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Nata

LumCAT: 2969-E
Luminaire: 92.76.263.00
Report No: NT2017010601
Test No: GC2017010601
LampCAT: bridgelux VERO 13
Lamp flux(lm): 1556.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 33.0000
Current(A): 0.5500
Power (W): 18.1500
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 1463.00
Efficiency(%): 94.02%
Lumens(lm)/Power(W): 80.61
Central intensity(cd): 11037.840
Maximum intensity(cd): 11037.840
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=15.3
 [C90/270]Total=15.3
Field angle(10%Imax): [C0/180]Total=29.2
 [C90/270]Total=29.2
Maximum s/h(1/2): C0_180=0.27 C90_270=0.27
Maximum s/h(1/4): C0_180=0.25 C90_270=0.25
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 98.18%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.585%

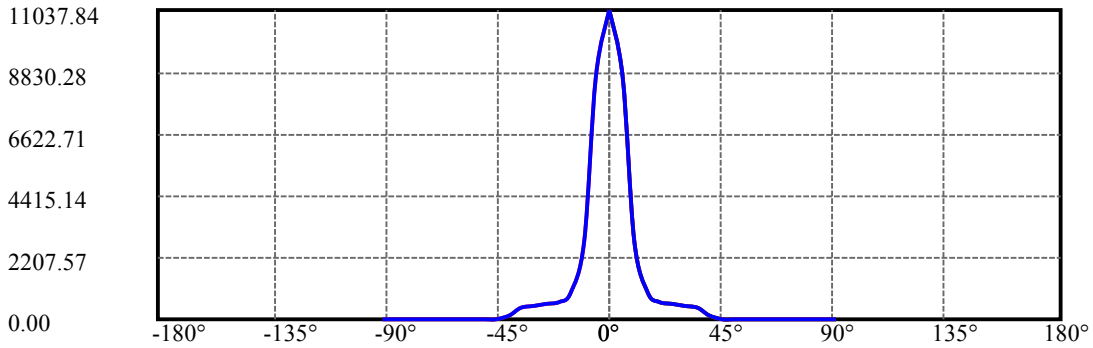
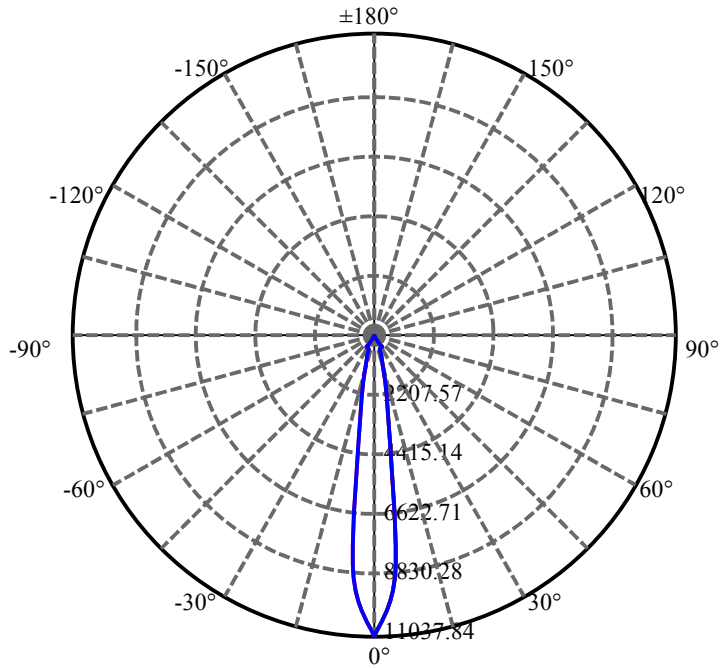
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11037.845	66.009	66.009	4.242%	4.512%
5.0	8649.154	413.199	479.207	26.555%	32.755%
10.0	2781.449	264.747	743.954	17.015%	50.851%
15.0	954.871	135.466	879.42	8.706%	60.111%
20.0	619.075	116.060	995.481	7.459%	68.044%
25.0	547.089	126.735	1122.215	8.145%	76.707%
30.0	494.317	135.477	1257.692	8.707%	85.967%
35.0	392.690	123.461	1381.153	7.935%	94.406%
40.0	146.333	51.558	1432.712	3.314%	97.930%
45.0	8.706	3.374	1436.086	.217%	98.161%
50.0	6.992	2.936	1439.022	.189%	98.361%
55.0	6.510	2.923	1441.945	.188%	98.561%
60.0	6.208	2.947	1444.892	.189%	98.763%
65.0	6.091	3.026	1447.918	.194%	98.969%
70.0	5.987	3.084	1451.002	.198%	99.180%
75.0	6.029	3.192	1454.193	.205%	99.398%
80.0	6.318	3.410	1457.604	.219%	99.631%
85.0	6.923	3.781	1461.384	.243%	99.890%
90.0	5.877	1.611	1462.995	.104%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1257.69	80.83%	85.97%
0-40	1432.71	92.08%	97.93%
0-60	1444.89	92.86%	98.76%
0-90	1461.38	93.92%	99.89%
0-120	1461.38	93.92%	99.89%
0-180	1463.00	94.02%	100.00%
60-90	19.44	1.25%	1.33%
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%
0-26.78	1170.40	75.22%	80.00%

