
Nata

LumCAT: 1407-N
Luminaire: 92.70.064.00
Report No: NT2018040703
Test No: nata-0100
LampCAT: SEOUL SAWX10
Lamp flux(lm): 1576.0
Number of Lamps: 1
Length(mm): 39
Phm Type: C

Voltage(V): 34.2000
Current(A): 0.3500
Power (W): 11.9700
PF: 0.0000
Ballast type: DC
Width(mm): 39
Height(mm): 0

Photometric Results

Lumens(lm): 1329.51
Efficiency(%): 84.36%
Lumens(lm)/Power(W): 111.07
Central intensity(cd): 1578.398
Maximum intensity(cd): 1578.398
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=47.3
 [C90/270]Total=47.3
Field angle(10%Imax): [C0/180]Total=93.7
 [C90/270]Total=93.7
Maximum s/h(1/2): C0_180=0.72 C90_270=0.72
Maximum s/h(1/4): C0_180=0.79 C90_270=0.79
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.88%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.871%

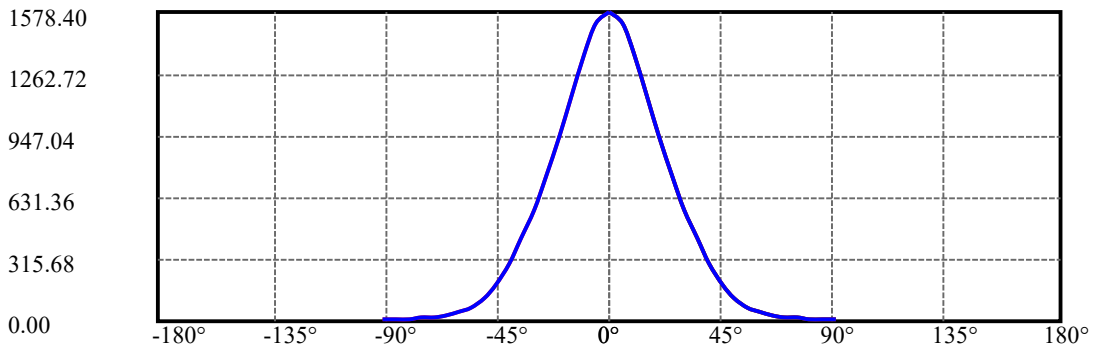
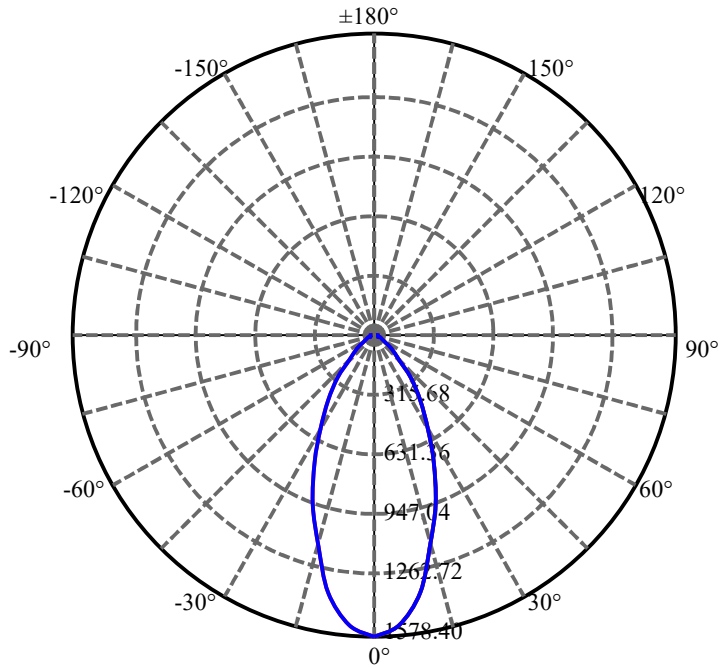
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1578.398	9.439	9.439	.599%	.710%
5.0	1519.488	72.591	82.03	4.606%	6.170%
10.0	1364.435	129.871	211.901	8.241%	15.938%
15.0	1140.239	161.764	373.665	10.264%	28.105%
20.0	937.225	175.705	549.37	11.149%	41.321%
25.0	733.812	169.990	719.36	10.786%	54.107%
30.0	570.446	156.341	875.702	9.920%	65.866%
35.0	418.181	131.476	1007.177	8.342%	75.755%
40.0	294.077	103.614	1110.791	6.575%	83.549%
45.0	184.157	71.378	1182.169	4.529%	88.918%
50.0	113.788	47.779	1229.948	3.032%	92.511%
55.0	68.545	30.777	1260.725	1.953%	94.826%
60.0	45.759	21.722	1282.447	1.378%	96.460%
65.0	31.492	15.645	1298.092	.993%	97.637%
70.0	22.848	11.769	1309.86	.747%	98.522%
75.0	15.994	8.468	1318.329	.537%	99.159%
80.0	10.936	5.903	1324.232	.375%	99.603%
85.0	7.047	3.848	1328.08	.244%	99.892%
90.0	5.223	1.432	1329.511	.091%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	875.70	55.57%	65.87%
0-40	1110.79	70.48%	83.55%
0-60	1282.45	81.37%	96.46%
0-90	1328.08	84.27%	99.89%
0-120	1328.08	84.27%	99.89%
0-180	1329.51	84.36%	100.00%
60-90	67.35	4.27%	5.07%
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%
0-37.72	1063.61	67.49%	80.00%

