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Nata

LumCAT: 1-0919-M
Luminaire: 92.70.124.00

Report No: 210715-B006	Voltage(V): 36.5100
Test No: 210715-C006	Current(A): 0.3050
LampCAT: Fortimo LED SLM 1202 G7N	Power (W): 11.1350
Lamp flux(lm): 1428.3	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): 1101.36
Efficiency(%): 77.11%
Lumens(lm)/Power(W): 98.91
Central intensity(cd): 5134.078
Maximum intensity(cd): 5134.078
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=26.4
[C90/270]Total=26.4
Field angle(10%Imax): [C0/180]Total=43.9
[C90/270]Total=43.9
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
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(%): 77.11%
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%

Equipment: GMS1980	Date: 2021/7/15	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	5134.078	0.000	0	.000%	.000%
1.0	5116.500	4.905	4.905	.343%	.445%
2.0	5064.820	14.613	19.518	1.023%	1.772%
3.0	4971.445	24.003	43.521	1.681%	3.952%
4.0	4864.289	32.923	76.445	2.305%	6.941%
5.0	4743.773	41.333	117.778	2.894%	10.694%
6.0	4590.211	49.053	166.831	3.434%	15.148%
7.0	4381.523	55.687	222.518	3.899%	20.204%
8.0	4169.602	61.199	283.717	4.285%	25.761%
9.0	3903.891	65.431	349.148	4.581%	31.702%
10.0	3593.953	67.853	417.001	4.751%	37.862%
11.0	3302.438	68.909	485.91	4.825%	44.119%
12.0	2983.148	68.710	554.62	4.811%	50.358%
13.0	2630.109	66.615	621.236	4.664%	56.406%
14.0	2310.469	63.239	684.475	4.428%	62.148%
15.0	2014.734	59.378	743.853	4.157%	67.540%
16.0	1716.961	54.680	798.533	3.828%	72.504%
17.0	1458.886	49.456	847.989	3.463%	76.995%
18.0	1182.480	43.550	891.54	3.049%	80.949%
19.0	1018.596	38.294	929.834	2.681%	84.426%
20.0	833.252	33.894	963.728	2.373%	87.504%
21.0	658.041	28.636	992.364	2.005%	90.104%
22.0	507.649	23.425	1015.789	1.640%	92.231%
23.0	378.302	18.590	1034.378	1.302%	93.918%
24.0	280.680	14.408	1048.786	1.009%	95.227%
25.0	161.339	10.051	1058.837	.704%	96.139%
26.0	89.803	5.928	1064.765	.415%	96.677%
27.0	43.847	3.270	1068.035	.229%	96.974%
28.0	22.542	1.681	1069.715	.118%	97.127%
29.0	15.159	0.986	1070.702	.069%	97.217%
30.0	12.016	0.734	1071.436	.051%	97.283%
31.0	10.484	0.626	1072.062	.044%	97.340%
32.0	9.605	0.576	1072.637	.040%	97.392%
33.0	8.930	0.546	1073.183	.038%	97.442%
34.0	8.297	0.521	1073.705	.036%	97.489%
35.0	7.840	0.501	1074.206	.035%	97.535%
36.0	7.446	0.487	1074.692	.034%	97.579%
37.0	7.116	0.475	1075.167	.033%	97.622%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	6.841	0.466	1075.633	.033%	97.664%
39.0	6.595	0.459	1076.092	.032%	97.706%
40.0	6.398	0.453	1076.545	.032%	97.747%
41.0	6.244	0.450	1076.995	.032%	97.788%
42.0	6.103	0.449	1077.444	.031%	97.829%
43.0	5.991	0.448	1077.892	.031%	97.869%
44.0	5.885	0.448	1078.34	.031%	97.910%
45.0	5.787	0.449	1078.789	.031%	97.951%
46.0	5.702	0.449	1079.238	.031%	97.992%
47.0	5.639	0.451	1079.689	.032%	98.033%
48.0	5.590	0.454	1080.143	.032%	98.074%
49.0	5.527	0.457	1080.599	.032%	98.115%
50.0	5.477	0.459	1081.058	.032%	98.157%
51.0	5.428	0.461	1081.52	.032%	98.199%
52.0	5.393	0.464	1081.984	.033%	98.241%
53.0	5.337	0.467	1082.451	.033%	98.283%
54.0	5.309	0.469	1082.92	.033%	98.326%
55.0	5.266	0.472	1083.392	.033%	98.369%
56.0	5.245	0.475	1083.867	.033%	98.412%
57.0	5.210	0.478	1084.345	.033%	98.455%
58.0	5.189	0.481	1084.826	.034%	98.499%
59.0	5.168	0.484	1085.31	.034%	98.543%
60.0	5.126	0.486	1085.796	.034%	98.587%
61.0	5.119	0.489	1086.285	.034%	98.631%
62.0	5.105	0.493	1086.778	.034%	98.676%
63.0	5.077	0.495	1087.273	.035%	98.721%
64.0	5.055	0.497	1087.77	.035%	98.766%
65.0	5.041	0.500	1088.27	.035%	98.812%
66.0	5.041	0.503	1088.773	.035%	98.857%
67.0	5.020	0.506	1089.279	.035%	98.903%
68.0	4.985	0.507	1089.786	.035%	98.949%
69.0	4.985	0.509	1090.294	.036%	98.995%
70.0	4.978	0.512	1090.806	.036%	99.042%
71.0	4.971	0.514	1091.32	.036%	99.089%
72.0	4.957	0.516	1091.837	.036%	99.136%
73.0	4.950	0.518	1092.355	.036%	99.183%
74.0	4.943	0.520	1092.875	.036%	99.230%
75.0	4.929	0.522	1093.396	.037%	99.277%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.922	0.523	1093.919	.037%	99.325%
77.0	4.922	0.525	1094.444	.037%	99.372%
78.0	4.915	0.527	1094.971	.037%	99.420%
79.0	4.908	0.528	1095.498	.037%	99.468%
80.0	4.908	0.529	1096.028	.037%	99.516%
81.0	4.915	0.531	1096.559	.037%	99.564%
82.0	4.908	0.533	1097.091	.037%	99.613%
83.0	4.901	0.533	1097.625	.037%	99.661%
84.0	4.901	0.534	1098.159	.037%	99.710%
85.0	4.873	0.533	1098.692	.037%	99.758%
86.0	4.873	0.533	1099.225	.037%	99.806%
87.0	4.859	0.533	1099.757	.037%	99.855%
88.0	4.873	0.533	1100.29	.037%	99.903%
89.0	4.866	0.534	1100.824	.037%	99.952%
90.0	4.866	0.534	1101.358	.037%	100.000%

