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: LN01D04524DA-N
Luminaire: 97.70.234.00
Report No: 200708-B007
Test No: 200708-C007
LampCAT: BRIDGELUX V6HD
Lamp flux(lm): 718.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 33.8900
Current(A): 0.1510
Power (W): 5.1200
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 628.48
Efficiency(%): 87.53%
Lumens(lm)/Power(W): 122.75
Central intensity(cd): 2742.469
Maximum intensity(cd): 2742.469
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=25.9
[C90/270]Total=25.9
Field angle(10%Imax): [C0/180]Total=41.7
[C90/270]Total=41.7
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
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(%): 87.53%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.004%

Nata LM01D04524DA

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2742.469	0.000	0	.000%	.000%
1.0	2738.320	2.622	2.622	.365%	.417%
2.0	2722.008	7.837	10.46	1.092%	1.664%
3.0	2693.883	12.953	23.413	1.804%	3.725%
4.0	2653.664	17.900	41.313	2.493%	6.573%
5.0	2594.391	22.577	63.889	3.144%	10.166%
6.0	2511.563	26.833	90.723	3.737%	14.435%
7.0	2408.625	30.540	121.262	4.253%	19.294%
8.0	2291.063	33.635	154.897	4.685%	24.646%
9.0	2136.375	35.882	190.779	4.997%	30.356%
10.0	1957.219	37.046	227.824	5.160%	36.250%
11.0	1778.414	37.327	265.151	5.199%	42.189%
12.0	1583.016	36.745	301.896	5.118%	48.036%
13.0	1354.802	34.864	336.761	4.856%	53.583%
14.0	1165.908	32.265	369.026	4.494%	58.717%
15.0	997.116	29.695	398.721	4.136%	63.442%
16.0	825.518	26.707	425.427	3.720%	67.691%
17.0	668.152	23.260	448.688	3.240%	71.392%
18.0	532.709	19.800	468.487	2.758%	74.543%
19.0	426.966	16.696	485.184	2.325%	77.199%
20.0	334.364	13.934	499.118	1.941%	79.417%
21.0	263.011	11.471	510.589	1.598%	81.242%
22.0	208.934	9.484	520.073	1.321%	82.751%
23.0	161.353	7.770	527.842	1.082%	83.987%
24.0	128.461	6.336	534.179	.883%	84.995%
25.0	104.963	5.308	539.486	.739%	85.840%
26.0	88.980	4.578	544.064	.638%	86.568%
27.0	76.859	4.057	548.122	.565%	87.214%
28.0	67.514	3.655	551.777	.509%	87.795%
29.0	60.820	3.358	555.135	.468%	88.330%
30.0	55.216	3.133	558.268	.436%	88.828%
31.0	50.048	2.929	561.197	.408%	89.294%
32.0	45.668	2.742	563.939	.382%	89.731%
33.0	42.012	2.583	566.522	.360%	90.142%
34.0	38.440	2.435	568.957	.339%	90.529%
35.0	35.276	2.289	571.246	.319%	90.893%
36.0	32.590	2.161	573.407	.301%	91.237%
37.0	30.241	2.049	575.456	.285%	91.563%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	28.097	1.947	577.403	.271%	91.873%
39.0	26.051	1.848	579.252	.257%	92.167%
40.0	24.363	1.758	581.01	.245%	92.447%
41.0	22.809	1.680	582.69	.234%	92.714%
42.0	21.298	1.602	584.292	.223%	92.969%
43.0	19.849	1.524	585.816	.212%	93.212%
44.0	18.612	1.452	587.268	.202%	93.443%
45.0	17.416	1.385	588.653	.193%	93.663%
46.0	16.277	1.318	589.97	.184%	93.872%
47.0	15.230	1.253	591.223	.175%	94.072%
48.0	14.288	1.193	592.417	.166%	94.262%
49.0	13.366	1.136	593.552	.158%	94.442%
50.0	12.445	1.076	594.628	.150%	94.614%
51.0	11.735	1.023	595.652	.142%	94.776%
52.0	11.074	0.979	596.63	.136%	94.932%
53.0	10.441	0.936	597.566	.130%	95.081%
54.0	9.956	0.899	598.465	.125%	95.224%
55.0	9.548	0.871	599.336	.121%	95.363%
56.0	9.155	0.845	600.181	.118%	95.497%
57.0	8.845	0.823	601.004	.115%	95.628%
58.0	8.550	0.804	601.808	.112%	95.756%
59.0	8.297	0.788	602.596	.110%	95.881%
60.0	8.037	0.772	603.368	.107%	96.004%
61.0	7.770	0.754	604.122	.105%	96.124%
62.0	7.545	0.738	604.86	.103%	96.242%
63.0	7.313	0.723	605.583	.101%	96.357%
64.0	7.123	0.708	606.291	.099%	96.469%
65.0	6.905	0.694	606.985	.097%	96.580%
66.0	6.736	0.681	607.666	.095%	96.688%
67.0	6.581	0.670	608.335	.093%	96.795%
68.0	6.595	0.667	609.003	.093%	96.901%
69.0	7.038	0.696	609.698	.097%	97.011%
70.0	7.910	0.768	610.466	.107%	97.134%
71.0	8.986	0.873	611.339	.122%	97.273%
72.0	10.034	0.989	612.328	.138%	97.430%
73.0	11.067	1.103	613.432	.154%	97.606%
74.0	11.967	1.211	614.643	.169%	97.798%
75.0	12.769	1.307	615.95	.182%	98.006%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	13.163	1.377	617.326	.192%	98.225%
77.0	12.853	1.387	618.713	.193%	98.446%
78.0	12.368	1.350	620.063	.188%	98.661%
79.0	11.510	1.283	621.346	.179%	98.865%
80.0	10.610	1.193	622.539	.166%	99.055%
81.0	9.766	1.102	623.641	.153%	99.230%
82.0	8.684	1.001	624.641	.139%	99.389%
83.0	7.073	0.857	625.498	.119%	99.525%
84.0	5.414	0.680	626.178	.095%	99.634%
85.0	4.205	0.525	626.703	.073%	99.717%
86.0	3.558	0.424	627.127	.059%	99.785%
87.0	3.255	0.373	627.5	.052%	99.844%
88.0	3.023	0.344	627.844	.048%	99.899%
89.0	2.883	0.324	628.168	.045%	99.950%
90.0	2.820	0.313	628.481	.044%	100.000%

