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Nata

LumCAT: 1-0927-M
Luminaire: 92.70.124.00

Report No: 210713-B009	Voltage(V): 38.9800
Test No: 210713-C009	Current(A): 0.2310
LampCAT: Fortimo LED SLM 1201 G7N	Power (W): 9.0040
Lamp flux(lm): 1070.7	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): 817.92
Efficiency(%): 76.39%
Lumens(lm)/Power(W): 90.84
Central intensity(cd): 4024.266
Maximum intensity(cd): 4024.266
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=26.0
[C90/270]Total=26.0
Field angle(10%Imax): [C0/180]Total=42.3
[C90/270]Total=42.3
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.39%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.454%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4024.266	0.000	0	.000%	.000%
1.0	4014.844	3.847	3.847	.359%	.470%
2.0	3970.969	11.462	15.309	1.070%	1.872%
3.0	3900.938	18.827	34.136	1.758%	4.173%
4.0	3808.758	25.807	59.942	2.410%	7.329%
5.0	3680.859	32.220	92.162	3.009%	11.268%
6.0	3534.961	37.921	130.083	3.542%	15.904%
7.0	3368.391	42.849	172.932	4.002%	21.143%
8.0	3180.797	46.871	219.804	4.378%	26.874%
9.0	2974.078	49.882	269.686	4.659%	32.972%
10.0	2746.055	51.765	321.451	4.835%	39.301%
11.0	2496.938	52.388	373.839	4.893%	45.706%
12.0	2259.492	51.995	425.834	4.856%	52.063%
13.0	2009.531	50.663	476.496	4.732%	58.257%
14.0	1742.836	48.030	524.526	4.486%	64.130%
15.0	1492.088	44.410	568.937	4.148%	69.559%
16.0	1275.202	40.549	609.485	3.787%	74.517%
17.0	1076.934	36.629	646.114	3.421%	78.995%
18.0	887.674	32.392	678.506	3.025%	82.955%
19.0	727.959	28.109	706.615	2.625%	86.392%
20.0	564.391	23.654	730.269	2.209%	89.284%
21.0	419.527	18.893	749.162	1.765%	91.594%
22.0	309.248	14.645	763.807	1.368%	93.384%
23.0	205.298	10.797	774.603	1.008%	94.704%
24.0	131.070	7.354	781.958	.687%	95.604%
25.0	65.728	4.475	786.432	.418%	96.151%
26.0	33.996	2.354	788.786	.220%	96.438%
27.0	20.700	1.338	790.125	.125%	96.602%
28.0	14.597	0.894	791.018	.083%	96.711%
29.0	12.185	0.701	791.719	.065%	96.797%
30.0	10.807	0.621	792.34	.058%	96.873%
31.0	9.830	0.574	792.914	.054%	96.943%
32.0	9.035	0.540	793.454	.050%	97.009%
33.0	8.360	0.512	793.967	.048%	97.072%
34.0	7.819	0.490	794.457	.046%	97.132%
35.0	7.334	0.471	794.927	.044%	97.189%
36.0	6.926	0.454	795.381	.042%	97.245%
37.0	6.630	0.442	795.823	.041%	97.299%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	6.335	0.433	796.256	.040%	97.352%
39.0	6.068	0.423	796.679	.040%	97.403%
40.0	5.899	0.417	797.097	.039%	97.455%
41.0	5.723	0.414	797.511	.039%	97.505%
42.0	5.562	0.410	797.921	.038%	97.555%
43.0	5.442	0.408	798.328	.038%	97.605%
44.0	5.351	0.407	798.736	.038%	97.655%
45.0	5.266	0.408	799.144	.038%	97.705%
46.0	5.168	0.408	799.552	.038%	97.755%
47.0	5.077	0.407	799.959	.038%	97.804%
48.0	5.013	0.408	800.367	.038%	97.854%
49.0	4.950	0.409	800.776	.038%	97.904%
50.0	4.873	0.410	801.186	.038%	97.954%
51.0	4.802	0.409	801.595	.038%	98.004%
52.0	4.676	0.407	802.002	.038%	98.054%
53.0	4.598	0.403	802.405	.038%	98.104%
54.0	4.570	0.404	802.809	.038%	98.153%
55.0	4.535	0.406	803.216	.038%	98.203%
56.0	4.507	0.409	803.624	.038%	98.253%
57.0	4.451	0.410	804.034	.038%	98.303%
58.0	4.430	0.411	804.445	.038%	98.353%
59.0	4.395	0.413	804.857	.039%	98.403%
60.0	4.359	0.414	805.271	.039%	98.454%
61.0	4.303	0.413	805.684	.039%	98.504%
62.0	4.268	0.413	806.097	.039%	98.555%
63.0	4.247	0.414	806.511	.039%	98.606%
64.0	4.219	0.415	806.927	.039%	98.656%
65.0	4.170	0.415	807.342	.039%	98.707%
66.0	4.078	0.412	807.753	.038%	98.757%
67.0	4.071	0.410	808.163	.038%	98.808%
68.0	4.064	0.412	808.575	.038%	98.858%
69.0	4.050	0.414	808.989	.039%	98.908%
70.0	4.029	0.415	809.404	.039%	98.959%
71.0	4.022	0.416	809.82	.039%	99.010%
72.0	3.987	0.416	810.237	.039%	99.061%
73.0	3.987	0.417	810.653	.039%	99.112%
74.0	3.980	0.419	811.072	.039%	99.163%
75.0	3.973	0.420	811.492	.039%	99.215%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.966	0.421	811.914	.039%	99.266%
77.0	3.909	0.420	812.334	.039%	99.317%
78.0	3.923	0.419	812.753	.039%	99.369%
79.0	3.909	0.421	813.174	.039%	99.420%
80.0	3.895	0.421	813.595	.039%	99.472%
81.0	3.959	0.425	814.019	.040%	99.524%
82.0	3.973	0.430	814.449	.040%	99.576%
83.0	4.036	0.435	814.885	.041%	99.629%
84.0	4.043	0.440	815.325	.041%	99.683%
85.0	4.015	0.440	815.765	.041%	99.737%
86.0	4.043	0.440	816.205	.041%	99.791%
87.0	3.895	0.434	816.64	.041%	99.844%
88.0	3.888	0.426	817.066	.040%	99.896%
89.0	3.881	0.426	817.492	.040%	99.948%
90.0	3.867	0.425	817.917	.040%	100.000%

