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Nata

LumCAT: 1-0918-M
Luminaire: 92.70.124.00

Report No: 210713-B006	Voltage(V): 38.9900
Test No: 210713-C006	Current(A): 0.2310
LampCAT: Fortimo LED SLM 1201 G7N	Power (W): 9.0000
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): 835.82
Efficiency(%): 78.06%
Lumens(lm)/Power(W): 92.87
Central intensity(cd): 5219.297
Maximum intensity(cd): 5233.570
Angle of maximum intensity: C=0.0 γ=1.0
Beam Angle(50%Imax): [C0/180]Total=20.1
[C90/270]Total=20.1
Field angle(10%Imax): [C0/180]Total=40.5
[C90/270]Total=40.5
Maximum s/h(1/2): C0_180=0.34 C90_270=0.34
Maximum s/h(1/4): C0_180=0.36 C90_270=0.36
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.06%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.318%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5219.297	0.000	0	.000%	.000%
1.0	5233.570	5.002	5.002	.467%	.598%
2.0	5153.906	14.909	19.911	1.392%	2.382%
3.0	4984.453	24.248	44.158	2.265%	5.283%
4.0	4792.852	32.728	76.886	3.057%	9.199%
5.0	4540.359	40.151	117.037	3.750%	14.003%
6.0	4181.766	45.837	162.874	4.281%	19.487%
7.0	3788.156	49.469	212.343	4.620%	25.405%
8.0	3419.367	51.583	263.926	4.818%	31.577%
9.0	3022.453	52.207	316.134	4.876%	37.823%
10.0	2637.773	51.223	367.357	4.784%	43.952%
11.0	2318.484	49.523	416.88	4.625%	49.877%
12.0	2037.094	47.613	464.492	4.447%	55.573%
13.0	1748.672	44.927	509.42	4.196%	60.949%
14.0	1487.109	41.418	550.838	3.868%	65.904%
15.0	1301.688	38.286	589.124	3.576%	70.485%
16.0	1104.609	35.259	624.383	3.293%	74.703%
17.0	945.970	31.933	656.316	2.982%	78.524%
18.0	793.238	28.676	684.991	2.678%	81.955%
19.0	674.170	25.530	710.521	2.384%	85.009%
20.0	552.509	22.452	732.973	2.097%	87.695%
21.0	442.737	19.111	752.084	1.785%	89.982%
22.0	355.451	16.040	768.123	1.498%	91.901%
23.0	266.618	13.053	781.176	1.219%	93.463%
24.0	180.640	9.779	790.955	.913%	94.633%
25.0	129.804	7.059	798.014	.659%	95.477%
26.0	70.446	4.727	802.741	.441%	96.043%
27.0	40.163	2.706	805.447	.253%	96.366%
28.0	20.953	1.547	806.994	.145%	96.551%
29.0	13.416	0.899	807.893	.084%	96.659%
30.0	10.146	0.636	808.529	.059%	96.735%
31.0	8.782	0.527	809.056	.049%	96.798%
32.0	8.086	0.483	809.539	.045%	96.856%
33.0	7.523	0.460	809.999	.043%	96.911%
34.0	7.088	0.442	810.441	.041%	96.964%
35.0	6.975	0.437	810.878	.041%	97.016%
36.0	6.785	0.438	811.316	.041%	97.069%
37.0	6.511	0.434	811.75	.040%	97.121%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	6.293	0.427	812.177	.040%	97.172%
39.0	6.096	0.423	812.6	.039%	97.222%
40.0	5.963	0.421	813.021	.039%	97.273%
41.0	5.822	0.420	813.44	.039%	97.323%
42.0	5.716	0.419	813.859	.039%	97.373%
43.0	5.611	0.420	814.279	.039%	97.423%
44.0	5.527	0.420	814.699	.039%	97.473%
45.0	5.449	0.422	815.121	.039%	97.524%
46.0	5.400	0.424	815.546	.040%	97.575%
47.0	5.330	0.427	815.972	.040%	97.626%
48.0	5.266	0.428	816.401	.040%	97.677%
49.0	5.238	0.431	816.832	.040%	97.729%
50.0	5.182	0.434	817.266	.041%	97.781%
51.0	5.154	0.437	817.704	.041%	97.833%
52.0	5.112	0.441	818.144	.041%	97.886%
53.0	5.091	0.444	818.588	.041%	97.939%
54.0	5.055	0.447	819.035	.042%	97.992%
55.0	5.013	0.449	819.485	.042%	98.046%
56.0	4.964	0.451	819.936	.042%	98.100%
57.0	4.922	0.452	820.388	.042%	98.154%
58.0	4.901	0.454	820.842	.042%	98.208%
59.0	4.852	0.456	821.298	.043%	98.263%
60.0	4.823	0.457	821.755	.043%	98.318%
61.0	4.788	0.459	822.213	.043%	98.372%
62.0	4.732	0.459	822.672	.043%	98.427%
63.0	4.697	0.459	823.131	.043%	98.482%
64.0	4.683	0.460	823.591	.043%	98.537%
65.0	4.655	0.462	824.053	.043%	98.593%
66.0	4.627	0.463	824.516	.043%	98.648%
67.0	4.591	0.464	824.98	.043%	98.703%
68.0	4.570	0.464	825.444	.043%	98.759%
69.0	4.549	0.465	825.909	.043%	98.815%
70.0	4.521	0.466	826.375	.044%	98.870%
71.0	4.500	0.466	826.841	.044%	98.926%
72.0	4.472	0.467	827.308	.044%	98.982%
73.0	4.444	0.466	827.774	.044%	99.038%
74.0	4.430	0.466	828.24	.044%	99.094%
75.0	4.423	0.468	828.708	.044%	99.149%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.423	0.470	829.178	.044%	99.206%
77.0	4.409	0.471	829.649	.044%	99.262%
78.0	4.402	0.472	830.12	.044%	99.318%
79.0	4.395	0.473	830.593	.044%	99.375%
80.0	4.388	0.473	831.066	.044%	99.432%
81.0	4.366	0.473	831.54	.044%	99.488%
82.0	4.388	0.475	832.014	.044%	99.545%
83.0	4.380	0.477	832.491	.045%	99.602%
84.0	4.373	0.477	832.968	.045%	99.659%
85.0	4.352	0.476	833.444	.044%	99.716%
86.0	4.380	0.477	833.921	.045%	99.773%
87.0	4.317	0.476	834.397	.044%	99.830%
88.0	4.324	0.473	834.871	.044%	99.887%
89.0	4.310	0.473	835.344	.044%	99.943%
90.0	4.317	0.473	835.817	.044%	100.000%

