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Nata

LumCAT: 3-2055-A
Luminaire: TE 2213480-1+92.76.365.00
Report No: GC2017050615
Test No: NT-0010
LampCAT: BRIDGELUX V22B
Lamp flux(lm): 3719.0
Number of Lamps: 1
Length(mm): 79
Phm Type: C

Voltage(V): 49.2000
Current(A): 0.5000
Power (W): 24.6000
PF: 0.0000
Ballast type: DC
Width(mm): 79
Height(mm): 0

Photometric Results

Lumens(lm): 3356.49
Efficiency(%): 90.25%
Lumens(lm)/Power(W): 136.44
Central intensity(cd): 9201.025
Maximum intensity(cd): 9201.025
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=28.9
[C90/270]Total=28.9
Field angle(10%Imax): [C0/180]Total=66.9
[C90/270]Total=66.9
Maximum s/h(1/2): C0_180=0.48 C90_270=0.48
Maximum s/h(1/4): C0_180=0.51 C90_270=0.51
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.25%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.535%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9201.026	0.000	0	.000%	.000%
1.0	9166.202	8.788	8.788	.236%	.262%
2.0	9051.547	26.148	34.936	.703%	1.041%
3.0	8871.651	42.866	77.803	1.153%	2.318%
4.0	8640.138	58.618	136.42	1.576%	4.064%
5.0	8335.126	73.027	209.447	1.964%	6.240%
6.0	8020.479	85.953	295.4	2.311%	8.801%
7.0	7654.216	97.293	392.692	2.616%	11.699%
8.0	7282.723	106.901	499.593	2.874%	14.884%
9.0	6861.954	114.635	614.228	3.082%	18.300%
10.0	6445.728	120.430	734.658	3.238%	21.888%
11.0	6043.403	124.792	859.45	3.356%	25.606%
12.0	5623.461	127.536	986.986	3.429%	29.405%
13.0	5191.268	128.344	1115.329	3.451%	33.229%
14.0	4778.758	127.615	1242.945	3.431%	37.031%
15.0	4367.349	125.562	1368.506	3.376%	40.772%
16.0	3971.631	122.189	1490.696	3.286%	44.412%
17.0	3617.618	118.185	1608.881	3.178%	47.933%
18.0	3275.993	113.661	1722.542	3.056%	51.320%
19.0	2989.975	109.015	1831.557	2.931%	54.568%
20.0	2726.255	104.623	1936.179	2.813%	57.685%
21.0	2476.162	99.897	2036.076	2.686%	60.661%
22.0	2282.225	95.622	2131.698	2.571%	63.510%
23.0	2109.073	92.141	2223.839	2.478%	66.255%
24.0	1947.345	88.688	2312.527	2.385%	68.897%
25.0	1814.384	85.533	2398.061	2.300%	71.445%
26.0	1709.088	83.172	2481.233	2.236%	73.923%
27.0	1604.343	81.064	2562.297	2.180%	76.338%
28.0	1507.582	78.787	2641.084	2.119%	78.686%
29.0	1414.399	76.447	2717.531	2.056%	80.963%
30.0	1312.545	73.627	2791.158	1.980%	83.157%
31.0	1186.975	69.558	2860.716	1.870%	85.229%
32.0	1091.177	65.266	2925.983	1.755%	87.174%
33.0	964.134	60.550	2986.533	1.628%	88.978%
34.0	867.345	55.426	3041.959	1.490%	90.629%
35.0	757.493	50.461	3092.42	1.357%	92.132%
36.0	638.696	44.455	3136.875	1.195%	93.457%
37.0	538.809	38.404	3175.279	1.033%	94.601%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	434.877	32.500	3207.779	.874%	95.569%
39.0	322.699	25.858	3233.637	.695%	96.340%
40.0	232.132	19.351	3252.988	.520%	96.916%
41.0	149.767	13.599	3266.587	.366%	97.321%
42.0	89.618	8.697	3275.284	.234%	97.581%
43.0	50.473	5.189	3280.474	.140%	97.735%
44.0	32.153	3.119	3283.592	.084%	97.828%
45.0	23.619	2.143	3285.736	.058%	97.892%
46.0	19.366	1.681	3287.417	.045%	97.942%
47.0	17.370	1.461	3288.878	.039%	97.986%
48.0	17.026	1.390	3290.268	.037%	98.027%
49.0	16.737	1.387	3291.655	.037%	98.068%
50.0	16.613	1.390	3293.045	.037%	98.110%
51.0	16.503	1.401	3294.446	.038%	98.151%
52.0	16.352	1.410	3295.856	.038%	98.193%
53.0	16.187	1.415	3297.272	.038%	98.236%
54.0	16.021	1.420	3298.691	.038%	98.278%
55.0	15.884	1.424	3300.115	.038%	98.320%
56.0	15.732	1.429	3301.544	.038%	98.363%
57.0	15.595	1.432	3302.976	.039%	98.406%
58.0	15.512	1.438	3304.415	.039%	98.448%
59.0	15.402	1.445	3305.86	.039%	98.491%
60.0	15.443	1.457	3307.317	.039%	98.535%
61.0	15.608	1.482	3308.799	.040%	98.579%
62.0	16.145	1.530	3310.329	.041%	98.625%
63.0	16.544	1.590	3311.919	.043%	98.672%
64.0	17.136	1.653	3313.572	.044%	98.721%
65.0	17.604	1.719	3315.291	.046%	98.772%
66.0	17.880	1.770	3317.062	.048%	98.825%
67.0	17.935	1.801	3318.862	.048%	98.879%
68.0	17.893	1.815	3320.677	.049%	98.933%
69.0	17.742	1.818	3322.495	.049%	98.987%
70.0	17.508	1.810	3324.306	.049%	99.041%
71.0	17.233	1.796	3326.101	.048%	99.095%
72.0	16.889	1.774	3327.875	.048%	99.147%
73.0	16.600	1.751	3329.627	.047%	99.200%
74.0	16.283	1.729	3331.355	.046%	99.251%
75.0	15.939	1.702	3333.058	.046%	99.302%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	15.636	1.676	3334.734	.045%	99.352%
77.0	15.361	1.653	3336.386	.044%	99.401%
78.0	15.168	1.634	3338.021	.044%	99.450%
79.0	15.030	1.623	3339.643	.044%	99.498%
80.0	14.907	1.614	3341.257	.043%	99.546%
81.0	14.755	1.604	3342.861	.043%	99.594%
82.0	14.604	1.592	3344.453	.043%	99.641%
83.0	14.494	1.582	3346.035	.043%	99.688%
84.0	14.301	1.569	3347.604	.042%	99.735%
85.0	14.136	1.552	3349.156	.042%	99.781%
86.0	13.764	1.525	3350.681	.041%	99.827%
87.0	13.310	1.482	3352.163	.040%	99.871%
88.0	13.158	1.450	3353.612	.039%	99.914%
89.0	13.131	1.441	3355.053	.039%	99.957%
90.0	13.131	1.440	3356.493	.039%	100.000%

