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: 1-1005-M
Luminaire: BJB 47.360.1020

Report No: 210714-B016	Voltage(V): 39.2300
Test No: 210714-C016	Current(A): 0.2310
LampCAT: Fortimo LED SLM 1201 G7N	Power (W): 9.0620
Lamp flux(lm): 1093.7	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 570	Width(mm): 45
Phm Type: C	Height(mm): 20

Photometric Results

Lumens(lm): 806.95
Efficiency(%): 73.79%
Lumens(lm)/Power(W): 89.05
Central intensity(cd): 5129.438
Maximum intensity(cd): 5129.438
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=20.1
[C90/270]Total=20.1
Field angle(10%Imax): [C0/180]Total=40.4
[C90/270]Total=40.4
Maximum s/h(1/2): C0_180=0.34 C90_270=0.34
Maximum s/h(1/4): C0_180=0.36 C90_270=0.36
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 73.79%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.536%

Equipment: GMS1980	Date: 2021/7/14	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	5129.438	0.000	0	.000%	.000%
1.0	5113.617	4.901	4.901	.448%	.607%
2.0	4998.164	14.513	19.414	1.327%	2.406%
3.0	4822.453	23.488	42.902	2.148%	5.317%
4.0	4632.188	31.648	74.55	2.894%	9.238%
5.0	4406.555	38.884	113.434	3.555%	14.057%
6.0	4035.727	44.366	157.801	4.057%	19.555%
7.0	3676.219	47.868	205.668	4.377%	25.487%
8.0	3332.883	50.163	255.831	4.587%	31.703%
9.0	2944.055	50.871	306.702	4.652%	38.007%
10.0	2583.844	50.025	356.728	4.574%	44.207%
11.0	2279.109	48.591	405.319	4.443%	50.228%
12.0	1988.578	46.652	451.971	4.266%	56.010%
13.0	1708.102	43.870	495.841	4.011%	61.446%
14.0	1459.223	40.541	536.382	3.707%	66.470%
15.0	1263.600	37.380	573.763	3.418%	71.102%
16.0	1052.923	33.944	607.706	3.104%	75.309%
17.0	911.883	30.597	638.303	2.798%	79.101%
18.0	769.627	27.724	666.028	2.535%	82.536%
19.0	656.227	24.807	690.835	2.268%	85.610%
20.0	535.648	21.815	712.649	1.995%	88.314%
21.0	427.690	18.498	731.147	1.691%	90.606%
22.0	345.030	15.528	746.676	1.420%	92.530%
23.0	249.462	12.474	759.15	1.141%	94.076%
24.0	180.844	9.408	768.558	.860%	95.242%
25.0	106.031	6.523	775.081	.596%	96.050%
26.0	65.974	4.060	779.141	.371%	96.554%
27.0	33.441	2.432	781.573	.222%	96.855%
28.0	19.097	1.330	782.903	.122%	97.020%
29.0	12.340	0.822	783.726	.075%	97.122%
30.0	9.204	0.582	784.307	.053%	97.194%
31.0	7.650	0.469	784.776	.043%	97.252%
32.0	6.933	0.418	785.194	.038%	97.304%
33.0	6.455	0.394	785.588	.036%	97.353%
34.0	6.089	0.380	785.968	.035%	97.400%
35.0	5.752	0.368	786.336	.034%	97.445%
36.0	5.484	0.358	786.694	.033%	97.489%
37.0	5.273	0.351	787.044	.032%	97.533%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	5.077	0.345	787.39	.032%	97.576%
39.0	4.922	0.341	787.731	.031%	97.618%
40.0	4.795	0.339	788.07	.031%	97.660%
41.0	4.697	0.338	788.408	.031%	97.702%
42.0	4.598	0.338	788.746	.031%	97.744%
43.0	4.507	0.337	789.083	.031%	97.786%
44.0	4.444	0.338	789.421	.031%	97.827%
45.0	4.380	0.339	789.76	.031%	97.869%
46.0	4.345	0.341	790.101	.031%	97.912%
47.0	4.296	0.344	790.445	.031%	97.954%
48.0	4.268	0.346	790.791	.032%	97.997%
49.0	4.219	0.349	791.14	.032%	98.040%
50.0	4.177	0.350	791.49	.032%	98.084%
51.0	4.163	0.353	791.843	.032%	98.128%
52.0	4.134	0.356	792.199	.033%	98.172%
53.0	4.113	0.359	792.557	.033%	98.216%
54.0	4.099	0.362	792.919	.033%	98.261%
55.0	4.064	0.364	793.284	.033%	98.306%
56.0	4.050	0.367	793.65	.034%	98.352%
57.0	4.036	0.370	794.02	.034%	98.397%
58.0	4.015	0.372	794.392	.034%	98.444%
59.0	3.987	0.374	794.766	.034%	98.490%
60.0	3.980	0.376	795.143	.034%	98.537%
61.0	3.966	0.379	795.522	.035%	98.584%
62.0	3.959	0.382	795.904	.035%	98.631%
63.0	3.959	0.385	796.289	.035%	98.679%
64.0	3.923	0.387	796.676	.035%	98.726%
65.0	3.909	0.388	797.063	.035%	98.775%
66.0	3.909	0.390	797.453	.036%	98.823%
67.0	3.895	0.392	797.846	.036%	98.871%
68.0	3.888	0.394	798.24	.036%	98.920%
69.0	3.881	0.396	798.636	.036%	98.969%
70.0	3.867	0.398	799.034	.036%	99.019%
71.0	3.839	0.398	799.433	.036%	99.068%
72.0	3.846	0.400	799.832	.037%	99.118%
73.0	3.832	0.402	800.234	.037%	99.167%
74.0	3.825	0.403	800.636	.037%	99.217%
75.0	3.811	0.403	801.04	.037%	99.267%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.804	0.404	801.444	.037%	99.317%
77.0	3.790	0.405	801.849	.037%	99.368%
78.0	3.755	0.404	802.253	.037%	99.418%
79.0	3.727	0.402	802.655	.037%	99.467%
80.0	3.691	0.400	803.055	.037%	99.517%
81.0	3.642	0.397	803.451	.036%	99.566%
82.0	3.607	0.393	803.844	.036%	99.615%
83.0	3.593	0.391	804.236	.036%	99.663%
84.0	3.593	0.391	804.627	.036%	99.712%
85.0	3.572	0.391	805.018	.036%	99.760%
86.0	3.544	0.389	805.407	.036%	99.809%
87.0	3.523	0.387	805.794	.035%	99.856%
88.0	3.523	0.386	806.18	.035%	99.904%
89.0	3.523	0.386	806.566	.035%	99.952%
90.0	3.523	0.386	806.952	.035%	100.000%

