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Nata

LumCAT: 1-1060-N
Luminaire: 92.70.246.00

Report No: 210630-B009	Voltage(V): 39.8000
Test No: 210630-C009	Current(A): 0.2510
LampCAT: Fortimo LED SLM 1201 G7N	Power (W): 9.9890
Lamp flux(lm): 1156.7	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): 962.43
Efficiency(%): 83.21%
Lumens(lm)/Power(W): 96.35
Central intensity(cd): 5526.703
Maximum intensity(cd): 5526.703
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=17.3
[C90/270]Total=17.3
Field angle(10%Imax): [C0/180]Total=45.2
[C90/270]Total=45.2
Maximum s/h(1/2): C0_180=0.30 C90_270=0.30
Maximum s/h(1/4): C0_180=0.34 C90_270=0.34
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 83.21%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.261%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5526.703	0.000	0	.000%	.000%
1.0	5467.078	5.260	5.26	.455%	.547%
2.0	5306.766	15.464	20.724	1.337%	2.153%
3.0	5067.633	24.812	45.536	2.145%	4.731%
4.0	4750.734	32.865	78.401	2.841%	8.146%
5.0	4353.750	39.167	117.568	3.386%	12.216%
6.0	3881.883	43.280	160.849	3.742%	16.713%
7.0	3425.484	45.357	206.205	3.921%	21.426%
8.0	3022.945	46.150	252.356	3.990%	26.221%
9.0	2610.422	45.655	298.011	3.947%	30.965%
10.0	2253.375	44.016	342.027	3.805%	35.538%
11.0	1987.664	42.377	384.403	3.664%	39.941%
12.0	1759.641	40.963	425.367	3.541%	44.197%
13.0	1559.813	39.394	464.76	3.406%	48.290%
14.0	1401.968	37.911	502.671	3.278%	52.229%
15.0	1252.898	36.447	539.118	3.151%	56.016%
16.0	1148.597	35.189	574.307	3.042%	59.673%
17.0	1035.330	34.010	608.316	2.940%	63.206%
18.0	929.876	32.402	640.718	2.801%	66.573%
19.0	837.998	30.757	671.476	2.659%	69.769%
20.0	745.875	28.989	700.465	2.506%	72.781%
21.0	660.129	26.998	727.463	2.334%	75.586%
22.0	588.670	25.095	752.558	2.170%	78.194%
23.0	527.217	23.414	775.973	2.024%	80.627%
24.0	465.110	21.696	797.668	1.876%	82.881%
25.0	409.774	19.893	817.561	1.720%	84.948%
26.0	358.608	18.138	835.699	1.568%	86.832%
27.0	308.974	16.333	852.032	1.412%	88.529%
28.0	260.191	14.410	866.442	1.246%	90.027%
29.0	211.978	12.353	878.795	1.068%	91.310%
30.0	169.875	10.310	889.105	.891%	92.381%
31.0	128.208	8.295	897.4	.717%	93.243%
32.0	95.667	6.414	903.814	.555%	93.910%
33.0	72.323	4.949	908.763	.428%	94.424%
34.0	56.053	3.885	912.648	.336%	94.828%
35.0	46.259	3.177	915.825	.275%	95.158%
36.0	40.254	2.755	918.58	.238%	95.444%
37.0	35.445	2.469	921.049	.213%	95.701%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	31.078	2.220	923.269	.192%	95.931%
39.0	27.120	1.986	925.256	.172%	96.138%
40.0	23.970	1.782	927.038	.154%	96.323%
41.0	21.312	1.612	928.65	.139%	96.490%
42.0	18.865	1.460	930.11	.126%	96.642%
43.0	16.854	1.323	931.433	.114%	96.779%
44.0	15.314	1.214	932.647	.105%	96.906%
45.0	13.971	1.125	933.772	.097%	97.023%
46.0	12.818	1.048	934.82	.091%	97.131%
47.0	11.904	0.983	935.803	.085%	97.234%
48.0	11.166	0.933	936.736	.081%	97.330%
49.0	10.470	0.888	937.624	.077%	97.423%
50.0	9.858	0.848	938.472	.073%	97.511%
51.0	9.401	0.815	939.287	.070%	97.596%
52.0	8.944	0.787	940.074	.068%	97.677%
53.0	8.557	0.761	940.835	.066%	97.756%
54.0	8.205	0.739	941.574	.064%	97.833%
55.0	7.896	0.719	942.293	.062%	97.908%
56.0	7.650	0.702	942.995	.061%	97.981%
57.0	7.418	0.689	943.684	.060%	98.052%
58.0	7.221	0.677	944.361	.059%	98.123%
59.0	7.073	0.668	945.029	.058%	98.192%
60.0	6.947	0.662	945.692	.057%	98.261%
61.0	6.820	0.657	946.349	.057%	98.329%
62.0	6.701	0.652	947	.056%	98.397%
63.0	6.602	0.647	947.647	.056%	98.464%
64.0	6.511	0.643	948.291	.056%	98.531%
65.0	6.434	0.641	948.931	.055%	98.598%
66.0	6.363	0.638	949.57	.055%	98.664%
67.0	6.279	0.636	950.205	.055%	98.730%
68.0	6.159	0.630	950.836	.054%	98.795%
69.0	6.033	0.622	951.458	.054%	98.860%
70.0	5.913	0.614	952.071	.053%	98.924%
71.0	5.752	0.603	952.674	.052%	98.987%
72.0	5.590	0.590	953.264	.051%	99.048%
73.0	5.463	0.578	953.842	.050%	99.108%
74.0	5.337	0.568	954.409	.049%	99.167%
75.0	5.203	0.557	954.966	.048%	99.225%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.105	0.547	955.514	.047%	99.282%
77.0	5.027	0.540	956.054	.047%	99.338%
78.0	4.929	0.533	956.587	.046%	99.393%
79.0	4.859	0.526	957.113	.045%	99.448%
80.0	4.774	0.519	957.632	.045%	99.502%
81.0	4.718	0.513	958.145	.044%	99.555%
82.0	4.662	0.509	958.654	.044%	99.608%
83.0	4.648	0.506	959.16	.044%	99.660%
84.0	4.605	0.504	959.664	.044%	99.713%
85.0	4.423	0.493	960.157	.043%	99.764%
86.0	4.254	0.474	960.631	.041%	99.813%
87.0	4.163	0.461	961.092	.040%	99.861%
88.0	4.085	0.452	961.543	.039%	99.908%
89.0	4.036	0.445	961.989	.038%	99.954%
90.0	3.980	0.439	962.428	.038%	100.000%

