
LumCAT: 4-2129-A	
Luminaire: 92.76.323.00	
Report No: NATA0100	Voltage(V): 32.6100
Test No: GC2019061807	Current(A): 0.1970
LampCAT: PHILIPS SLM 1208 G7	Power (W): 6.4200
Lamp flux(lm): 948.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 100	Width(mm): 100
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 845.51
Efficiency(%): 89.19%
Lumens(lm)/Power(W): 131.70
Central intensity(cd): 1672.031
Maximum intensity(cd): 1672.031
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=38.5
[C90/270]Total=38.5
Field angle(10%Imax): [C0/180]Total=72.0
[C90/270]Total=72.0
Maximum s/h(1/2): C0_180=0.63 C90_270=0.63
Maximum s/h(1/4): C0_180=0.63 C90_270=0.63
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.19%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.519%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1672.031	0.000	0	.000%	.000%
1.0	1669.359	1.599	1.599	.169%	.189%
2.0	1664.086	4.784	6.383	.505%	.755%
3.0	1655.016	7.938	14.321	.837%	1.694%
4.0	1641.023	11.033	25.354	1.164%	2.999%
5.0	1620.422	14.031	39.385	1.480%	4.658%
6.0	1592.086	16.883	56.268	1.781%	6.655%
7.0	1556.578	19.544	75.811	2.062%	8.966%
8.0	1521.070	22.026	97.837	2.323%	11.571%
9.0	1477.195	24.299	122.137	2.563%	14.445%
10.0	1426.078	26.274	148.41	2.771%	17.553%
11.0	1378.617	28.025	176.435	2.956%	20.867%
12.0	1324.055	29.544	205.979	3.116%	24.362%
13.0	1258.875	30.653	236.632	3.233%	27.987%
14.0	1188.724	31.329	267.961	3.305%	31.692%
15.0	1127.911	31.804	299.765	3.355%	35.454%
16.0	1071.246	32.224	331.989	3.399%	39.265%
17.0	1003.275	32.306	364.294	3.408%	43.086%
18.0	932.386	31.915	396.209	3.367%	46.860%
19.0	854.930	31.096	427.305	3.280%	50.538%
20.0	779.400	29.913	457.218	3.155%	54.076%
21.0	706.254	28.528	485.745	3.009%	57.450%
22.0	645.588	27.166	512.911	2.866%	60.663%
23.0	598.823	26.111	539.022	2.754%	63.751%
24.0	555.244	25.232	564.254	2.662%	66.735%
25.0	515.672	24.350	588.604	2.569%	69.615%
26.0	483.349	23.582	612.186	2.488%	72.405%
27.0	451.884	22.881	635.067	2.414%	75.111%
28.0	420.532	22.088	657.155	2.330%	77.723%
29.0	395.438	21.348	678.503	2.252%	80.248%
30.0	372.410	20.732	699.235	2.187%	82.700%
31.0	348.195	20.053	719.288	2.115%	85.072%
32.0	328.388	19.383	738.671	2.045%	87.364%
33.0	302.055	18.573	757.244	1.959%	89.561%
34.0	271.709	17.364	774.608	1.832%	91.614%
35.0	217.188	15.183	789.792	1.602%	93.410%
36.0	168.377	12.276	802.068	1.295%	94.862%
37.0	120.206	9.412	811.48	.993%	95.975%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	78.019	6.616	818.097	.698%	96.758%
39.0	40.739	4.054	822.15	.428%	97.237%
40.0	17.698	2.038	824.188	.215%	97.478%
41.0	12.270	1.067	825.255	.113%	97.605%
42.0	10.406	0.824	826.079	.087%	97.702%
43.0	8.684	0.707	826.786	.075%	97.786%
44.0	6.082	0.557	827.344	.059%	97.852%
45.0	4.845	0.420	827.763	.044%	97.901%
46.0	4.373	0.360	828.124	.038%	97.944%
47.0	4.268	0.344	828.468	.036%	97.985%
48.0	4.219	0.343	828.811	.036%	98.025%
49.0	4.134	0.343	829.154	.036%	98.066%
50.0	4.078	0.342	829.496	.036%	98.106%
51.0	4.029	0.343	829.839	.036%	98.147%
52.0	3.980	0.344	830.183	.036%	98.187%
53.0	3.945	0.345	830.528	.036%	98.228%
54.0	3.916	0.346	830.874	.037%	98.269%
55.0	3.874	0.348	831.222	.037%	98.310%
56.0	3.846	0.349	831.571	.037%	98.352%
57.0	3.825	0.351	831.921	.037%	98.393%
58.0	3.818	0.353	832.275	.037%	98.435%
59.0	3.804	0.356	832.631	.038%	98.477%
60.0	3.769	0.358	832.989	.038%	98.519%
61.0	3.769	0.360	833.349	.038%	98.562%
62.0	3.741	0.362	833.71	.038%	98.605%
63.0	3.734	0.364	834.074	.038%	98.648%
64.0	3.741	0.367	834.441	.039%	98.691%
65.0	3.727	0.370	834.81	.039%	98.735%
66.0	3.713	0.371	835.181	.039%	98.779%
67.0	3.727	0.374	835.555	.039%	98.823%
68.0	3.705	0.376	835.932	.040%	98.867%
69.0	3.691	0.377	836.309	.040%	98.912%
70.0	3.755	0.382	836.692	.040%	98.957%
71.0	3.916	0.396	837.088	.042%	99.004%
72.0	4.092	0.416	837.505	.044%	99.053%
73.0	4.282	0.438	837.943	.046%	99.105%
74.0	4.641	0.469	838.412	.049%	99.161%
75.0	4.908	0.505	838.916	.053%	99.220%

