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Nata

LumCAT: 1437-N
Luminaire: 92.70.051.00+92.70.147.00
Report No: NATA0100
Test No: GC2018080916
LampCAT: LUMINUS CXM-7-AA00
Lamp flux(lm): 1072.0
Number of Lamps: 1
Length(mm): 46
Phm Type: C

Voltage(V): 37.7000
Current(A): 0.2500
Power (W): 9.4250
PF: 0.0000
Ballast type: DC
Width(mm): 46
Height(mm): 0

Photometric Results

Lumens(lm): 867.40
Efficiency(%): 80.91%
Lumens(lm)/Power(W): 92.98
Central intensity(cd): 1636.139
Maximum intensity(cd): 1636.139
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=39.2
 [C90/270]Total=39.2
Field angle(10%Imax): [C0/180]Total=68.1
 [C90/270]Total=68.1
Maximum s/h(1/2): C0_180=0.65 C90_270=0.65
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 81.75%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.311%

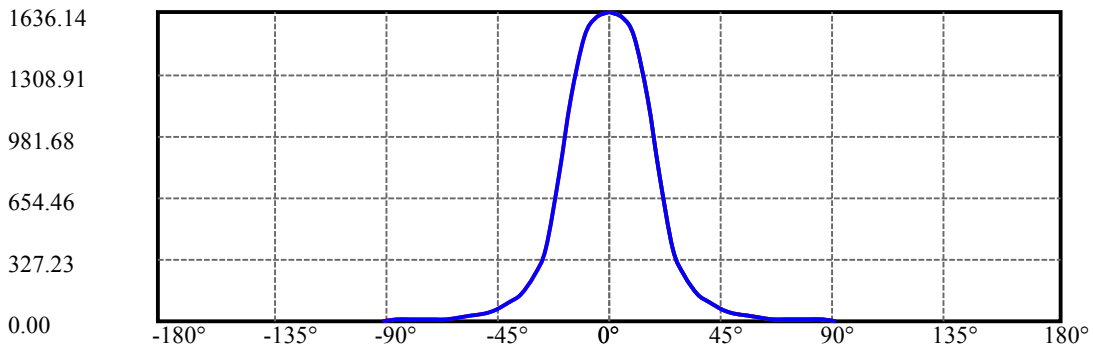
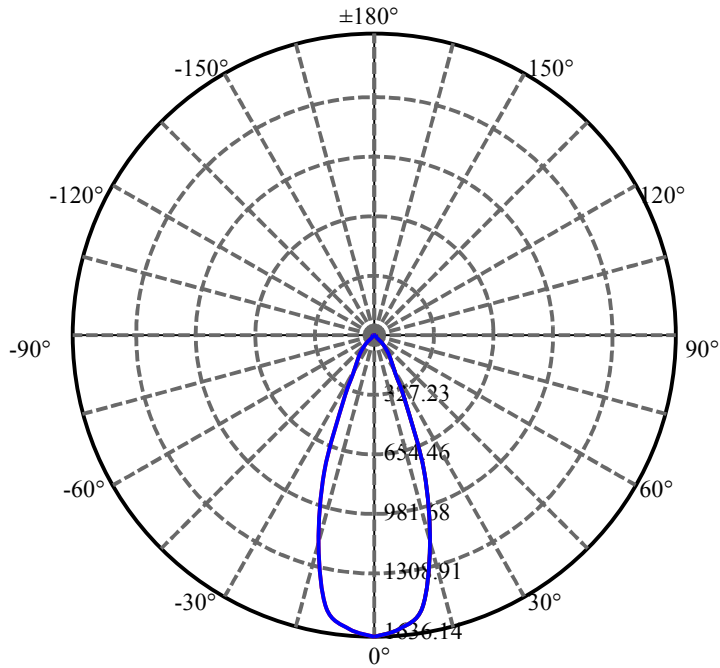
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1636.139	9.784	9.784	.913%	1.128%
5.0	1603.586	76.609	86.393	7.146%	9.960%
10.0	1506.618	143.405	229.798	13.377%	26.493%
15.0	1178.579	167.203	397.001	15.597%	45.769%
20.0	786.666	147.480	544.48	13.757%	62.772%
25.0	388.106	89.906	634.386	8.387%	73.137%
30.0	239.578	65.661	700.047	6.125%	80.707%
35.0	145.225	45.659	745.706	4.259%	85.971%
40.0	99.060	34.902	780.608	3.256%	89.994%
45.0	64.444	24.978	805.586	2.330%	92.874%
50.0	43.384	18.217	823.803	1.699%	94.974%
55.0	27.287	12.252	836.055	1.143%	96.387%
60.0	16.792	7.971	844.026	.744%	97.306%
65.0	10.715	5.323	849.349	.497%	97.919%
70.0	8.837	4.552	853.901	.425%	98.444%
75.0	7.983	4.227	858.128	.394%	98.931%
80.0	7.653	4.131	862.259	.385%	99.408%
85.0	7.488	4.089	866.348	.381%	99.879%
90.0	3.826	1.049	867.396	.098%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	700.05	65.30%	80.71%
0-40	780.61	72.82%	89.99%
0-60	844.03	78.73%	97.31%
0-90	866.35	80.82%	99.88%
0-120	866.35	80.82%	99.88%
0-180	867.40	80.91%	100.00%
60-90	30.29	2.83%	3.49%
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%
0-29.53	693.92	64.73%	80.00%

