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Nata

LumCAT: 2-2214-L
Luminaire: 92.70.129.00
Report No: 200408-B002
Test No: 200408-C002
LampCAT: CREE CXA1820
Lamp flux(lm): 2357.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 36.9300
Current(A): 0.5010
Power (W): 18.5000
PF: 1.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 2213.27
Efficiency(%): 93.90%
Lumens(lm)/Power(W): 119.64
Central intensity(cd): 2547.422
Maximum intensity(cd): 2547.422
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=58.5
 [C90/270]Total=58.5
Field angle(10%Imax): [C0/180]Total=81.1
 [C90/270]Total=81.1
Maximum s/h(1/2): C0_180=0.91 C90_270=0.91
Maximum s/h(1/4): C0_180=0.87 C90_270=0.87
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.90%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.040%

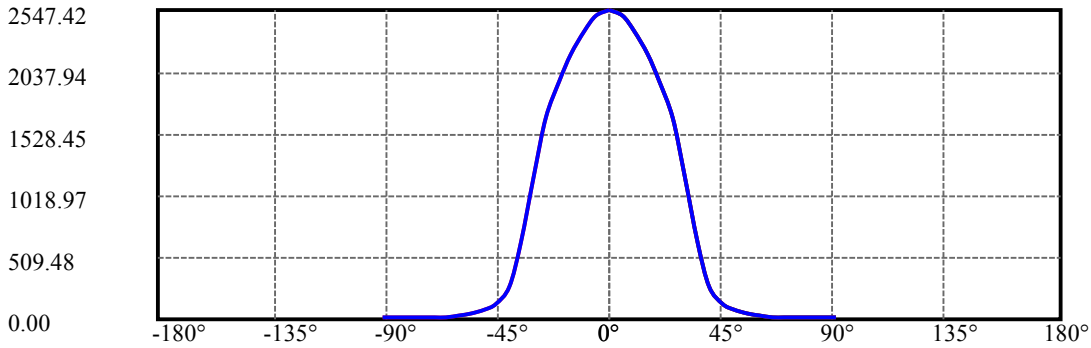
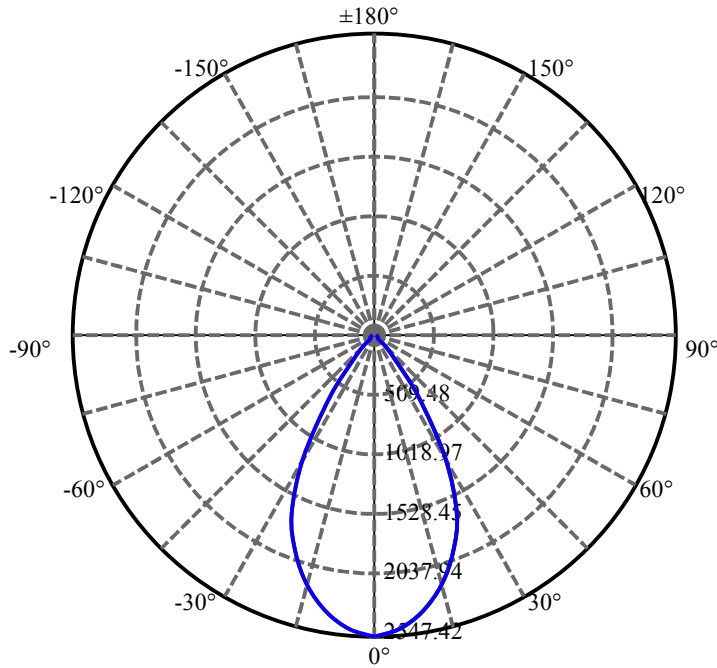
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2547.422	0.000	0	.000%	.000%
5.0	2495.813	60.290	60.29	2.558%	2.724%
10.0	2372.625	174.159	234.45	7.389%	10.593%
15.0	2190.023	270.653	505.103	11.483%	22.822%
20.0	1956.094	341.698	846.801	14.497%	38.260%
25.0	1665.141	379.801	1226.602	16.114%	55.420%
30.0	1206.091	363.357	1589.959	15.416%	71.837%
35.0	638.128	271.574	1861.533	11.522%	84.108%
40.0	270.921	151.668	2013.201	6.435%	90.960%
45.0	129.621	74.164	2087.365	3.147%	94.311%
50.0	72.422	40.826	2128.19	1.732%	96.156%
55.0	43.207	25.142	2153.332	1.067%	97.292%
60.0	28.434	16.560	2169.892	.703%	98.040%
65.0	19.005	11.533	2181.424	.489%	98.561%
70.0	14.337	8.442	2189.867	.358%	98.943%
75.0	11.700	6.806	2196.672	.289%	99.250%
80.0	10.849	6.034	2202.706	.256%	99.523%
85.0	9.541	5.541	2208.247	.235%	99.773%
90.0	8.810	5.025	2213.271	.213%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1589.96	67.46%	71.84%
0-40	2013.20	85.41%	90.96%
0-60	2169.89	92.06%	98.04%
0-90	2208.25	93.69%	99.77%
0-120	2208.25	93.69%	99.77%
0-180	2213.27	93.90%	100.00%
60-90	54.91	2.33%	2.48%
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%
0-33.33	1770.62	75.12%	80.00%

