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: LN01D03517EE-N
Luminaire: 92.70.307.00

Report No: 210519-B001	Voltage(V): 221.3000
Test No: 210519-C001	Current(A): 0.0730
LampCAT: LUMINUS CXM-6-AC40 LES6.3	Power (W): 8.0000
Lamp flux(lm): 873.4	PF: 0.4970
Number of Lamps: 1	Ballast type: DC
Length(mm): 74	Width(mm): 74
Phm Type: C	Height(mm): 56

Photometric Results

Lumens(lm): 587.30
Efficiency(%): 67.24%
Lumens(lm)/Power(W): 73.41
Central intensity(cd): 2286.281
Maximum intensity(cd): 2286.281
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=22.5
[C90/270]Total=22.5
Field angle(10%Imax): [C0/180]Total=47.6
[C90/270]Total=47.6
Maximum s/h(1/2): C0_180=0.38 C90_270=0.38
Maximum s/h(1/4): C0_180=0.40 C90_270=0.40
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 67.24%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.239%

Equipment: GMS1980	Date: 2021/05/19	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	2286.281	0.000	0	.000%	.000%
1.0	2276.438	2.183	2.183	.250%	.372%
2.0	2236.992	6.478	8.661	.742%	1.475%
3.0	2172.375	10.546	19.207	1.207%	3.270%
4.0	2093.625	14.280	33.487	1.635%	5.702%
5.0	1989.773	17.567	51.053	2.011%	8.693%
6.0	1864.828	20.257	71.31	2.319%	12.142%
7.0	1738.125	22.363	93.674	2.560%	15.950%
8.0	1606.430	23.936	117.61	2.741%	20.026%
9.0	1459.055	24.844	142.454	2.844%	24.256%
10.0	1307.461	25.036	167.49	2.866%	28.519%
11.0	1175.920	24.814	192.304	2.841%	32.744%
12.0	1045.638	24.285	216.589	2.780%	36.879%
13.0	927.780	23.420	240.008	2.681%	40.867%
14.0	818.360	22.350	262.359	2.559%	44.672%
15.0	719.944	21.119	283.477	2.418%	48.268%
16.0	628.460	19.758	303.235	2.262%	51.632%
17.0	547.109	18.307	321.542	2.096%	54.749%
18.0	478.498	16.910	338.452	1.936%	57.629%
19.0	418.838	15.612	354.064	1.787%	60.287%
20.0	367.545	14.393	368.457	1.648%	62.738%
21.0	324.134	13.282	381.739	1.521%	64.999%
22.0	285.588	12.253	393.991	1.403%	67.085%
23.0	253.702	11.316	405.307	1.296%	69.012%
24.0	221.822	10.397	415.704	1.190%	70.782%
25.0	195.553	9.490	425.194	1.087%	72.398%
26.0	175.015	8.747	433.941	1.001%	73.888%
27.0	156.361	8.107	442.048	.928%	75.268%
28.0	140.175	7.508	449.556	.860%	76.547%
29.0	125.803	6.959	456.515	.797%	77.731%
30.0	113.885	6.472	462.986	.741%	78.833%
31.0	102.966	6.035	469.021	.691%	79.861%
32.0	93.241	5.621	474.642	.644%	80.818%
33.0	84.938	5.249	479.891	.601%	81.712%
34.0	77.927	4.929	484.82	.564%	82.551%
35.0	71.037	4.626	489.446	.530%	83.339%
36.0	65.236	4.339	493.785	.497%	84.078%
37.0	60.434	4.099	497.884	.469%	84.775%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	55.870	3.882	501.766	.444%	85.436%
39.0	51.497	3.665	505.431	.420%	86.060%
40.0	47.693	3.459	508.89	.396%	86.649%
41.0	44.423	3.280	512.17	.376%	87.208%
42.0	41.456	3.120	515.29	.357%	87.739%
43.0	38.820	2.974	518.264	.340%	88.246%
44.0	36.394	2.839	521.103	.325%	88.729%
45.0	34.137	2.711	523.813	.310%	89.191%
46.0	32.119	2.591	526.404	.297%	89.632%
47.0	30.270	2.481	528.886	.284%	90.054%
48.0	28.688	2.383	531.269	.273%	90.460%
49.0	27.148	2.293	533.562	.263%	90.850%
50.0	25.629	2.200	535.762	.252%	91.225%
51.0	24.244	2.110	537.872	.242%	91.584%
52.0	22.866	2.021	539.894	.231%	91.929%
53.0	21.600	1.934	541.828	.221%	92.258%
54.0	20.461	1.854	543.682	.212%	92.574%
55.0	19.505	1.784	545.466	.204%	92.877%
56.0	18.520	1.718	547.184	.197%	93.170%
57.0	17.634	1.653	548.837	.189%	93.451%
58.0	16.847	1.595	550.432	.183%	93.723%
59.0	16.130	1.542	551.974	.177%	93.985%
60.0	15.405	1.490	553.463	.171%	94.239%
61.0	14.738	1.438	554.902	.165%	94.484%
62.0	14.126	1.391	556.293	.159%	94.721%
63.0	13.690	1.353	557.646	.155%	94.951%
64.0	13.345	1.327	558.972	.152%	95.177%
65.0	13.099	1.309	560.281	.150%	95.400%
66.0	13.001	1.302	561.583	.149%	95.622%
67.0	13.050	1.310	562.893	.150%	95.845%
68.0	13.177	1.329	564.222	.152%	96.071%
69.0	13.402	1.356	565.577	.155%	96.302%
70.0	13.627	1.388	566.966	.159%	96.538%
71.0	13.971	1.426	568.392	.163%	96.781%
72.0	14.288	1.469	569.861	.168%	97.031%
73.0	14.569	1.509	571.37	.173%	97.288%
74.0	14.780	1.543	572.913	.177%	97.551%
75.0	14.773	1.561	574.475	.179%	97.817%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	14.344	1.546	576.02	.177%	98.080%
77.0	13.746	1.498	577.518	.171%	98.335%
78.0	12.895	1.426	578.944	.163%	98.578%
79.0	11.728	1.323	580.267	.151%	98.803%
80.0	10.512	1.199	581.466	.137%	99.007%
81.0	9.204	1.066	582.532	.122%	99.189%
82.0	7.840	0.924	583.456	.106%	99.346%
83.0	6.574	0.784	584.24	.090%	99.479%
84.0	5.484	0.657	584.897	.075%	99.591%
85.0	4.430	0.541	585.438	.062%	99.683%
86.0	3.881	0.454	585.892	.052%	99.761%
87.0	3.459	0.402	586.294	.046%	99.829%
88.0	3.115	0.360	586.654	.041%	99.891%
89.0	2.932	0.331	586.986	.038%	99.947%
90.0	2.749	0.311	587.297	.036%	100.000%

