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Nata

LumCAT: 1-0919-M
Luminaire: 92.70.124.00

Report No: 210713-B005	Voltage(V): 38.9700
Test No: 210713-C005	Current(A): 0.2310
LampCAT: Fortimo LED SLM 1201 G7N	Power (W): 9.0020
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): 833.52
Efficiency(%): 77.85%
Lumens(lm)/Power(W): 92.59
Central intensity(cd): 4284.422
Maximum intensity(cd): 4284.422
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=24.5
[C90/270]Total=24.5
Field angle(10%Imax): [C0/180]Total=42.9
[C90/270]Total=42.9
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
Maximum s/h(1/4): C0_180=0.41 C90_270=0.41
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 77.85%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.589%

Equipment: GMS1980	Date: 2021/7/13	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	4284.422	0.000	0	.000%	.000%
1.0	4257.422	4.087	4.087	.382%	.490%
2.0	4171.641	12.098	16.185	1.130%	1.942%
3.0	4047.258	19.657	35.842	1.836%	4.300%
4.0	3932.227	26.710	62.552	2.495%	7.505%
5.0	3801.023	33.268	95.82	3.107%	11.496%
6.0	3634.102	39.074	134.894	3.649%	16.184%
7.0	3451.219	43.978	178.872	4.107%	21.460%
8.0	3247.945	47.945	226.817	4.478%	27.212%
9.0	3000.234	50.638	277.455	4.729%	33.287%
10.0	2739.656	51.944	329.399	4.851%	39.519%
11.0	2478.938	52.144	381.543	4.870%	45.775%
12.0	2213.508	51.295	432.838	4.791%	51.929%
13.0	1945.336	49.355	482.193	4.609%	57.851%
14.0	1697.414	46.627	528.82	4.355%	63.445%
15.0	1473.117	43.526	572.347	4.065%	68.667%
16.0	1233.584	39.661	612.008	3.704%	73.425%
17.0	1053.366	35.614	647.621	3.326%	77.698%
18.0	892.160	32.078	679.699	2.996%	81.546%
19.0	746.599	28.511	708.21	2.663%	84.967%
20.0	605.763	24.752	732.962	2.312%	87.936%
21.0	474.968	20.752	753.714	1.938%	90.426%
22.0	372.115	17.022	770.737	1.590%	92.468%
23.0	280.294	13.689	784.426	1.279%	94.110%
24.0	201.895	10.542	794.968	.985%	95.375%
25.0	112.802	7.156	802.124	.668%	96.234%
26.0	61.755	4.120	806.244	.385%	96.728%
27.0	30.572	2.259	808.503	.211%	96.999%
28.0	16.467	1.191	809.694	.111%	97.142%
29.0	10.948	0.717	810.411	.067%	97.228%
30.0	8.775	0.533	810.944	.050%	97.292%
31.0	7.791	0.461	811.405	.043%	97.347%
32.0	7.130	0.427	811.832	.040%	97.399%
33.0	6.645	0.406	812.238	.038%	97.447%
34.0	6.230	0.390	812.628	.036%	97.494%
35.0	5.871	0.376	813.004	.035%	97.539%
36.0	5.590	0.365	813.368	.034%	97.583%
37.0	5.351	0.357	813.725	.033%	97.626%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	5.140	0.350	814.075	.033%	97.668%
39.0	4.978	0.345	814.421	.032%	97.709%
40.0	4.816	0.342	814.762	.032%	97.750%
41.0	4.725	0.340	815.102	.032%	97.791%
42.0	4.591	0.338	815.441	.032%	97.831%
43.0	4.500	0.337	815.777	.031%	97.872%
44.0	4.458	0.338	816.116	.032%	97.912%
45.0	4.373	0.339	816.455	.032%	97.953%
46.0	4.331	0.340	816.795	.032%	97.994%
47.0	4.275	0.342	817.138	.032%	98.035%
48.0	4.226	0.344	817.481	.032%	98.076%
49.0	4.198	0.346	817.827	.032%	98.118%
50.0	4.141	0.348	818.175	.032%	98.159%
51.0	4.106	0.349	818.524	.033%	98.201%
52.0	4.071	0.351	818.875	.033%	98.243%
53.0	4.043	0.353	819.228	.033%	98.286%
54.0	4.008	0.355	819.583	.033%	98.328%
55.0	4.001	0.357	819.94	.033%	98.371%
56.0	3.959	0.360	820.3	.034%	98.414%
57.0	3.952	0.362	820.661	.034%	98.458%
58.0	3.916	0.364	821.025	.034%	98.501%
59.0	3.902	0.366	821.391	.034%	98.545%
60.0	3.895	0.368	821.759	.034%	98.589%
61.0	3.860	0.370	822.129	.035%	98.634%
62.0	3.846	0.371	822.501	.035%	98.678%
63.0	3.839	0.374	822.874	.035%	98.723%
64.0	3.811	0.375	823.25	.035%	98.768%
65.0	3.811	0.377	823.627	.035%	98.814%
66.0	3.790	0.379	824.006	.035%	98.859%
67.0	3.797	0.381	824.388	.036%	98.905%
68.0	3.783	0.384	824.772	.036%	98.951%
69.0	3.769	0.385	825.157	.036%	98.997%
70.0	3.769	0.387	825.544	.036%	99.044%
71.0	3.755	0.389	825.933	.036%	99.090%
72.0	3.755	0.390	826.323	.036%	99.137%
73.0	3.741	0.392	826.715	.037%	99.184%
74.0	3.727	0.393	827.108	.037%	99.231%
75.0	3.741	0.395	827.502	.037%	99.279%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.720	0.396	827.898	.037%	99.326%
77.0	3.727	0.397	828.295	.037%	99.374%
78.0	3.720	0.399	828.694	.037%	99.421%
79.0	3.713	0.399	829.093	.037%	99.469%
80.0	3.705	0.400	829.493	.037%	99.517%
81.0	3.713	0.401	829.894	.037%	99.565%
82.0	3.698	0.402	830.296	.038%	99.614%
83.0	3.691	0.402	830.698	.038%	99.662%
84.0	3.691	0.402	831.1	.038%	99.710%
85.0	3.691	0.403	831.503	.038%	99.758%
86.0	3.670	0.402	831.905	.038%	99.807%
87.0	3.677	0.402	832.308	.038%	99.855%
88.0	3.670	0.402	832.71	.038%	99.903%
89.0	3.677	0.403	833.113	.038%	99.952%
90.0	3.677	0.403	833.516	.038%	100.000%

