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NATA

LumCAT: 3-2044-M
Luminaire: 92.70.135.00
Report No: GC2017061710
Test No: NT-0010
LampCAT: LUMILEDS LUXEON CoB 1208
Lamp flux(lm): 3128.0
Number of Lamps: 1
Length(mm): 84
Phm Type: C

Voltage(V): 35.3000
Current(A): 0.7000
Power (W): 24.7100
PF: 0.0000
Ballast type: DC
Width(mm): 84
Height(mm): 0

Photometric Results

Lumens(lm): 2833.36
Efficiency(%): 90.58%
Lumens(lm)/Power(W): 114.66
Central intensity(cd): 9633.494
Maximum intensity(cd): 9633.494
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.5
 [C90/270]Total=26.5
Field angle(10%Imax): [C0/180]Total=60.3
 [C90/270]Total=60.3
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.58%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.791%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/6/10
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

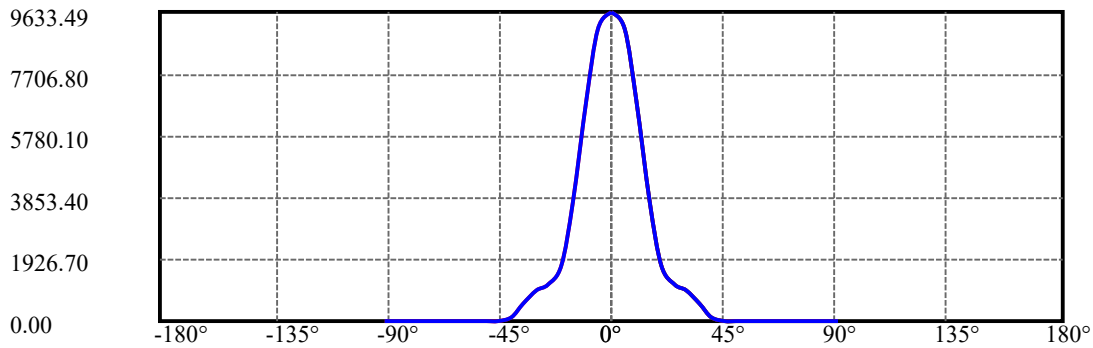
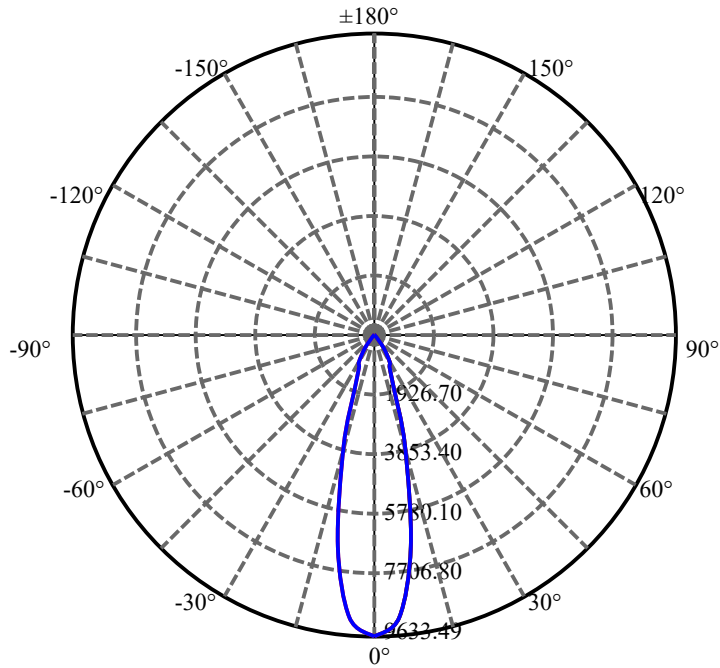
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9633.494	0.000	0	.000%	.000%
5.0	9071.643	223.615	223.615	7.149%	7.892%
10.0	6866.772	570.167	793.782	18.228%	28.016%
15.0	3688.848	626.152	1419.934	20.018%	50.115%
20.0	1754.303	448.592	1868.526	14.341%	65.947%
25.0	1122.091	301.681	2170.207	9.645%	76.595%
30.0	978.173	265.790	2435.997	8.497%	85.975%
35.0	519.664	220.567	2656.564	7.051%	93.760%
40.0	105.543	104.311	2760.875	3.335%	97.442%
45.0	14.032	22.140	2783.015	.708%	98.223%
50.0	12.587	5.379	2788.394	.172%	98.413%
55.0	11.885	5.321	2793.716	.170%	98.601%
60.0	11.486	5.402	2799.118	.173%	98.791%
65.0	11.163	5.506	2804.624	.176%	98.986%
70.0	10.970	5.604	2810.228	.179%	99.183%
75.0	10.825	5.697	2815.925	.182%	99.385%
80.0	10.743	5.771	2821.696	.184%	99.588%
85.0	10.681	5.821	2827.517	.186%	99.794%
90.0	10.667	5.845	2833.363	.187%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2436.00	77.88%	85.98%
0-40	2760.88	88.26%	97.44%
0-60	2799.12	89.49%	98.79%
0-90	2827.52	90.39%	99.79%
0-120	2827.52	90.39%	99.79%
0-180	2833.36	90.58%	100.00%
60-90	33.80	1.08%	1.19%
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%
0-26.82	2266.69	72.46%	80.00%

