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Nata

LumCAT: 2-2159-A
Luminaire: 92.70.153.00
Report No: NATA0100 Voltage(V): 34.1100
Test No: GC2019111406 Current(A): 0.3220
LampCAT: PHILIPS SLM92757 TWL112024 Power (W): 11.0000
Lamp flux(lm): 1022.0 PF: 1.0000
Number of Lamps: 1 Ballast type: DC
Length(mm): 0 Width(mm): 0
Phm Type: C Height(mm): 0

Photometric Results

Lumens(lm): 860.69
Efficiency(%): 84.22%
Lumens(lm)/Power(W): 78.24
Central intensity(cd): 2292.469
Maximum intensity(cd): 2292.469
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=28.4
[C90/270]Total=28.4
Field angle(10%Imax): [C0/180]Total=67.7
[C90/270]Total=67.7
Maximum s/h(1/2): C0_180=0.48 C90_270=0.48
Maximum s/h(1/4): C0_180=0.50 C90_270=0.50
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.22%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.929%

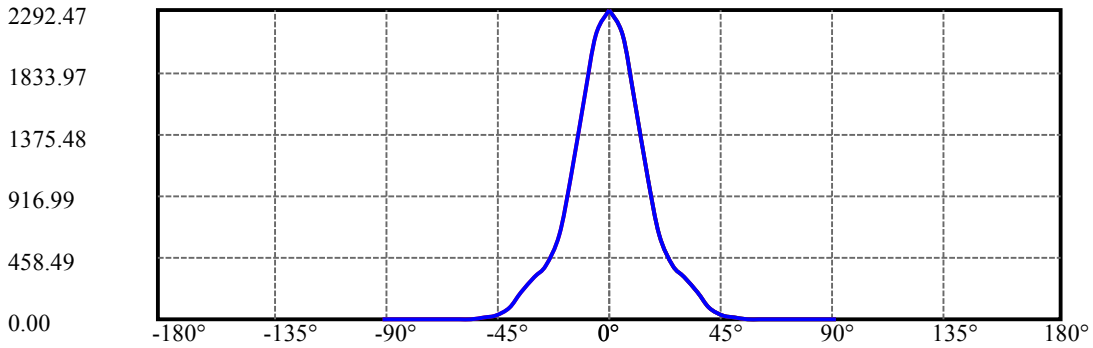
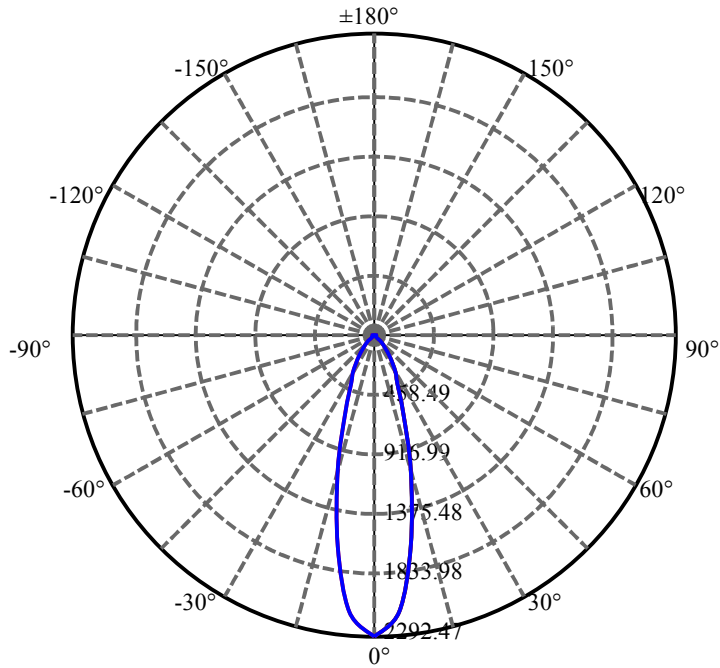
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2292.469	0.000	0	.000%	.000%
5.0	2109.305	52.622	52.622	5.149%	6.114%
10.0	1635.539	133.965	186.587	13.108%	21.679%
15.0	1055.060	159.605	346.191	15.617%	40.223%
20.0	628.158	138.721	484.912	13.573%	56.340%
25.0	403.038	108.153	593.066	10.583%	68.906%
30.0	312.687	90.576	683.641	8.863%	79.429%
35.0	204.370	76.140	759.781	7.450%	88.276%
40.0	85.753	48.405	808.186	4.736%	93.900%
45.0	26.522	20.789	828.975	2.034%	96.315%
50.0	9.598	7.298	836.273	.714%	97.163%
55.0	6.701	3.544	839.817	.347%	97.575%
60.0	6.469	3.044	842.861	.298%	97.929%
65.0	6.279	3.099	845.96	.303%	98.289%
70.0	6.103	3.135	849.096	.307%	98.653%
75.0	5.878	3.132	852.227	.306%	99.017%
80.0	5.646	3.084	855.311	.302%	99.375%
85.0	5.189	2.944	858.255	.288%	99.717%
90.0	3.705	2.435	860.69	.238%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	683.64	66.89%	79.43%
0-40	808.19	79.08%	93.90%
0-60	842.86	82.47%	97.93%
0-90	858.26	83.98%	99.72%
0-120	858.26	83.98%	99.72%
0-180	860.69	84.22%	100.00%
60-90	18.44	1.80%	2.14%
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%
0-30.32	688.55	67.37%	80.00%