Zonal flux distribution table

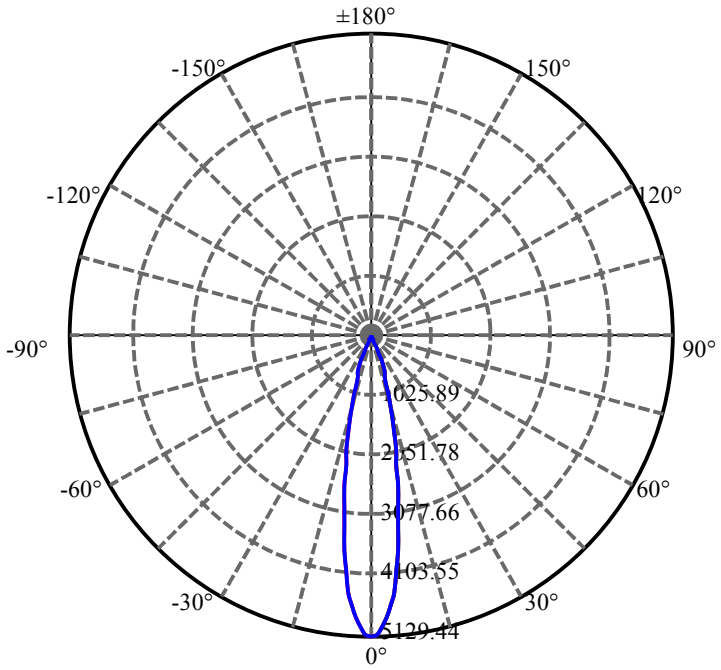
ZONAL LUMEN SUMMARY

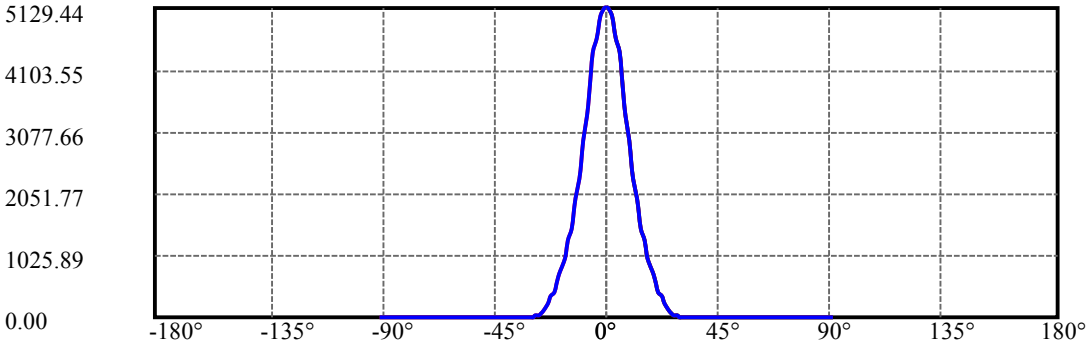
Zone	Lumens	%Lamp	%Fixt
0-30	784.31	71.71%	97.19%
0-40	788.07	72.06%	97.66%
0-60	795.14	72.71%	98.54%
0-90	806.57	73.75%	99.95%
0-120	806.57	73.75%	99.95%
0-180	806.95	73.79%	100.00%
60-90	11.80	1.08%	1.46%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.26	645.56	59.03%	80.00%

ZONAL LUMEN SUMMARY

0-10	356.73
10-20	355.92
20-30	71.66
30-40	3.76
40-50	3.42
50-60	3.65
60-70	3.89
70-80	4.02
80-90	3.51
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):

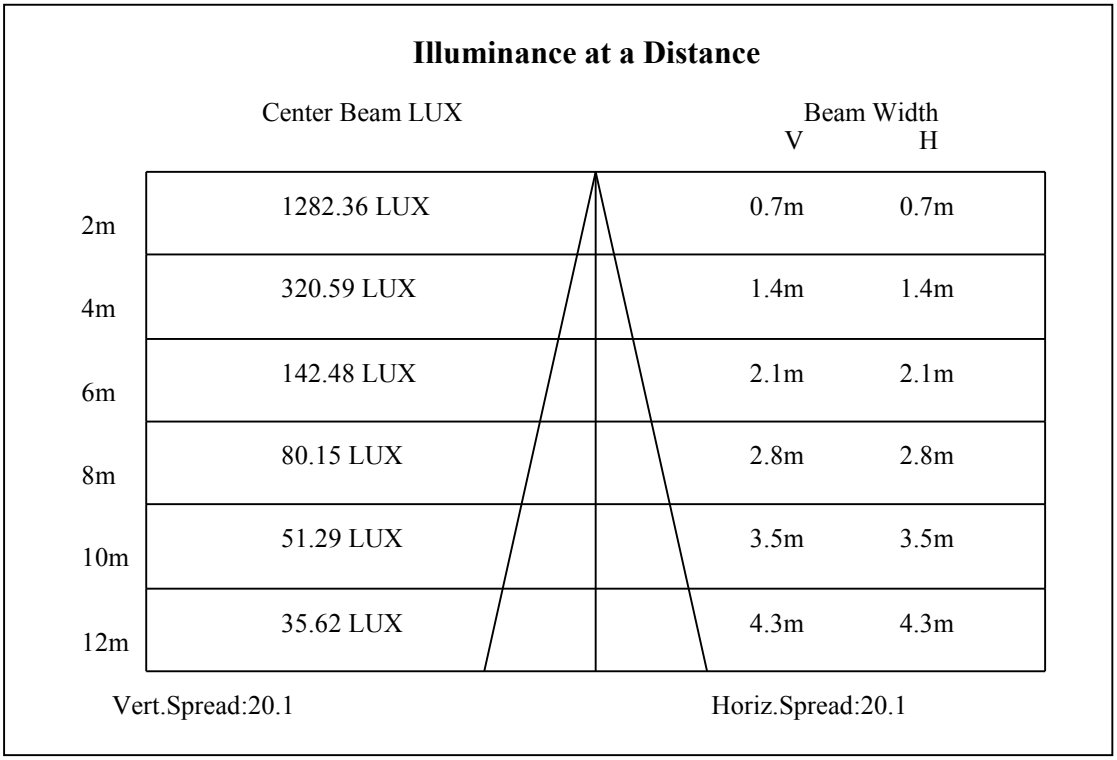
C0/C180:

C90/C270:

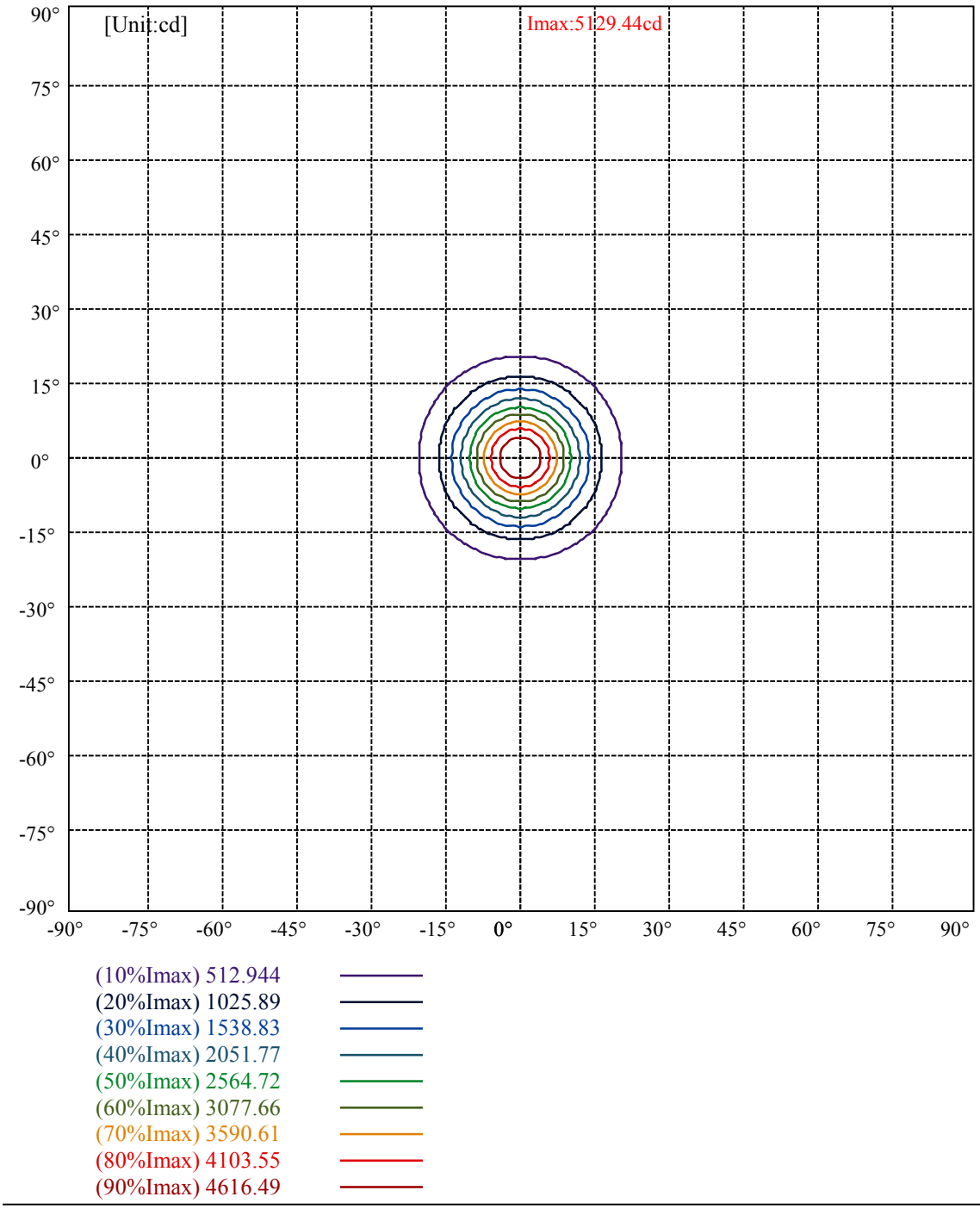
Field angle(10%Imax):C0/180Left:20.2 Right:20.2
:C90/270Left:20.2 Right:20.2

Beam Angle(50%Imax):C0/180Left:10.1 Right:10.1
:C90/270Left:10.1 Right:10.1

Lux distance Curve



ISO-Intensity(V-H)