Zonal flux distribution table

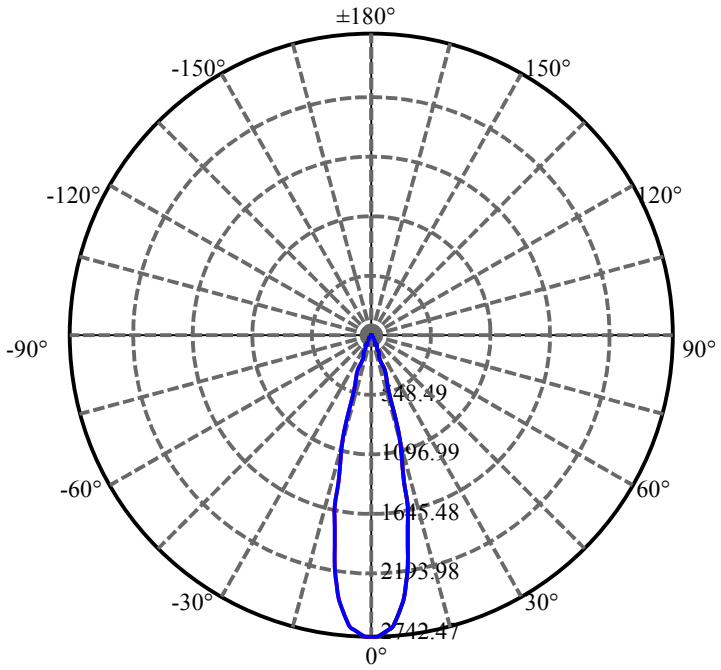
ZONAL LUMEN SUMMARY

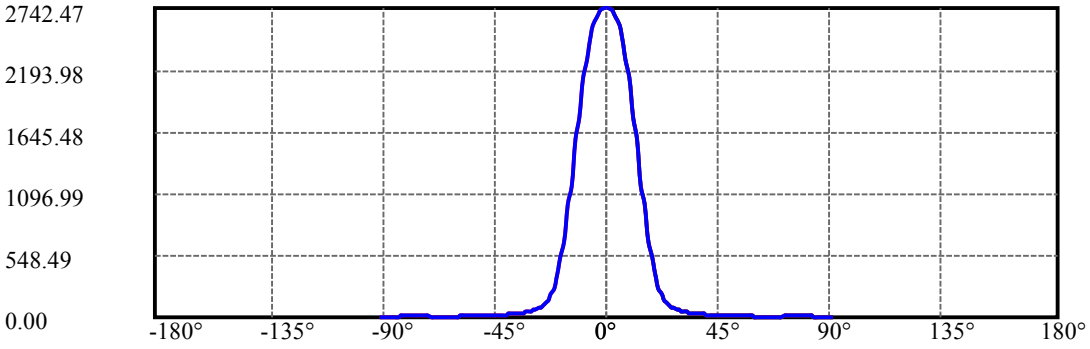
Zone	Lumens	%Lamp	%Fixt
0-30	558.27	77.75%	88.83%
0-40	581.01	80.92%	92.45%
0-60	603.37	84.03%	96.00%
0-90	628.17	87.49%	99.95%
0-120	628.17	87.49%	99.95%
0-180	628.48	87.53%	100.00%
60-90	25.57	3.56%	4.07%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-20.32	502.78	70.03%	80.00%

ZONAL LUMEN SUMMARY

0-10	227.82
10-20	271.29
20-30	59.15
30-40	22.74
40-50	13.62
50-60	8.74
60-70	7.10
70-80	12.07
80-90	5.63
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):

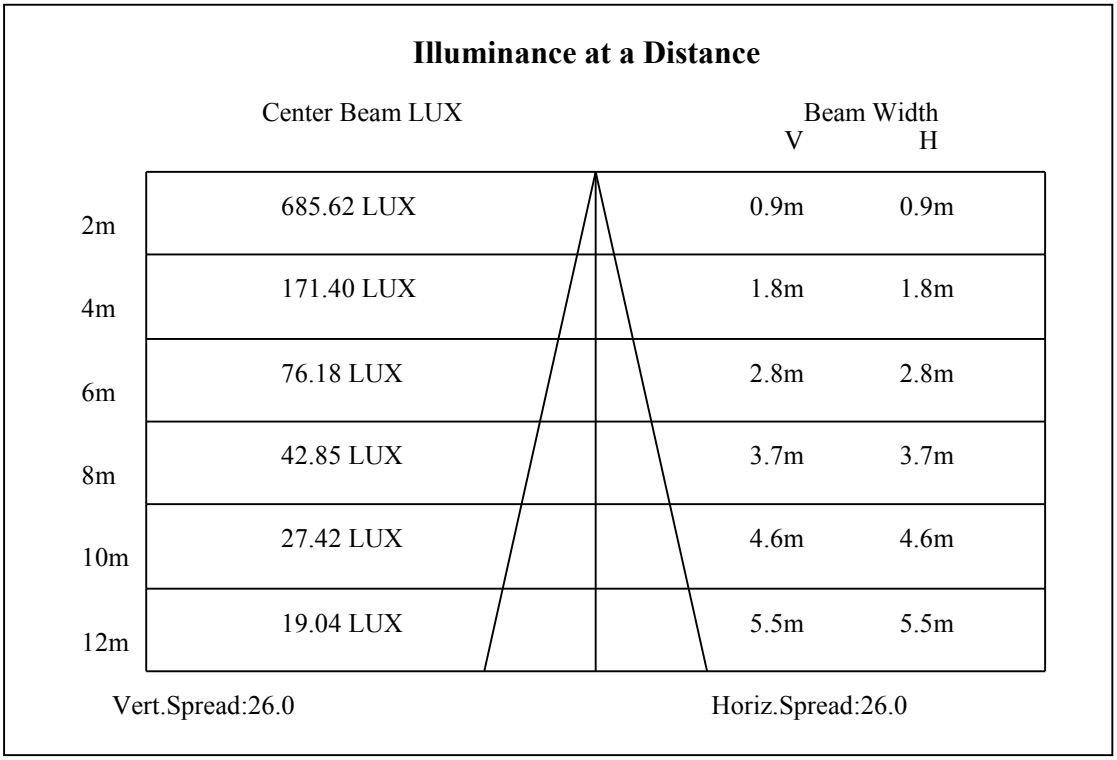
C0/C180:

C90/C270:

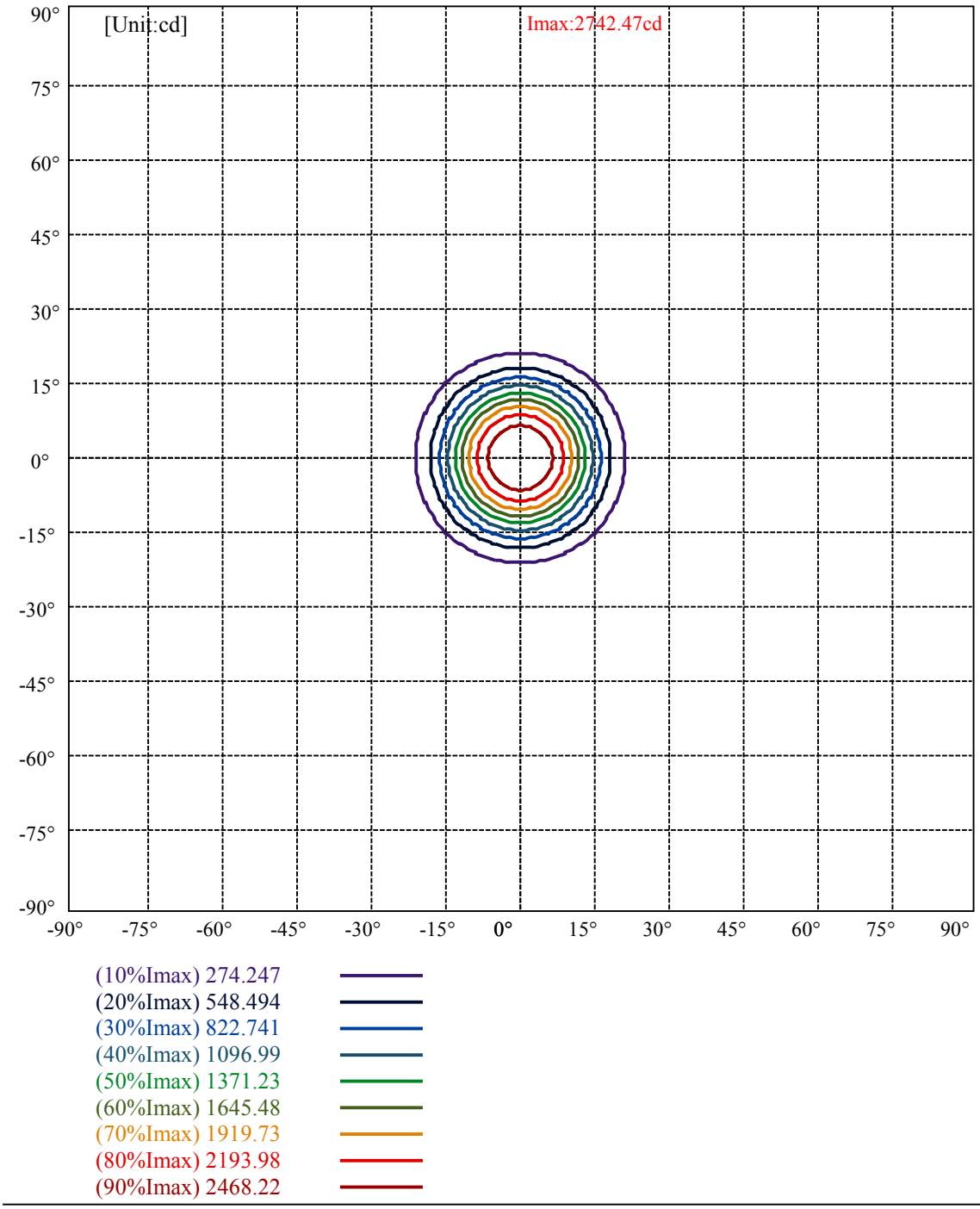
Field angle(10%Imax):C0/180Left:20.8 Right:20.8
:C90/270Left:20.8 Right:20.8

Beam Angle(50%Imax):C0/180Left:12.9 Right:12.9
:C90/270Left:12.9 Right:12.9

Lux distance Curve



ISO-Intensity(V-H)



