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Nata

LumCAT: 1-0919-M
Luminaire: 92.70.124.00

Report No: 210716-B006	Voltage(V): 36.2300
Test No: 210716-C006	Current(A): 0.4510
LampCAT: Fortimo LED SLM 1203 G7N	Power (W): 16.3390
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): 1347.40
Efficiency(%): 86.04%
Lumens(lm)/Power(W): 82.47
Central intensity(cd): 6312.938
Maximum intensity(cd): 6312.938
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=26.3
[C90/270]Total=26.3
Field angle(10%Imax): [C0/180]Total=44.1
[C90/270]Total=44.1
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
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(%): 86.04%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.587%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6312.938	0.000	0	.000%	.000%
1.0	6291.914	6.031	6.031	.385%	.448%
2.0	6220.898	17.960	23.991	1.147%	1.781%
3.0	6101.648	29.471	53.462	1.882%	3.968%
4.0	5959.547	40.373	93.835	2.578%	6.964%
5.0	5771.320	50.466	144.301	3.222%	10.710%
6.0	5560.664	59.553	203.853	3.803%	15.129%
7.0	5307.117	67.456	271.309	4.307%	20.136%
8.0	5026.148	73.953	345.262	4.722%	25.624%
9.0	4696.875	78.800	424.062	5.032%	31.473%
10.0	4346.367	81.838	505.9	5.226%	37.546%
11.0	3972.516	83.123	589.023	5.308%	43.715%
12.0	3597.539	82.752	671.775	5.284%	49.857%
13.0	3212.719	80.821	752.595	5.161%	55.855%
14.0	2812.219	77.119	829.714	4.924%	61.579%
15.0	2454.539	72.304	902.018	4.617%	66.945%
16.0	2117.602	66.995	969.013	4.278%	71.917%
17.0	1809.070	61.149	1030.162	3.905%	76.455%
18.0	1501.193	54.579	1084.741	3.485%	80.506%
19.0	1276.502	48.326	1133.067	3.086%	84.093%
20.0	1010.152	41.852	1174.919	2.672%	87.199%
21.0	817.980	35.104	1210.023	2.242%	89.804%
22.0	641.531	29.330	1239.352	1.873%	91.981%
23.0	467.754	23.276	1262.628	1.486%	93.708%
24.0	344.363	17.756	1280.384	1.134%	95.026%
25.0	213.518	12.685	1293.069	.810%	95.967%
26.0	127.463	8.049	1301.118	.514%	96.565%
27.0	62.002	4.635	1305.753	.296%	96.909%
28.0	34.172	2.435	1308.188	.155%	97.089%
29.0	20.707	1.436	1309.624	.092%	97.196%
30.0	15.553	0.979	1310.603	.063%	97.269%
31.0	13.233	0.801	1311.404	.051%	97.328%
32.0	11.988	0.723	1312.127	.046%	97.382%
33.0	11.102	0.680	1312.807	.043%	97.432%
34.0	10.385	0.650	1313.457	.042%	97.481%
35.0	9.766	0.626	1314.083	.040%	97.527%
36.0	9.239	0.605	1314.688	.039%	97.572%
37.0	8.824	0.589	1315.277	.038%	97.616%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	8.480	0.578	1315.855	.037%	97.658%
39.0	8.142	0.567	1316.422	.036%	97.701%
40.0	7.903	0.560	1316.982	.036%	97.742%
41.0	7.713	0.556	1317.538	.036%	97.783%
42.0	7.523	0.554	1318.091	.035%	97.824%
43.0	7.383	0.552	1318.644	.035%	97.865%
44.0	7.235	0.552	1319.195	.035%	97.906%
45.0	7.123	0.552	1319.747	.035%	97.947%
46.0	7.024	0.553	1320.3	.035%	97.988%
47.0	6.947	0.556	1320.856	.035%	98.030%
48.0	6.877	0.559	1321.415	.036%	98.071%
49.0	6.792	0.561	1321.976	.036%	98.113%
50.0	6.722	0.563	1322.54	.036%	98.155%
51.0	6.680	0.567	1323.107	.036%	98.197%
52.0	6.616	0.571	1323.677	.036%	98.239%
53.0	6.560	0.573	1324.25	.037%	98.282%
54.0	6.511	0.576	1324.826	.037%	98.324%
55.0	6.497	0.581	1325.407	.037%	98.367%
56.0	6.441	0.585	1325.992	.037%	98.411%
57.0	6.398	0.587	1326.579	.037%	98.454%
58.0	6.370	0.590	1327.169	.038%	98.498%
59.0	6.328	0.594	1327.763	.038%	98.542%
60.0	6.307	0.597	1328.36	.038%	98.587%
61.0	6.265	0.600	1328.96	.038%	98.631%
62.0	6.251	0.603	1329.563	.039%	98.676%
63.0	6.230	0.607	1330.17	.039%	98.721%
64.0	6.202	0.610	1330.78	.039%	98.766%
65.0	6.195	0.613	1331.393	.039%	98.812%
66.0	6.152	0.616	1332.009	.039%	98.857%
67.0	6.145	0.618	1332.628	.039%	98.903%
68.0	6.124	0.622	1333.249	.040%	98.949%
69.0	6.117	0.624	1333.874	.040%	98.996%
70.0	6.103	0.628	1334.501	.040%	99.042%
71.0	6.089	0.630	1335.131	.040%	99.089%
72.0	6.047	0.631	1335.762	.040%	99.136%
73.0	6.047	0.632	1336.395	.040%	99.183%
74.0	6.047	0.636	1337.031	.041%	99.230%
75.0	6.040	0.639	1337.669	.041%	99.277%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.026	0.640	1338.31	.041%	99.325%
77.0	6.019	0.642	1338.952	.041%	99.373%
78.0	6.012	0.644	1339.596	.041%	99.420%
79.0	6.005	0.646	1340.242	.041%	99.468%
80.0	6.005	0.647	1340.889	.041%	99.516%
81.0	6.005	0.649	1341.538	.041%	99.565%
82.0	6.012	0.652	1342.19	.042%	99.613%
83.0	5.998	0.653	1342.843	.042%	99.661%
84.0	5.984	0.653	1343.496	.042%	99.710%
85.0	5.991	0.654	1344.149	.042%	99.758%
86.0	5.934	0.652	1344.801	.042%	99.807%
87.0	5.941	0.650	1345.451	.042%	99.855%
88.0	5.948	0.651	1346.102	.042%	99.903%
89.0	5.934	0.651	1346.754	.042%	99.952%
90.0	5.934	0.651	1347.404	.042%	100.000%