ZONAL LUMEN SUMMARY

0-10	743.95
10-20	251.53
20-30	262.21
30-40	175.02
40-50	6.31
50-60	5.87
60-70	6.11
70-80	6.60
80-90	3.78
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



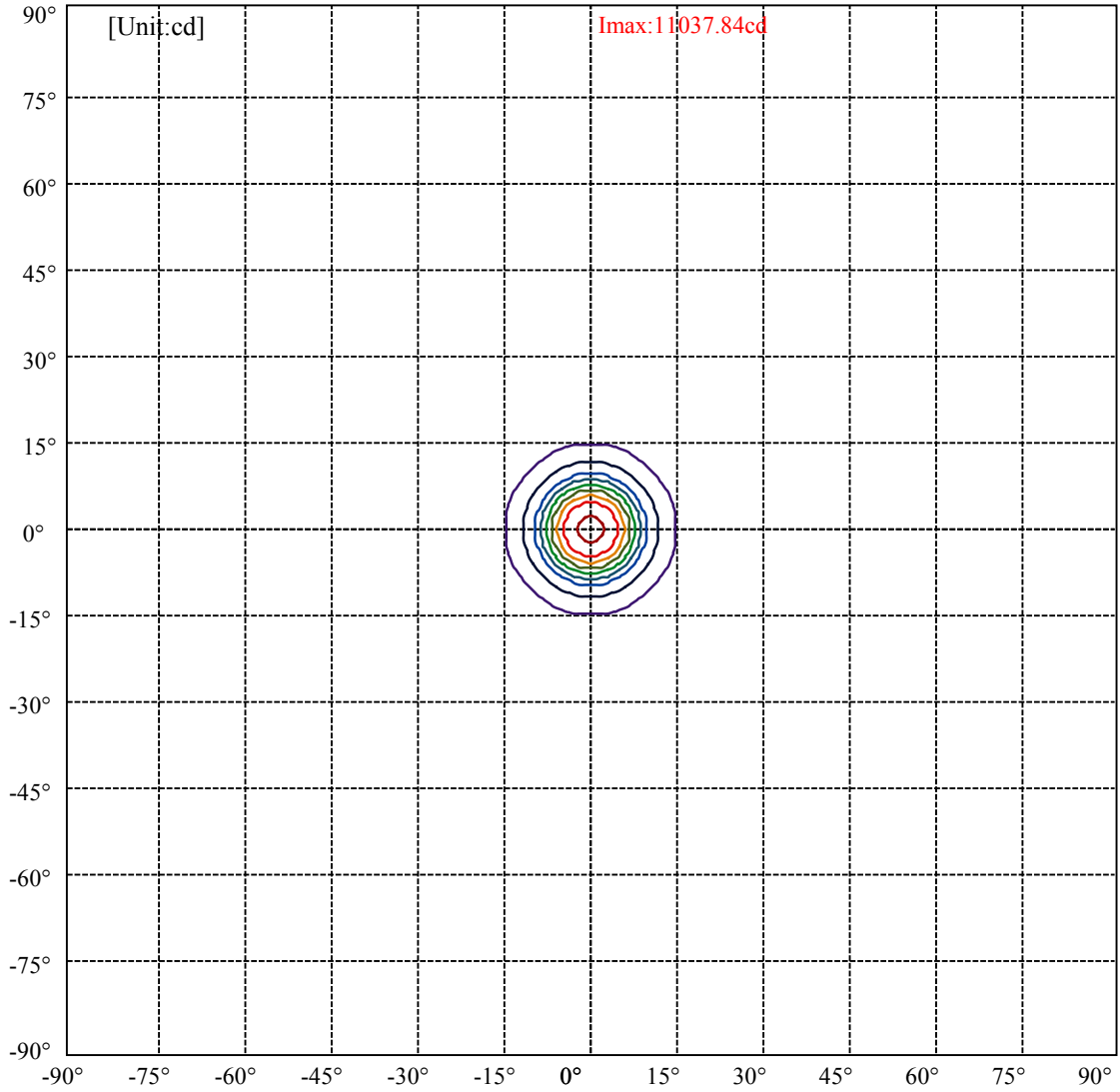
C0(Max): —————

C0/C180: —————

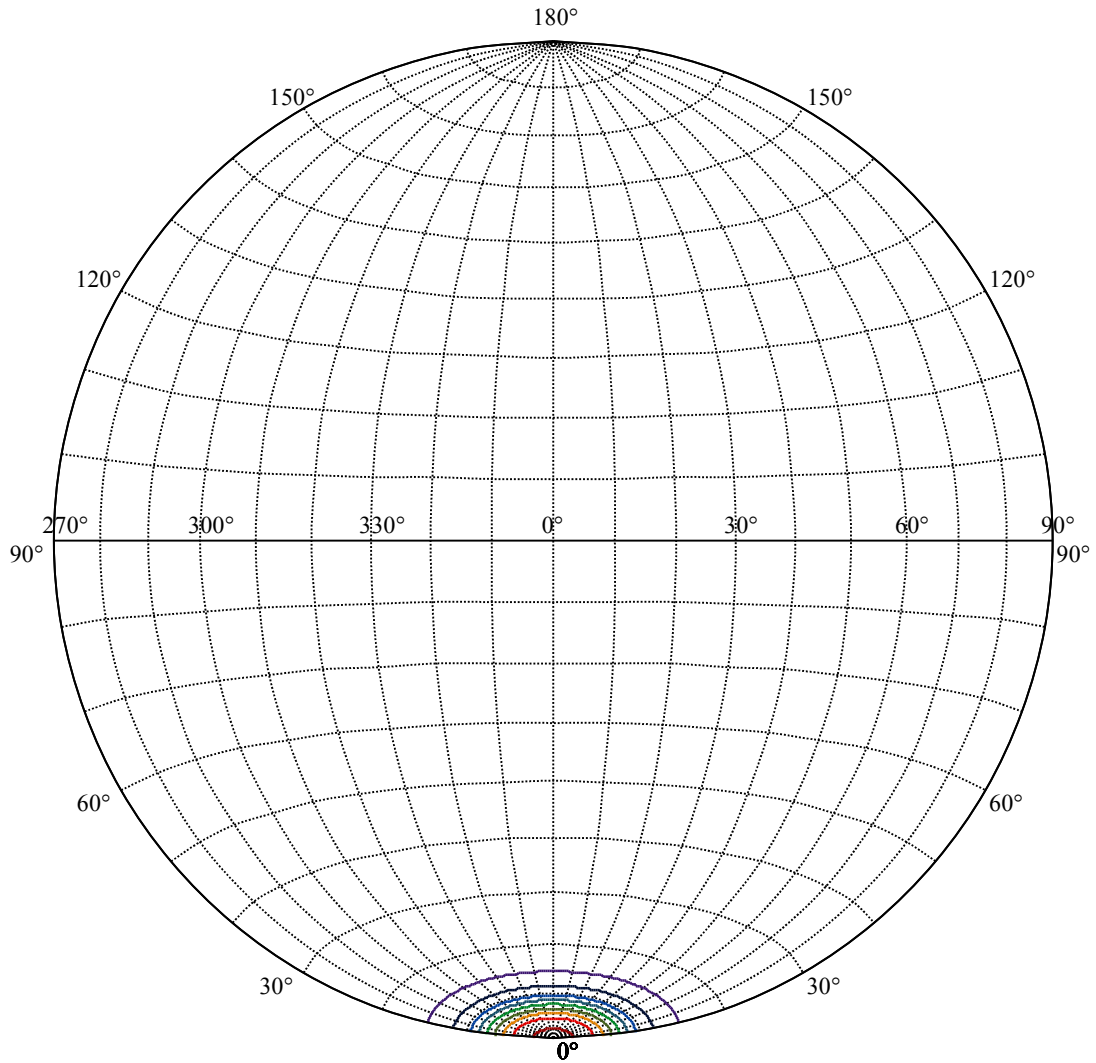
C90/C270: —————

Field angle(10%Imax):C0/180Left:14.6 Right:14.6
:C90/270Left:14.6 Right:14.6

Beam Angle(50%Imax):C0/180Left:7.7 Right:7.7
:C90/270Left:7.7 Right:7.7



(10%Imax) 1103.78	—
(20%Imax) 2207.57	—
(30%Imax) 3311.35	—
(40%Imax) 4415.14	—
(50%Imax) 5518.92	—
(60%Imax) 6622.71	—
(70%Imax) 7726.49	—
(80%Imax) 8830.28	—
(90%Imax) 9934.06	—