ZONAL LUMEN SUMMARY

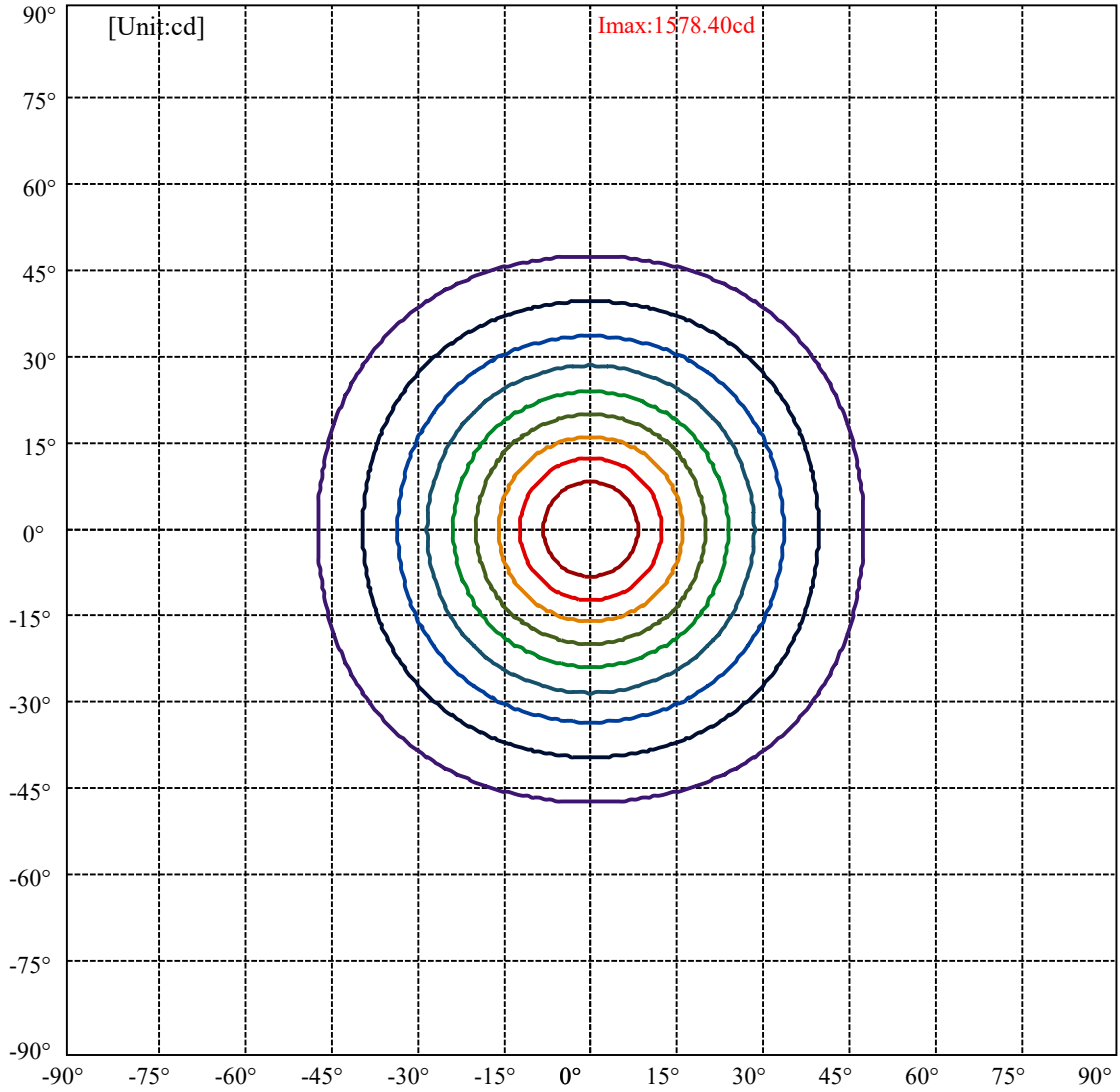
0-10	211.90
10-20	337.47
20-30	326.33
30-40	235.09
40-50	119.16
50-60	52.50
60-70	27.41
70-80	14.37
80-90	3.85
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