Zonal flux distribution table

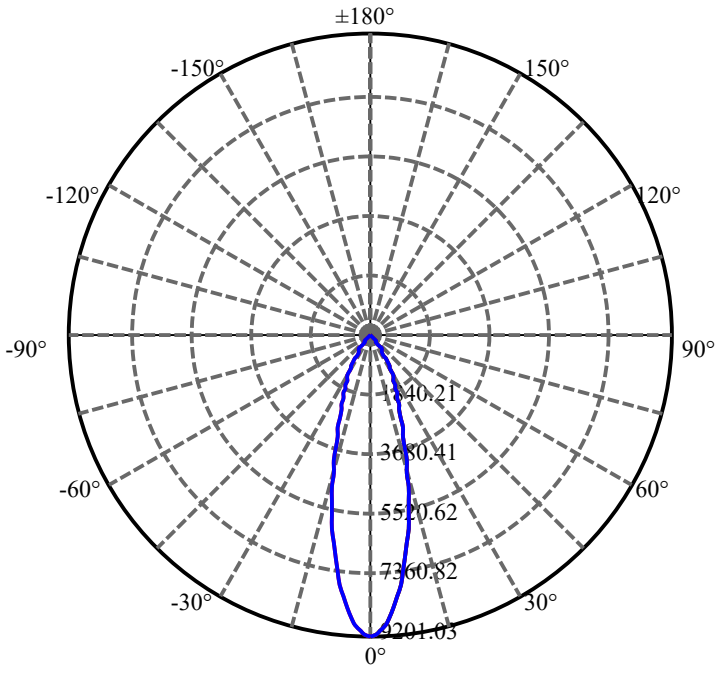
ZONAL LUMEN SUMMARY

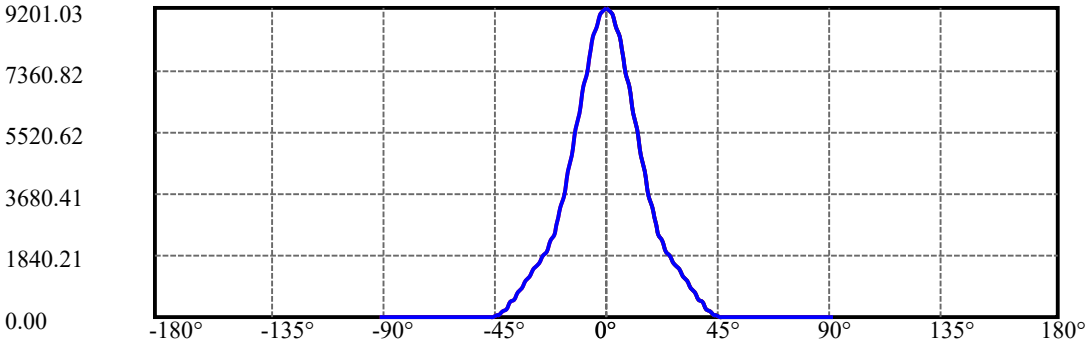
Zone	Lumens	%Lamp	%Fixt
0-30	2791.16	75.05%	83.16%
0-40	3252.99	87.47%	96.92%
0-60	3307.32	88.93%	98.53%
0-90	3355.05	90.21%	99.96%
0-120	3355.05	90.21%	99.96%
0-180	3356.49	90.25%	100.00%
60-90	49.19	1.32%	1.47%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.58	2685.20	72.20%	80.00%

ZONAL LUMEN SUMMARY

0-10	734.66
10-20	1201.52
20-30	854.98
30-40	461.83
40-50	40.06
50-60	14.27
60-70	16.99
70-80	16.95
80-90	13.80
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):