ZONAL LUMEN SUMMARY

0-10	186.59
10-20	298.33
20-30	198.73
30-40	124.55
40-50	28.09
50-60	6.59
60-70	6.23
70-80	6.22
80-90	2.94
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: —————

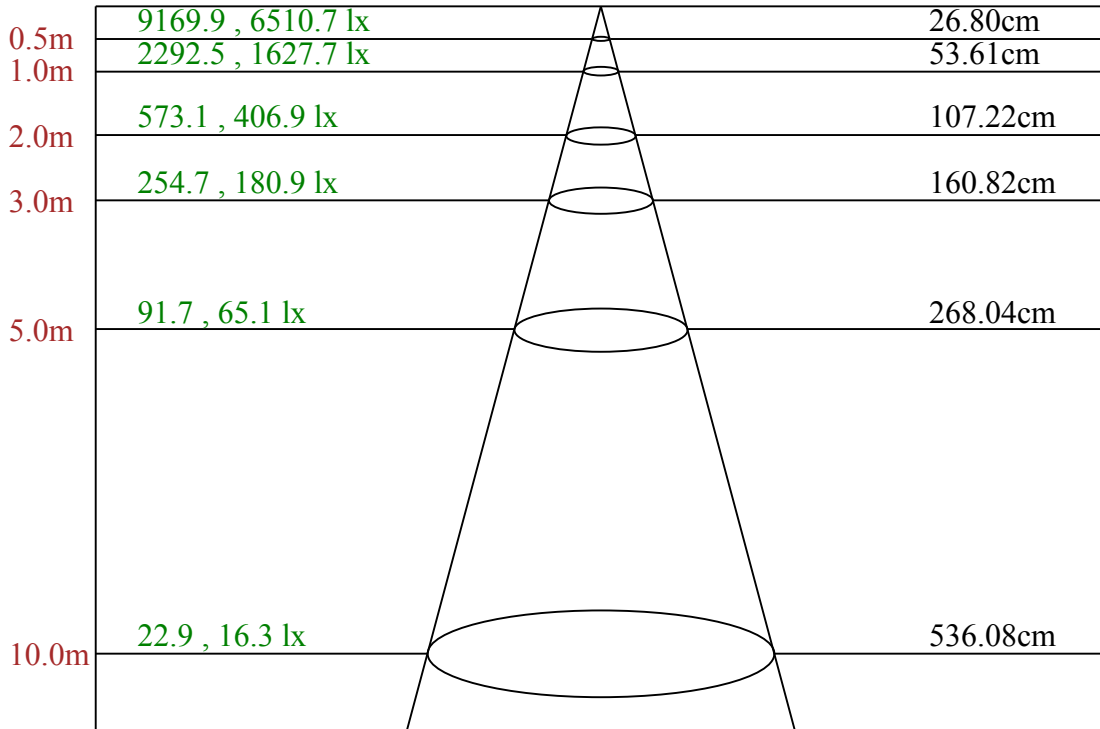
