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Nata

LumCAT: 1-0927-M
Luminaire: 92.70.124.00

Report No: 210716-B003	Voltage(V): 36.0900
Test No: 210716-C003	Current(A): 0.4510
LampCAT: Fortimo LED SLM 1203 G7N	Power (W): 16.2760
Lamp flux(lm): 1566.1	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): 1213.66
Efficiency(%): 77.50%
Lumens(lm)/Power(W): 74.57
Central intensity(cd): 5671.266
Maximum intensity(cd): 5671.266
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=26.9
[C90/270]Total=26.9
Field angle(10%Imax): [C0/180]Total=43.1
[C90/270]Total=43.1
Maximum s/h(1/2): C0_180=0.46 C90_270=0.46
Maximum s/h(1/4): C0_180=0.43 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 77.50%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.560%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5671.266	0.000	0	.000%	.000%
1.0	5662.055	5.423	5.423	.346%	.447%
2.0	5607.211	16.175	21.598	1.033%	1.780%
3.0	5521.922	26.617	48.215	1.700%	3.973%
4.0	5412.305	36.600	84.815	2.337%	6.988%
5.0	5247.984	45.860	130.675	2.928%	10.767%
6.0	5041.406	54.073	184.749	3.453%	15.222%
7.0	4833.984	61.296	246.045	3.914%	20.273%
8.0	4572.211	67.318	313.363	4.299%	25.820%
9.0	4293.070	71.848	385.212	4.588%	31.740%
10.0	3998.531	75.036	460.248	4.791%	37.922%
11.0	3661.102	76.535	536.783	4.887%	44.229%
12.0	3346.313	76.601	613.384	4.891%	50.540%
13.0	2994.469	75.249	688.633	4.805%	56.740%
14.0	2636.719	72.079	760.712	4.602%	62.679%
15.0	2323.688	68.099	828.811	4.348%	68.290%
16.0	2023.594	63.700	892.51	4.067%	73.539%
17.0	1643.597	57.108	949.618	3.647%	78.244%
18.0	1378.181	49.823	999.441	3.181%	82.350%
19.0	1123.882	43.531	1042.972	2.780%	85.936%
20.0	884.412	36.757	1079.729	2.347%	88.965%
21.0	670.704	29.861	1109.59	1.907%	91.425%
22.0	490.015	23.325	1132.916	1.489%	93.347%
23.0	344.159	17.503	1150.419	1.118%	94.790%
24.0	196.256	11.815	1162.234	.754%	95.763%
25.0	113.702	7.048	1169.282	.450%	96.344%
26.0	52.425	3.921	1173.203	.250%	96.667%
27.0	30.495	2.029	1175.232	.130%	96.834%
28.0	21.263	1.310	1176.542	.084%	96.942%
29.0	17.719	1.020	1177.562	.065%	97.026%
30.0	15.764	0.904	1178.466	.058%	97.101%
31.0	14.273	0.836	1179.302	.053%	97.169%
32.0	12.930	0.779	1180.082	.050%	97.234%
33.0	11.946	0.733	1180.815	.047%	97.294%
34.0	11.130	0.698	1181.513	.045%	97.352%
35.0	10.308	0.666	1182.179	.043%	97.406%
36.0	9.717	0.638	1182.816	.041%	97.459%
37.0	9.218	0.618	1183.434	.039%	97.510%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	8.782	0.601	1184.035	.038%	97.559%
39.0	8.360	0.585	1184.62	.037%	97.608%
40.0	8.079	0.573	1185.193	.037%	97.655%
41.0	7.819	0.566	1185.759	.036%	97.701%
42.0	7.559	0.559	1186.318	.036%	97.747%
43.0	7.362	0.553	1186.871	.035%	97.793%
44.0	7.193	0.549	1187.42	.035%	97.838%
45.0	7.031	0.547	1187.967	.035%	97.883%
46.0	6.884	0.544	1188.511	.035%	97.928%
47.0	6.771	0.543	1189.054	.035%	97.973%
48.0	6.652	0.543	1189.596	.035%	98.018%
49.0	6.567	0.543	1190.139	.035%	98.062%
50.0	6.469	0.544	1190.683	.035%	98.107%
51.0	6.377	0.543	1191.226	.035%	98.152%
52.0	6.321	0.545	1191.771	.035%	98.197%
53.0	6.244	0.547	1192.318	.035%	98.242%
54.0	6.159	0.547	1192.864	.035%	98.287%
55.0	6.124	0.548	1193.413	.035%	98.332%
56.0	6.047	0.550	1193.963	.035%	98.377%
57.0	5.998	0.551	1194.513	.035%	98.423%
58.0	5.955	0.553	1195.066	.035%	98.468%
59.0	5.913	0.555	1195.621	.035%	98.514%
60.0	5.878	0.557	1196.178	.036%	98.560%
61.0	5.836	0.559	1196.737	.036%	98.606%
62.0	5.787	0.560	1197.297	.036%	98.652%
63.0	5.759	0.562	1197.859	.036%	98.698%
64.0	5.723	0.563	1198.422	.036%	98.745%
65.0	5.709	0.566	1198.988	.036%	98.791%
66.0	5.688	0.569	1199.557	.036%	98.838%
67.0	5.667	0.571	1200.128	.036%	98.885%
68.0	5.639	0.573	1200.7	.037%	98.933%
69.0	5.632	0.575	1201.275	.037%	98.980%
70.0	5.590	0.576	1201.852	.037%	99.027%
71.0	5.569	0.577	1202.428	.037%	99.075%
72.0	5.583	0.580	1203.008	.037%	99.123%
73.0	5.555	0.582	1203.591	.037%	99.171%
74.0	5.534	0.583	1204.174	.037%	99.219%
75.0	5.534	0.585	1204.758	.037%	99.267%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.520	0.587	1205.345	.037%	99.315%
77.0	5.520	0.589	1205.934	.038%	99.364%
78.0	5.498	0.590	1206.523	.038%	99.412%
79.0	5.520	0.592	1207.115	.038%	99.461%
80.0	5.505	0.594	1207.71	.038%	99.510%
81.0	5.498	0.595	1208.305	.038%	99.559%
82.0	5.505	0.597	1208.902	.038%	99.608%
83.0	5.548	0.601	1209.502	.038%	99.658%
84.0	5.562	0.605	1210.108	.039%	99.708%
85.0	5.548	0.606	1210.714	.039%	99.758%
86.0	5.365	0.596	1211.311	.038%	99.807%
87.0	5.351	0.586	1211.897	.037%	99.855%
88.0	5.358	0.587	1212.484	.037%	99.903%
89.0	5.344	0.587	1213.07	.037%	99.952%
90.0	5.344	0.586	1213.656	.037%	100.000%