ZONAL LUMEN SUMMARY

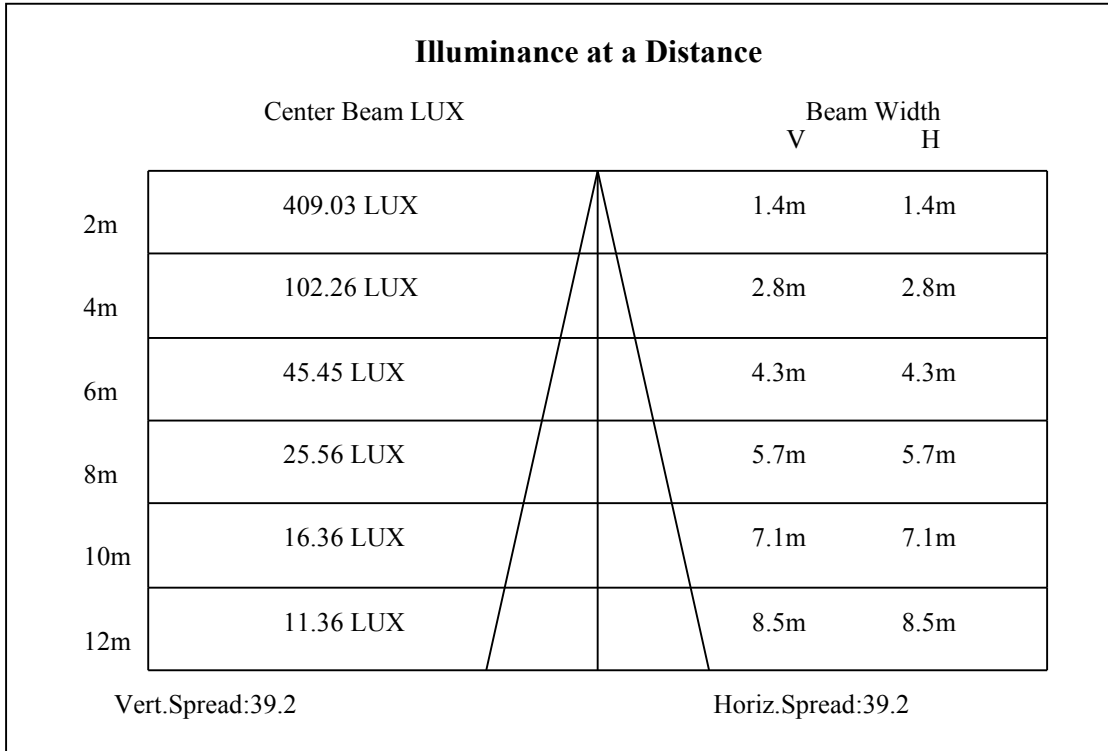
0-10	229.80
10-20	314.68
20-30	155.57
30-40	80.56
40-50	43.19
50-60	20.22
60-70	9.87
70-80	8.36
80-90	4.09
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