Zonal flux distribution table

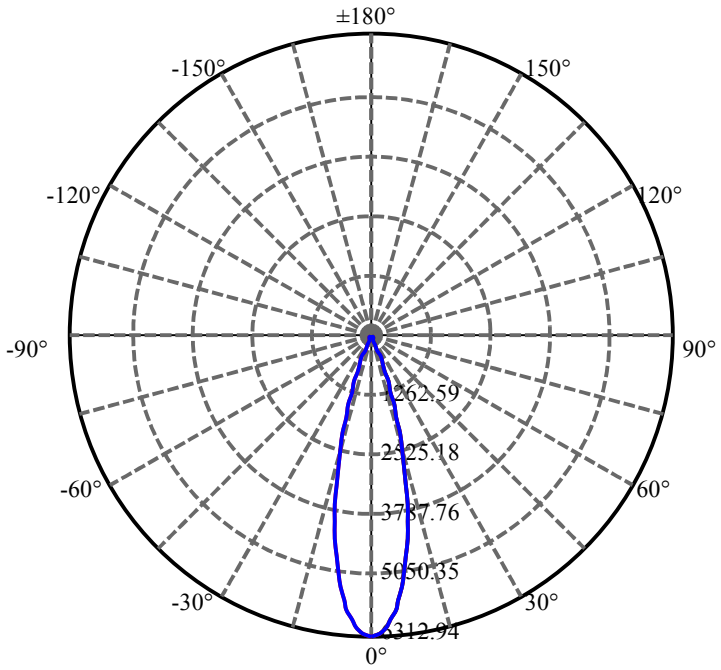
ZONAL LUMEN SUMMARY

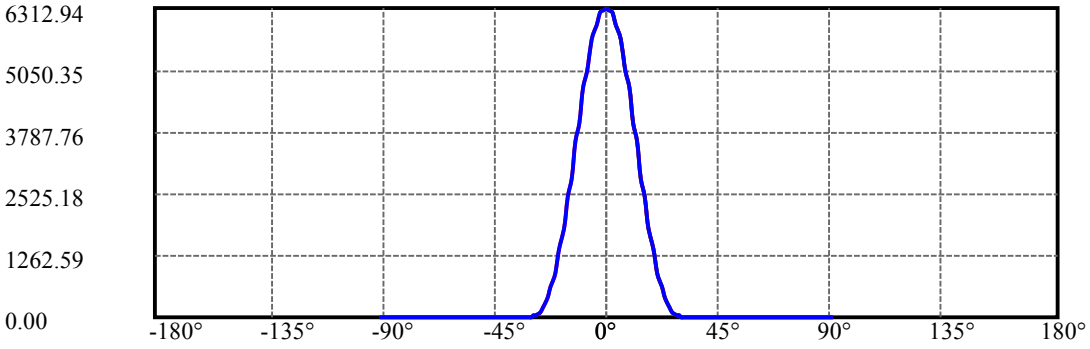
Zone	Lumens	%Lamp	%Fixt
0-30	1310.60	83.69%	97.27%
0-40	1316.98	84.09%	97.74%
0-60	1328.36	84.82%	98.59%
0-90	1346.75	86.00%	99.95%
0-120	1346.75	86.00%	99.95%
0-180	1347.40	86.04%	100.00%
60-90	18.99	1.21%	1.41%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.88	1077.92	68.83%	80.00%

ZONAL LUMEN SUMMARY

0-10	505.90
10-20	669.02
20-30	135.68
30-40	6.38
40-50	5.56
50-60	5.82
60-70	6.14
70-80	6.39
80-90	5.86
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):