ZONAL LUMEN SUMMARY

0-10	234.45
10-20	612.35
20-30	743.16
30-40	423.24
40-50	114.99
50-60	41.70
60-70	19.98
70-80	12.84
80-90	5.54
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: —————

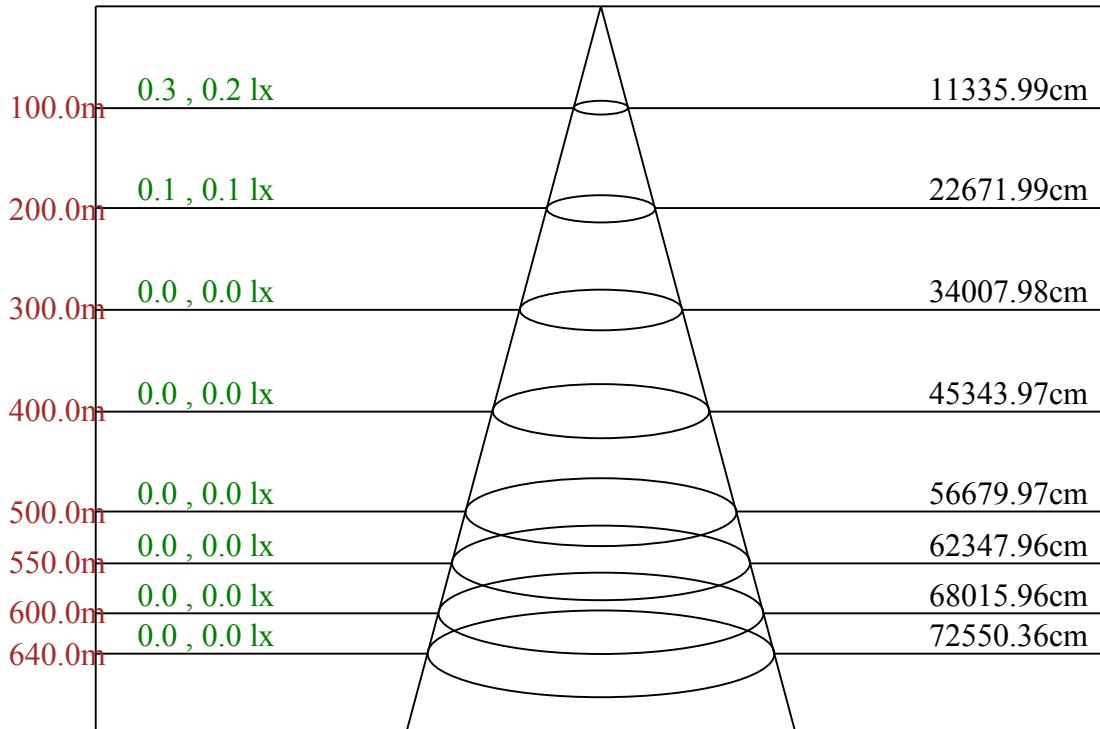
C90/C270: —————

Field angle(10%Imax):C0/180Left:40.6 Right:40.6

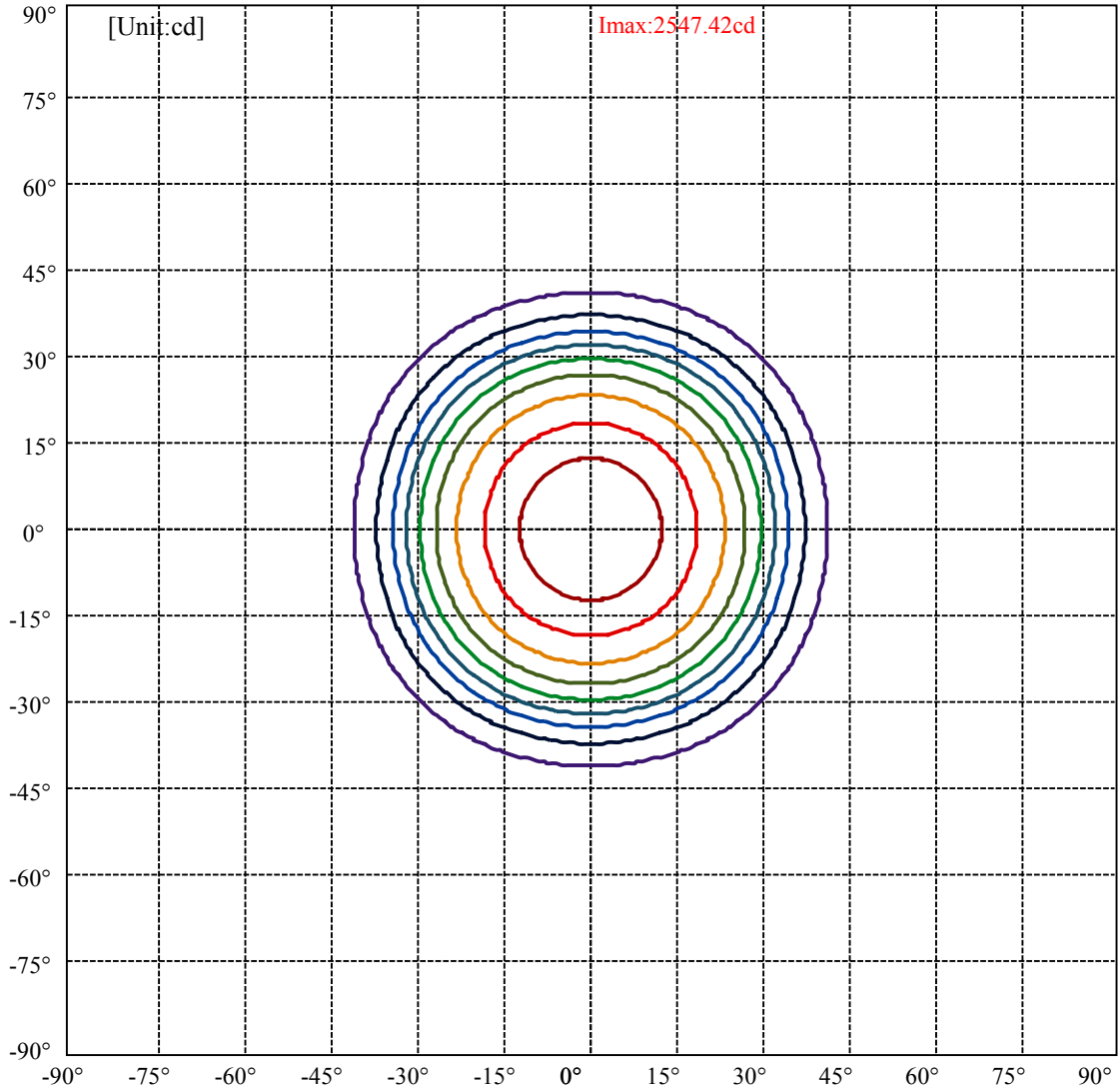
:C90/270Left:40.6 Right:40.6