C90/C270: —————

Field angle(10%Imax):C0/180Left:33.9 Right:33.9

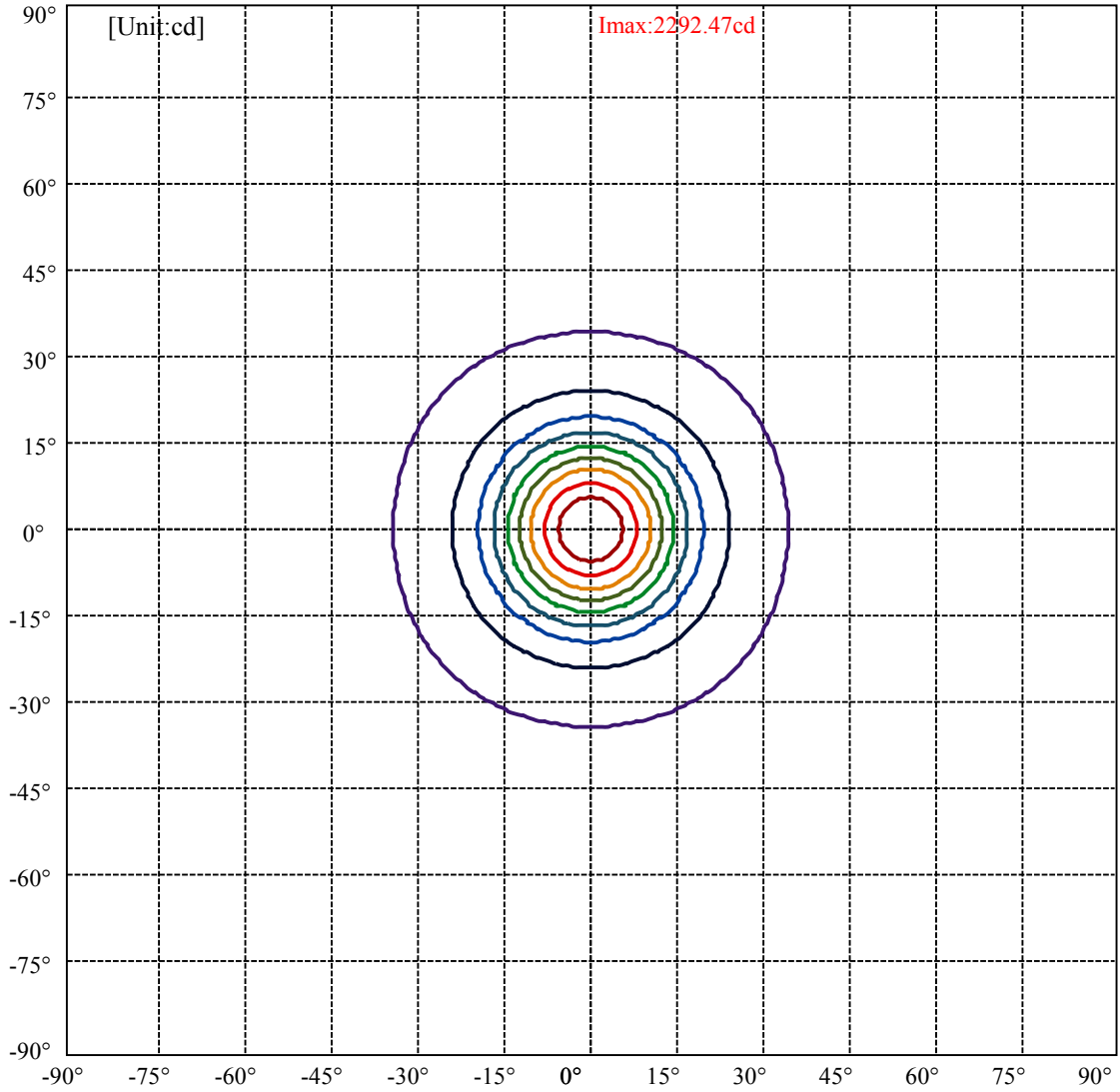
:C90/270Left:33.9 Right:33.9

Beam Angle(50%Imax):C0/180Left:14.2 Right:14.2

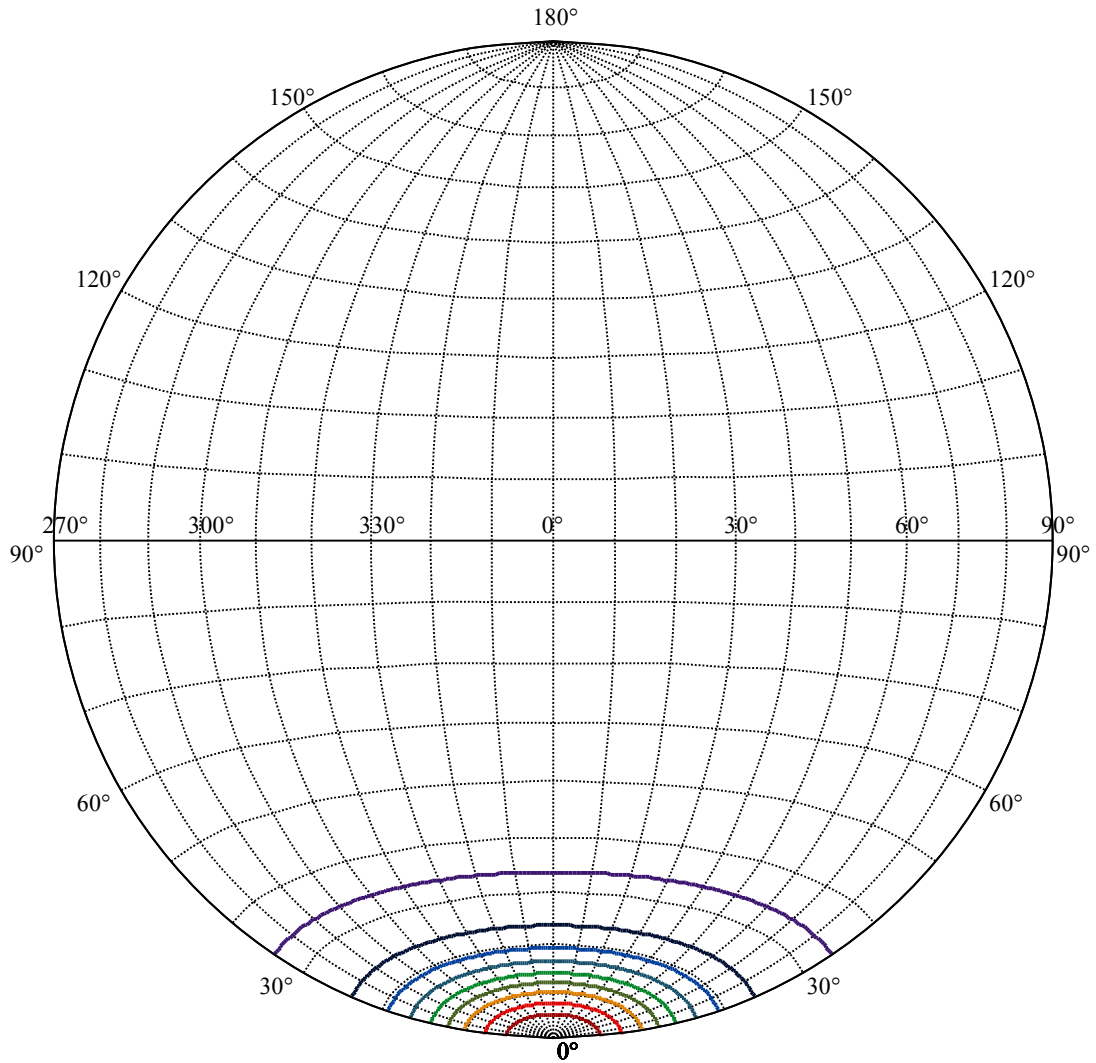
:C90/270Left:14.2 Right:14.2



Max , Ave Beam angle of C0 plane 30.01



(10%Imax) 229.247	—
(20%Imax) 458.494	—
(30%Imax) 687.741	—
(40%Imax) 916.987	—
(50%Imax) 1146.23	—
(60%Imax) 1375.48	—
(70%Imax) 1604.73	—
(80%Imax) 1833.97	—
(90%Imax) 2063.22	—