ZONAL LUMEN SUMMARY

0-10	793.78
10-20	1074.74
20-30	567.47
30-40	324.88
40-50	27.52
50-60	10.72
60-70	11.11
70-80	11.47
80-90	5.82
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



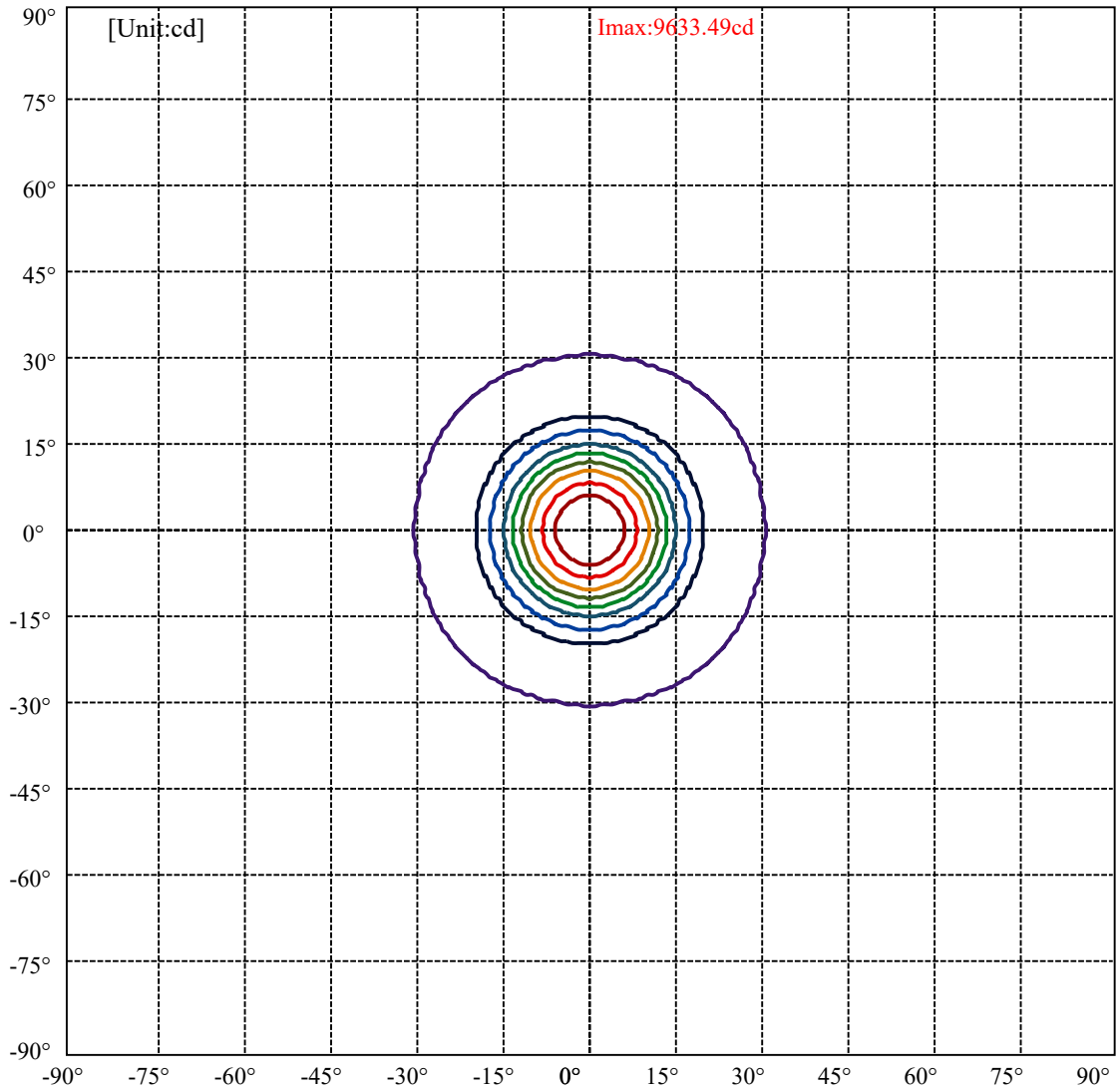
C0(Max): —————

C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:30.2 Right:30.2