Beam Angle(50%Imax):C0/180Left:29.3 Right:29.3

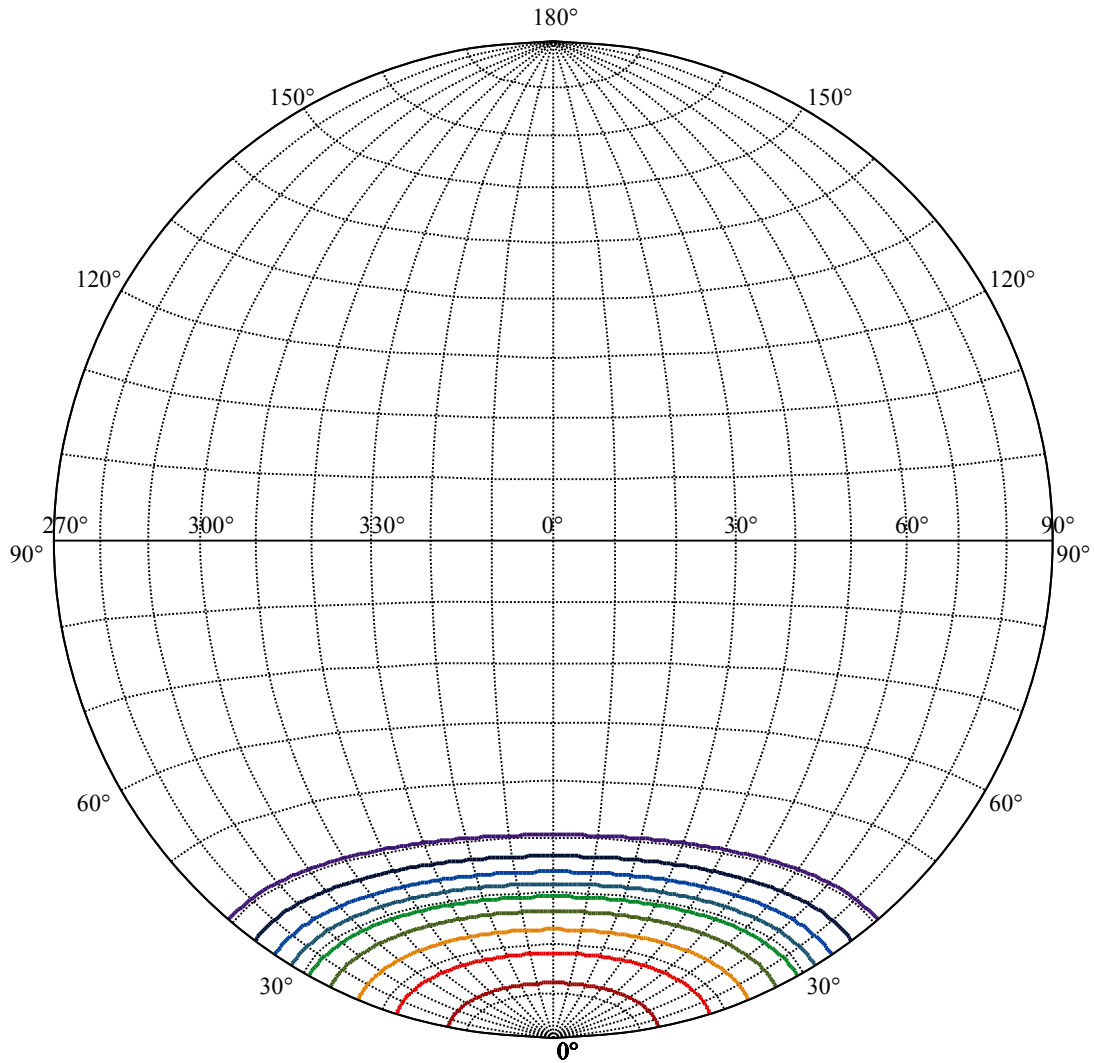
:C90/270Left:29.3 Right:29.3



Max , Ave Beam angle of C0 plane 59.09



(10%Imax) 254.742	—
(20%Imax) 509.484	—
(30%Imax) 764.227	—
(40%Imax) 1018.97	—
(50%Imax) 1273.71	—
(60%Imax) 1528.45	—
(70%Imax) 1783.2	—
(80%Imax) 2037.94	—
(90%Imax) 2292.68	—