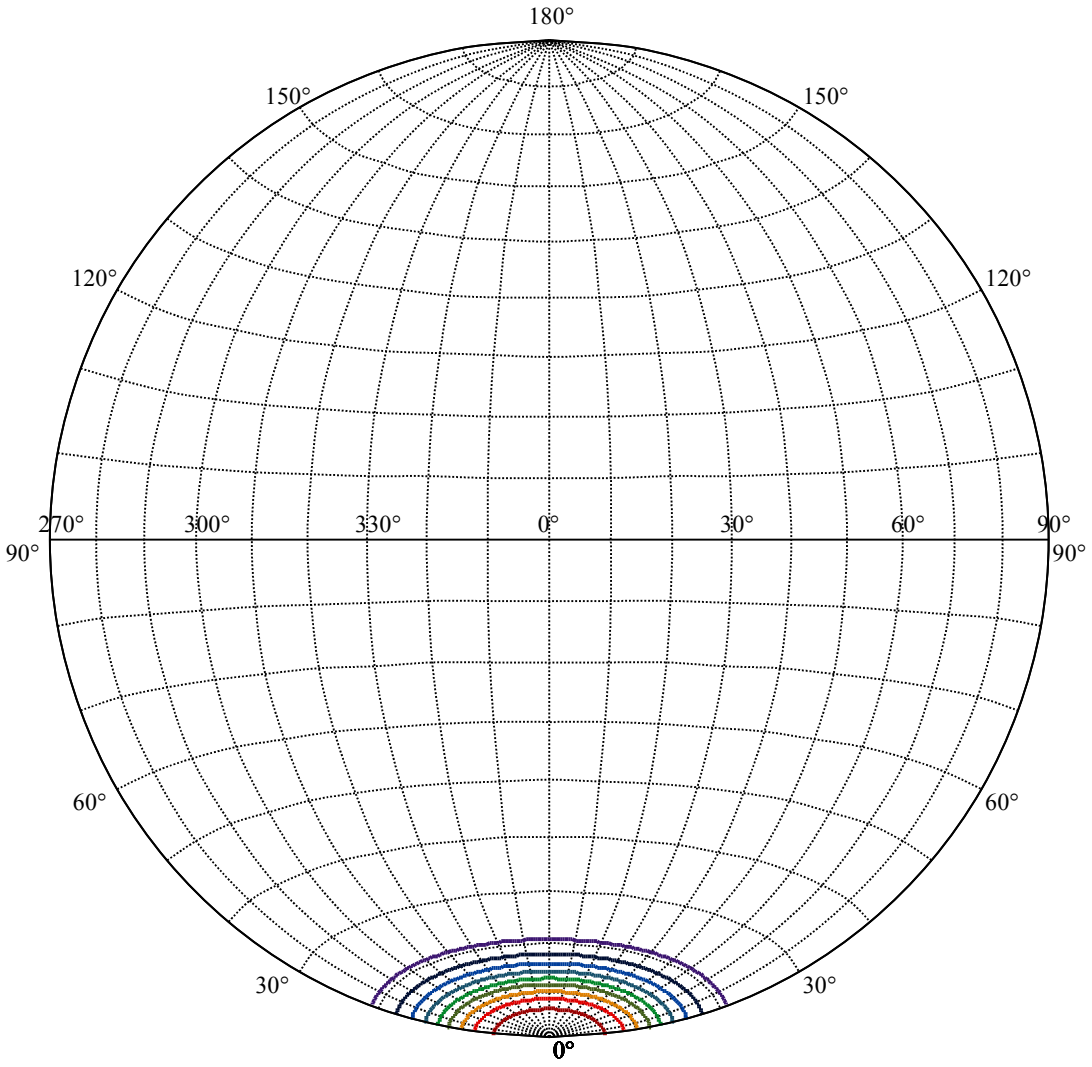
(10%Imax) 274.247
(20%Imax) 548.494
(30%Imax) 822.741
(40%Imax) 1096.99
(50%Imax) 1371.23
(60%Imax) 1645.48
(70%Imax) 1919.73
(80%Imax) 2193.98
(90%Imax) 2468.22

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/8
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:2742.47

(10%Imax) 274.247
(20%Imax) 548.494
(30%Imax) 822.741
(40%Imax) 1096.99
(50%Imax) 1371.23
(60%Imax) 1645.48
(70%Imax) 1919.73
(80%Imax) 2193.98
(90%Imax) 2468.22

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/8
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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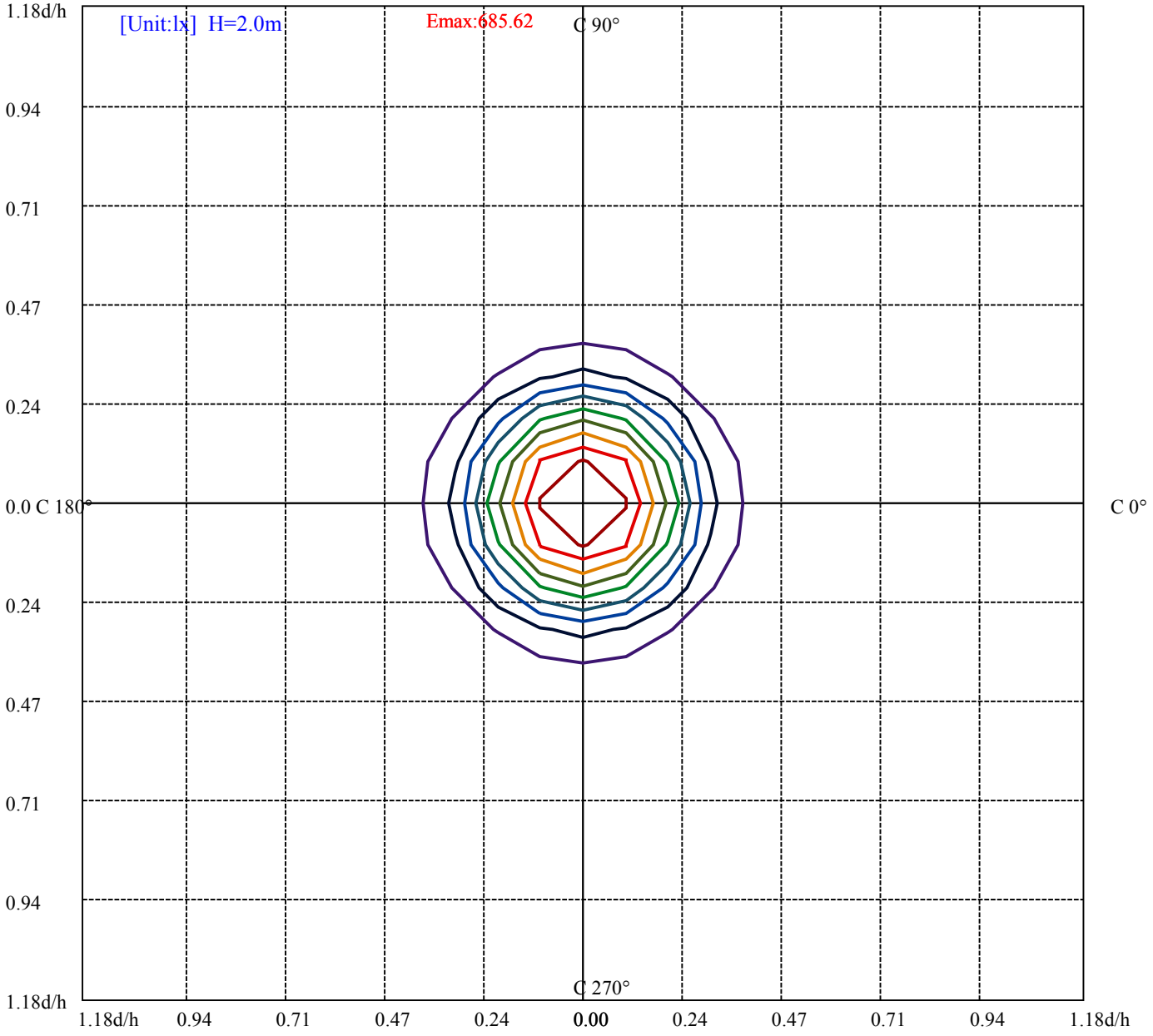
ISO illuminance diagram