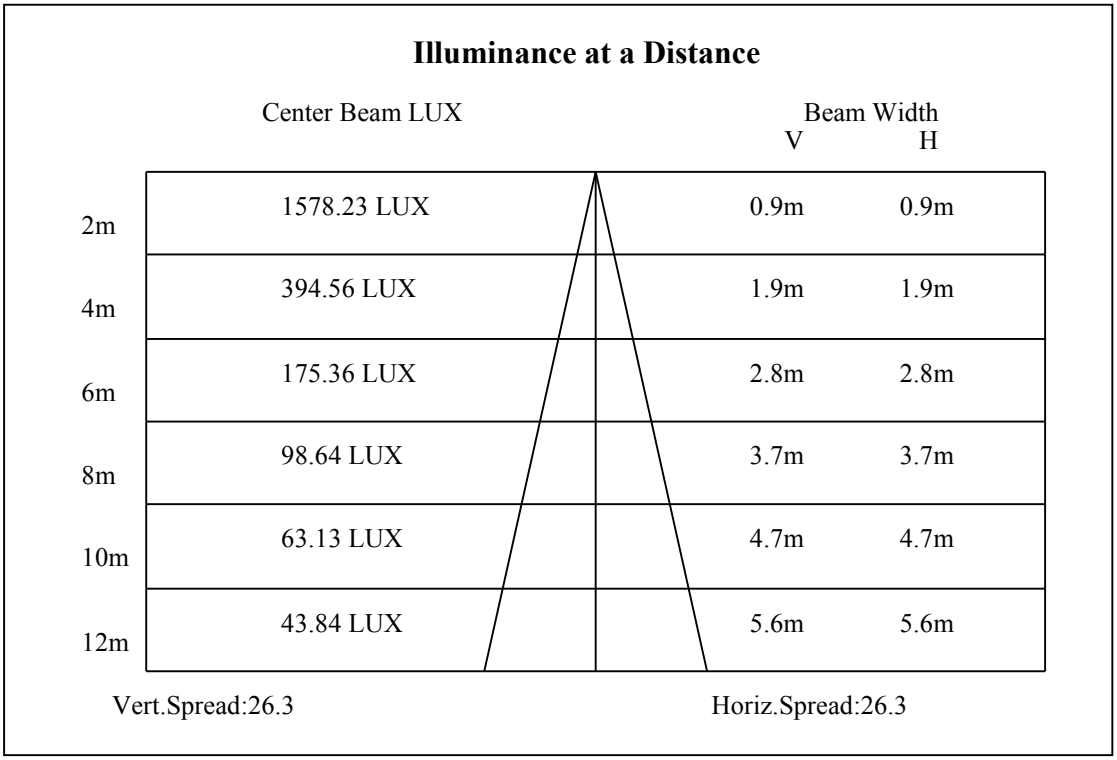
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:22.1 Right:22.1
:C90/270Left:22.1 Right:22.1

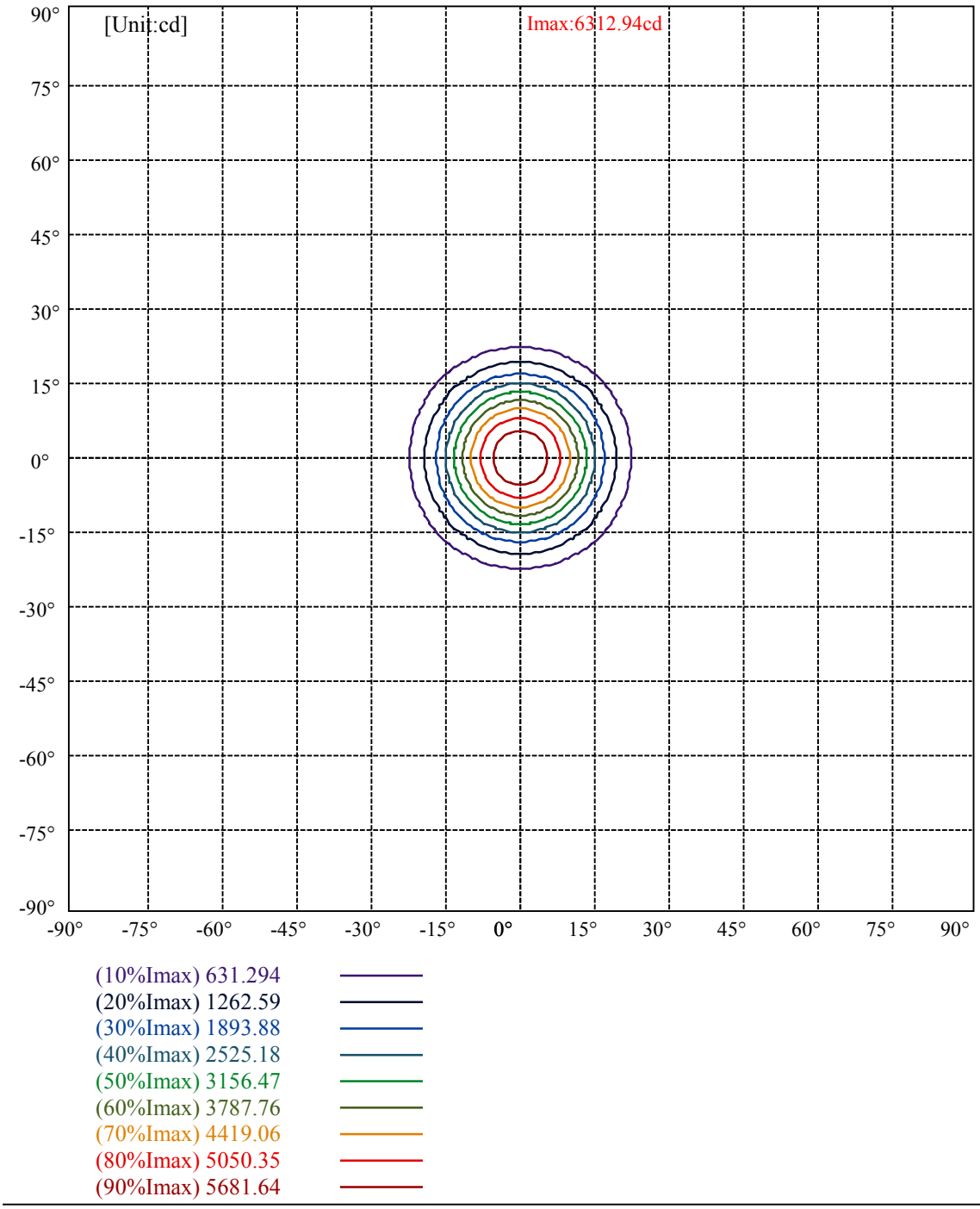
Beam Angle(50%Imax):C0/180Left:13.1 Right:13.1
:C90/270Left:13.1 Right:13.1

Lux distance Curve



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

ISO-Intensity(V-H)