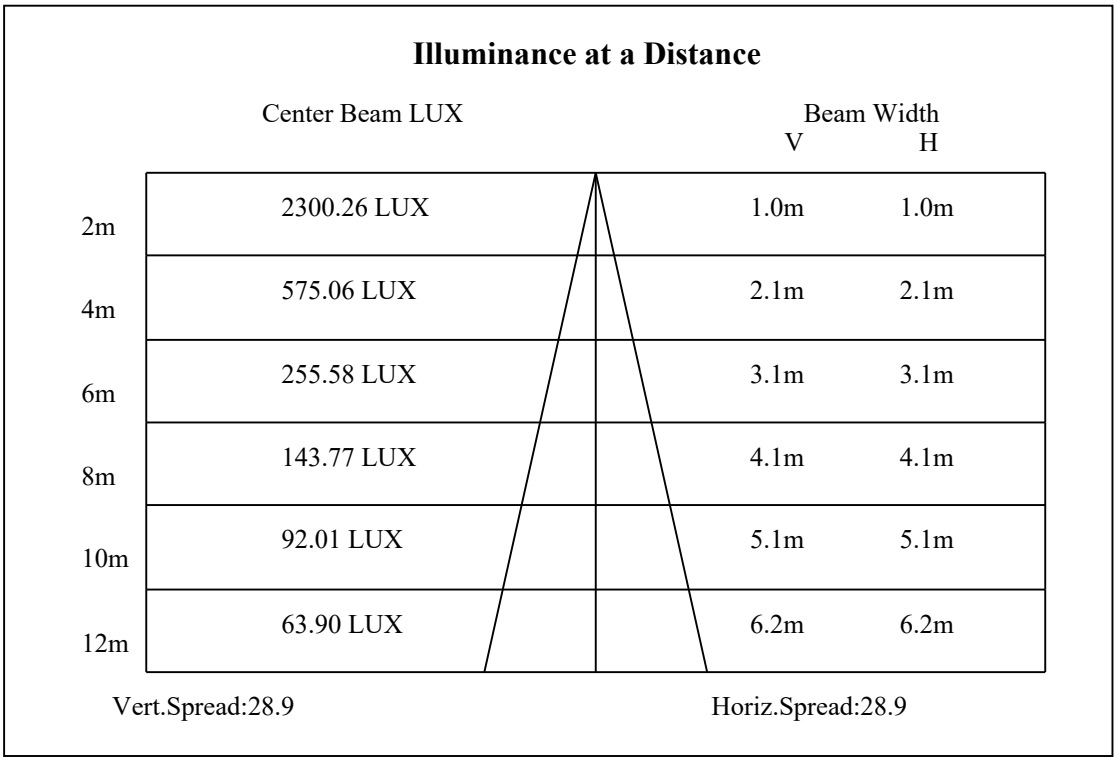
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:33.5 Right:33.5
:C90/270Left:33.5 Right:33.5

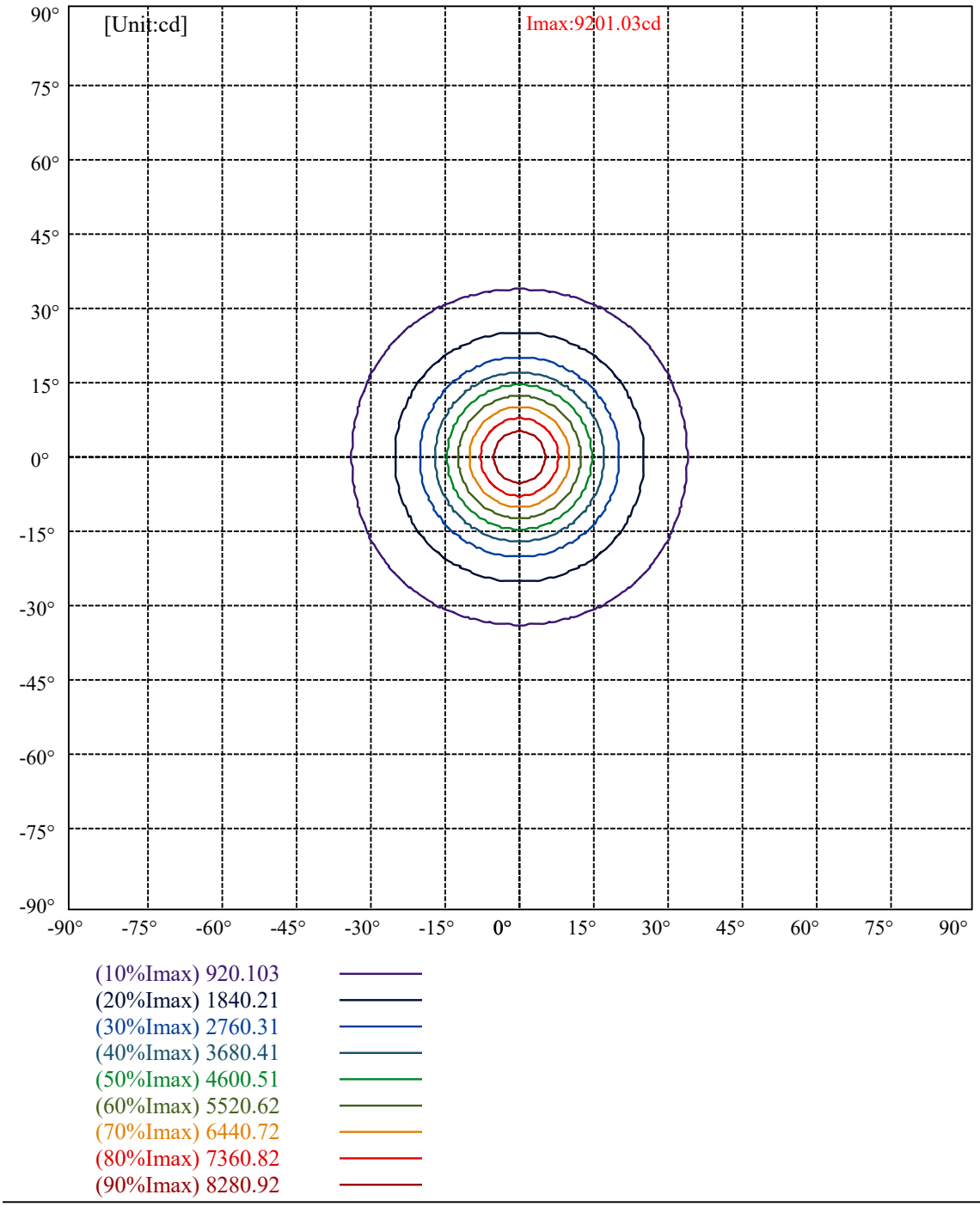
Beam Angle(50%Imax):C0/180Left:14.4 Right:14.4
:C90/270Left:14.4 Right:14.4