Zonal flux distribution table

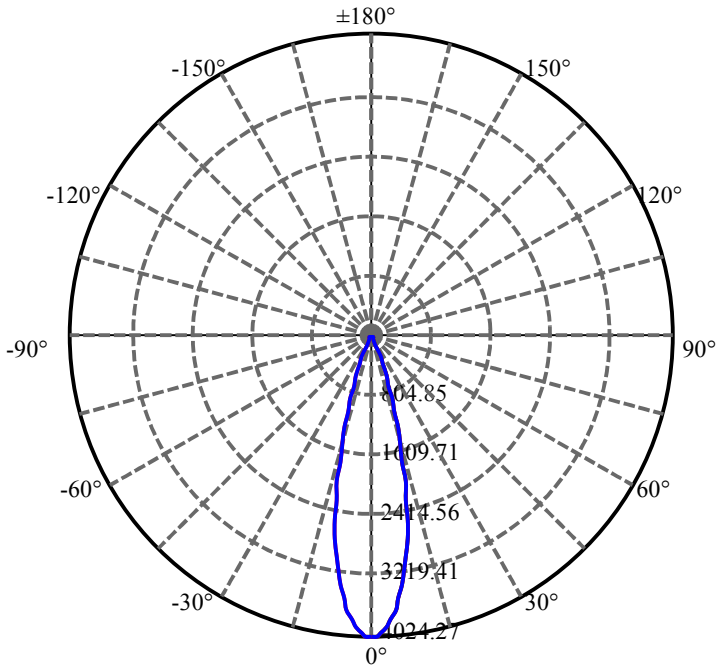
ZONAL LUMEN SUMMARY

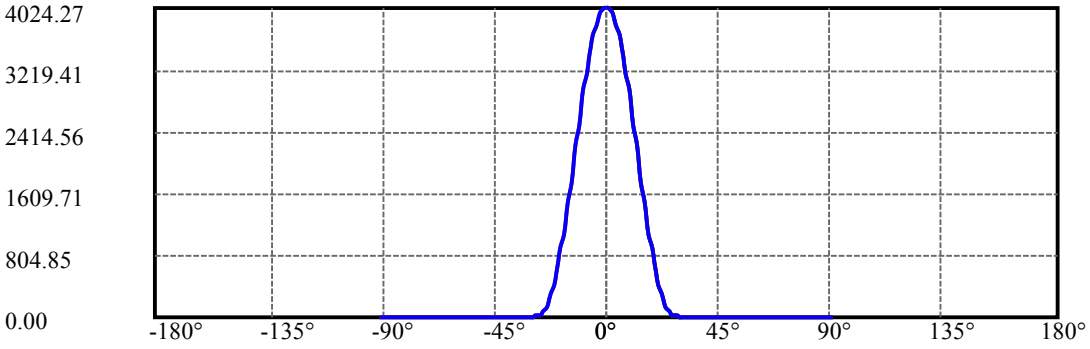
Zone	Lumens	%Lamp	%Fixt
0-30	792.34	74.00%	96.87%
0-40	797.10	74.44%	97.45%
0-60	805.27	75.21%	98.45%
0-90	817.49	76.35%	99.95%
0-120	817.49	76.35%	99.95%
0-180	817.92	76.39%	100.00%
60-90	12.63	1.18%	1.54%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.25	654.33	61.11%	80.00%

ZONAL LUMEN SUMMARY

0-10	321.45
10-20	408.82
20-30	62.07
30-40	4.76
40-50	4.09
50-60	4.08
60-70	4.13
70-80	4.19
80-90	3.90
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):

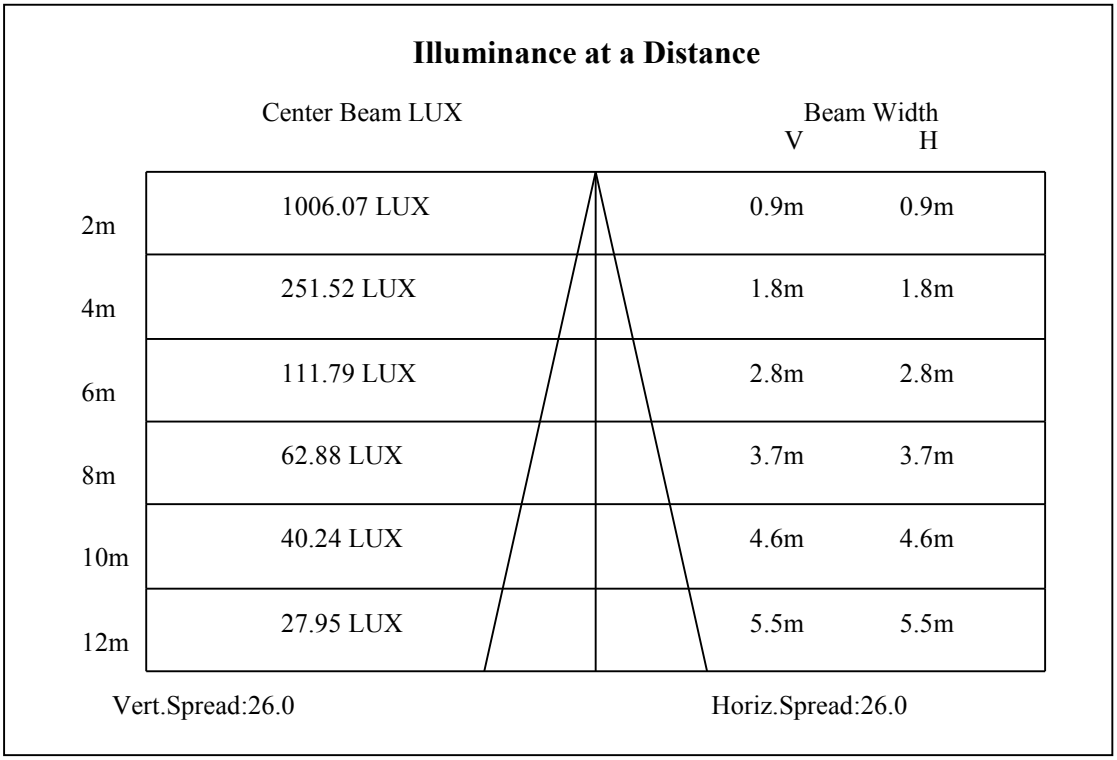
C0/C180:

C90/C270:

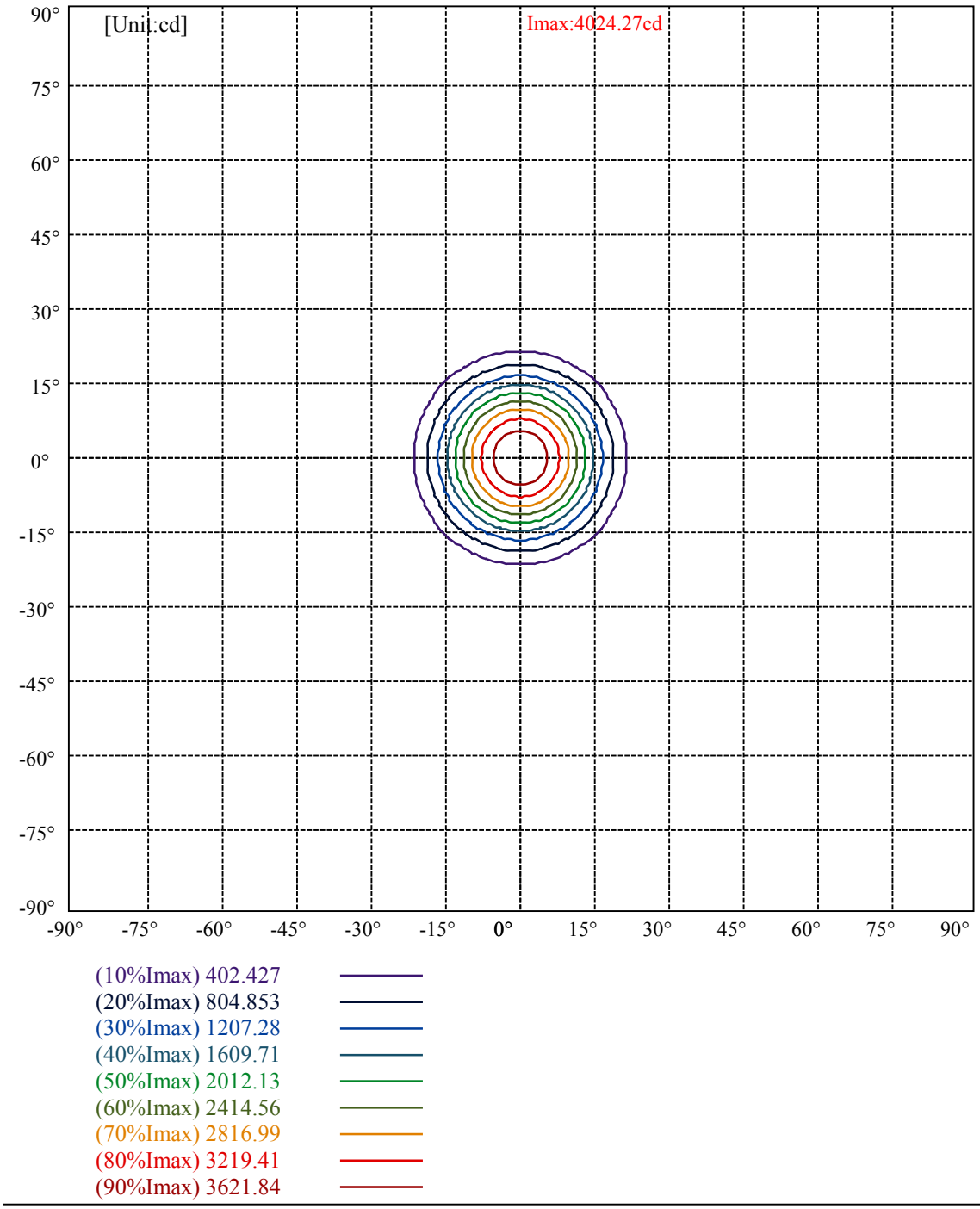
Field angle(10%Imax):C0/180Left:21.2 Right:21.2
:C90/270Left:21.2 Right:21.2

Beam Angle(50%Imax):C0/180Left:13.0 Right:13.0
:C90/270Left:13.0 Right:13.0

Lux distance Curve



ISO-Intensity(V-H)