Zonal flux distribution table

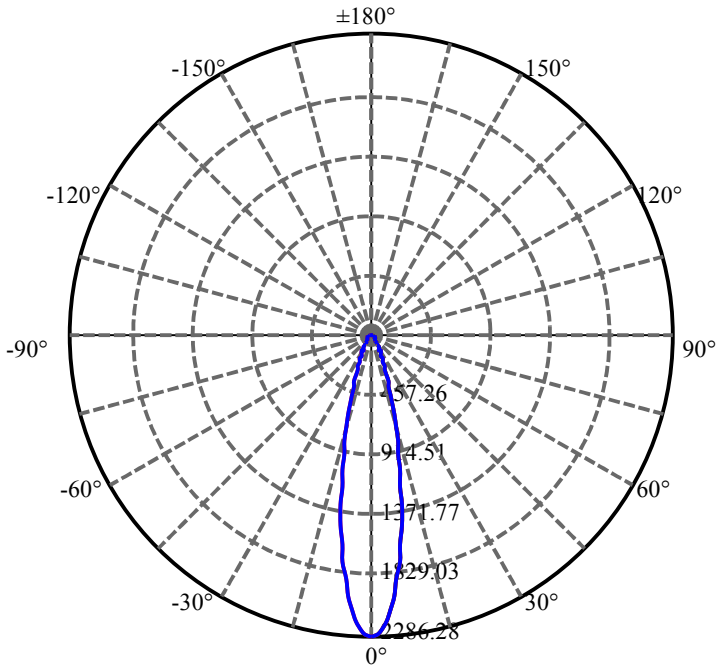
ZONAL LUMEN SUMMARY

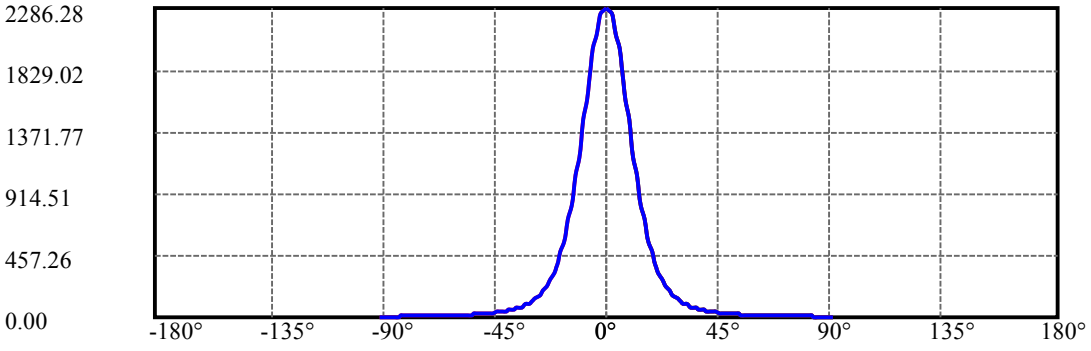
Zone	Lumens	%Lamp	%Fixt
0-30	462.99	53.01%	78.83%
0-40	508.89	58.26%	86.65%
0-60	553.46	63.37%	94.24%
0-90	586.99	67.21%	99.95%
0-120	586.99	67.21%	99.95%
0-180	587.30	67.24%	100.00%
60-90	35.01	4.01%	5.96%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-31.15	469.84	53.79%	80.00%

ZONAL LUMEN SUMMARY

0-10	167.49
10-20	200.97
20-30	94.53
30-40	45.90
40-50	26.87
50-60	17.70
60-70	13.50
70-80	14.50
80-90	5.52
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:

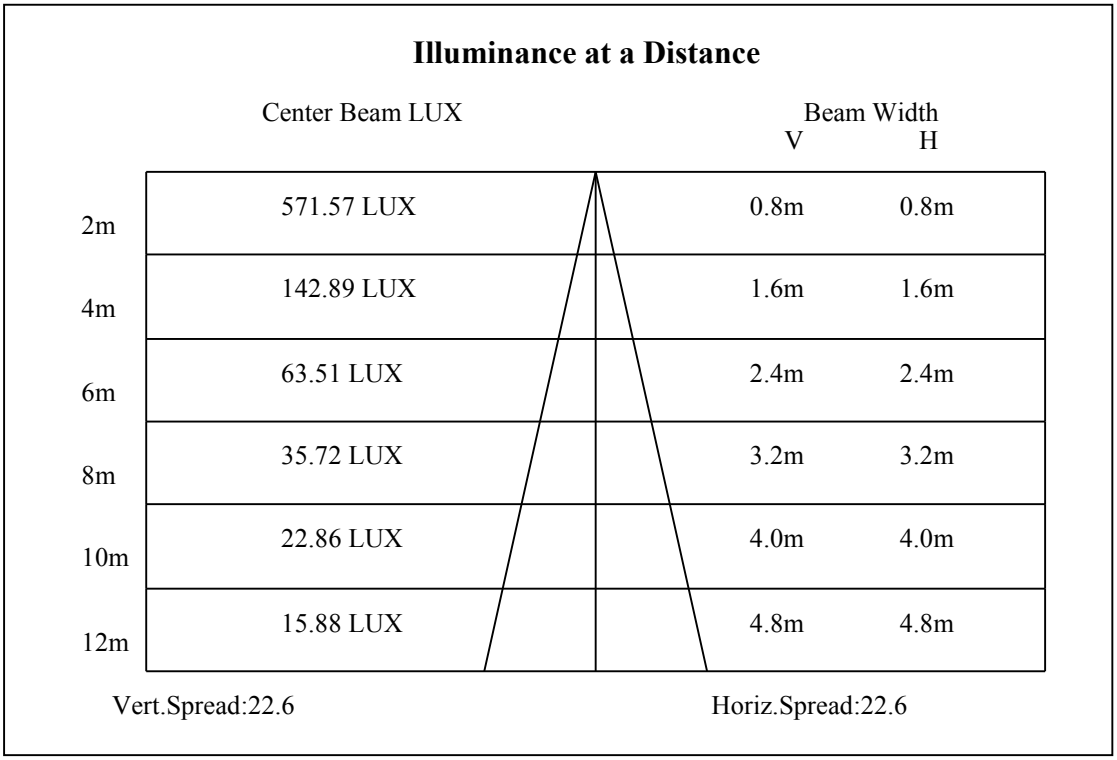
C90/C270:

Field angle(10%Imax):C0/180Left:23.8 Right:23.8
:C90/270Left:23.8 Right:23.8

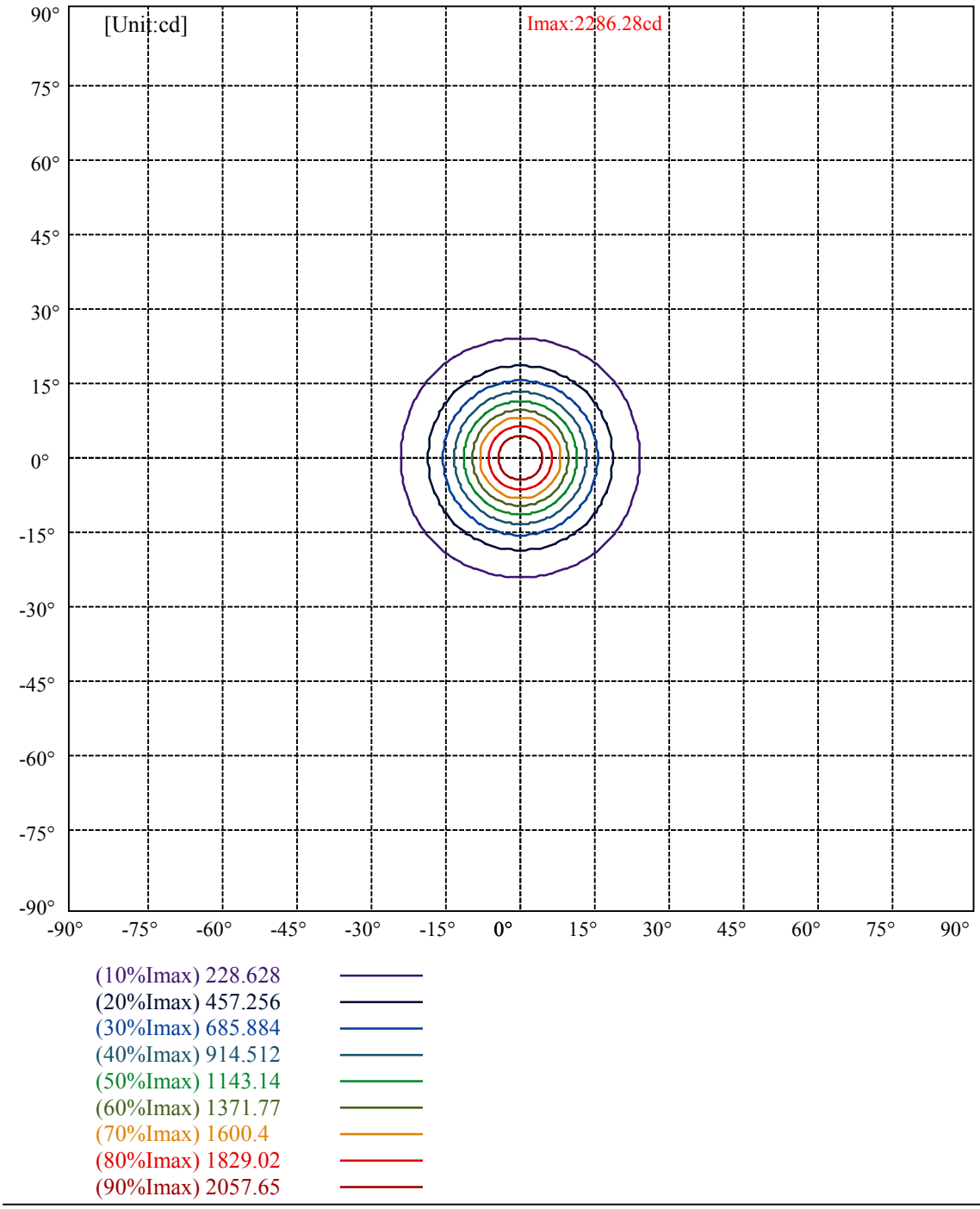
Beam Angle(50%Imax):C0/180Left:11.3 Right:11.3
:C90/270Left:11.3 Right:11.3

Equipment: GMS1980	Date: 2021/05/19	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

Lux distance Curve



ISO-Intensity(V-H)



