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## Nata

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LumCAT: 1535-E

Luminaire:

Report No: NT2016122301

Voltage(V): 38.5000

Test No: GC2016122301

Current(A): 0.6000

LampCAT: XICATO XTM LES9

Power (W): 17.1000

Lamp flux(lm): 942.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 25

Width(mm):25

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 870.42

Efficiency(%): 92.40%

Lumens(lm)/Power(W): 50.90

Central intensity(cd): 1429.264

Maximum intensity(cd): 1429.264

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=40.9

[C90/270]Total=40.9

Field angle(10%Imax): [C0/180]Total=81.1

[C90/270]Total=81.1

Maximum s/h(1/2): C0\_180=0.65 C90\_270=0.65

Maximum s/h(1/4): C0\_180=0.69 C90\_270=0.69

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.40%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.606%

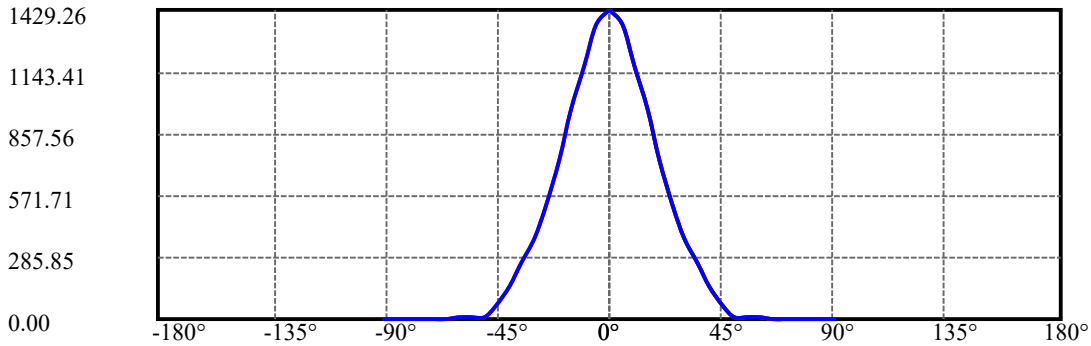
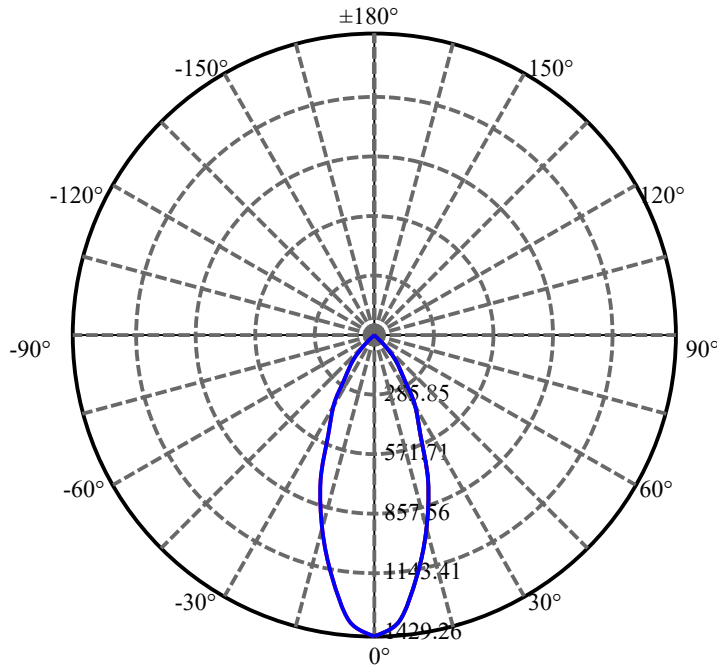
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1429.264	0.000	0	.000%	.000%
5.0	1362.095	33.370	33.37	3.542%	3.834%
10.0	1167.781	90.502	123.872	9.607%	14.231%
15.0	963.783	126.443	250.314	13.423%	28.758%
20.0	734.562	139.968	390.282	14.859%	44.838%
25.0	519.843	131.564	521.846	13.966%	59.953%
30.0	375.326	113.284	635.13	12.026%	72.968%
35.0	261.594	93.791	728.921	9.957%	83.743%
40.0	152.210	69.040	797.961	7.329%	91.675%
45.0	63.907	40.016	837.977	4.248%	96.273%
50.0	9.945	14.923	852.9	1.584%	97.987%
55.0	4.886	3.225	856.125	.342%	98.357%
60.0	4.473	2.163	858.288	.230%	98.606%
65.0	4.164	2.100	860.388	.223%	98.847%
70.0	3.978	2.061	862.449	.219%	99.084%
75.0	3.785	2.029	864.478	.215%	99.317%
80.0	3.682	1.998	866.476	.212%	99.547%
85.0	3.599	1.978	868.455	.210%	99.774%
90.0	3.586	1.967	870.422	.209%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	635.13	67.42%	72.97%
0-40	797.96	84.71%	91.68%
0-60	858.29	91.11%	98.61%
0-90	868.45	92.19%	99.77%
0-120	868.45	92.19%	99.77%
0-180	870.42	92.40%	100.00%
60-90	12.33	1.31%	1.42%
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%
0-33.26	696.34	73.92%	80.00%