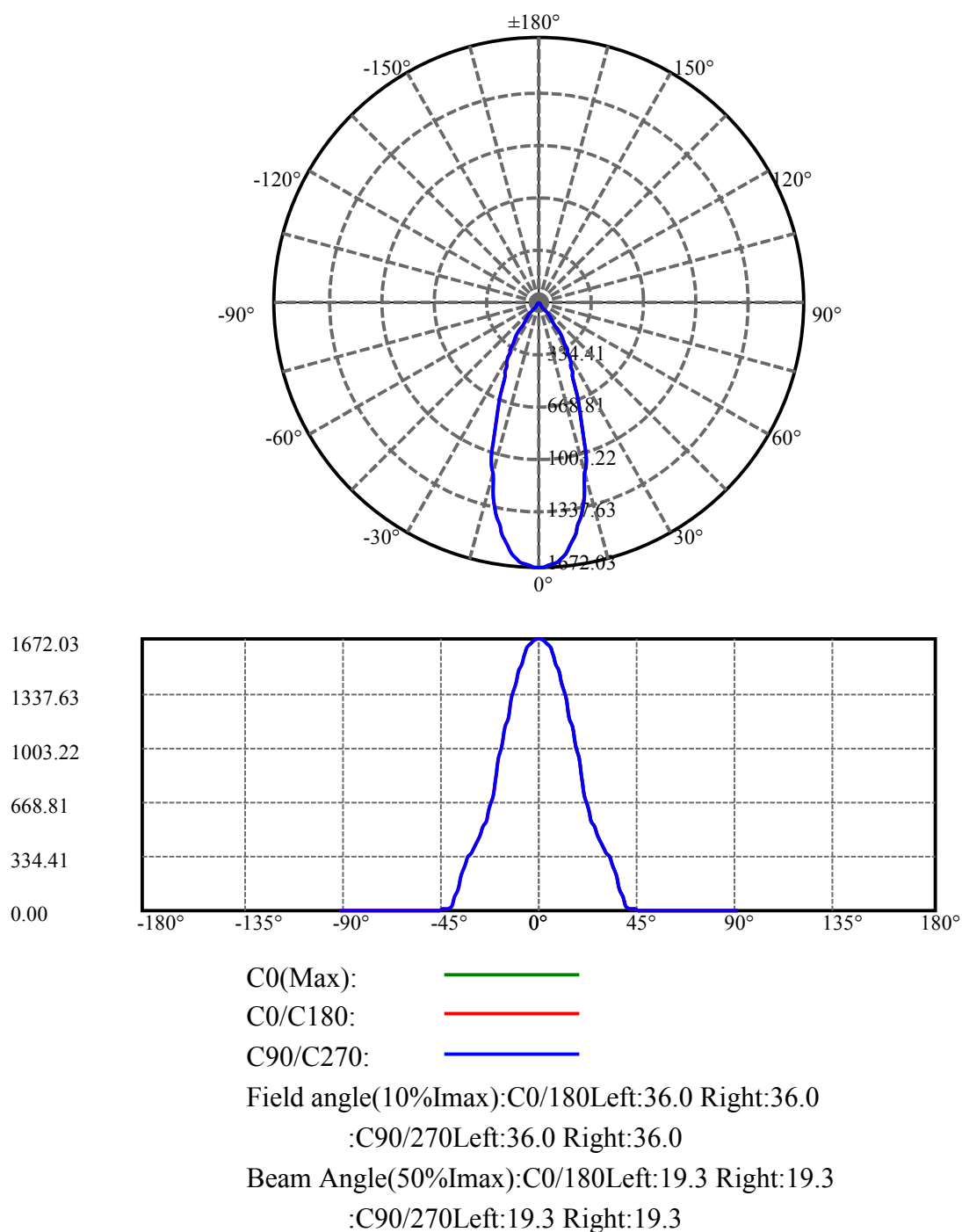
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.802	0.515	839.432	.054%	99.281%
77.0	4.739	0.509	839.94	.054%	99.341%
78.0	4.641	0.502	840.442	.053%	99.401%
79.0	4.591	0.496	840.938	.052%	99.459%
80.0	4.402	0.485	841.423	.051%	99.517%
81.0	4.106	0.460	841.883	.049%	99.571%
82.0	3.888	0.434	842.317	.046%	99.622%
83.0	3.776	0.417	842.734	.044%	99.672%
84.0	3.755	0.410	843.144	.043%	99.720%
85.0	3.762	0.410	843.554	.043%	99.769%
86.0	3.734	0.410	843.964	.043%	99.817%
87.0	3.698	0.407	844.37	.043%	99.865%
88.0	3.537	0.396	844.767	.042%	99.912%
89.0	3.340	0.377	845.144	.040%	99.957%
90.0	3.319	0.365	845.509	.039%	100.000%

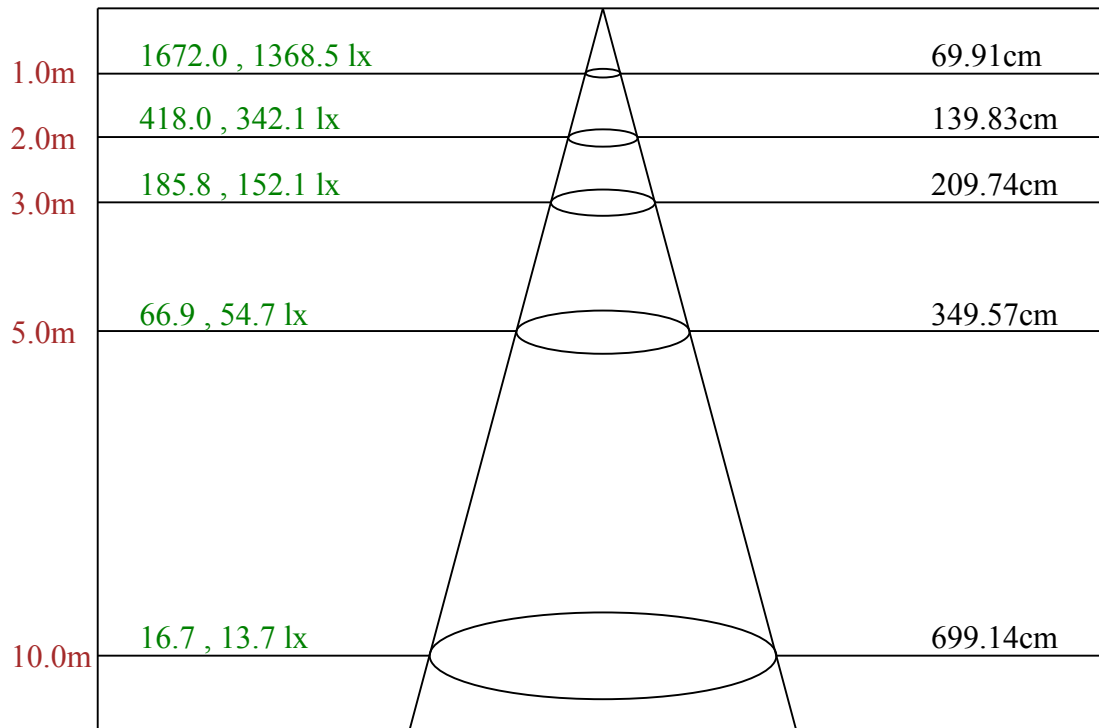
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	699.23	73.76%	82.70%
0-40	824.19	86.94%	97.48%
0-60	832.99	87.87%	98.52%
0-90	845.14	89.15%	99.96%
0-120	845.14	89.15%	99.96%
0-180	845.51	89.19%	100.00%
60-90	12.51	1.32%	1.48%
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%
0-28.90	676.41	71.35%	80.00%