Zonal flux distribution table

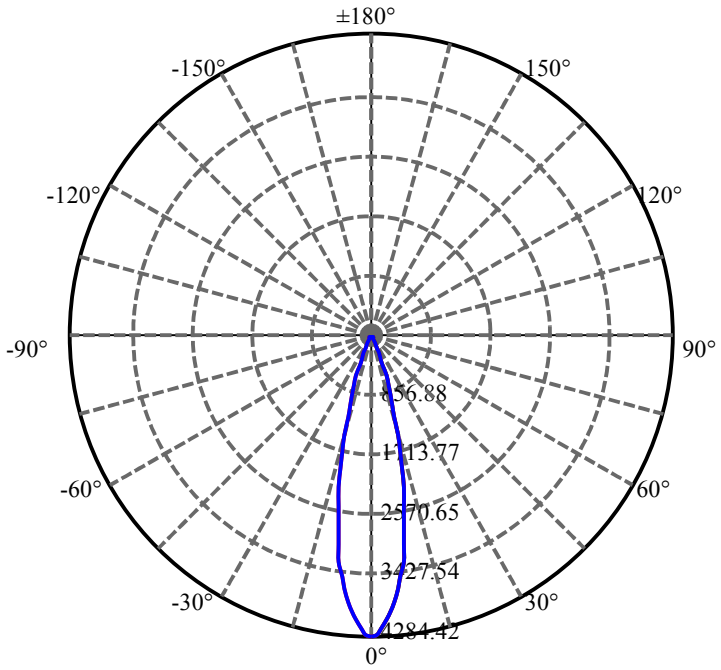
ZONAL LUMEN SUMMARY

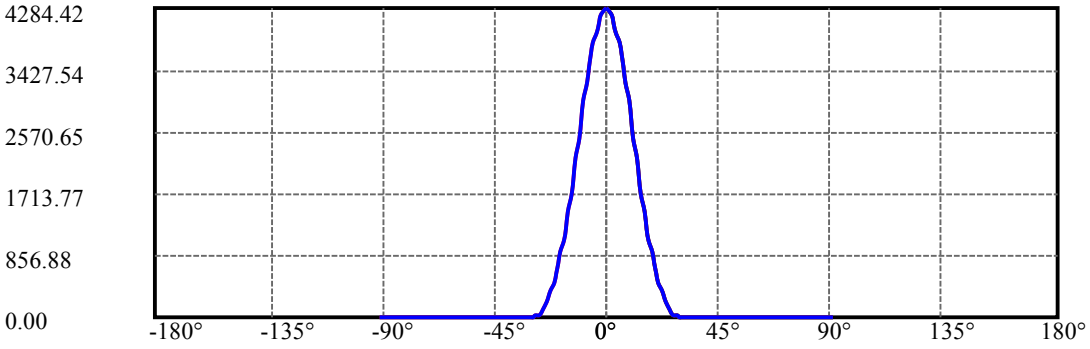
Zone	Lumens	%Lamp	%Fixt
0-30	810.94	75.74%	97.29%
0-40	814.76	76.09%	97.75%
0-60	821.76	76.75%	98.59%
0-90	833.11	77.81%	99.95%
0-120	833.11	77.81%	99.95%
0-180	833.52	77.85%	100.00%
60-90	11.72	1.09%	1.41%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.60	666.81	62.28%	80.00%

ZONAL LUMEN SUMMARY

0-10	329.40
10-20	403.56
20-30	77.98
30-40	3.82
40-50	3.41
50-60	3.58
60-70	3.78
70-80	3.95
80-90	3.62
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:21.5 Right:21.5
:C90/270Left:21.5 Right:21.5