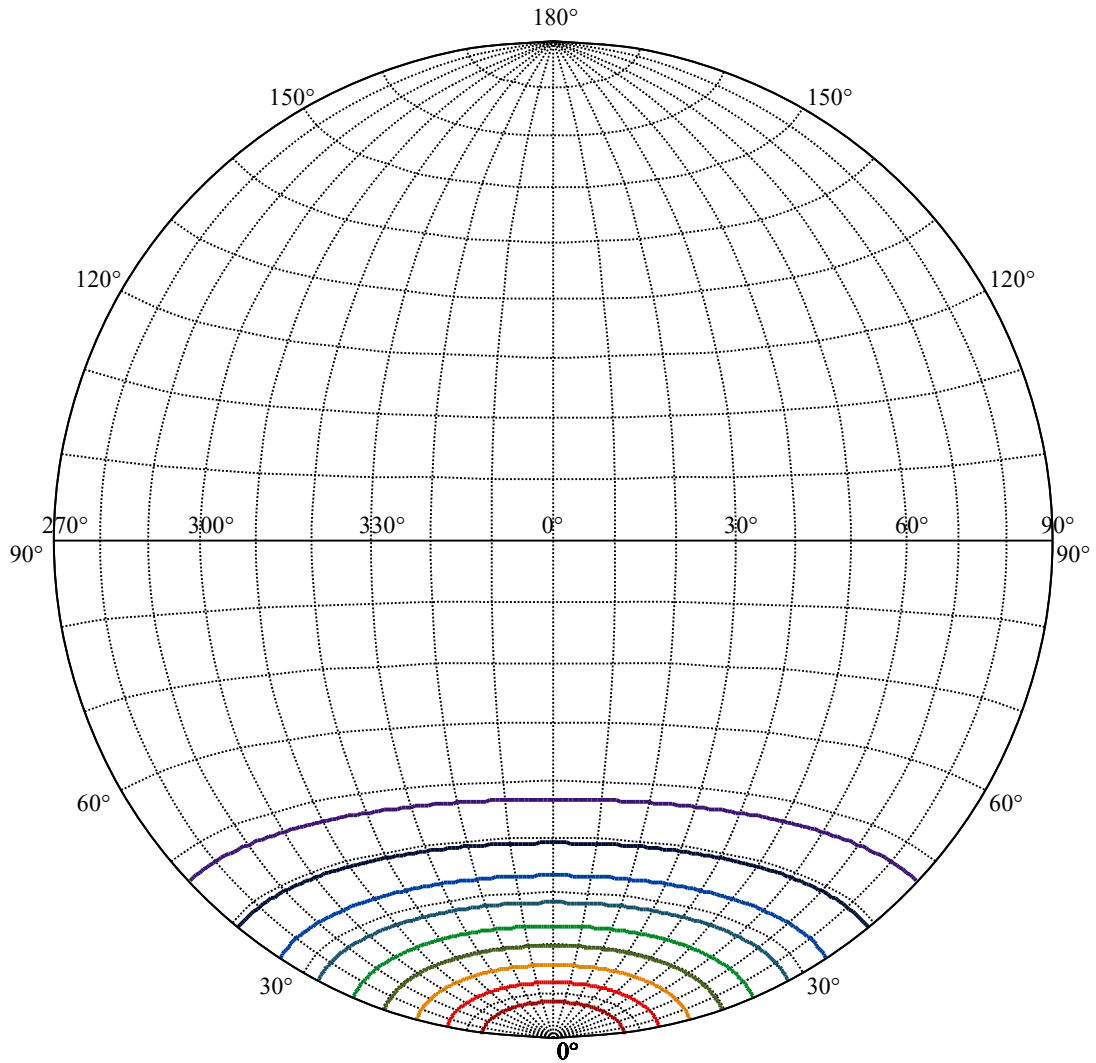
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:46.9 Right:46.9
:C90/270Left:46.9 Right:46.9