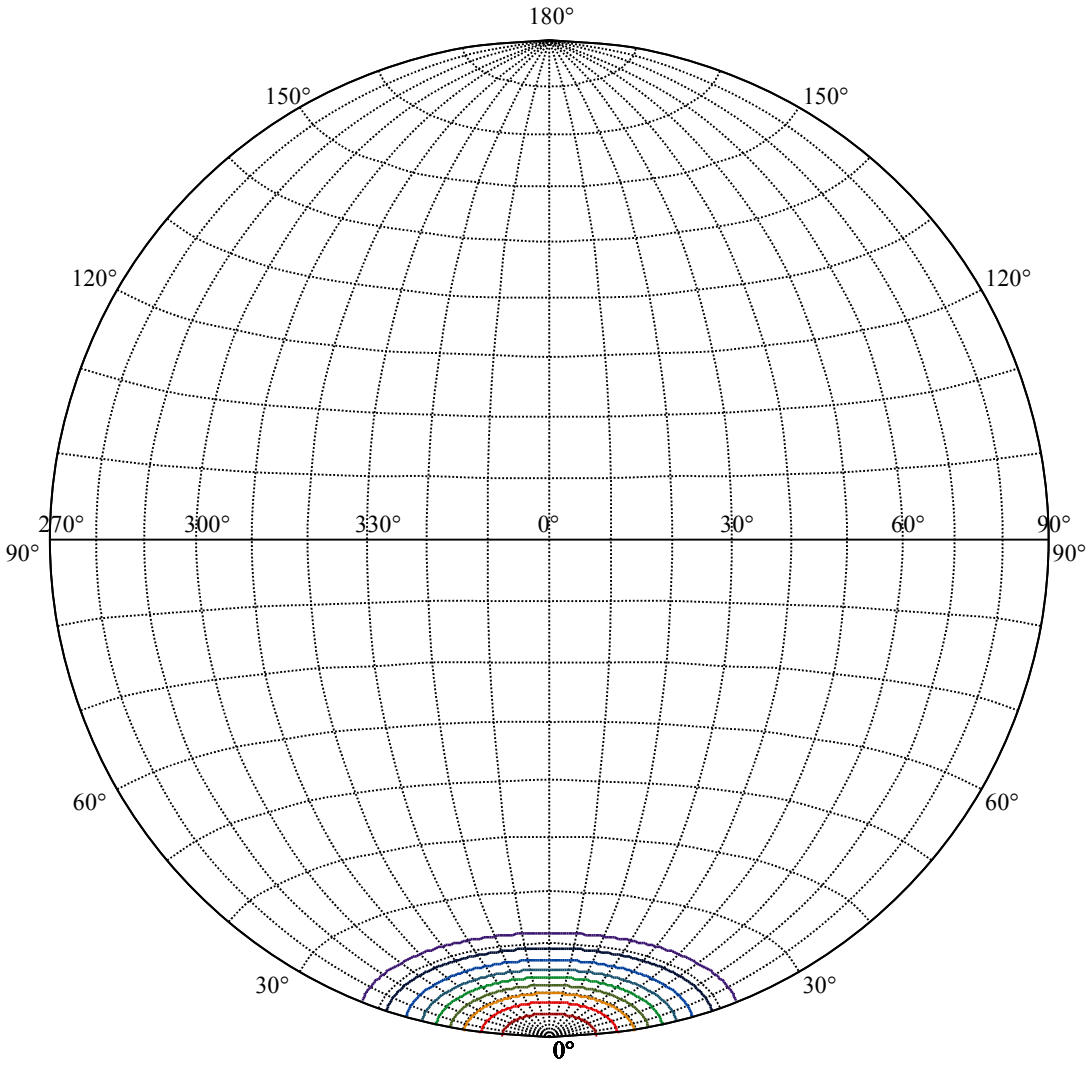


Equipment: GMS1980
Temperature(°C): 25.0

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

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



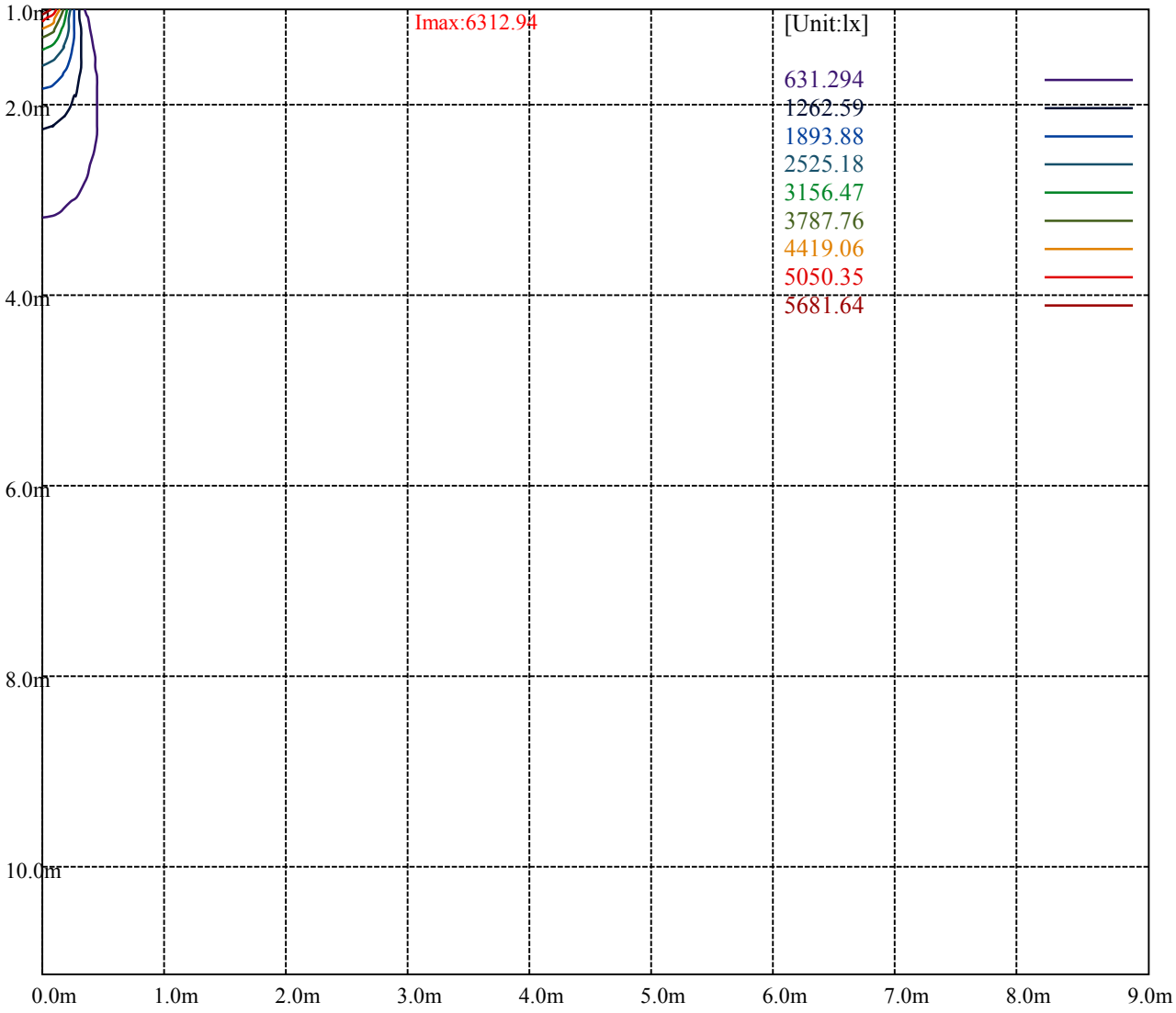
House [Unit:cd] Road

Imax:6312.94

(10%Imax) 631.294
(20%Imax) 1262.59
(30%Imax) 1893.88
(40%Imax) 2525.18
(50%Imax) 3156.47
(60%Imax) 3787.76