Zonal flux distribution table

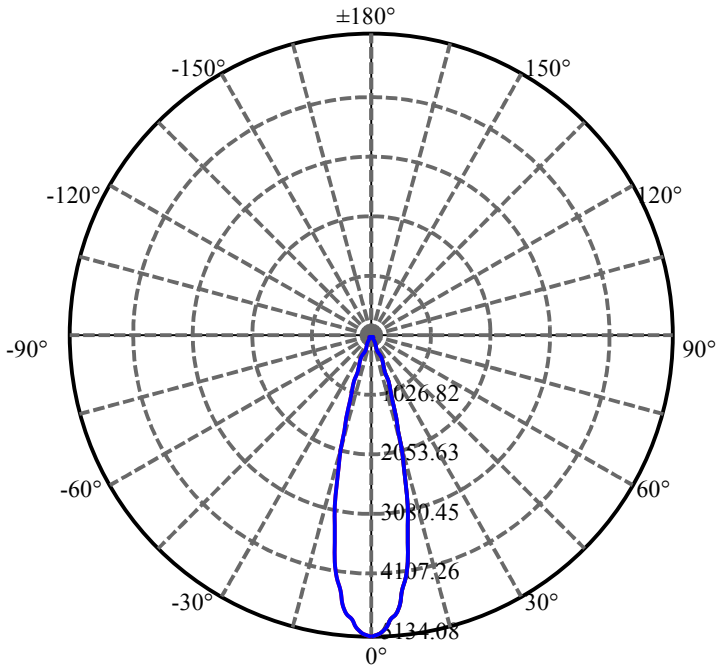
ZONAL LUMEN SUMMARY

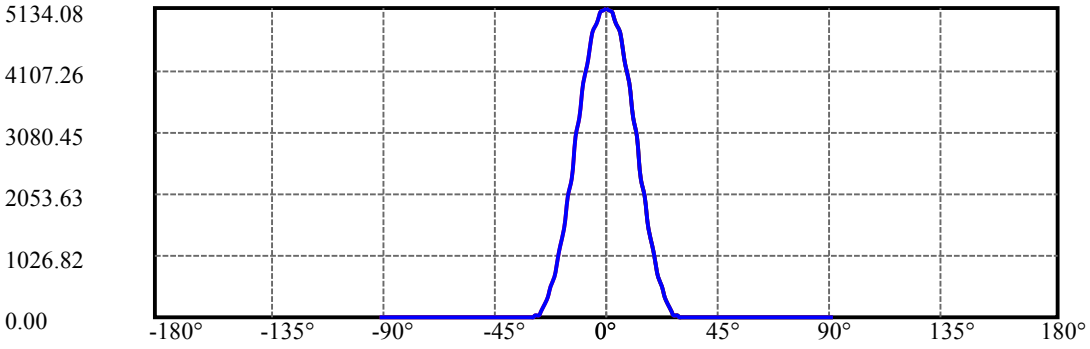
Zone	Lumens	%Lamp	%Fixt
0-30	1071.44	75.01%	97.28%
0-40	1076.55	75.37%	97.75%
0-60	1085.80	76.02%	98.59%
0-90	1100.82	77.07%	99.95%
0-120	1100.82	77.07%	99.95%
0-180	1101.36	77.11%	100.00%
60-90	15.51	1.09%	1.41%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.76	881.09	61.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	417.00
10-20	546.73
20-30	107.71
30-40	5.11
40-50	4.51
50-60	4.74
60-70	5.01
70-80	5.22
80-90	4.80
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):