Zonal flux distribution table

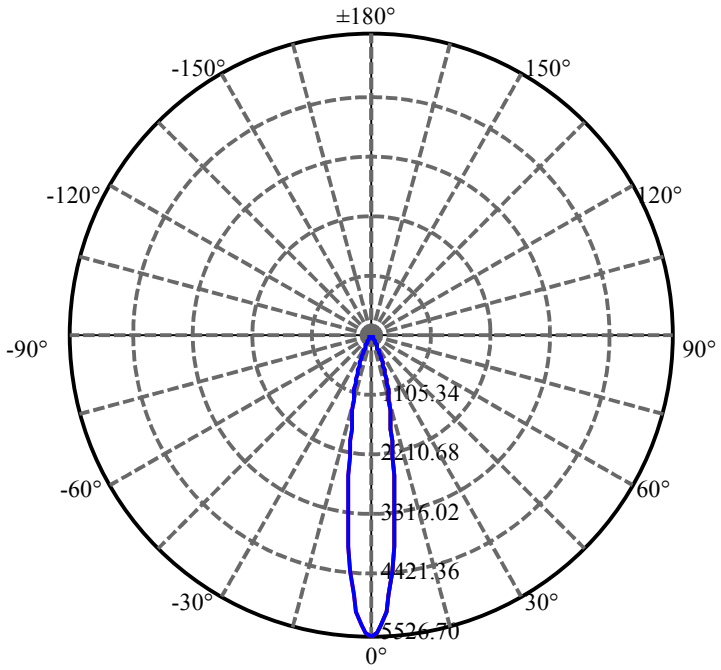
ZONAL LUMEN SUMMARY

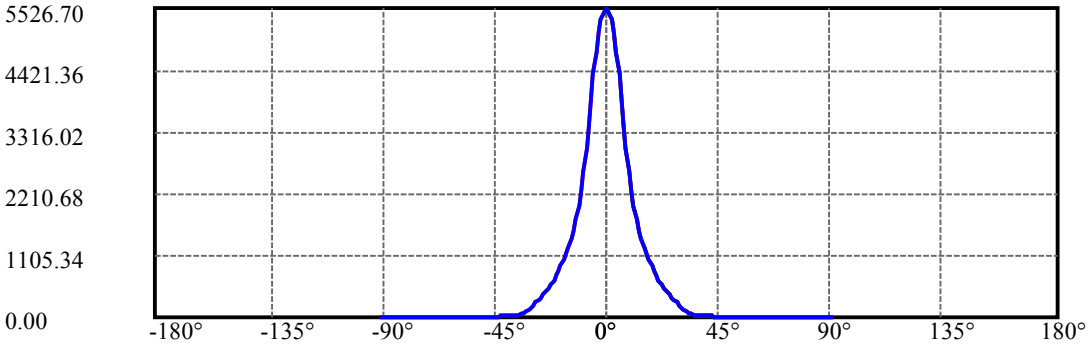
Zone	Lumens	%Lamp	%Fixt
0-30	889.10	76.87%	92.38%
0-40	927.04	80.15%	96.32%
0-60	945.69	81.76%	98.26%
0-90	961.99	83.17%	99.95%
0-120	961.99	83.17%	99.95%
0-180	962.43	83.21%	100.00%
60-90	16.96	1.47%	1.76%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.74	769.94	66.57%	80.00%

ZONAL LUMEN SUMMARY

0-10	342.03
10-20	358.44
20-30	188.64
30-40	37.93
40-50	11.43
50-60	7.22
60-70	6.38
70-80	5.56
80-90	4.36
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):