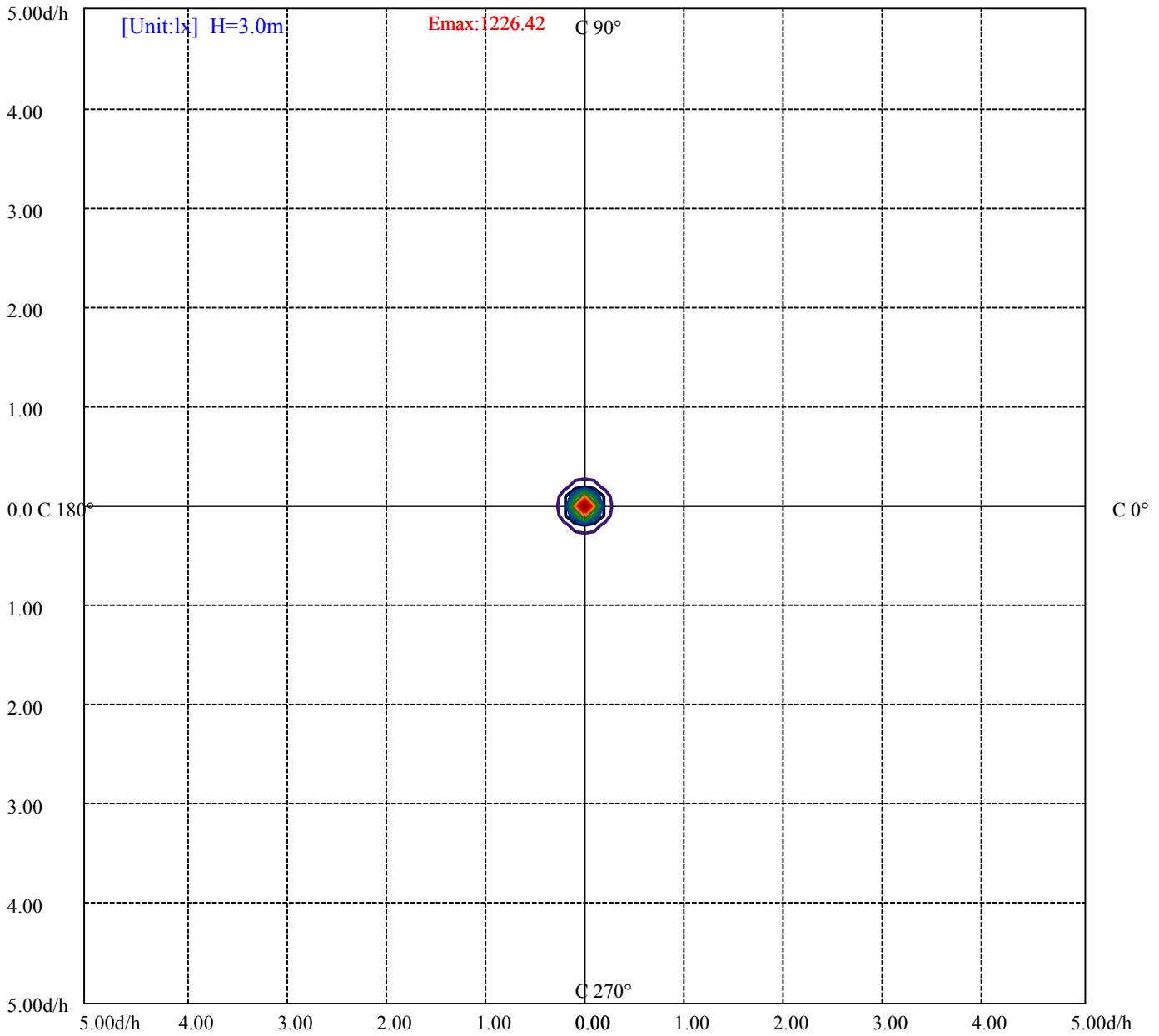
House

[Unit:cd]