(70%Imax) 4419.06
(80%Imax) 5050.35
(90%Imax) 5681.64

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

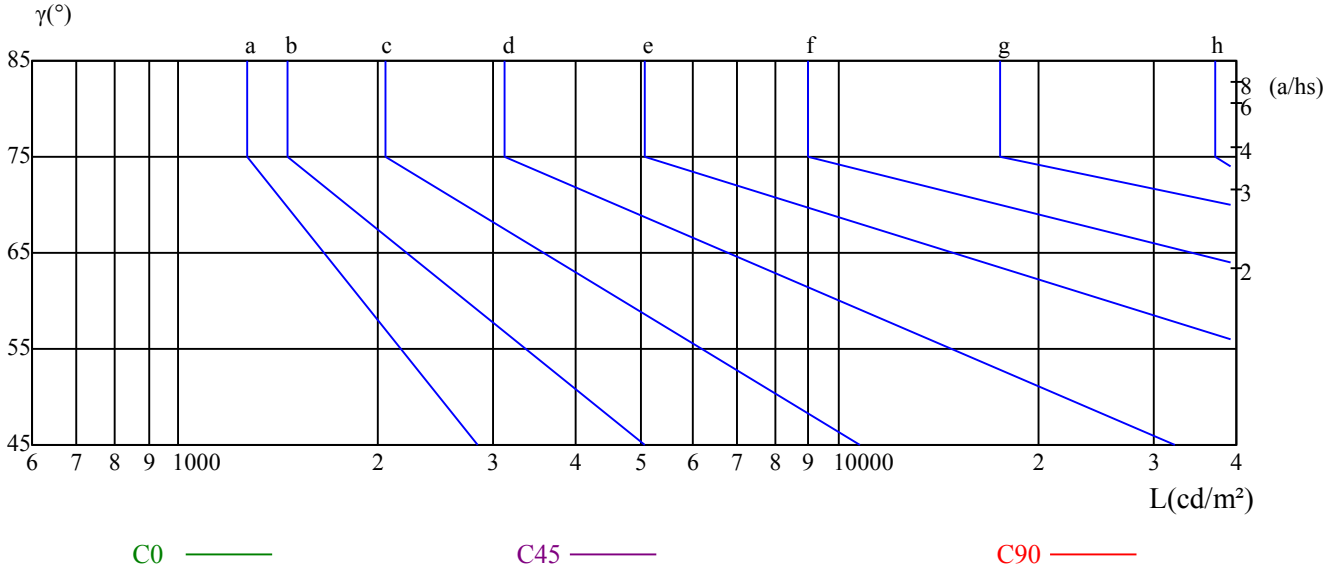
γ	45	50	55	60	65	70	75	80	85
C0	272	267	270	278	293	313	342	383	441
C45	293	290	298	310	331	360	402	461	550
C90	379	391	421	464	531	635	804	1124	1913

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
571	571	571	910	910	910	2680	2680	2680