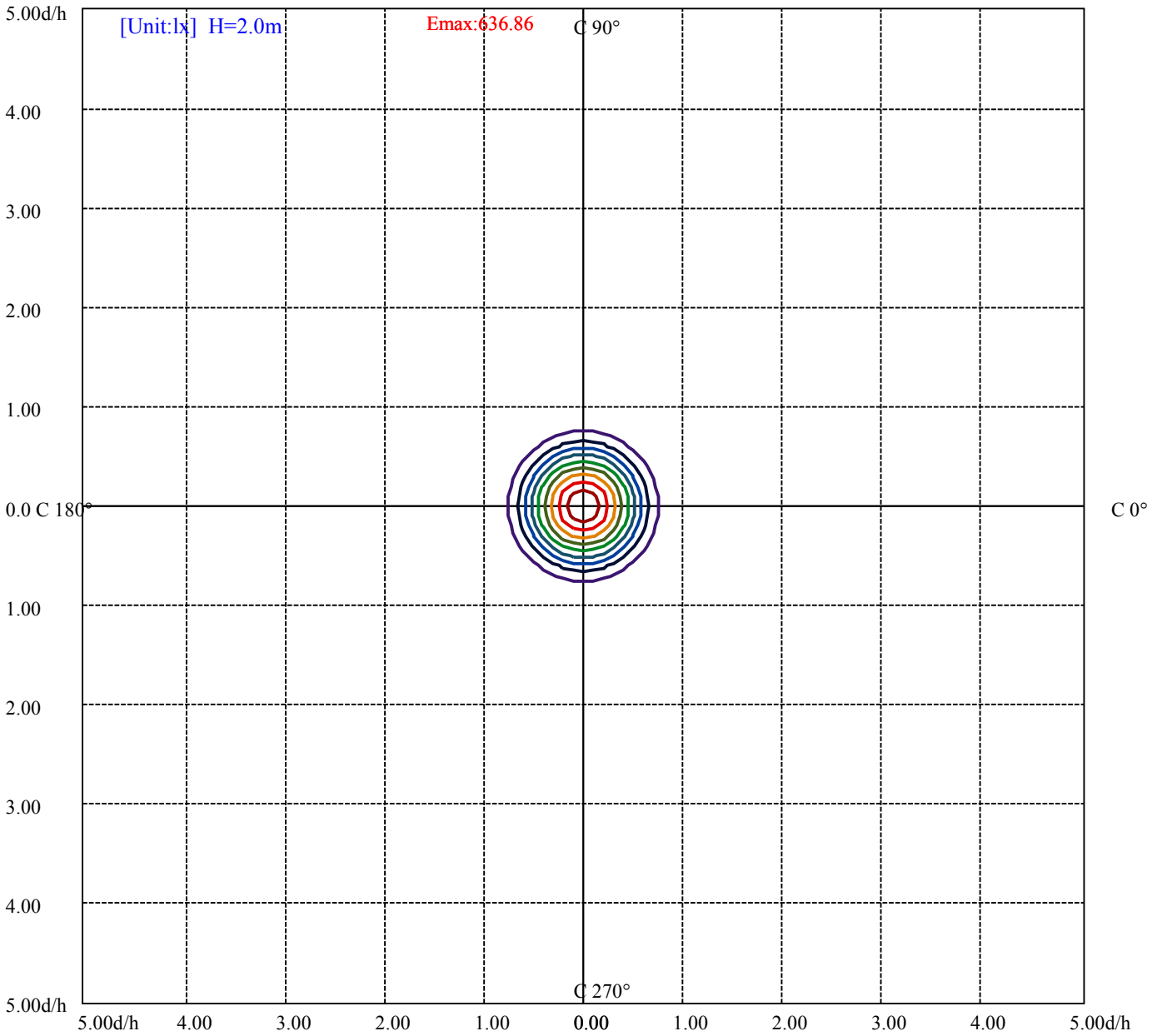
House

[Unit:cd]

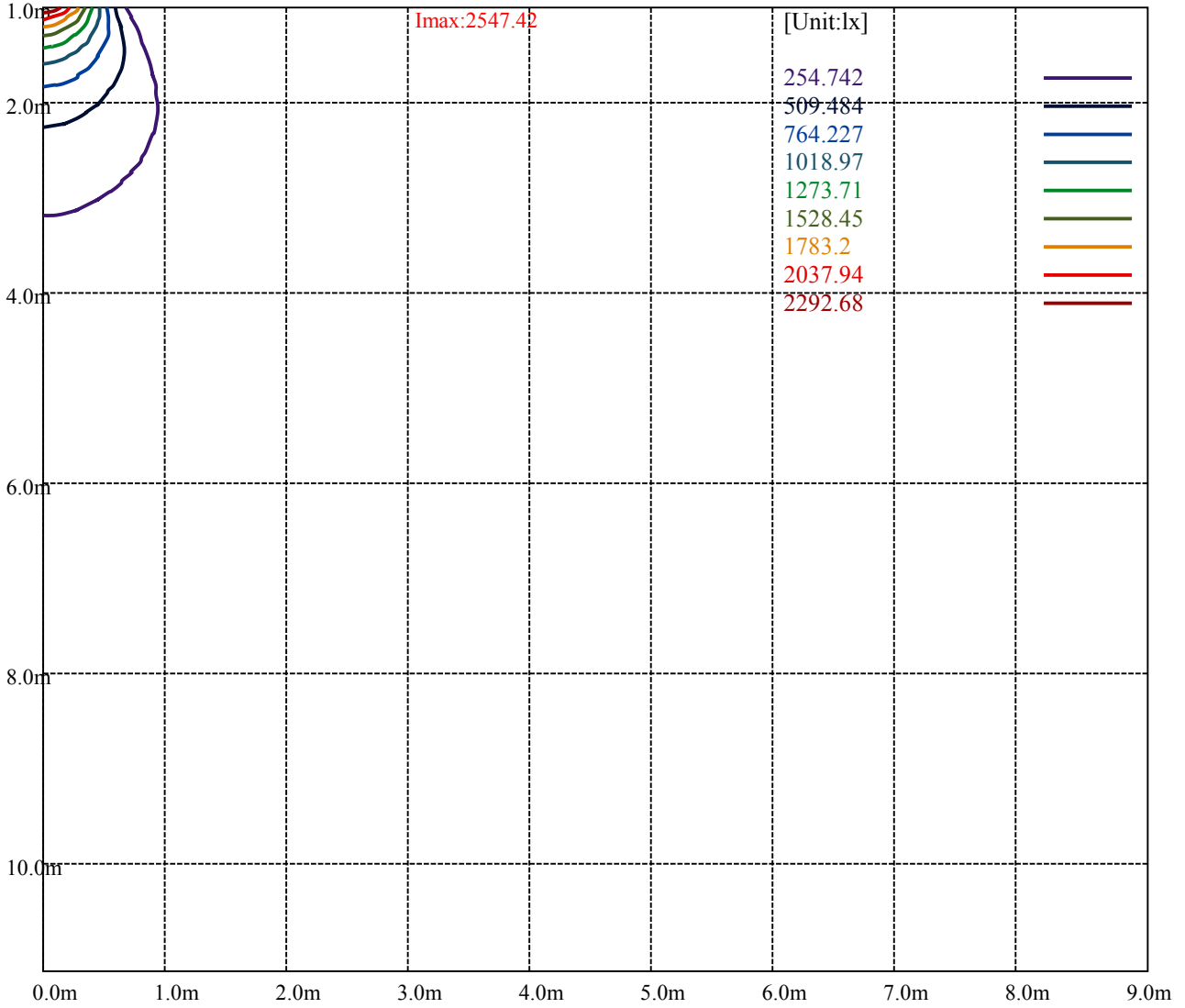
Road

Imax:2547.42

(10%Imax) 254.742	—
(20%Imax) 509.484	—
(30%Imax) 764.227	—
(40%Imax) 1018.97	—
(50%Imax) 1273.71	—
(60%Imax) 1528.45	—
(70%Imax) 1783.2	—
(80%Imax) 2037.94	—
(90%Imax) 2292.68	—