:C90/270Left:30.2 Right:30.2

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

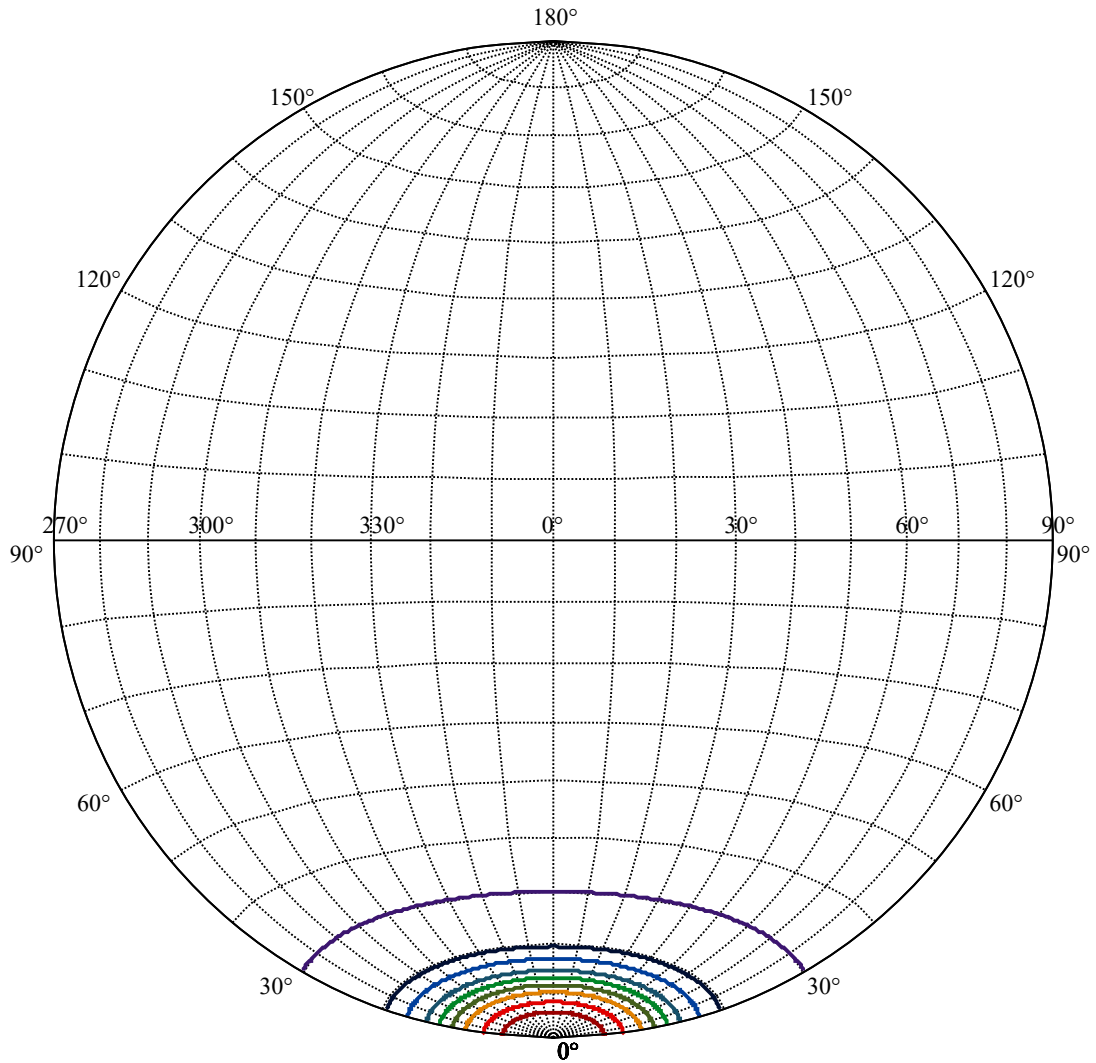


(10%Imax) 963.349	—
(20%Imax) 1926.7	—
(30%Imax) 2890.05	—
(40%Imax) 3853.4	—
(50%Imax) 4816.75	—
(60%Imax) 5780.1	—
(70%Imax) 6743.45	—
(80%Imax) 7706.8	—
(90%Imax) 8670.14	—