Zonal flux distribution table

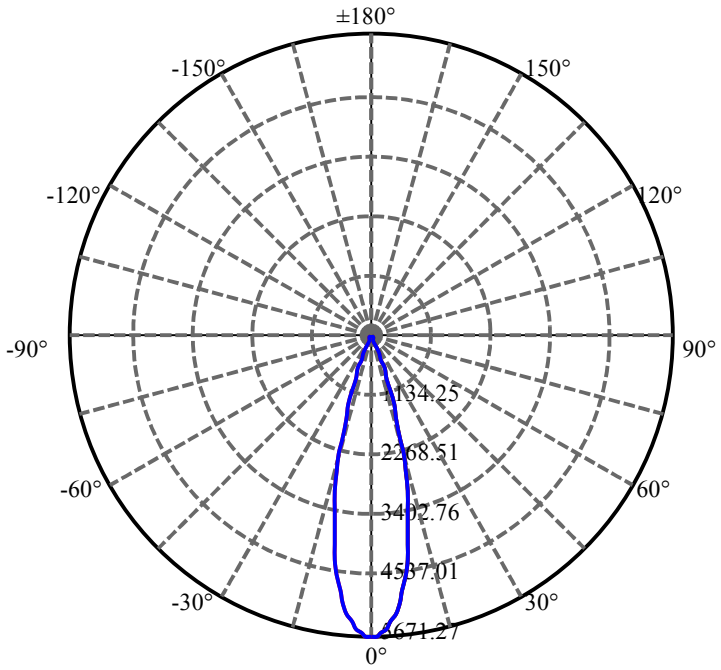
ZONAL LUMEN SUMMARY

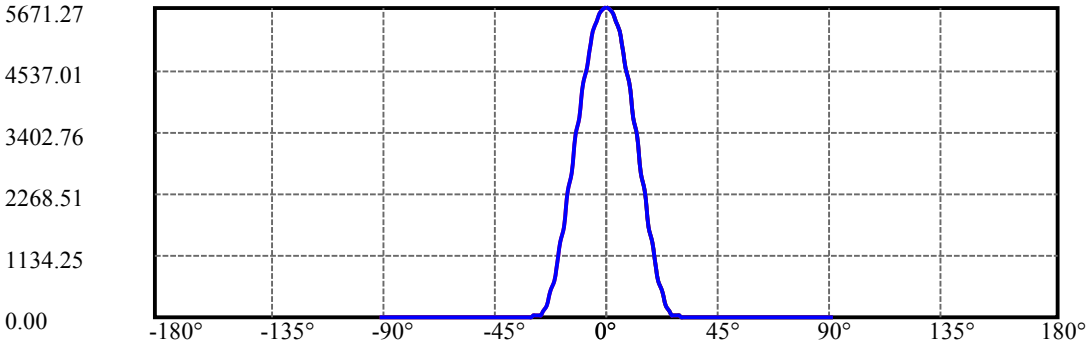
Zone	Lumens	%Lamp	%Fixt
0-30	1178.47	75.25%	97.10%
0-40	1185.19	75.68%	97.65%
0-60	1196.18	76.38%	98.56%
0-90	1213.07	77.46%	99.95%
0-120	1213.07	77.46%	99.95%
0-180	1213.66	77.50%	100.00%
60-90	17.45	1.11%	1.44%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.43	970.92	62.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	460.25
10-20	619.48
20-30	98.74
30-40	6.73
40-50	5.49
50-60	5.50
60-70	5.67
70-80	5.86
80-90	5.36
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:21.6 Right:21.6
:C90/270Left:21.6 Right:21.6