Zonal flux distribution table

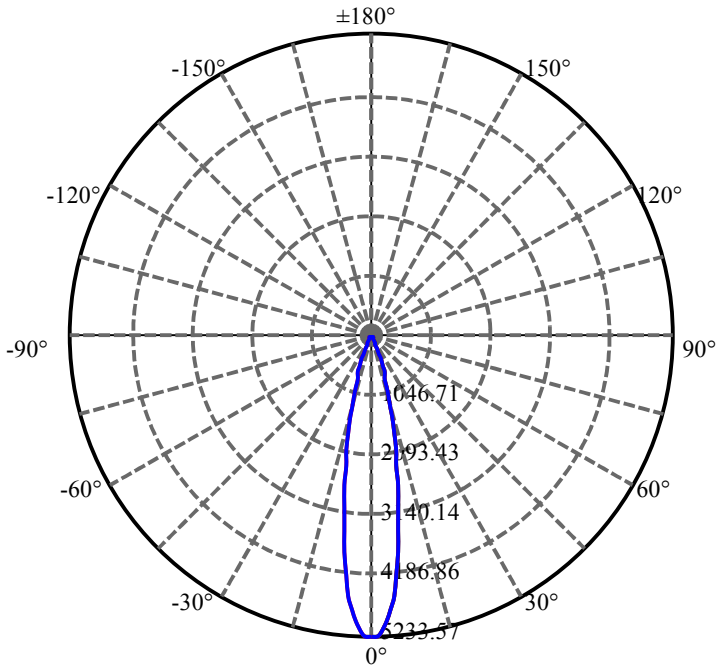
ZONAL LUMEN SUMMARY

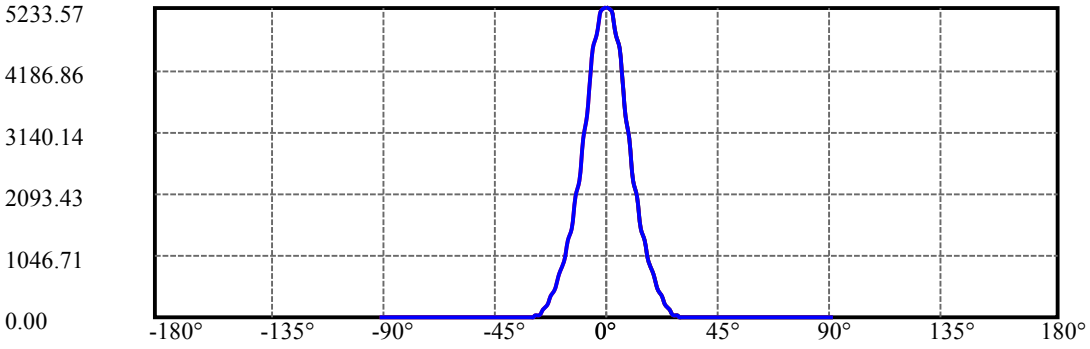
Zone	Lumens	%Lamp	%Fixt
0-30	808.53	75.51%	96.74%
0-40	813.02	75.93%	97.27%
0-60	821.75	76.75%	98.32%
0-90	835.34	78.02%	99.94%
0-120	835.34	78.02%	99.94%
0-180	835.82	78.06%	100.00%
60-90	14.05	1.31%	1.68%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.43	668.65	62.45%	80.00%

ZONAL LUMEN SUMMARY

0-10	367.36
10-20	365.62
20-30	75.56
30-40	4.49
40-50	4.25
50-60	4.49
60-70	4.62
70-80	4.69
80-90	4.28
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):

