%
36.0	316.441	20.321	802.226	1.894%	81.678%
37.0	311.998	20.496	822.722	1.910%	83.765%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	303.434	20.542	843.264	1.914%	85.856%
39.0	286.080	20.122	863.386	1.875%	87.905%
40.0	264.846	19.214	882.6	1.791%	89.861%
41.0	231.469	17.674	900.274	1.647%	91.661%
42.0	198.028	15.604	915.878	1.454%	93.249%
43.0	164.805	13.440	929.319	1.253%	94.618%
44.0	131.562	11.186	940.504	1.042%	95.757%
45.0	97.734	8.812	949.317	.821%	96.654%
46.0	68.843	6.514	955.831	.607%	97.317%
47.0	42.180	4.416	960.247	.412%	97.767%
48.0	23.548	2.657	962.904	.248%	98.037%
49.0	14.948	1.581	964.485	.147%	98.198%
50.0	12.291	1.136	965.62	.106%	98.314%
51.0	10.027	0.944	966.565	.088%	98.410%
52.0	7.868	0.768	967.332	.072%	98.488%
53.0	5.970	0.602	967.934	.056%	98.549%
54.0	5.041	0.485	968.42	.045%	98.599%
55.0	4.725	0.436	968.856	.041%	98.643%
56.0	4.479	0.416	969.272	.039%	98.685%
57.0	4.233	0.398	969.67	.037%	98.726%
58.0	4.134	0.387	970.057	.036%	98.765%
59.0	4.071	0.384	970.44	.036%	98.804%
60.0	4.008	0.382	970.822	.036%	98.843%
61.0	3.959	0.380	971.202	.035%	98.882%
62.0	3.916	0.379	971.582	.035%	98.921%
63.0	3.867	0.379	971.96	.035%	98.959%
64.0	3.832	0.378	972.338	.035%	98.998%
65.0	3.790	0.377	972.715	.035%	99.036%
66.0	3.755	0.376	973.092	.035%	99.074%
67.0	3.720	0.376	973.468	.035%	99.113%
68.0	3.698	0.376	973.843	.035%	99.151%
69.0	3.670	0.376	974.219	.035%	99.189%
70.0	3.663	0.377	974.596	.035%	99.228%
71.0	3.628	0.377	974.973	.035%	99.266%
72.0	3.607	0.376	975.349	.035%	99.304%
73.0	3.607	0.377	975.726	.035%	99.343%
74.0	3.600	0.379	976.105	.035%	99.381%
75.0	3.572	0.379	976.484	.035%	99.420%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.558	0.378	976.862	.035%	99.458%
77.0	3.551	0.379	977.241	.035%	99.497%
78.0	3.551	0.380	977.622	.035%	99.536%
79.0	3.537	0.381	978.002	.035%	99.574%
80.0	3.523	0.381	978.383	.035%	99.613%
81.0	3.537	0.382	978.765	.036%	99.652%
82.0	3.502	0.382	979.146	.036%	99.691%
83.0	3.509	0.381	979.528	.036%	99.730%
84.0	3.502	0.382	979.909	.036%	99.769%
85.0	3.488	0.381	980.291	.036%	99.807%
86.0	3.473	0.380	980.671	.035%	99.846%
87.0	3.459	0.379	981.051	.035%	99.885%
88.0	3.431	0.377	981.428	.035%	99.923%
89.0	3.445	0.377	981.805	.035%	99.962%
90.0	3.445	0.378	982.183	.035%	100.000%