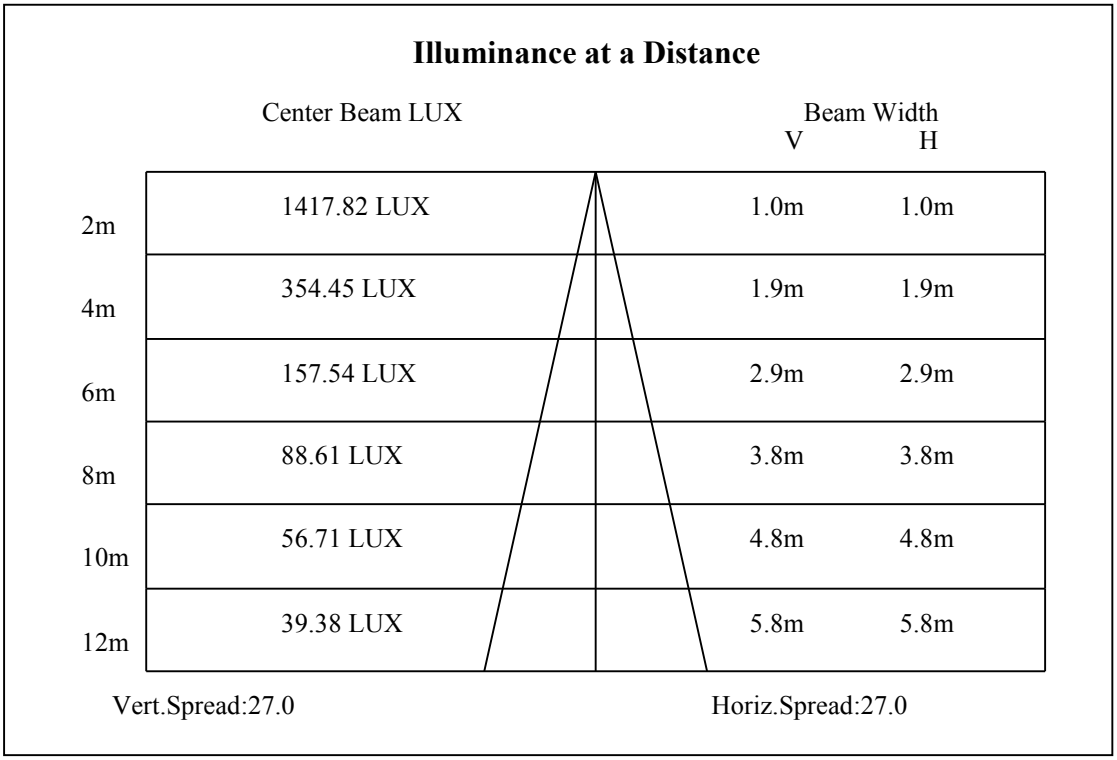
Beam Angle(50%Imax):C0/180Left:13.4 Right:13.4
:C90/270Left:13.4 Right:13.4

Equipment: GMS1980
Temperature(°C): 25.0

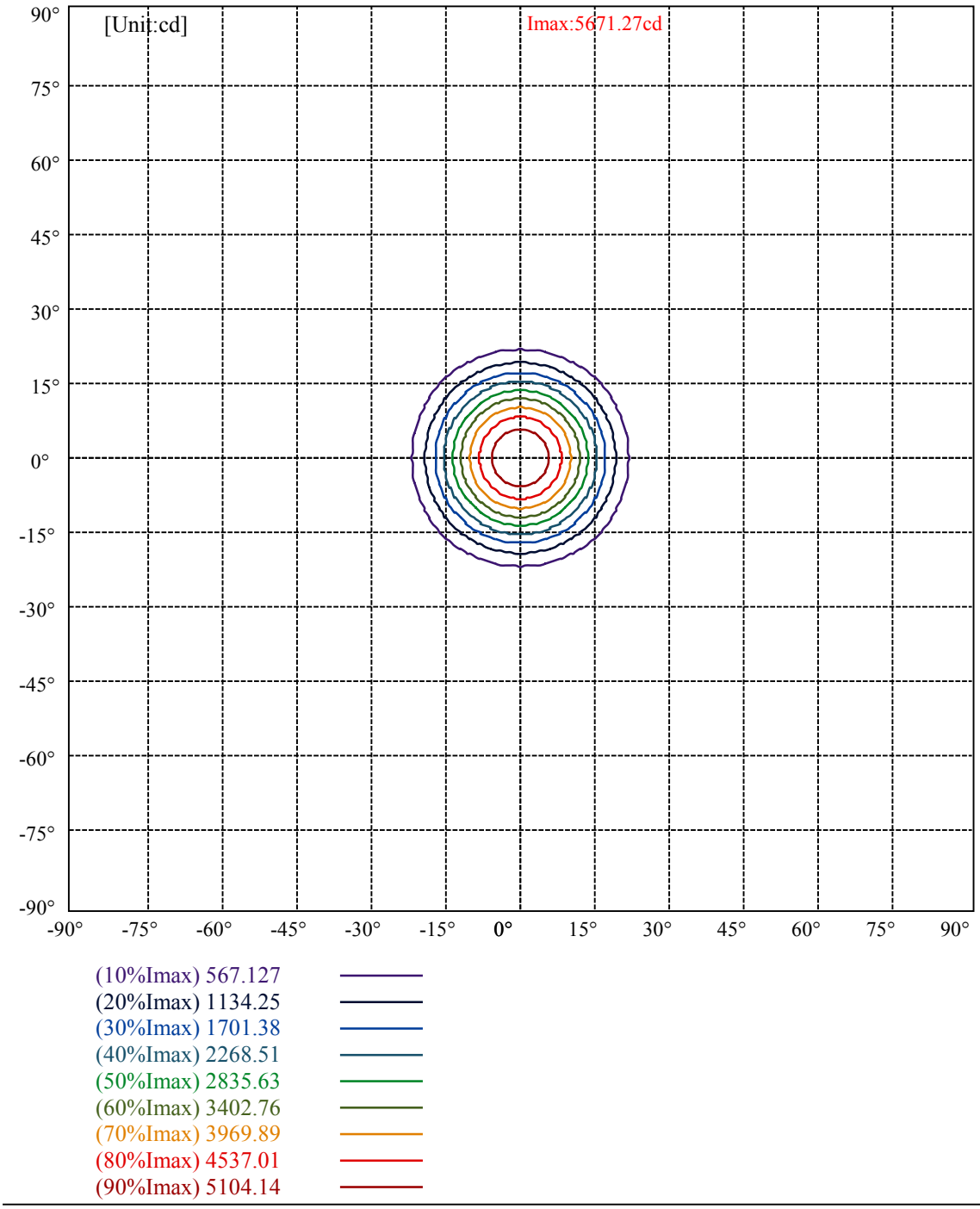
Date: 2021/7/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Lux distance Curve



ISO-Intensity(V-H)