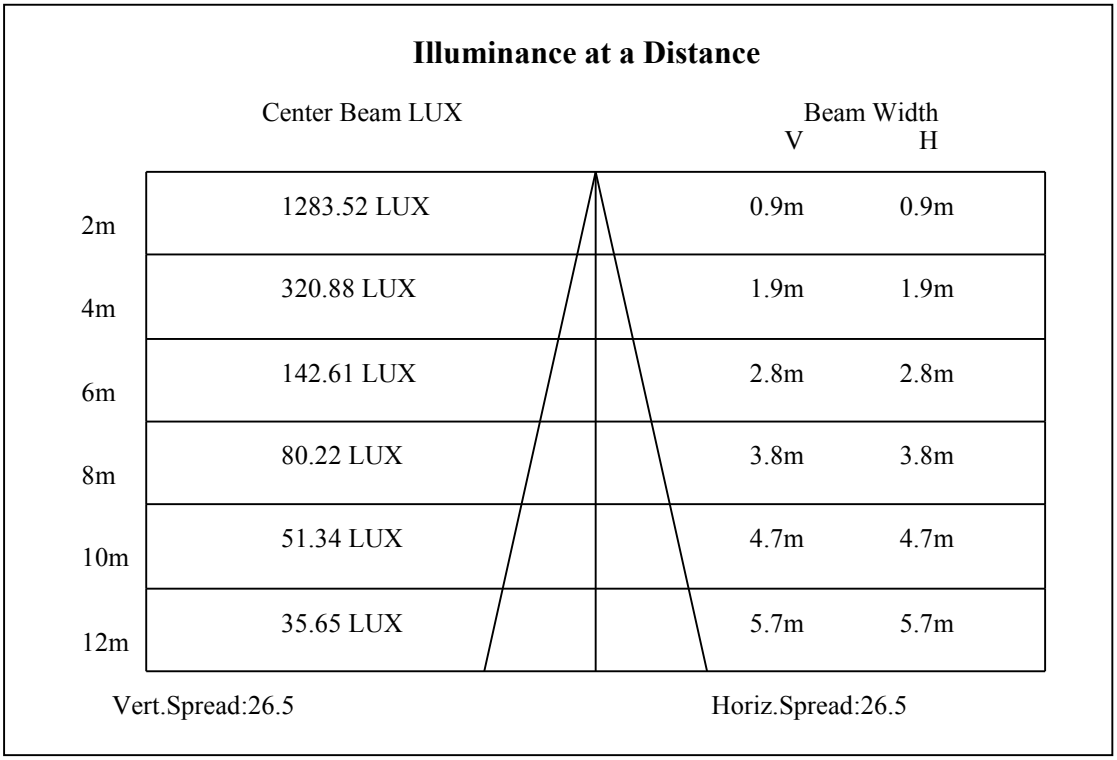
C0/C180:

C90/C270:

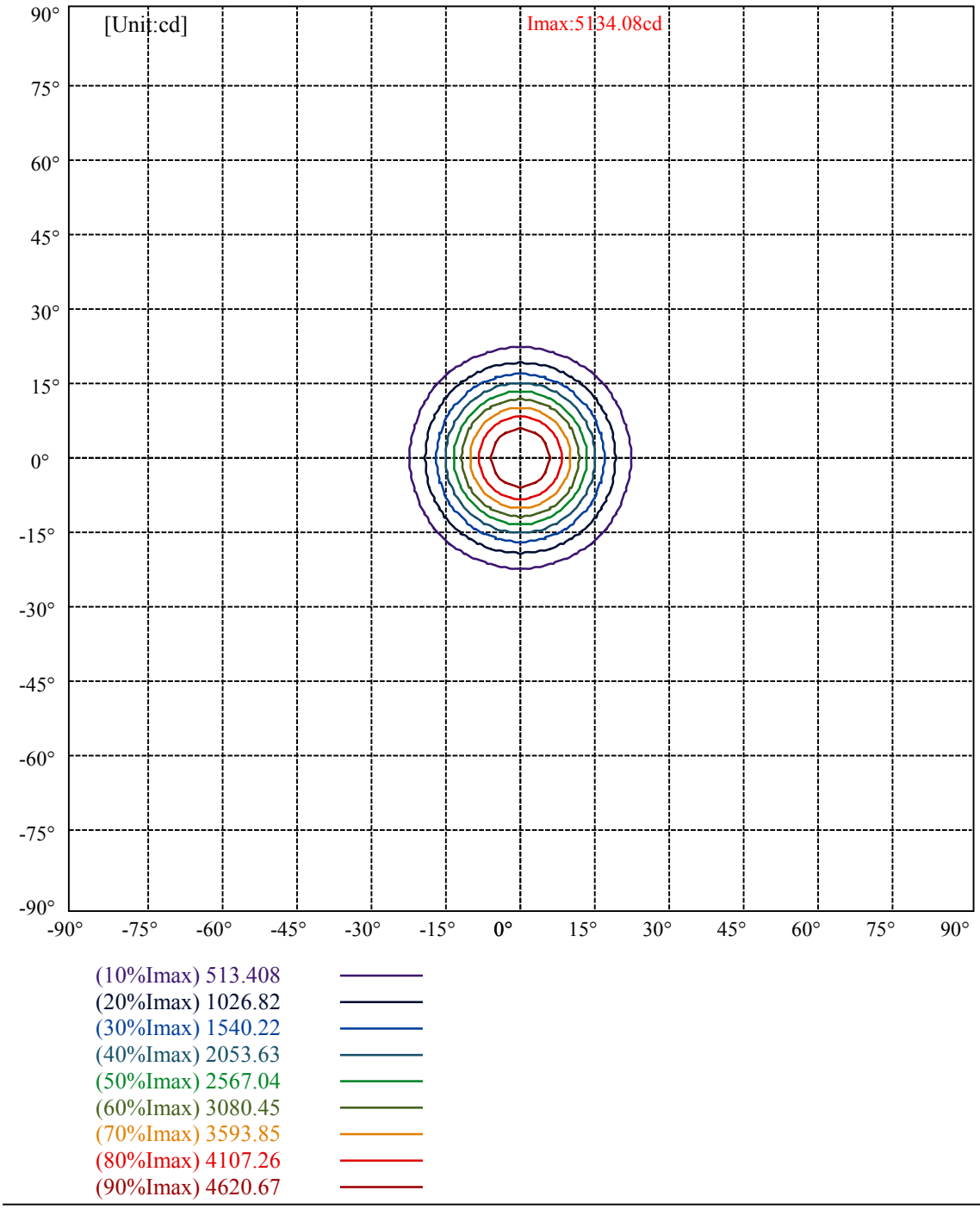
Field angle(10%Imax):C0/180Left:22.0 Right:22.0
:C90/270Left:22.0 Right:22.0

Beam Angle(50%Imax):C0/180Left:13.2 Right:13.2
:C90/270Left:13.2 Right:13.2

Lux distance Curve



ISO-Intensity(V-H)