Lux distance Curve



Equipment: gms1980 Date: 2017/5/6 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

ISO-Intensity(V-H)

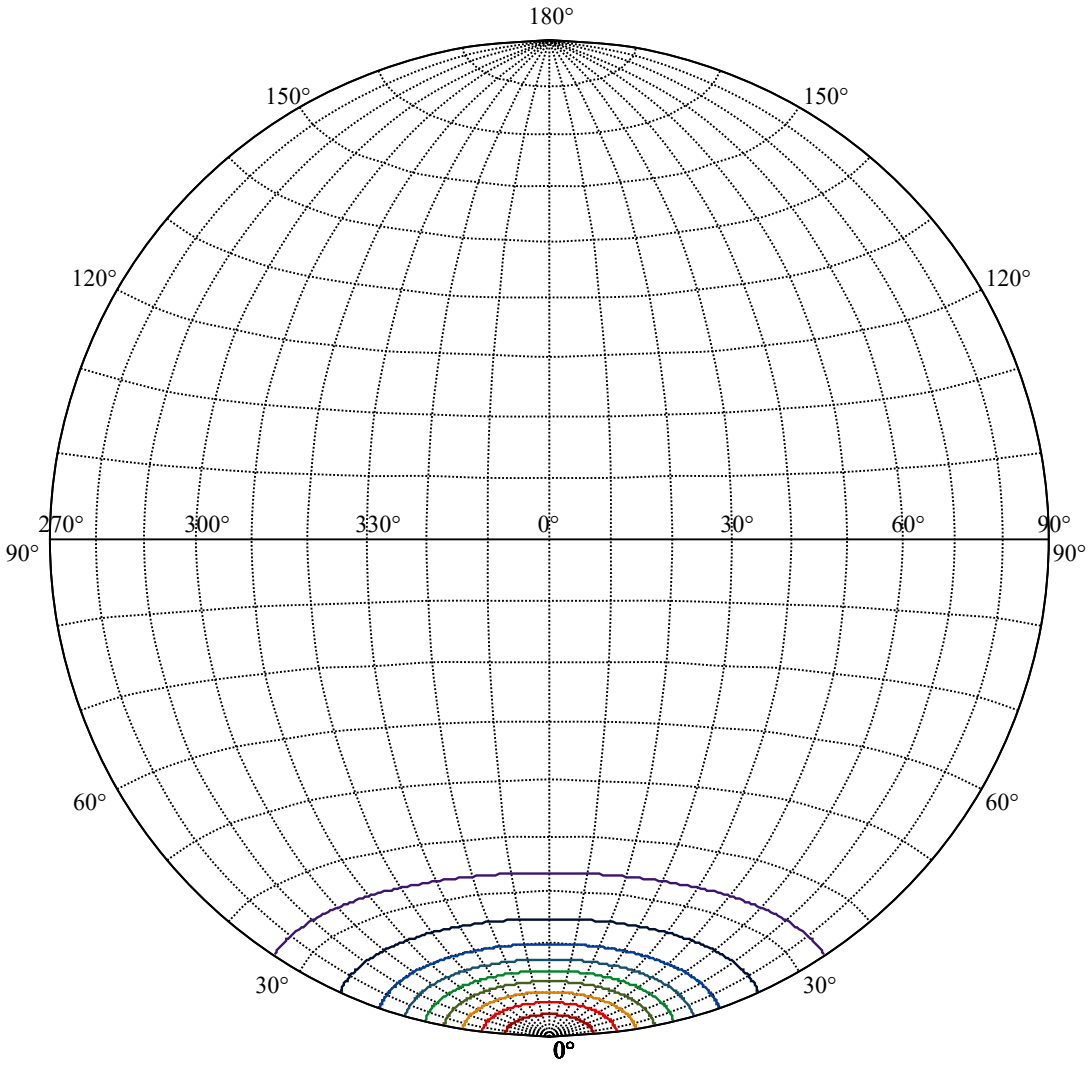


Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

ISO candela diagram on circular web



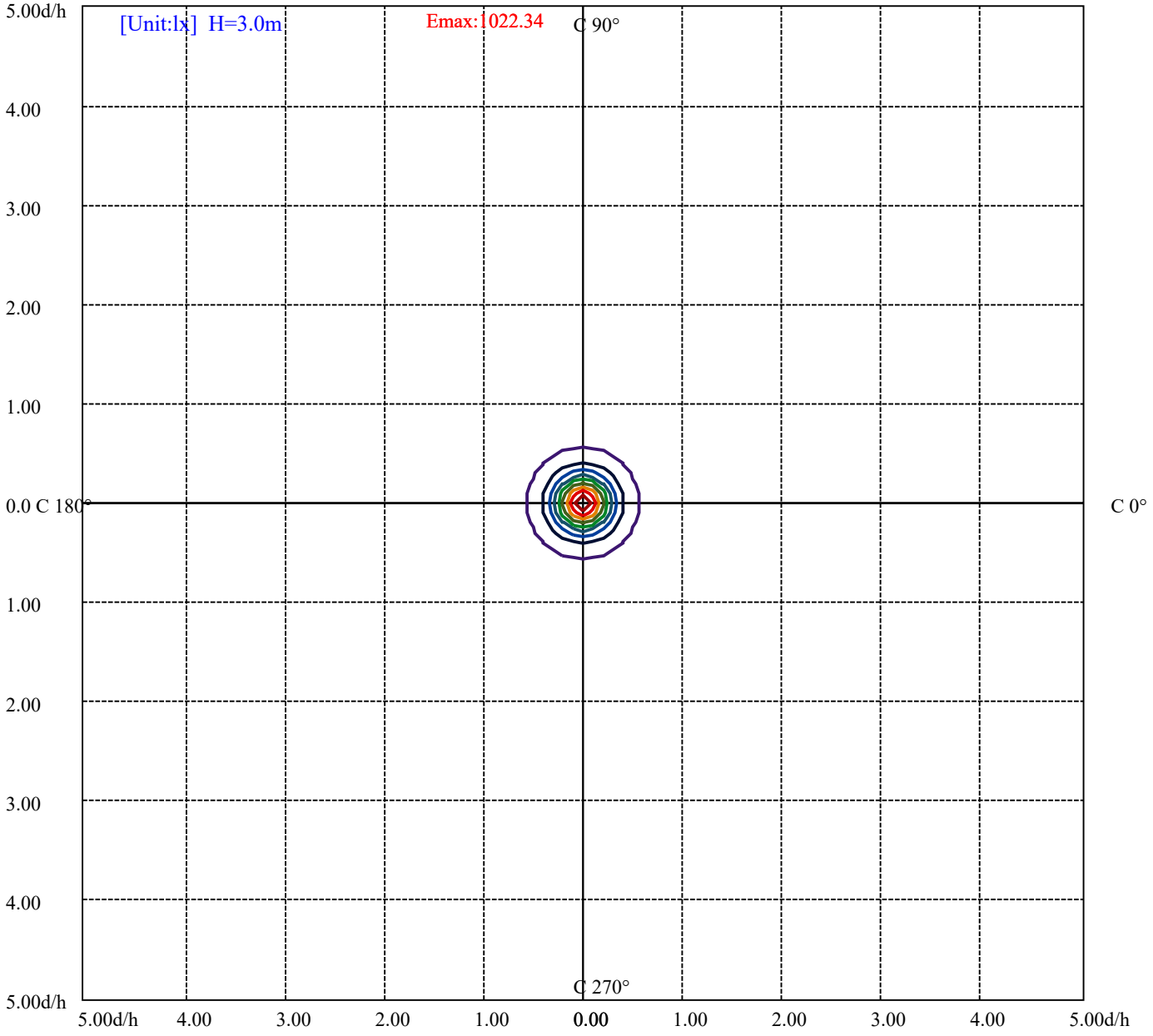
House [Unit:cd] Road

Imax:9201.03

(10%Imax) 920.103
(20%Imax) 1840.21
(30%Imax) 2760.31
(40%Imax) 3680.41