Zonal flux distribution table

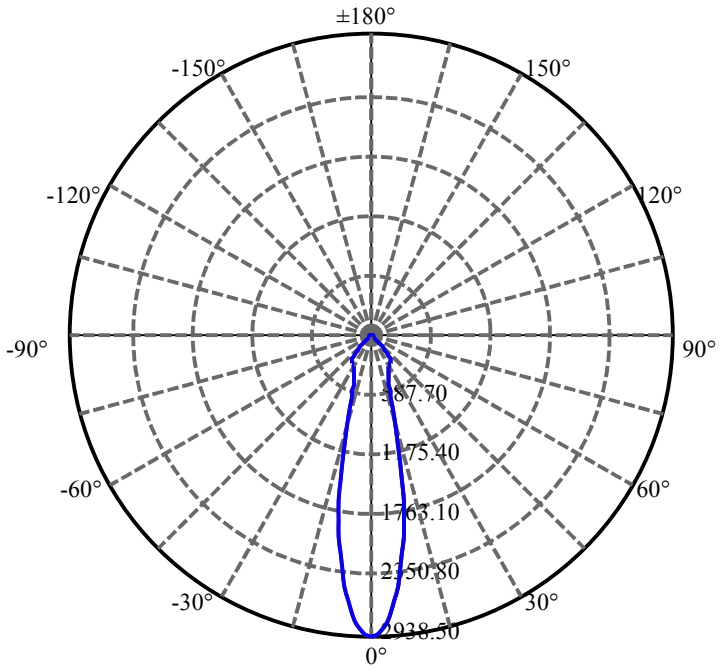
ZONAL LUMEN SUMMARY

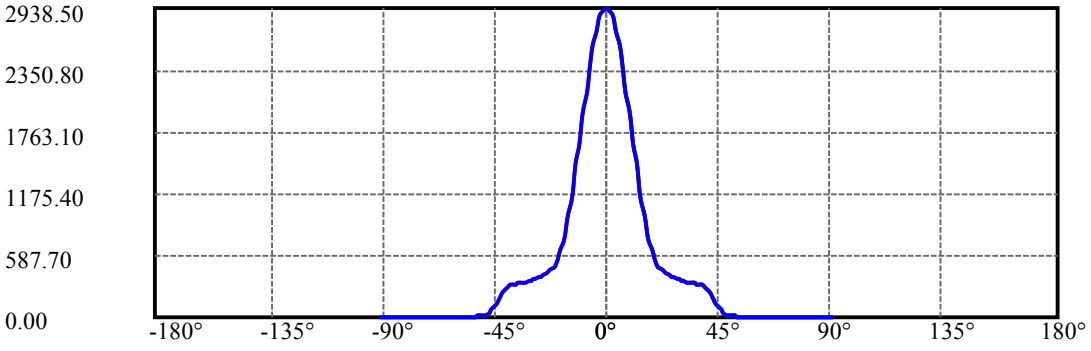
Zone	Lumens	%Lamp	%Fixt
0-30	683.54	63.70%	69.59%
0-40	882.60	82.26%	89.86%
0-60	970.82	90.48%	98.84%
0-90	981.81	91.50%	99.96%
0-120	981.81	91.50%	99.96%
0-180	982.18	91.54%	100.00%
60-90	11.36	1.06%	1.16%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-35.19	785.75	73.23%	80.00%

ZONAL LUMEN SUMMARY

0-10	221.97
10-20	274.23
20-30	187.34
30-40	199.06
40-50	83.02
50-60	5.20
60-70	3.77
70-80	3.79
80-90	3.42
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

Light Distribution Curve [Unit:cd]





C0(Max):

C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:38.6 Right:38.6
:C90/270Left:38.6 Right:38.6

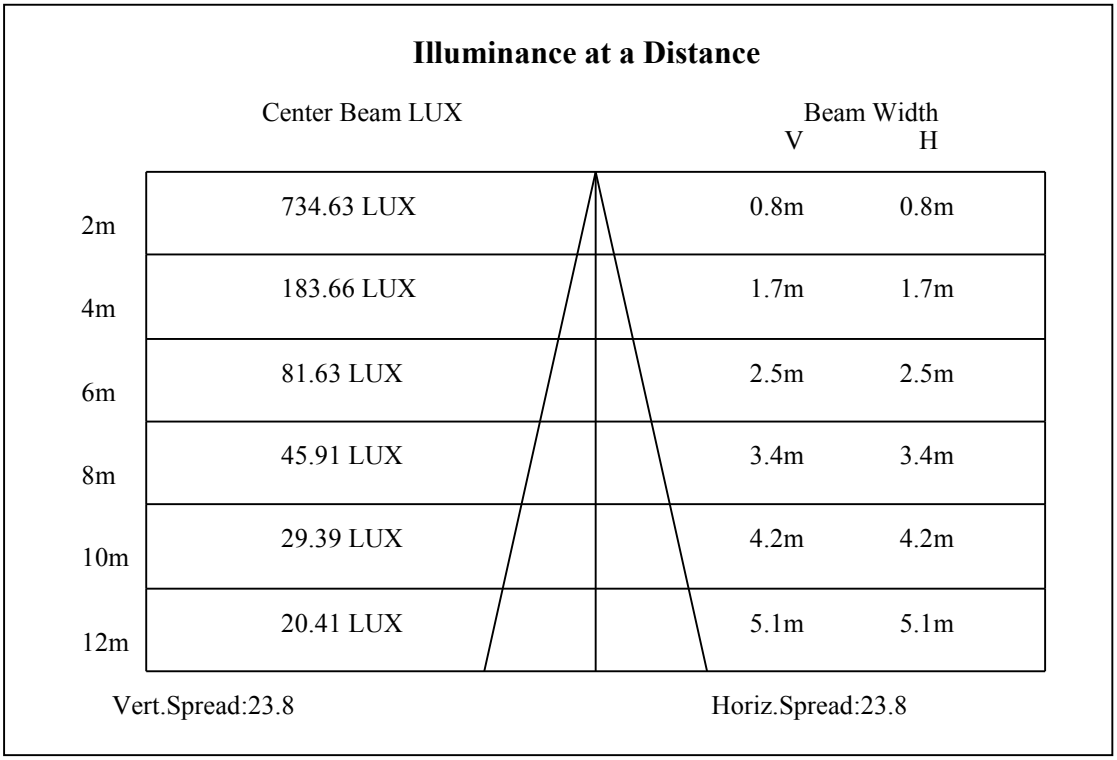
Beam Angle(50%Imax):C0/180Left:12.0 Right:12.0
:C90/270Left:12.0 Right:12.0