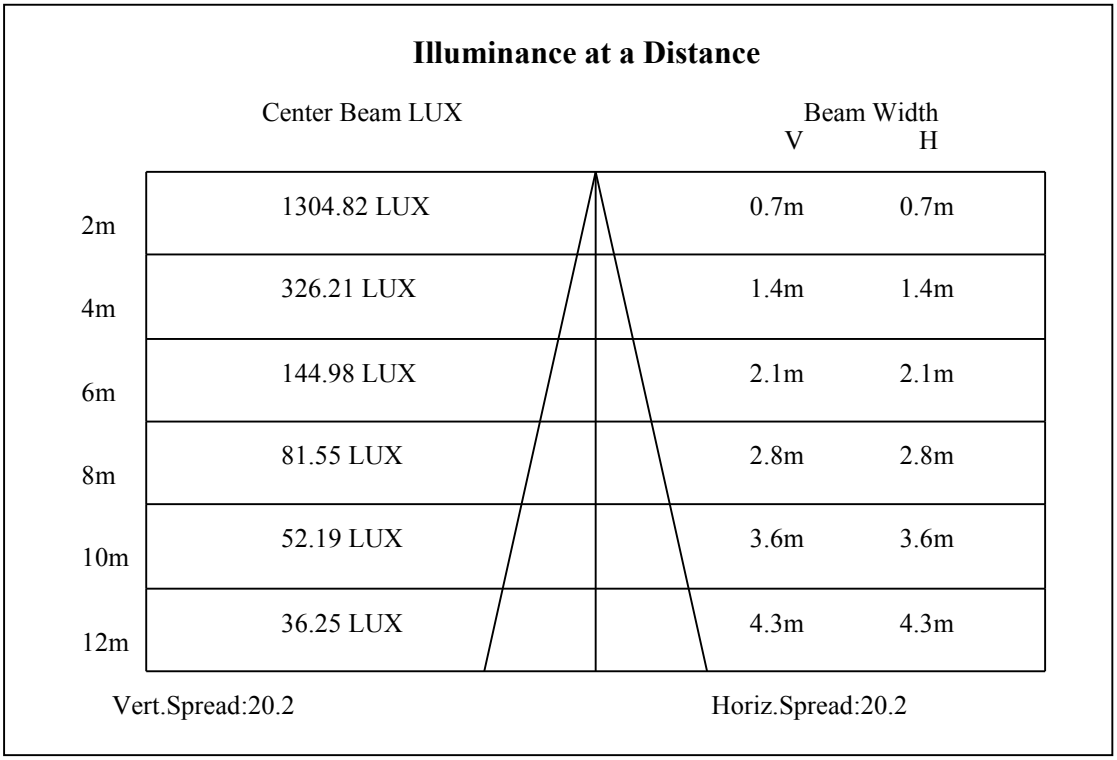
C0/C180:

C90/C270:

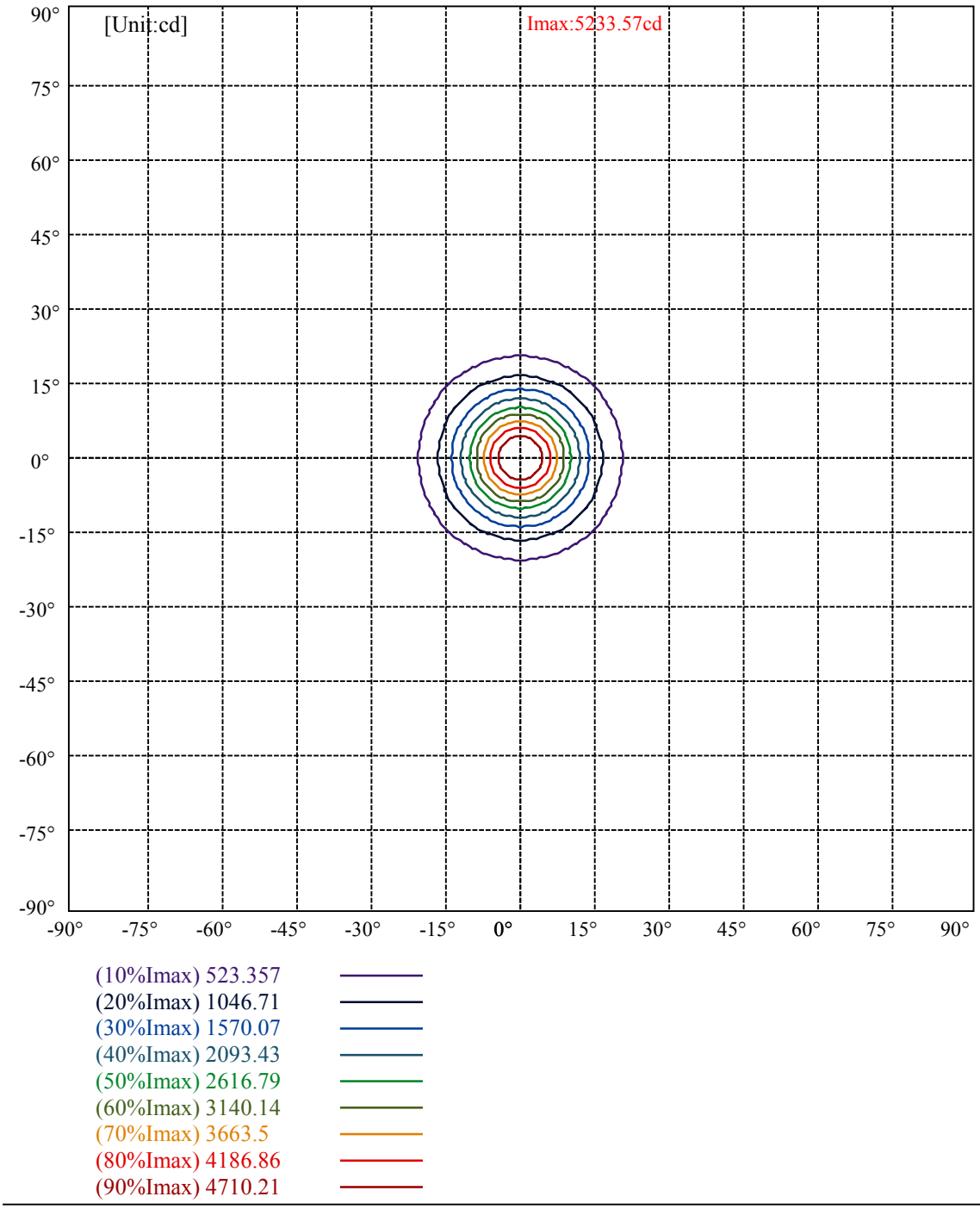
Field angle(10%Imax):C0/180Left:21.3 Right:19.3
:C90/270Left:21.3 Right:19.3

Beam Angle(50%Imax):C0/180Left:11.1 Right:9.1
:C90/270Left:11.1 Right:9.1

Lux distance Curve



ISO-Intensity(V-H)