(10%Emax) 63.6855	—
(20%Emax) 127.371	—
(30%Emax) 191.0565	—
(40%Emax) 254.7425	—
(50%Emax) 318.4275	—
(60%Emax) 382.1125	—
(70%Emax) 445.7975	—
(80%Emax) 509.485	—
(90%Emax) 573.17	—



Luminance Table

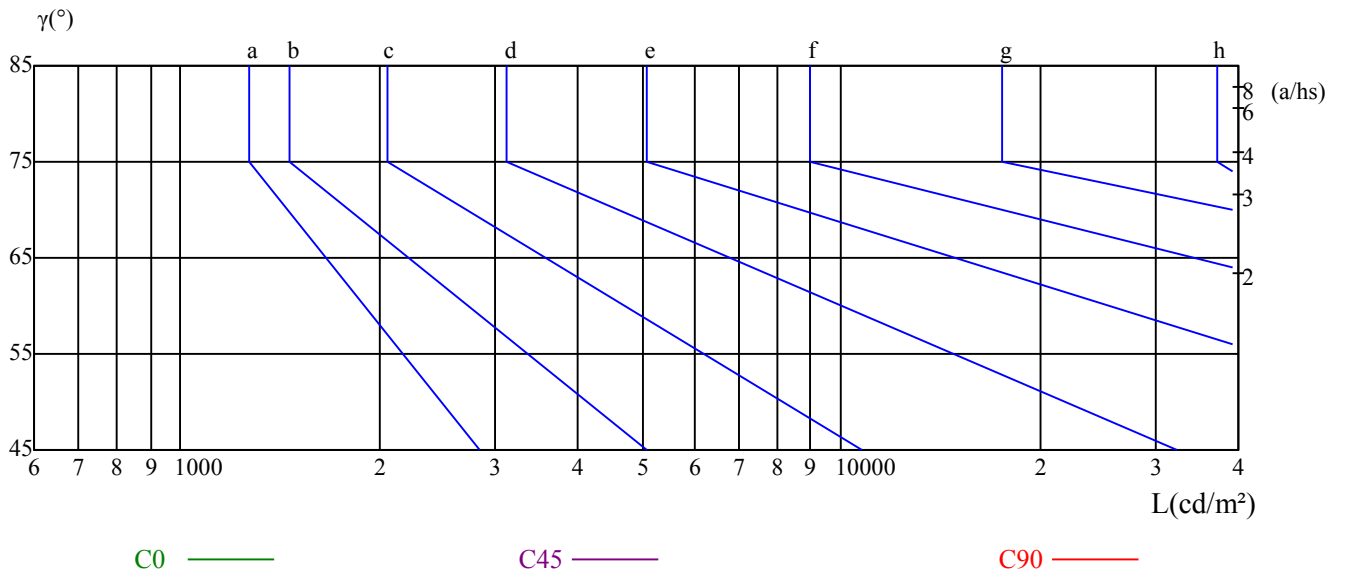
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