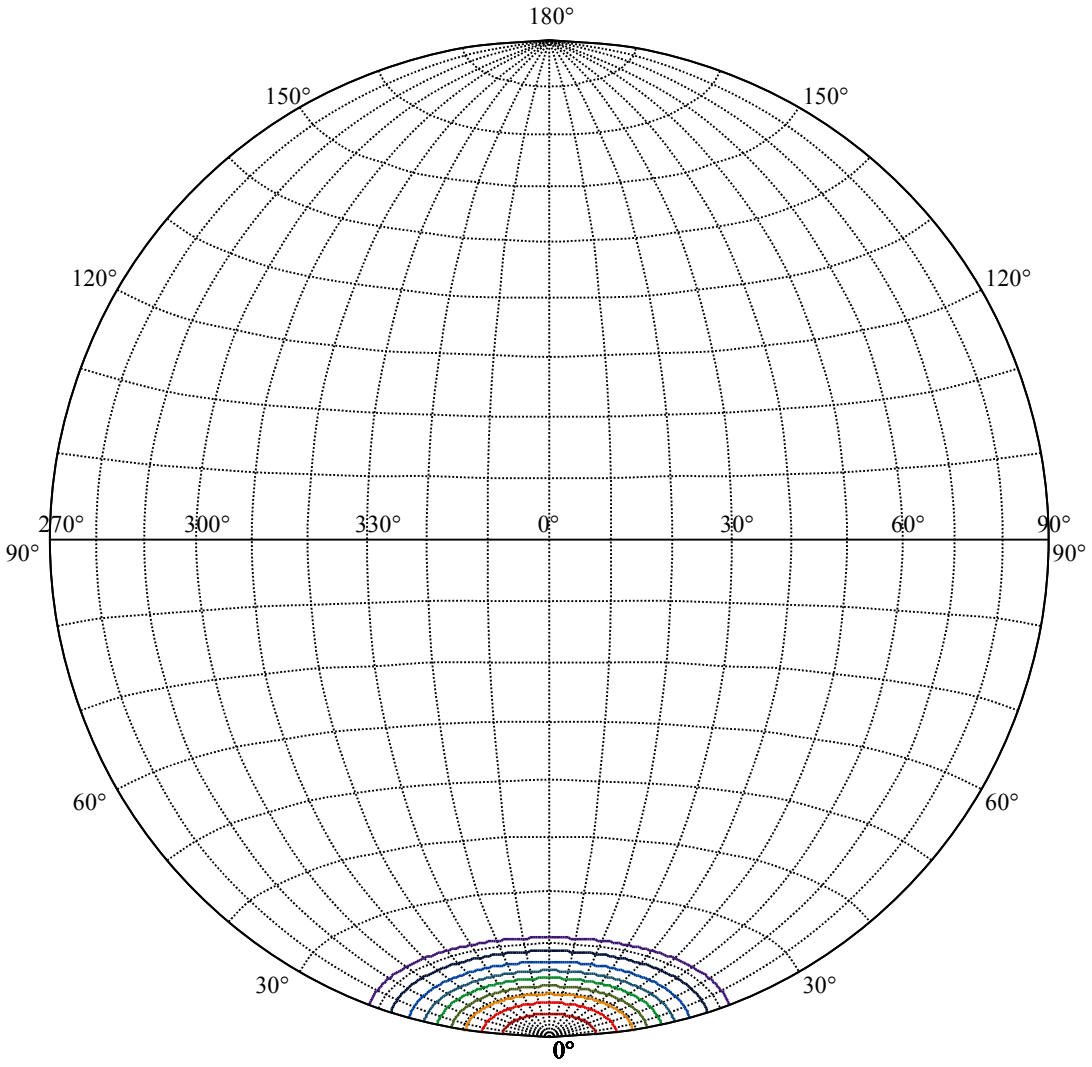
(10%Imax) 402.427
(20%Imax) 804.853
(30%Imax) 1207.28
(40%Imax) 1609.71
(50%Imax) 2012.13
(60%Imax) 2414.56
(70%Imax) 2816.99
(80%Imax) 3219.41
(90%Imax) 3621.84

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/13
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:4024.27

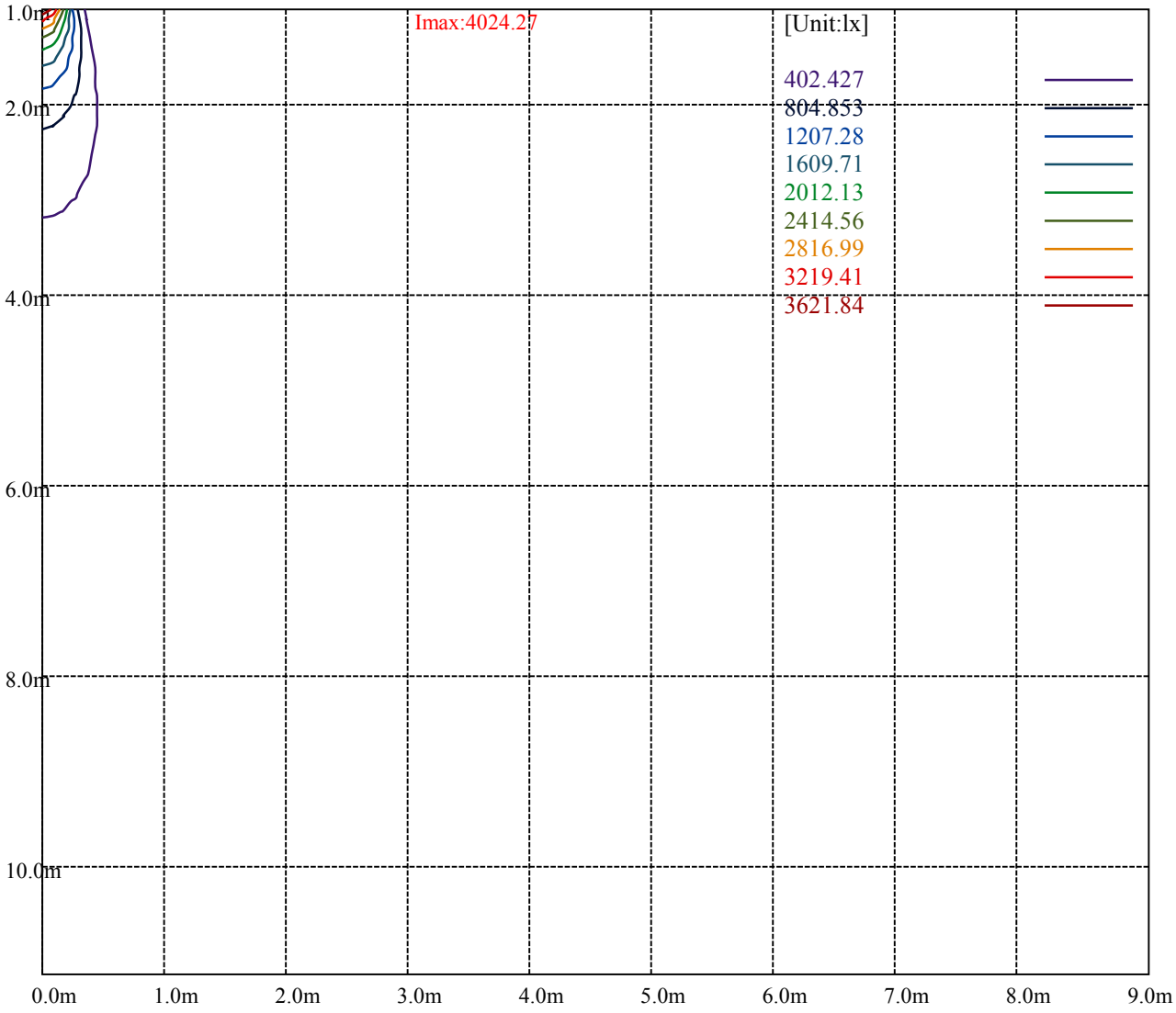
(10%Imax) 402.427
(20%Imax) 804.853
(30%Imax) 1207.28
(40%Imax) 1609.71
(50%Imax) 2012.13
(60%Imax) 2414.56
(70%Imax) 2816.99
(80%Imax) 3219.41
(90%Imax) 3621.84