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

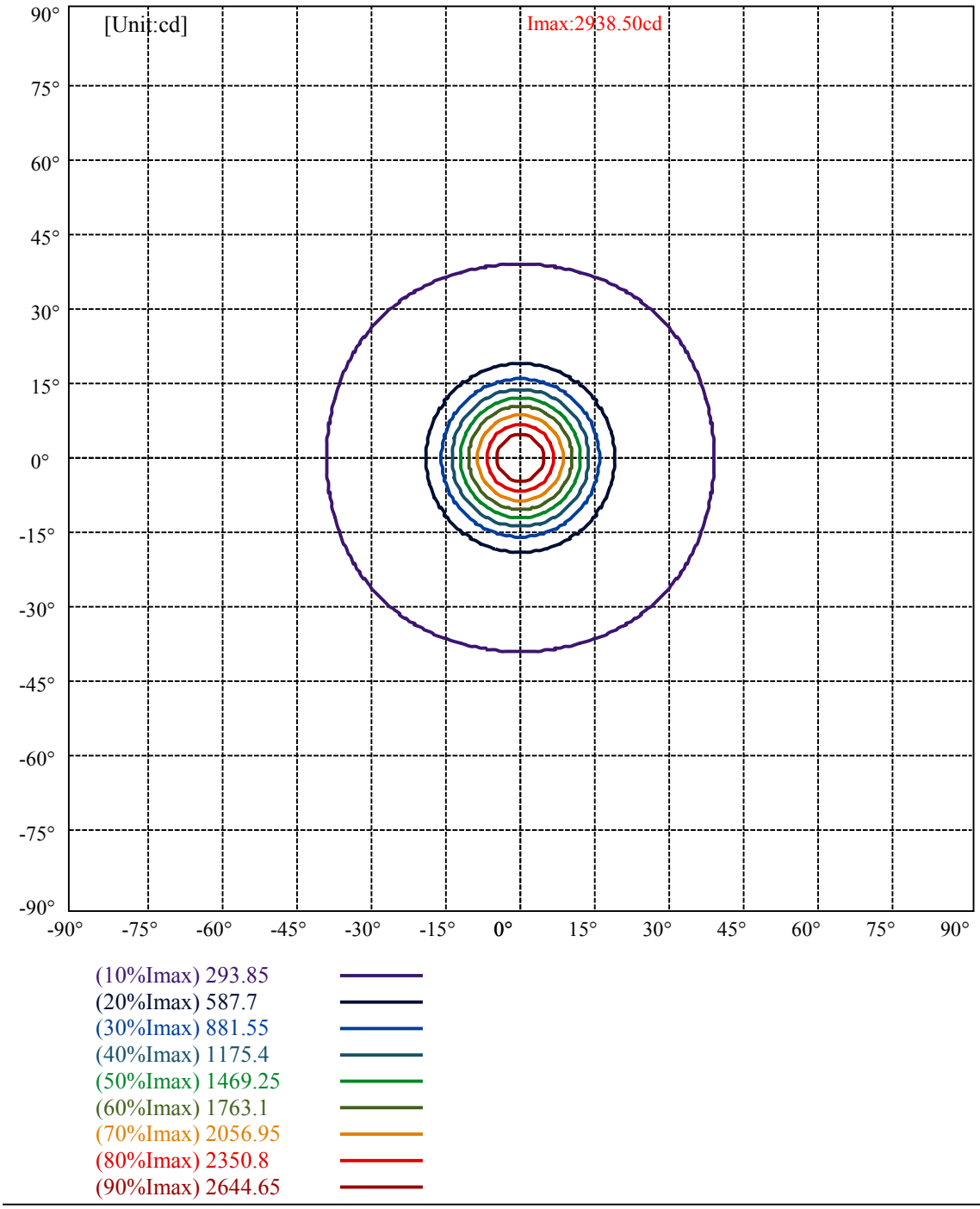
Operator: NT07
Distance(m): 7.50

Lux distance Curve



Equipment: GMS1980 Date: 2019/6/28 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

ISO-Intensity(V-H)

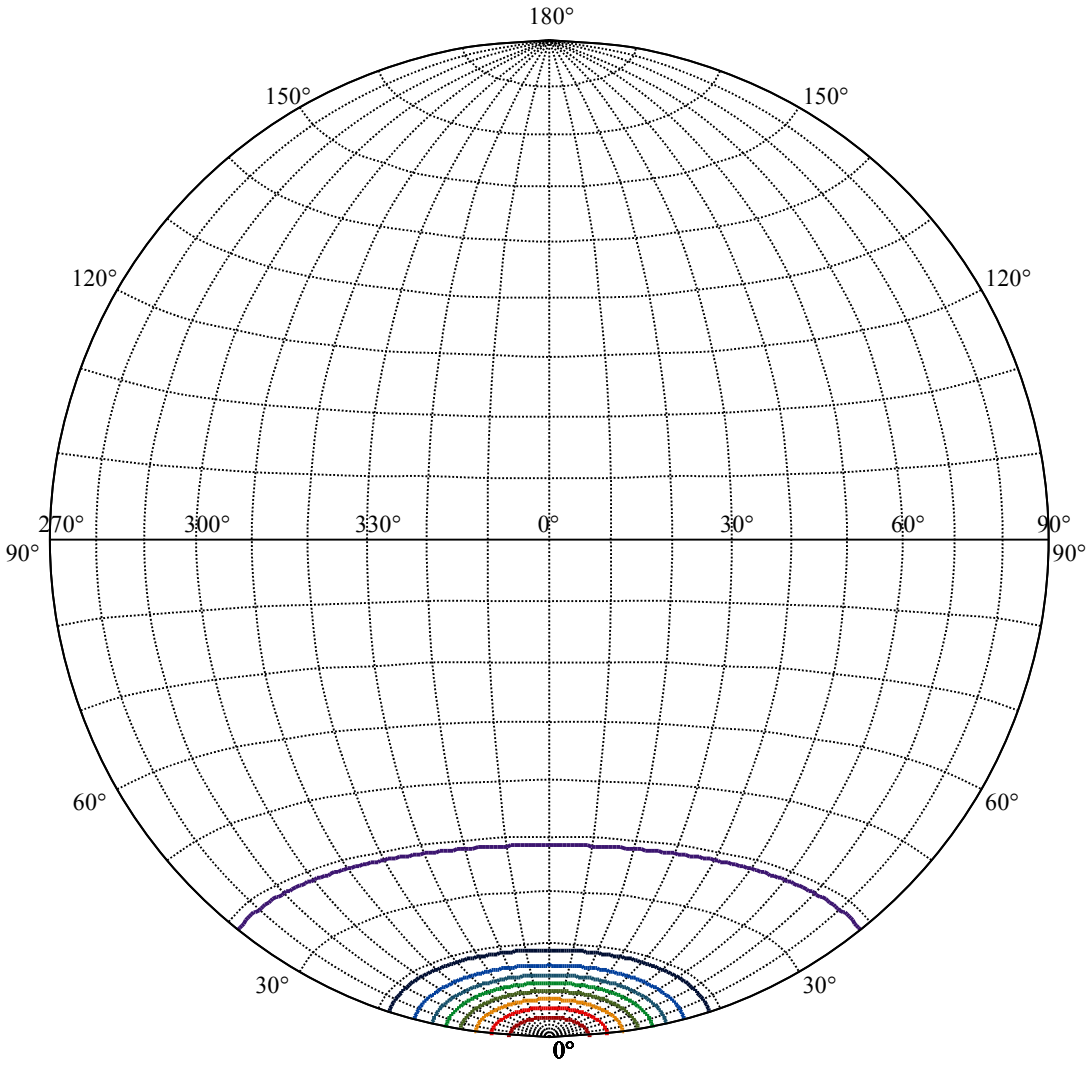


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:2938.50

(10%Imax) 293.85
(20%Imax) 587.7
(30%Imax) 881.55
(40%Imax) 1175.4
(50%Imax) 1469.25
(60%Imax) 1763.1
(70%Imax) 2056.95
(80%Imax) 2350.8
(90%Imax) 2644.65