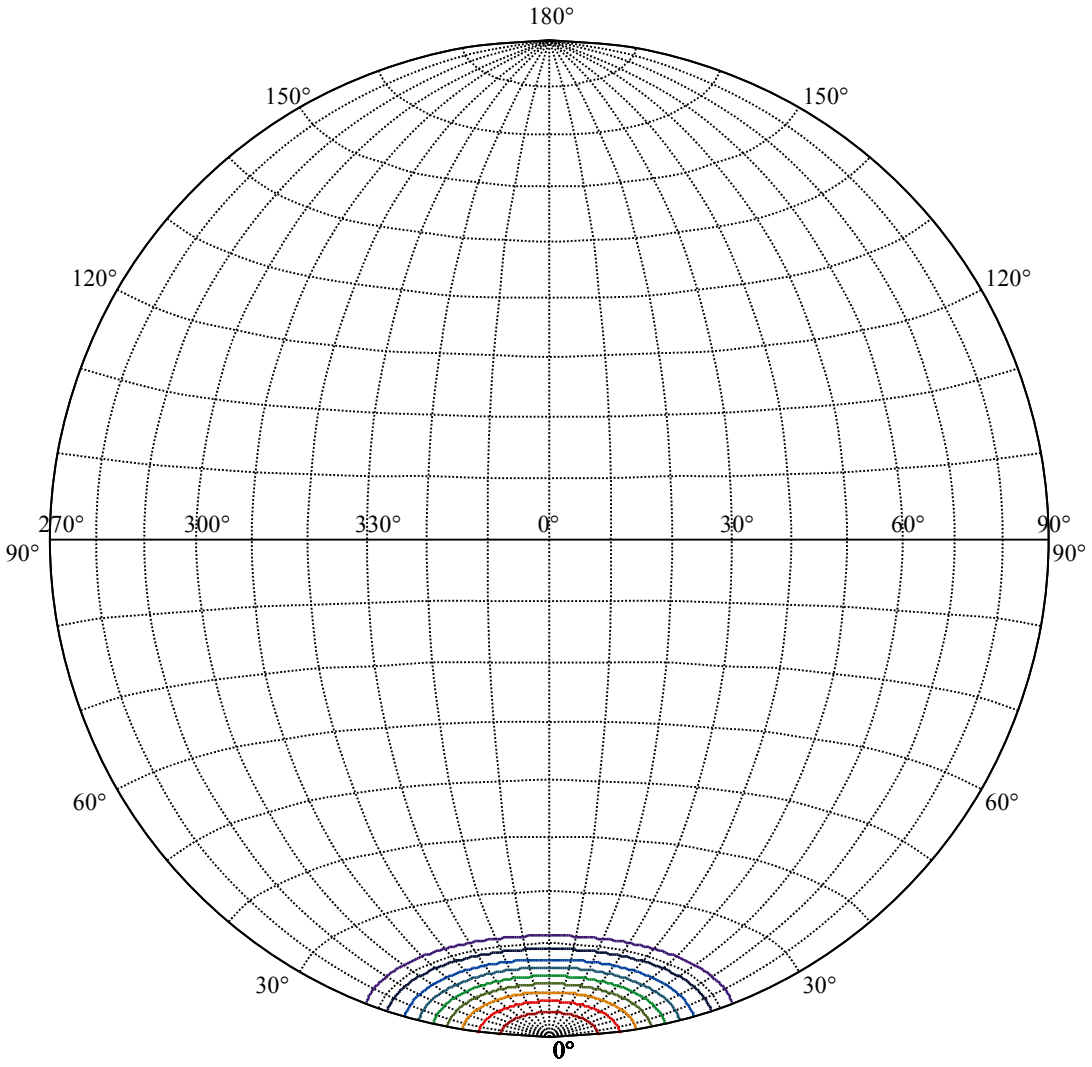
(10%Imax) 567.127
(20%Imax) 1134.25
(30%Imax) 1701.38
(40%Imax) 2268.51
(50%Imax) 2835.63
(60%Imax) 3402.76
(70%Imax) 3969.89
(80%Imax) 4537.01
(90%Imax) 5104.14