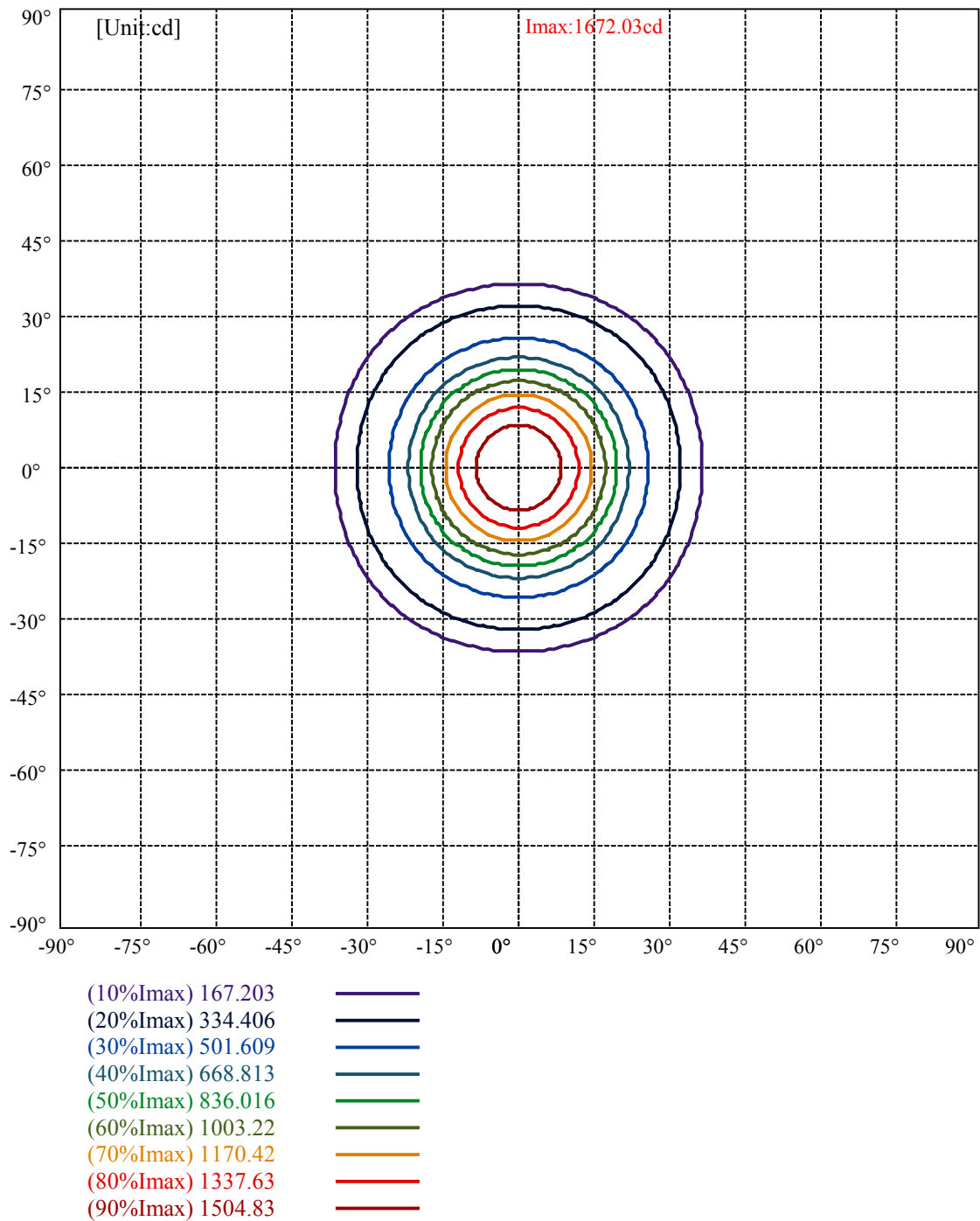
ZONAL LUMEN SUMMARY

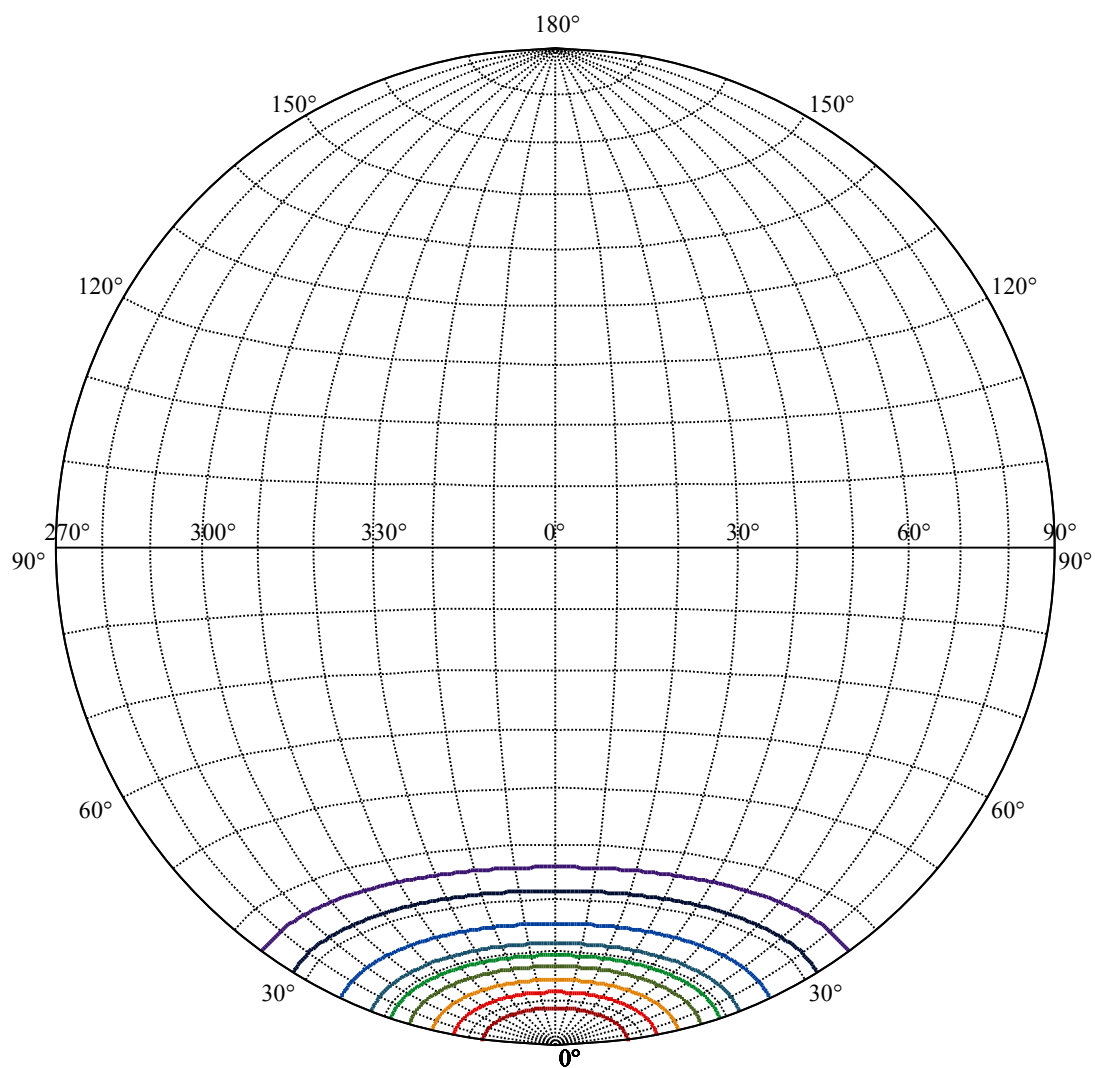
0-10	148.41
10-20	308.81
20-30	242.02
30-40	124.95
40-50	5.31