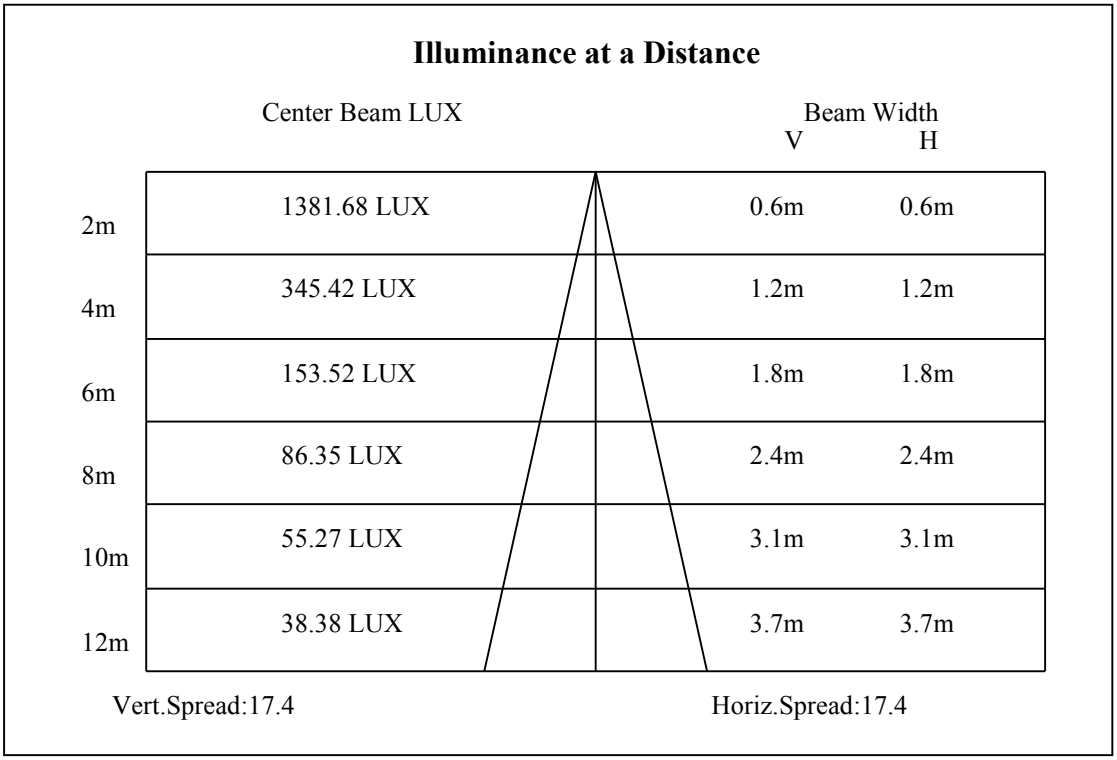
C0/C180:

C90/C270:

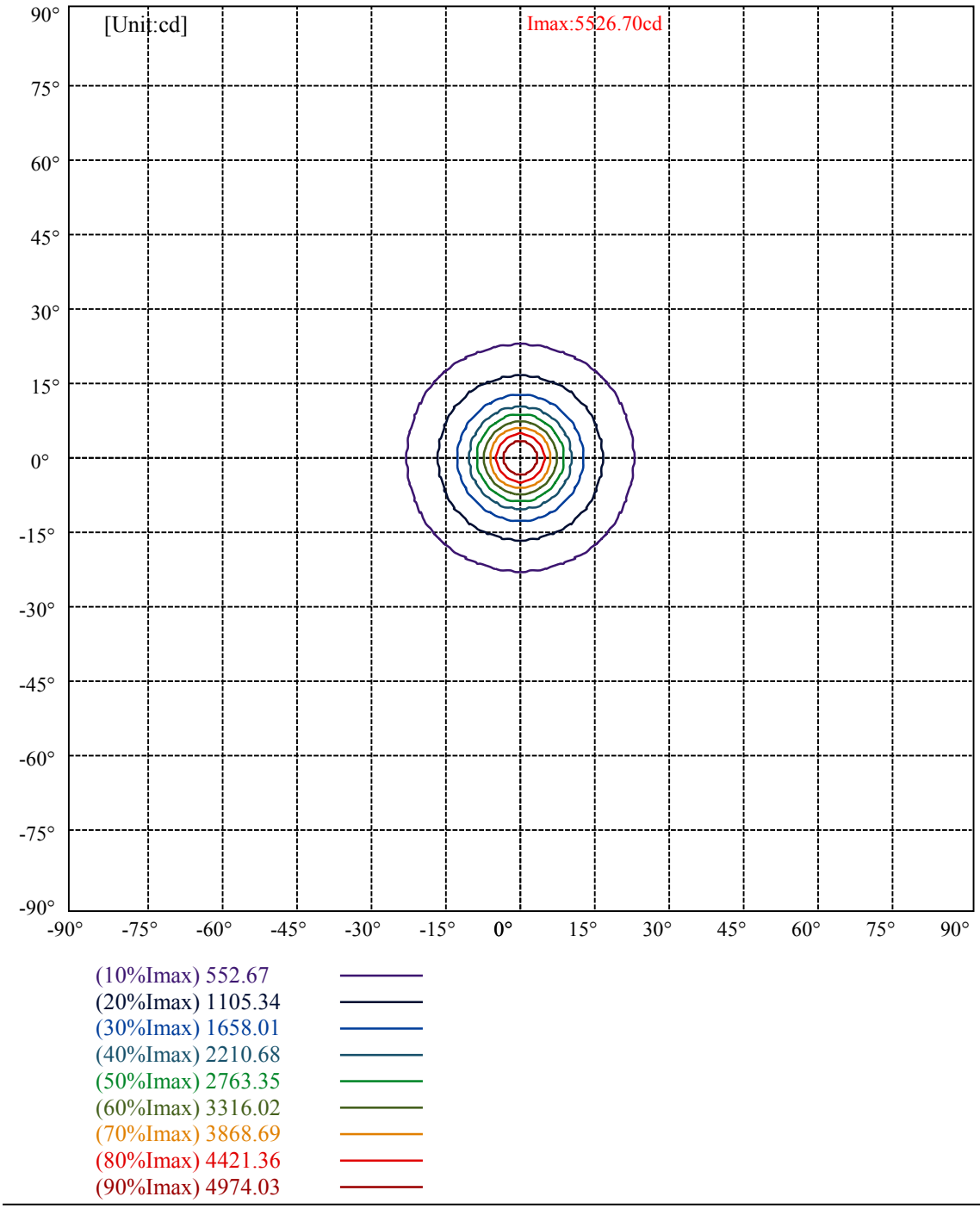
Field angle(10%Imax):C0/180Left:22.6 Right:22.6
:C90/270Left:22.6 Right:22.6

Beam Angle(50%Imax):C0/180Left:8.6 Right:8.6
:C90/270Left:8.6 Right:8.6

Lux distance Curve



ISO-Intensity(V-H)