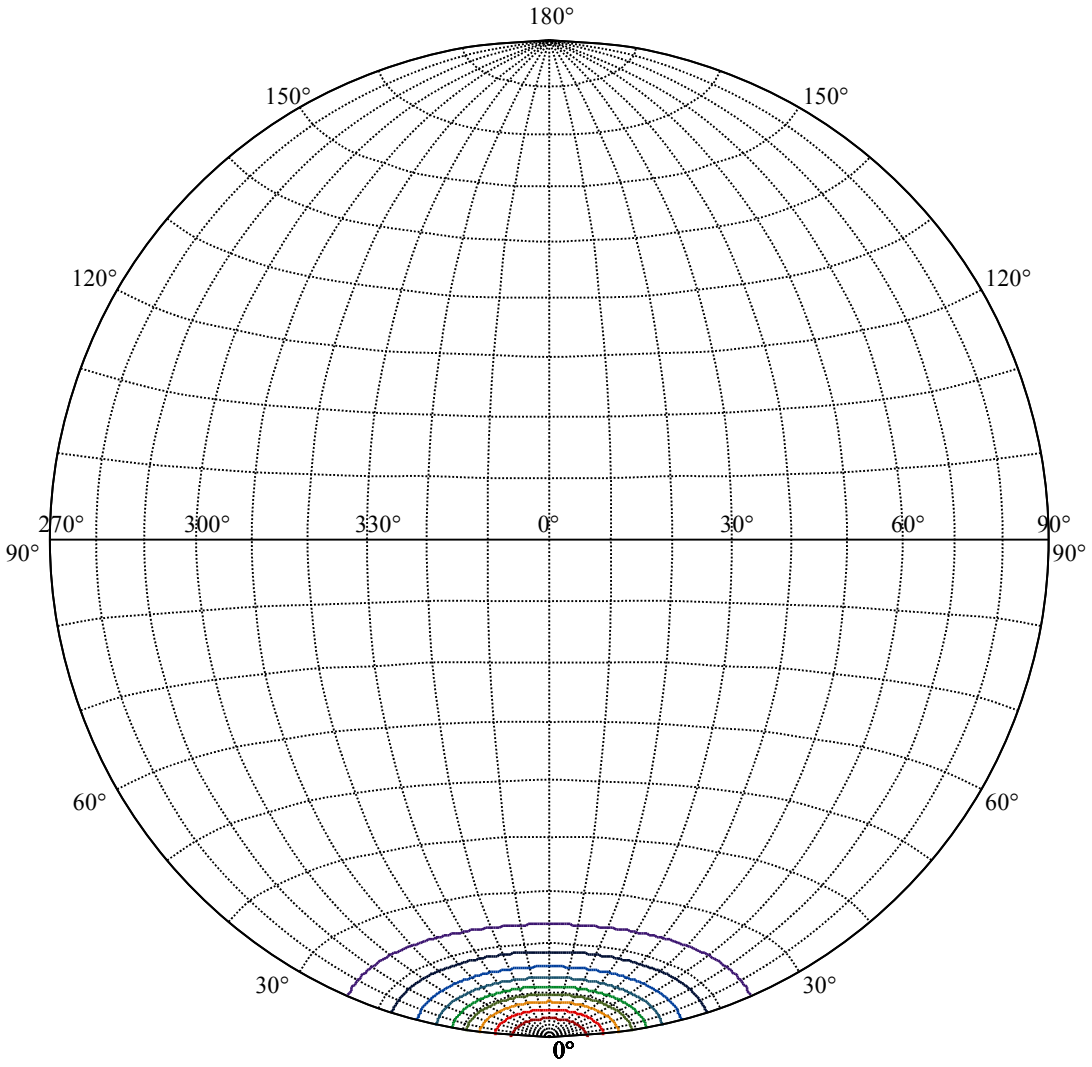
(10%Imax) 228.628
(20%Imax) 457.256
(30%Imax) 685.884
(40%Imax) 914.512
(50%Imax) 1143.14
(60%Imax) 1371.77
(70%Imax) 1600.4
(80%Imax) 1829.02
(90%Imax) 2057.65

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/05/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:2286.28

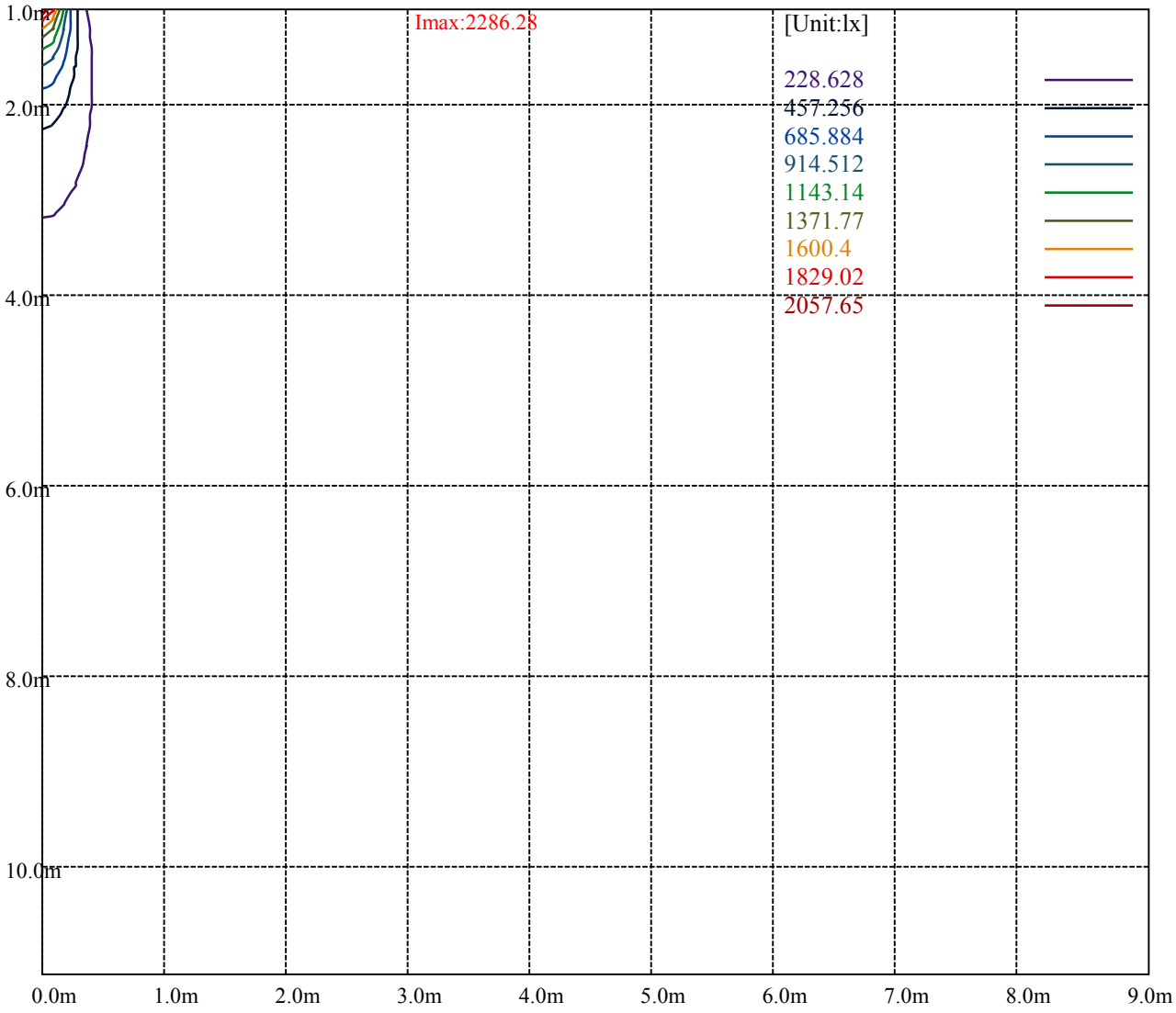
(10%Imax) 228.628
(20%Imax) 457.256
(30%Imax) 685.884
(40%Imax) 914.512
(50%Imax) 1143.14
(60%Imax) 1371.77
(70%Imax) 1600.4
(80%Imax) 1829.02
(90%Imax) 2057.65