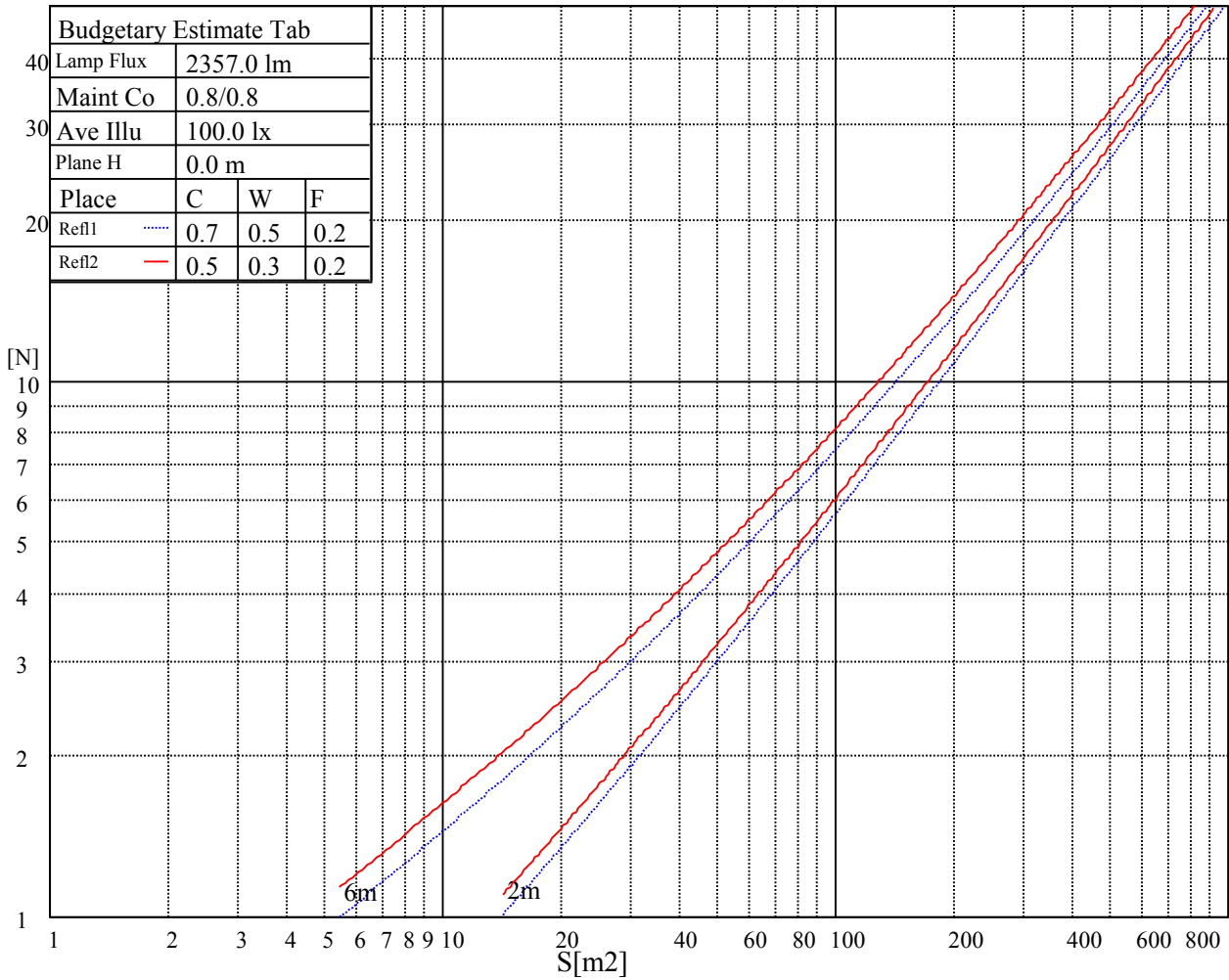
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