50-60	3.49
60-70	3.70
70-80	4.73
80-90	3.72
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 38.54





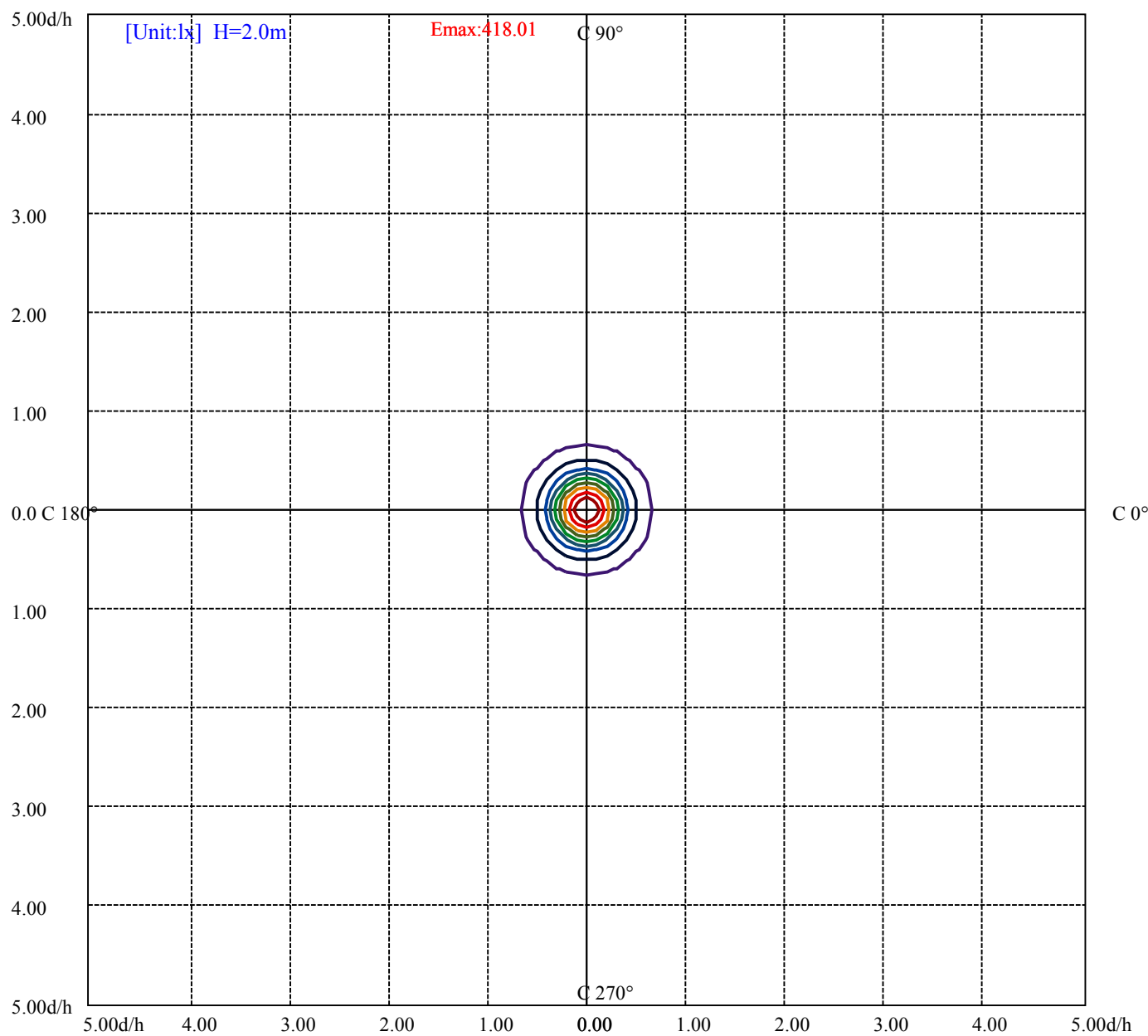
House

[Unit:cd]