(50%Imax) 4600.51
(60%Imax) 5520.62
(70%Imax) 6440.72
(80%Imax) 7360.82
(90%Imax) 8280.92

Equipment: gms1980 Date: 2017/5/6 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

ISO illuminance diagram

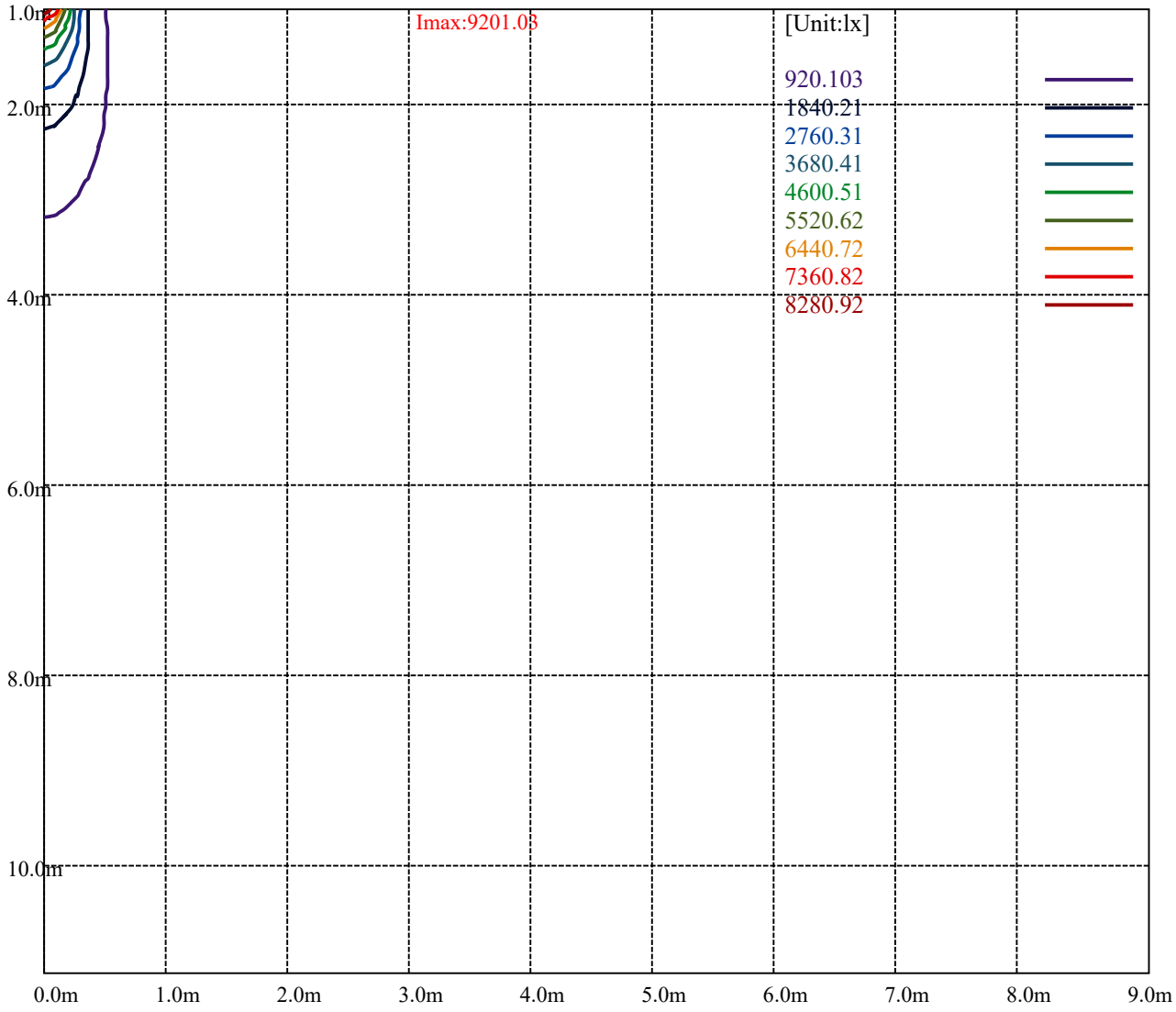


Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Space ISO Lux diagram



Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Luminance Limitting Curve(no luminous side)