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/05/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/05/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Nata LN01D03517EE-N

Luminance Limitting Curve(no luminous side)

Luminance Table

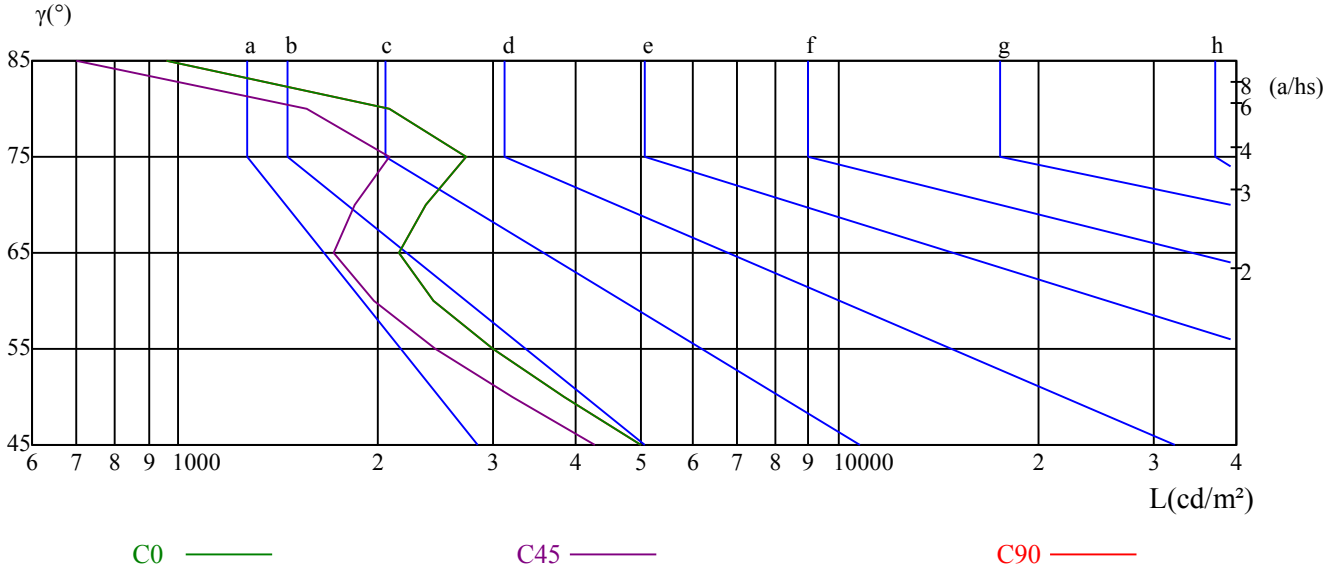
γ	45	50	55	60	65	70	75	80	85
C0	5018	3828	2984	2435	2158	2363	2726	2089	962
C45	4259	3200	2456	1972	1718	1846	2087	1564	701
C90	5018	3828	2984	2435	2158	2363	2726	2089	962

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5660	5660	5660	10423	10423	10423	9281	9281	9281