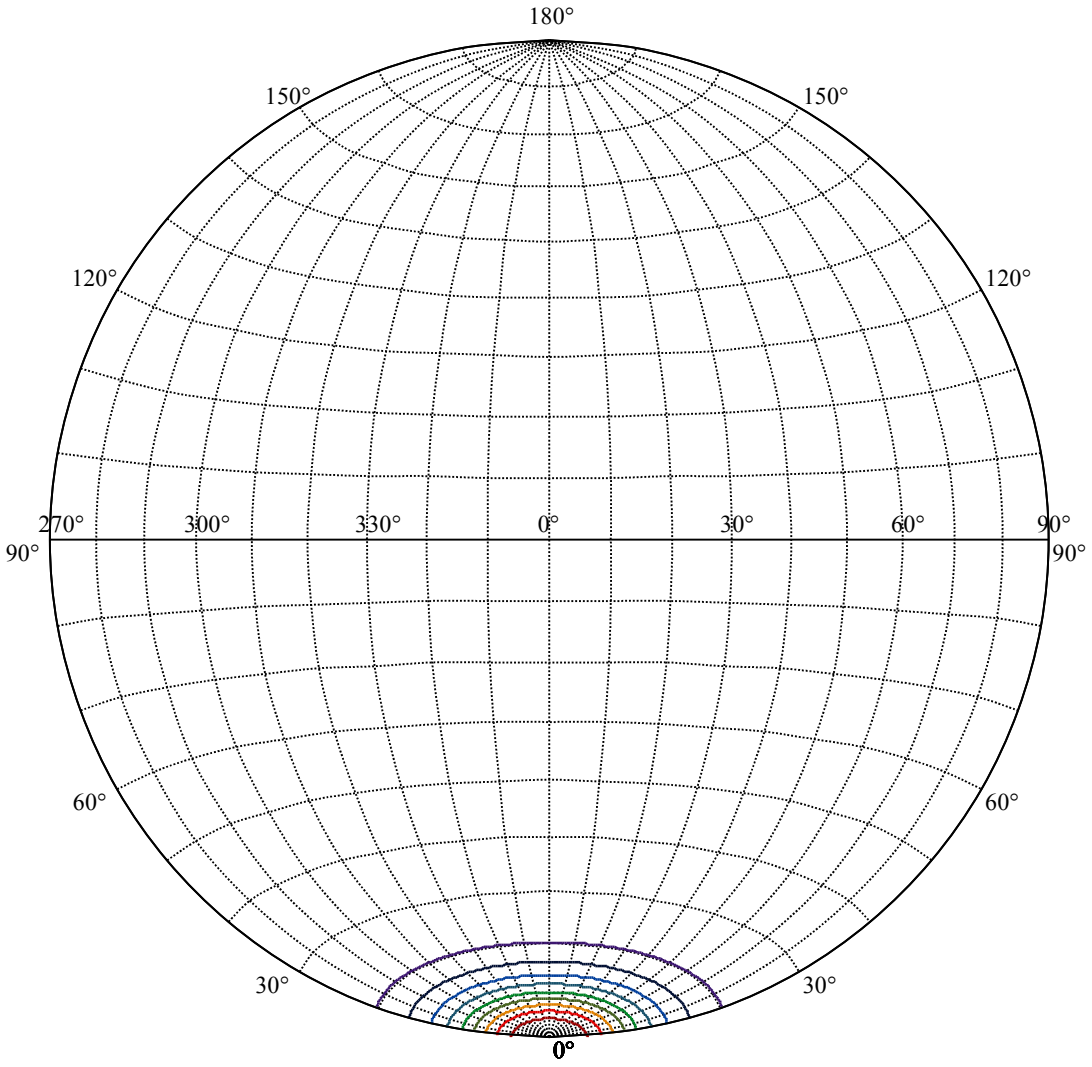
(10%Imax) 523.357
(20%Imax) 1046.71
(30%Imax) 1570.07
(40%Imax) 2093.43
(50%Imax) 2616.79
(60%Imax) 3140.14
(70%Imax) 3663.5
(80%Imax) 4186.86
(90%Imax) 4710.21