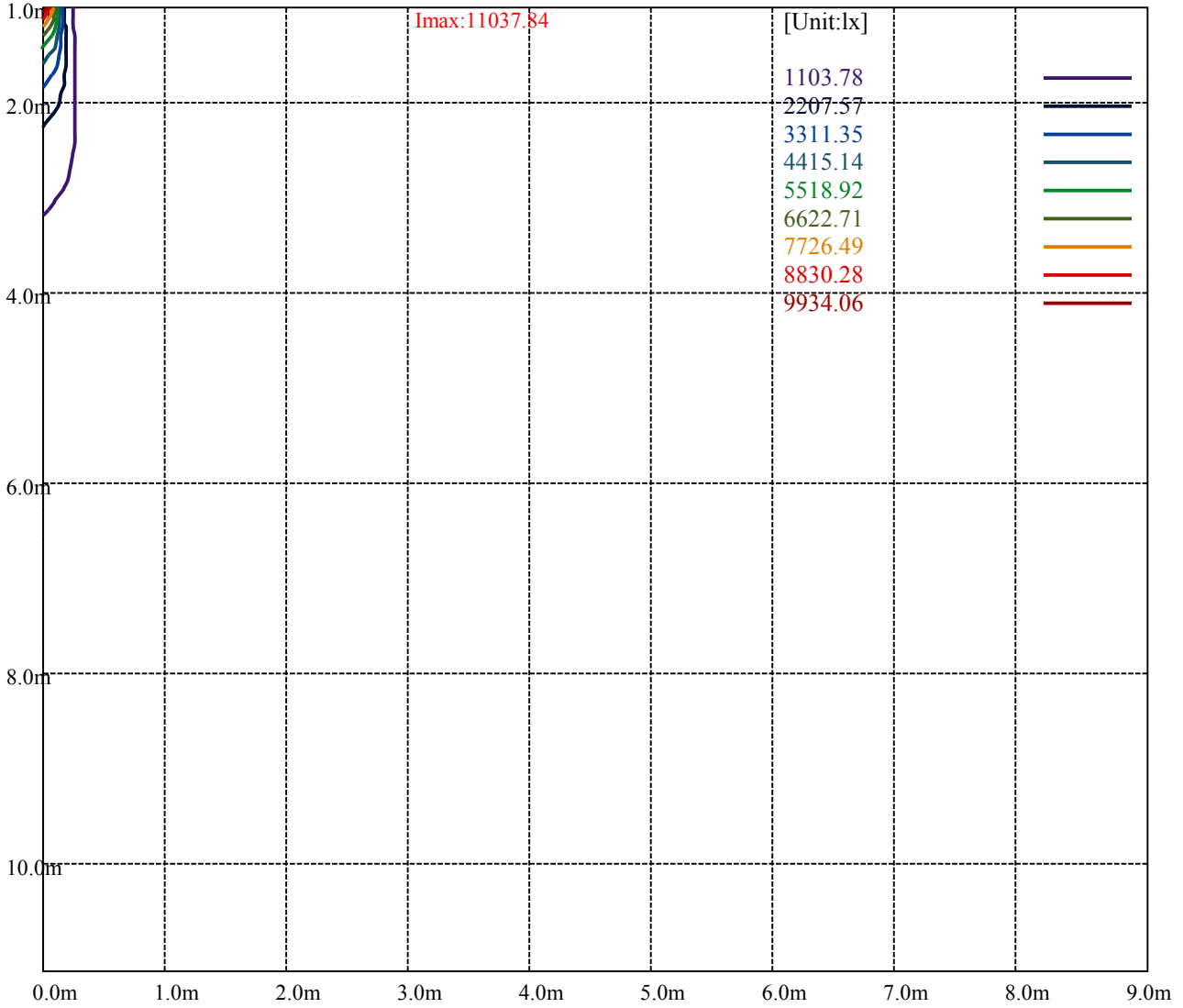
Road

Imax:11037.84

(10%Imax)	1103.78	—
(20%Imax)	2207.57	—
(30%Imax)	3311.35	—
(40%Imax)	4415.14	—
(50%Imax)	5518.92	—
(60%Imax)	6622.71	—
(70%Imax)	7726.49	—
(80%Imax)	8830.28	—
(90%Imax)	9934.06	—



- (10%Emax) 122.6422
- (20%Emax) 245.2833
- (30%Emax) 367.9256
- (40%Emax) 490.5677
- (50%Emax) 613.21
- (60%Emax) 735.8511
- (70%Emax) 858.4933
- (80%Emax) 981.1355
- (90%Emax) 1103.778