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5671.27

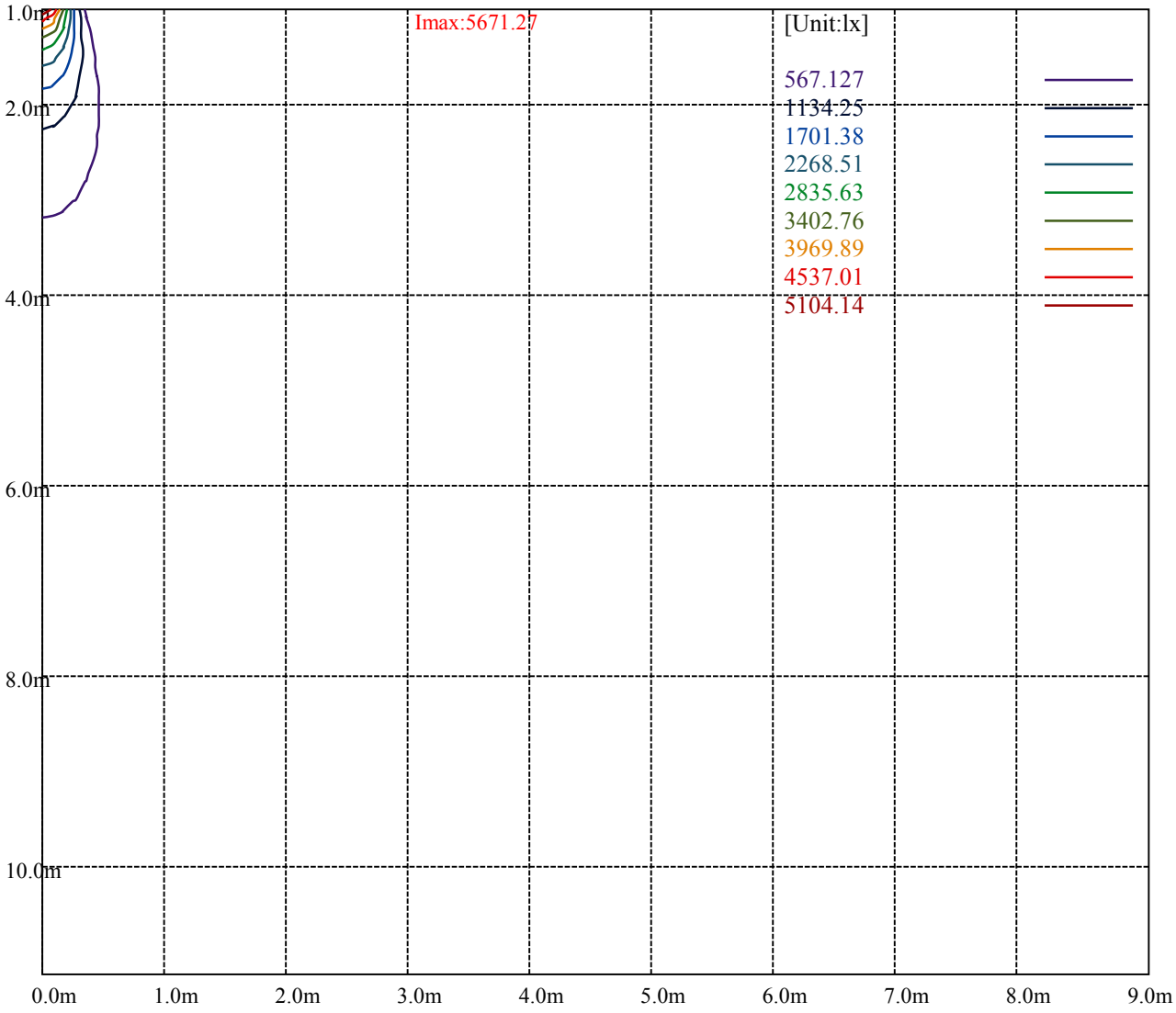
(10%Imax) 567.127
(20%Imax) 1134.25
(30%Imax) 1701.38
(40%Imax) 2268.51
(50%Imax) 2835.63
(60%Imax) 3402.76
(70%Imax) 3969.89
(80%Imax) 4537.01
(90%Imax) 5104.14

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/16
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

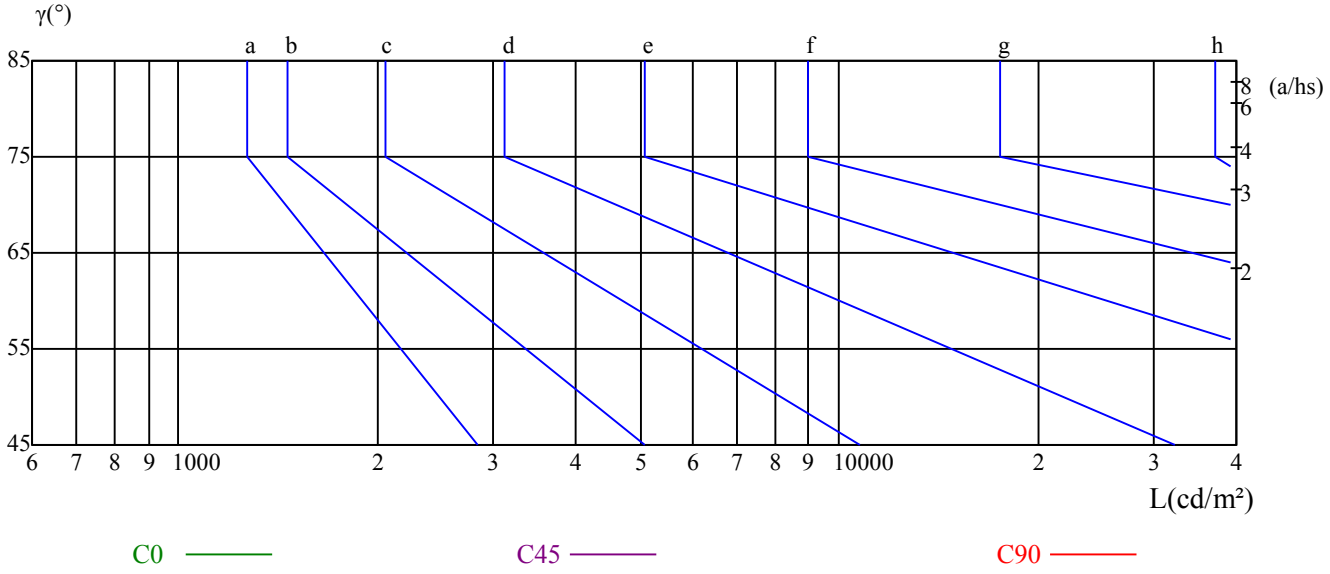
γ	45	50	55	60	65	70	75	80	85
C0	268	256	255	259	270	287	314	351	408
C45	290	279	280	289	305	330	368	423	509
C90	375	377	396	432	490	581	737	1031	1771

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
527	527	527	834	834	834	2482	2482	2482