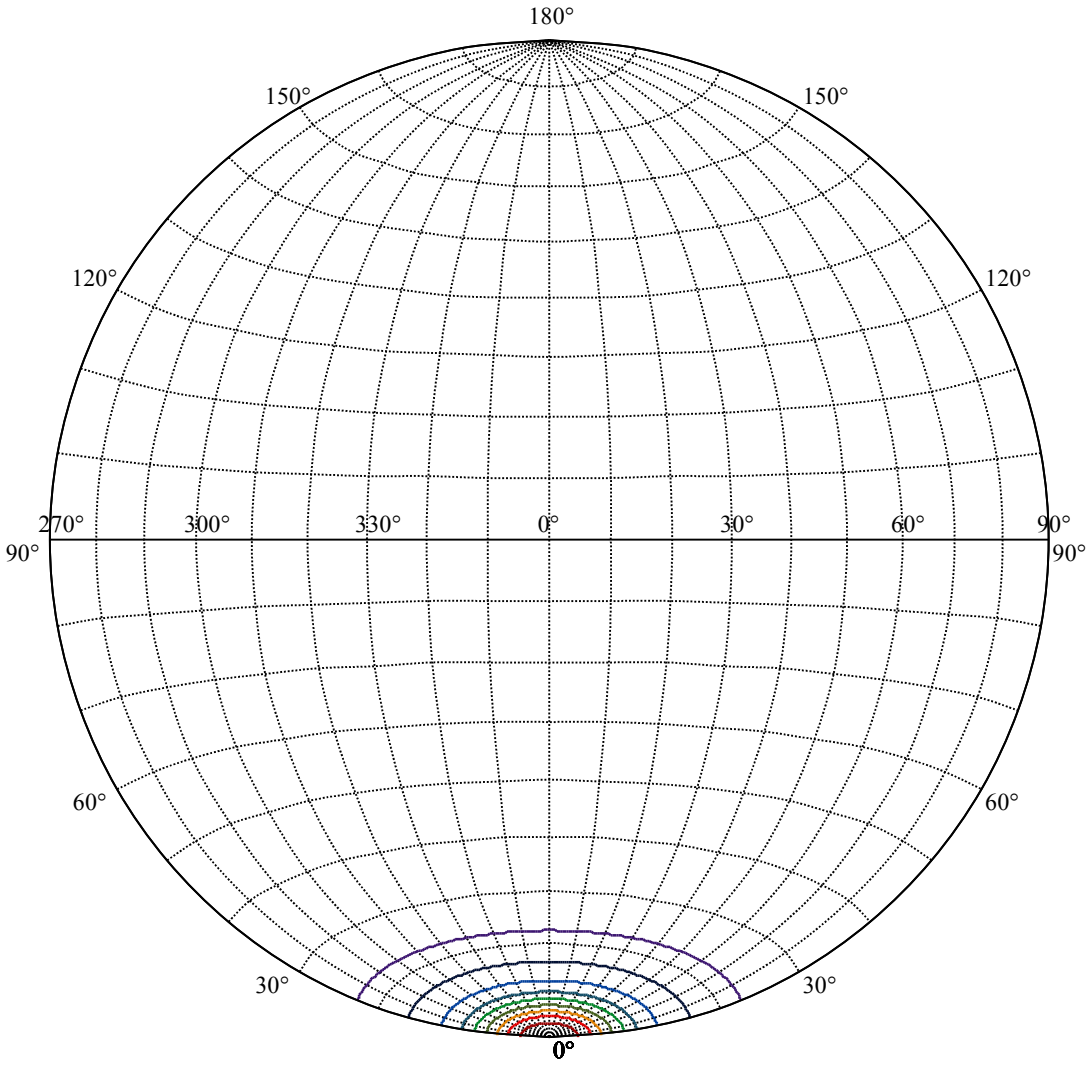


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/6/30
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5526.70

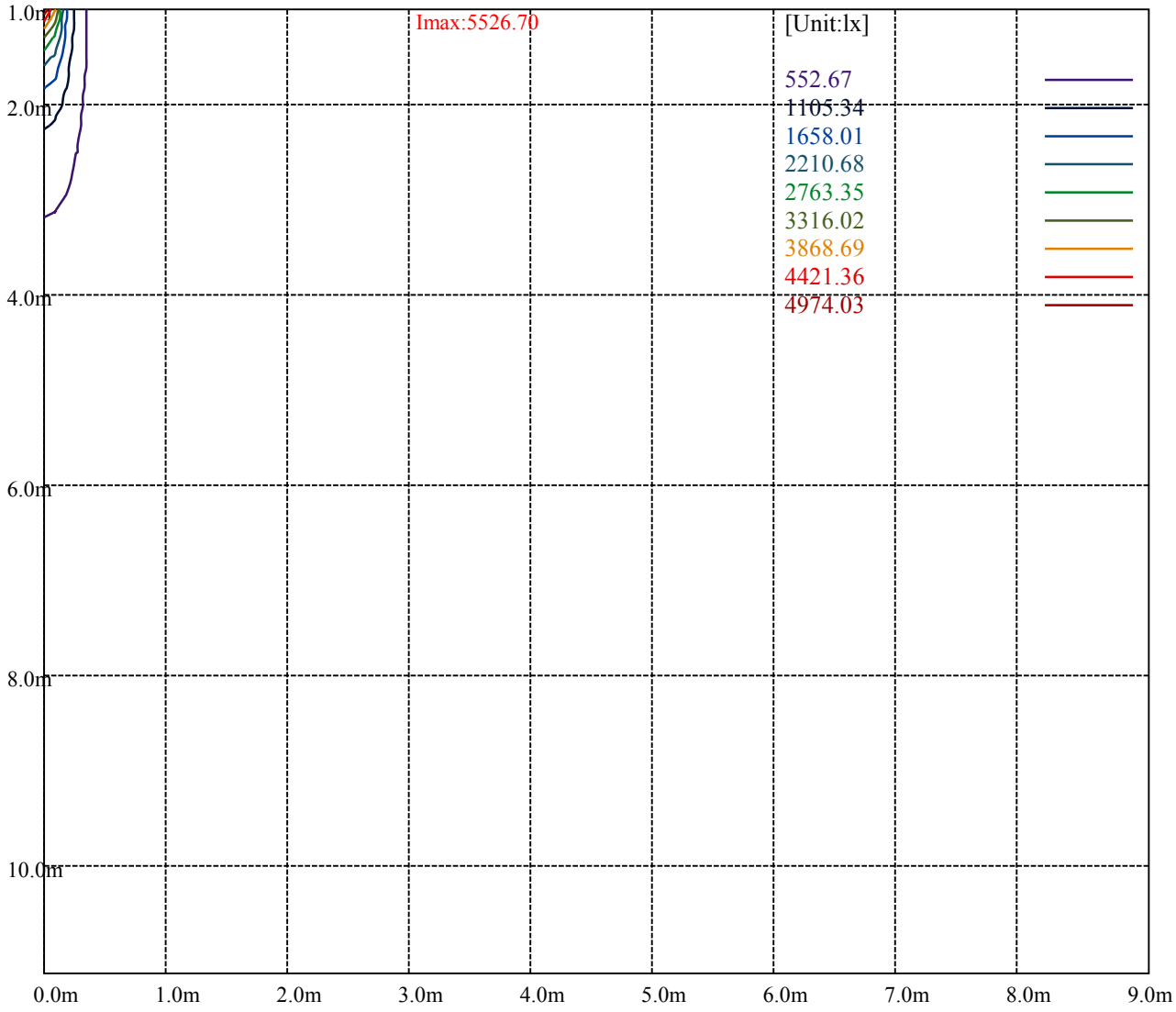
(10%Imax) 552.67
(20%Imax) 1105.34
(30%Imax) 1658.01
(40%Imax) 2210.68
(50%Imax) 2763.35
(60%Imax) 3316.02
(70%Imax) 3868.69
(80%Imax) 4421.36
(90%Imax) 4974.03