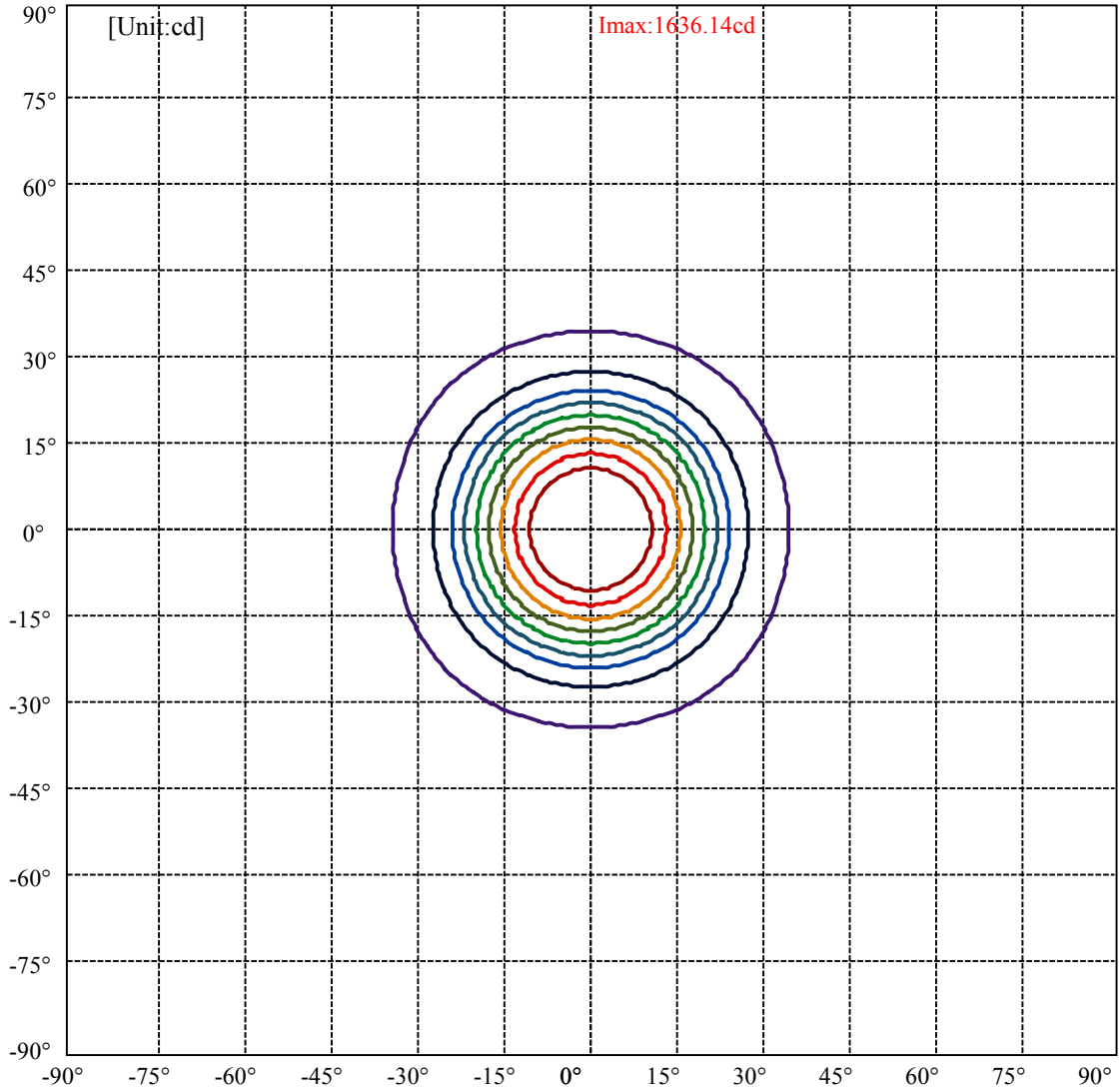


C0(Max): —————
C0/C180: —————
C90/C270: —————

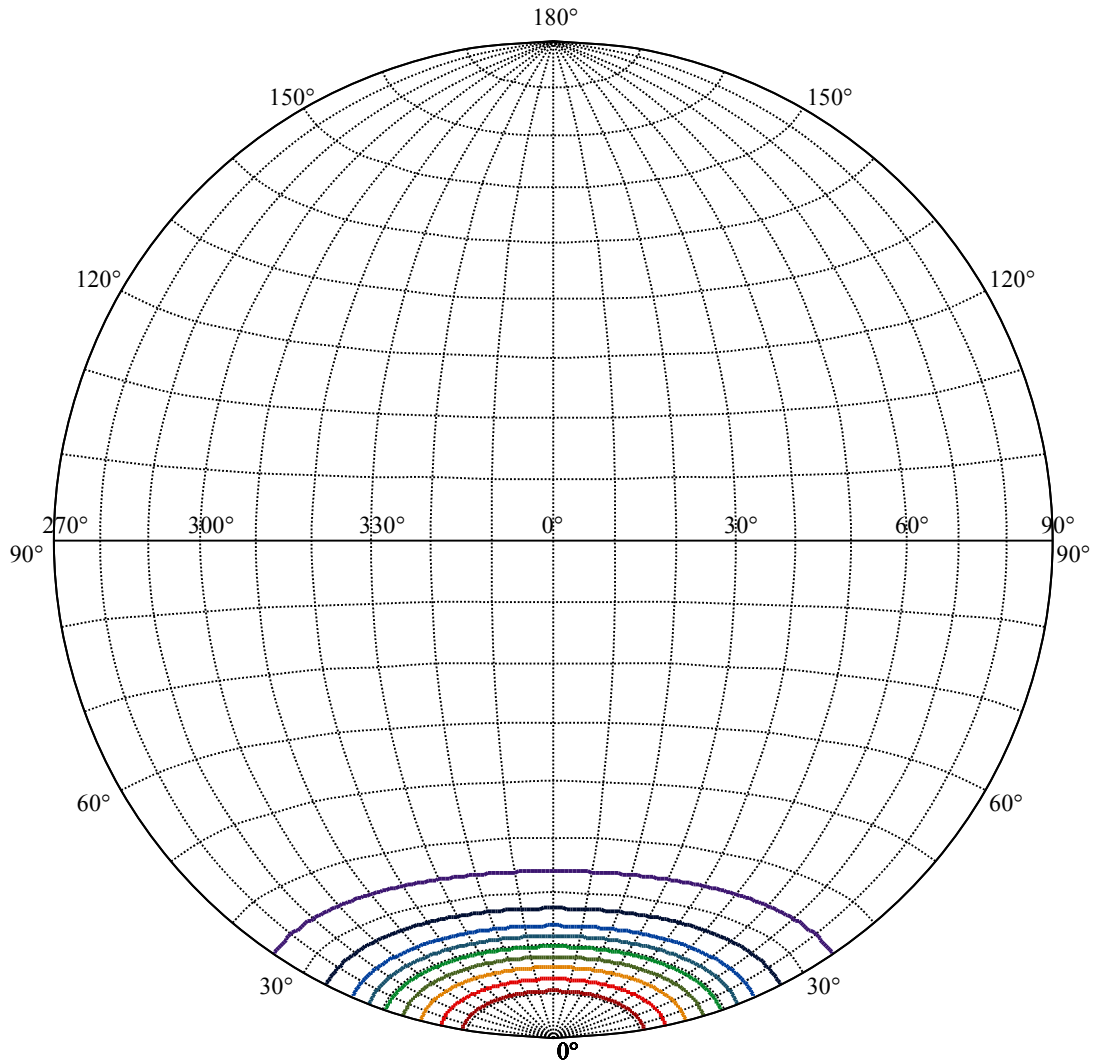
Field angle(10%Imax):C0/180Left:34.0 Right:34.0
:C90/270Left:34.0 Right:34.0