Luminance Table

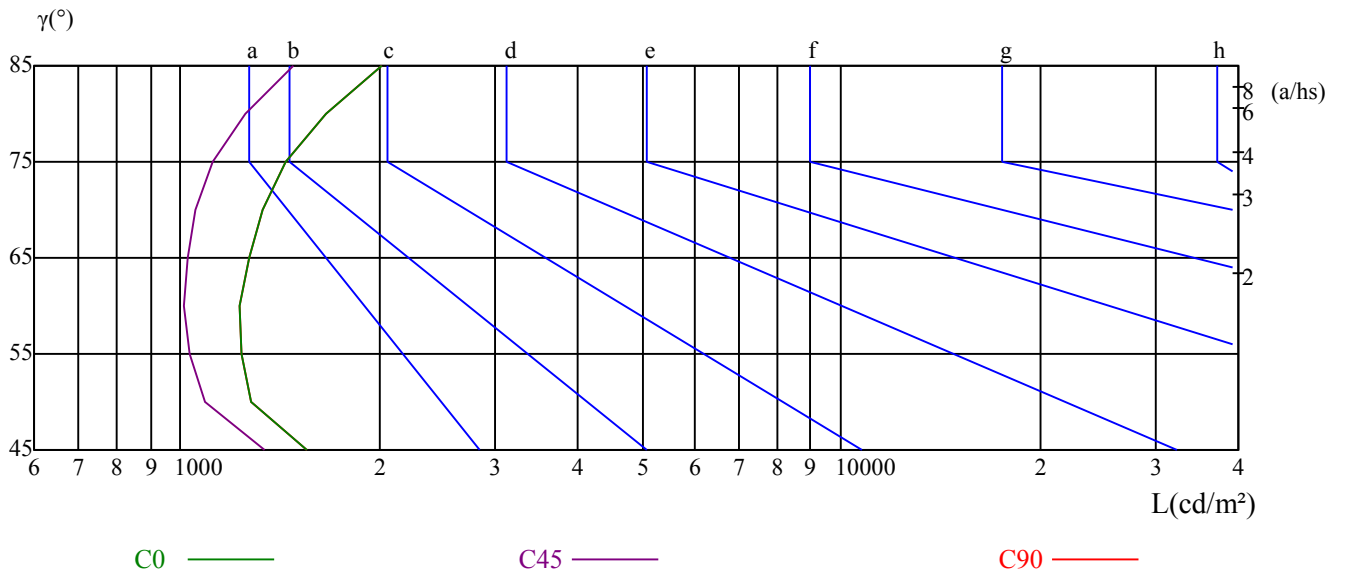
γ	45	50	55	60	65	70	75	80	85
C0	1556	1282	1234	1228	1269	1329	1444	1656	2021
C45	1345	1091	1034	1012	1027	1055	1121	1253	1483
C90	1556	1282	1234	1228	1269	1329	1444	1656	2021