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/6/30
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/6/30
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

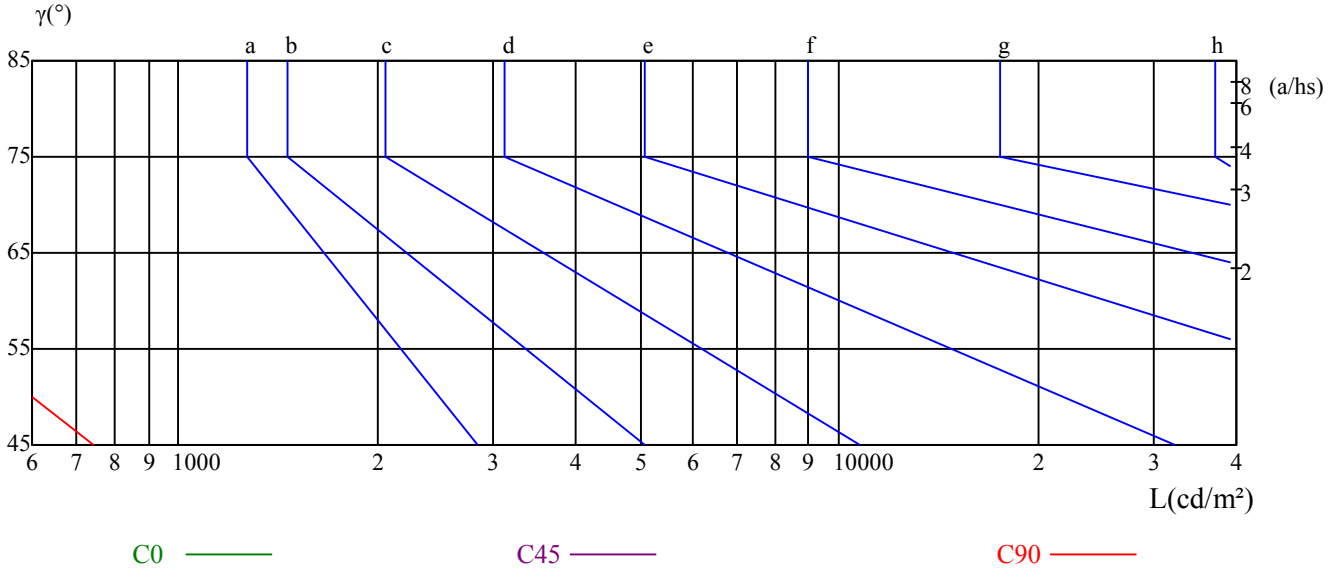
γ	45	50	55	60	65	70	75	80	85
C0	533	391	328	306	304	303	295	304	325
C45	575	426	362	341	344	349	346	367	406
C90	744	574	511	511	552	615	693	894	1412

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
593	593	593	784	784	784	1978	1978	1978