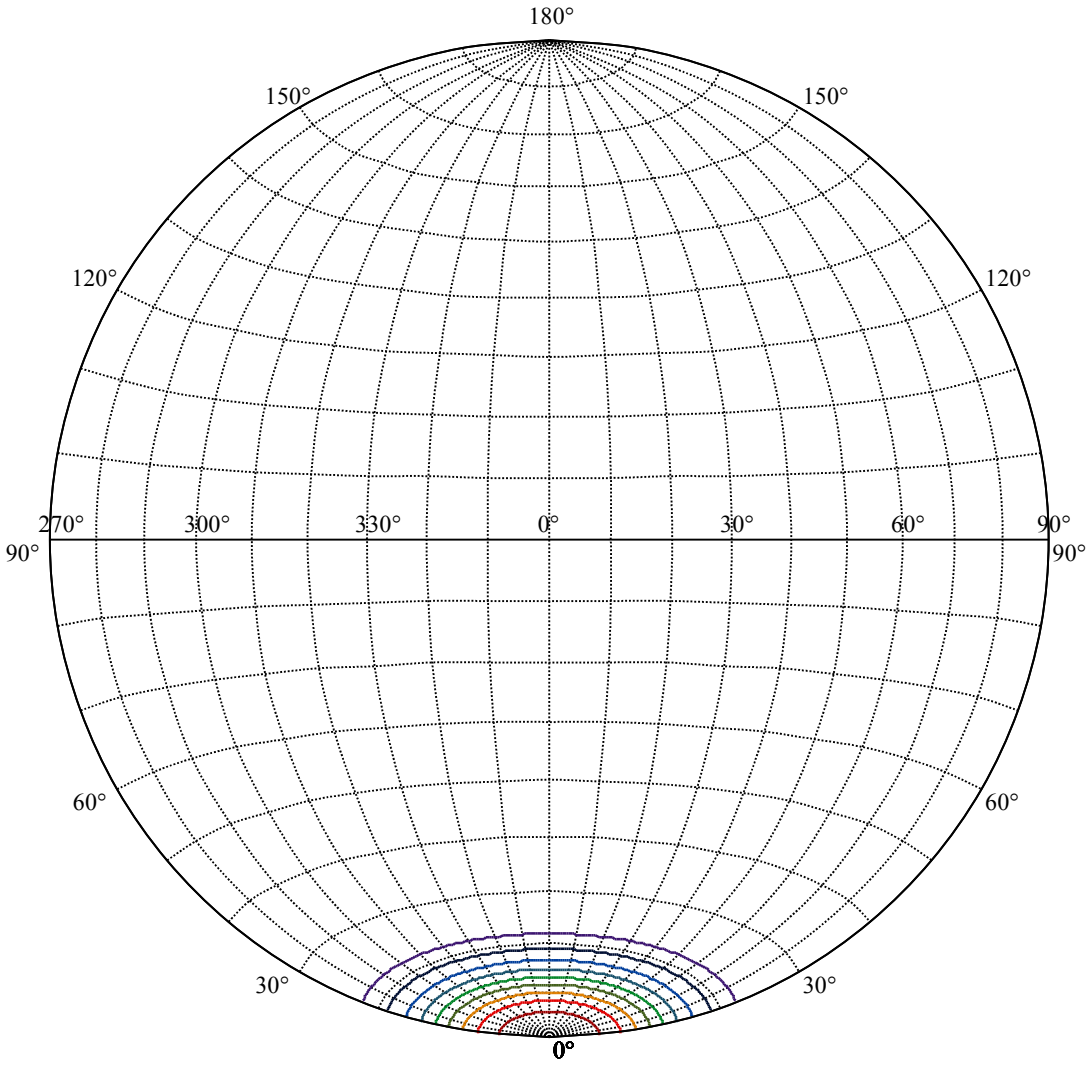
(10%Imax) 513.408
(20%Imax) 1026.82
(30%Imax) 1540.22
(40%Imax) 2053.63
(50%Imax) 2567.04
(60%Imax) 3080.45
(70%Imax) 3593.85
(80%Imax) 4107.26
(90%Imax) 4620.67

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/15
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5134.08