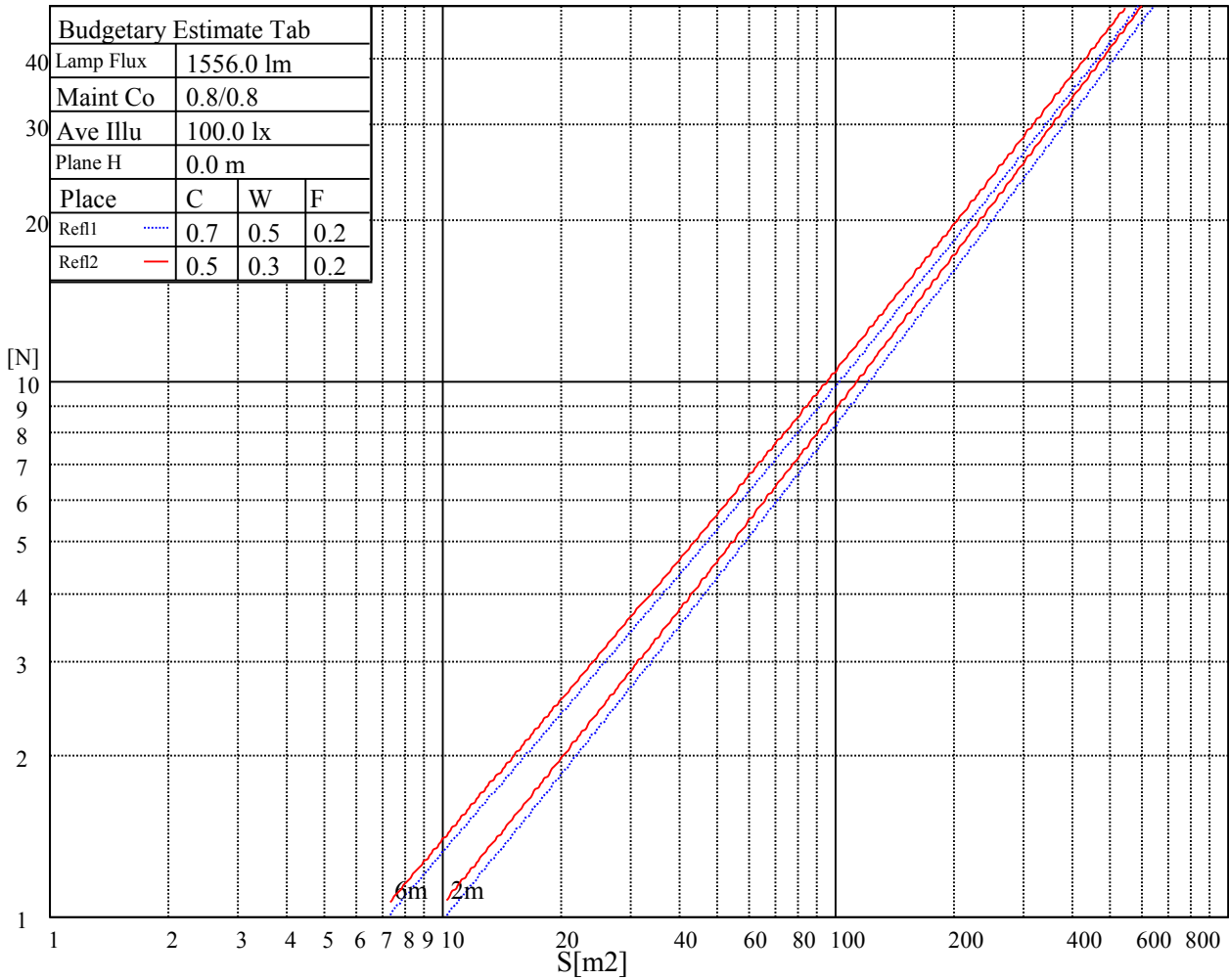
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2941	2941	2941	4754	4754	4754	16212	16212	16212

Glare Table

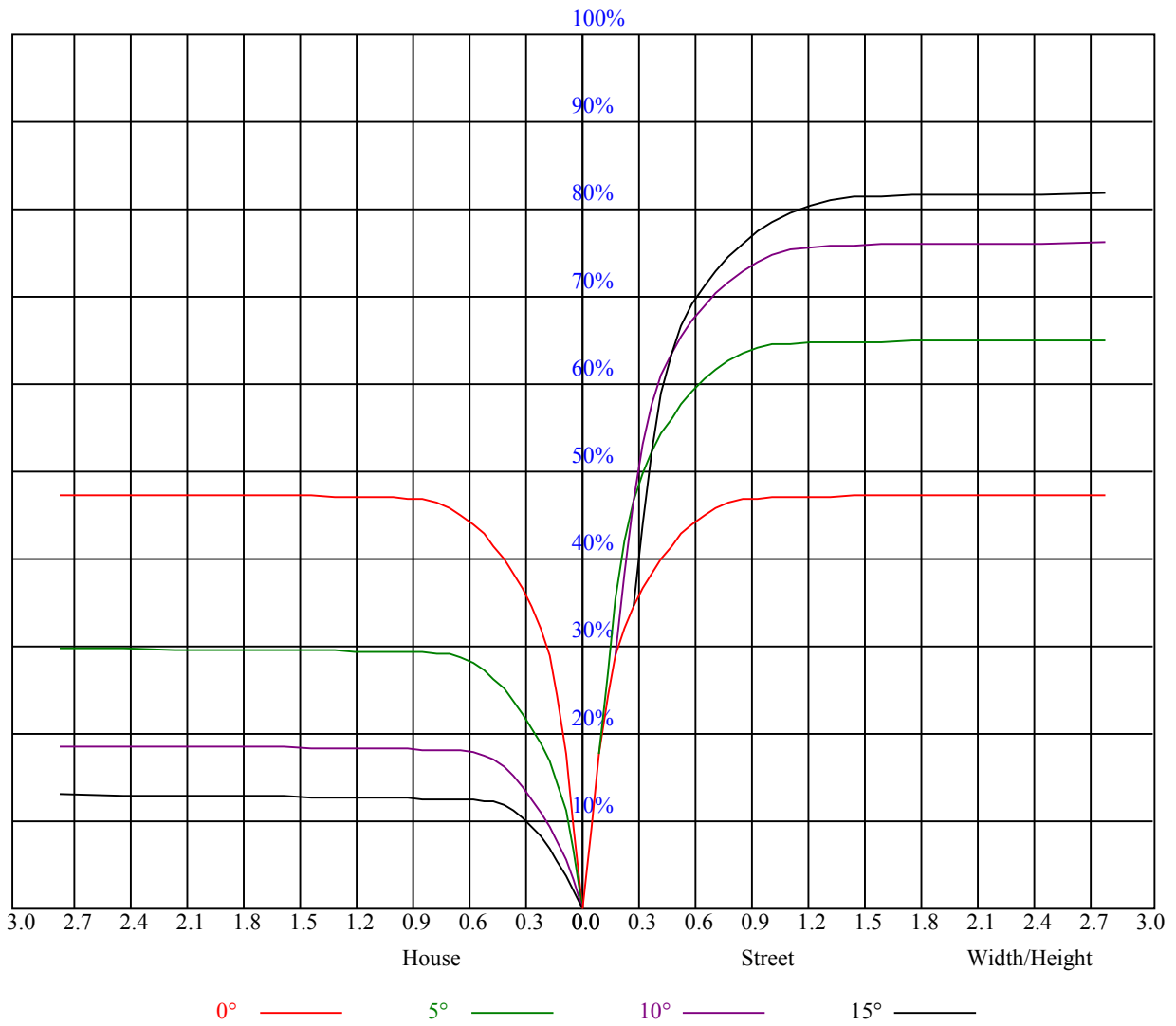
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.17	1.17	1.17	1.14	1.14	1.14	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.98
1	1.05	1.01	0.98	1.03	1.00	0.97	0.99	0.96	0.94	0.95	0.93	0.91	0.91	0.90	0.88	0.86
2	0.99	0.95	0.91	0.98	0.94	0.90	0.94	0.91	0.88	0.91	0.89	0.86	0.89	0.87	0.85	0.83
3	0.95	0.90	0.86	0.93	0.89	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.81	0.80
4	0.91	0.86	0.82	0.90	0.85	0.81	0.88	0.84	0.80	0.86	0.82	0.80	0.84	0.81	0.79	0.77
5	0.87	0.82	0.78	0.86	0.82	0.78	0.85	0.81	0.77	0.83	0.79	0.77	0.82	0.79	0.76	0.75
6	0.84	0.79	0.75	0.83	0.79	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.74	0.73
7	0.81	0.76	0.73	0.81	0.76	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.70
8	0.79	0.74	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.69
9	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.74	0.70	0.68	0.67
10	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.65