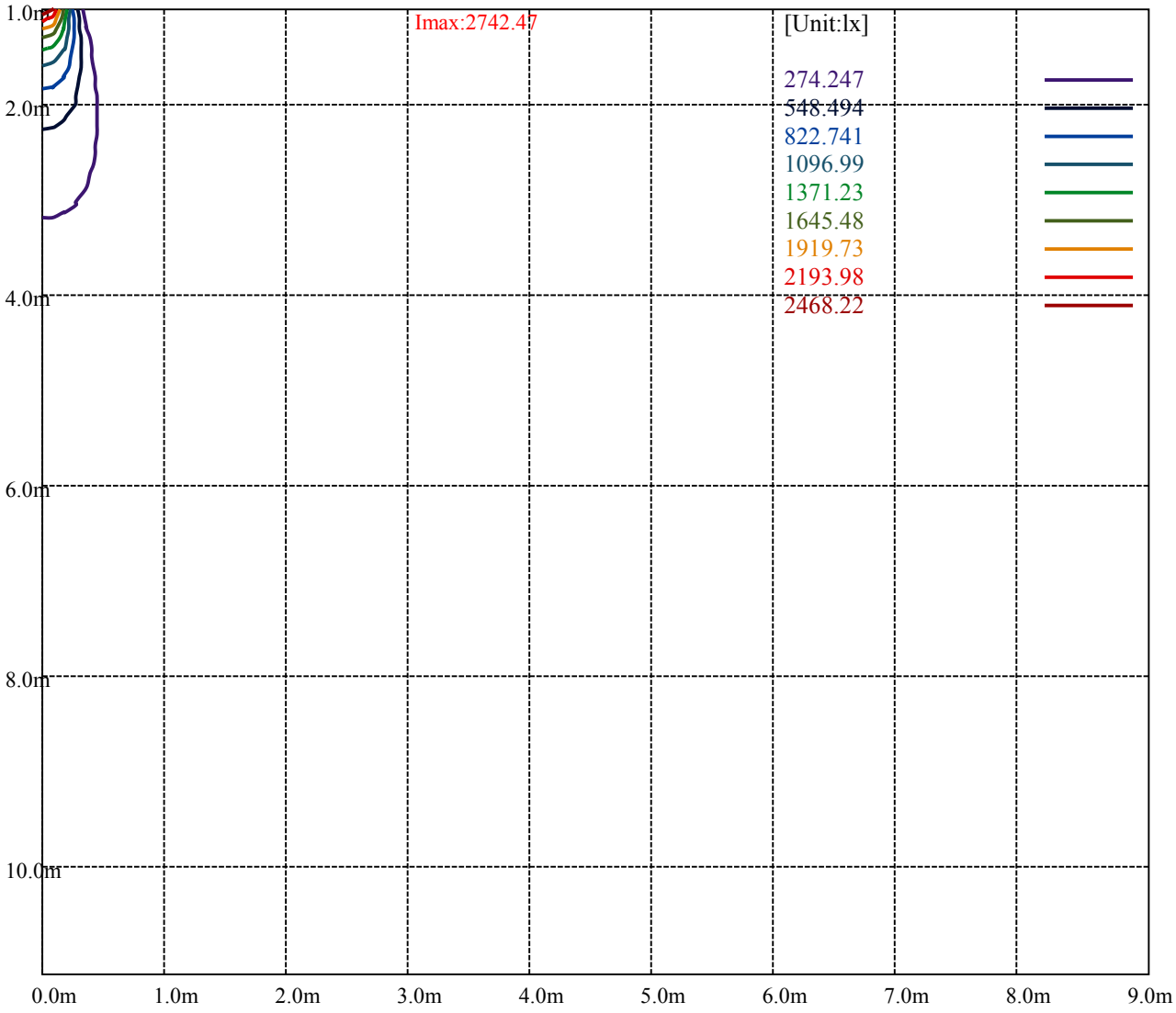
(10%Emax) 68.56175
(20%Emax) 137.1235
(30%Emax) 205.685
(40%Emax) 274.2475
(50%Emax) 342.8075
(60%Emax) 411.37
(70%Emax) 479.9325
(80%Emax) 548.4925
(90%Emax) 617.055

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/8
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/8
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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Luminance Limitting Curve(no luminous side)

Luminance Table

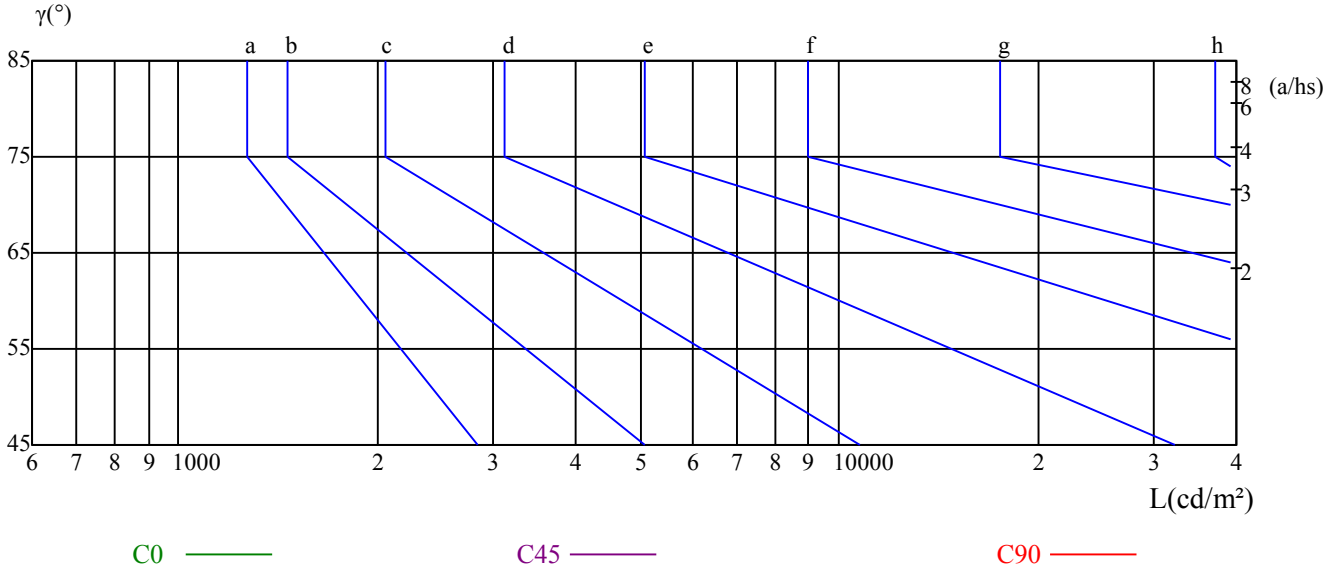
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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