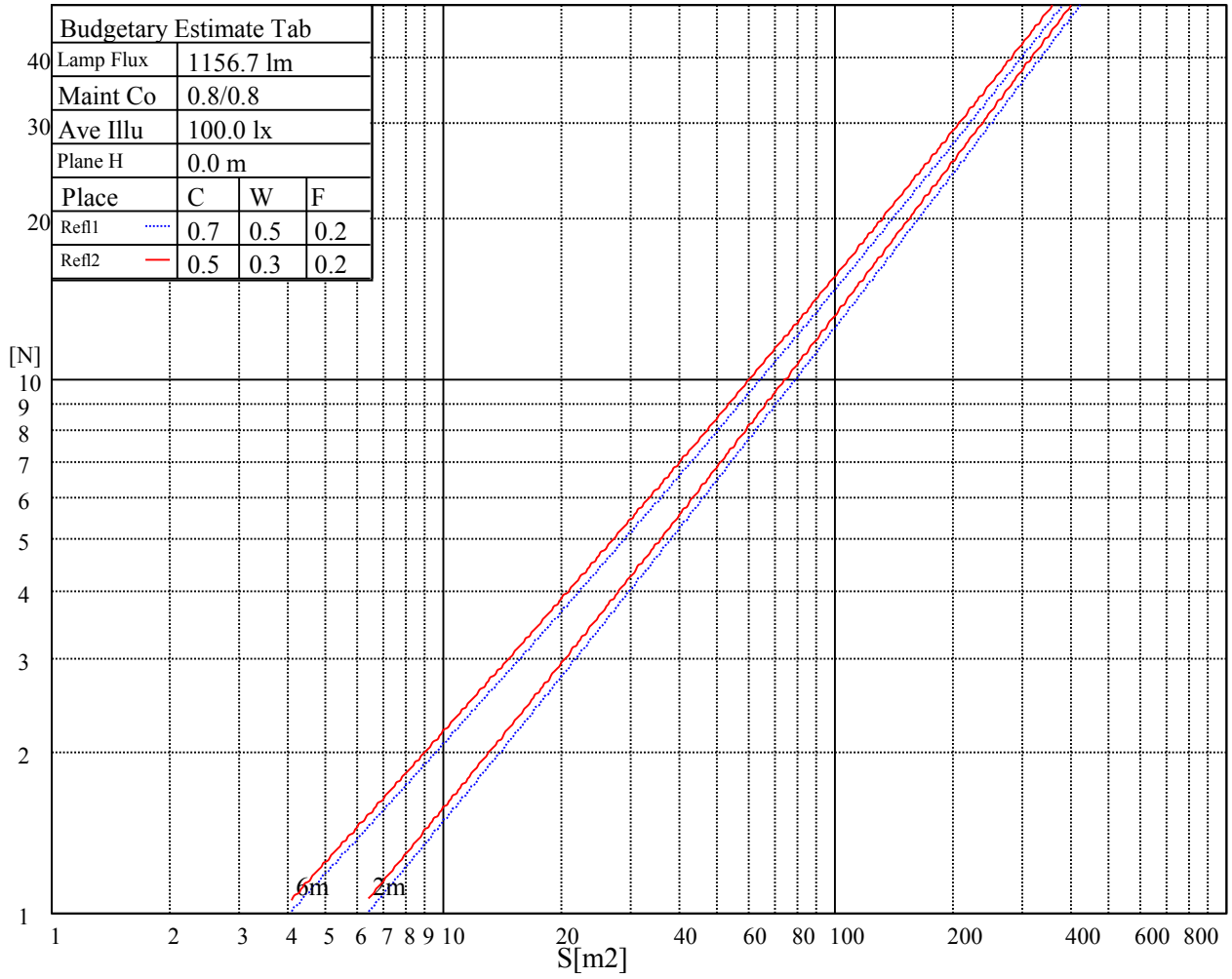
Glare Table

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

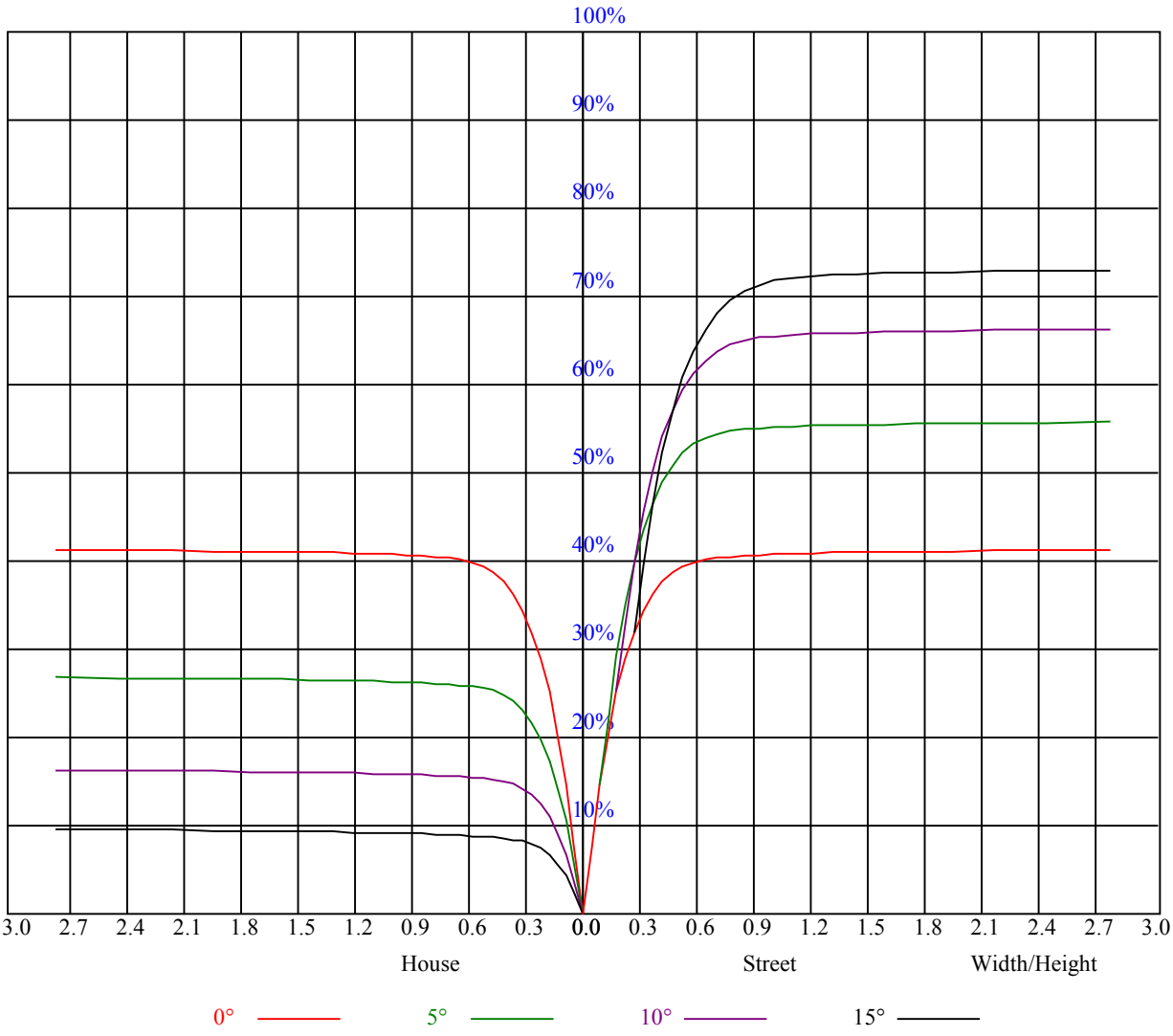


Equipment: GMS1980 Date: 2021/6/30 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

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	0.99	0.99	0.99	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89	0.85	0.85	0.85	0.83
1	0.93	0.92	0.90	0.92	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.82	0.81	0.80
2	0.89	0.86	0.84	0.87	0.85	0.83	0.85	0.83	0.81	0.82	0.81	0.79	0.80	0.79	0.78	0.76
3	0.85	0.81	0.79	0.83	0.81	0.78	0.81	0.79	0.77	0.79	0.77	0.76	0.78	0.76	0.75	0.74
4	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.71
5	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.70	0.69
6	0.75	0.71	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.72	0.70	0.68	0.71	0.69	0.67	0.66
7	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.65	0.69	0.67	0.65	0.64
8	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.68	0.65	0.63	0.62
9	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.61	0.61
10	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.59

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2021/6/30
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	5432.06	5603.06	5611.50	5448.94	5283.00	5051.81	4675.50	4227.19	3809.25
45.0	5596.88	5590.13	5441.06	5229.56	5001.19	4606.88	4106.81	3681.00	3258.00
90.0	5533.88	5365.13	5180.06	4924.69	4503.94	4026.38	3595.50	3071.25	2680.88
135.0	5544.00	5393.81	5190.19	4928.63	4540.50	4065.19	3517.88	3086.44	2703.94
180.0	5432.06	5235.19	4944.94	4595.06	4110.19	3619.69	3130.31	2726.44	2329.88
225.0	5596.88	5424.19	5224.50	4960.69	4604.63	4122.00	3668.06	3155.06	2773.13
270.0	5533.88	5546.25	5418.56	5232.94	5005.69	4644.56	4147.31	3720.38	3308.63
315.0	5544.00	5578.88	5443.31	5220.56	4956.75	4693.50	4213.69	3736.13	3319.88
360.0	5432.06	5603.06	5611.50	5448.94	5283.00	5051.81	4675.50	4227.19	3809.25