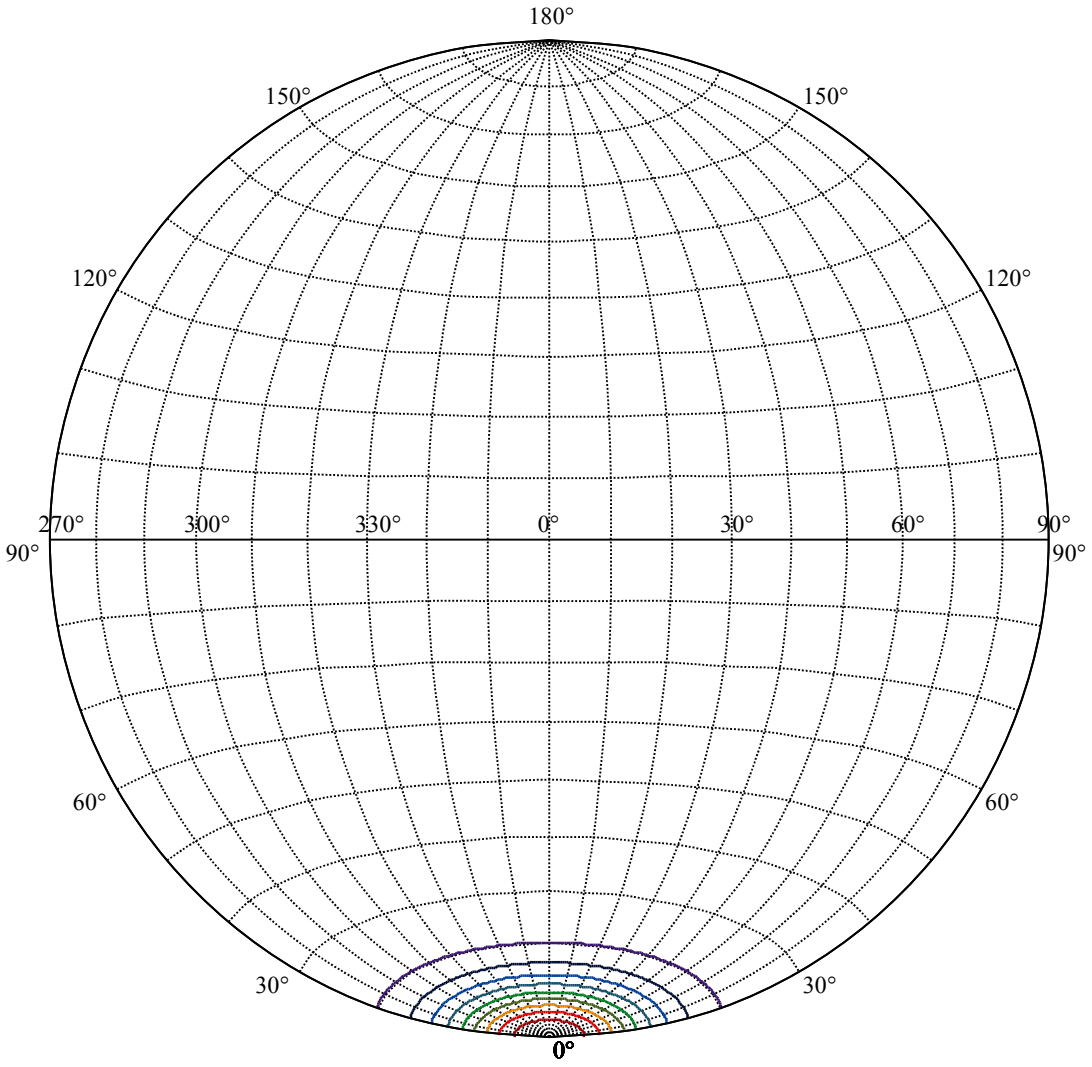
(10%Imax) 512.944
(20%Imax) 1025.89
(30%Imax) 1538.83
(40%Imax) 2051.77
(50%Imax) 2564.72
(60%Imax) 3077.66
(70%Imax) 3590.61
(80%Imax) 4103.55
(90%Imax) 4616.49

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/14
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5129.44

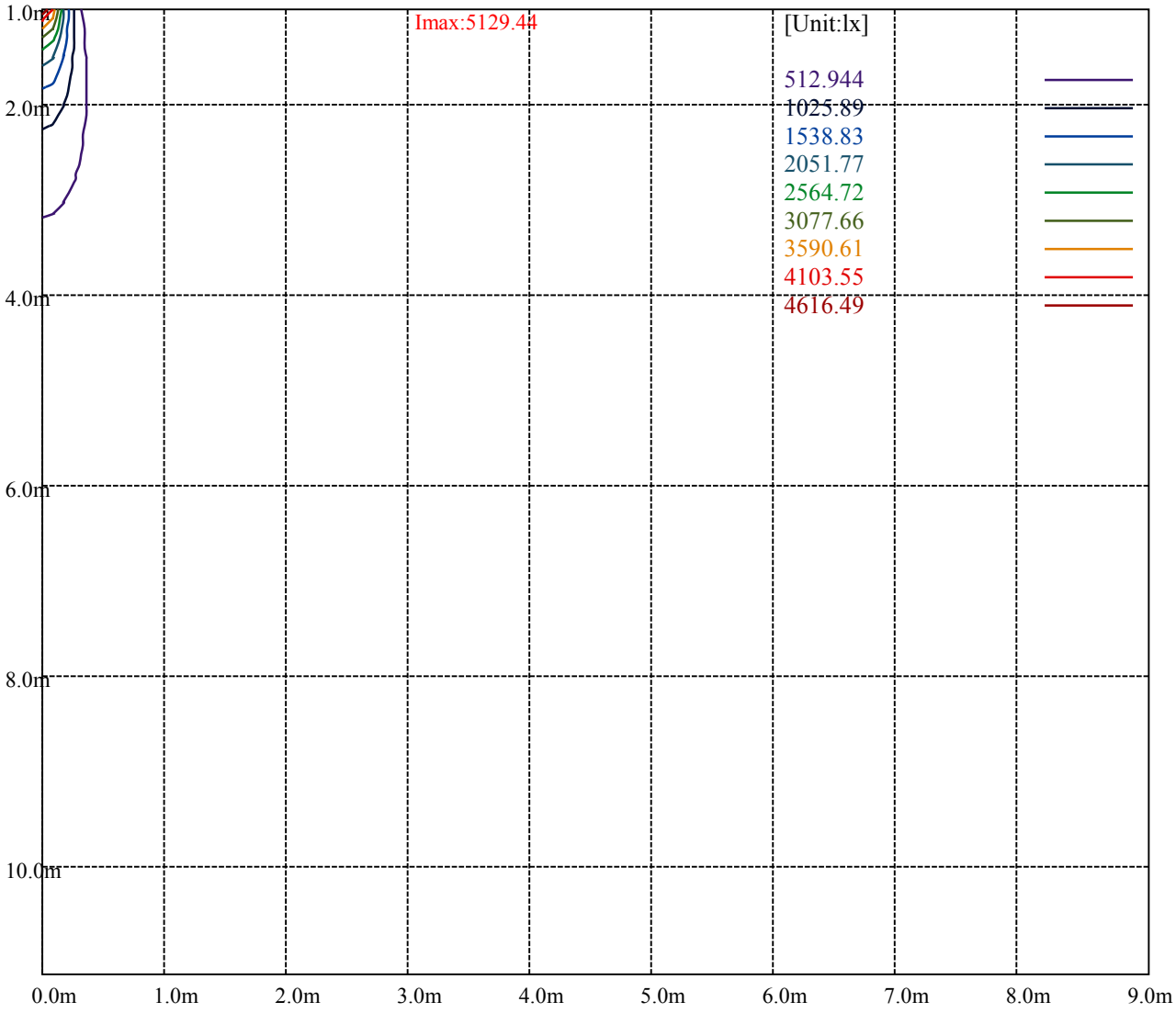
(10%Imax) 512.944
(20%Imax) 1025.89
(30%Imax) 1538.83
(40%Imax) 2051.77
(50%Imax) 2564.72
(60%Imax) 3077.66
(70%Imax) 3590.61
(80%Imax) 4103.55
(90%Imax) 4616.49