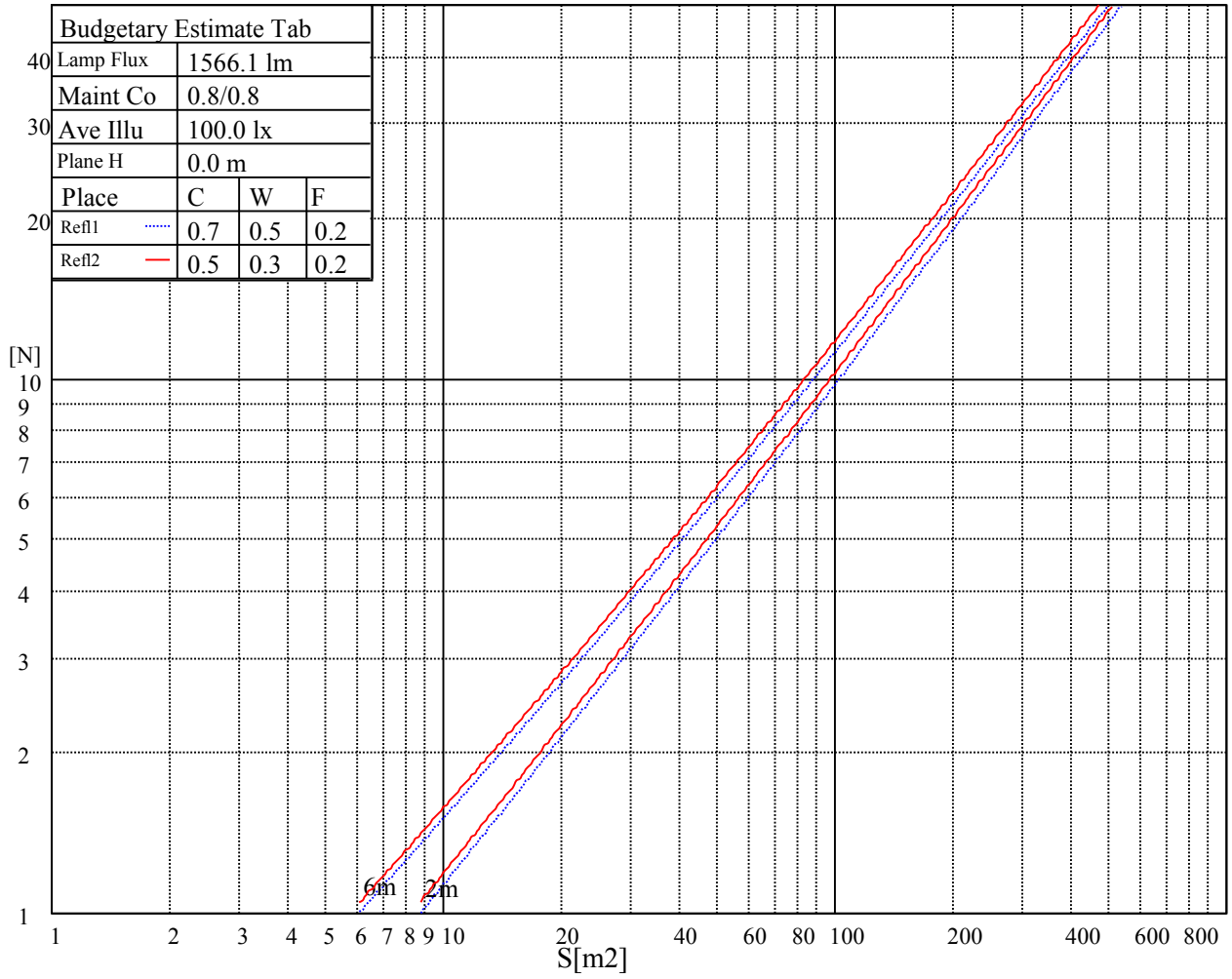
Glare Table

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

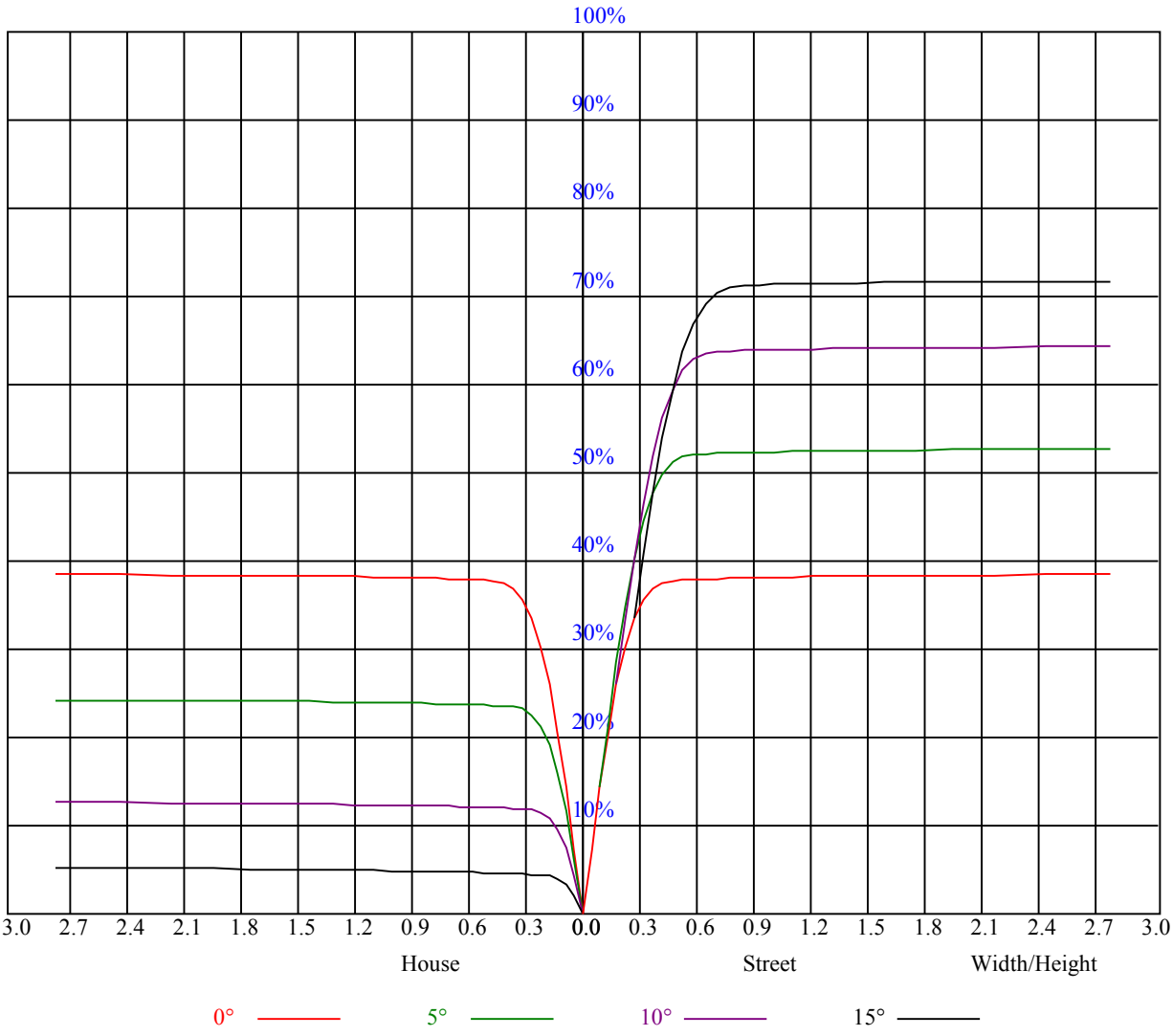


Equipment: GMS1980
Temperature(°C): 25.0
Date: 2021/7/16
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.50

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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.79	0.79	0.79	0.77
1	0.87	0.86	0.85	0.86	0.84	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.77	0.77	0.76	0.75
2	0.83	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.77	0.78	0.76	0.75	0.76	0.74	0.74	0.72
3	0.80	0.77	0.75	0.79	0.77	0.75	0.77	0.75	0.74	0.75	0.74	0.72	0.74	0.72	0.71	0.70
4	0.77	0.74	0.72	0.76	0.74	0.72	0.75	0.73	0.71	0.74	0.72	0.70	0.72	0.71	0.69	0.68
5	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.69	0.72	0.70	0.68	0.71	0.69	0.67	0.67
6	0.72	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.65
7	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.64	0.68	0.66	0.64	0.63
8	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.65	0.63	0.66	0.64	0.63	0.62
9	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.62	0.65	0.63	0.61	0.65	0.63	0.61	0.61
10	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.64	0.62	0.60	0.63	0.61	0.60	0.59

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2021/7/16	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	5670.00	5681.25	5644.13	5577.19	5475.94	5323.50	5133.94	4931.44	4689.00
45.0	5685.75	5649.19	5568.19	5446.69	5304.38	5109.19	4885.88	4644.56	4361.06
90.0	5655.38	5598.56	5492.81	5366.25	5208.75	5001.75	4754.81	4501.13	4194.00
135.0	5673.94	5657.06	5580.00	5483.25	5380.88	5184.56	4966.88	4770.00	4466.81
180.0	5670.00	5659.88	5580.56	5483.25	5361.19	5208.19	4964.63	4746.94	4483.69
225.0	5685.75	5691.38	5672.81	5614.31	5532.75	5397.75	5220.56	5038.31	4806.56
270.0	5655.38	5681.81	5680.13	5640.75	5571.56	5450.63	5289.19	5119.31	4905.00
315.0	5673.94	5677.31	5639.06	5563.69	5463.00	5308.31	5115.38	4920.19	4671.56
360.0	5670.00	5681.25	5644.13	5577.19	5475.94	5323.50	5133.94	4931.44	4689.00