Beam Angle(50%Imax):C0/180Left:19.6 Right:19.6
:C90/270Left:19.6 Right:19.6





(10%Imax) 163.614	—
(20%Imax) 327.228	—
(30%Imax) 490.842	—
(40%Imax) 654.455	—
(50%Imax) 818.069	—
(60%Imax) 981.683	—
(70%Imax) 1145.3	—
(80%Imax) 1308.91	—
(90%Imax) 1472.52	—



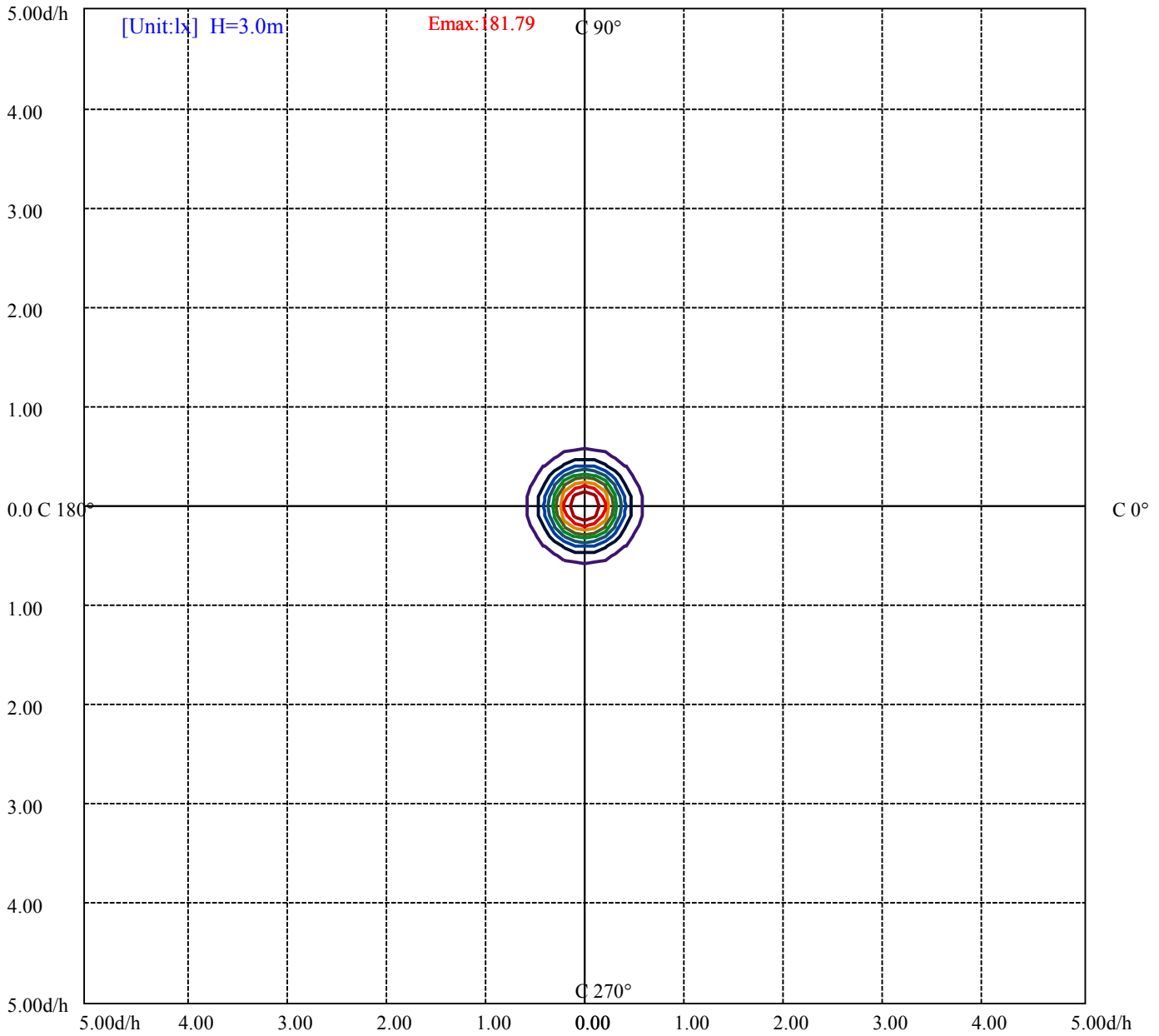
House

[Unit:cd]

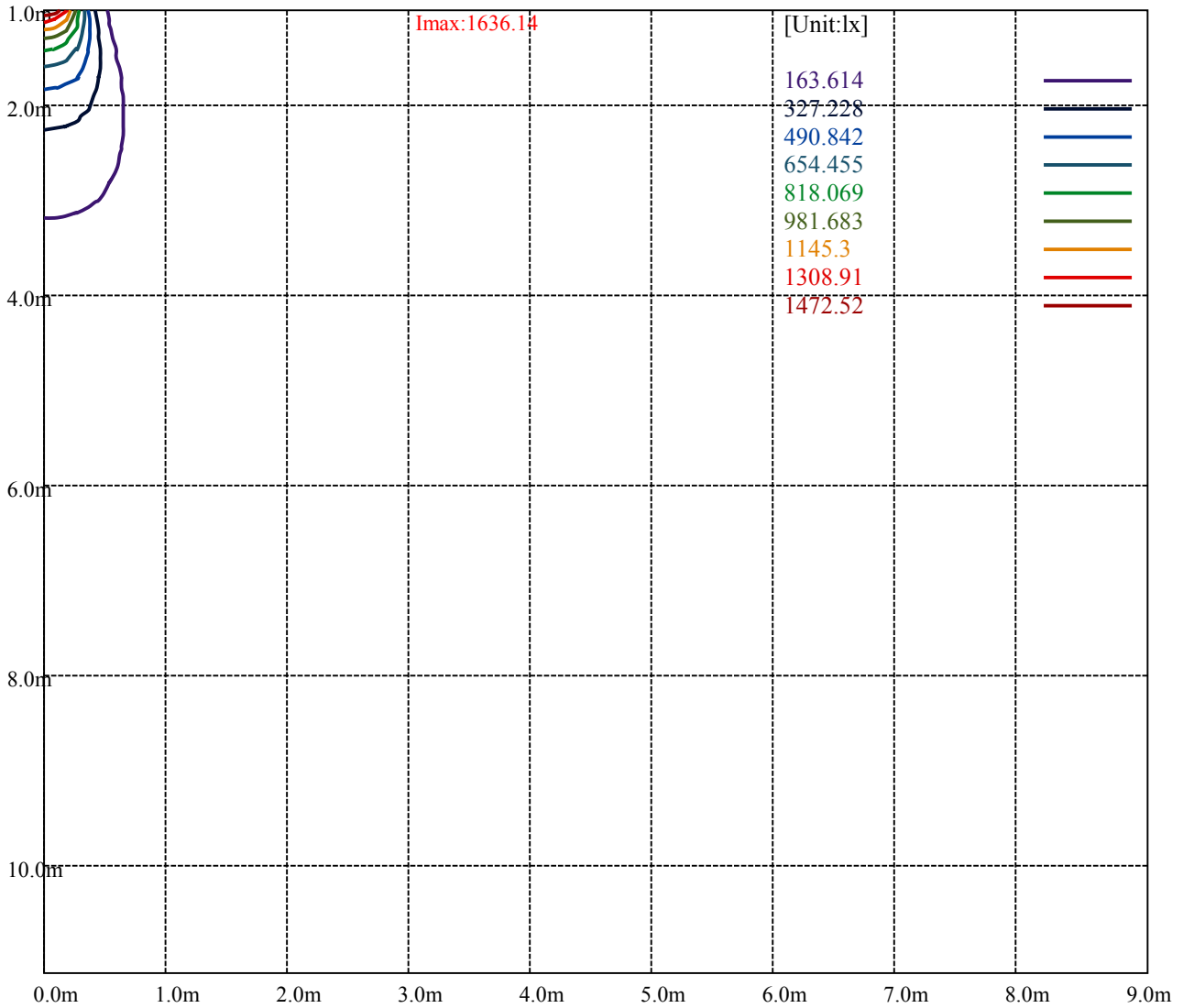
Road

Imax:1636.14

(10%Imax)	163.614	—
(20%Imax)	327.228	—
(30%Imax)	490.842	—
(40%Imax)	654.455	—
(50%Imax)	818.069	—
(60%Imax)	981.683	—
(70%Imax)	1145.3	—
(80%Imax)	1308.91	—
(90%Imax)	1472.52	—