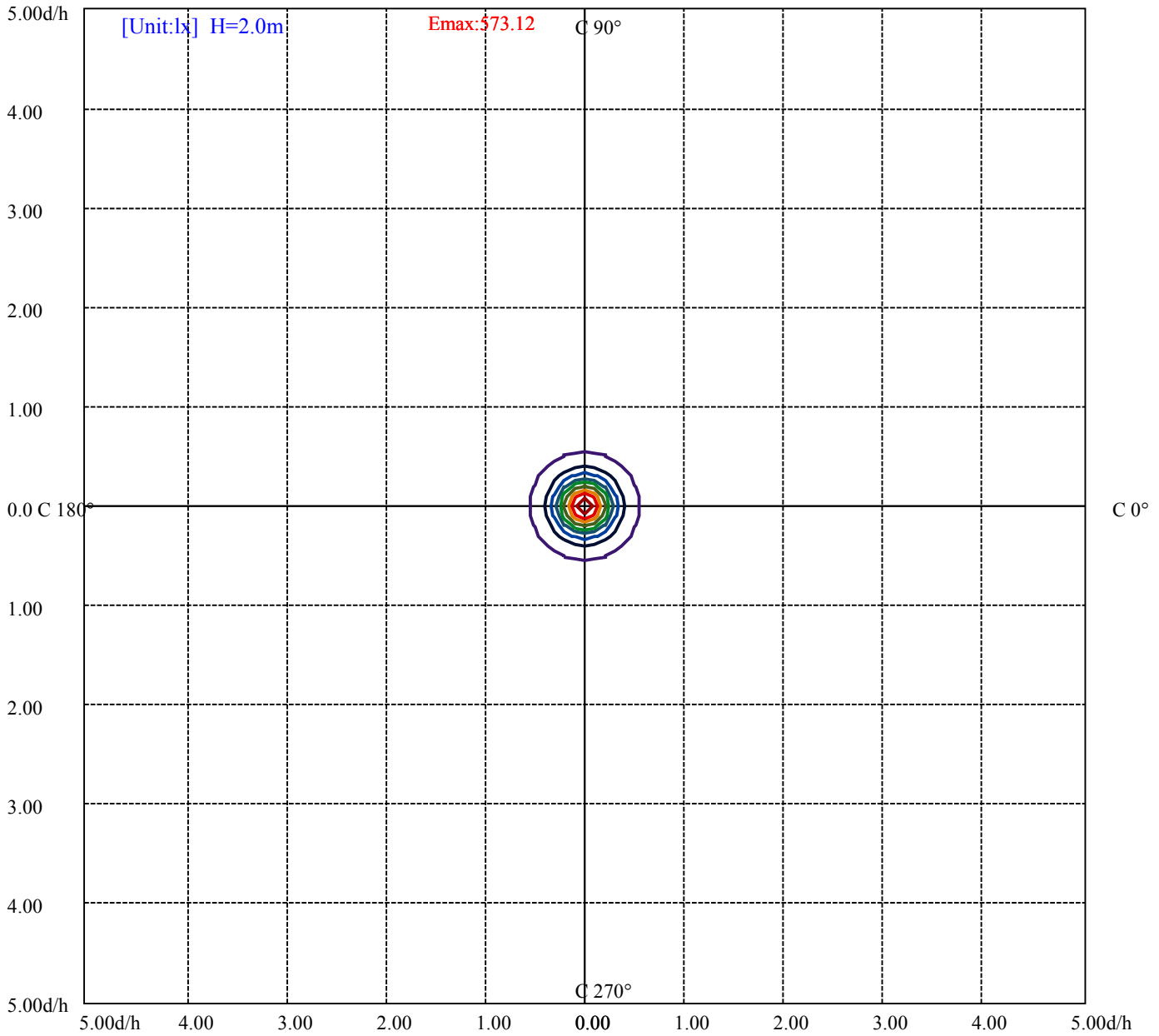
House

[Unit:cd]