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/14
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/14
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

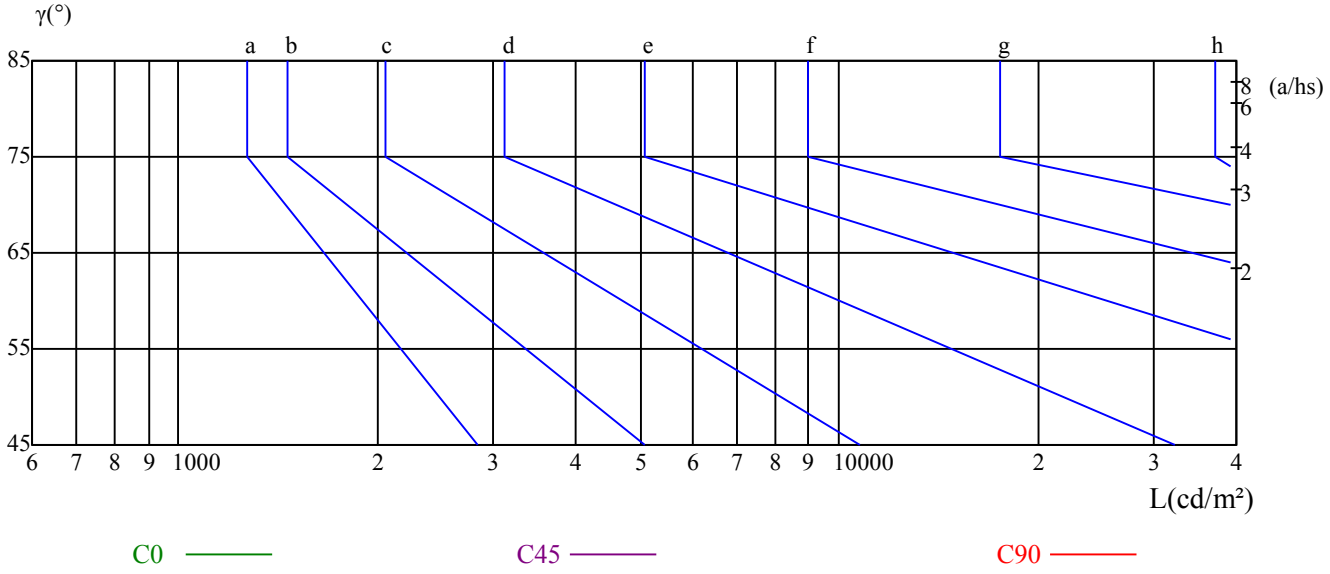
γ	45	50	55	60	65	70	75	80	85
C0	167	166	169	175	185	198	216	235	263
C45	180	180	186	195	209	228	253	284	328
C90	233	243	263	293	335	402	508	691	1140

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
361	361	361	574	574	574	1598	1598	1598