Luminance Table

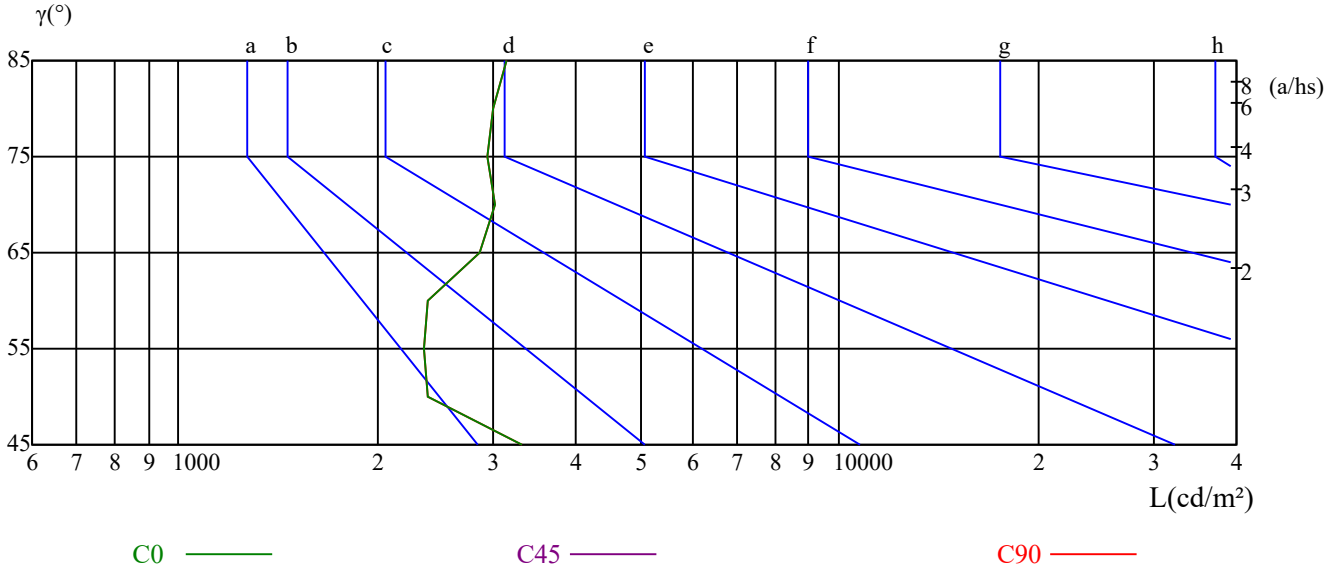
γ	45	50	55	60	65	70	75	80	85
C0	3320	2388	2354	2381	2850	3009	2942	2997	3146
C45	0	0	0	0	0	0	0	0	0
C90	3320	2388	2354	2381	2850	3009	2942	2997	3146

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6847	6847	0	10122	10122	0	26658	26658	0