- (10%Emax) 18.17933
- (20%Emax) 36.35867
- (30%Emax) 54.53789
- (40%Emax) 72.71722
- (50%Emax) 90.89655
- (60%Emax) 109.0759
- (70%Emax) 127.2556
- (80%Emax) 145.4344
- (90%Emax) 163.6133



Luminance Table

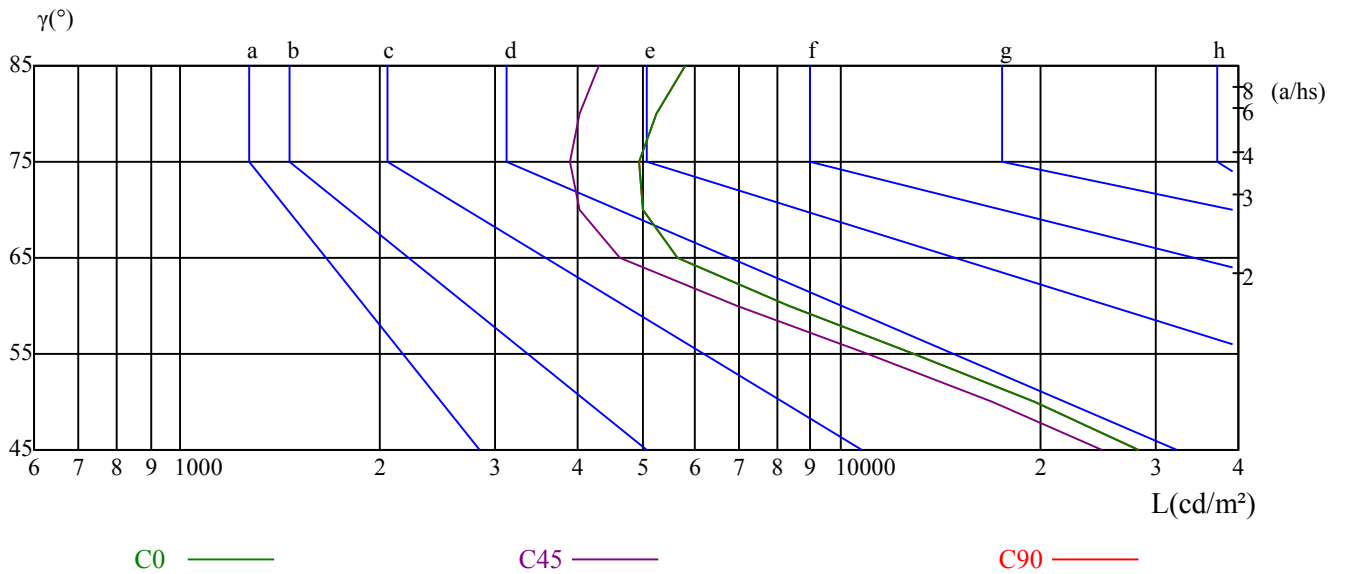
γ	45	50	55	60	65	70	75	80	85
C0	28303	19668	12883	8337	5655	5018	4946	5261	5831
C45	24784	16973	10947	6967	4640	4033	3883	4017	4304
C90	28303	19668	12883	8337	5655	5018	4946	5261	5831