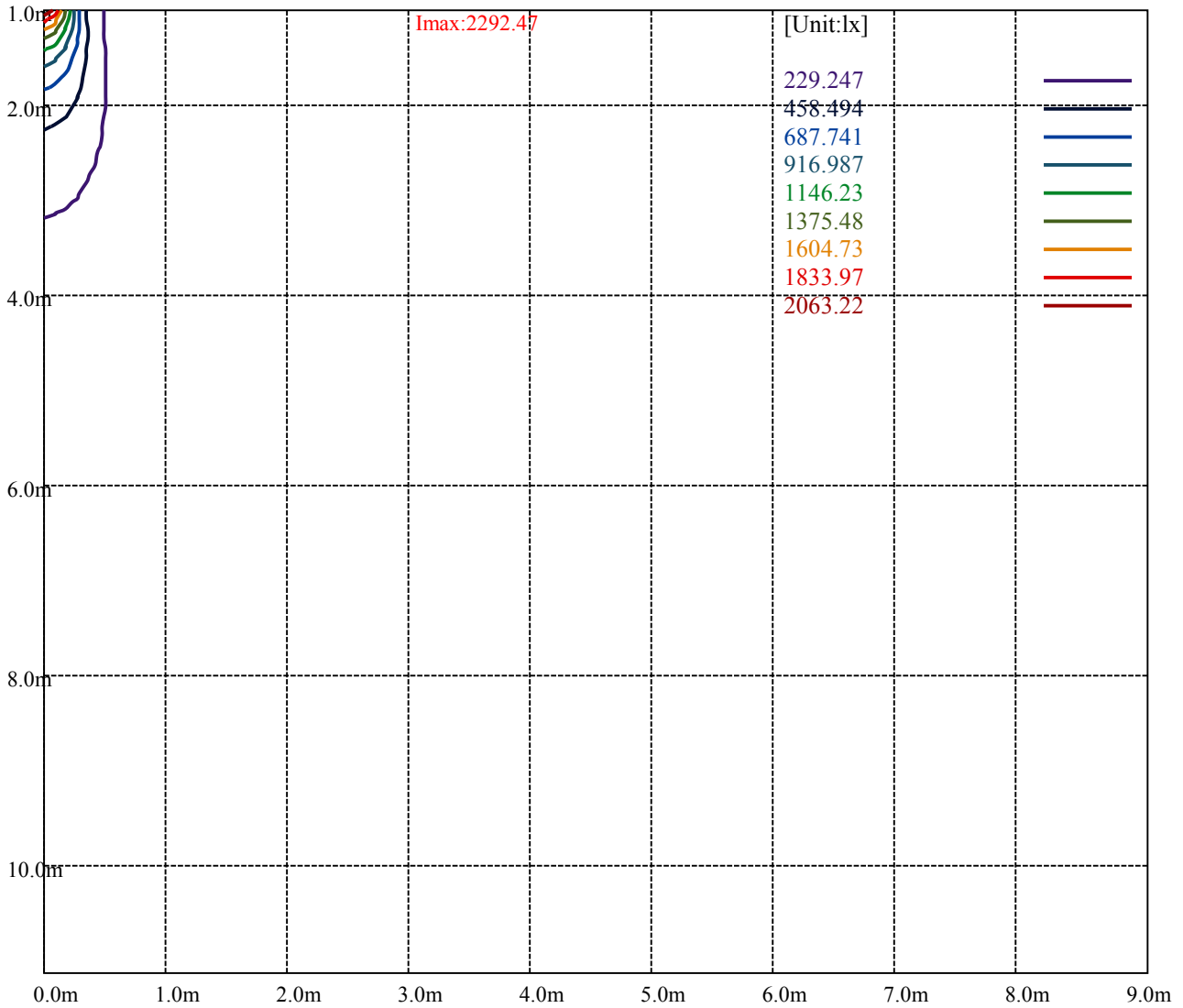
Road

Imax:2292.47

(10%Imax)	229.247	—
(20%Imax)	458.494	—
(30%Imax)	687.741	—
(40%Imax)	916.987	—
(50%Imax)	1146.23	—
(60%Imax)	1375.48	—
(70%Imax)	1604.73	—
(80%Imax)	1833.97	—
(90%Imax)	2063.22	—



(10%Emax) 57.3115	—
(20%Emax) 114.6233	—
(30%Emax) 171.9348	—
(40%Emax) 229.2462	—
(50%Emax) 286.5575	—
(60%Emax) 343.87	—
(70%Emax) 401.18	—
(80%Emax) 458.4925	—
(90%Emax) 515.805	—