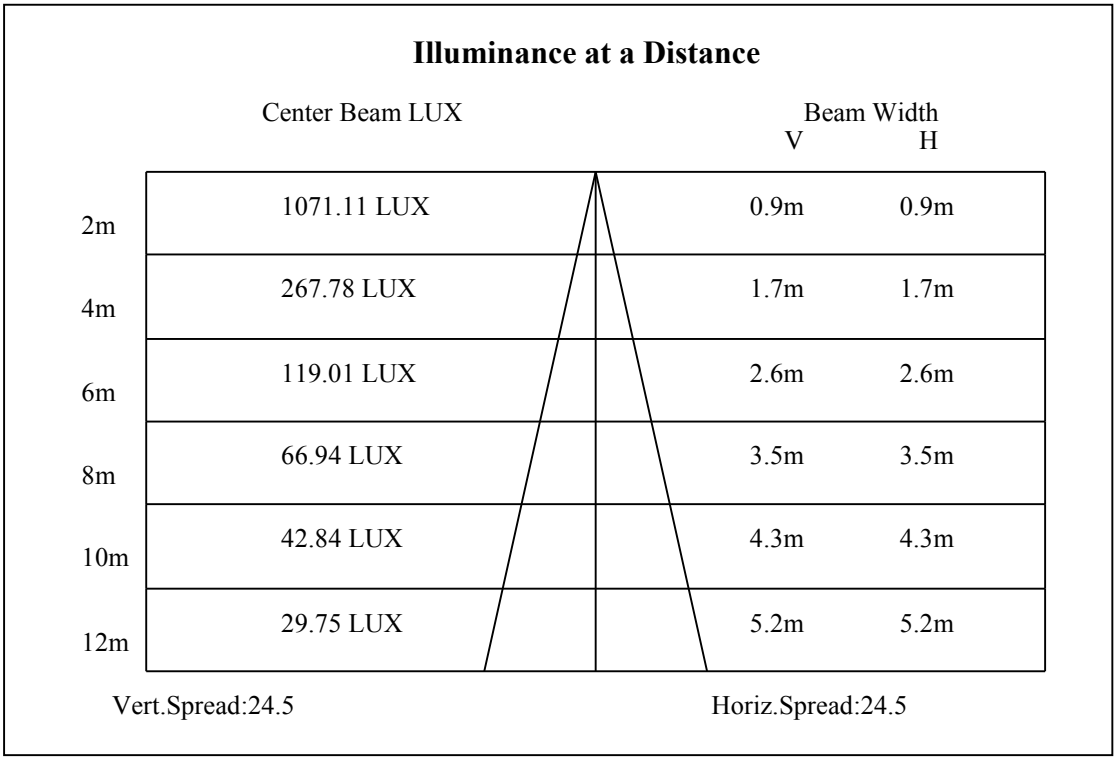
Beam Angle(50%Imax):C0/180Left:12.3 Right:12.3
:C90/270Left:12.3 Right:12.3

Equipment: GMS1980
Temperature(°C): 25.0

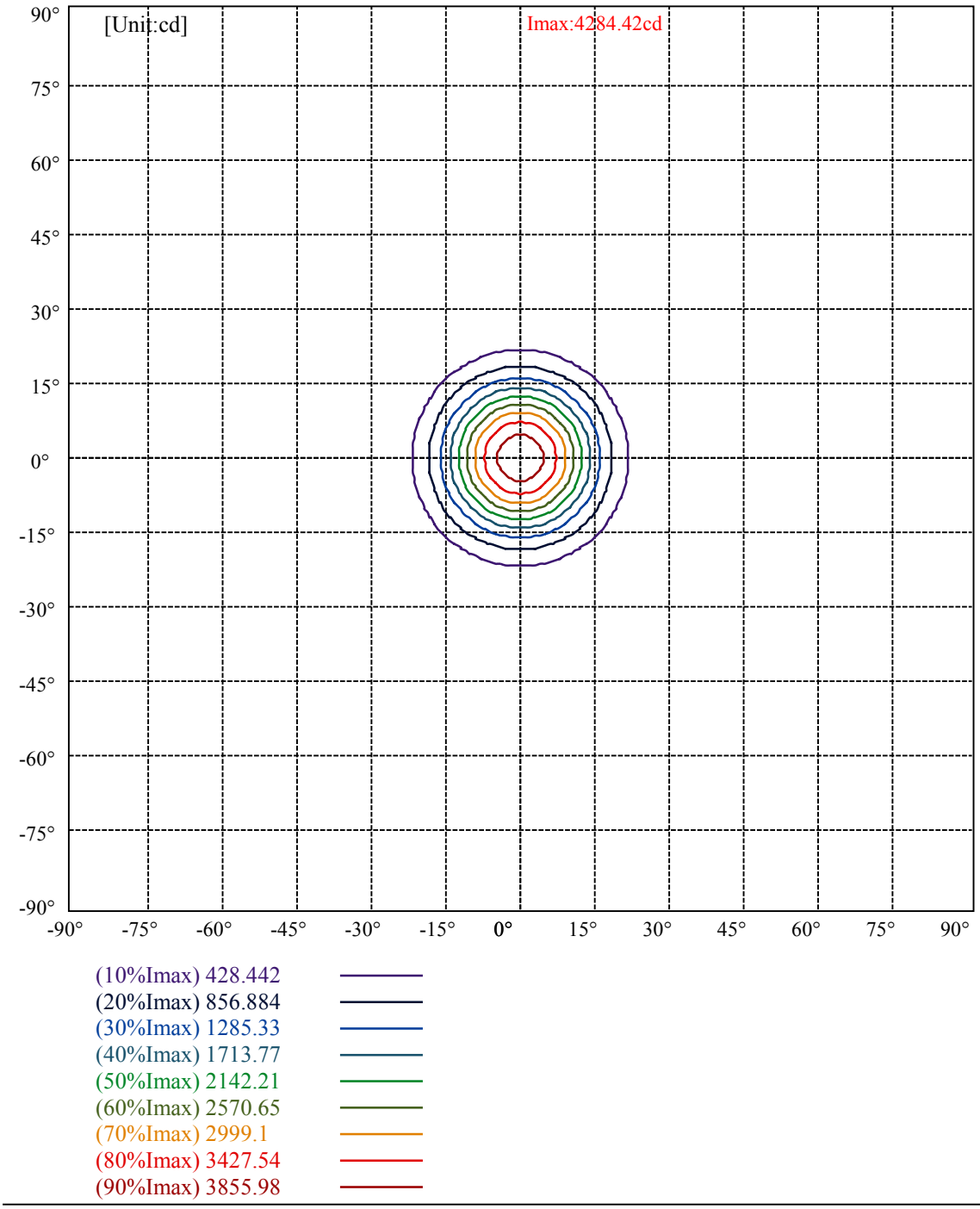
Date: 2021/7/13
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Lux distance Curve



ISO-Intensity(V-H)