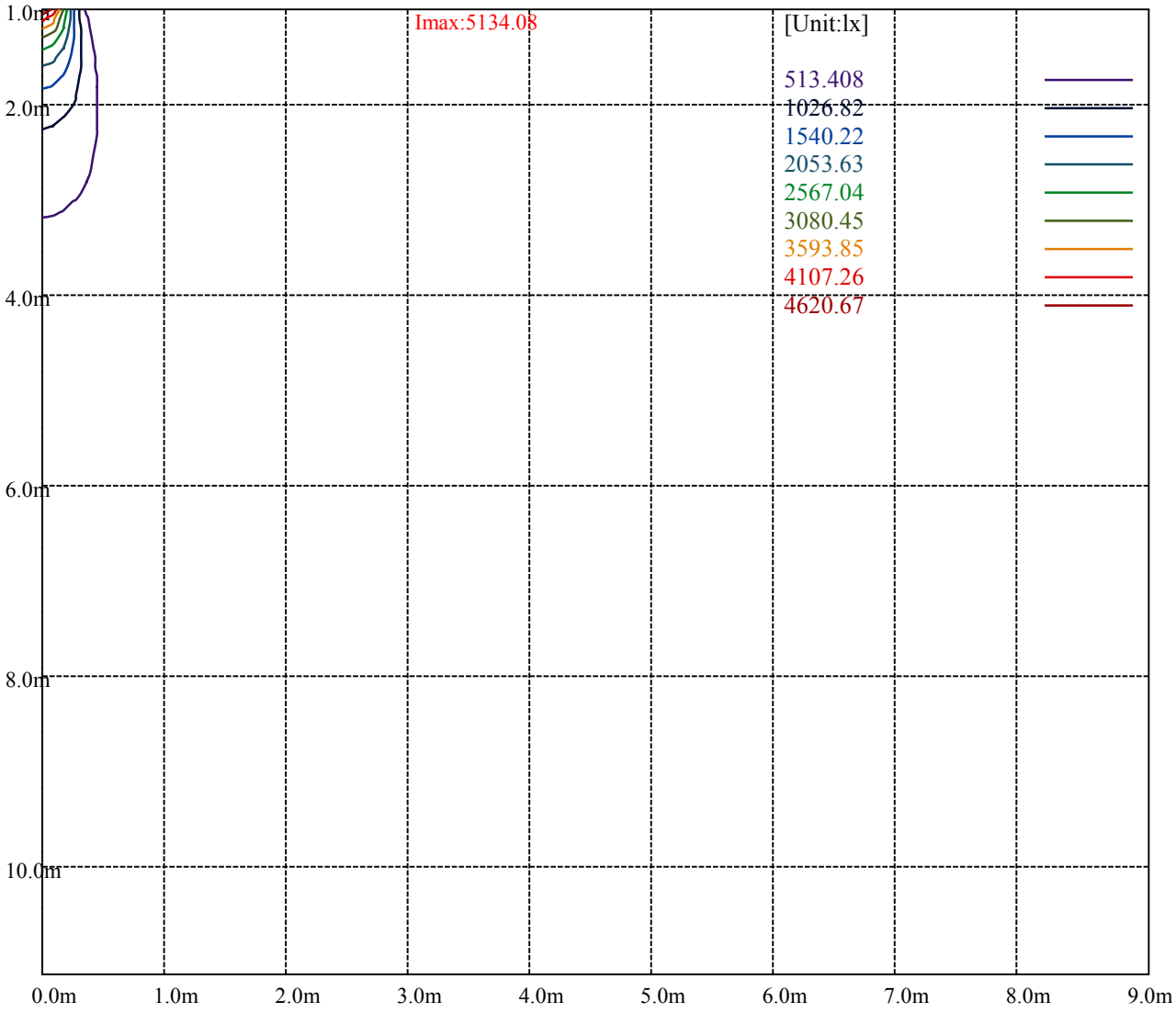
(10%Imax) 513.408
(20%Imax) 1026.82
(30%Imax) 1540.22
(40%Imax) 2053.63
(50%Imax) 2567.04
(60%Imax) 3080.45
(70%Imax) 3593.85
(80%Imax) 4107.26
(90%Imax) 4620.67

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/15
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/7/15
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

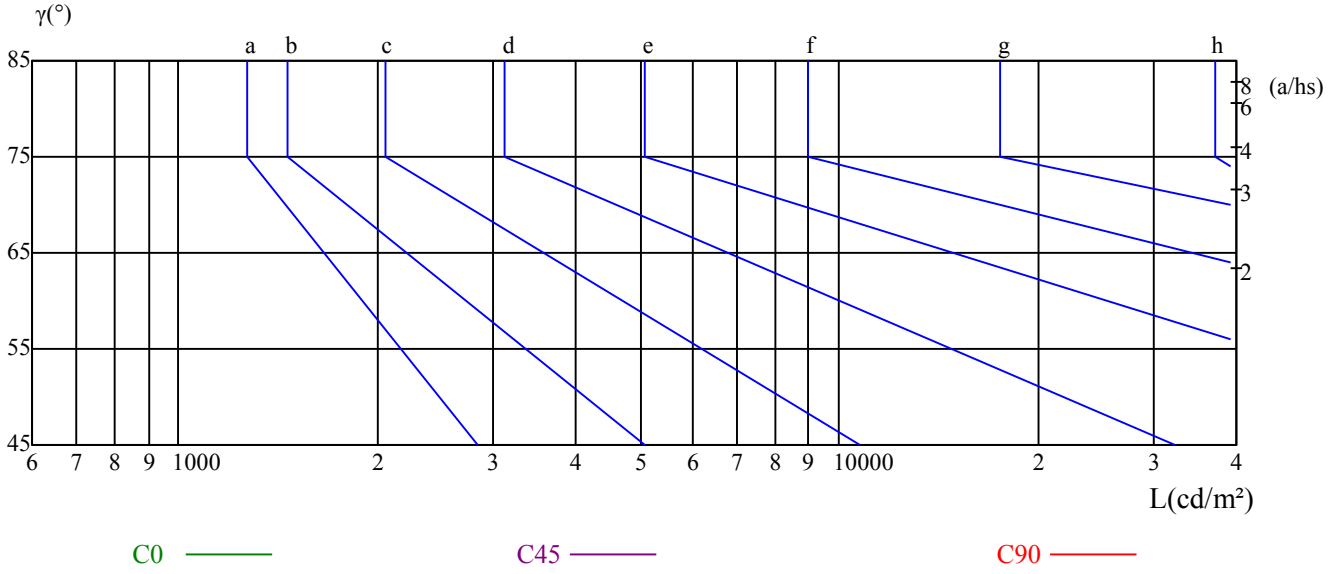
γ	45	50	55	60	65	70	75	80	85
C0	221	217	219	226	238	255	279	313	358
C45	238	237	241	252	269	294	328	377	447
C90	308	319	341	377	433	518	656	919	1556

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
465	465	465	742	742	742	2180	2180	2180