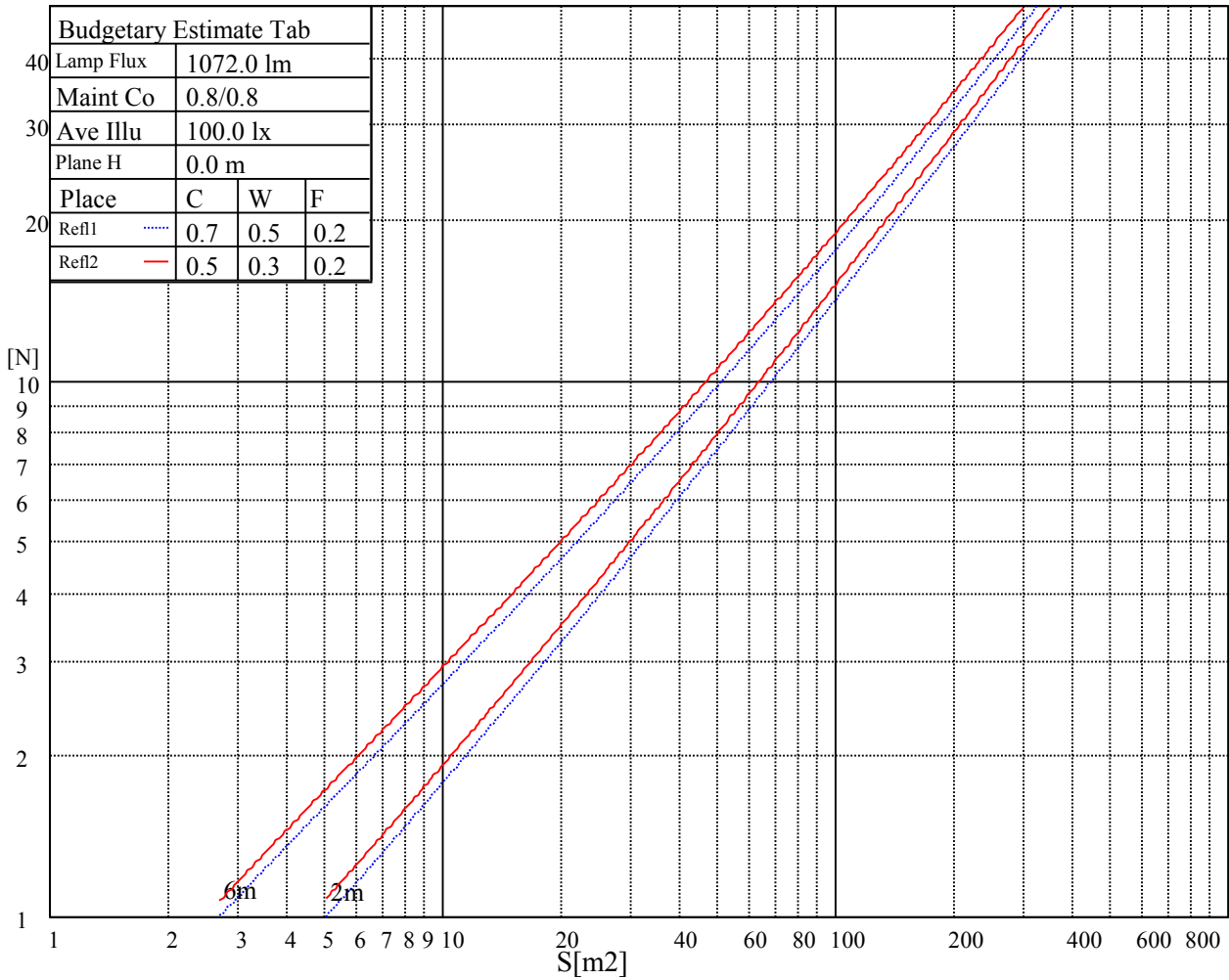
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11982	11982	11982	14577	14577	14577	40601	40601	40601