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/6/10
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42



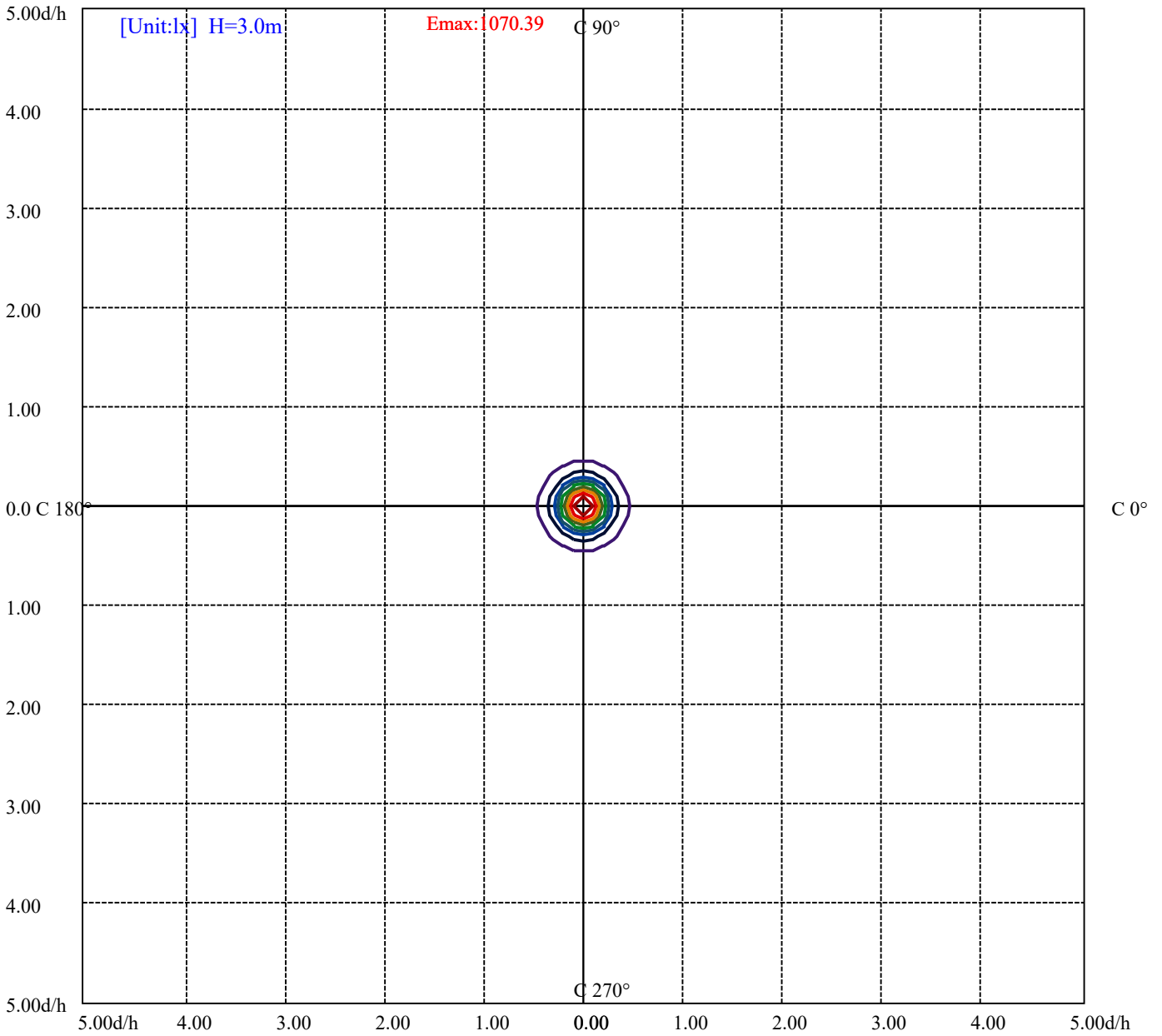
House

[Unit:cd]