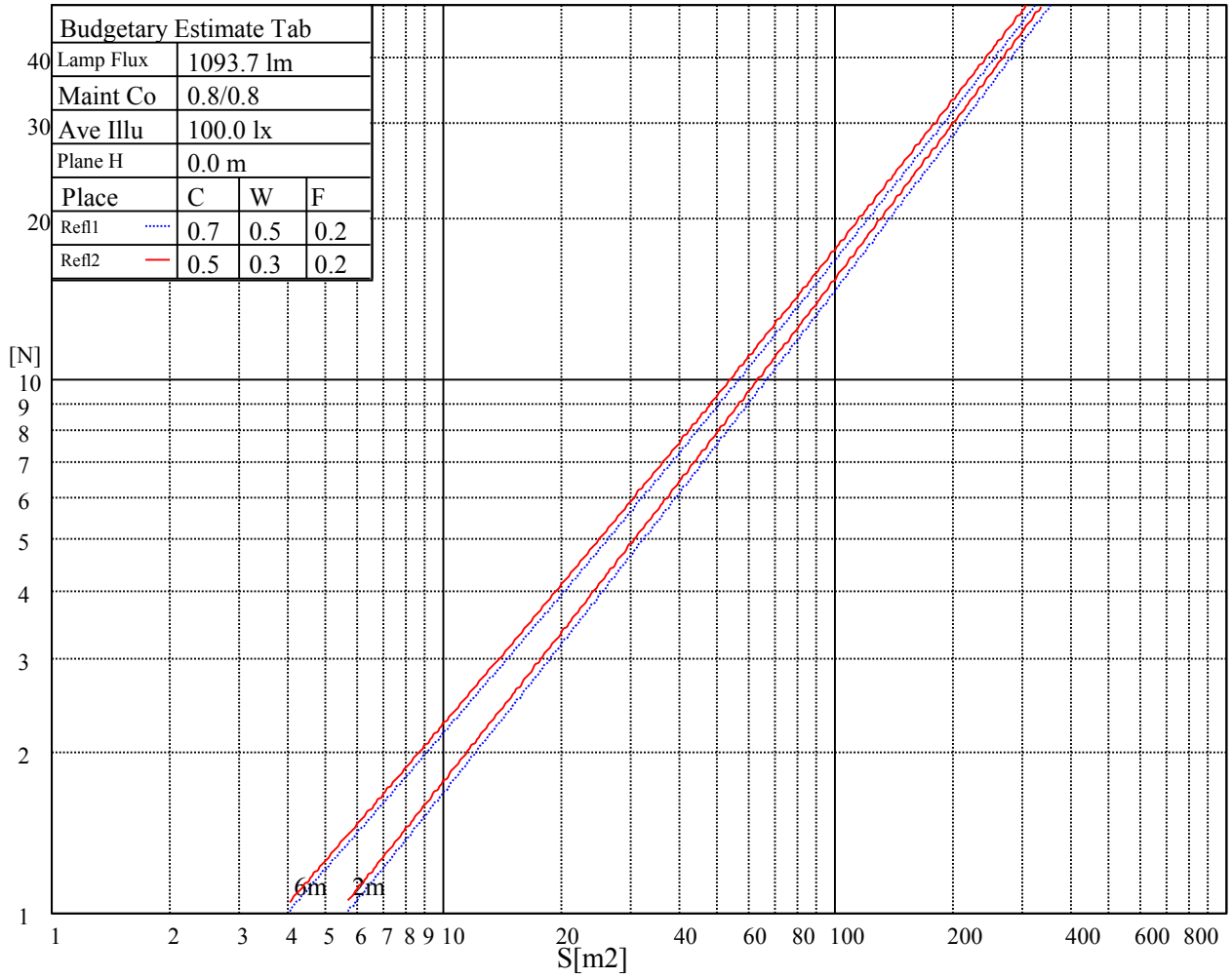
Glare Table

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

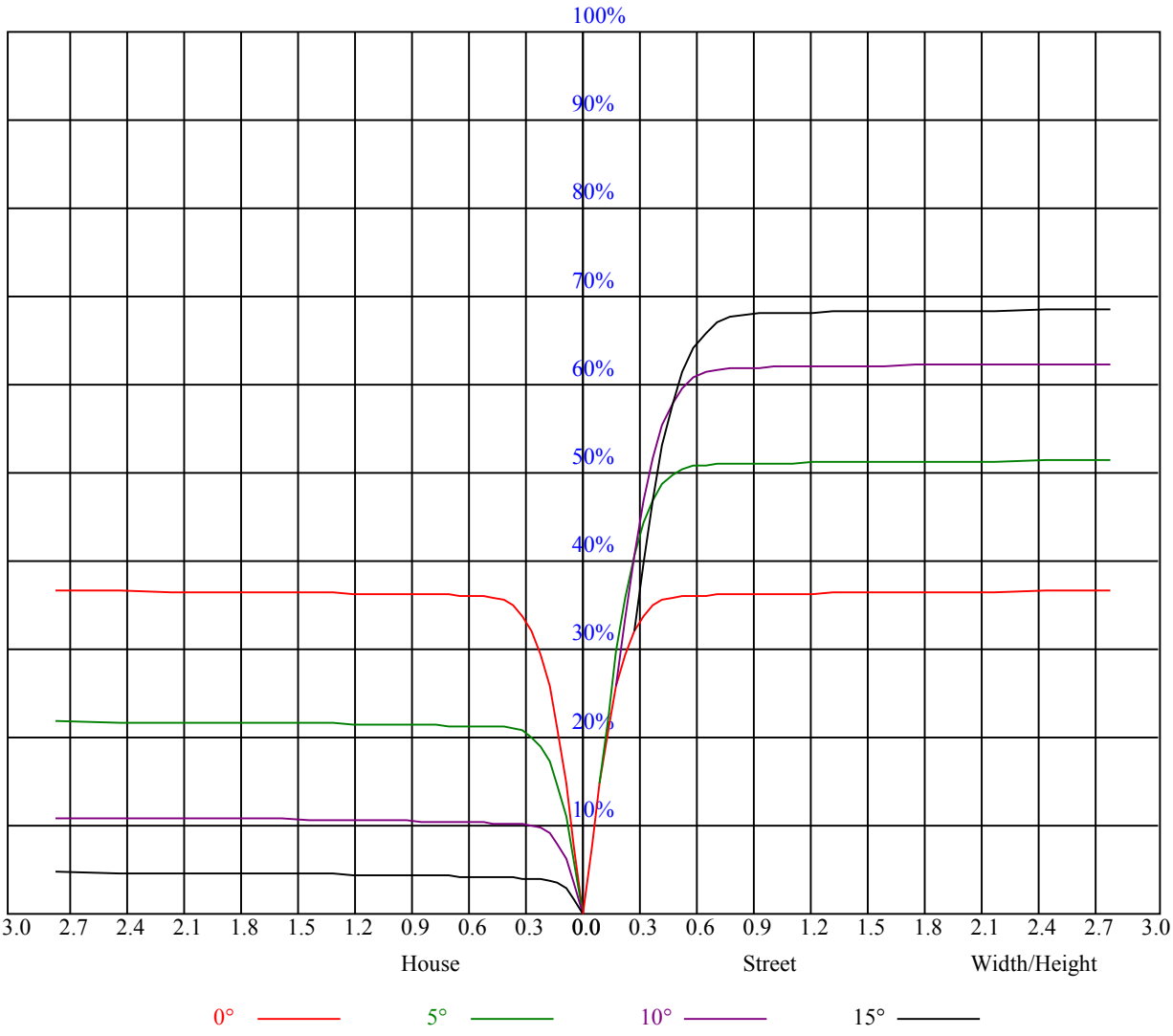


Equipment: GMS1980 Date: 2021/7/14 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.88	0.88	0.88	0.86	0.86	0.86	0.82	0.82	0.82	0.78	0.78	0.78	0.75	0.75	0.75	0.74
1	0.83	0.82	0.81	0.82	0.81	0.79	0.79	0.78	0.77	0.76	0.75	0.75	0.74	0.73	0.73	0.71
2	0.80	0.78	0.76	0.78	0.77	0.75	0.76	0.75	0.73	0.74	0.73	0.72	0.72	0.71	0.70	0.69
3	0.77	0.74	0.72	0.76	0.73	0.72	0.74	0.72	0.70	0.72	0.71	0.69	0.71	0.69	0.68	0.67
4	0.74	0.71	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.67	0.69	0.68	0.67	0.66
5	0.72	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.68	0.66	0.65	0.64
6	0.70	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.67	0.65	0.63	0.63
7	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.63	0.66	0.64	0.62	0.65	0.63	0.62	0.61
8	0.66	0.63	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.63	0.61	0.64	0.62	0.61	0.60
9	0.65	0.62	0.60	0.64	0.62	0.60	0.64	0.61	0.60	0.63	0.61	0.60	0.63	0.61	0.60	0.59
10	0.63	0.61	0.59	0.63	0.60	0.59	0.63	0.60	0.59	0.62	0.60	0.58	0.62	0.60	0.58	0.58

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2021/7/14	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	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	5141.25	5249.81	5094.00	4984.31	4890.38	4709.25	4370.06	4005.56	3659.06
45.0	5174.44	4987.13	4866.19	4695.75	4391.44	4075.31	3685.50	3314.81	2929.50
90.0	5027.06	4898.25	4752.56	4468.50	4074.19	3787.31	3381.75	2938.50	2657.81
135.0	5175.00	4988.25	4856.06	4660.31	4379.06	4069.13	3650.63	3291.19	2949.19
180.0	5141.25	4982.06	4892.06	4687.31	4407.19	4096.13	3670.88	3296.25	2935.69
225.0	5174.44	5289.75	5142.94	4989.94	4928.63	4770.56	4397.63	4087.13	3740.06
270.0	5027.06	5251.50	5270.06	5069.81	5042.25	4970.81	4696.88	4394.81	4074.19
315.0	5175.00	5262.19	5111.44	5023.69	4944.38	4773.94	4432.50	4081.50	3717.56