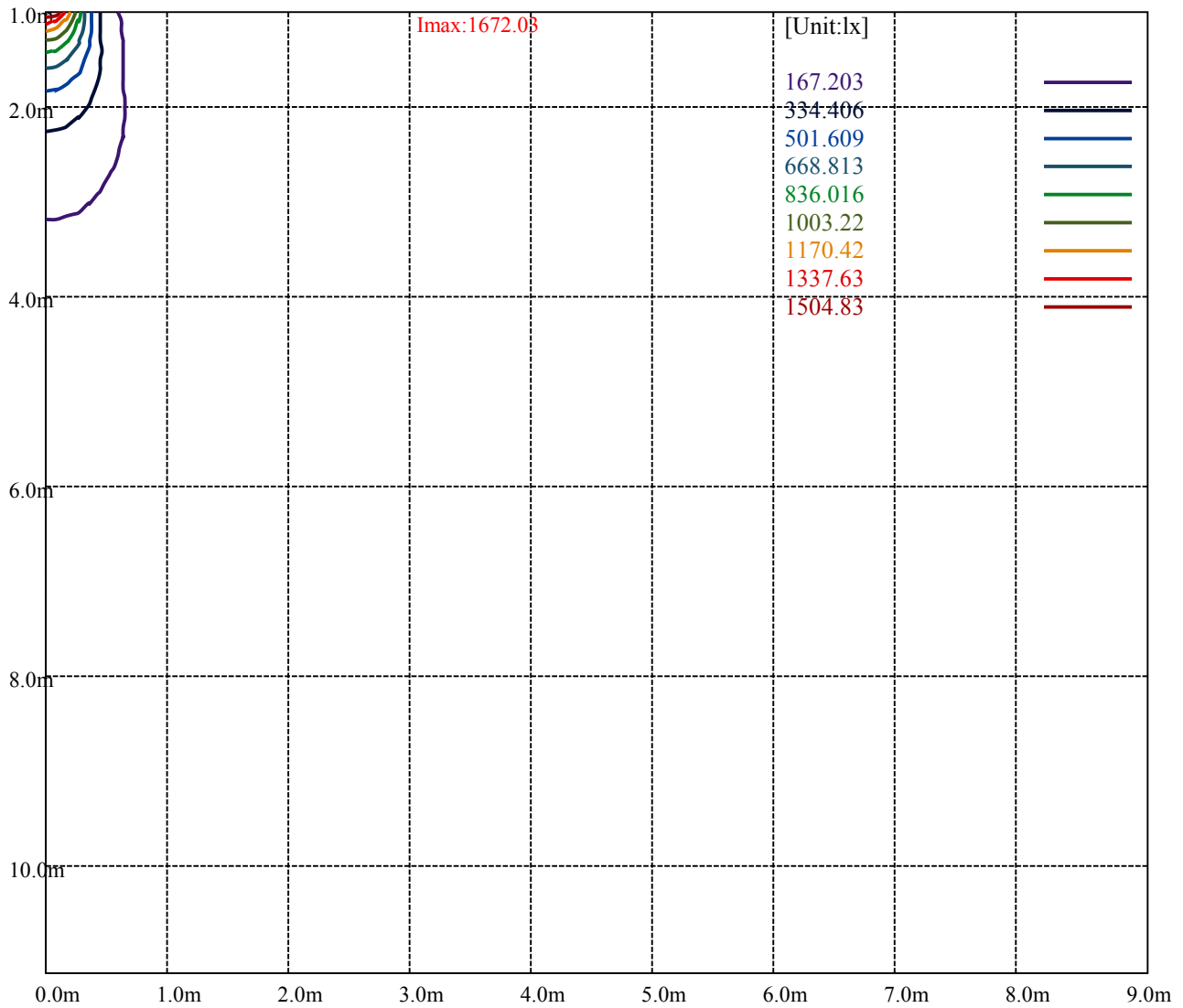
Road

Imax:1672.03

(10%Imax)	167.203	
(20%Imax)	334.406	
(30%Imax)	501.609	
(40%Imax)	668.813	
(50%Imax)	836.016	
(60%Imax)	1003.22	
(70%Imax)	1170.42	
(80%Imax)	1337.63	
(90%Imax)	1504.83	



(10%E _{max}) 41.80075	—
(20%E _{max}) 83.6015	—
(30%E _{max}) 125.4023	—
(40%E _{max}) 167.203	—
(50%E _{max}) 209.0038	—
(60%E _{max}) 250.805	—
(70%E _{max}) 292.605	—
(80%E _{max}) 334.405	—
(90%E _{max}) 376.2075	—



Luminance Table

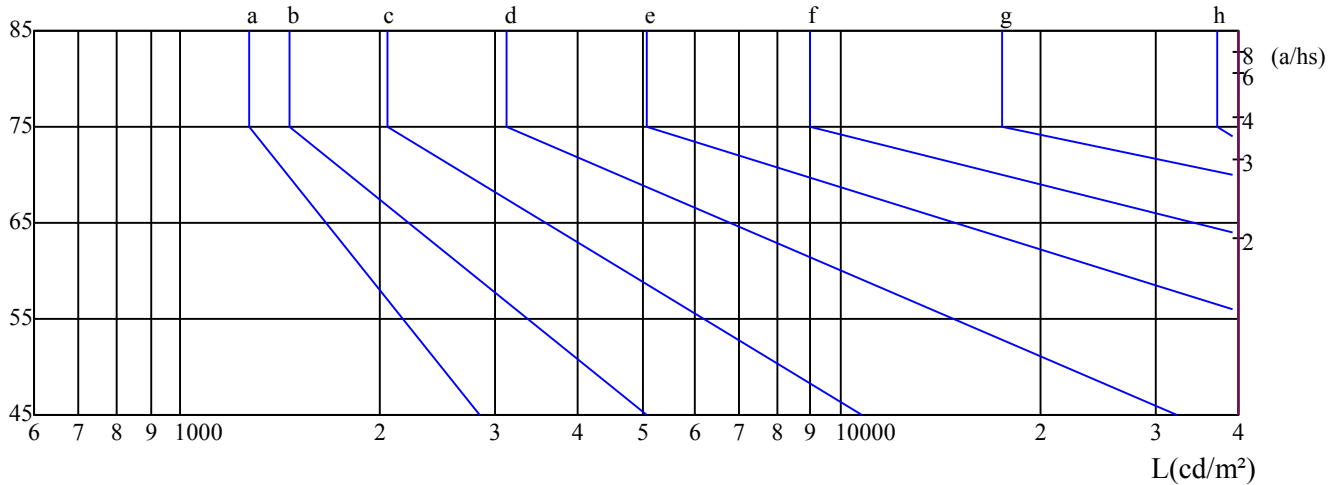
γ	45	50	55	60	65	70	75	80	85
C0	68512	63444	67545	75375	88178	109780	189623	253476	431609
C45	68512	63444	67545	75375	88178	109780	189623	253476	431609
C90	68512	63444	67545	75375	88178	109780	189623	253476	431609