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/13
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/13
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

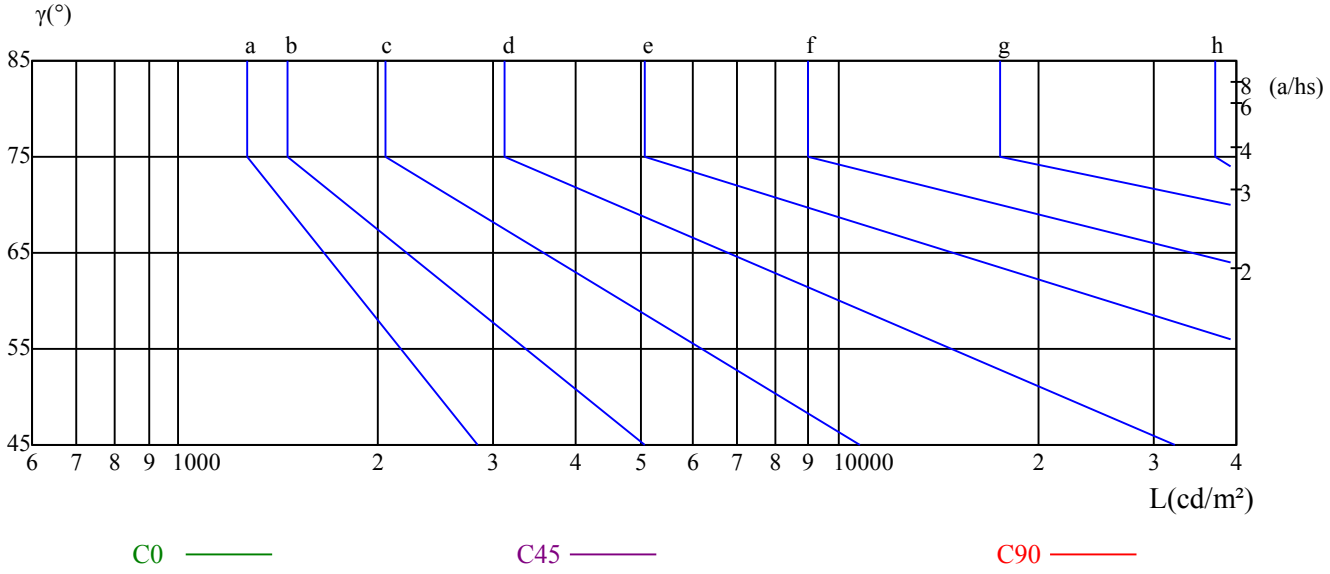
γ	45	50	55	60	65	70	75	80	85
C0	201	193	189	192	197	207	225	248	295
C45	217	210	208	214	223	238	264	299	368
C90	281	284	294	320	358	419	529	729	1282

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
385	385	385	598	598	598	1796	1796	1796