360.0	5141.25	5249.81	5094.00	4984.31	4890.38	4709.25	4370.06	4005.56	3659.06

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3247.88	2865.38	2544.19	2249.44	1906.31	1658.81	1434.94	1194.75	1029.94
45.0	2573.44	2280.38	1971.56	1728.00	1459.69	1271.81	1103.06	935.44	794.25
90.0	2360.25	2030.63	1789.88	1572.75	1353.94	1115.66	1000.46	849.15	719.49
135.0	2557.13	2269.69	2004.75	1735.88	1498.50	1310.63	1122.75	968.06	814.50
180.0	2572.31	2244.38	1974.94	1705.50	1492.88	1218.38	1088.78	940.44	794.36
225.0	3312.56	2892.94	2559.94	2214.56	1929.38	1644.19	1402.31	1102.44	1021.56
270.0	3598.31	3210.19	2843.44	2464.88	2113.88	1829.81	1551.38	1313.44	1125.00
315.0	3330.56	2877.19	2544.19	2237.63	1910.25	1624.50	1405.13	1119.66	995.96
360.0	3247.88	2865.38	2544.19	2249.44	1906.31	1658.81	1434.94	1194.75	1029.94

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	885.38	768.38	624.38	526.50	426.94	325.13	289.13	154.52	95.23
45.0	673.31	567.00	441.00	348.75	306.00	171.90	104.79	56.59	29.70
90.0	599.18	487.41	382.05	294.36	201.49	129.88	86.01	38.25	21.71
135.0	690.19	572.06	461.25	355.50	286.31	193.33	114.69	67.22	37.58
180.0	662.01	554.01	458.04	336.09	264.43	180.17	115.31	63.11	35.49
225.0	848.53	747.56	628.65	496.07	408.32	323.49	231.86	143.72	98.33
270.0	945.00	815.63	686.25	566.44	468.00	367.88	284.06	184.89	122.85
315.0	853.43	737.78	603.56	497.81	398.76	303.92	220.89	139.95	86.91
360.0	885.38	768.38	624.38	526.50	426.94	325.13	289.13	154.52	95.23

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	44.55	25.48	14.23	10.13	8.33	7.54	6.98	6.53	6.02
45.0	15.53	10.18	8.10	7.37	6.75	6.36	6.02	5.79	5.51
90.0	12.99	8.55	7.43	6.86	6.41	6.02	5.74	5.51	5.29
135.0	19.58	10.97	8.10	7.09	6.58	6.13	5.74	5.51	5.29
180.0	19.97	10.97	8.04	7.09	6.58	6.13	5.79	5.51	5.29
225.0	47.53	26.66	17.10	10.63	8.66	7.76	7.03	6.58	6.19
270.0	62.66	35.04	21.04	14.29	9.56	8.16	7.48	6.86	6.41
315.0	44.72	24.92	14.68	10.18	8.33	7.37	6.86	6.41	6.02
360.0	44.55	25.48	14.23	10.13	8.33	7.54	6.98	6.53	6.02