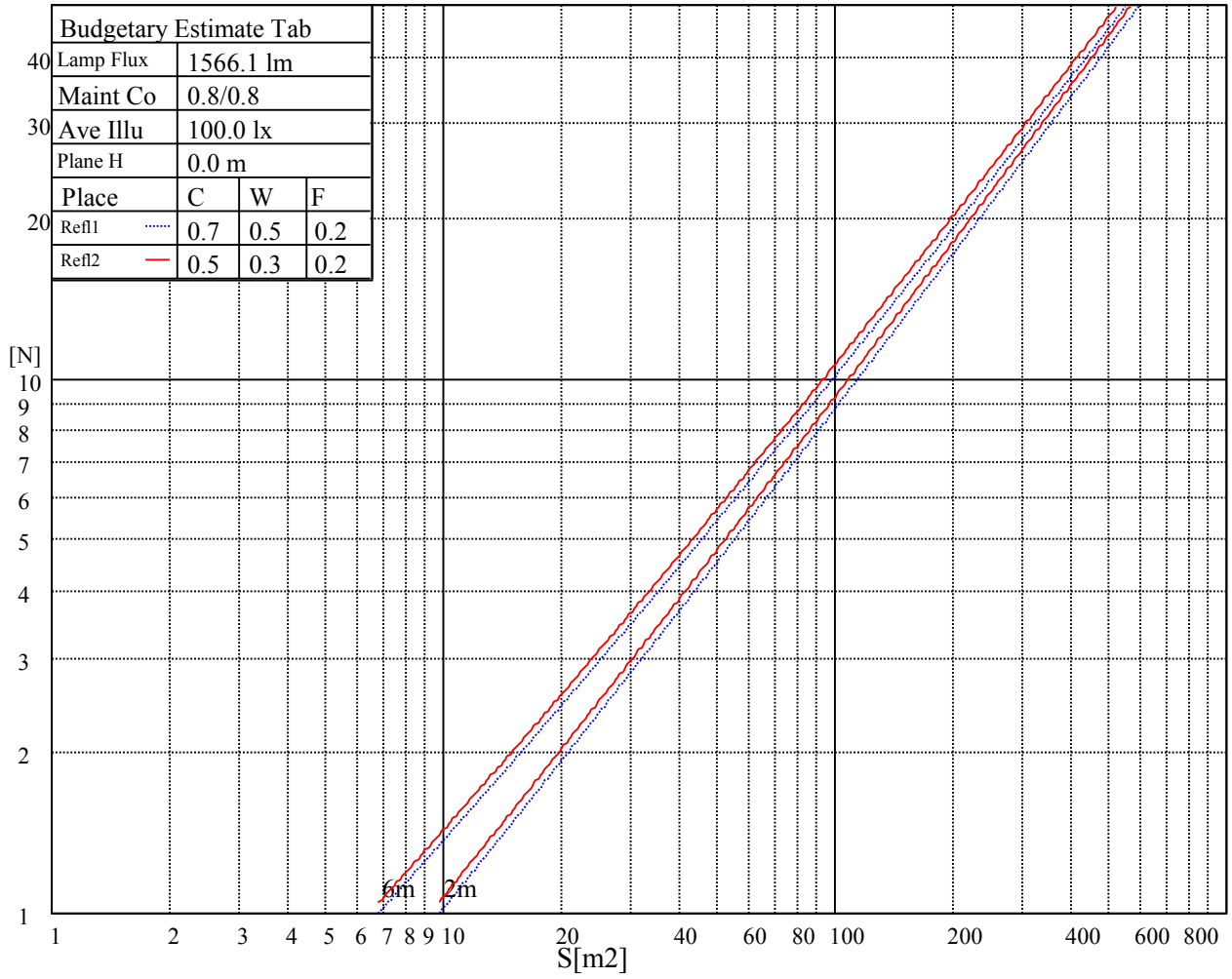
Glare Table

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

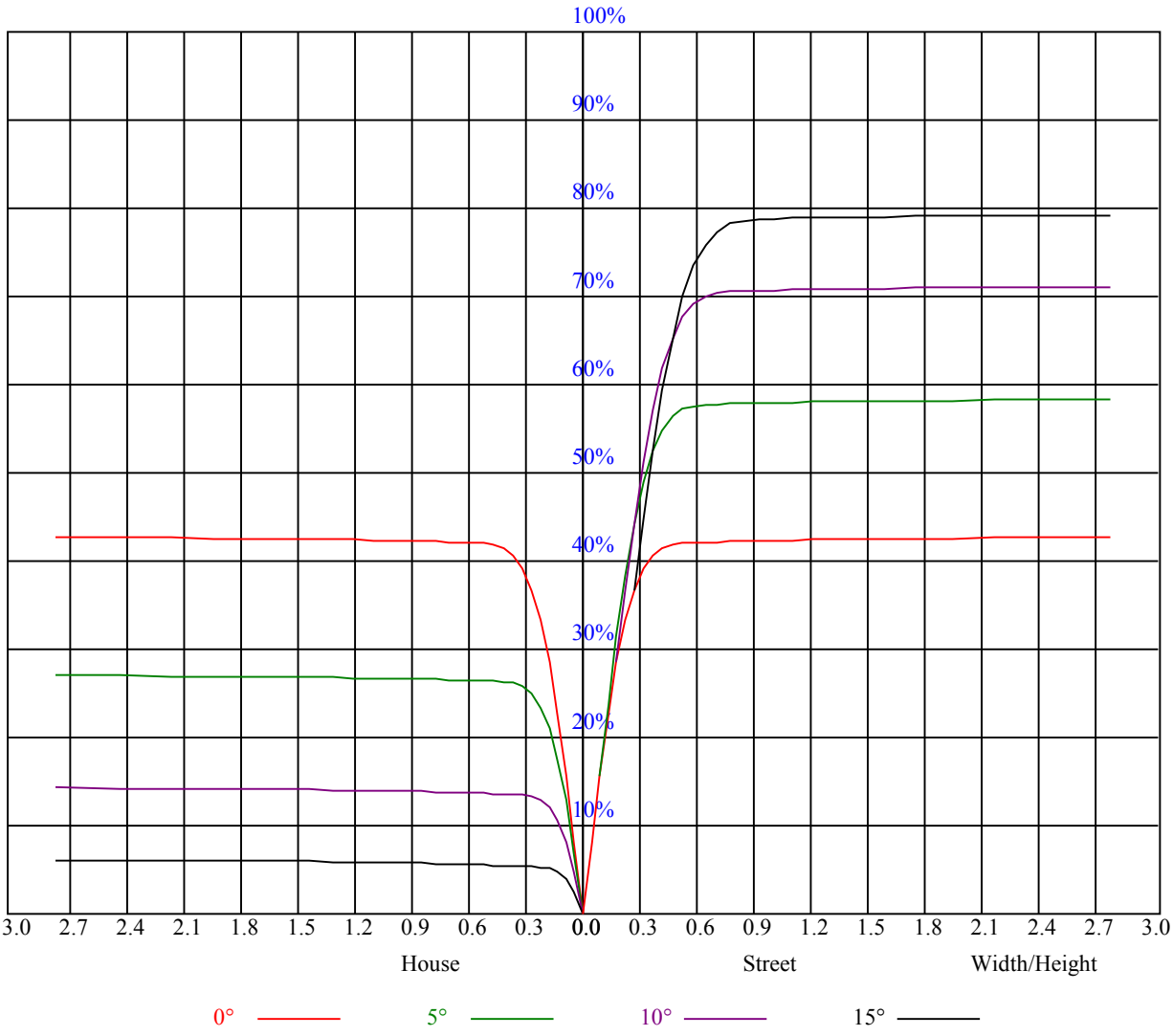


Equipment: GMS1980 Date: 2021/7/16 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	1.02	1.02	1.02	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.97	0.95	0.94	0.95	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	0.93	0.90	0.88	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.84	0.83	0.82	0.80
3	0.89	0.86	0.83	0.88	0.85	0.83	0.86	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.79	0.78
4	0.86	0.82	0.80	0.85	0.82	0.79	0.83	0.81	0.78	0.82	0.79	0.78	0.80	0.78	0.77	0.76
5	0.83	0.79	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.78	0.76	0.75	0.74
6	0.80	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.77	0.74	0.73	0.72
7	0.78	0.75	0.72	0.77	0.74	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.75	0.73	0.71	0.70
8	0.76	0.72	0.70	0.75	0.72	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.73	0.71	0.69	0.68
9	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.72	0.69	0.68	0.67
10	0.72	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.65

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/16
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	6314.06	6337.13	6301.69	6222.94	6095.81	5892.19	5713.31	5497.31	5225.06
45.0	6317.44	6288.19	6189.75	6033.94	5876.44	5694.75	5415.75	5159.25	4872.94
90.0	6293.81	6221.81	6086.81	5899.50	5712.19	5506.88	5253.19	4887.00	4560.19
135.0	6326.44	6279.19	6164.44	6024.94	5866.31	5643.00	5411.25	5158.13	4827.38
180.0	6314.06	6255.56	6144.75	5990.63	5838.75	5645.81	5429.81	5141.25	4807.69
225.0	6317.44	6302.25	6269.06	6165.00	6036.19	5876.44	5701.50	5464.13	5216.63