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
88178	88178	88178	189623	189623	189623	431609	431609	431609

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

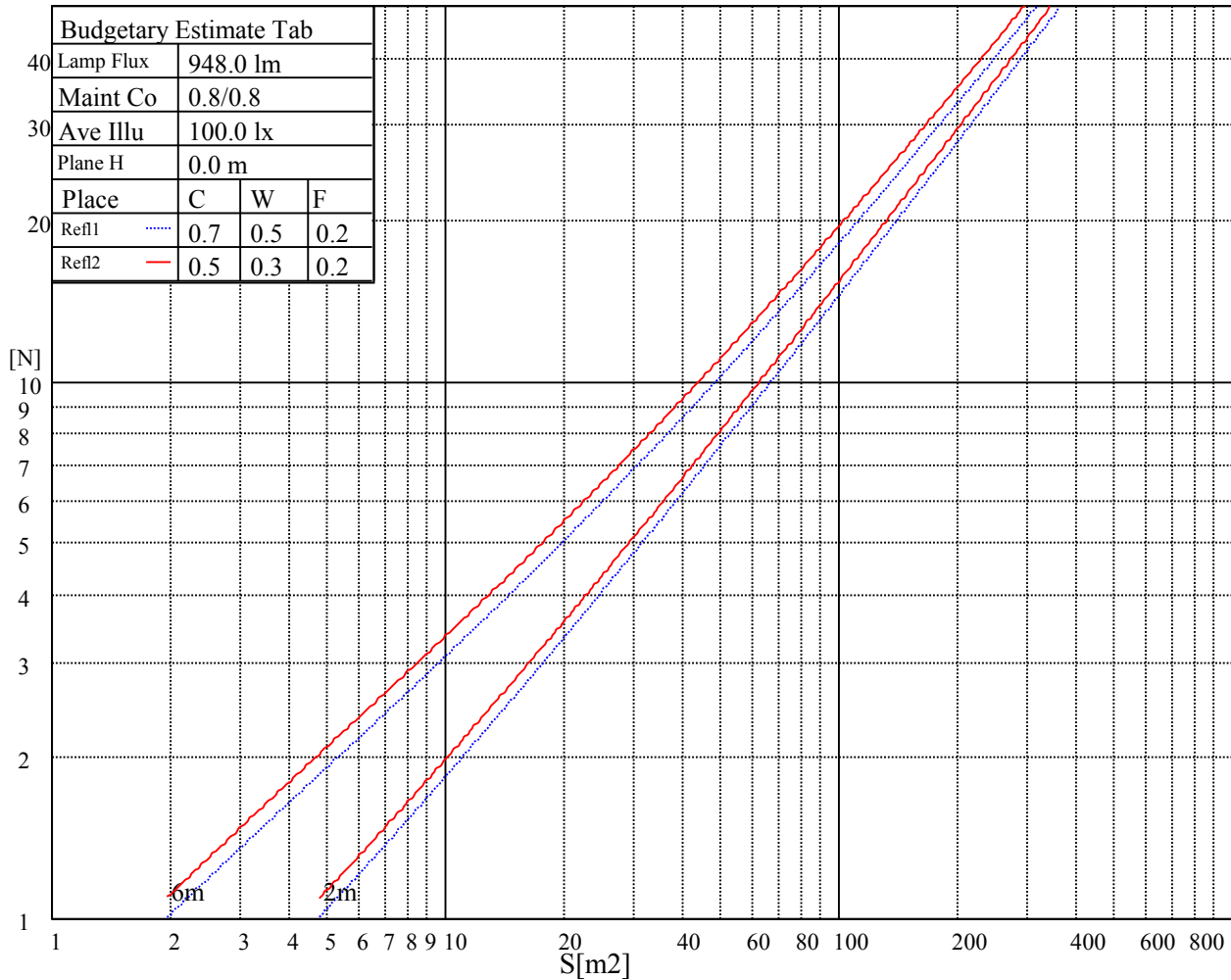
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