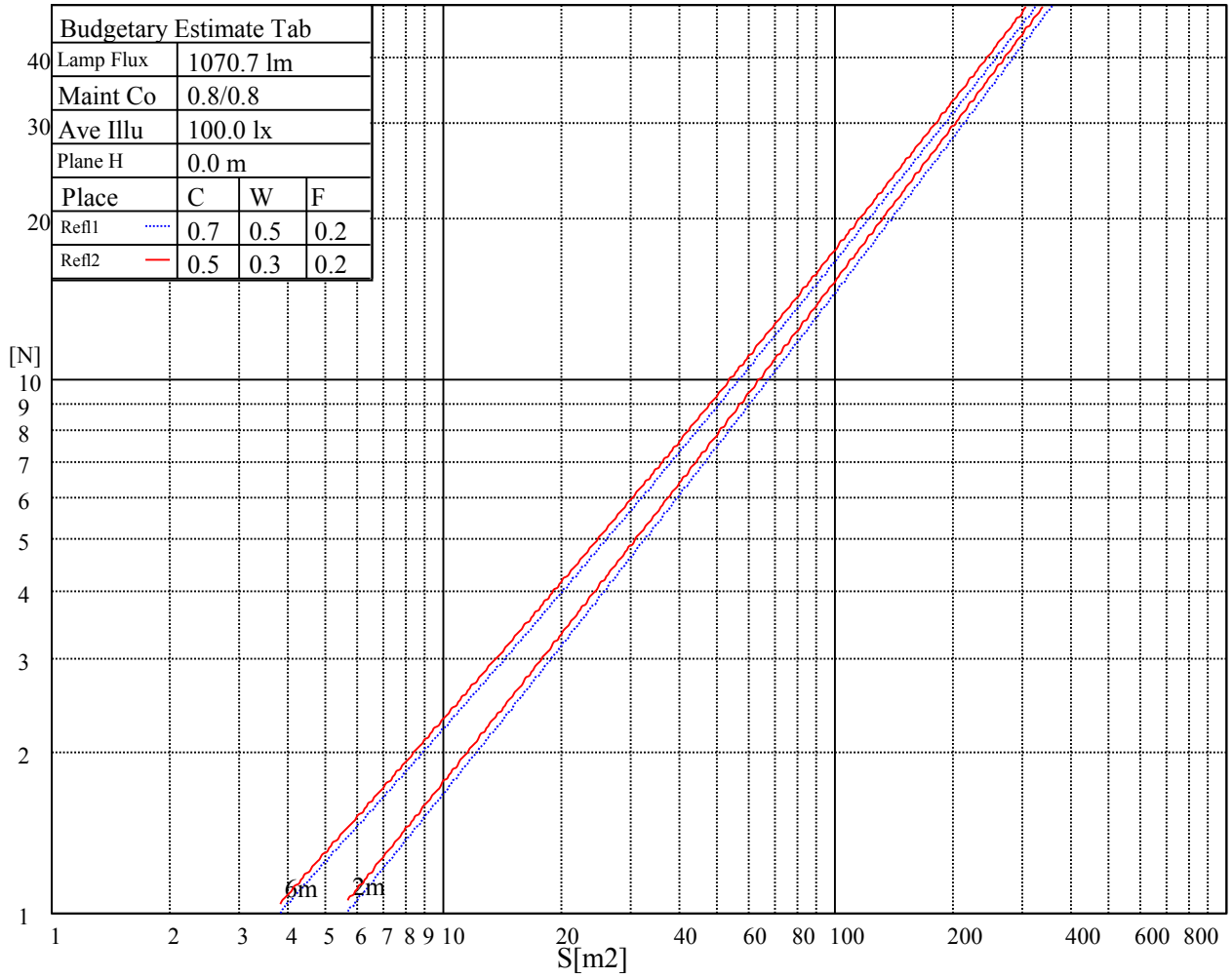
Glare Table

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

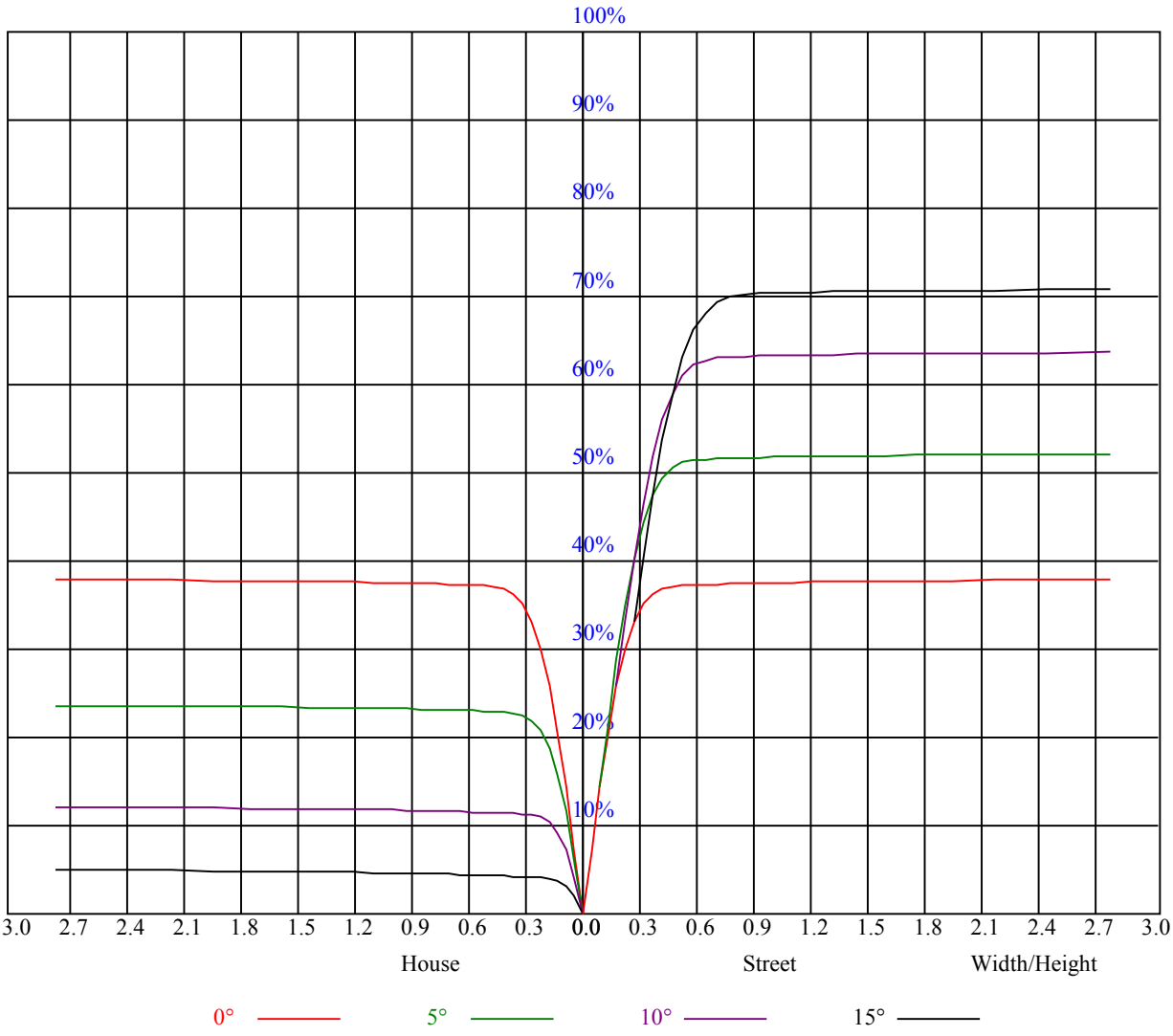


Equipment: GMS1980 Date: 2021/7/13 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.91	0.91	0.91	0.89	0.89	0.89	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.76
1	0.86	0.85	0.83	0.85	0.83	0.82	0.81	0.80	0.80	0.79	0.78	0.77	0.76	0.76	0.75	0.74
2	0.82	0.80	0.78	0.81	0.79	0.77	0.79	0.77	0.76	0.76	0.75	0.74	0.74	0.73	0.73	0.71
3	0.79	0.76	0.74	0.78	0.76	0.74	0.76	0.74	0.73	0.74	0.73	0.71	0.73	0.72	0.70	0.69
4	0.76	0.73	0.71	0.75	0.73	0.71	0.74	0.72	0.70	0.73	0.71	0.69	0.71	0.70	0.68	0.68
5	0.74	0.71	0.69	0.73	0.70	0.68	0.72	0.70	0.68	0.71	0.69	0.67	0.70	0.68	0.67	0.66
6	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.69	0.67	0.65	0.68	0.66	0.65	0.64
7	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.68	0.65	0.64	0.67	0.65	0.63	0.63
8	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.65	0.63	0.62	0.61
9	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.61	0.60
10	0.64	0.62	0.60	0.64	0.62	0.60	0.64	0.61	0.60	0.63	0.61	0.59	0.63	0.61	0.59	0.59

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2021/7/13	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	3992.06	4024.69	4038.75	4024.13	3987.56	3891.94	3793.50	3688.88	3501.00
45.0	4034.81	4061.25	4053.38	4025.25	3953.25	3866.63	3753.00	3585.38	3434.63
90.0	4046.63	4048.88	4025.25	3962.81	3879.00	3763.69	3633.19	3457.13	3266.44
135.0	4023.56	4012.88	3961.13	3903.19	3813.75	3662.44	3512.81	3350.81	3152.81
180.0	3992.06	3926.81	3825.00	3698.44	3566.81	3429.00	3249.56	3029.06	2828.25
225.0	4034.81	3997.13	3920.06	3807.00	3687.75	3544.31	3358.13	3160.69	2976.19
270.0	4046.63	4030.31	3971.25	3894.75	3789.00	3623.06	3467.81	3295.13	3093.19
315.0	4023.56	4016.81	3972.94	3891.94	3792.94	3665.81	3511.69	3380.06	3193.88
360.0	3992.06	4024.69	4038.75	4024.13	3987.56	3891.94	3793.50	3688.88	3501.00