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3281.06	2878.88	2517.75	2177.44	1902.94	1713.94	1524.38	1382.06	1239.75
45.0	2757.94	2397.94	2102.06	1842.75	1637.44	1479.38	1341.56	1196.44	1093.50
90.0	2331.00	1984.50	1777.50	1608.19	1441.13	1295.44	1113.41	1061.83	965.98
135.0	2310.19	1995.19	1780.31	1581.75	1414.69	1283.63	1153.13	1049.63	946.69
180.0	2037.94	1780.88	1586.81	1438.88	1291.50	1121.68	1057.39	963.06	853.59
225.0	2421.00	2044.13	1810.13	1631.25	1463.06	1319.06	1120.39	1081.58	980.89
270.0	2819.81	2462.63	2150.44	1873.13	1650.38	1487.81	1334.81	1200.94	1091.81
315.0	2924.44	2482.88	2176.31	1923.75	1677.38	1514.81	1378.13	1253.25	1110.43
360.0	3281.06	2878.88	2517.75	2177.44	1902.94	1713.94	1524.38	1382.06	1239.75

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1118.25	1019.25	912.94	811.69	725.06	657.56	565.31	509.63	468.00
45.0	982.69	892.13	790.88	706.50	621.56	558.00	494.44	435.38	380.81
90.0	862.71	765.62	685.35	604.74	534.49	482.68	434.64	365.74	323.94
135.0	843.75	760.50	674.44	594.56	535.50	485.44	417.94	367.31	321.75
180.0	764.78	683.49	604.69	536.57	486.11	428.51	370.29	325.74	266.91
225.0	877.89	780.58	697.95	616.28	546.86	493.71	446.96	376.54	335.14
270.0	979.88	888.19	789.75	696.38	624.38	551.81	492.75	444.94	384.75
315.0	1009.07	914.23	811.01	714.32	635.40	560.03	498.54	452.93	387.56
360.0	1118.25	1019.25	912.94	811.69	725.06	657.56	565.31	509.63	468.00

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	392.06	344.25	293.63	240.13	199.35	148.89	118.18	86.40	63.34
45.0	332.44	285.75	230.96	193.61	135.23	109.52	79.43	57.49	47.98
90.0	273.49	233.89	187.37	139.67	112.33	75.26	58.05	47.76	41.12
135.0	286.31	224.83	178.82	128.87	98.89	68.40	54.39	46.52	40.67
180.0	230.91	184.95	131.57	107.61	71.49	54.06	46.13	41.23	35.44
225.0	278.83	233.38	192.88	140.57	113.79	74.03	57.88	47.08	41.74
270.0	330.75	288.56	237.71	200.76	139.61	115.37	79.99	58.22	49.16
315.0	347.01	285.92	242.89	207.79	154.97	119.81	84.54	63.73	50.63
360.0	392.06	344.25	293.63	240.13	199.35	148.89	118.18	86.40	63.34