270.0	6293.81	6321.94	6315.75	6266.81	6171.19	6013.13	5841.56	5661.00	5480.44
315.0	6326.44	6329.25	6294.94	6209.44	6079.50	5898.38	5718.94	5488.88	5218.88
360.0	6314.06	6337.13	6301.69	6222.94	6095.81	5892.19	5713.31	5497.31	5225.06

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4924.69	4621.50	4242.94	3882.94	3459.94	3036.38	2676.94	2295.56	1944.00
45.0	4457.81	4102.31	3715.31	3280.50	2870.44	2525.06	2162.81	1830.94	1587.38
90.0	4206.94	3787.31	3360.38	2996.44	2644.88	2235.38	1936.69	1668.94	1395.00
135.0	4462.88	4108.50	3682.69	3307.50	2891.81	2549.25	2193.19	1853.44	1600.31
180.0	4489.88	4110.75	3709.13	3343.50	2980.69	2549.81	2229.19	1927.69	1586.25
225.0	4935.94	4557.38	4228.88	3885.19	3525.19	3062.25	2712.94	2380.50	2030.63
270.0	5138.44	4855.50	4591.13	4186.13	3794.06	3473.44	3013.88	2610.56	2314.13
315.0	4958.44	4627.69	4249.69	3898.13	3534.75	3066.19	2710.69	2373.19	2014.88
360.0	4924.69	4621.50	4242.94	3882.94	3459.94	3036.38	2676.94	2295.56	1944.00

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1672.31	1420.88	1145.25	942.75	756.00	547.88	401.06	288.56	167.57
45.0	1310.06	1094.06	866.25	676.13	517.50	353.81	294.19	131.68	64.52
90.0	1119.54	945.68	740.36	561.15	411.69	272.93	170.27	85.84	36.96
135.0	1314.00	1096.31	856.13	686.81	517.50	377.44	293.63	134.78	70.26
180.0	1249.31	1103.34	874.91	673.14	517.73	360.73	243.17	140.74	68.34
225.0	1713.38	1451.25	1099.18	948.38	756.45	569.64	420.08	280.69	165.88
270.0	1934.44	1660.50	1402.31	1114.88	905.63	721.13	519.19	378.56	298.69
315.0	1696.50	1440.00	1096.82	940.61	749.76	538.48	413.33	267.30	147.49
360.0	1672.31	1420.88	1145.25	942.75	756.00	547.88	401.06	288.56	167.57