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3314.25	3162.38	2916.56	2697.75	2455.31	2152.69	1913.63	1653.19	1405.13
45.0	3264.19	3009.94	2779.88	2546.44	2248.31	2010.94	1774.69	1527.75	1284.75
90.0	3079.69	2844.56	2594.81	2358.56	2124.56	1833.75	1609.31	1400.06	1118.48
135.0	2946.38	2736.00	2473.88	2241.56	1976.06	1713.38	1494.00	1263.94	1047.38
180.0	2572.31	2311.31	2049.19	1810.69	1587.94	1351.13	1106.66	954.23	789.30
225.0	2747.25	2494.13	2262.94	1992.38	1759.50	1509.75	1106.66	1083.88	912.49
270.0	2872.69	2665.13	2410.31	2176.31	1911.38	1650.94	1432.13	1204.88	992.81
315.0	2995.88	2745.00	2487.94	2252.25	2013.19	1720.13	1499.63	1113.69	1065.15
360.0	3314.25	3162.38	2916.56	2697.75	2455.31	2152.69	1913.63	1653.19	1405.13

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1197.56	1009.69	796.50	654.75	506.25	367.88	285.19	151.26	73.07
45.0	1074.94	892.13	696.38	555.75	401.63	300.38	220.50	104.06	53.72
90.0	954.68	790.09	603.96	461.19	349.76	215.55	147.54	79.65	35.10
135.0	874.13	714.38	540.00	401.63	302.63	217.07	105.69	50.57	26.61
180.0	605.70	458.04	345.77	205.43	131.91	66.99	31.84	17.33	13.33
225.0	686.98	567.45	433.74	280.52	182.98	120.04	52.71	27.06	17.83
270.0	828.56	677.81	512.44	385.88	291.94	161.04	88.65	43.93	25.54
315.0	878.85	714.09	586.35	411.08	306.90	193.44	116.44	51.98	26.78
360.0	1197.56	1009.69	796.50	654.75	506.25	367.88	285.19	151.26	73.07

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	37.29	22.44	15.53	12.77	11.19	9.96	9.11	8.33	7.65
45.0	30.77	16.99	13.50	11.87	10.69	9.84	9.17	8.61	8.04
90.0	22.22	14.68	12.26	11.19	10.29	9.39	8.83	8.38	7.88
135.0	15.75	12.94	11.31	10.29	9.34	8.72	7.93	7.31	6.81
180.0	11.42	10.18	9.28	8.44	7.82	7.26	6.75	6.41	6.08
225.0	14.34	12.43	11.36	10.35	9.62	8.94	8.38	7.88	7.48
270.0	15.98	13.50	12.32	10.97	10.07	9.39	8.66	8.16	7.76
315.0	17.83	13.61	11.93	10.58	9.62	8.78	8.04	7.48	6.98
360.0	37.29	22.44	15.53	12.77	11.19	9.96	9.11	8.33	7.65