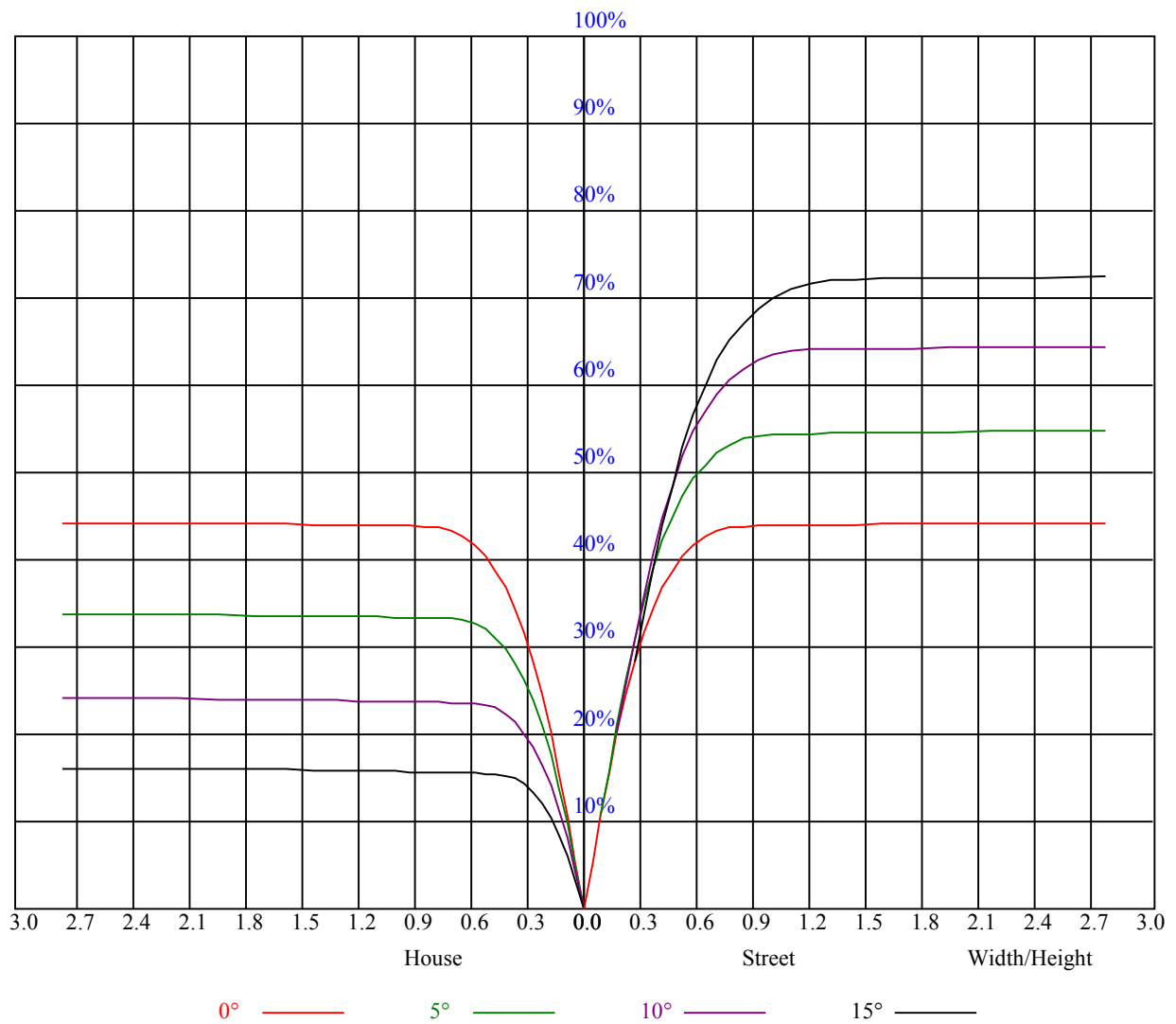
C0 ———

C45 ———

C90 ———



RHOC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.99	0.97	0.95	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.84
2	0.93	0.90	0.87	0.92	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.81	0.79
3	0.88	0.84	0.81	0.87	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.75
4	0.83	0.79	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.73	0.77	0.74	0.72	0.71
5	0.79	0.74	0.71	0.78	0.74	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.67
6	0.75	0.70	0.67	0.74	0.70	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
7	0.71	0.66	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.61
8	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58
9	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.55
10	0.62	0.57	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.53



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	1671.75	1671.19	1665.00	1652.63	1638.56	1616.06	1579.50	1544.06	1504.13
45.0	1671.75	1670.06	1661.63	1654.88	1638.00	1615.50	1591.31	1550.25	1510.31
90.0	1671.75	1666.69	1660.50	1645.88	1627.88	1605.94	1576.69	1535.63	1498.50
135.0	1672.88	1668.94	1663.31	1654.31	1643.63	1621.69	1598.06	1566.56	1533.38
180.0	1671.75	1666.69	1662.75	1657.69	1643.63	1627.88	1602.00	1564.88	1535.63
225.0	1671.75	1670.06	1667.81	1657.69	1647.56	1627.88	1595.81	1569.94	1536.75
270.0	1671.75	1672.31	1667.25	1662.19	1652.06	1633.50	1608.19	1578.38	1545.75
315.0	1672.88	1668.94	1664.44	1654.88	1636.88	1614.94	1585.13	1542.94	1504.13
360.0	1671.75	1671.19	1665.00	1652.63	1638.56	1616.06	1579.50	1544.06	1504.13
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1450.69	1404.56	1357.31	1296.00	1231.31	1173.38	1106.44	1047.38	978.19
45.0	1470.94	1414.13	1365.19	1310.63	1239.75	1182.38	1124.44	1058.06	986.63
90.0	1458.00	1397.25	1344.94	1292.63	1231.88	1118.19	1104.75	1036.29	971.83
135.0	1487.81	1444.50	1398.94	1342.13	1280.81	1225.69	1160.44	1092.94	1026.00
180.0	1497.94	1441.13	1399.50	1350.00	1275.75	1226.25	1117.91	1101.60	1021.67
225.0	1492.31	1447.31	1397.81	1338.75	1279.69	1224.00	1115.16	1090.07	1016.78
270.0	1497.94	1455.75	1411.31	1361.25	1293.19	1238.63	1180.13	1104.19	1041.19
315.0	1461.94	1404.00	1353.94	1301.06	1238.63	1121.29	1114.03	1039.44	983.93
360.0	1450.69	1404.56	1357.31	1296.00	1231.31	1173.38	1106.44	1047.38	978.19
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	904.50	838.13	763.31	693.56	642.38	600.19	555.19	522.00	490.50
45.0	924.19	844.88	764.44	696.94	641.25	594.00	551.81	514.13	482.06
90.0	892.58	810.00	739.29	667.69	610.09	567.28	529.76	486.00	456.58
135.0	951.75	877.50	795.94	716.63	657.56	604.69	557.44	521.44	487.69
180.0	950.12	875.59	792.28	713.03	651.94	597.21	551.87	515.08	477.56
225.0	948.32	867.32	794.25	715.89	647.94	599.79	553.05	510.36	477.45
270.0	977.63	899.44	819.56	750.94	682.31	632.25	585.00	544.50	509.63
315.0	910.01	826.59	766.13	695.36	631.24	595.18	557.83	511.88	485.33
360.0	904.50	838.13	763.31	693.56	642.38	600.19	555.19	522.00	490.50
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	456.75	426.94	403.31	379.69	356.63	338.06	304.88	284.63	210.15
45.0	455.06	422.44	397.69	374.63	347.63	327.94	297.00	292.50	200.59
90.0	429.64	398.81	376.48	354.60	332.89	309.54	275.46	230.34	186.53
135.0	450.00	420.75	394.88	369.00	345.38	327.94	303.19	286.31	222.08
180.0	448.48	417.60	390.32	366.19	343.46	322.82	301.28	269.33	221.40
225.0	445.95	411.08	386.83	364.84	343.52	325.91	306.73	270.28	226.29
270.0	473.63	440.44	414.00	392.63	361.69	342.00	327.38	287.44	263.31
315.0	455.57	426.21	399.99	377.72	354.38	332.89	300.54	252.84	207.17
360.0	456.75	426.94	403.31	379.69	356.63	338.06	304.88	284.63	210.15
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	157.33	111.38	70.71	32.01	14.79	11.19	8.78	7.31	5.63
45.0	158.29	108.11	70.65	34.76	14.85	11.42	9.45	8.10	5.74
90.0	138.04	91.29	54.73	24.47	13.11	11.53	10.01	7.59	4.84
135.0	176.63	128.76	82.69	47.08	19.41	13.11	11.03	8.94	6.36
180.0	178.65	135.28	88.88	48.32	19.86	13.78	12.21	10.46	5.57
225.0	183.09	132.47	90.06	47.76	18.68	11.93	10.41	8.55	6.53
270.0	200.08	149.01	100.01	60.19	26.72	13.44	11.25	9.68	8.78
315.0	154.91	105.36	66.43	31.33	14.18	11.76	10.13	8.83	5.23
360.0	157.33	111.38	70.71	32.01	14.79	11.19	8.78	7.31	5.63