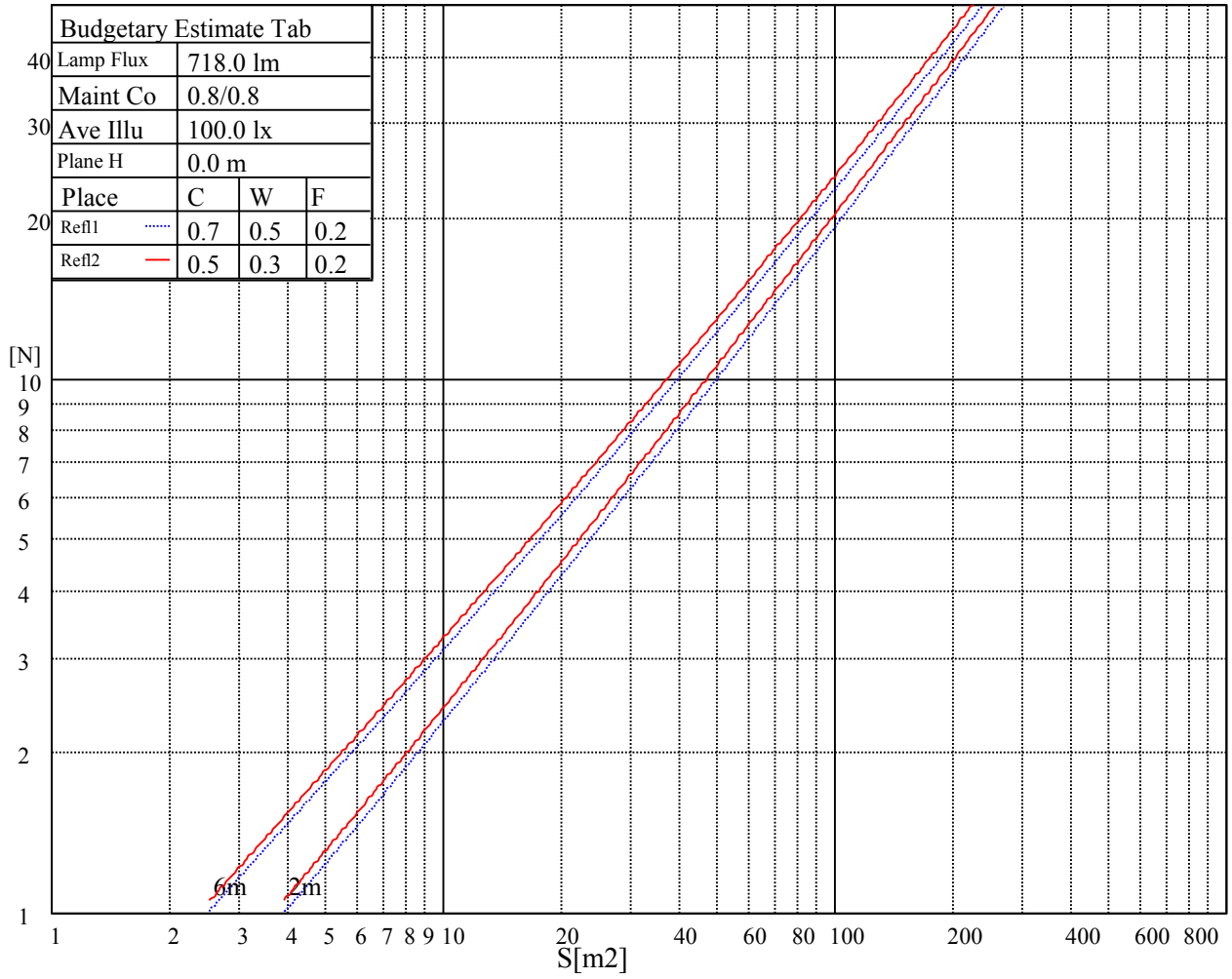


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/7/8
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Budgetary Estimate Table