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:5233.57

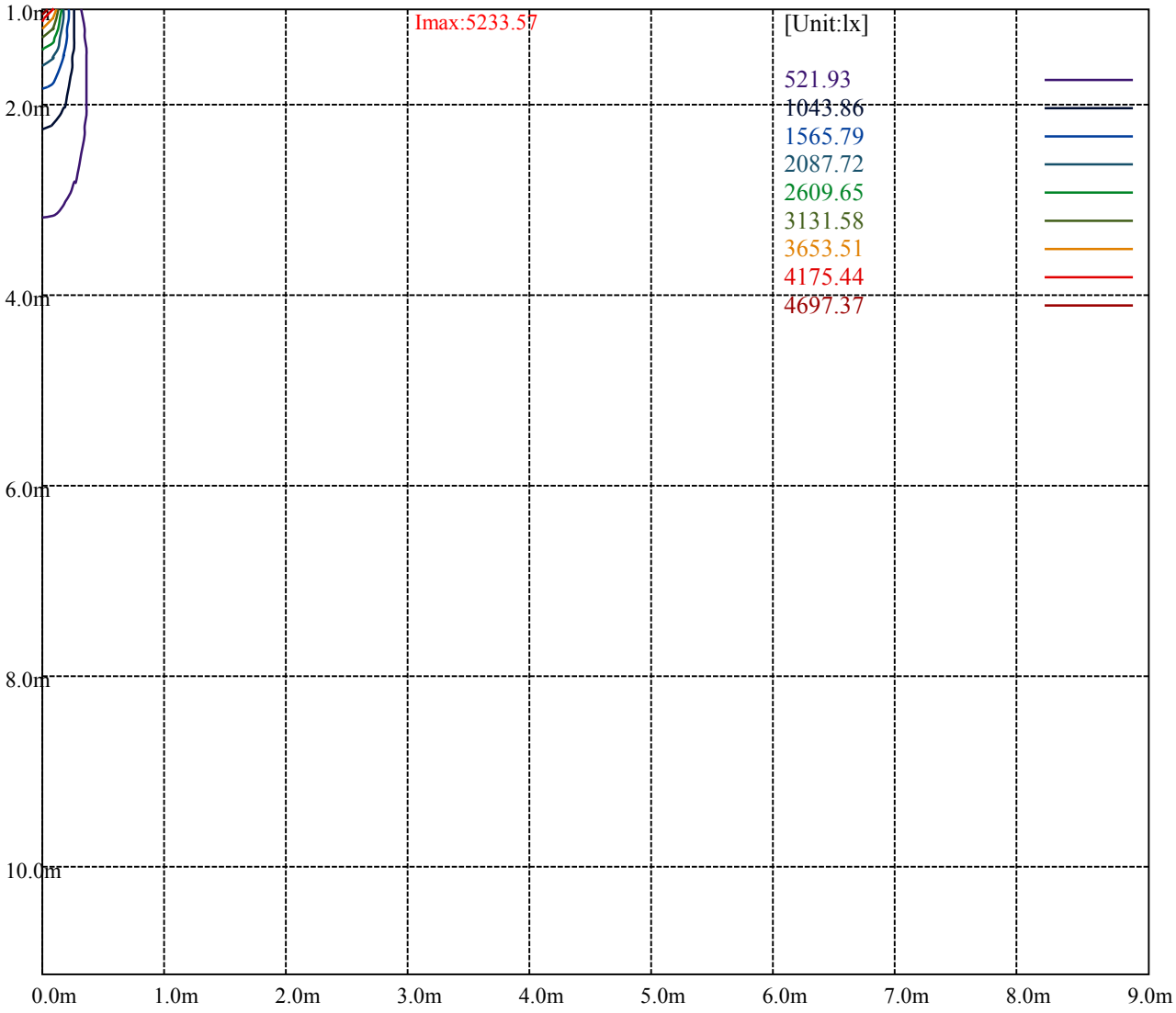
(10%Imax) 523.357
(20%Imax) 1046.71
(30%Imax) 1570.07
(40%Imax) 2093.43
(50%Imax) 2616.79
(60%Imax) 3140.14
(70%Imax) 3663.5
(80%Imax) 4186.86
(90%Imax) 4710.21

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

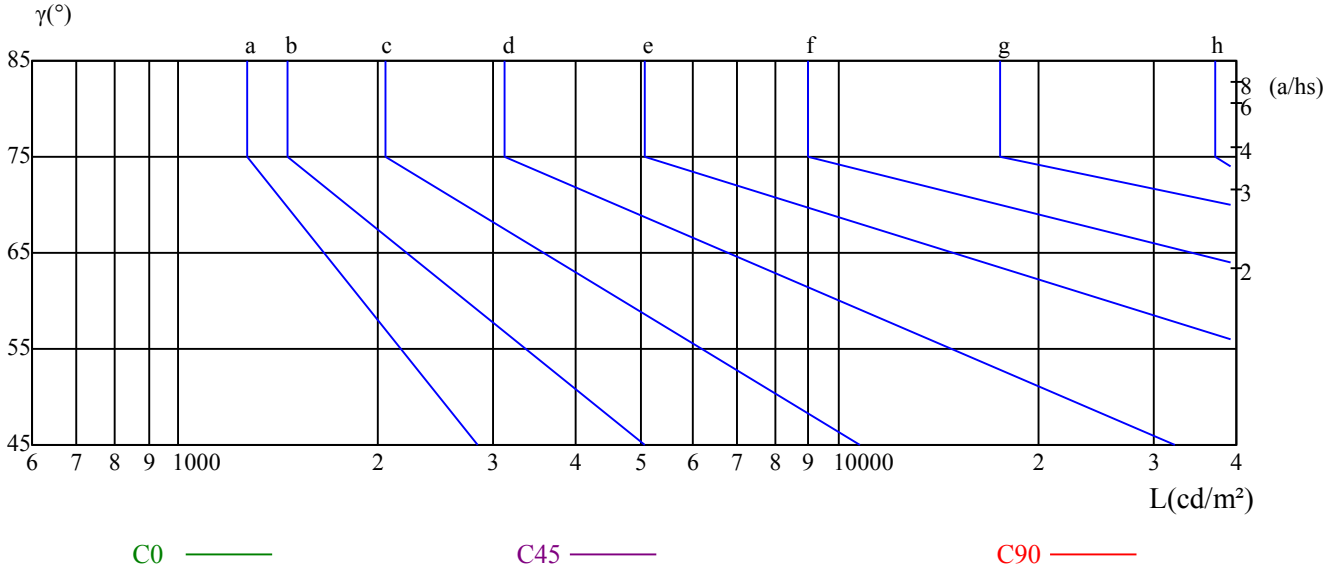
γ	45	50	55	60	65	70	75	80	85
C0	208	205	208	213	220	232	251	280	320
C45	224	224	230	237	249	267	294	337	399
C90	290	302	324	355	399	470	589	822	1390

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
429	429	429	666	666	666	1947	1947	1947