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

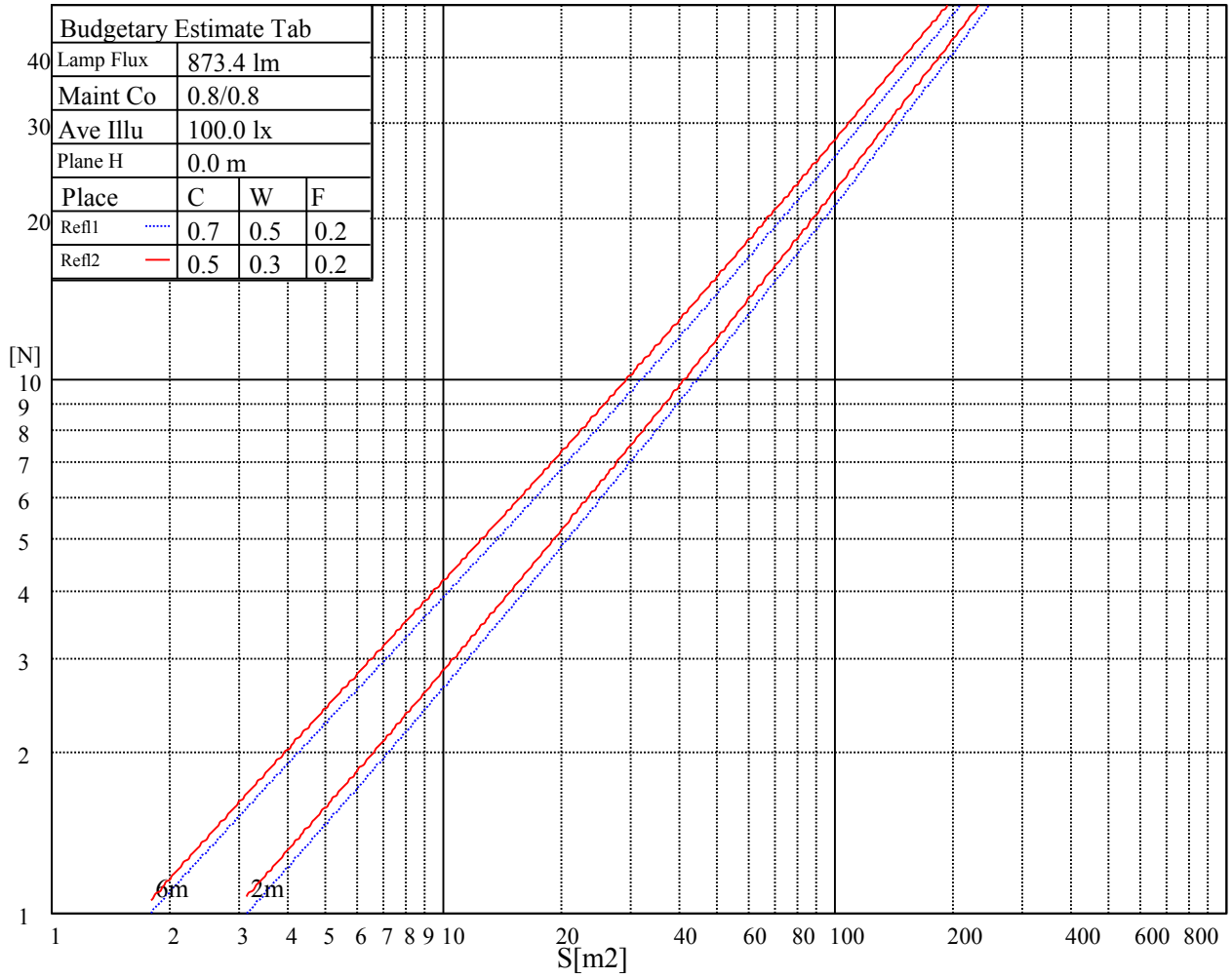


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/05/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Budgetary Estimate Table