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4411.69	4140.00	3804.19	3498.19	3138.19	2772.56	2457.56	2147.06	1769.63
45.0	4043.25	3750.19	3392.44	3074.06	2710.69	2357.44	2056.50	1765.13	1440.00
90.0	3906.00	3565.13	3215.25	2899.69	2548.69	2203.31	1909.13	1635.19	1100.03
135.0	4163.06	3907.13	3529.13	3213.00	2893.50	2500.88	2198.81	1904.63	1555.31
180.0	4173.19	3852.56	3549.94	3195.56	2844.56	2530.69	2189.25	1896.19	1572.19
225.0	4570.88	4267.13	3941.44	3633.75	3277.69	2913.19	2594.81	2283.19	1904.06
270.0	4652.44	4393.69	4076.44	3786.19	3439.69	3076.88	2754.56	2434.50	2051.44
315.0	4424.06	4112.44	3780.00	3470.06	3102.75	2738.81	2428.88	2122.88	1756.13
360.0	4411.69	4140.00	3804.19	3498.19	3138.19	2772.56	2457.56	2147.06	1769.63

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1500.19	1244.25	959.06	747.00	556.88	372.94	287.44	122.29	54.23
45.0	1184.63	954.56	686.81	515.81	351.00	299.25	99.96	49.16	27.79
90.0	1071.84	850.73	630.62	438.24	293.63	177.64	75.49	37.35	24.13
135.0	1287.00	1048.50	773.44	591.19	410.06	298.13	132.75	65.76	33.86
180.0	1107.73	1019.53	794.03	550.86	381.54	245.81	121.44	60.36	35.27
225.0	1622.25	1259.44	1045.52	827.16	626.85	430.20	272.25	158.96	67.89
270.0	1762.31	1495.69	1181.25	956.81	747.56	542.25	360.56	293.63	116.44
315.0	1489.50	1118.36	1004.57	738.56	552.60	387.06	220.16	122.12	59.79
360.0	1500.19	1244.25	959.06	747.00	556.88	372.94	287.44	122.29	54.23

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	30.21	22.11	18.79	16.93	15.19	13.67	12.54	11.59	10.63
45.0	20.19	16.88	15.24	13.84	12.66	11.70	10.86	10.24	9.62
90.0	18.79	16.43	14.85	13.44	12.38	11.36	10.69	10.07	9.51
135.0	23.12	18.39	16.03	14.46	13.16	11.98	11.25	10.58	9.84
180.0	22.95	18.17	16.09	14.29	13.05	11.93	11.08	10.35	9.73
225.0	41.12	25.20	19.80	17.44	15.75	14.01	12.88	11.93	10.86
270.0	55.91	30.54	21.71	18.73	16.59	14.91	13.67	12.66	11.53
315.0	31.67	22.39	19.24	16.99	15.41	13.89	12.60	11.64	10.74
360.0	30.21	22.11	18.79	16.93	15.19	13.67	12.54	11.59	10.63