Equipment: GMS1980 Date: 2019/6/28 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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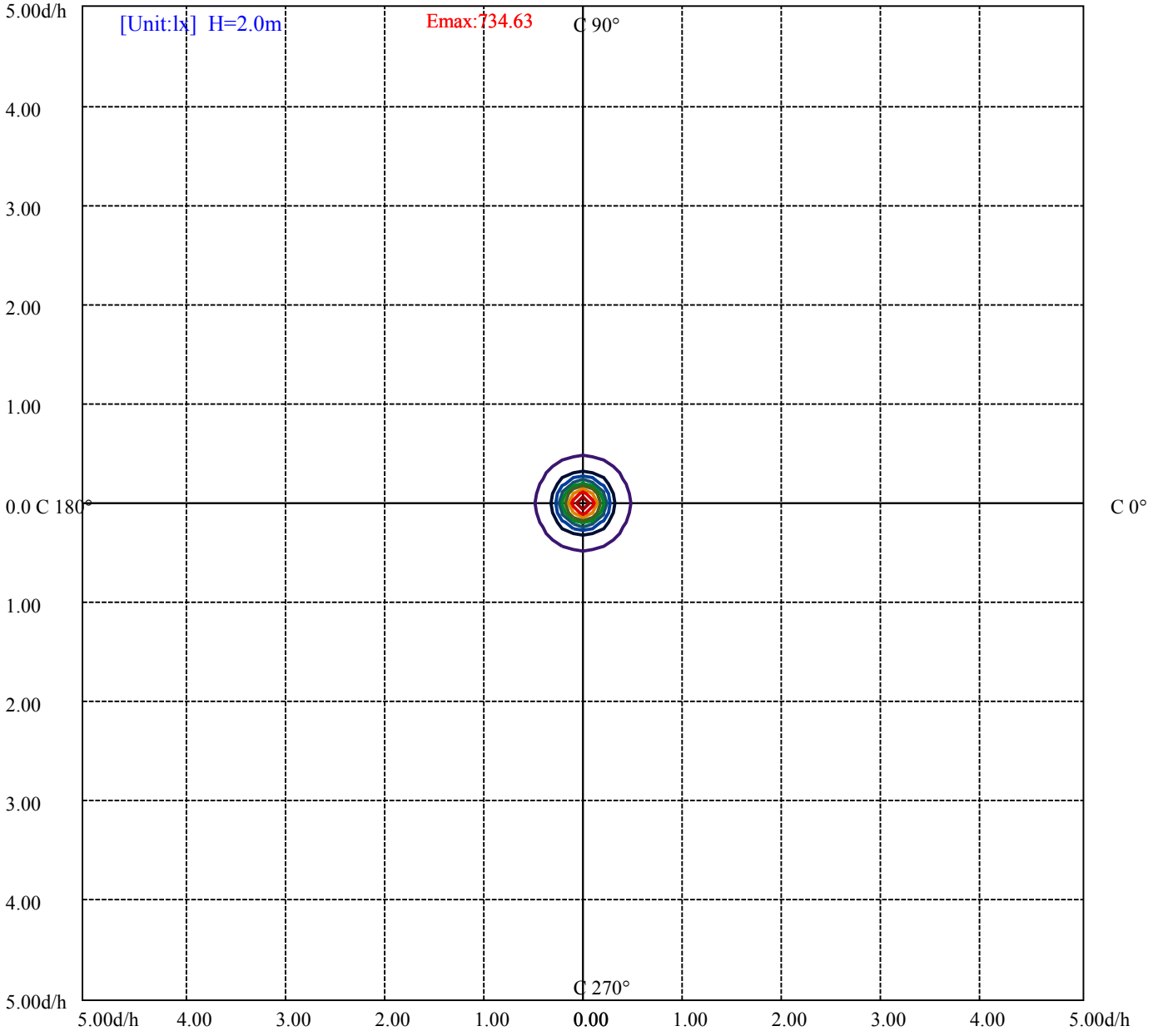
ISO illuminance diagram