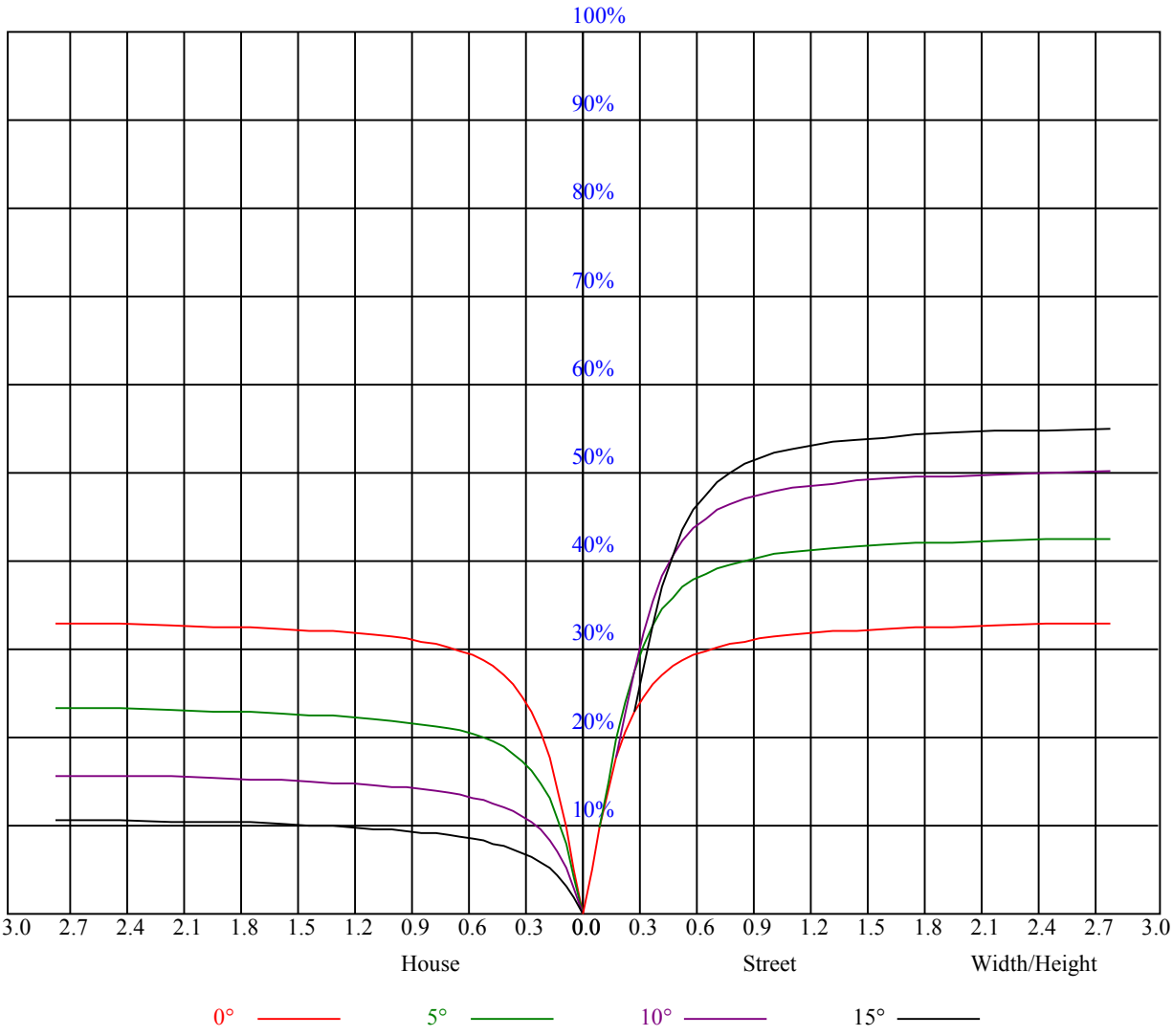


Equipment: GMS1980 Date: 2021/05/19 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.80	0.80	0.80	0.78	0.78	0.78	0.75	0.75	0.75	0.72	0.72	0.72	0.69	0.69	0.69	0.67
1	0.74	0.73	0.71	0.73	0.71	0.70	0.70	0.69	0.68	0.68	0.67	0.66	0.65	0.64	0.64	0.63
2	0.69	0.67	0.64	0.68	0.66	0.64	0.66	0.64	0.62	0.64	0.62	0.61	0.62	0.61	0.60	0.59
3	0.65	0.62	0.60	0.64	0.62	0.59	0.63	0.60	0.58	0.61	0.59	0.57	0.60	0.58	0.56	0.55
4	0.62	0.58	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.58	0.56	0.54	0.57	0.55	0.54	0.53
5	0.59	0.55	0.53	0.58	0.55	0.53	0.57	0.54	0.52	0.56	0.54	0.52	0.55	0.53	0.51	0.50
6	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.54	0.51	0.49	0.53	0.51	0.49	0.48
7	0.54	0.50	0.48	0.54	0.50	0.48	0.53	0.50	0.48	0.52	0.49	0.47	0.51	0.49	0.47	0.46
8	0.52	0.48	0.46	0.51	0.48	0.46	0.51	0.48	0.46	0.50	0.47	0.46	0.50	0.47	0.45	0.45
9	0.50	0.47	0.44	0.50	0.46	0.44	0.49	0.46	0.44	0.48	0.46	0.44	0.48	0.46	0.44	0.43
10	0.48	0.45	0.43	0.48	0.45	0.43	0.47	0.45	0.43	0.47	0.44	0.42	0.47	0.44	0.42	0.42

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2021/05/19	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	2296.13	2290.50	2247.75	2194.88	2104.88	2008.69	1881.00	1742.63	1614.38
45.0	2278.69	2247.75	2170.13	2086.31	2003.63	1847.25	1722.38	1609.31	1442.81
90.0	2278.13	2244.38	2191.50	2100.94	2007.00	1896.75	1761.19	1617.19	1483.88
135.0	2292.19	2287.69	2255.06	2203.31	2121.75	2032.31	1909.69	1774.13	1648.69
180.0	2296.13	2281.50	2244.94	2159.44	2086.31	1987.88	1830.38	1717.31	1584.56
225.0	2278.69	2294.44	2284.31	2247.19	2189.81	2103.19	2008.13	1890.56	1770.75
270.0	2278.13	2291.06	2269.69	2232.56	2165.06	2070.56	1978.31	1847.81	1729.69
315.0	2292.19	2274.19	2232.56	2154.38	2070.56	1971.56	1827.56	1706.06	1576.69
360.0	2296.13	2290.50	2247.75	2194.88	2104.88	2008.69	1881.00	1742.63	1614.38

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1465.31	1319.63	1189.69	1063.13	918.00	811.69	714.38	615.38	530.44
45.0	1295.44	1180.69	1026.56	910.13	806.06	689.06	605.25	533.25	453.94
90.0	1331.44	1112.63	1069.31	939.60	834.69	729.56	634.67	559.46	493.03
135.0	1499.06	1347.75	1216.13	1091.81	945.56	839.25	743.63	646.31	561.38
180.0	1432.13	1281.94	1119.77	1029.77	888.08	785.42	691.31	597.66	514.74
225.0	1627.88	1482.19	1353.94	1112.46	1083.32	956.87	840.09	744.02	656.61
270.0	1589.63	1447.31	1319.06	1194.19	1046.25	934.31	830.81	712.69	628.31
315.0	1431.56	1287.56	1112.91	1024.03	900.28	800.72	699.41	618.92	538.43
360.0	1465.31	1319.63	1189.69	1063.13	918.00	811.69	714.38	615.38	530.44

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	465.19	401.63	347.63	307.13	284.06	234.96	205.54	181.18	162.34
45.0	399.38	352.69	304.31	286.88	237.94	206.21	184.22	165.04	147.88
90.0	421.48	376.59	334.24	291.60	259.09	232.09	203.18	182.98	165.54
135.0	494.44	430.31	376.31	334.13	293.63	285.19	226.97	199.29	180.23
180.0	450.84	389.48	342.84	298.07	259.71	231.02	202.50	178.71	160.76
225.0	563.01	497.53	439.26	377.33	334.74	296.33	259.26	227.59	203.34
270.0	556.88	483.75	422.44	375.19	327.94	287.44	267.19	230.12	200.53
315.0	476.78	418.73	373.33	322.76	287.61	256.39	225.73	199.52	179.49
360.0	465.19	401.63	347.63	307.13	284.06	234.96	205.54	181.18	162.34

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	145.69	128.25	116.55	106.43	95.18	87.53	80.44	73.52	67.28
45.0	133.03	120.66	108.23	98.38	89.27	81.34	74.76	68.23	62.49
90.0	145.80	133.59	119.93	106.48	98.55	89.66	80.61	74.81	69.13
135.0	162.11	144.68	128.76	116.83	103.50	94.33	86.18	79.31	71.49
180.0	144.84	128.14	116.38	106.14	95.68	86.46	79.37	72.62	66.66
225.0	180.11	161.72	144.56	129.66	117.79	106.09	95.96	88.14	80.61
270.0	177.36	161.55	142.43	129.15	117.56	104.79	95.68	87.58	78.58
315.0	161.94	142.82	129.60	118.01	106.20	95.74	86.51	79.20	72.06
360.0	145.69	128.25	116.55	106.43	95.18	87.53	80.44	73.52	67.28