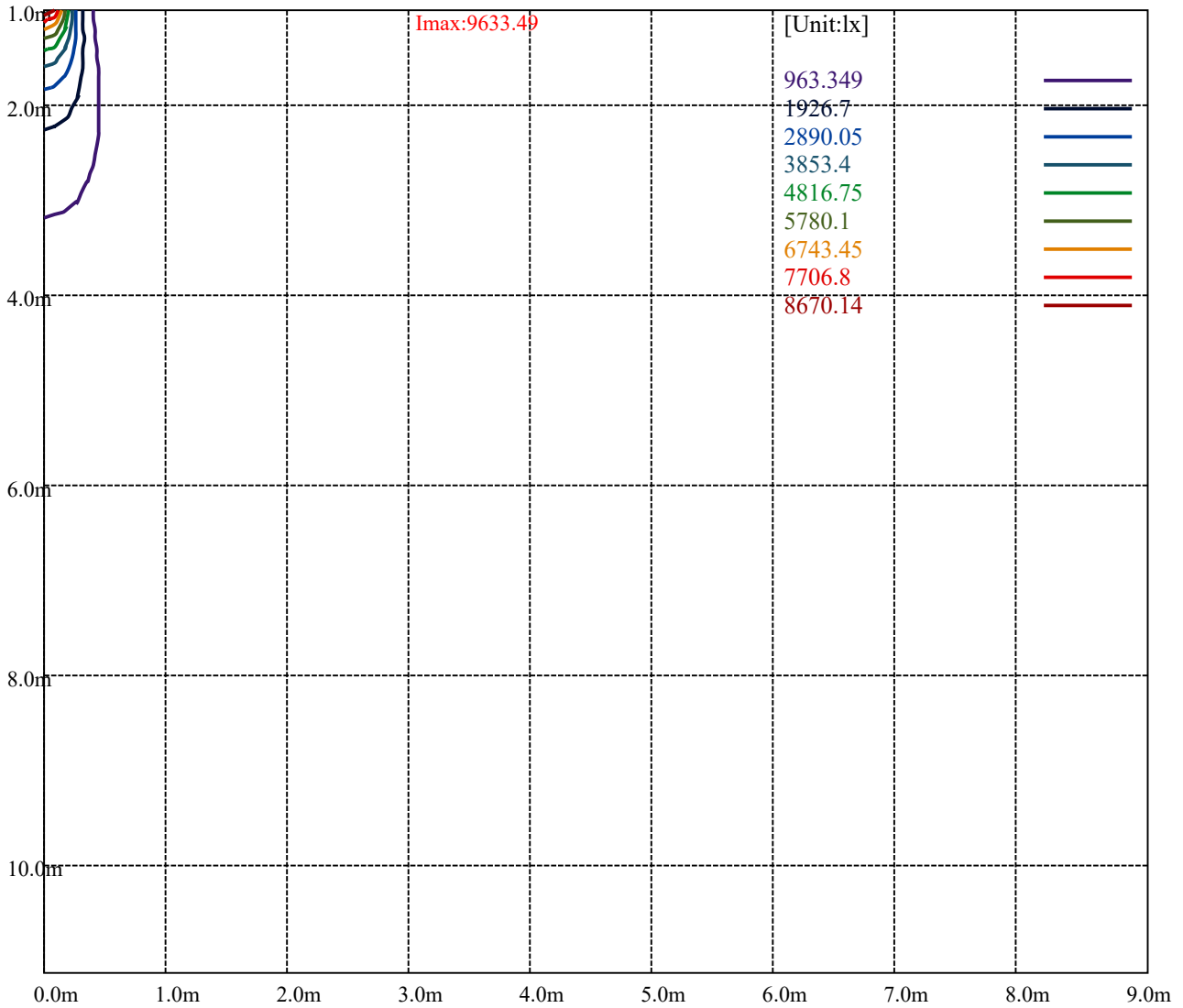
Road

I_{max}:9633.49

- (10%I_{max}) 963.349
- (20%I_{max}) 1926.7
- (30%I_{max}) 2890.05
- (40%I_{max}) 3853.4
- (50%I_{max}) 4816.75
- (60%I_{max}) 5780.1
- (70%I_{max}) 6743.45
- (80%I_{max}) 7706.8
- (90%I_{max}) 8670.14



- (10%Emax) 107.0387
- (20%Emax) 214.0778
- (30%Emax) 321.1156
- (40%Emax) 428.1544
- (50%Emax) 535.1934
- (60%Emax) 642.2322
- (70%Emax) 749.27
- (80%Emax) 856.3088
- (90%Emax) 963.3478