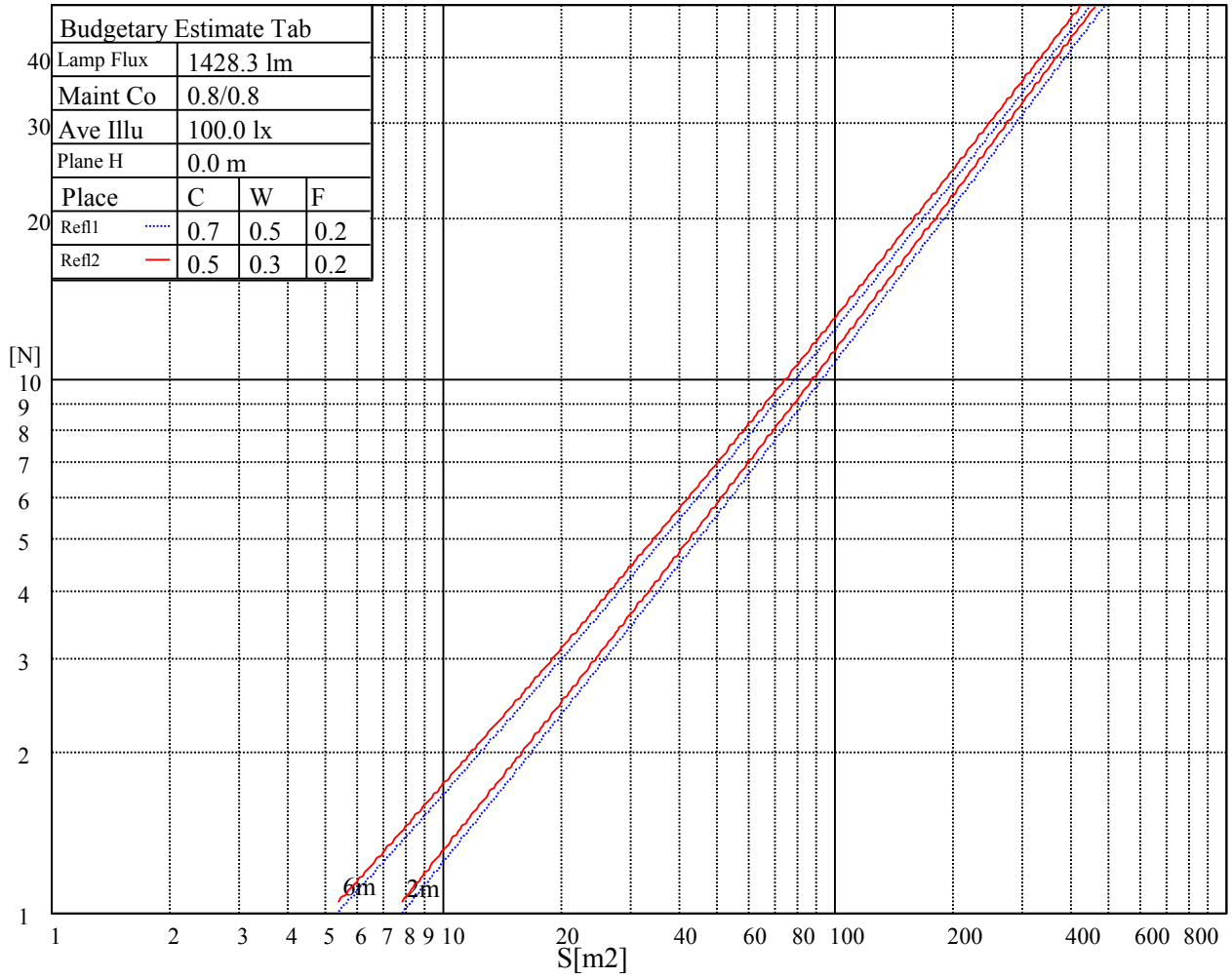
Glare Table

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

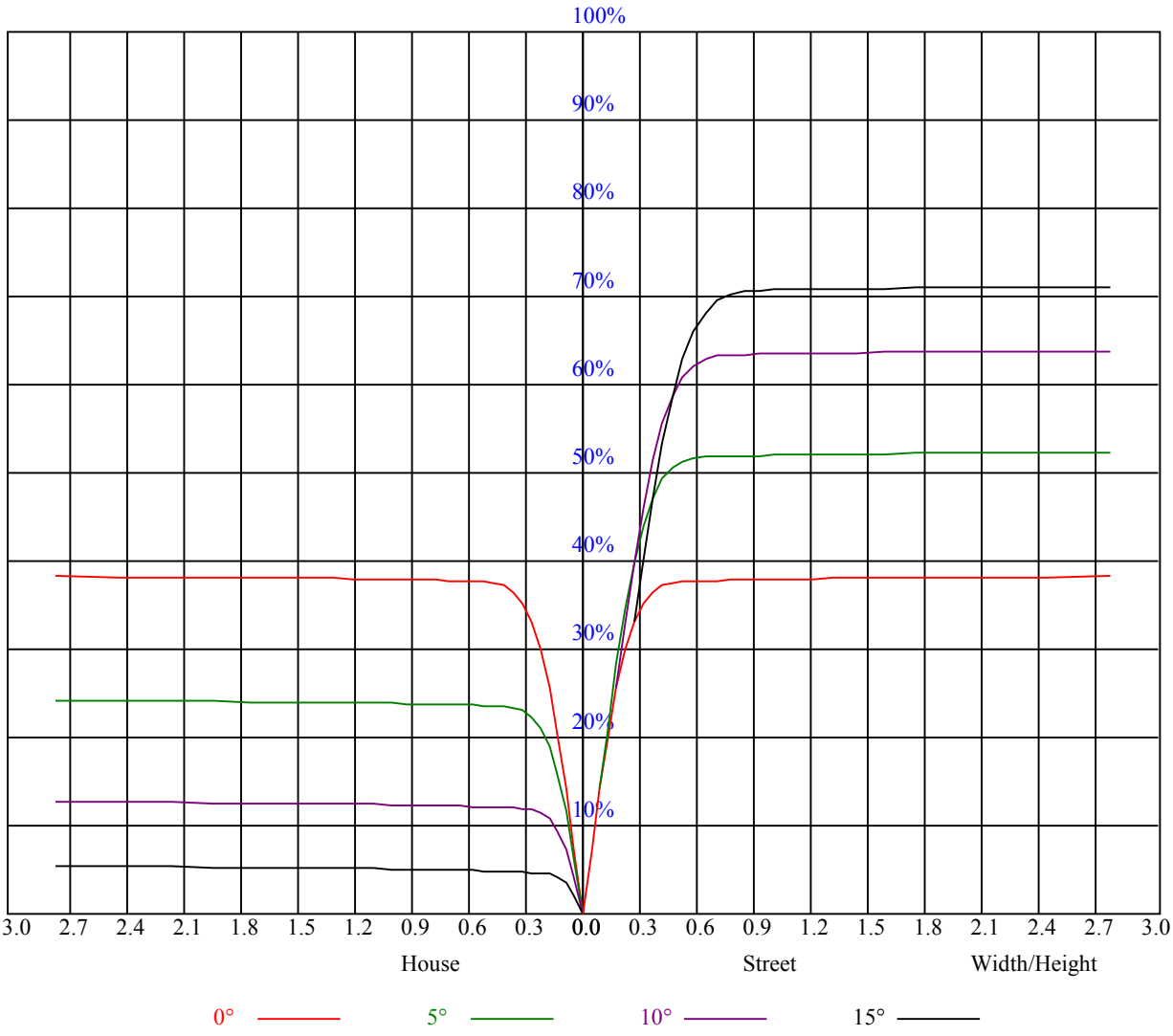


Equipment: GMS1980 Date: 2021/7/15 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.92	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	0.85	0.84	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.76	0.74
2	0.83	0.81	0.79	0.82	0.80	0.78	0.79	0.78	0.76	0.77	0.76	0.75	0.75	0.74	0.73	0.72
3	0.80	0.77	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.75	0.73	0.72	0.73	0.72	0.71	0.70
4	0.77	0.74	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.70	0.72	0.70	0.69	0.68
5	0.74	0.71	0.69	0.74	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.68	0.70	0.68	0.67	0.66
6	0.72	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.70	0.67	0.66	0.69	0.67	0.65	0.65
7	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
8	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.63	0.66	0.64	0.62	0.66	0.64	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	0.63	0.61	0.64	0.62	0.61	0.60
10	0.65	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: 2021/7/15	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	5131.13	5132.25	5080.50	4973.06	4851.00	4716.56	4547.81	4366.69	4160.81
45.0	5141.25	5130.56	5064.19	4961.25	4834.13	4714.31	4566.94	4374.00	4171.50
90.0	5127.75	5107.50	5057.44	4961.25	4883.63	4778.44	4618.69	4407.19	4194.00
135.0	5136.19	5118.19	5087.25	5018.06	4950.56	4859.44	4740.75	4590.00	4397.63
180.0	5131.13	5104.69	5059.13	4956.75	4850.44	4744.13	4615.31	4398.75	4190.06
225.0	5141.25	5118.19	5069.25	4966.88	4869.00	4764.38	4602.38	4392.56	4179.94
270.0	5127.75	5122.69	5073.75	5016.94	4892.63	4741.88	4593.38	4347.56	4133.25
315.0	5136.19	5097.94	5027.06	4917.38	4782.94	4631.06	4436.44	4175.44	3929.63
360.0	5131.13	5132.25	5080.50	4973.06	4851.00	4716.56	4547.81	4366.69	4160.81