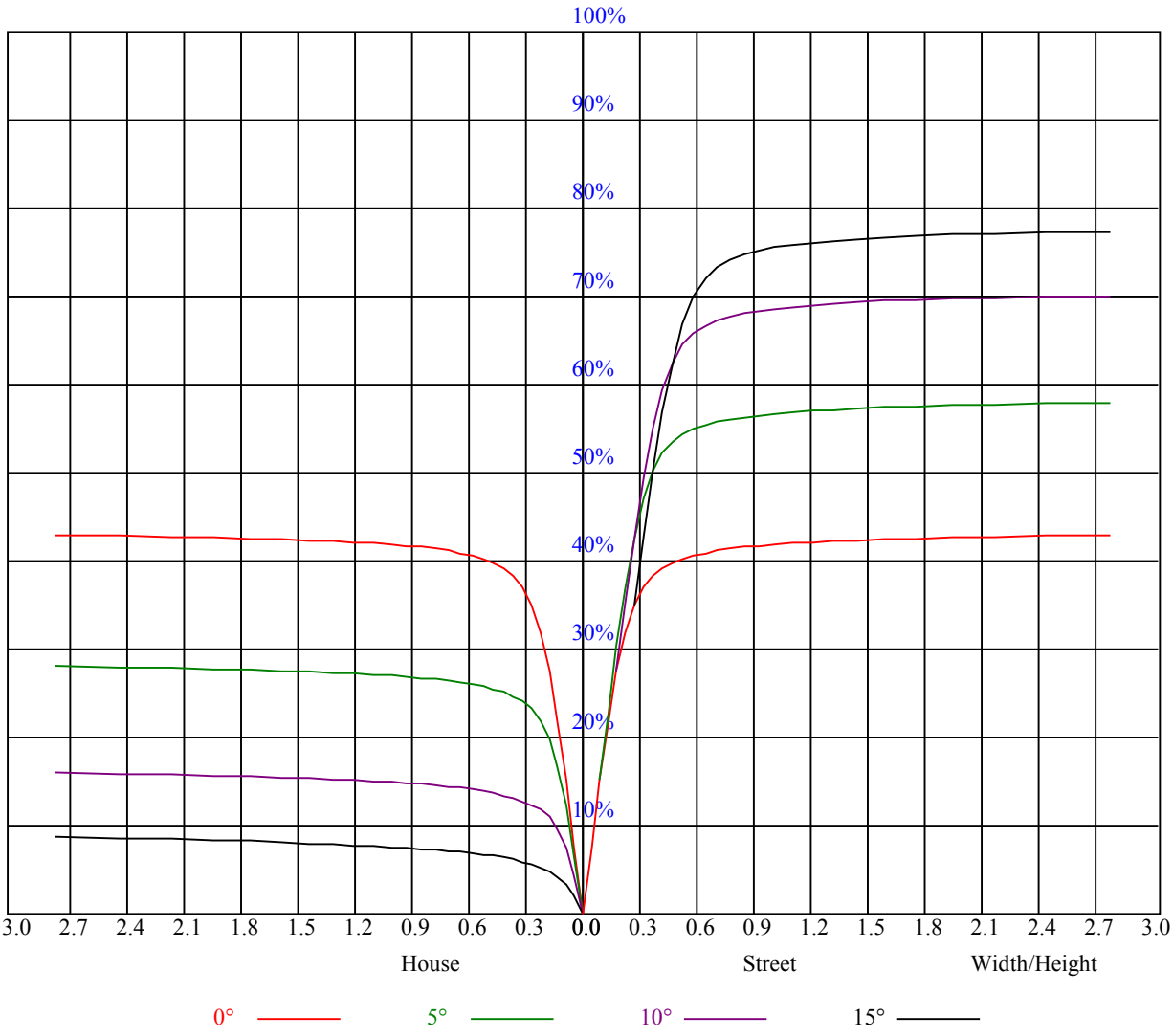


Equipment: GMS1980 Date: 2020/7/8 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.98	0.96	0.94	0.96	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.92	0.89	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.81	0.79
3	0.88	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.76
4	0.84	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.76	0.79	0.76	0.75	0.74
5	0.81	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.71
6	0.78	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
7	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.65
9	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.64
10	0.70	0.66	0.64	0.69	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.62

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2020/7/8	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	2739.38	2742.19	2725.31	2705.06	2669.06	2616.75	2544.75	2451.94	2352.94
45.0	2744.44	2746.69	2739.94	2717.44	2686.50	2629.69	2552.63	2458.69	2345.06
90.0	2743.31	2741.06	2732.06	2700.56	2653.88	2587.50	2501.44	2354.63	2206.69
135.0	2742.75	2748.38	2738.25	2713.50	2671.88	2616.75	2516.63	2412.00	2279.81
180.0	2739.38	2732.63	2711.25	2669.63	2618.44	2550.38	2433.38	2316.94	2175.75
225.0	2744.44	2728.69	2710.69	2676.38	2631.94	2566.69	2496.94	2381.06	2271.38
270.0	2743.31	2734.88	2714.63	2694.38	2662.31	2609.44	2542.50	2472.19	2382.75
315.0	2742.75	2732.06	2703.94	2674.13	2635.31	2577.94	2504.25	2421.56	2314.13
360.0	2739.38	2742.19	2725.31	2705.06	2669.06	2616.75	2544.75	2451.94	2352.94

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2216.25	2052.00	1882.13	1703.25	1474.31	1290.94	1113.19	918.00	743.63
45.0	2172.94	2008.69	1824.75	1609.31	1391.63	1204.31	1005.19	822.94	676.69
90.0	2035.69	1799.44	1602.56	1407.38	1118.42	984.66	819.73	673.31	534.88
135.0	2088.00	1911.38	1724.06	1506.94	1288.13	1100.81	906.19	749.81	593.44
180.0	1993.50	1788.75	1604.25	1390.50	1117.13	1008.17	823.05	675.34	529.48
225.0	2136.38	1939.50	1762.88	1580.06	1375.88	1105.88	998.38	817.93	673.03
270.0	2250.00	2116.69	1966.50	1776.38	1580.06	1396.69	1194.19	997.88	836.44
315.0	2198.25	2041.31	1860.19	1690.31	1492.88	1235.81	1117.01	948.94	757.63
360.0	2216.25	2052.00	1882.13	1703.25	1474.31	1290.94	1113.19	918.00	743.63

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	604.69	475.31	369.56	293.63	247.22	178.65	140.79	113.18	95.57
45.0	534.94	429.75	335.81	291.38	202.50	162.79	132.47	104.85	89.27
90.0	418.44	333.62	256.05	196.14	156.83	124.43	103.95	87.53	76.11
135.0	461.25	372.38	284.06	216.62	171.62	138.04	108.34	91.97	79.54
180.0	410.68	325.24	255.99	190.80	153.23	125.16	100.13	86.06	75.83
225.0	534.09	419.68	338.06	262.91	203.23	162.28	131.23	103.67	88.43
270.0	675.56	554.06	438.19	343.69	291.38	211.05	164.59	133.37	109.91
315.0	622.01	505.69	397.18	308.93	245.48	188.44	146.19	119.08	97.20
360.0	604.69	475.31	369.56	293.63	247.22	178.65	140.79	113.18	95.57