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	62.55	57.77	53.94	49.73	46.18	43.48	40.67	38.25	35.66
45.0	57.99	54.06	49.67	46.35	43.43	40.56	38.14	36.17	33.69
90.0	62.38	58.95	55.07	50.40	46.07	42.58	39.77	37.52	35.78
135.0	65.98	61.14	56.36	52.20	48.54	45.06	41.68	39.15	36.45
180.0	62.04	57.49	53.78	49.73	45.96	43.03	40.50	37.74	35.55
225.0	72.23	66.54	61.65	56.25	52.20	48.66	45.23	42.02	39.54
270.0	72.28	66.71	60.30	55.86	51.86	48.04	44.55	41.74	38.87
315.0	66.43	60.81	56.19	51.47	47.31	43.99	41.12	37.97	35.61
360.0	62.55	57.77	53.94	49.73	46.18	43.48	40.67	38.25	35.66

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	33.47	31.22	29.59	28.13	26.72	24.98	23.74	22.67	21.60
45.0	31.73	30.09	28.01	26.66	25.26	24.02	22.95	21.94	20.64
90.0	33.98	32.79	31.22	29.59	28.01	26.78	24.64	22.16	20.64
135.0	34.20	32.06	30.32	28.91	27.68	26.16	25.03	24.02	22.39
180.0	33.13	30.71	29.14	27.68	26.16	24.64	23.40	22.28	21.49
225.0	36.90	34.82	32.40	30.32	28.63	26.94	25.43	24.19	23.06
270.0	36.11	33.98	31.78	29.98	28.07	26.38	24.92	23.51	22.11
315.0	33.58	31.28	29.70	28.24	26.66	25.14	23.85	22.16	20.87
360.0	33.47	31.22	29.59	28.13	26.72	24.98	23.74	22.67	21.60

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	20.48	19.69	18.73	17.89	17.04	16.31	15.53	14.74	13.95
45.0	19.80	18.96	17.83	16.99	16.26	15.53	14.79	14.23	13.56
90.0	19.35	18.62	17.78	17.04	16.26	15.69	15.08	14.46	14.06
135.0	21.26	20.19	18.68	17.66	16.99	16.26	15.47	14.91	14.23
180.0	20.31	19.01	18.34	17.44	16.59	15.81	15.19	14.40	13.78
225.0	21.71	20.70	19.74	18.73	17.83	17.04	16.14	15.47	14.91
270.0	21.09	20.14	19.13	18.23	17.49	16.71	15.98	15.36	14.68
315.0	19.69	18.73	17.94	17.10	16.31	15.69	15.08	14.34	13.84
360.0	20.48	19.69	18.73	17.89	17.04	16.31	15.53	14.74	13.95

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.39	12.77	12.26	11.81	11.36	10.97	10.69	10.41	10.13
45.0	13.05	12.49	11.93	11.42	10.91	10.46	10.01	9.62	9.17
90.0	14.23	15.47	17.16	18.90	20.93	22.84	25.26	27.11	28.97
135.0	13.78	13.28	12.66	12.26	11.76	11.25	10.91	10.58	10.35
180.0	13.22	12.60	12.04	11.53	11.08	10.69	10.35	10.13	9.96
225.0	14.29	13.67	13.11	12.54	12.09	11.64	11.03	10.63	10.24
270.0	14.18	13.67	13.33	13.61	14.85	16.59	18.39	20.31	22.78
315.0	13.39	12.83	12.32	11.93	11.42	10.97	10.58	10.24	10.18
360.0	13.39	12.77	12.26	11.81	11.36	10.97	10.69	10.41	10.13

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	9.84	9.51	9.11	8.66	8.21	7.76	7.31	6.81	6.36
45.0	8.78	8.44	8.04	7.59	7.20	6.86	6.41	6.13	5.79
90.0	30.94	32.51	33.53	33.75	31.44	28.86	26.27	23.23	19.86
135.0	10.29	10.29	10.13	9.96	9.62	8.89	7.99	7.03	6.13
180.0	9.68	9.28	8.89	8.38	7.82	7.37	6.86	6.24	5.79
225.0	9.68	9.34	9.00	8.61	8.27	7.88	7.37	7.03	6.69
270.0	24.81	26.78	28.97	30.54	31.67	32.34	31.73	29.59	26.83
315.0	10.29	10.41	10.58	10.69	10.52	10.01	9.23	7.76	6.64
360.0	9.84	9.51	9.11	8.66	8.21	7.76	7.31	6.81	6.36

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.91	5.46	5.01	4.67	4.28	3.88	3.49	3.21	3.04
45.0	5.51	5.23	4.95	4.67	4.22	3.49	3.26	2.98	2.93
90.0	14.91	8.89	5.29	3.77	3.38	3.09	2.81	2.59	2.42
135.0	5.63	5.29	4.78	4.44	3.66	3.43	3.15	2.93	2.70
180.0	5.46	5.06	4.67	4.33	3.83	3.49	3.26	3.04	2.81
225.0	6.24	5.91	5.57	5.29	5.01	4.78	4.33	3.83	3.54
270.0	24.08	21.49	17.27	12.04	6.75	4.95	4.05	3.26	3.09
315.0	5.91	5.40	5.06	4.67	4.33	3.94	3.32	3.09	2.93
360.0	5.91	5.46	5.01	4.67	4.28	3.88	3.49	3.21	3.04

Intensity data(cd)

C/γ(°)	90.0
0.0	2.87
45.0	2.64
90.0	2.42
135.0	2.42
180.0	2.70
225.0	3.32
270.0	2.81
315.0	2.81
360.0	2.87