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	10798.21	10664.42	4123.72	1098.93	627.64	555.52	511.47	438.80	290.15
45.0	10939.16	10477.23	3831.93	1016.34	630.40	557.17	499.36	431.09	282.44
90.0	10940.26	8305.26	2277.13	899.68	600.67	531.02	475.91	366.73	107.14
135.0	11473.75	8698.91	2929.00	960.73	633.15	554.97	496.61	398.61	126.41
180.0	10798.21	6491.15	1825.12	843.79	611.29	533.33	477.89	342.40	67.06
225.0	10939.16	6706.97	1891.19	883.93	608.76	542.03	493.97	357.54	70.25
270.0	10940.26	9062.28	2890.46	1009.73	635.35	558.27	505.97	418.98	133.68
315.0	11473.75	8787.00	2483.04	925.83	605.35	544.40	493.36	387.38	93.54
360.0	10798.21	10664.42	4123.72	1098.93	627.64	555.52	511.47	438.80	290.15
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	9.41	7.32	6.66	6.28	6.11	6.00	6.00	5.95	6.00
45.0	8.75	7.10	6.61	6.28	6.28	6.06	6.00	6.00	6.00
90.0	8.42	6.88	6.39	6.06	6.00	5.95	6.00	5.84	5.95
135.0	8.92	6.88	6.44	6.22	6.06	6.00	5.95	6.06	6.22
180.0	7.60	6.72	6.39	6.11	6.11	5.95	5.95	6.17	6.17
225.0	8.09	6.88	6.39	6.17	5.95	6.00	6.22	7.10	8.15
270.0	9.30	7.10	6.61	6.33	6.17	6.06	6.11	7.21	10.63
315.0	9.14	7.05	6.61	6.22	6.06	5.89	6.00	6.22	6.28
360.0	9.41	7.32	6.66	6.28	6.11	6.00	6.00	5.95	6.00
C/ γ (°)	90.0								
0.0	5.89								
45.0	5.84								
90.0	5.89								
135.0	5.84								
180.0	5.89								
225.0	5.89								
270.0	5.95								
315.0	5.84								
360.0	5.89								