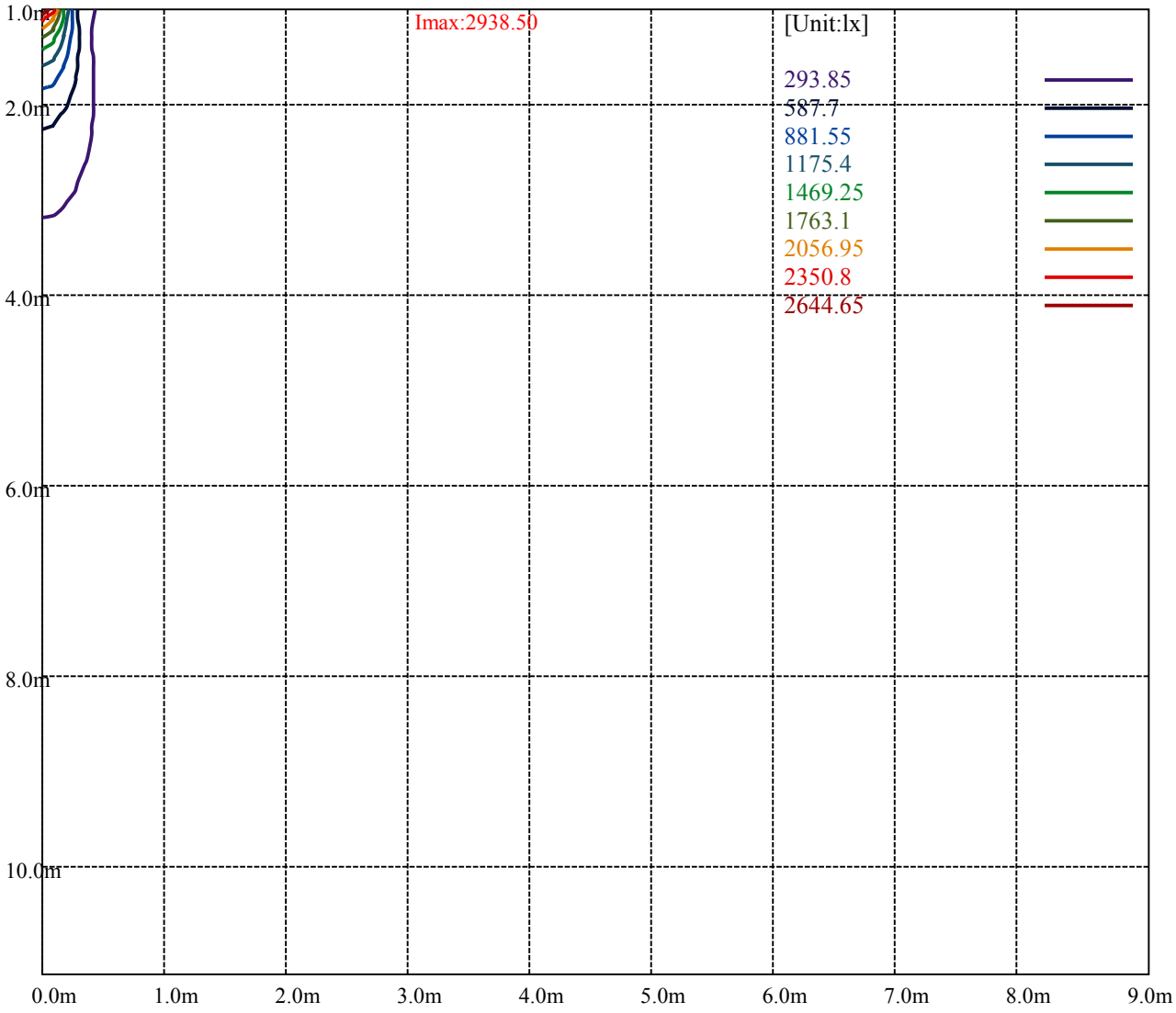


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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Luminance Limitting Curve(no luminous side)

Luminance Table

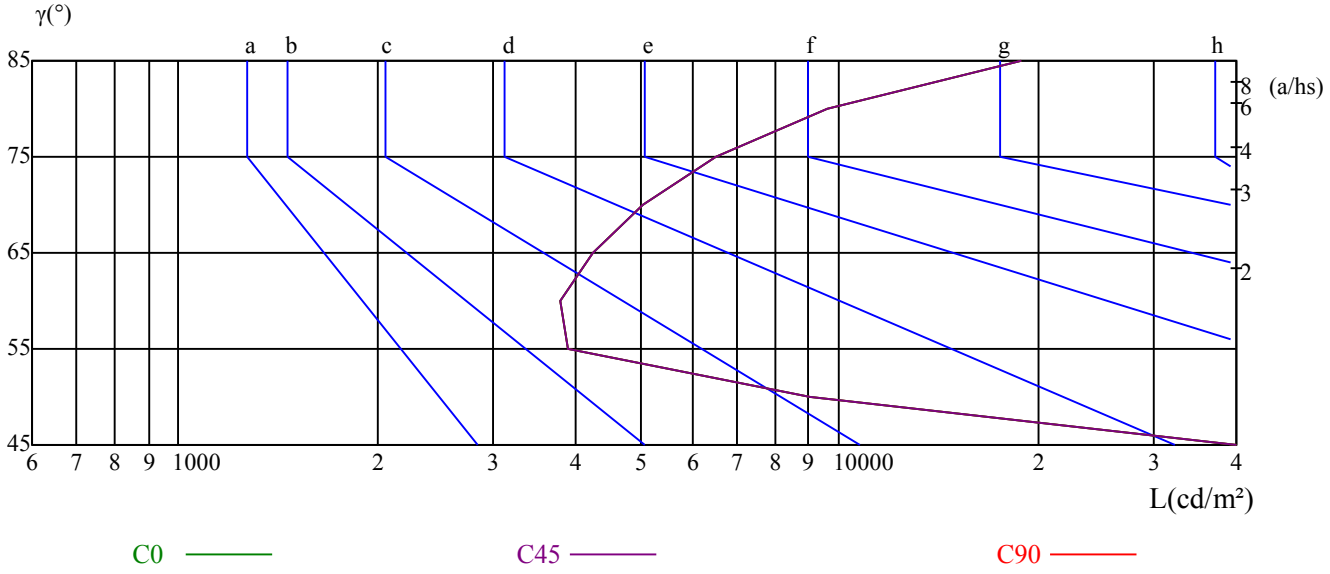
γ	45	50	55	60	65	70	75	80	85
C0	65320	9036	3893	3788	4238	5062	6522	9587	18910
C45	65320	9036	3893	3788	4238	5062	6522	9587	18910
C90	65320	9036	3893	3788	4238	5062	6522	9587	18910

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4238	4238	4238	6522	6522	6522	18910	18910	18910