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3840.75	3562.31	3265.31	2913.19	2559.94	2260.13	1940.06	1649.25	1413.00
45.0	3900.38	3585.38	3284.44	2971.13	2585.81	2283.19	2000.25	1680.19	1437.75
90.0	3930.19	3634.31	3348.56	3013.88	2707.31	2369.81	2053.13	1792.13	1548.00
135.0	4130.44	3885.19	3618.00	3327.75	2952.00	2643.75	2347.88	2003.63	1734.75
180.0	3956.06	3629.25	3352.50	3058.88	2713.50	2372.06	2088.00	1784.25	1538.44
225.0	3918.38	3617.44	3328.31	2986.31	2670.75	2328.19	2010.38	1743.19	1495.13
270.0	3893.06	3556.69	3258.00	2947.50	2556.00	2249.44	1964.25	1636.88	1396.69
315.0	3661.88	3281.06	2964.38	2646.56	2295.56	1977.19	1713.94	1446.19	1107.34
360.0	3840.75	3562.31	3265.31	2913.19	2559.94	2260.13	1940.06	1649.25	1413.00

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1180.69	995.63	807.19	631.69	493.31	361.13	302.06	146.08	83.36
45.0	1236.94	1010.25	808.88	653.06	507.38	379.69	296.44	162.23	86.23
90.0	1112.68	1063.41	882.56	695.31	537.30	408.04	296.83	174.15	103.16
135.0	1501.31	1247.63	1016.44	836.44	669.38	513.00	377.44	285.19	160.03
180.0	1118.70	1020.77	861.08	676.46	511.54	387.79	271.52	156.94	92.59
225.0	1113.98	1018.86	841.28	641.25	498.43	378.28	249.19	151.03	82.52
270.0	1185.19	971.44	784.69	623.25	476.44	337.50	286.31	136.46	71.16
315.0	1010.36	820.80	663.92	506.87	367.43	261.00	165.66	78.64	39.38
360.0	1180.69	995.63	807.19	631.69	493.31	361.13	302.06	146.08	83.36

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	36.90	19.13	14.29	12.32	10.74	9.90	9.28	8.44	7.99
45.0	39.38	20.76	13.61	11.36	9.96	9.23	8.61	8.10	7.65
90.0	51.19	24.53	14.91	11.53	10.13	9.23	8.66	8.10	7.65
135.0	80.10	37.69	22.16	14.06	10.97	9.96	9.17	8.44	7.99
180.0	48.54	23.91	15.02	11.53	10.18	9.23	8.61	8.04	7.59
225.0	40.50	21.88	15.13	12.15	11.03	10.07	9.23	8.61	8.10
270.0	33.13	18.11	13.84	12.04	10.74	9.96	9.23	8.49	8.04
315.0	21.04	14.34	12.32	11.14	10.13	9.28	8.66	8.16	7.71
360.0	36.90	19.13	14.29	12.32	10.74	9.90	9.28	8.44	7.99