Beam Angle(50%Imax):C0/180Left:23.6 Right:23.6
:C90/270Left:23.6 Right:23.6



(10%Imax) 157.84	—
(20%Imax) 315.68	—
(30%Imax) 473.519	—
(40%Imax) 631.359	—
(50%Imax) 789.199	—
(60%Imax) 947.039	—
(70%Imax) 1104.88	—
(80%Imax) 1262.72	—
(90%Imax) 1420.56	—



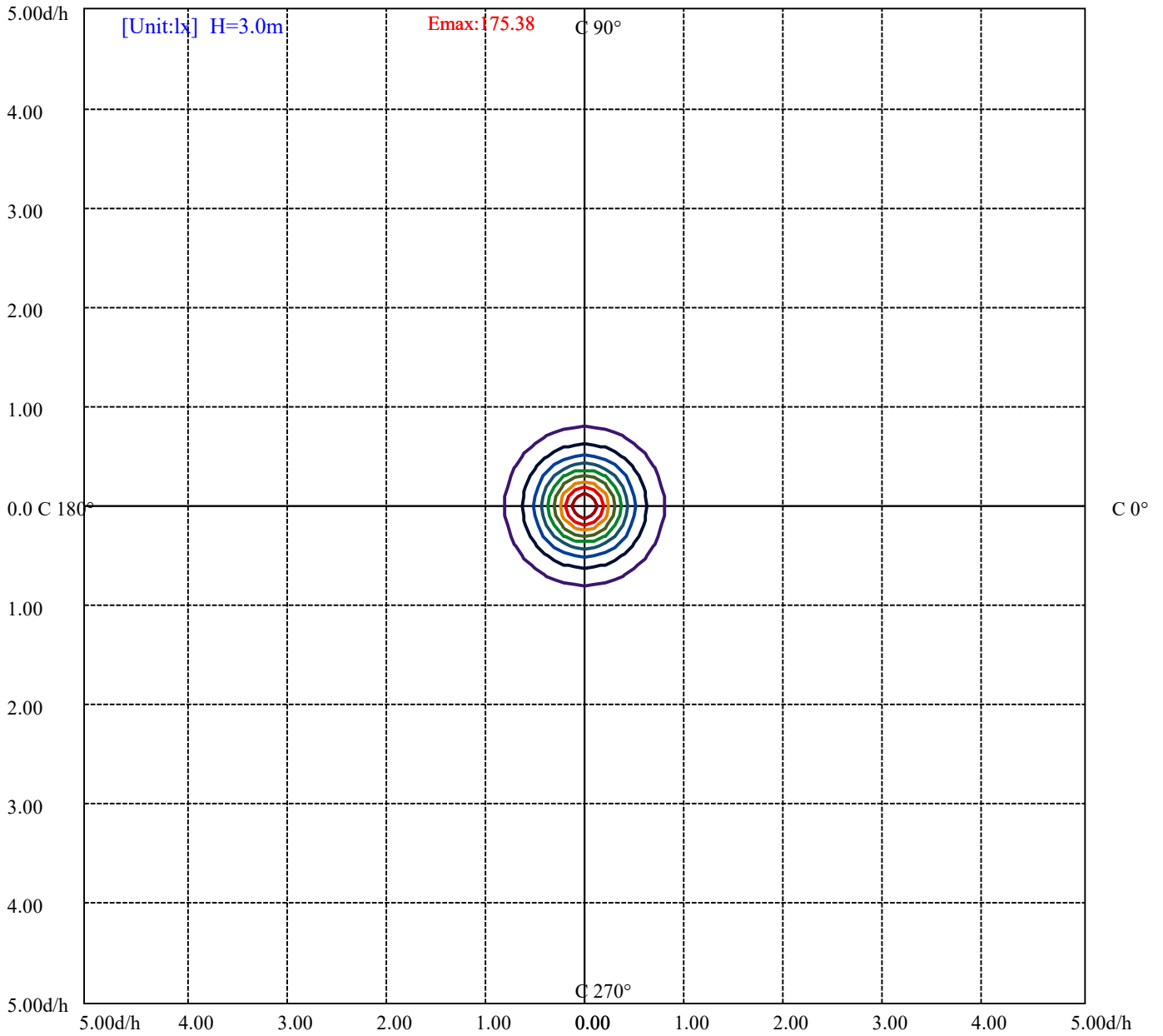
House

[Unit:cd]