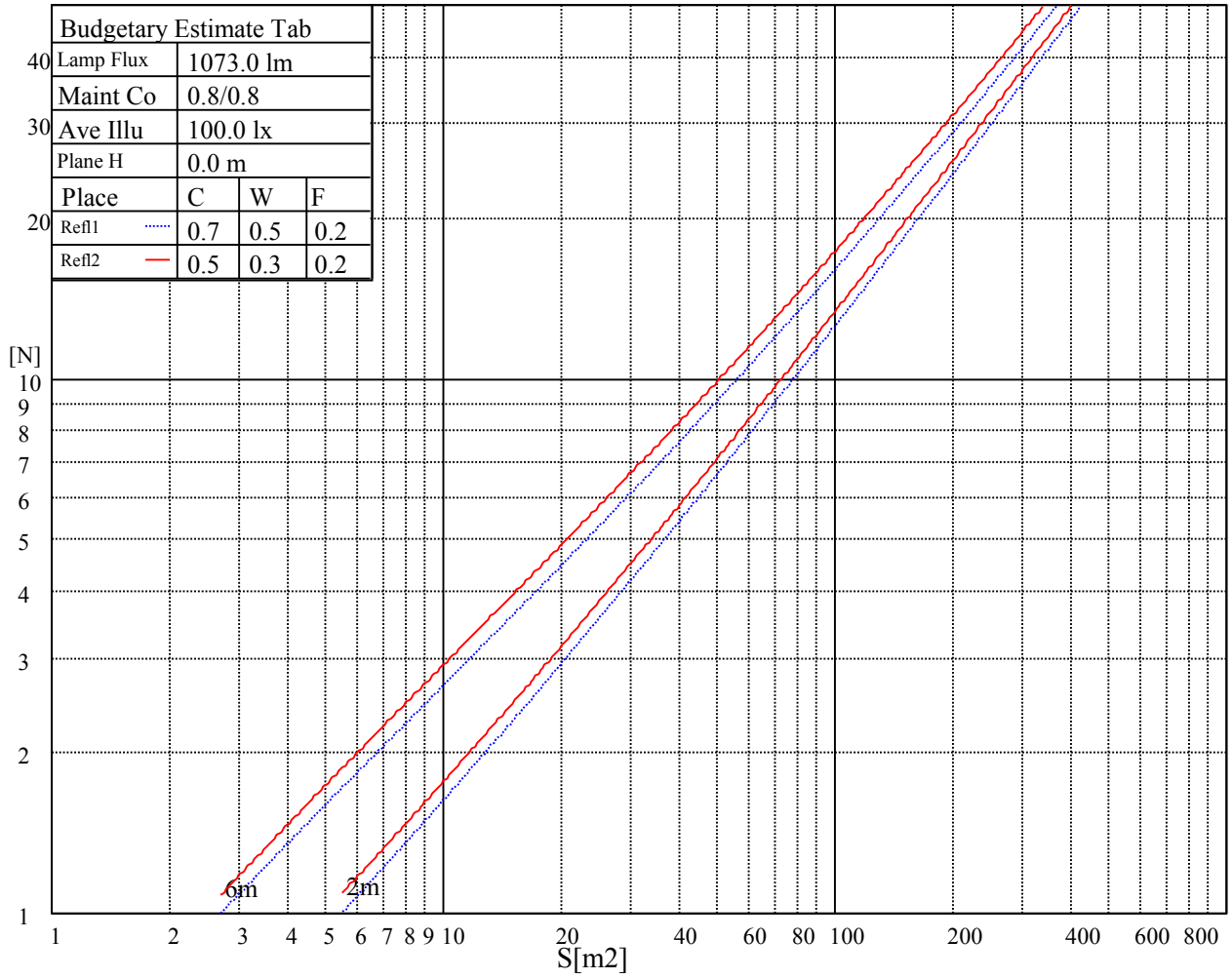
Glare Table

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 Limitting Curve



Budgetary Estimate Table

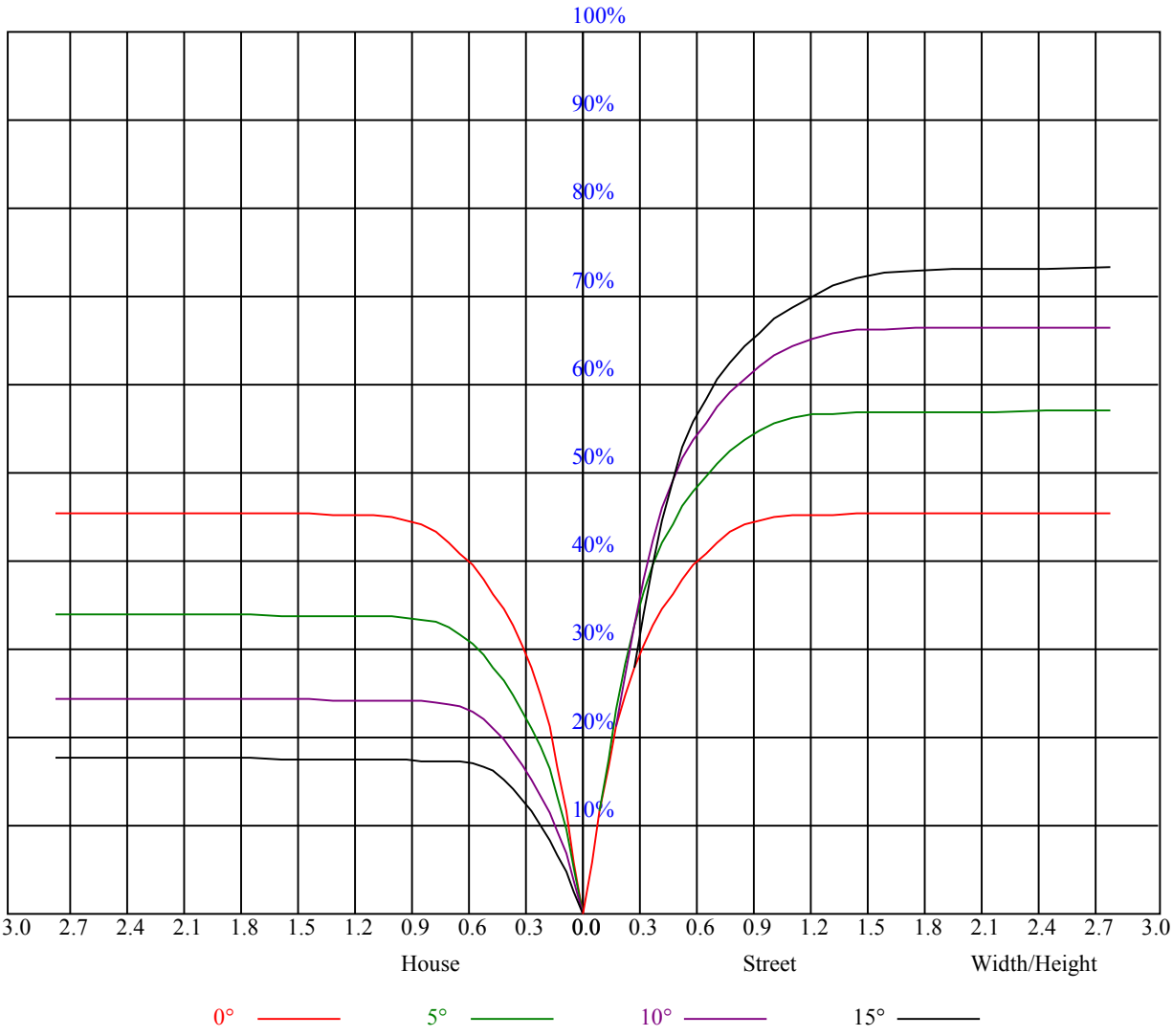


Equipment: GMS1980 Date: 2019/6/28 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

Utilization factor table for indoor luminaire

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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.09	1.09	1.09	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.92
1	1.02	0.99	0.97	1.00	0.98	0.96	0.96	0.94	0.93	0.93	0.91	0.90	0.89	0.88	0.88	0.86
2	0.95	0.91	0.89	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.89	0.85	0.81	0.88	0.84	0.81	0.85	0.82	0.79	0.83	0.81	0.78	0.81	0.79	0.77	0.76
4	0.84	0.79	0.75	0.83	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.72	0.71
5	0.79	0.74	0.70	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.68	0.67
6	0.75	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.65	0.63
7	0.71	0.66	0.62	0.70	0.66	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60
8	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
9	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.54
10	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.52

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/6/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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	2939.06	2932.31	2910.38	2856.94	2760.19	2609.44	2476.13	2321.44	2162.25
45.0	2937.94	2921.63	2878.31	2799.00	2702.25	2552.63	2419.31	2278.13	2134.69
90.0	2933.44	2904.75	2844.56	2747.81	2647.13	2505.94	2371.50	2211.19	2036.25
135.0	2943.56	2933.44	2896.88	2832.75	2735.44	2592.56	2458.13	2325.38	2160.56
180.0	2939.06	2927.25	2882.25	2809.13	2685.94	2563.31	2422.69	2258.44	2104.88
225.0	2937.94	2936.25	2900.25	2835.56	2734.88	2621.81	2494.69	2340.00	2163.38
270.0	2933.44	2934.00	2912.06	2865.38	2792.81	2670.75	2548.69	2415.94	2248.88
315.0	2943.56	2930.63	2885.06	2815.88	2725.31	2597.63	2468.25	2313.56	2145.38
360.0	2939.06	2932.31	2910.38	2856.94	2760.19	2609.44	2476.13	2321.44	2162.25