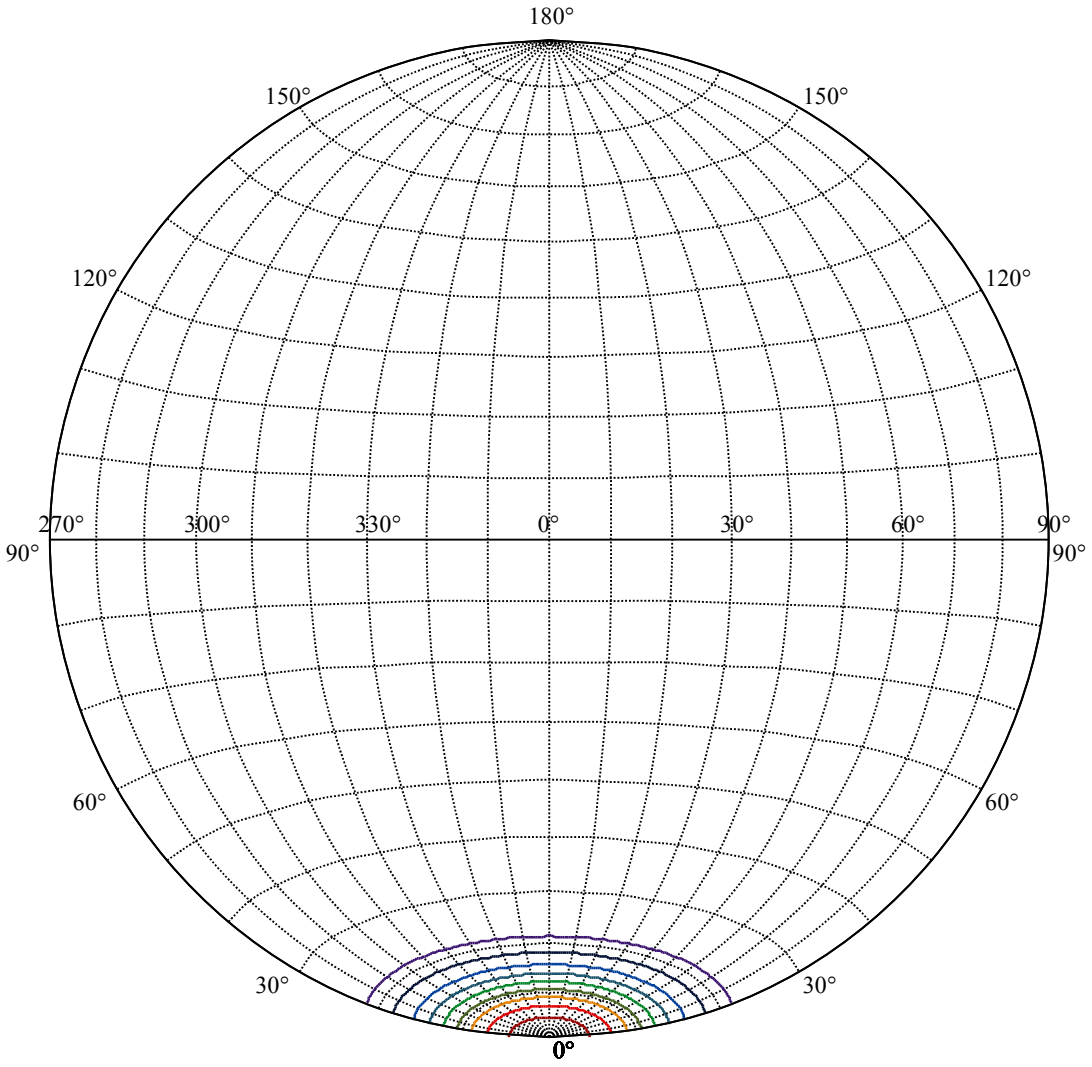
(10%Imax) 428.442
(20%Imax) 856.884
(30%Imax) 1285.33
(40%Imax) 1713.77
(50%Imax) 2142.21
(60%Imax) 2570.65
(70%Imax) 2999.1
(80%Imax) 3427.54
(90%Imax) 3855.98