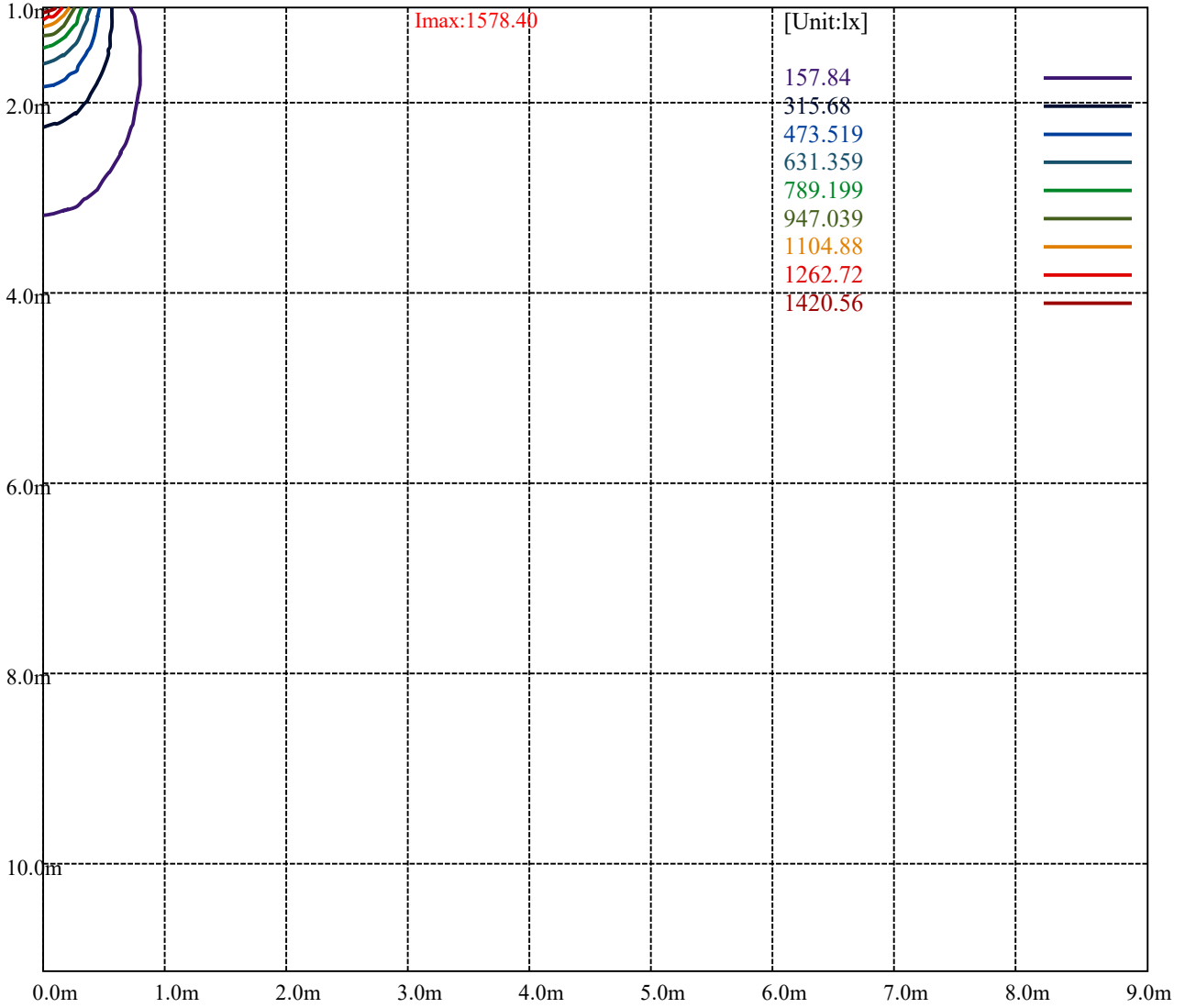
Road

Imax:1578.40

(10%Imax) 157.84	—
(20%Imax) 315.68	—
(30%Imax) 473.519	—
(40%Imax) 631.359	—
(50%Imax) 789.199	—
(60%Imax) 947.039	—
(70%Imax) 1104.88	—
(80%Imax) 1262.72	—
(90%Imax) 1420.56	—



(10%Emax) 17.53778	—
(20%Emax) 35.07544	—
(30%Emax) 52.61322	—
(40%Emax) 70.151	—
(50%Emax) 87.68867	—
(60%Emax) 105.2264	—
(70%Emax) 122.7644	—
(80%Emax) 140.3022	—
(90%Emax) 157.84	—