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	7.59	7.20	6.86	6.64	6.41	6.24	6.08	5.96	5.85
45.0	7.37	7.09	6.81	6.58	6.41	6.30	6.13	6.02	5.91
90.0	7.26	6.98	6.75	6.47	6.30	6.19	6.02	5.96	5.85
135.0	7.54	7.14	6.86	6.64	6.47	6.24	6.13	5.96	5.85
180.0	7.20	6.92	6.69	6.41	6.24	6.08	5.96	5.85	5.79
225.0	7.65	7.31	7.03	6.75	6.53	6.36	6.19	6.08	5.96
270.0	7.65	7.31	6.98	6.75	6.53	6.36	6.24	6.13	6.02
315.0	7.31	6.98	6.75	6.53	6.30	6.19	6.08	5.96	5.85
360.0	7.59	7.20	6.86	6.64	6.41	6.24	6.08	5.96	5.85

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	5.74	5.63	5.63	5.51	5.46	5.40	5.40	5.29	5.23
45.0	5.79	5.74	5.68	5.68	5.57	5.51	5.46	5.46	5.40
90.0	5.74	5.68	5.57	5.57	5.51	5.46	5.40	5.40	5.34
135.0	5.79	5.68	5.63	5.57	5.51	5.46	5.40	5.34	5.29
180.0	5.68	5.63	5.51	5.46	5.40	5.34	5.34	5.29	5.23
225.0	5.91	5.79	5.74	5.68	5.63	5.57	5.51	5.51	5.46
270.0	5.91	5.79	5.74	5.68	5.63	5.63	5.51	5.51	5.40
315.0	5.74	5.68	5.63	5.57	5.51	5.46	5.40	5.34	5.34
360.0	5.74	5.63	5.63	5.51	5.46	5.40	5.40	5.29	5.23

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.23	5.18	5.18	5.12	5.12	5.06	5.01	5.01	5.01
45.0	5.40	5.34	5.29	5.29	5.29	5.23	5.23	5.18	5.18
90.0	5.29	5.29	5.23	5.23	5.18	5.18	5.12	5.18	5.18
135.0	5.29	5.23	5.23	5.18	5.18	5.18	5.12	5.12	5.06
180.0	5.18	5.18	5.12	5.12	5.06	5.06	5.06	5.01	5.01
225.0	5.40	5.34	5.34	5.29	5.29	5.23	5.23	5.23	5.18
270.0	5.40	5.34	5.34	5.29	5.29	5.29	5.18	5.18	5.18
315.0	5.29	5.23	5.23	5.18	5.12	5.12	5.06	5.06	5.06
360.0	5.23	5.18	5.18	5.12	5.12	5.06	5.01	5.01	5.01

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.95	4.95	4.95	4.95	4.89	4.89	4.89	4.89	4.89
45.0	5.18	5.12	5.12	5.12	5.12	5.06	5.06	5.06	5.06
90.0	5.12	5.12	5.06	5.06	5.06	5.01	5.01	5.01	5.01
135.0	5.01	5.06	5.01	5.01	5.01	4.95	4.95	4.95	4.95
180.0	4.95	4.95	4.95	4.95	4.89	4.89	4.89	4.84	4.84
225.0	5.18	5.12	5.12	5.12	5.12	5.06	5.06	5.06	5.06
270.0	5.18	5.12	5.12	5.12	5.12	5.06	5.06	5.06	5.01
315.0	5.06	5.01	5.01	5.01	4.95	4.95	4.95	4.95	4.95
360.0	4.95	4.95	4.95	4.95	4.89	4.89	4.89	4.89	4.89

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.84	4.84	4.84	4.78	4.84	4.84	4.84	4.84	4.78
45.0	5.06	5.06	5.01	5.01	5.01	5.01	5.01	5.01	5.01
90.0	5.01	5.01	5.01	5.01	4.95	4.95	4.95	4.95	4.95
135.0	4.95	4.95	4.95	4.89	4.89	4.89	4.89	4.89	4.89
180.0	4.89	4.84	4.84	4.84	4.78	4.84	4.78	4.78	4.78
225.0	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01
270.0	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.95	5.01
315.0	4.89	4.89	4.89	4.89	4.89	4.84	4.84	4.84	4.84
360.0	4.84	4.84	4.84	4.78	4.84	4.84	4.84	4.84	4.78

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.78	4.84	4.78	4.78	4.78	4.78	4.78	4.78	4.78
45.0	5.01	5.01	4.95	5.01	4.95	4.95	4.95	4.95	4.95
90.0	4.95	4.95	4.95	4.95	4.89	4.95	4.89	4.95	4.89
135.0	4.89	4.89	4.89	4.89	4.84	4.84	4.84	4.84	4.84
180.0	4.78	4.78	4.78	4.78	4.73	4.73	4.73	4.78	4.78
225.0	5.01	5.01	5.01	5.01	5.01	4.95	4.95	4.95	4.95
270.0	5.01	4.95	5.01	4.95	4.95	4.95	4.89	4.89	4.89
315.0	4.89	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84
360.0	4.78	4.84	4.78	4.78	4.78	4.78	4.78	4.78	4.78

Intensity data(cd)

C/γ(°)	90.0
0.0	4.78
45.0	4.95
90.0	4.89
135.0	4.84
180.0	4.73
225.0	5.01
270.0	4.89
315.0	4.84
360.0	4.78