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

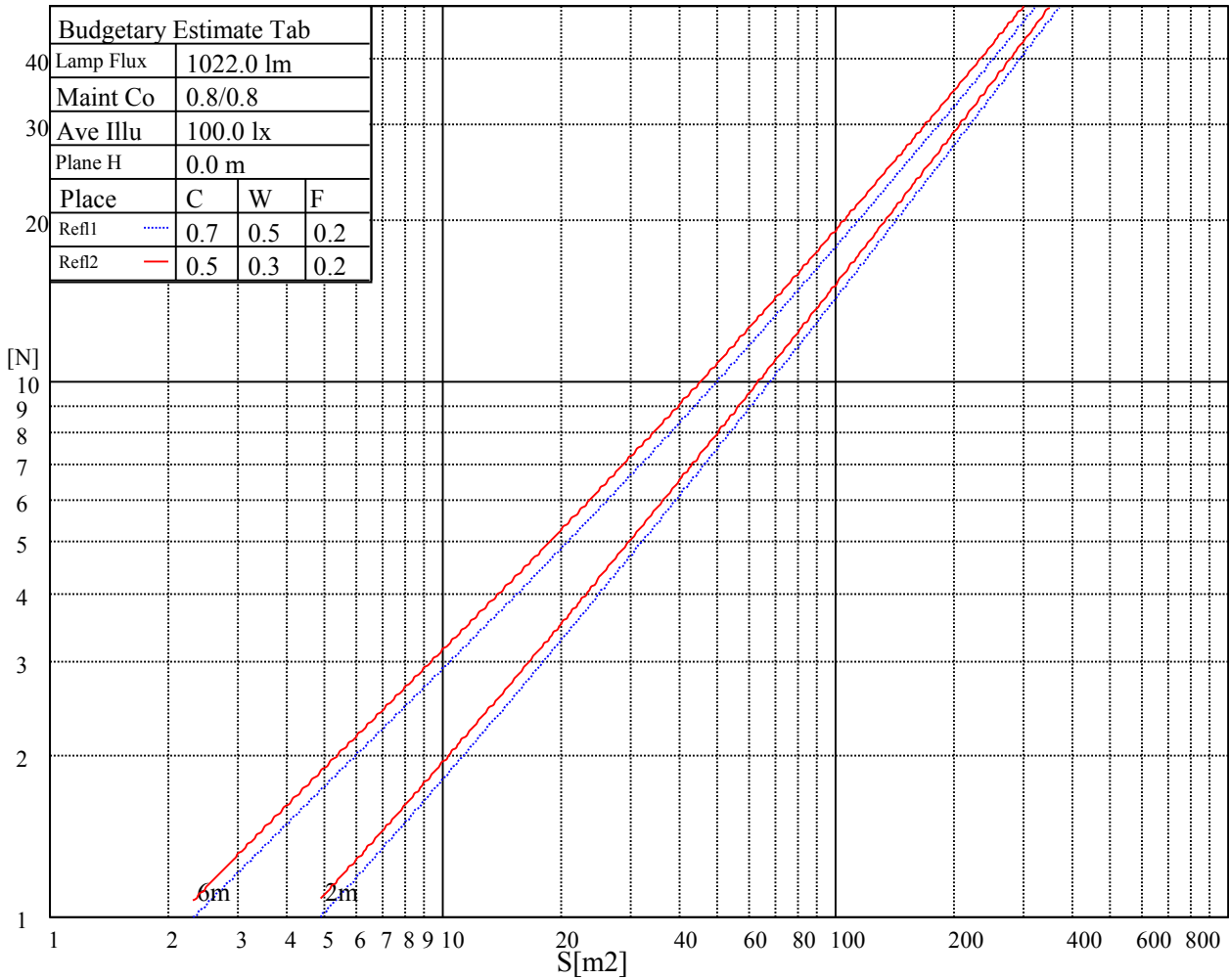
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