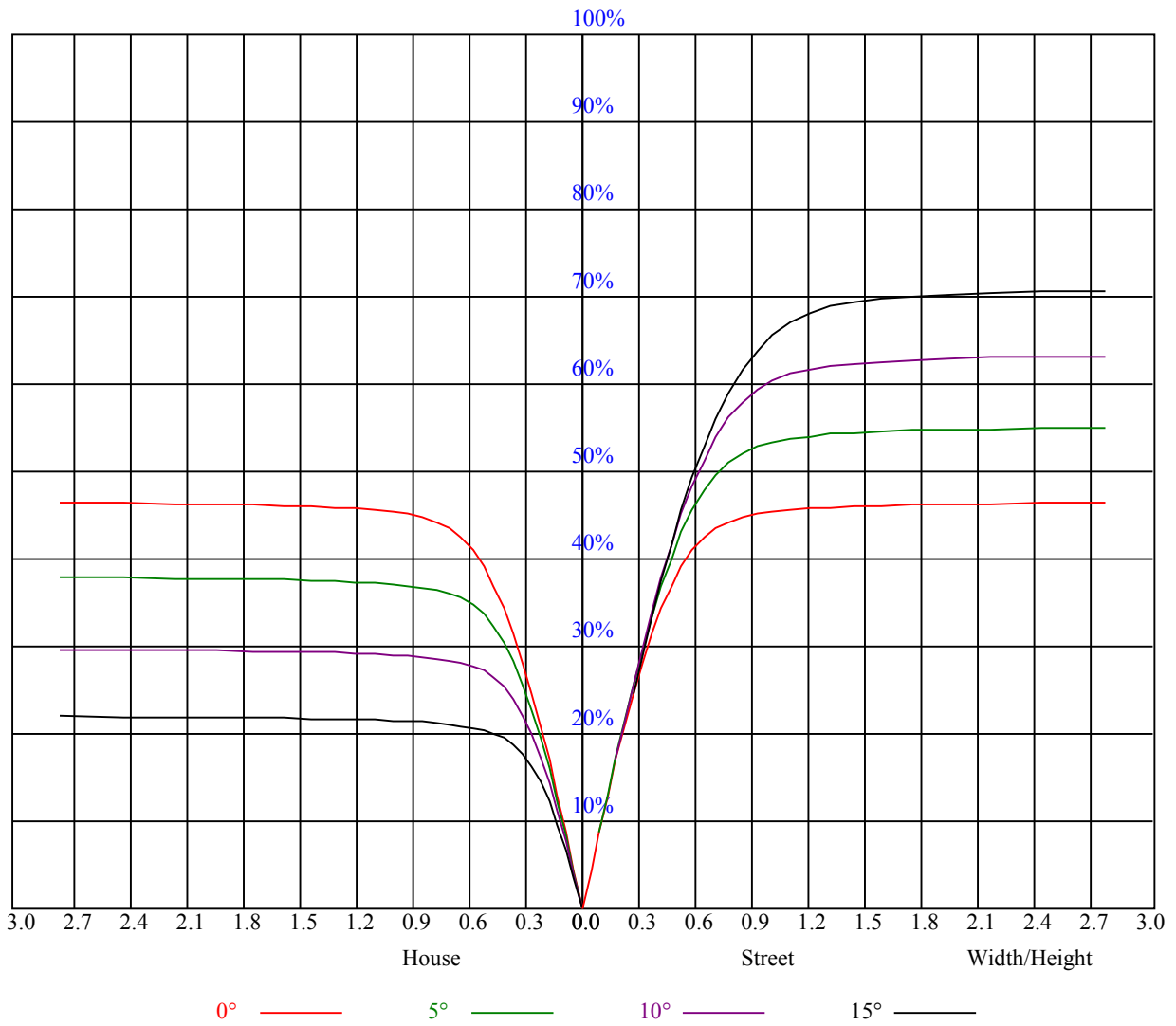
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.04	1.01	0.99	1.02	0.99	0.97	0.98	0.96	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.87
2	0.96	0.92	0.89	0.95	0.91	0.88	0.92	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.81
3	0.90	0.85	0.81	0.88	0.84	0.80	0.86	0.82	0.79	0.84	0.80	0.78	0.81	0.79	0.77	0.75
4	0.84	0.78	0.74	0.83	0.78	0.74	0.81	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.70
5	0.78	0.73	0.69	0.77	0.72	0.68	0.76	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.65
6	0.74	0.68	0.64	0.73	0.67	0.64	0.71	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.61
7	0.69	0.63	0.59	0.69	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.57
8	0.65	0.60	0.56	0.65	0.59	0.56	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.54
9	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.59	0.55	0.52	0.50
10	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.56	0.52	0.49	0.47



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	2553.19	2503.13	2408.06	2230.31	2009.25	1777.50	1383.19	806.63	332.44
45.0	2545.31	2507.06	2369.81	2198.25	2000.25	1737.56	1379.81	803.81	353.81
90.0	2544.19	2483.44	2355.75	2176.88	1954.13	1671.75	1122.30	629.49	223.43
135.0	2547.00	2514.38	2403.56	2235.94	1972.69	1665.00	1251.00	641.81	291.94
180.0	2553.19	2503.69	2348.44	2129.63	1876.50	1569.94	1101.60	537.24	247.67
225.0	2545.31	2481.75	2342.25	2154.38	1910.81	1584.00	1104.02	504.23	209.31
270.0	2544.19	2494.69	2369.81	2198.81	1976.63	1662.19	1191.38	608.63	287.44
315.0	2547.00	2478.38	2383.31	2196.00	1948.50	1653.19	1115.44	573.19	221.34
360.0	2553.19	2503.13	2408.06	2230.31	2009.25	1777.50	1383.19	806.63	332.44
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	182.70	101.48	56.76	34.71	20.08	14.01	10.74	10.07	9.68
45.0	164.36	86.63	49.61	31.61	20.36	15.53	12.26	11.42	9.73
90.0	105.47	58.16	36.45	26.83	20.14	16.31	13.73	12.26	9.56
135.0	124.54	68.79	41.12	27.56	18.28	13.39	10.52	10.07	9.56
180.0	144.23	83.93	47.48	28.18	17.27	12.38	10.24	9.90	9.45
225.0	108.28	64.07	39.54	26.44	19.01	15.13	13.44	11.98	9.34
270.0	96.13	54.84	35.94	26.38	19.29	14.96	12.26	11.08	9.39
315.0	111.26	61.48	38.76	25.76	17.61	12.99	10.41	10.01	9.62
360.0	182.70	101.48	56.76	34.71	20.08	14.01	10.74	10.07	9.68
C/ γ (°)	90.0								
0.0	9.00								
45.0	8.83								
90.0	8.78								
135.0	8.83								
180.0	8.78								
225.0	8.66								
270.0	8.78								
315.0	8.83								
360.0	9.00								