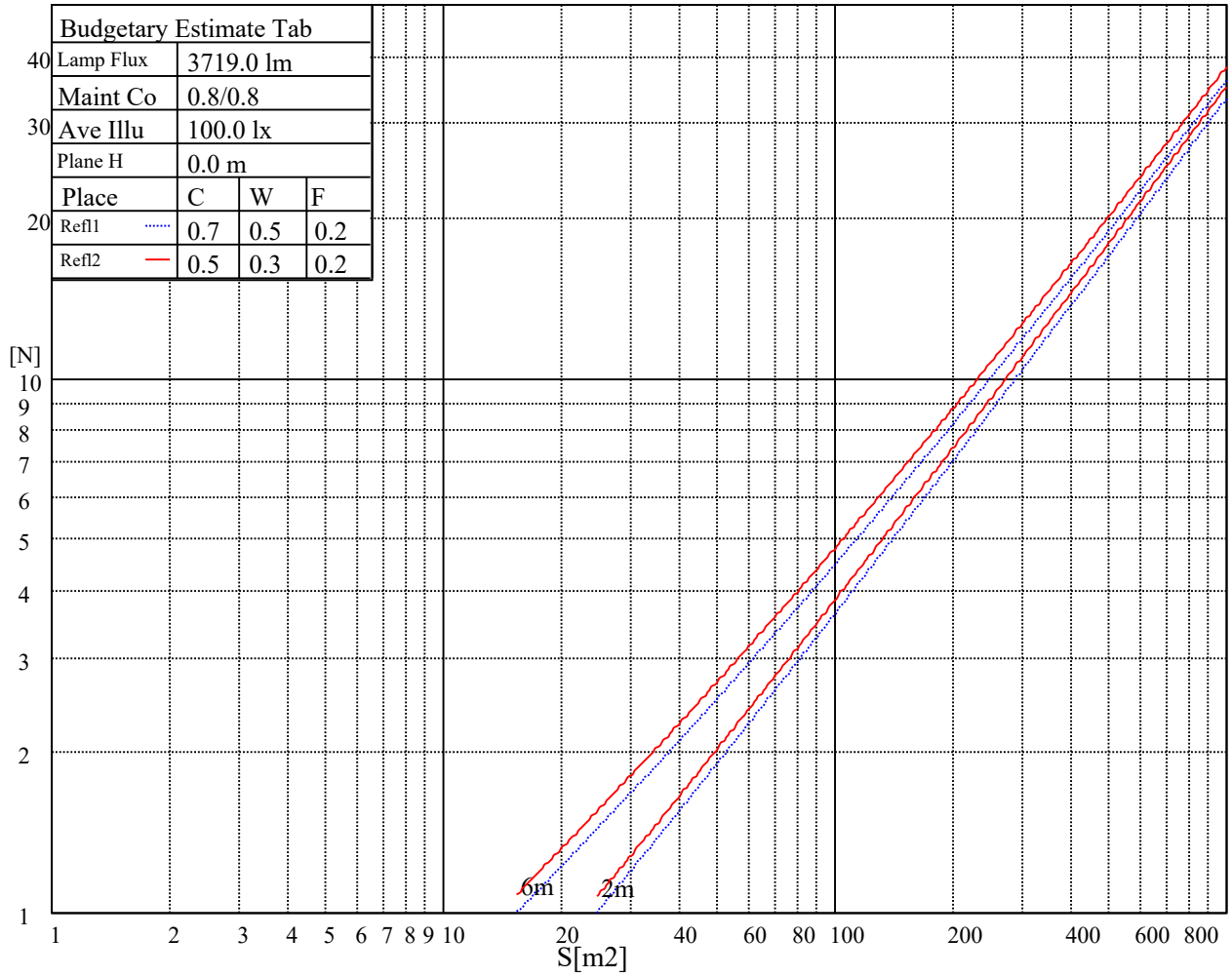
Glare Table

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

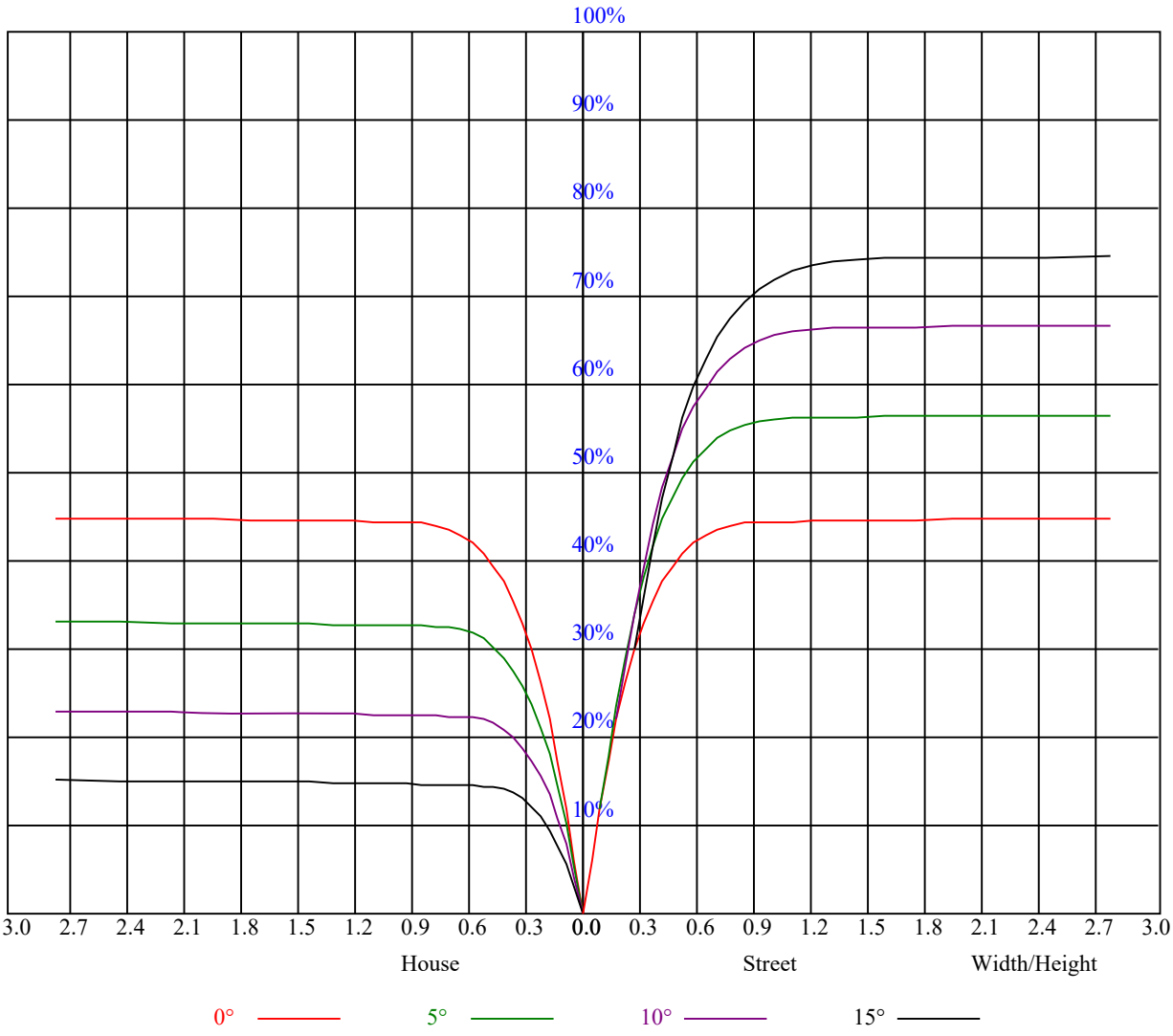


Equipment: gms1980 Date: 2017/5/6 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85
2	0.95	0.91	0.89	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.89	0.85	0.82	0.88	0.85	0.82	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.78	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.73
5	0.81	0.76	0.73	0.80	0.76	0.72	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.71	0.69
6	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.70	0.67	0.66
7	0.73	0.69	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
8	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60
9	0.67	0.63	0.60	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.58
10	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56