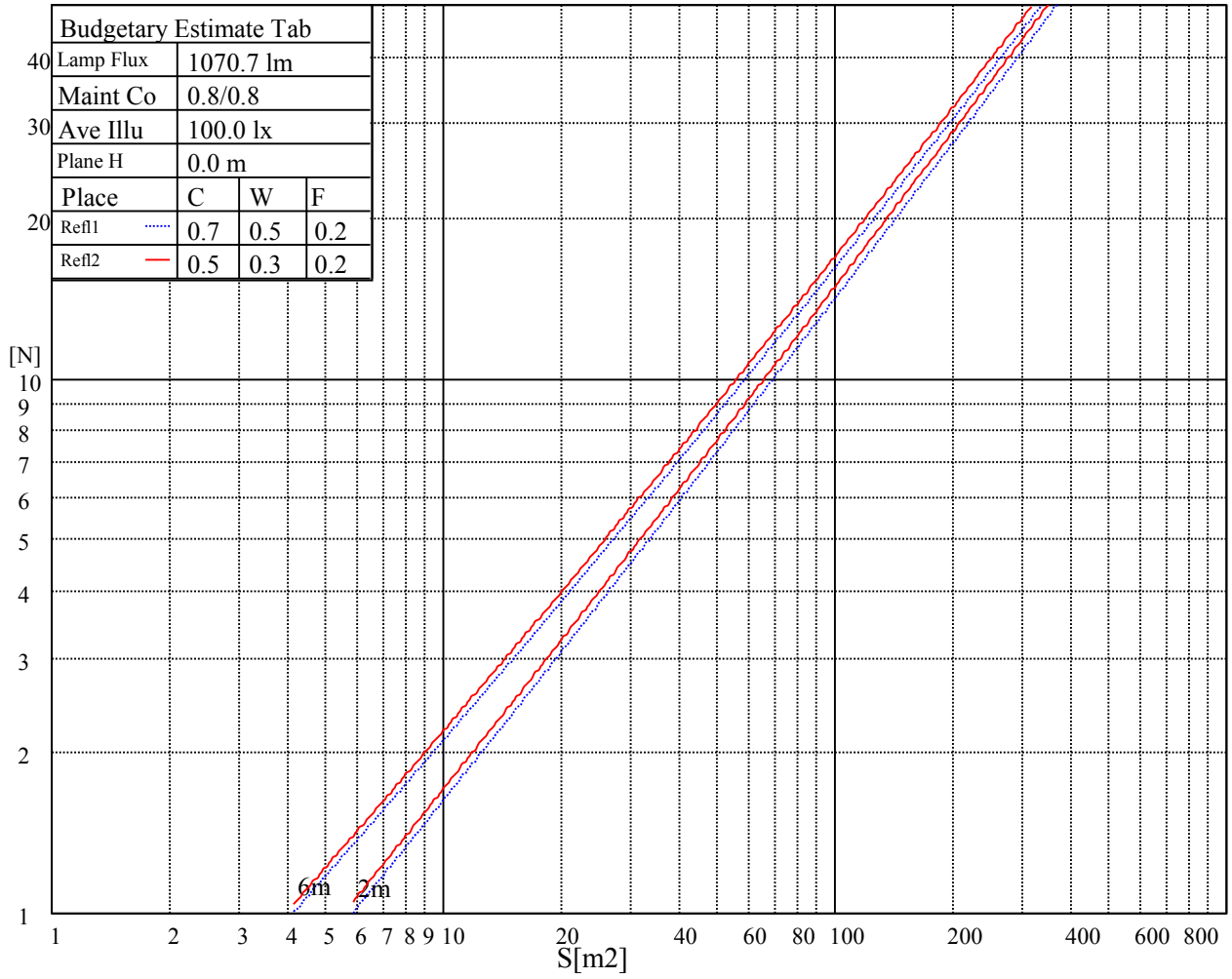
Glare Table

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

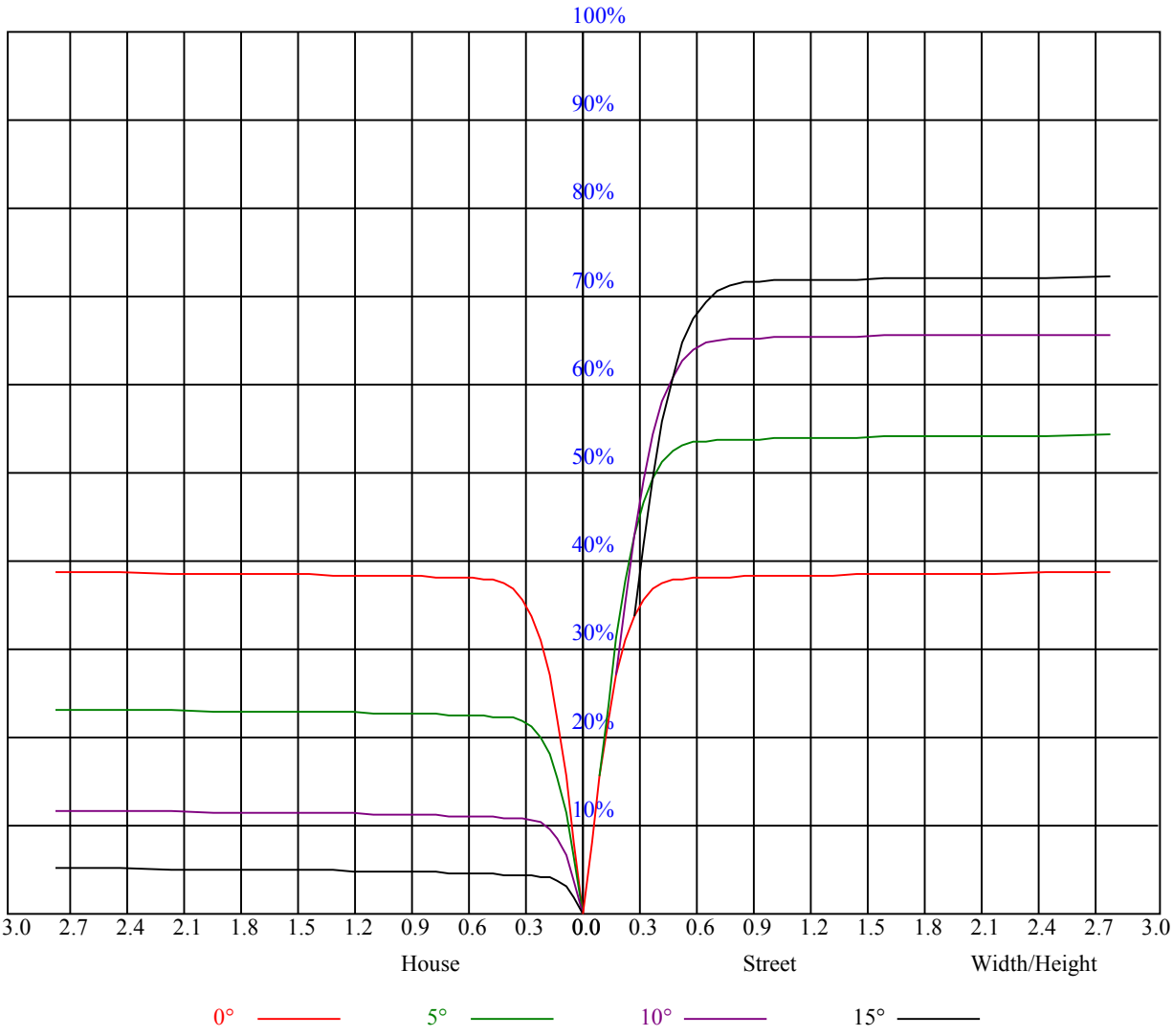


Equipment: GMS1980 Date: 2021/7/13 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.88	0.87	0.85	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.80	0.79	0.78	0.77	0.77	0.75
2	0.84	0.82	0.80	0.83	0.81	0.79	0.80	0.79	0.77	0.78	0.77	0.76	0.76	0.75	0.74	0.73
3	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.76	0.75	0.73	0.75	0.73	0.72	0.71
4	0.78	0.75	0.73	0.77	0.75	0.73	0.76	0.74	0.72	0.74	0.73	0.71	0.73	0.72	0.70	0.69
5	0.76	0.73	0.71	0.75	0.72	0.70	0.74	0.71	0.70	0.73	0.71	0.69	0.72	0.70	0.69	0.68
6	0.74	0.71	0.68	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
7	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.70	0.67	0.66	0.69	0.67	0.65	0.65
8	0.70	0.67	0.65	0.69	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.67	0.65	0.64	0.63
9	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.63	0.66	0.64	0.63	0.62
10	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.62	0.65	0.63	0.62	0.65	0.63	0.61	0.61

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/13
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	5164.88	5344.31	5374.13	5126.06	5069.81	4964.06	4669.88	4332.94	4006.13
45.0	5310.56	5169.94	5083.31	4980.38	4785.75	4381.88	4028.63	3640.50	3216.38
90.0	5171.63	5104.69	5015.25	4795.88	4429.13	4070.25	3673.13	3178.13	2817.00
135.0	5230.13	5123.81	5048.44	4882.50	4584.94	4248.00	3771.56	3363.19	2977.88
180.0	5164.88	5094.56	5013.00	4800.38	4407.19	4112.44	3668.63	3165.75	2840.63
225.0	5310.56	5252.06	5099.06	5059.69	4955.06	4685.63	4363.88	3996.56	3522.94