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	51.41	45.28	40.11	34.54	30.38	26.94	23.34	20.76	18.68
45.0	42.13	36.79	32.34	28.46	24.98	22.33	19.52	17.27	15.69
90.0	36.11	32.12	27.68	24.30	21.71	19.01	17.21	15.36	14.06
135.0	35.78	31.56	27.79	24.02	21.43	19.13	16.65	15.24	14.06
180.0	31.39	27.90	24.36	21.43	19.13	17.04	15.47	14.01	12.88
225.0	36.45	31.84	28.24	24.58	21.71	19.46	17.44	15.47	14.06
270.0	43.71	38.03	33.08	29.14	25.31	22.67	19.97	17.78	16.14
315.0	45.06	40.05	35.04	30.49	27.11	23.91	21.32	18.96	16.93
360.0	51.41	45.28	40.11	34.54	30.38	26.94	23.34	20.76	18.68

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	16.71	15.13	13.89	12.77	11.93	11.08	10.46	9.96	9.45
45.0	14.18	12.94	12.04	11.31	10.52	9.96	9.51	9.00	8.61
90.0	13.05	12.09	11.19	10.58	10.01	9.45	9.00	8.61	8.27
135.0	12.94	11.98	11.25	10.58	10.07	9.51	9.11	8.66	8.33
180.0	12.04	11.19	10.52	10.01	9.51	9.00	8.61	8.27	7.93
225.0	12.99	11.87	11.14	10.46	9.79	9.34	8.89	8.44	8.16
270.0	14.46	13.33	12.38	11.64	10.69	10.07	9.68	9.11	8.66
315.0	15.41	14.01	12.83	11.98	11.25	10.46	9.96	9.51	9.06
360.0	16.71	15.13	13.89	12.77	11.93	11.08	10.46	9.96	9.45

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.94	8.61	8.33	7.93	7.71	7.48	7.31	7.20	7.03
45.0	8.27	7.88	7.65	7.43	7.20	7.03	6.92	6.81	6.69
90.0	7.93	7.65	7.43	7.26	7.03	6.92	6.75	6.69	6.58
135.0	8.04	7.71	7.54	7.26	7.09	7.03	6.92	6.75	6.69
180.0	7.65	7.43	7.20	7.09	6.98	6.81	6.69	6.64	6.53
225.0	7.82	7.54	7.37	7.14	6.98	6.86	6.75	6.64	6.53
270.0	8.38	8.04	7.71	7.54	7.31	7.14	7.03	6.86	6.75
315.0	8.61	8.33	7.99	7.71	7.48	7.31	7.20	6.98	6.81
360.0	8.94	8.61	8.33	7.93	7.71	7.48	7.31	7.20	7.03

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	6.92	6.81	6.75	6.64	6.53	6.41	6.36	6.24	6.08
45.0	6.58	6.53	6.41	6.30	6.30	6.19	6.13	5.96	5.74
90.0	6.47	6.41	6.30	6.24	6.24	6.08	5.91	5.79	5.68
135.0	6.58	6.47	6.41	6.36	6.24	6.13	5.96	5.85	5.68
180.0	6.47	6.36	6.30	6.24	6.13	5.96	5.79	5.68	5.51
225.0	6.41	6.36	6.30	6.24	6.13	6.02	5.91	5.74	5.57
270.0	6.64	6.53	6.47	6.41	6.30	6.19	6.08	5.96	5.85
315.0	6.75	6.64	6.53	6.47	6.36	6.30	6.13	6.08	5.91
360.0	6.92	6.81	6.75	6.64	6.53	6.41	6.36	6.24	6.08

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.91	5.74	5.63	5.40	5.29	5.23	5.06	5.01	4.89
45.0	5.63	5.51	5.34	5.23	5.12	5.01	4.95	4.84	4.73
90.0	5.51	5.40	5.23	5.12	5.01	4.95	4.89	4.78	4.73
135.0	5.51	5.40	5.34	5.18	5.12	5.06	4.95	4.89	4.84
180.0	5.34	5.29	5.18	5.01	4.95	4.89	4.78	4.73	4.67
225.0	5.46	5.29	5.23	5.12	5.01	4.95	4.84	4.78	4.73
270.0	5.68	5.51	5.34	5.29	5.18	5.06	4.95	4.89	4.78
315.0	5.68	5.57	5.40	5.29	5.18	5.06	5.01	4.95	4.84
360.0	5.91	5.74	5.63	5.40	5.29	5.23	5.06	5.01	4.89

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.84	4.73	4.61	4.56	4.44	4.39	4.28	4.22	4.16
45.0	4.67	4.56	4.50	4.44	4.33	4.28	4.16	4.11	4.05
90.0	4.67	4.67	4.67	4.89	4.28	4.16	4.11	4.05	3.99
135.0	4.84	4.84	5.06	4.95	4.67	4.16	4.11	3.99	3.99
180.0	4.61	4.56	4.50	4.39	4.28	4.16	4.05	3.99	3.99
225.0	4.61	4.56	4.56	4.44	4.39	4.28	4.16	4.05	3.99
270.0	4.73	4.61	4.56	4.56	4.56	4.33	4.22	4.16	4.05
315.0	4.78	4.78	4.73	4.61	4.44	4.28	4.22	4.11	4.05
360.0	4.84	4.73	4.61	4.56	4.44	4.39	4.28	4.22	4.16

Intensity data(cd)

C/γ(°)	90.0
0.0	4.11
45.0	3.94
90.0	3.94
135.0	3.94
180.0	3.99
225.0	3.99
270.0	3.94
315.0	3.99
360.0	4.11