Glare Table

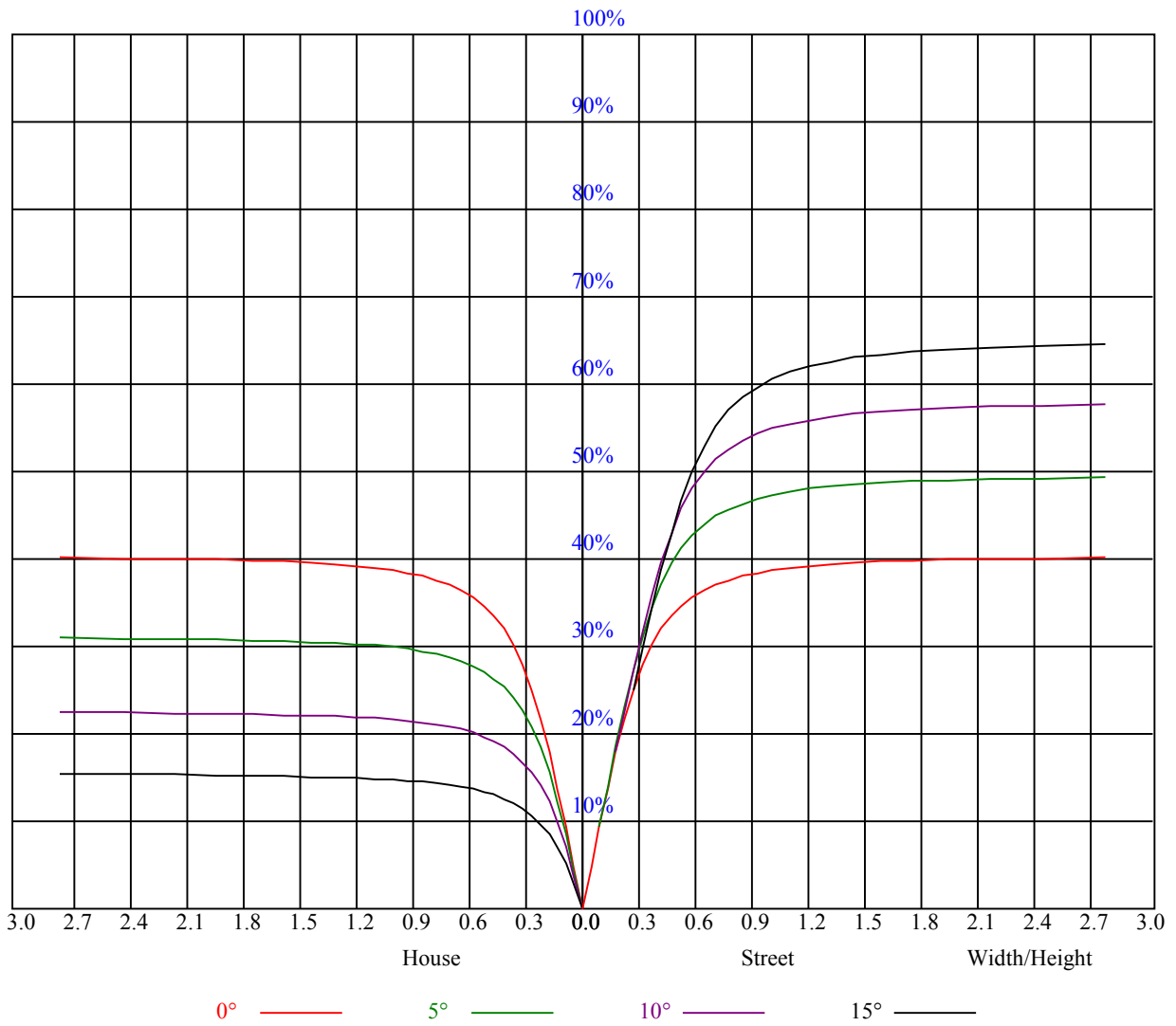
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.97	0.97	0.97	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.82
1	0.90	0.87	0.85	0.88	0.86	0.84	0.85	0.83	0.81	0.82	0.80	0.79	0.79	0.78	0.77	0.75
2	0.84	0.81	0.78	0.83	0.80	0.77	0.80	0.78	0.75	0.78	0.76	0.74	0.75	0.74	0.72	0.71
3	0.79	0.75	0.72	0.78	0.75	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.72	0.70	0.68	0.67
4	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.71	0.68	0.66	0.69	0.67	0.65	0.64
5	0.71	0.67	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.61
6	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.58
7	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56
8	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.60	0.57	0.54	0.53
9	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.58	0.55	0.52	0.51
10	0.58	0.54	0.51	0.57	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.56	0.53	0.51	0.50



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	1632.97	1599.94	1500.84	1249.23	819.24	403.56	278.59	151.63	103.40
45.0	1640.68	1585.07	1455.69	1195.27	742.16	358.42	206.13	137.15	93.21
90.0	1633.52	1579.02	1457.89	1074.21	644.71	320.48	191.87	126.24	86.66
135.0	1637.38	1603.24	1514.05	1266.30	803.82	405.77	280.24	146.23	104.83
180.0	1632.97	1587.28	1477.71	1070.90	773.71	377.80	222.70	141.99	96.84
225.0	1640.68	1606.00	1507.44	1089.84	823.31	407.36	231.13	149.70	100.59
270.0	1633.52	1643.43	1590.58	1384.67	921.64	456.97	279.14	160.76	108.63
315.0	1637.38	1624.71	1548.74	1098.21	764.73	374.49	226.83	148.10	98.33
360.0	1632.97	1599.94	1500.84	1249.23	819.24	403.56	278.59	151.63	103.40
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	67.33	44.98	28.85	17.67	11.45	9.63	8.81	8.15	7.43
45.0	59.41	40.30	25.33	15.91	10.68	8.92	8.15	8.09	7.60
90.0	55.77	37.38	24.00	14.53	9.63	8.09	7.54	7.21	6.61
135.0	65.52	43.55	27.42	17.23	10.35	8.48	7.60	7.16	7.27
180.0	62.93	44.76	27.80	16.74	10.96	9.03	7.93	7.49	7.65
225.0	65.79	45.04	28.30	17.29	10.85	9.03	8.20	8.09	8.53
270.0	73.17	47.57	29.84	18.17	11.29	8.86	7.87	7.43	6.94
315.0	65.63	43.49	26.76	16.79	10.52	8.64	7.76	7.60	7.87
360.0	67.33	44.98	28.85	17.67	11.45	9.63	8.81	8.15	7.43
C/ γ (°)	90.0								
0.0	3.80								
45.0	3.80								
90.0	3.80								
135.0	3.80								
180.0	3.80								
225.0	3.85								
270.0	3.91								
315.0	3.85								
360.0	3.80								