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:4284.42

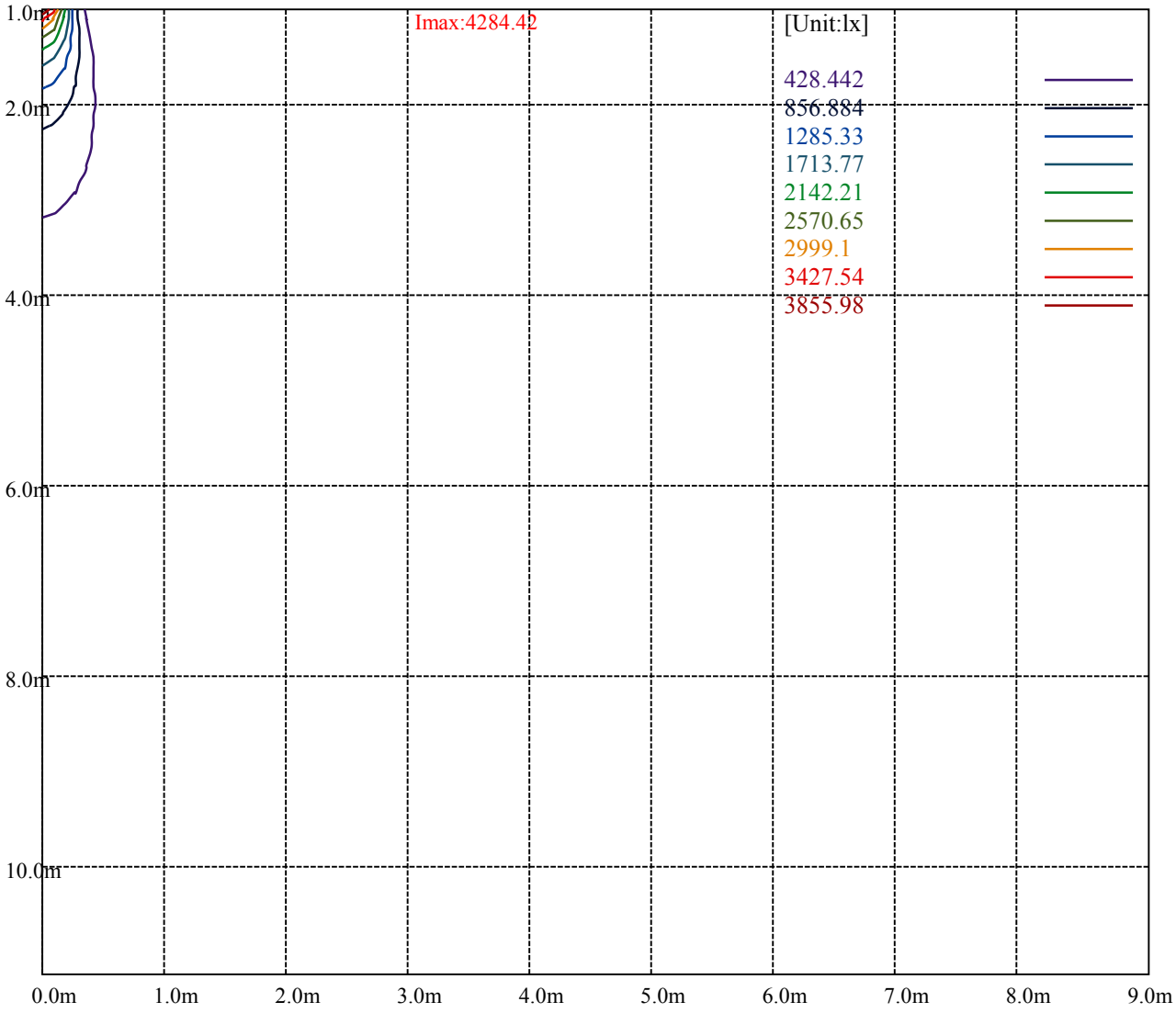
(10%Imax) 428.442
(20%Imax) 856.884
(30%Imax) 1285.33
(40%Imax) 1713.77
(50%Imax) 2142.21
(60%Imax) 2570.65
(70%Imax) 2999.1
(80%Imax) 3427.54
(90%Imax) 3855.98

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

Luminance Limitting Curve(no luminous side)

Luminance Table

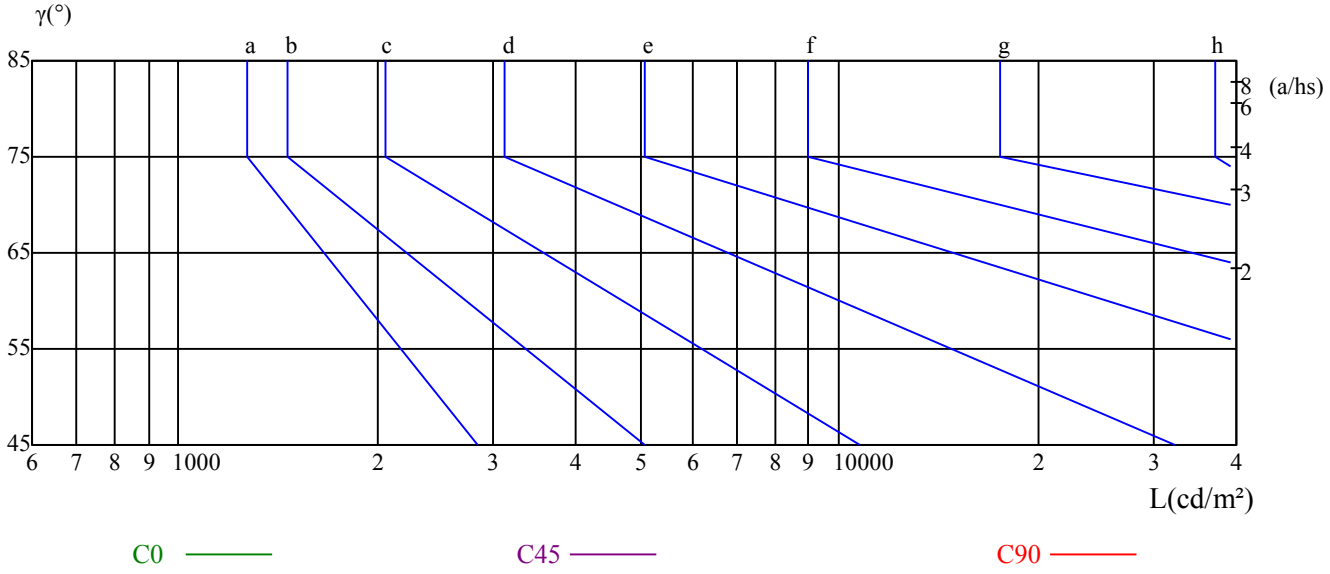
γ	45	50	55	60	65	70	75	80	85
C0	167	164	166	172	180	193	212	236	272
C45	180	179	183	191	204	222	249	285	339
C90	233	241	259	286	327	392	498	694	1179

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
352	352	352	563	563	563	1651	1651	1651