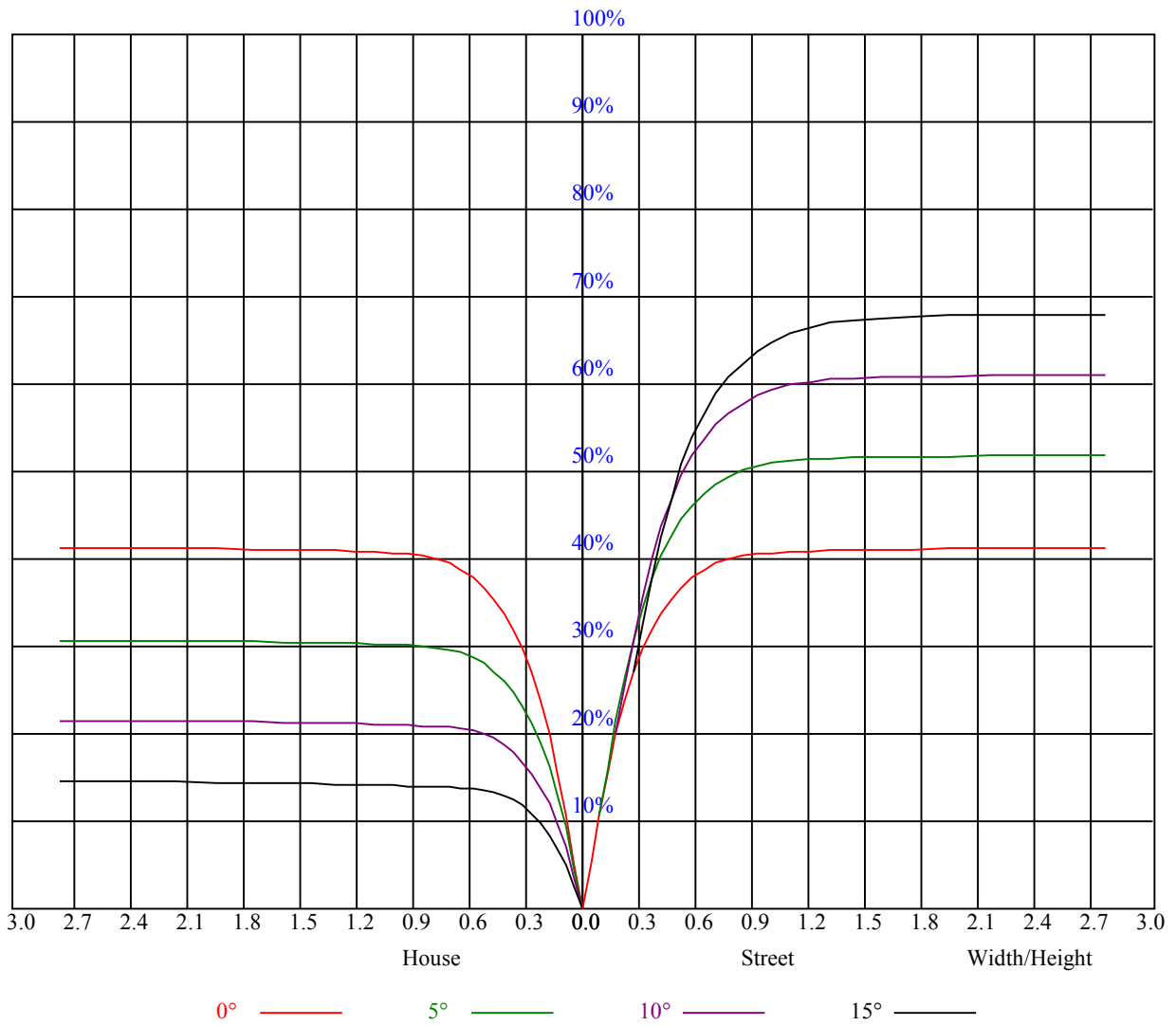
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance 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	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.94	0.92	0.90	0.92	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.79
2	0.88	0.85	0.82	0.86	0.84	0.81	0.84	0.81	0.79	0.81	0.79	0.78	0.79	0.77	0.76	0.75
3	0.83	0.79	0.76	0.82	0.78	0.75	0.79	0.77	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.71
4	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.69	0.67	0.65	0.64
6	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.60
7	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.58
8	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.55
9	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.53
10	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.57	0.54	0.51	0.51



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	2291.06	2100.94	1635.19	1043.44	635.06	402.19	309.94	206.38	83.87
45.0	2298.94	2106.00	1604.81	1067.63	609.19	390.38	311.63	196.43	78.53
90.0	2288.81	2045.25	1541.81	951.98	560.31	369.51	291.54	176.51	66.43
135.0	2291.06	2162.81	1703.81	1135.13	668.25	416.81	317.81	217.35	94.11
180.0	2291.06	2125.69	1628.44	1038.43	632.42	402.92	309.88	207.51	85.44
225.0	2298.94	2130.19	1671.19	1069.71	653.34	417.49	323.83	209.31	95.40
270.0	2288.81	2151.00	1740.38	1140.75	676.13	437.63	331.31	231.30	108.62
315.0	2291.06	2052.56	1558.69	993.43	590.57	387.39	305.55	190.18	73.63
360.0	2291.06	2100.94	1635.19	1043.44	635.06	402.19	309.94	206.38	83.87
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	25.54	9.90	6.86	6.53	6.41	6.30	6.08	5.91	5.29
45.0	25.37	9.39	6.81	6.58	6.41	6.24	6.02	5.74	5.18
90.0	22.33	8.66	6.75	6.58	6.36	6.13	5.91	5.57	5.01
135.0	28.91	10.41	6.86	6.64	6.41	6.19	5.96	5.74	5.29
180.0	26.38	9.28	6.58	6.41	6.19	6.08	5.85	5.63	5.23
225.0	28.52	9.56	6.53	6.30	6.08	5.91	5.74	5.51	5.18
270.0	32.40	10.86	6.58	6.30	6.13	5.91	5.68	5.46	5.12
315.0	22.73	8.72	6.64	6.41	6.24	6.08	5.79	5.63	5.23
360.0	25.54	9.90	6.86	6.53	6.41	6.30	6.08	5.91	5.29
C/ γ (°)	90.0								
0.0	3.71								
45.0	3.71								
90.0	3.71								
135.0	3.66								
180.0	3.71								
225.0	3.71								
270.0	3.71								
315.0	3.71								
360.0	3.71								