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	7.14	6.69	6.24	5.96	5.68	5.40	5.23	5.06	4.89
45.0	7.65	7.37	7.14	6.81	6.64	6.41	6.24	6.08	6.02
90.0	7.48	7.20	6.86	6.58	6.41	6.24	6.08	5.91	5.79
135.0	6.53	6.24	5.91	5.68	5.57	5.40	5.23	5.23	5.29
180.0	5.79	5.57	5.34	5.18	5.06	4.95	4.84	4.73	4.61
225.0	7.03	6.75	6.53	6.30	6.13	6.02	5.91	5.74	5.63
270.0	7.26	6.98	6.69	6.41	6.24	6.08	5.91	5.79	5.68
315.0	6.53	6.24	5.96	5.63	5.46	5.29	5.06	5.01	4.89
360.0	7.14	6.69	6.24	5.96	5.68	5.40	5.23	5.06	4.89

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	4.84	4.67	4.56	4.50	4.44	4.39	4.28	4.28	4.16
45.0	5.91	5.79	5.68	5.68	5.57	5.46	5.40	5.34	5.29
90.0	5.68	5.57	5.51	5.40	5.34	5.29	5.18	5.12	5.12
135.0	5.12	5.06	4.95	4.89	4.78	4.67	4.61	4.56	4.33
180.0	4.56	4.50	4.39	4.33	4.28	4.22	4.16	4.16	4.11
225.0	5.57	5.46	5.40	5.34	5.29	5.23	5.18	5.12	5.12
270.0	5.68	5.63	5.51	5.46	5.40	5.34	5.29	4.56	4.39
315.0	4.78	4.67	4.61	4.50	4.50	4.39	4.33	4.28	4.28
360.0	4.84	4.67	4.56	4.50	4.44	4.39	4.28	4.28	4.16

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	4.16	4.11	4.05	3.99	3.99	3.99	3.94	3.94	3.88
45.0	5.23	5.23	5.18	5.12	5.12	5.06	5.01	4.89	4.84
90.0	5.06	5.01	4.95	4.89	4.89	4.84	4.78	4.73	4.61
135.0	4.50	4.50	4.44	4.39	4.39	4.33	4.33	4.28	4.22
180.0	4.05	4.05	3.99	3.99	3.94	3.88	3.88	3.83	3.83
225.0	5.06	5.01	5.01	4.95	4.89	4.89	4.84	4.84	4.84
270.0	4.33	4.28	4.28	4.22	4.16	4.11	4.11	4.05	4.05
315.0	4.16	4.11	4.16	4.05	4.05	4.05	3.99	3.88	3.88
360.0	4.16	4.11	4.05	3.99	3.99	3.99	3.94	3.94	3.88

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.88	3.83	3.83	3.77	3.77	3.77	3.77	3.71	3.71
45.0	4.84	4.78	4.73	4.67	4.61	4.61	4.61	4.61	4.61
90.0	4.56	4.56	4.50	4.44	4.50	4.56	4.50	4.50	4.44
135.0	4.22	4.11	4.11	4.11	4.05	3.99	3.99	3.99	3.99
180.0	3.83	3.77	3.77	3.71	3.71	3.71	3.71	3.71	3.71
225.0	4.78	4.78	4.56	4.11	4.11	4.11	4.11	4.05	4.05
270.0	3.99	3.99	3.99	3.94	3.94	3.88	3.88	3.88	3.83
315.0	3.88	3.94	3.88	3.88	3.88	3.88	3.83	3.77	3.83
360.0	3.88	3.83	3.83	3.77	3.77	3.77	3.77	3.71	3.71

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.71	3.71	3.71	3.71	3.71	3.66	3.66	3.66	3.66
45.0	4.50	4.50	4.50	4.50	4.44	4.44	4.44	4.39	4.39
90.0	4.44	4.44	4.39	4.39	4.33	4.33	4.28	4.22	4.28
135.0	3.88	3.99	3.99	3.94	3.94	3.66	3.77	3.66	3.60
180.0	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.60
225.0	4.05	3.99	3.99	3.99	4.05	3.99	3.99	4.05	4.05
270.0	3.88	3.83	3.83	3.83	3.83	3.83	3.83	3.88	3.88
315.0	3.77	3.77	3.77	3.77	3.77	3.71	3.77	3.77	3.71
360.0	3.71	3.71	3.71	3.71	3.71	3.66	3.66	3.66	3.66

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.66	3.71	4.44	4.44	4.50	4.56	4.33	4.33	4.33
45.0	4.39	4.39	4.50	4.50	4.39	4.33	4.33	4.28	4.28
90.0	4.28	4.28	4.22	4.22	4.16	4.16	4.16	4.16	4.16
135.0	4.05	4.05	3.83	3.60	3.54	3.54	3.54	3.54	3.54
180.0	3.66	3.66	3.66	3.71	3.54	3.54	3.54	3.54	3.54
225.0	4.05	4.11	4.11	4.22	4.28	4.39	3.88	3.88	3.88
270.0	3.88	3.88	3.88	3.88	3.94	3.99	3.66	3.66	3.66
315.0	3.71	3.71	3.66	3.77	3.77	3.83	3.71	3.71	3.66
360.0	3.66	3.71	4.44	4.44	4.50	4.56	4.33	4.33	4.33

Intensity data(cd)

C/γ(°)	90.0
0.0	4.33
45.0	4.28
90.0	4.11
135.0	3.49
180.0	3.54
225.0	3.88
270.0	3.66
315.0	3.66
360.0	4.33