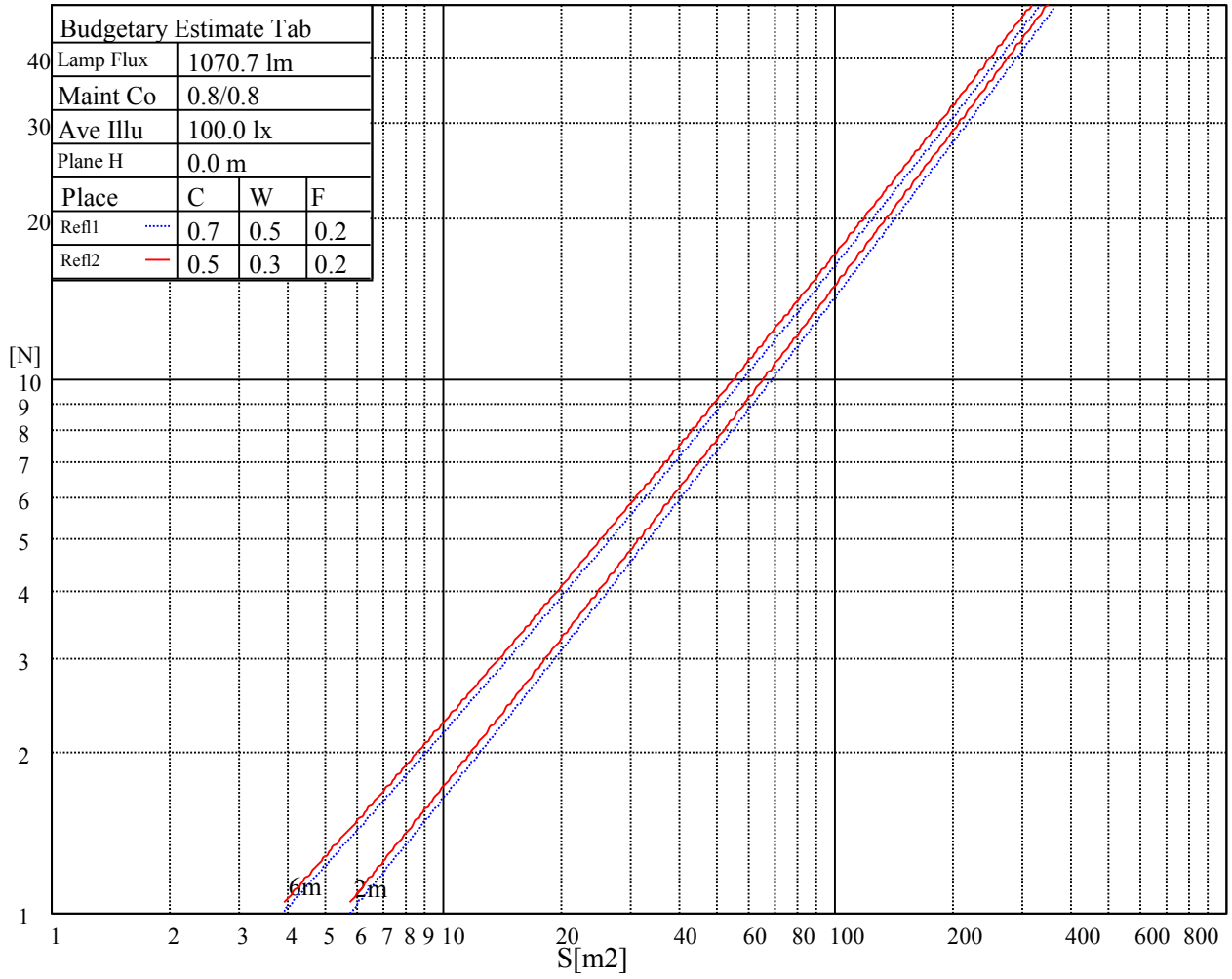
Glare Table

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

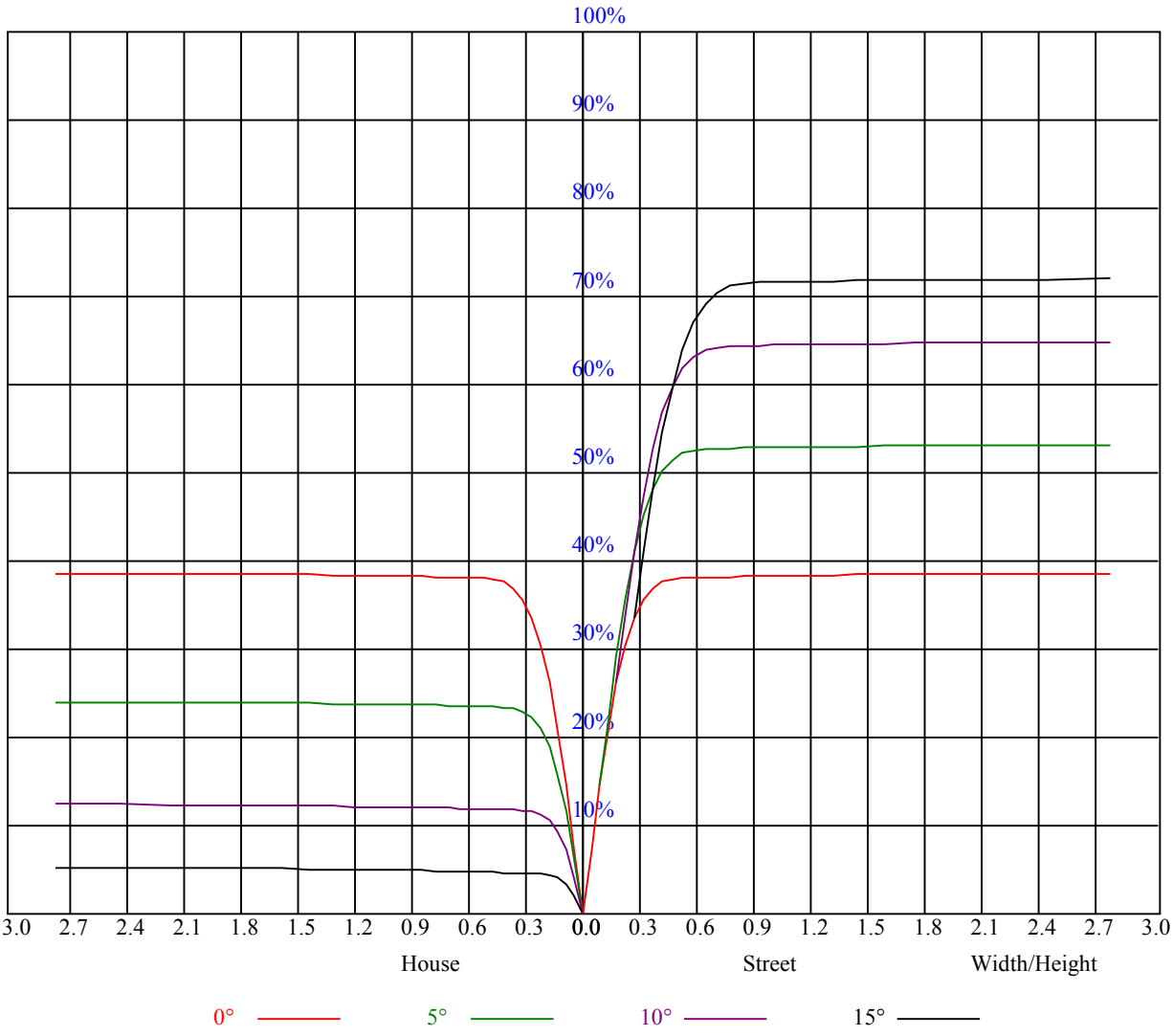


Equipment: GMS1980 Date: 2021/7/13 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.86	0.86	0.86	0.83	0.83	0.83	0.79	0.79	0.79	0.78
1	0.88	0.86	0.85	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.76	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	0.75	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	0.74	0.73	0.74	0.73	0.72	0.71
4	0.78	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.74	0.72	0.71	0.73	0.71	0.70	0.69
5	0.75	0.72	0.70	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.68	0.67
6	0.73	0.70	0.68	0.72	0.70	0.67	0.71	0.69	0.67	0.70	0.68	0.67	0.70	0.68	0.66	0.65
7	0.71	0.68	0.66	0.70	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.65	0.64
8	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.64	0.67	0.65	0.63	0.67	0.65	0.63	0.62
9	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.64	0.62	0.65	0.63	0.62	0.61
10	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.61	0.64	0.62	0.60	0.60

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	4284.00	4286.25	4218.75	4093.88	3969.00	3815.44	3674.25	3515.63	3303.56
45.0	4285.69	4219.31	4079.25	3970.69	3840.75	3713.06	3534.19	3327.75	3110.06
90.0	4282.88	4232.25	4134.38	3982.50	3859.31	3732.75	3556.13	3353.63	3142.13
135.0	4285.13	4275.56	4215.94	4101.75	3974.06	3846.38	3715.88	3545.44	3371.63
180.0	4284.00	4229.44	4127.06	4005.00	3916.13	3774.38	3603.38	3401.44	3179.25
225.0	4285.69	4275.56	4229.44	4119.19	4015.13	3897.56	3715.88	3555.56	3384.56