Luminance Table

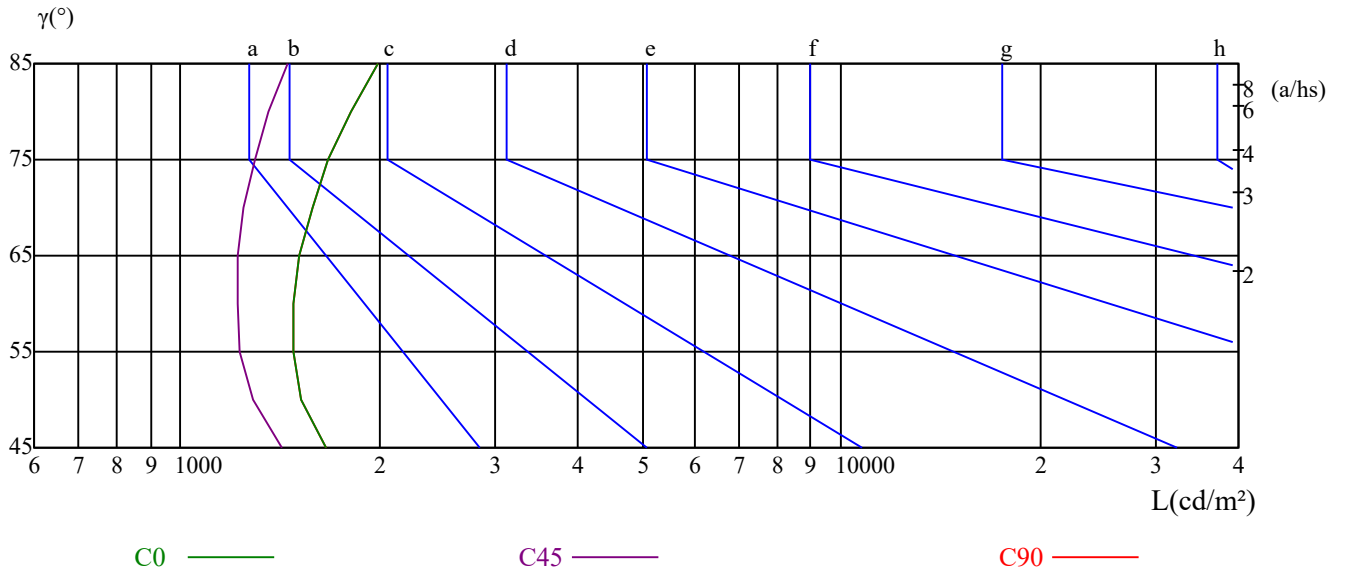
γ	45	50	55	60	65	70	75	80	85
C0	1656	1518	1478	1485	1515	1580	1674	1808	1988
C45	1422	1284	1231	1216	1219	1247	1293	1363	1456
C90	1656	1518	1478	1485	1515	1580	1674	1808	1988