270.0	5171.63	5334.75	5292.56	5123.25	5066.44	4947.75	4671.56	4363.88	4048.31
315.0	5230.13	5444.44	5305.50	5107.50	5044.50	4912.88	4606.88	4264.31	3925.69
360.0	5164.88	5344.31	5374.13	5126.06	5069.81	4964.06	4669.88	4332.94	4006.13

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3531.94	3152.81	2806.31	2457.00	2130.19	1863.00	1596.38	1391.63	1184.63
45.0	2817.00	2487.38	2149.31	1886.63	1628.44	1400.06	1218.94	1034.44	868.50
90.0	2484.56	2114.44	1850.63	1618.88	1387.69	1117.41	1019.25	863.33	743.91
135.0	2548.69	2240.44	1961.44	1679.06	1432.69	1242.00	1050.75	902.25	767.25
180.0	2510.44	2103.75	1870.88	1629.00	1388.81	1111.22	1012.44	870.02	724.39
225.0	3190.50	2783.25	2385.00	2133.00	1860.19	1535.06	1355.63	1102.78	1003.84
270.0	3568.50	3178.69	2824.31	2508.19	2141.44	1869.19	1625.63	1359.56	1167.19
315.0	3528.00	3041.44	2700.00	2385.00	2019.94	1758.94	1534.50	1312.88	1108.07
360.0	3531.94	3152.81	2806.31	2457.00	2130.19	1863.00	1596.38	1391.63	1184.63

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1001.25	862.31	727.88	599.63	501.19	392.63	294.75	284.06	131.29
45.0	740.81	622.69	498.94	390.94	311.06	290.25	133.99	88.14	40.22
90.0	606.71	496.01	389.70	303.58	206.44	135.45	90.00	39.43	21.77
135.0	623.25	529.88	408.94	311.06	290.81	149.85	90.11	44.89	25.71
180.0	604.91	508.05	390.09	302.46	217.74	135.51	84.77	44.66	25.14
225.0	827.94	712.80	596.48	472.11	377.04	295.03	199.80	124.43	78.47
270.0	986.63	849.94	720.00	591.75	489.38	377.44	290.81	237.49	129.15
315.0	954.39	811.69	688.05	570.38	449.94	356.79	260.89	175.33	111.83
360.0	1001.25	862.31	727.88	599.63	501.19	392.63	294.75	284.06	131.29