270.0	4282.88	4285.13	4218.75	4092.75	3990.38	3896.44	3700.13	3526.31	3342.94
315.0	4285.13	4255.88	4149.56	4012.31	3893.06	3732.19	3573.00	3384.00	3149.44
360.0	4284.00	4286.25	4218.75	4093.88	3969.00	3815.44	3674.25	3515.63	3303.56

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3049.88	2799.00	2518.88	2238.19	1995.75	1735.31	1517.06	1290.94	1085.06
45.0	2838.38	2553.19	2301.75	2045.81	1760.63	1544.63	1344.38	1138.50	951.75
90.0	2912.06	2601.56	2348.44	2099.25	1802.81	1582.88	1375.88	1118.19	973.86
135.0	3123.00	2888.44	2639.81	2354.06	2066.06	1826.44	1573.88	1339.31	1152.56
180.0	2960.44	2696.63	2415.94	2166.75	1926.56	1641.94	1428.19	1113.58	1026.79
225.0	3119.63	2892.94	2654.44	2380.50	2099.25	1852.88	1604.25	1395.56	1107.34
270.0	3088.13	2856.38	2608.31	2330.44	2057.63	1823.63	1573.31	1364.63	1148.06
315.0	2910.38	2629.13	2343.94	2093.06	1854.00	1571.63	1368.00	1107.96	981.51
360.0	3049.88	2799.00	2518.88	2238.19	1995.75	1735.31	1517.06	1290.94	1085.06

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	929.25	785.25	630.56	515.25	402.19	295.31	234.51	128.70	76.22
45.0	798.75	655.88	519.75	407.81	311.06	288.56	134.27	74.53	36.84
90.0	821.36	683.10	547.26	419.01	332.04	222.36	143.55	91.13	42.36
135.0	950.06	809.44	651.94	508.50	409.50	308.81	285.75	135.11	77.40
180.0	850.73	704.03	581.12	434.14	345.83	236.31	159.47	99.45	47.64
225.0	1002.04	832.22	692.55	555.24	424.97	329.74	226.01	143.66	89.21
270.0	960.19	816.75	664.88	531.56	416.81	330.19	284.06	137.48	83.98
315.0	824.91	686.14	558.06	428.23	334.52	231.08	147.54	92.36	40.39
360.0	929.25	785.25	630.56	515.25	402.19	295.31	234.51	128.70	76.22