Luminance Table

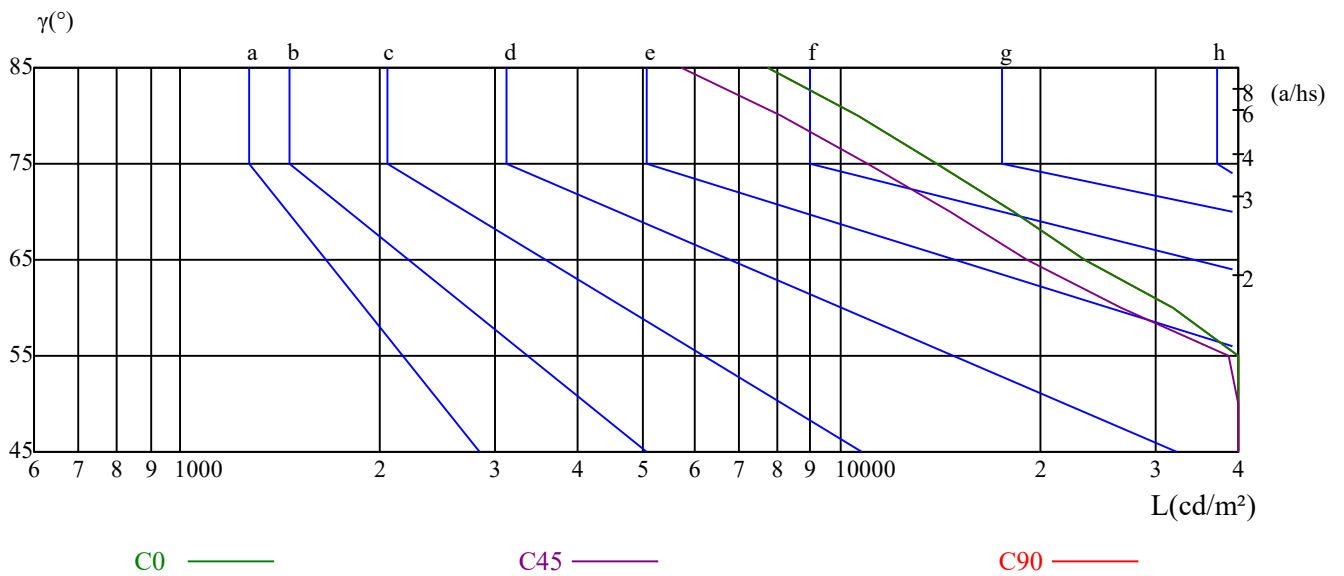
γ	45	50	55	60	65	70	75	80	85
C0	113184	72237	45354	31865	23332	18232	13943	10594	7748
C45	99249	62428	38595	26669	19173	14677	10961	8098	5723
C90	113184	72237	45354	31865	23332	18232	13943	10594	7748