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	76.73	38.59	22.39	14.85	12.49	11.53	10.69	10.18	9.62
45.0	20.81	12.49	8.89	7.99	7.26	6.69	6.24	5.91	5.57
90.0	12.60	8.72	7.88	7.26	6.64	6.24	5.91	5.51	5.34
135.0	15.02	9.45	8.33	7.65	6.92	6.47	6.13	5.85	7.76
180.0	16.54	12.26	11.14	10.46	9.90	9.39	9.00	8.78	8.44
225.0	38.03	21.26	12.71	9.45	8.44	7.65	6.98	6.53	6.13
270.0	80.55	35.27	19.46	12.26	9.28	8.44	7.71	6.98	6.53
315.0	61.03	29.59	16.54	11.25	9.34	8.27	7.54	6.98	6.41
360.0	76.73	38.59	22.39	14.85	12.49	11.53	10.69	10.18	9.62

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	9.23	8.89	8.61	8.27	8.10	7.93	7.82	7.71	7.59
45.0	5.40	5.18	4.95	4.84	4.73	4.56	4.50	4.39	4.33
90.0	5.12	4.95	4.84	4.67	4.56	4.50	4.44	4.33	4.28
135.0	8.33	8.10	7.93	7.82	7.71	7.59	7.48	7.43	7.31
180.0	8.27	8.04	7.88	7.76	7.71	7.54	7.48	7.37	7.31
225.0	5.74	5.46	5.23	5.01	4.84	4.73	4.56	4.44	4.39
270.0	6.13	5.79	5.46	5.23	5.01	4.89	4.73	4.61	4.50
315.0	6.08	5.68	5.46	5.18	5.06	4.84	4.73	4.61	4.50
360.0	9.23	8.89	8.61	8.27	8.10	7.93	7.82	7.71	7.59

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	7.48	7.37	7.31	7.26	7.20	7.14	7.09	7.03	7.03
45.0	4.28	4.22	4.16	4.11	4.05	3.99	3.99	3.94	3.94
90.0	4.22	4.16	4.11	4.05	4.05	3.99	3.94	3.88	3.88
135.0	7.26	7.26	7.20	7.09	7.09	7.03	7.03	7.03	6.98
180.0	7.26	7.26	7.14	7.09	7.03	7.03	7.03	6.98	6.98
225.0	4.28	4.22	4.16	4.11	4.11	4.05	3.99	3.94	3.94
270.0	4.44	4.33	4.28	4.22	4.16	4.11	4.11	4.05	3.99
315.0	4.39	4.39	4.28	4.22	4.22	4.11	4.05	4.05	3.99
360.0	7.48	7.37	7.31	7.26	7.20	7.14	7.09	7.03	7.03

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	7.03	6.98	6.98	6.92	6.92	6.86	6.86	6.81	6.75
45.0	3.88	3.88	3.83	3.83	3.83	3.77	3.77	3.77	3.71
90.0	3.88	3.83	3.83	3.77	3.77	3.77	3.71	3.77	3.71
135.0	6.92	6.86	6.75	6.69	6.58	6.53	6.41	6.30	6.19
180.0	6.86	6.81	6.69	6.64	6.58	6.47	6.41	6.30	6.24
225.0	3.88	3.88	3.83	3.77	3.77	3.77	3.77	3.77	3.71
270.0	3.99	3.94	3.88	3.88	3.88	3.83	3.83	3.77	3.77
315.0	3.99	3.94	3.94	3.88	3.88	3.83	3.83	3.83	3.77
360.0	7.03	6.98	6.98	6.92	6.92	6.86	6.86	6.81	6.75

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	6.69	6.64	6.53	6.47	6.41	6.30	6.24	6.13	6.08
45.0	3.71	3.71	3.71	3.71	3.66	3.66	3.66	3.66	3.66
90.0	3.71	3.71	3.66	3.66	3.66	3.66	3.66	3.66	3.66
135.0	6.13	6.08	6.08	6.02	5.96	5.91	5.85	5.79	5.79
180.0	6.13	6.08	6.08	6.02	5.96	5.96	5.91	5.85	5.79
225.0	3.71	3.71	3.71	3.66	3.66	3.66	3.66	3.66	3.66
270.0	3.71	3.77	3.77	3.77	3.71	3.71	3.71	3.71	3.66
315.0	3.77	3.77	3.71	3.71	3.71	3.71	3.71	3.71	3.71
360.0	6.69	6.64	6.53	6.47	6.41	6.30	6.24	6.13	6.08

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.02	6.02	5.96	5.91	5.91	5.91	5.91	5.91	5.91
45.0	3.66	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60
90.0	3.66	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60
135.0	5.74	5.68	5.68	5.68	5.68	5.63	5.63	5.57	5.57
180.0	5.79	5.74	5.68	5.68	5.68	5.63	5.63	5.57	5.57
225.0	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60
270.0	3.66	3.66	3.66	3.66	3.66	3.66	3.60	3.66	3.60
315.0	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
360.0	6.02	6.02	5.96	5.91	5.91	5.91	5.91	5.91	5.91

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.91	5.96	5.91	5.96	6.02	6.19	5.85	5.85	5.85
45.0	3.60	3.60	3.66	3.60	3.54	3.54	3.54	3.54	3.54
90.0	3.60	3.60	3.60	3.60	3.54	3.54	3.54	3.60	3.54
135.0	5.51	5.57	5.51	5.51	5.46	5.46	5.40	5.40	5.40
180.0	5.51	5.57	5.51	5.46	5.46	5.46	5.46	5.46	5.46
225.0	3.54	3.60	3.60	3.60	3.54	3.54	3.54	3.54	3.54
270.0	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60
315.0	3.66	3.60	3.66	3.66	3.66	3.71	3.60	3.60	3.54
360.0	5.91	5.96	5.91	5.96	6.02	6.19	5.85	5.85	5.85

Intensity data(cd)

C/γ(°)	90.0
0.0	5.91
45.0	3.54
90.0	3.54
135.0	5.40
180.0	5.40
225.0	3.54
270.0	3.60
315.0	3.60
360.0	5.91