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	5.12	4.44	4.33	4.28	4.16	4.11	4.05	3.99	3.99
45.0	4.61	4.28	4.22	4.16	4.11	4.05	3.99	3.94	3.94
90.0	4.44	4.33	4.22	4.22	4.16	4.11	4.05	3.99	3.99
135.0	5.12	4.44	4.39	4.33	4.28	4.22	4.16	4.16	4.11
180.0	4.61	4.33	4.22	4.16	4.11	4.05	3.99	3.94	3.88
225.0	5.12	4.33	4.22	4.16	4.05	3.99	3.94	3.88	3.88
270.0	5.12	4.44	4.28	4.22	4.11	4.05	4.05	3.99	3.88
315.0	4.61	4.39	4.28	4.22	4.11	4.05	3.99	3.94	3.88
360.0	5.12	4.44	4.33	4.28	4.16	4.11	4.05	3.99	3.99
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.94	3.88	3.88	3.83	3.83	3.83	3.77	3.77	3.71
45.0	3.88	3.88	3.83	3.83	3.83	3.83	3.77	3.77	3.71
90.0	3.94	3.94	3.88	3.88	3.88	3.88	3.88	3.83	3.83
135.0	4.11	4.05	4.05	4.05	4.05	4.05	3.99	4.05	4.05
180.0	3.88	3.83	3.83	3.77	3.77	3.71	3.71	3.71	3.66
225.0	3.83	3.77	3.77	3.71	3.71	3.71	3.66	3.66	3.66
270.0	3.88	3.83	3.77	3.77	3.77	3.71	3.71	3.71	3.66
315.0	3.88	3.83	3.77	3.77	3.71	3.71	3.66	3.66	3.66
360.0	3.94	3.88	3.88	3.83	3.83	3.83	3.77	3.77	3.71
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.71	3.77	3.77	3.77	3.83	3.83	3.77	3.83	3.83
45.0	3.71	3.71	3.71	3.66	3.71	3.66	3.66	3.66	3.66
90.0	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.99	5.18
135.0	4.05	4.05	4.05	3.99	3.99	3.99	3.99	4.33	4.44
180.0	3.66	3.66	3.66	3.66	3.66	3.66	3.60	3.60	3.60
225.0	3.60	3.60	3.60	3.60	3.60	3.54	3.54	3.54	3.54
270.0	3.66	3.66	3.60	3.60	3.60	3.60	3.60	3.54	3.54
315.0	3.66	3.66	3.60	3.60	3.60	3.54	3.54	3.54	3.54
360.0	3.71	3.77	3.77	3.77	3.83	3.83	3.77	3.83	3.83
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.77	3.83	4.16	4.61	5.12	5.51	5.85	6.24	6.30
45.0	3.66	3.77	3.88	3.88	3.71	3.66	3.66	3.66	3.60
90.0	6.64	7.48	7.93	7.03	5.63	4.67	3.88	3.71	3.66
135.0	4.44	4.84	6.36	8.61	9.00	9.17	9.00	8.55	7.20
180.0	3.60	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54
225.0	3.54	3.60	3.88	3.99	3.88	3.88	3.77	3.66	3.60
270.0	3.54	3.66	3.83	4.05	4.05	3.99	3.94	3.88	3.83
315.0	3.54	3.54	3.54	3.54	3.49	3.49	3.49	3.49	3.49
360.0	3.77	3.83	4.16	4.61	5.12	5.51	5.85	6.24	6.30
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.13	5.34	4.28	4.11	4.16	4.05	3.99	3.49	3.32
45.0	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.54	3.38
90.0	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.60	3.32
135.0	5.12	4.22	4.33	4.39	4.33	4.33	4.22	3.88	3.43
180.0	3.54	3.54	3.60	3.60	3.60	3.54	3.54	3.43	3.32
225.0	3.54	3.54	3.60	3.54	3.60	3.54	3.49	3.43	3.32
270.0	3.77	3.71	3.66	3.66	3.66	3.66	3.60	3.49	3.32
315.0	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.43	3.32
360.0	6.13	5.34	4.28	4.11	4.16	4.05	3.99	3.49	3.32

Intensity data(cd)

Appendix Page: 18 Total:18

C/ γ (°)	90.0
0.0	3.32
45.0	3.32
90.0	3.32
135.0	3.32
180.0	3.32
225.0	3.32
270.0	3.32
315.0	3.32
360.0	3.32