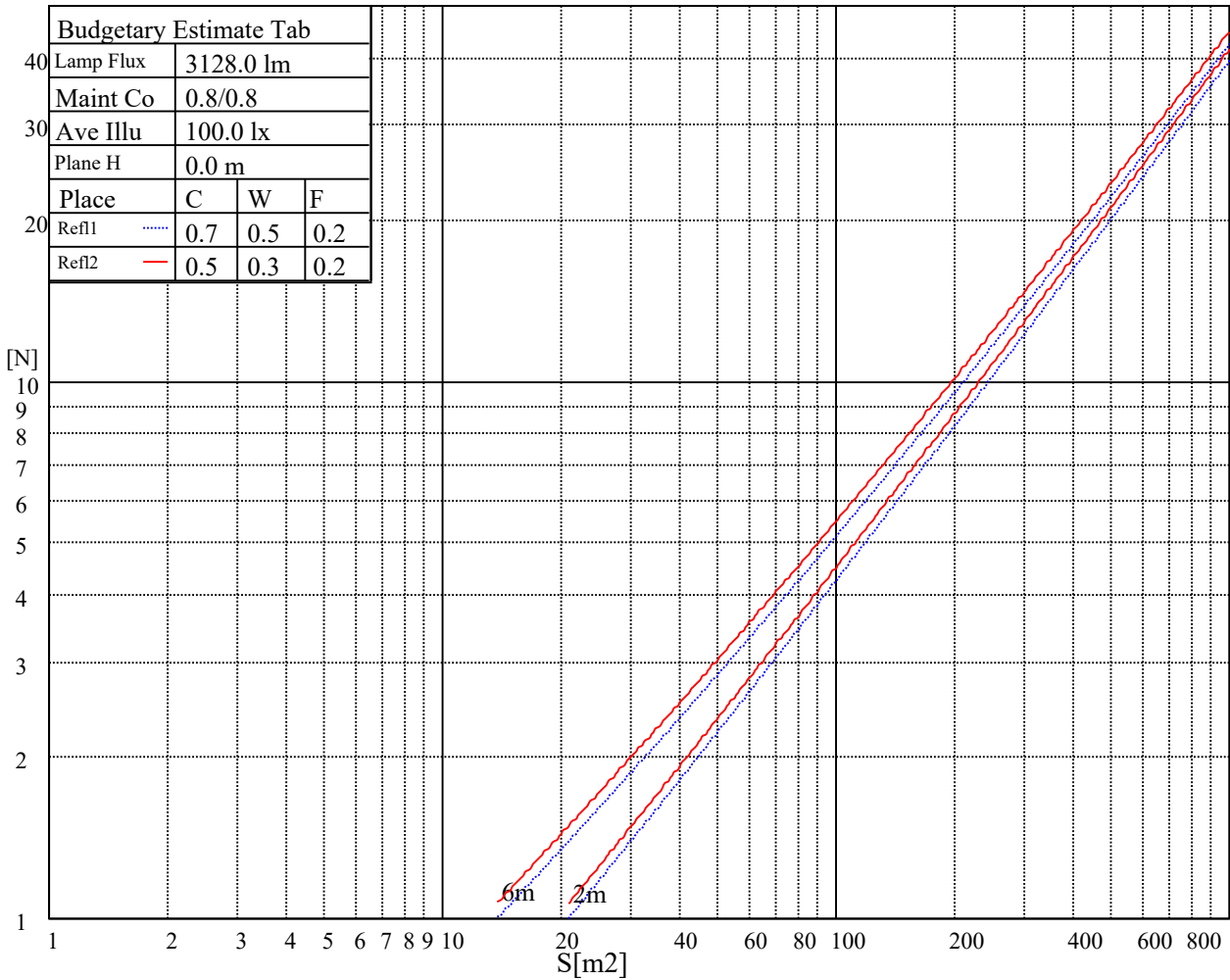
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3656	3656	3656	5789	5789	5789	16962	16962	16962