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	10.01	9.39	8.89	8.44	8.16	7.88	7.59	7.43	7.26
45.0	9.11	8.72	8.38	7.99	7.76	7.59	7.31	7.14	7.03
90.0	9.06	8.66	8.33	8.04	7.76	7.54	7.37	7.20	7.03
135.0	9.34	8.94	8.55	8.21	7.93	7.65	7.48	7.26	7.14
180.0	9.23	8.78	8.49	8.04	7.82	7.59	7.37	7.20	7.03
225.0	10.18	9.68	9.11	8.61	8.27	7.99	7.65	7.43	7.20
270.0	10.80	10.13	9.51	9.00	8.66	8.33	7.99	7.76	7.54
315.0	10.01	9.45	9.00	8.55	8.27	7.99	7.71	7.48	7.31
360.0	10.01	9.39	8.89	8.44	8.16	7.88	7.59	7.43	7.26

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	7.09	6.92	6.81	6.69	6.64	6.53	6.41	6.36	6.30
45.0	6.86	6.75	6.69	6.58	6.47	6.41	6.30	6.24	6.19
90.0	6.92	6.81	6.69	6.58	6.53	6.41	6.36	6.30	6.24
135.0	6.98	6.86	6.69	6.58	6.53	6.47	6.36	6.30	6.19
180.0	6.86	6.75	6.64	6.53	6.47	6.36	6.24	6.24	6.13
225.0	7.09	6.86	6.75	6.64	6.53	6.41	6.36	6.30	6.19
270.0	7.31	7.14	7.03	6.86	6.75	6.64	6.58	6.47	6.41
315.0	7.14	6.98	6.86	6.75	6.64	6.53	6.41	6.36	6.30
360.0	7.09	6.92	6.81	6.69	6.64	6.53	6.41	6.36	6.30

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.19	6.19	6.08	6.02	5.96	5.91	5.85	5.85	5.79
45.0	6.08	6.08	5.96	5.91	5.91	5.85	5.85	5.79	5.74
90.0	6.13	6.08	6.02	6.02	5.96	5.91	5.91	5.85	5.85
135.0	6.13	6.13	6.08	6.02	5.96	5.91	5.91	5.85	5.79
180.0	6.08	6.02	5.96	5.91	5.91	5.91	5.85	5.79	5.74
225.0	6.13	6.08	6.02	5.91	5.91	5.85	5.79	5.79	5.74
270.0	6.30	6.24	6.19	6.13	6.02	6.02	5.96	5.91	5.85
315.0	6.24	6.19	6.08	6.08	6.02	5.96	5.91	5.85	5.79
360.0	6.19	6.19	6.08	6.02	5.96	5.91	5.85	5.85	5.79

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.79	5.74	5.74	5.68	5.68	5.63	5.63	5.57	5.57
45.0	5.68	5.68	5.68	5.63	5.63	5.63	5.57	5.57	5.51
90.0	5.79	5.74	5.74	5.74	5.74	5.74	5.74	5.74	5.68
135.0	5.79	5.74	5.74	5.74	5.68	5.68	5.63	5.57	5.57
180.0	5.74	5.68	5.68	5.68	5.63	5.57	5.63	5.57	5.57
225.0	5.68	5.68	5.63	5.63	5.63	5.57	5.57	5.51	5.51
270.0	5.85	5.79	5.79	5.74	5.68	5.68	5.68	5.63	5.63
315.0	5.74	5.74	5.68	5.68	5.68	5.63	5.63	5.57	5.51
360.0	5.79	5.74	5.74	5.68	5.68	5.63	5.63	5.57	5.57

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.57	5.57	5.51	5.51	5.51	5.51	5.46	5.51	5.46
45.0	5.57	5.51	5.51	5.46	5.46	5.51	5.46	5.51	5.46
90.0	5.68	5.63	5.63	5.68	5.68	5.68	5.63	5.68	5.68
135.0	5.63	5.57	5.57	5.57	5.51	5.51	5.51	5.57	5.57
180.0	5.57	5.57	5.51	5.51	5.57	5.51	5.51	5.51	5.51
225.0	5.51	5.51	5.51	5.46	5.46	5.46	5.46	5.40	5.46
270.0	5.57	5.57	5.51	5.57	5.51	5.51	5.51	5.51	5.46
315.0	5.57	5.51	5.51	5.51	5.46	5.46	5.46	5.46	5.46
360.0	5.57	5.57	5.51	5.51	5.51	5.51	5.46	5.51	5.46

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.46	5.46	5.46	5.46	5.46	5.40	5.34	5.34	5.34
45.0	5.46	5.51	5.51	5.51	5.63	5.34	5.29	5.34	5.29
90.0	5.63	5.68	5.74	5.79	5.57	5.34	5.34	5.34	5.34
135.0	5.57	5.51	5.57	5.51	5.57	5.40	5.40	5.40	5.40
180.0	5.51	5.51	5.57	5.63	5.46	5.34	5.34	5.34	5.34
225.0	5.46	5.46	5.51	5.57	5.74	5.34	5.29	5.34	5.29
270.0	5.51	5.51	5.57	5.63	5.57	5.40	5.40	5.34	5.34
315.0	5.40	5.40	5.46	5.40	5.40	5.34	5.40	5.40	5.40
360.0	5.46	5.46	5.46	5.46	5.46	5.40	5.34	5.34	5.34

Intensity data(cd)

C/γ(°)	90.0
0.0	5.34
45.0	5.29
90.0	5.34
135.0	5.40
180.0	5.40
225.0	5.29
270.0	5.34
315.0	5.34
360.0	5.34