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	82.35	70.93	64.18	58.73	52.99	48.83	45.17	41.85	37.91
45.0	77.40	67.95	61.09	55.41	49.50	45.39	42.19	37.80	35.04
90.0	68.40	62.04	55.18	50.34	46.01	41.34	37.97	35.10	32.29
135.0	69.92	62.55	56.70	51.36	46.52	42.75	39.04	36.11	33.24
180.0	68.01	60.41	55.52	50.51	46.58	42.58	39.49	36.34	33.47
225.0	76.95	66.83	60.69	55.35	49.67	45.56	42.02	37.91	35.33
270.0	88.71	77.34	69.08	61.88	55.91	51.08	46.29	42.02	38.59
315.0	83.14	72.06	64.13	58.16	53.21	47.81	43.93	40.39	36.34
360.0	82.35	70.93	64.18	58.73	52.99	48.83	45.17	41.85	37.91

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	35.16	32.63	30.04	27.79	25.99	24.13	22.50	21.15	19.74
45.0	32.57	30.15	28.01	26.27	24.47	23.01	21.43	19.97	18.79
90.0	29.81	27.96	25.93	24.08	22.61	20.98	19.63	18.28	16.99
135.0	30.77	28.74	26.89	24.86	23.40	21.99	20.36	19.18	17.94
180.0	31.16	28.86	27.00	24.92	23.34	21.88	20.64	19.01	17.89
225.0	32.46	29.76	28.07	26.10	24.13	22.89	21.49	19.74	18.73
270.0	35.21	32.57	29.98	27.68	25.88	24.24	22.44	20.98	19.74
315.0	33.58	31.28	28.86	26.72	25.09	23.34	21.88	20.48	19.07
360.0	35.16	32.63	30.04	27.79	25.99	24.13	22.50	21.15	19.74

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	18.56	17.33	16.20	15.19	14.23	13.22	12.43	11.87	10.91
45.0	17.55	16.43	15.53	14.63	13.56	12.71	11.98	11.25	10.63
90.0	15.92	14.91	13.78	12.88	12.15	11.25	10.63	10.13	9.68
135.0	16.76	15.64	14.68	13.73	12.94	12.09	11.36	10.86	10.24
180.0	16.82	15.58	14.63	13.78	12.83	11.98	11.36	10.69	10.24
225.0	17.61	16.48	15.41	14.46	13.50	12.54	11.81	11.08	10.58
270.0	18.17	17.10	16.03	14.91	13.89	12.99	12.21	11.36	10.63
315.0	17.94	16.76	15.58	14.74	13.84	12.77	12.09	11.36	10.63
360.0	18.56	17.33	16.20	15.19	14.23	13.22	12.43	11.87	10.91

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.46	10.07	9.56	9.23	9.00	8.72	8.49	8.27	7.99
45.0	10.18	9.73	9.28	9.00	8.72	8.44	8.16	7.88	7.65
90.0	9.23	8.94	8.66	8.38	8.16	7.93	7.71	7.48	7.31
135.0	9.84	9.45	9.17	8.78	8.49	8.27	7.93	7.71	7.48
180.0	9.73	9.34	9.06	8.83	8.55	8.38	8.16	7.88	7.65
225.0	10.01	9.56	9.17	8.83	8.44	8.21	7.93	7.59	7.37
270.0	10.07	9.62	9.17	8.83	8.49	8.21	7.93	7.65	7.48
315.0	10.13	9.68	9.17	8.89	8.55	8.21	7.99	7.71	7.43
360.0	10.46	10.07	9.56	9.23	9.00	8.72	8.49	8.27	7.99

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.76	7.54	7.31	7.09	6.92	6.64	6.47	6.30	6.08
45.0	7.37	7.14	6.92	6.75	6.53	6.41	6.24	6.02	5.85
90.0	7.09	6.98	6.81	6.69	6.64	8.10	11.93	16.14	20.98
135.0	7.20	7.03	6.81	6.58	6.47	6.24	6.08	5.91	5.74
180.0	7.43	7.20	6.98	6.81	6.58	6.41	6.24	6.02	5.85
225.0	7.14	6.98	6.75	6.58	6.41	6.19	6.02	5.91	5.74
270.0	7.31	7.09	6.92	6.75	6.64	6.53	7.20	11.03	15.81
315.0	7.20	7.03	6.75	6.64	6.47	6.24	6.13	5.96	5.85
360.0	7.76	7.54	7.31	7.09	6.92	6.64	6.47	6.30	6.08

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.91	5.79	5.68	5.51	5.40	5.23	5.06	4.84	4.73
45.0	5.68	5.51	5.40	5.23	5.06	4.95	4.78	4.61	4.44
90.0	25.71	29.81	33.98	36.79	36.96	33.86	31.05	28.18	24.64
135.0	5.51	5.40	5.23	5.06	4.95	4.78	4.61	4.50	4.33
180.0	5.68	5.57	5.40	5.29	5.06	4.95	4.78	4.61	4.50
225.0	5.57	5.40	5.23	5.12	5.01	4.84	4.73	4.56	4.39
270.0	20.53	25.48	29.48	33.98	37.80	39.26	39.15	36.11	33.36
315.0	5.68	5.57	5.34	5.18	5.06	4.95	4.78	4.67	4.50
360.0	5.91	5.79	5.68	5.51	5.40	5.23	5.06	4.84	4.73

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.56	4.44	4.22	4.11	3.94	3.77	3.54	3.32	3.09
45.0	4.28	4.05	3.94	3.71	3.49	3.38	3.15	2.98	2.81
90.0	22.16	17.89	9.06	4.22	3.71	3.60	3.04	2.81	2.76
135.0	4.11	3.94	3.83	3.60	3.43	3.26	2.98	2.81	2.76
180.0	4.33	4.16	3.99	3.83	3.66	3.43	3.15	3.04	2.98
225.0	4.22	4.11	3.88	3.71	3.54	3.43	3.15	3.04	2.81
270.0	30.15	26.66	23.68	16.31	8.16	4.11	3.71	3.15	2.93
315.0	4.33	4.22	3.99	3.83	3.71	3.49	3.32	3.04	2.93
360.0	4.56	4.44	4.22	4.11	3.94	3.77	3.54	3.32	3.09

Intensity data(cd)

C/γ(°)	90.0
0.0	2.98
45.0	2.81
90.0	2.76
135.0	2.76
180.0	2.93
225.0	2.76
270.0	2.81
315.0	2.76
360.0	2.98