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2014.31	1866.38	1694.81	1509.75	1346.63	1167.19	1018.69	871.31	748.13
45.0	1944.00	1787.06	1623.38	1437.75	1254.94	1105.31	948.94	816.75	717.75
90.0	1883.25	1706.06	1521.00	1355.63	1122.08	1018.07	893.03	783.51	669.04
135.0	1999.69	1845.00	1664.44	1495.13	1308.38	1133.44	993.38	852.19	732.38
180.0	1937.25	1774.69	1590.19	1401.19	1104.30	1086.02	913.44	794.03	694.58
225.0	2004.75	1823.63	1636.88	1467.00	1305.56	1114.09	976.33	849.60	728.49
270.0	2069.44	1914.75	1744.88	1578.94	1392.19	1209.94	1061.44	905.06	777.38
315.0	1989.56	1816.31	1629.00	1462.50	1298.25	1106.55	968.18	843.41	735.41
360.0	2014.31	1866.38	1694.81	1509.75	1346.63	1167.19	1018.69	871.31	748.13

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	660.38	585.56	530.44	492.75	469.69	441.56	424.13	409.50	394.31
45.0	625.50	564.19	510.19	474.19	448.88	432.00	410.63	396.56	385.88
90.0	595.74	540.06	489.88	460.86	439.43	418.95	405.06	390.60	376.43
135.0	643.50	577.69	515.81	483.19	457.31	434.25	416.25	402.19	388.13
180.0	598.56	542.08	501.19	465.30	440.21	422.44	404.72	389.19	377.89
225.0	635.46	570.99	514.97	475.03	450.68	428.91	412.48	398.81	385.03
270.0	685.69	612.56	541.69	498.94	468.00	441.56	425.25	410.06	395.44
315.0	633.83	573.53	525.83	479.48	454.73	434.70	415.29	398.98	387.11
360.0	660.38	585.56	530.44	492.75	469.69	441.56	424.13	409.50	394.31

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	383.06	372.94	363.38	354.38	348.75	342.00	337.50	333.56	328.50
45.0	372.94	364.50	354.94	348.19	340.88	336.38	329.63	325.13	321.75
90.0	369.34	359.72	348.30	342.17	336.26	330.08	325.01	321.24	315.79
135.0	376.31	367.88	357.75	349.31	341.44	334.69	329.06	324.00	319.50
180.0	366.81	359.16	350.66	342.84	335.64	329.91	323.94	319.22	315.51
225.0	375.41	366.86	356.18	349.09	343.74	337.61	331.93	328.16	323.16
270.0	383.06	374.06	362.81	357.19	349.31	342.56	336.38	331.31	326.25
315.0	375.36	366.81	357.24	349.48	344.25	337.67	332.66	327.60	323.89
360.0	383.06	372.94	363.38	354.38	348.75	342.00	337.50	333.56	328.50