Glare Table

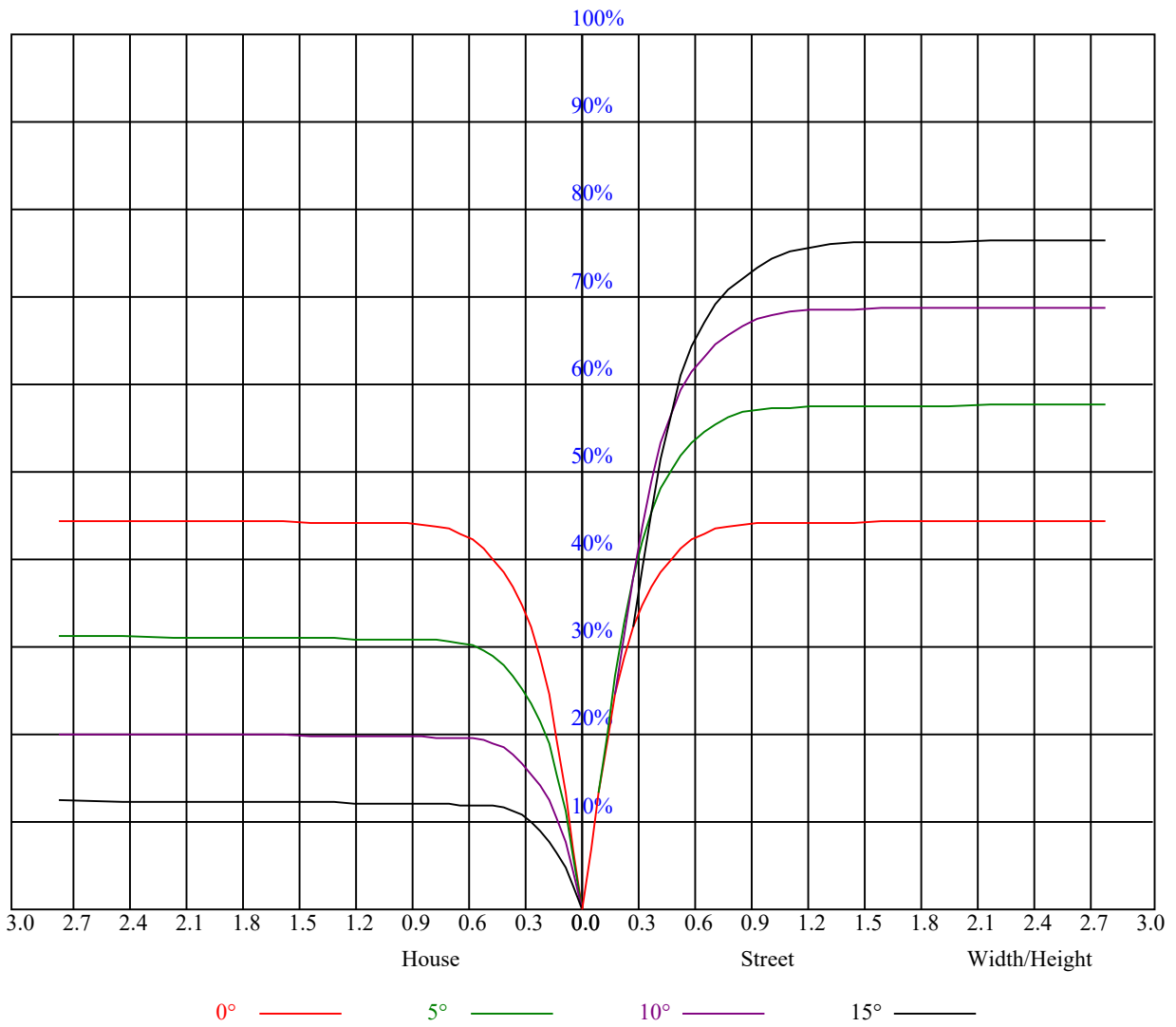
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.91
1	1.01	0.99	0.98	0.99	0.98	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.88	0.86
2	0.96	0.93	0.90	0.94	0.92	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.84	0.82
3	0.91	0.87	0.84	0.90	0.86	0.84	0.87	0.85	0.82	0.85	0.83	0.81	0.83	0.81	0.80	0.79
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.81	0.78	0.76	0.75
5	0.83	0.79	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
6	0.79	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
7	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.67
8	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
9	0.71	0.66	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62
10	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.60



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	9673.41	9188.36	7066.49	3899.64	1864.76	1135.26	995.97	575.89	45.31
45.0	9605.69	9603.49	8233.68	5036.56	2378.44	1275.66	1042.22	785.10	307.77
90.0	9645.88	9426.21	7389.12	4172.17	1925.32	1095.73	1009.73	639.76	60.73
135.0	9608.99	9487.87	7755.24	4329.64	1972.12	1167.75	1021.30	676.09	327.59
180.0	9673.41	9111.83	6757.62	3368.35	1522.31	1094.25	980.99	467.04	30.01
225.0	9605.69	8323.43	5200.63	2562.88	1323.01	1036.44	870.39	251.28	19.77
270.0	9645.88	8778.74	6354.06	3126.10	1539.93	1093.42	962.39	401.36	27.69
315.0	9608.99	8653.21	6177.33	3015.44	1508.55	1078.22	942.40	360.78	25.49
360.0	9673.41	9188.36	7066.49	3899.64	1864.76	1135.26	995.97	575.89	45.31

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	14.87	12.72	11.95	11.56	11.23	11.01	10.90	10.79	10.74
45.0	15.64	13.10	12.28	11.73	11.34	11.12	10.96	10.79	10.79
90.0	14.48	12.83	12.00	11.56	11.18	11.01	10.79	10.74	10.63
135.0	14.04	12.72	11.95	11.56	11.23	11.01	10.85	10.74	10.68
180.0	13.32	12.39	11.78	11.40	11.12	10.90	10.79	10.74	10.68
225.0	13.16	12.22	11.67	11.34	11.07	10.90	10.74	10.68	10.68
270.0	13.54	12.50	11.84	11.45	11.12	10.96	10.85	10.74	10.63
315.0	13.21	12.22	11.62	11.29	11.01	10.85	10.74	10.74	10.63
360.0	14.87	12.72	11.95	11.56	11.23	11.01	10.90	10.79	10.74

C/γ(°)	90.0
0.0	10.68
45.0	10.68
90.0	10.63
135.0	10.63
180.0	10.68
225.0	10.74
270.0	10.68
315.0	10.63
360.0	10.68