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	31.95	16.71	11.76	9.45	8.38	7.71	7.09	6.58	6.19
45.0	19.46	11.76	9.00	7.88	7.14	6.64	6.30	5.96	5.68
90.0	22.78	13.16	9.11	7.82	7.20	6.58	6.19	5.85	5.57
135.0	36.90	20.53	12.38	8.83	7.59	6.98	6.47	6.08	5.74
180.0	26.83	15.98	9.51	7.93	7.26	6.58	6.19	5.85	5.51
225.0	46.41	22.22	13.78	10.13	8.44	7.71	7.14	6.58	6.19
270.0	38.87	18.84	12.26	9.51	8.38	7.71	7.09	6.64	6.19
315.0	21.38	12.54	9.79	8.66	7.93	7.14	6.69	6.30	5.91
360.0	31.95	16.71	11.76	9.45	8.38	7.71	7.09	6.58	6.19

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	5.85	5.57	5.34	5.12	4.95	4.84	4.67	4.61	4.50
45.0	5.46	5.29	5.12	4.95	4.84	4.73	4.61	4.50	4.50
90.0	5.34	5.12	4.95	4.84	4.73	4.61	4.50	4.39	4.39
135.0	5.46	5.23	5.01	4.89	4.73	4.67	4.50	4.44	4.39
180.0	5.29	5.12	4.89	4.78	4.61	4.56	4.44	4.39	4.33
225.0	5.85	5.51	5.29	5.12	4.89	4.84	4.73	4.56	4.56
270.0	5.85	5.57	5.34	5.12	4.95	4.84	4.67	4.61	4.56
315.0	5.63	5.40	5.18	5.01	4.84	4.73	4.61	4.50	4.44
360.0	5.85	5.57	5.34	5.12	4.95	4.84	4.67	4.61	4.50

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	4.44	4.39	4.33	4.22	4.22	4.16	4.11	4.05	4.05
45.0	4.44	4.33	4.28	4.28	4.22	4.16	4.16	4.11	4.11
90.0	4.28	4.28	4.22	4.16	4.16	4.11	4.05	4.05	3.99
135.0	4.33	4.28	4.22	4.16	4.16	4.11	4.05	4.05	3.99
180.0	4.22	4.22	4.16	4.11	4.11	4.05	3.99	3.99	3.94
225.0	4.44	4.39	4.33	4.28	4.28	4.16	4.16	4.11	4.11
270.0	4.44	4.44	4.39	4.33	4.28	4.22	4.22	4.16	4.11
315.0	4.39	4.33	4.28	4.28	4.16	4.16	4.11	4.05	4.05
360.0	4.44	4.39	4.33	4.22	4.22	4.16	4.11	4.05	4.05

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.99	3.99	3.94	3.94	3.88	3.88	3.88	3.88	3.83
45.0	4.05	4.05	3.99	3.99	3.99	3.94	3.94	3.94	3.88
90.0	3.99	3.99	3.99	3.94	3.88	3.88	3.88	3.83	3.88
135.0	3.99	3.94	3.94	3.94	3.88	3.88	3.88	3.83	3.83
180.0	3.94	3.94	3.88	3.88	3.83	3.83	3.83	3.77	3.77
225.0	4.05	4.05	3.99	3.99	3.99	3.94	3.94	3.94	3.88
270.0	4.05	4.05	3.99	3.99	3.99	3.99	3.94	3.88	3.88
315.0	3.99	3.99	3.94	3.94	3.88	3.88	3.88	3.83	3.83
360.0	3.99	3.99	3.94	3.94	3.88	3.88	3.88	3.88	3.83

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.77	3.77	3.77	3.77	3.71	3.77	3.71	3.71	3.71
45.0	3.88	3.88	3.88	3.83	3.88	3.83	3.83	3.83	3.83
90.0	3.83	3.83	3.83	3.83	3.83	3.77	3.83	3.77	3.77
135.0	3.83	3.77	3.77	3.77	3.83	3.77	3.71	3.77	3.71
180.0	3.77	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.66
225.0	3.88	3.88	3.88	3.83	3.83	3.83	3.83	3.83	3.83
270.0	3.94	3.88	3.88	3.83	3.83	3.83	3.83	3.77	3.83
315.0	3.83	3.77	3.77	3.77	3.77	3.77	3.71	3.77	3.71
360.0	3.77	3.77	3.77	3.77	3.71	3.77	3.71	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	3.66	3.66	3.71	3.66	3.66	3.66	3.66	3.66
45.0	3.77	3.83	3.77	3.83	3.77	3.83	3.77	3.77	3.77
90.0	3.77	3.77	3.77	3.77	3.71	3.71	3.71	3.71	3.71
135.0	3.77	3.77	3.71	3.71	3.71	3.71	3.71	3.71	3.71
180.0	3.71	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
225.0	3.83	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.71
270.0	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77
315.0	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.66	3.66
360.0	3.71	3.66	3.66	3.71	3.66	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	3.66	3.60	3.66	3.66	3.60	3.66	3.60	3.66
45.0	3.77	3.77	3.77	3.71	3.71	3.71	3.71	3.71	3.71
90.0	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71	3.71
135.0	3.71	3.66	3.66	3.71	3.66	3.66	3.66	3.66	3.66
180.0	3.66	3.60	3.66	3.60	3.66	3.60	3.60	3.60	3.60
225.0	3.71	3.77	3.71	3.77	3.71	3.71	3.71	3.71	3.71
270.0	3.77	3.77	3.77	3.71	3.77	3.71	3.71	3.71	3.71
315.0	3.71	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
360.0	3.66	3.66	3.60	3.66	3.66	3.60	3.66	3.60	3.66

Intensity data(cd)

C/γ(°)	90.0
0.0	3.66
45.0	3.71
90.0	3.71
135.0	3.66
180.0	3.60
225.0	3.71
270.0	3.71
315.0	3.66
360.0	3.66