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	322.88	318.38	309.94	294.75	286.31	237.49	207.79	176.34	142.37
45.0	316.13	312.19	302.63	286.31	256.22	227.53	190.24	158.12	127.29
90.0	311.68	306.00	292.84	271.01	244.46	212.91	181.18	143.04	107.16
135.0	315.00	311.06	302.63	286.31	268.65	228.71	194.34	162.62	128.36
180.0	309.71	306.34	298.18	278.78	252.73	226.63	190.91	159.86	124.76
225.0	317.70	312.36	306.39	291.38	268.59	237.83	207.28	172.13	138.94
270.0	321.75	317.25	310.50	298.69	285.19	251.61	216.96	185.68	152.27
315.0	316.69	312.41	304.37	281.42	256.61	229.05	195.53	160.65	131.34
360.0	322.88	318.38	309.94	294.75	286.31	237.49	207.79	176.34	142.37

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	106.93	77.51	50.34	28.80	15.75	12.88	11.03	8.55	6.47
45.0	91.69	62.33	39.83	20.64	13.28	11.53	9.39	7.43	5.68
90.0	78.81	53.94	27.68	15.69	12.60	10.52	8.44	6.53	5.12
135.0	98.78	66.09	39.71	21.99	14.12	12.21	10.13	8.04	6.02
180.0	90.11	64.01	38.08	20.59	14.01	12.26	9.62	7.43	5.79
225.0	107.27	77.51	45.56	26.27	16.59	12.94	10.74	8.49	6.19
270.0	111.71	82.86	57.09	33.02	18.96	13.61	11.36	9.17	6.92
315.0	96.58	66.49	39.15	21.38	14.29	12.38	9.51	7.31	5.57
360.0	106.93	77.51	50.34	28.80	15.75	12.88	11.03	8.55	6.47

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.34	5.06	4.73	4.33	4.16	4.11	4.05	3.99	3.94
45.0	4.95	4.56	4.28	4.22	4.16	4.11	3.99	3.94	3.94
90.0	4.56	4.33	4.22	4.16	4.05	3.99	3.94	3.94	3.88
135.0	5.34	5.12	4.89	4.22	4.16	4.11	3.99	3.99	3.88
180.0	4.84	4.39	4.28	4.16	4.11	4.05	3.99	3.94	3.94
225.0	5.23	4.84	4.33	4.22	4.16	4.05	4.05	3.94	3.94
270.0	5.40	5.06	4.78	4.33	4.16	4.11	4.05	3.99	3.94
315.0	4.67	4.44	4.33	4.22	4.11	4.05	3.99	3.94	3.88
360.0	5.34	5.06	4.73	4.33	4.16	4.11	4.05	3.99	3.94

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.88	3.83	3.83	3.77	3.71	3.71	3.71	3.66	3.60
45.0	3.88	3.83	3.77	3.71	3.71	3.71	3.66	3.66	3.60
90.0	3.83	3.83	3.77	3.71	3.71	3.66	3.66	3.66	3.66
135.0	3.88	3.83	3.83	3.77	3.71	3.71	3.71	3.66	3.66
180.0	3.83	3.83	3.77	3.77	3.71	3.71	3.66	3.66	3.60
225.0	3.88	3.83	3.77	3.77	3.71	3.66	3.66	3.66	3.66
270.0	3.88	3.88	3.83	3.77	3.77	3.71	3.71	3.71	3.66
315.0	3.88	3.83	3.77	3.77	3.71	3.71	3.60	3.66	3.60
360.0	3.88	3.83	3.83	3.77	3.71	3.71	3.71	3.66	3.60

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.60	3.60	3.60	3.60	3.54	3.54	3.54	3.49	3.49
45.0	3.60	3.60	3.60	3.60	3.54	3.54	3.54	3.54	3.49
90.0	3.60	3.60	3.60	3.60	3.60	3.54	3.60	3.54	3.60
135.0	3.60	3.60	3.60	3.54	3.54	3.54	3.54	3.54	3.54
180.0	3.60	3.60	3.60	3.54	3.54	3.54	3.54	3.54	3.49
225.0	3.60	3.60	3.60	3.54	3.54	3.54	3.54	3.54	3.49
270.0	3.66	3.66	3.66	3.60	3.60	3.60	3.60	3.60	3.60
315.0	3.60	3.60	3.54	3.54	3.54	3.54	3.49	3.49	3.49
360.0	3.60	3.60	3.60	3.60	3.54	3.54	3.54	3.49	3.49

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.54	3.49	3.49	3.43	3.43	3.49	3.43	3.43	3.43
45.0	3.54	3.49	3.49	3.49	3.49	3.49	3.49	3.43	3.43
90.0	3.60	3.54	3.54	3.54	3.54	3.54	3.49	3.43	3.43
135.0	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.43	3.43
180.0	3.49	3.49	3.49	3.49	3.43	3.43	3.43	3.43	3.43
225.0	3.54	3.49	3.49	3.49	3.49	3.43	3.43	3.43	3.49
270.0	3.54	3.54	3.60	3.60	3.54	3.49	3.49	3.43	3.49
315.0	3.54	3.49	3.49	3.49	3.49	3.43	3.43	3.43	3.43
360.0	3.54	3.49	3.49	3.43	3.43	3.49	3.43	3.43	3.43

Intensity data(cd)

C/γ(°)	90.0
0.0	3.49
45.0	3.43
90.0	3.43
135.0	3.43
180.0	3.43
225.0	3.43
270.0	3.49
315.0	3.43
360.0	3.49