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	5.74	5.51	5.23	5.06	4.89	4.78	4.67	4.56	4.44
45.0	5.29	5.12	4.95	4.84	4.78	4.67	4.61	4.50	4.44
90.0	5.12	4.95	4.84	4.78	4.67	4.61	4.56	4.50	4.44
135.0	5.12	4.95	4.84	4.73	4.61	4.56	4.44	4.39	4.33
180.0	5.12	4.95	4.78	4.67	4.56	4.50	4.44	4.33	4.33
225.0	5.79	5.57	5.34	5.06	4.95	4.78	4.67	4.61	4.50
270.0	6.08	5.74	5.46	5.23	5.06	4.95	4.78	4.67	4.61
315.0	5.63	5.40	5.18	5.01	4.84	4.73	4.61	4.50	4.44
360.0	5.74	5.51	5.23	5.06	4.89	4.78	4.67	4.56	4.44

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	4.39	4.39	4.28	4.28	4.22	4.16	4.16	4.16	4.11
45.0	4.44	4.39	4.33	4.33	4.28	4.28	4.22	4.22	4.16
90.0	4.39	4.39	4.33	4.33	4.28	4.22	4.22	4.22	4.22
135.0	4.28	4.28	4.22	4.16	4.16	4.11	4.11	4.05	3.99
180.0	4.28	4.22	4.22	4.16	4.11	4.11	4.05	4.05	4.05
225.0	4.44	4.39	4.33	4.28	4.22	4.16	4.16	4.11	4.11
270.0	4.50	4.44	4.39	4.39	4.33	4.28	4.28	4.22	4.22
315.0	4.33	4.28	4.28	4.22	4.16	4.11	4.11	4.05	4.05
360.0	4.39	4.39	4.28	4.28	4.22	4.16	4.16	4.16	4.11

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	4.11	4.05	4.05	4.05	3.99	3.94	3.99	3.94	3.94
45.0	4.16	4.16	4.11	4.11	4.11	4.05	4.05	4.05	4.05
90.0	4.16	4.16	4.16	4.16	4.11	4.11	4.11	4.05	4.05
135.0	3.99	3.99	3.99	3.94	3.88	3.88	3.88	3.88	3.88
180.0	3.99	3.99	3.99	3.94	3.94	3.88	3.88	3.88	3.88
225.0	4.11	4.05	4.05	4.05	4.05	3.99	3.99	3.99	3.99
270.0	4.22	4.11	4.11	4.11	4.11	4.11	4.05	4.05	4.05
315.0	4.05	3.99	3.94	3.94	3.94	3.94	3.88	3.88	3.83
360.0	4.11	4.05	4.05	4.05	3.99	3.94	3.99	3.94	3.94

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.94	3.88	3.88	3.88	3.88	3.83	3.83	3.83	3.83
45.0	4.05	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.94
90.0	4.05	3.99	3.99	3.99	3.99	3.94	3.94	3.88	3.88
135.0	3.83	3.83	3.83	3.83	3.77	3.77	3.77	3.77	3.71
180.0	3.88	3.83	3.83	3.83	3.83	3.83	3.77	3.77	3.71
225.0	3.99	3.99	3.94	3.99	3.94	3.99	3.99	3.99	3.94
270.0	4.05	4.05	3.99	3.99	3.99	3.99	3.99	3.94	3.94
315.0	3.88	3.83	3.83	3.77	3.77	3.77	3.77	3.77	3.77
360.0	3.94	3.88	3.88	3.88	3.88	3.83	3.83	3.83	3.83

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.83	3.77	3.77	3.77	3.71	3.71	3.71	3.71	3.71
45.0	3.94	3.94	3.94	3.88	3.88	3.83	3.77	3.71	3.66
90.0	3.88	3.88	3.88	3.83	3.88	3.83	3.77	3.71	3.60
135.0	3.71	3.71	3.71	3.71	3.71	3.71	3.66	3.66	3.66
180.0	3.77	3.71	3.71	3.71	3.71	3.71	3.66	3.66	3.66
225.0	3.99	3.99	3.94	3.94	3.94	3.94	3.88	3.88	3.77
270.0	3.94	3.94	3.94	3.94	3.88	3.88	3.88	3.83	3.83
315.0	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.66	3.66
360.0	3.83	3.77	3.77	3.77	3.71	3.71	3.71	3.71	3.71

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.71	3.66	3.66	3.66	3.66	3.66	3.54	3.54	3.54
45.0	3.54	3.54	3.54	3.54	3.54	3.49	3.49	3.49	3.49
90.0	3.60	3.54	3.60	3.54	3.54	3.49	3.49	3.49	3.54
135.0	3.66	3.60	3.60	3.60	3.60	3.54	3.54	3.54	3.54
180.0	3.60	3.60	3.60	3.60	3.54	3.54	3.54	3.54	3.54
225.0	3.66	3.60	3.54	3.54	3.54	3.54	3.49	3.49	3.49
270.0	3.71	3.66	3.60	3.60	3.54	3.54	3.54	3.54	3.54
315.0	3.66	3.66	3.60	3.66	3.60	3.54	3.54	3.54	3.49
360.0	3.71	3.66	3.66	3.66	3.66	3.66	3.54	3.54	3.54

Intensity data(cd)

C/γ(°)	90.0
0.0	3.54
45.0	3.49
90.0	3.49
135.0	3.54
180.0	3.54
225.0	3.49
270.0	3.54
315.0	3.54
360.0	3.54