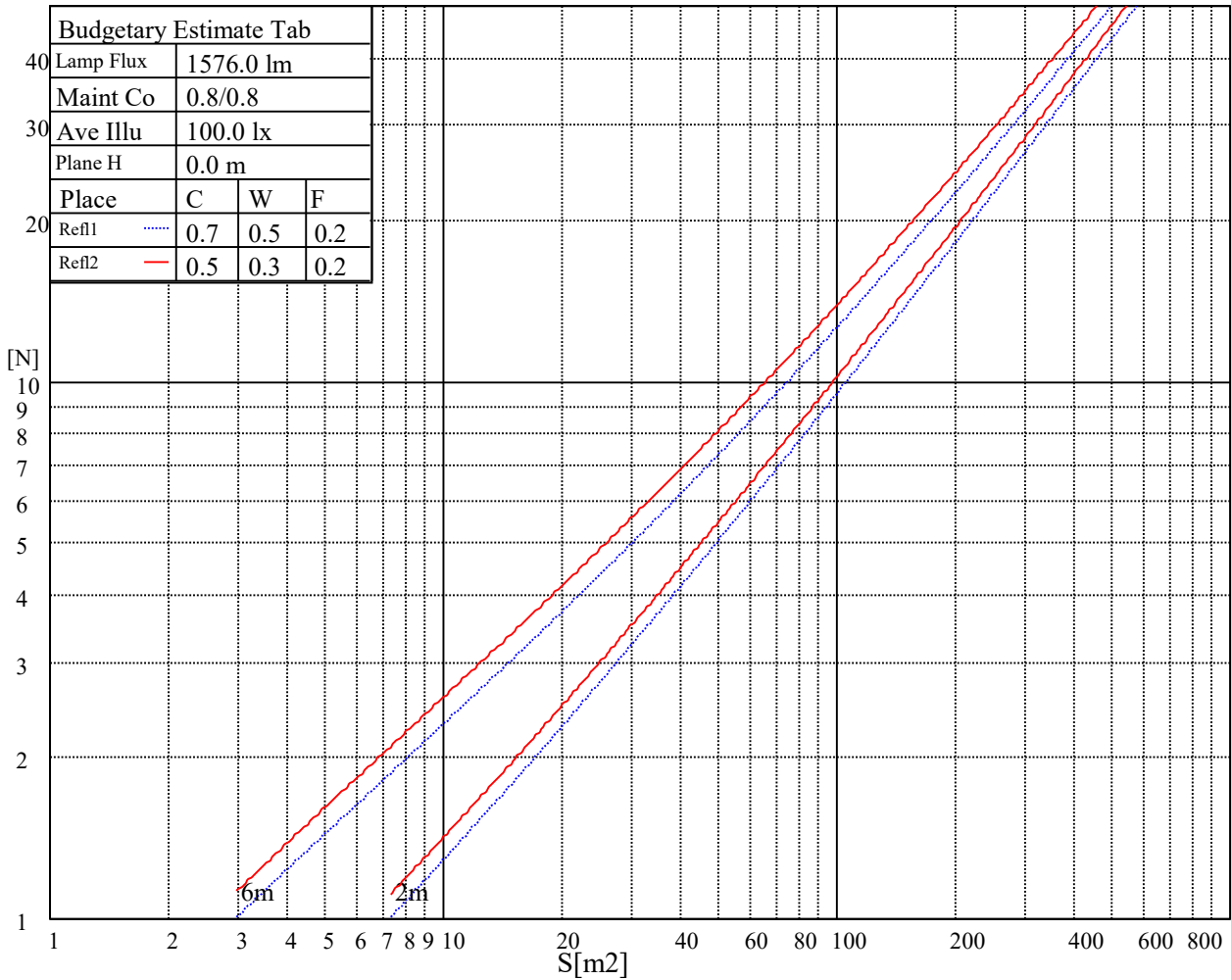
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
48992	48992	48992	40628	40628	40628	53161	53161	53161

Glare Table

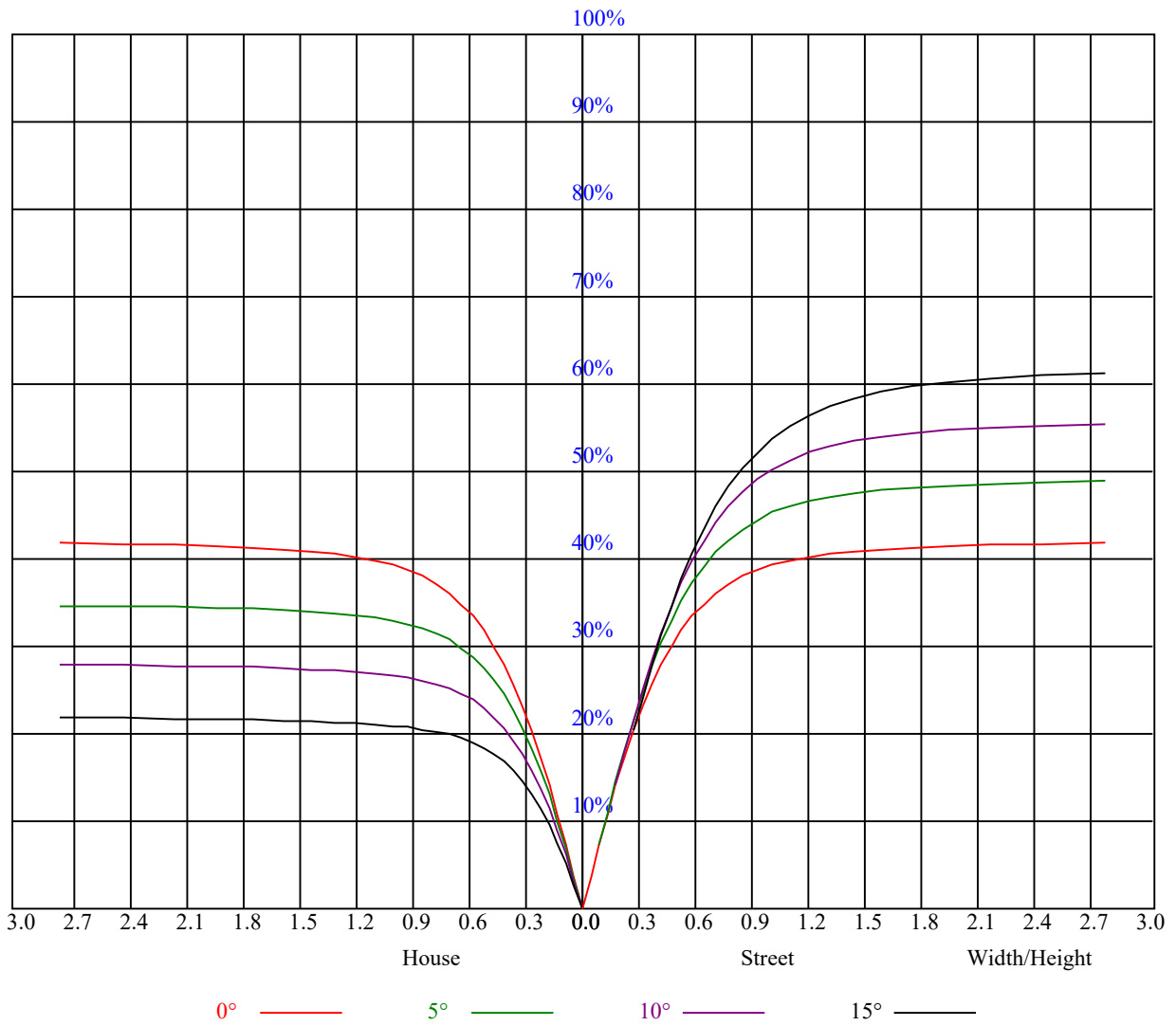
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.01	1.01	1.01	0.99	0.99	0.99	0.94	0.94	0.94	0.90	0.90	0.90	0.87	0.87	0.87	0.85
1	0.93	0.90	0.88	0.91	0.89	0.86	0.87	0.85	0.84	0.84	0.83	0.81	0.81	0.80	0.79	0.77
2	0.86	0.82	0.79	0.84	0.81	0.78	0.81	0.78	0.76	0.79	0.76	0.74	0.76	0.74	0.73	0.71
3	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.72	0.69	0.74	0.71	0.68	0.72	0.69	0.67	0.66
4	0.74	0.69	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.62	0.61
5	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.58	0.57
6	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.54	0.53
7	0.61	0.56	0.52	0.61	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.57	0.54	0.51	0.50
8	0.58	0.52	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.48	0.55	0.51	0.48	0.47
9	0.55	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.53	0.49	0.46	0.52	0.48	0.45	0.44
10	0.52	0.47	0.43	0.51	0.47	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.49	0.46	0.43	0.42



Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	1586.73	1517.35	1356.04	1145.17	928.80	727.85	580.29	419.53	285.74
45.0	1575.16	1542.13	1427.06	1212.34	997.62	782.90	617.73	452.01	314.92
90.0	1580.12	1550.39	1406.69	1208.49	986.01	772.66	605.01	445.35	314.65
135.0	1573.51	1563.05	1445.78	1240.97	1034.51	812.63	632.05	486.15	347.41
180.0	1586.73	1536.62	1373.11	1089.07	945.32	740.45	572.48	415.84	303.58
225.0	1575.16	1489.28	1317.50	1091.82	882.55	692.39	531.18	385.23	270.49
270.0	1580.12	1490.38	1320.80	1099.48	885.31	695.91	532.95	386.50	280.24
315.0	1569.66	1466.70	1268.50	1034.56	837.68	645.70	491.87	354.84	235.59
360.0	1586.73	1517.35	1356.04	1145.17	928.80	727.85	580.29	419.53	285.74

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	177.50	106.31	64.47	43.22	30.23	21.58	14.81	10.19	6.39
45.0	203.05	122.83	72.29	47.95	32.37	23.34	16.74	11.45	7.27
90.0	206.52	127.07	73.83	47.57	33.03	24.00	16.90	12.11	8.04
135.0	224.19	145.95	83.19	53.40	36.28	26.87	19.32	13.43	8.59
180.0	189.83	116.11	71.63	47.46	32.81	24.17	17.01	11.67	7.38
225.0	167.98	103.56	62.76	44.49	30.78	21.97	15.36	10.19	6.61
270.0	163.02	99.76	63.98	43.44	29.79	21.64	14.76	9.91	6.28
315.0	141.16	88.70	56.21	38.54	26.65	19.21	13.05	8.53	5.84
360.0	177.50	106.31	64.47	43.22	30.23	21.58	14.81	10.19	6.39

C/γ(°)	90.0
0.0	5.29
45.0	5.12
90.0	5.23
135.0	5.45
180.0	5.29
225.0	5.12
270.0	5.18
315.0	5.12
360.0	5.29