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	75.15	36.90	22.61	16.65	14.40	13.16	12.04	11.19	10.46
45.0	26.49	18.17	14.74	13.11	11.93	11.08	10.35	9.79	9.34
90.0	21.32	16.20	13.39	12.26	11.36	10.52	9.96	9.51	9.06
135.0	30.26	19.69	14.74	12.83	11.76	10.91	10.24	9.68	9.23
180.0	36.79	21.32	14.34	12.71	11.64	10.74	10.01	9.51	9.06
225.0	88.88	48.38	24.86	17.21	14.34	12.71	11.70	10.80	10.01
270.0	131.29	68.34	38.48	22.56	15.92	14.01	12.66	11.59	10.74
315.0	85.84	44.38	22.50	17.10	14.51	12.77	11.87	11.03	10.24
360.0	75.15	36.90	22.61	16.65	14.40	13.16	12.04	11.19	10.46

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	9.84	9.34	8.94	8.55	8.27	8.04	7.82	7.65	7.48
45.0	8.94	8.61	8.33	8.04	7.82	7.65	7.48	7.37	7.26
90.0	8.66	8.38	8.16	7.88	7.71	7.54	7.43	7.31	7.14
135.0	8.83	8.49	8.21	7.93	7.76	7.59	7.43	7.31	7.20
180.0	8.61	8.33	8.04	7.82	7.59	7.48	7.31	7.20	7.03
225.0	9.39	8.89	8.49	8.10	7.82	7.59	7.37	7.20	7.09
270.0	10.01	9.45	8.94	8.49	8.21	7.99	7.71	7.54	7.37
315.0	9.62	9.11	8.72	8.33	8.04	7.82	7.65	7.48	7.31
360.0	9.84	9.34	8.94	8.55	8.27	8.04	7.82	7.65	7.48

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	7.31	7.26	7.14	7.09	6.98	6.92	6.86	6.75	6.69
45.0	7.14	7.03	6.98	6.86	6.81	6.75	6.69	6.64	6.58
90.0	7.09	6.98	6.92	6.86	6.75	6.69	6.64	6.58	6.53
135.0	7.09	6.98	6.92	6.86	6.81	6.75	6.69	6.64	6.58
180.0	6.98	6.92	6.81	6.81	6.69	6.64	6.64	6.58	6.53
225.0	6.98	6.86	6.75	6.69	6.64	6.53	6.53	6.47	6.41
270.0	7.20	7.09	7.03	6.92	6.81	6.75	6.69	6.64	6.58
315.0	7.20	7.09	7.03	6.92	6.86	6.75	6.69	6.64	6.58
360.0	7.31	7.26	7.14	7.09	6.98	6.92	6.86	6.75	6.69

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.64	6.64	6.58	6.53	6.47	6.41	6.41	6.36	6.36
45.0	6.47	6.47	6.41	6.36	6.36	6.30	6.24	6.24	6.19
90.0	6.47	6.47	6.41	6.41	6.36	6.30	6.30	6.24	6.24
135.0	6.53	6.53	6.47	6.41	6.41	6.41	6.36	6.30	6.30
180.0	6.47	6.47	6.41	6.36	6.36	6.30	6.30	6.24	6.24
225.0	6.36	6.36	6.30	6.24	6.19	6.19	6.13	6.13	6.13
270.0	6.58	6.53	6.47	6.41	6.41	6.36	6.36	6.30	6.30
315.0	6.58	6.53	6.47	6.47	6.41	6.36	6.36	6.30	6.24
360.0	6.64	6.64	6.58	6.53	6.47	6.41	6.41	6.36	6.36

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	6.36	6.30	6.30	6.24	6.19	6.19	6.19	6.19	6.19
45.0	6.19	6.13	6.13	6.08	6.08	6.08	6.02	6.02	6.02
90.0	6.24	6.19	6.19	6.13	6.13	6.13	6.08	6.08	6.08
135.0	6.30	6.24	6.24	6.19	6.19	6.13	6.19	6.13	6.13
180.0	6.19	6.19	6.19	6.13	6.13	6.13	6.13	6.13	6.08
225.0	6.08	6.08	6.08	6.02	6.02	6.02	5.96	5.96	5.96
270.0	6.24	6.24	6.19	6.24	6.24	6.19	6.19	6.19	6.13
315.0	6.24	6.24	6.24	6.19	6.19	6.13	6.19	6.13	6.13
360.0	6.36	6.30	6.30	6.24	6.19	6.19	6.19	6.19	6.19

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.13	6.13	6.13	6.13	6.08	6.08	6.08	6.08	6.08
45.0	5.96	5.96	5.96	5.91	5.91	5.91	5.91	5.91	5.91
90.0	6.02	6.02	6.02	6.02	6.02	6.02	6.02	5.96	6.02
135.0	6.08	6.08	6.08	6.08	6.08	6.02	6.02	6.02	6.02
180.0	6.08	6.08	6.08	6.08	6.02	6.02	6.02	6.02	6.02
225.0	5.91	5.91	5.91	5.91	5.91	5.91	5.91	5.91	5.91
270.0	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.08
315.0	6.08	6.08	6.08	6.08	6.08	6.08	6.02	6.02	6.02
360.0	6.13	6.13	6.13	6.13	6.08	6.08	6.08	6.08	6.08

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	5.96
45.0	5.91	5.91	5.85	5.85	5.85	5.85	5.85	5.85	5.85
90.0	6.02	6.13	6.13	6.02	5.91	5.91	5.91	5.91	5.91
135.0	6.02	6.02	6.02	6.02	6.02	5.96	6.02	6.02	6.02
180.0	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	5.96
225.0	5.91	5.91	5.85	5.85	5.85	5.85	5.85	5.85	5.85
270.0	6.13	6.08	6.08	6.13	6.24	5.91	5.91	5.96	5.96
315.0	6.02	6.02	6.02	5.96	6.02	5.96	5.96	5.96	5.96
360.0	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	5.96

Intensity data(cd)

C/γ(°)	90.0
0.0	6.02
45.0	5.85
90.0	5.91
135.0	5.96
180.0	6.02
225.0	5.85
270.0	5.91
315.0	5.96
360.0	6.02