Coefficient Utilization Curve



Equipment: gms1980	Date: 2017/5/6	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 7.42

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	9161.38	9150.37	9065.59	8894.91	8683.50	8374.08	8039.34	7715.05	7362.14
90.0	9240.67	9094.22	8815.63	8538.70	8228.73	7810.85	7452.98	7080.25	6698.16
180.0	9161.38	9093.67	8970.89	8762.23	8480.89	8189.64	7873.07	7438.67	7071.99
270.0	9240.67	9326.55	9354.08	9290.77	9167.44	8965.93	8716.53	8382.89	7998.59
360.0	9161.38	9150.37	9065.59	8894.91	8683.50	8374.08	8039.34	7715.05	7362.14

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6913.98	6544.00	6164.67	5725.87	5287.62	4891.76	4453.51	4030.68	3683.27
90.0	6213.11	5821.66	5421.95	4969.39	4526.74	4204.11	3774.67	3420.65	3164.64
180.0	6692.66	6208.16	5821.66	5428.56	4987.01	4555.92	4180.43	3780.17	3453.69
270.0	7628.06	7209.09	6765.33	6370.03	5963.71	5463.25	5060.78	4655.02	4168.87
360.0	6913.98	6544.00	6164.67	5725.87	5287.62	4891.76	4453.51	4030.68	3683.27

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	3334.22	3052.88	2771.54	2523.23	2328.89	2157.11	1971.57	1846.04	1735.93
90.0	2841.46	2611.33	2409.27	2189.04	2035.44	1900.55	1749.69	1654.44	1578.47
180.0	3117.29	2818.89	2589.85	2360.27	2167.57	2016.17	1887.33	1748.59	1657.20
270.0	3811.00	3476.81	3134.36	2832.10	2597.01	2362.47	2180.78	2008.46	1864.76
360.0	3334.22	3052.88	2771.54	2523.23	2328.89	2157.11	1971.57	1846.04	1735.93

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1618.66	1535.52	1449.08	1344.48	1236.02	1134.71	1018.54	902.92	800.52
90.0	1467.80	1378.06	1278.96	1161.14	1037.81	928.25	809.33	690.41	578.64
180.0	1575.71	1465.05	1369.25	1267.40	1086.65	1035.45	933.54	820.45	719.31
270.0	1755.20	1651.69	1560.30	1477.16	1387.42	1266.30	1095.13	1055.60	931.50
360.0	1618.66	1535.52	1449.08	1344.48	1236.02	1134.71	1018.54	902.92	800.52

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	683.25	581.95	469.63	371.63	278.59	179.76	100.64	51.15	35.02
90.0	459.72	365.57	289.05	162.58	95.52	50.27	28.19	22.19	18.22
180.0	605.01	506.24	398.11	292.90	192.31	114.74	59.08	32.54	24.78
270.0	806.80	701.47	582.72	463.69	362.11	254.31	170.56	96.02	50.60
360.0	683.25	581.95	469.63	371.63	278.59	179.76	100.64	51.15	35.02

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	23.40	18.06	17.67	17.45	16.68	16.52	16.35	16.19	16.02
90.0	17.89	17.78	17.62	17.23	17.23	17.23	17.18	17.01	16.79
180.0	18.22	17.56	17.34	17.12	17.01	16.90	16.85	16.74	16.63
270.0	34.96	24.06	16.85	16.30	16.02	15.80	15.64	15.47	15.31
360.0	23.40	18.06	17.67	17.45	16.68	16.52	16.35	16.19	16.02

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	15.91	15.86	15.75	15.64	15.47	15.42	15.31	15.09	14.98
90.0	16.52	16.30	15.97	15.69	15.53	15.42	15.91	17.18	18.94
180.0	16.46	16.35	16.30	16.30	16.35	16.24	16.08	15.80	16.35
270.0	15.20	15.03	14.92	14.76	14.70	14.53	14.48	14.37	14.31
360.0	15.91	15.86	15.75	15.64	15.47	15.42	15.31	15.09	14.98

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	14.92	15.42	15.75	15.97	16.19	16.30	16.35	16.30	16.13
90.0	20.32	21.64	22.63	23.12	23.01	22.79	22.35	21.69	21.09
180.0	16.74	17.29	17.78	18.06	18.17	18.17	18.00	17.78	17.45
270.0	14.20	14.20	14.26	14.37	14.37	14.31	14.26	14.26	14.26
360.0	14.92	15.42	15.75	15.97	16.19	16.30	16.35	16.30	16.13

Intensity data(cd)

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	15.97	15.86	15.69	15.53	15.31	15.14	14.92	14.81	14.70
90.0	20.32	19.60	18.83	17.89	17.18	16.57	16.24	16.02	15.86
180.0	17.07	16.74	16.41	16.19	15.86	15.53	15.36	15.20	15.03
270.0	14.20	14.20	14.20	14.15	14.20	14.20	14.15	14.09	14.04
360.0	15.97	15.86	15.69	15.53	15.31	15.14	14.92	14.81	14.70

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	14.59	14.42	14.31	14.20	14.04	13.93	13.54	13.32	13.27
90.0	15.58	15.42	15.25	14.87	14.59	13.65	13.16	13.05	13.05
180.0	14.87	14.70	14.53	14.37	14.26	13.87	13.32	13.21	13.21
270.0	13.98	13.87	13.87	13.76	13.65	13.60	13.21	13.05	12.99
360.0	14.59	14.42	14.31	14.20	14.04	13.93	13.54	13.32	13.27

C/γ(°)	90.0
0.0	13.27
90.0	13.05
180.0	13.21
270.0	12.99
360.0	13.27