ZONAL LUMEN SUMMARY

0-10	123.87
10-20	266.41
20-30	244.85
30-40	162.83
40-50	54.94
50-60	5.39
60-70	4.16
70-80	4.03
80-90	1.98
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: —————

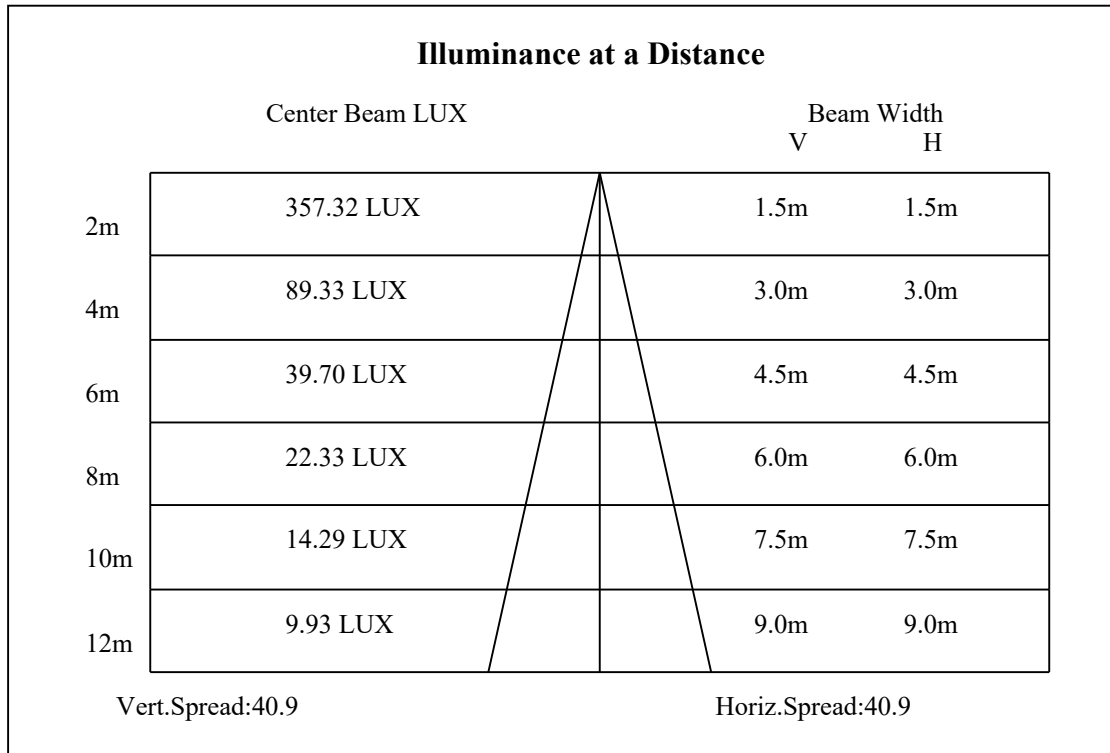
C90/C270: —————

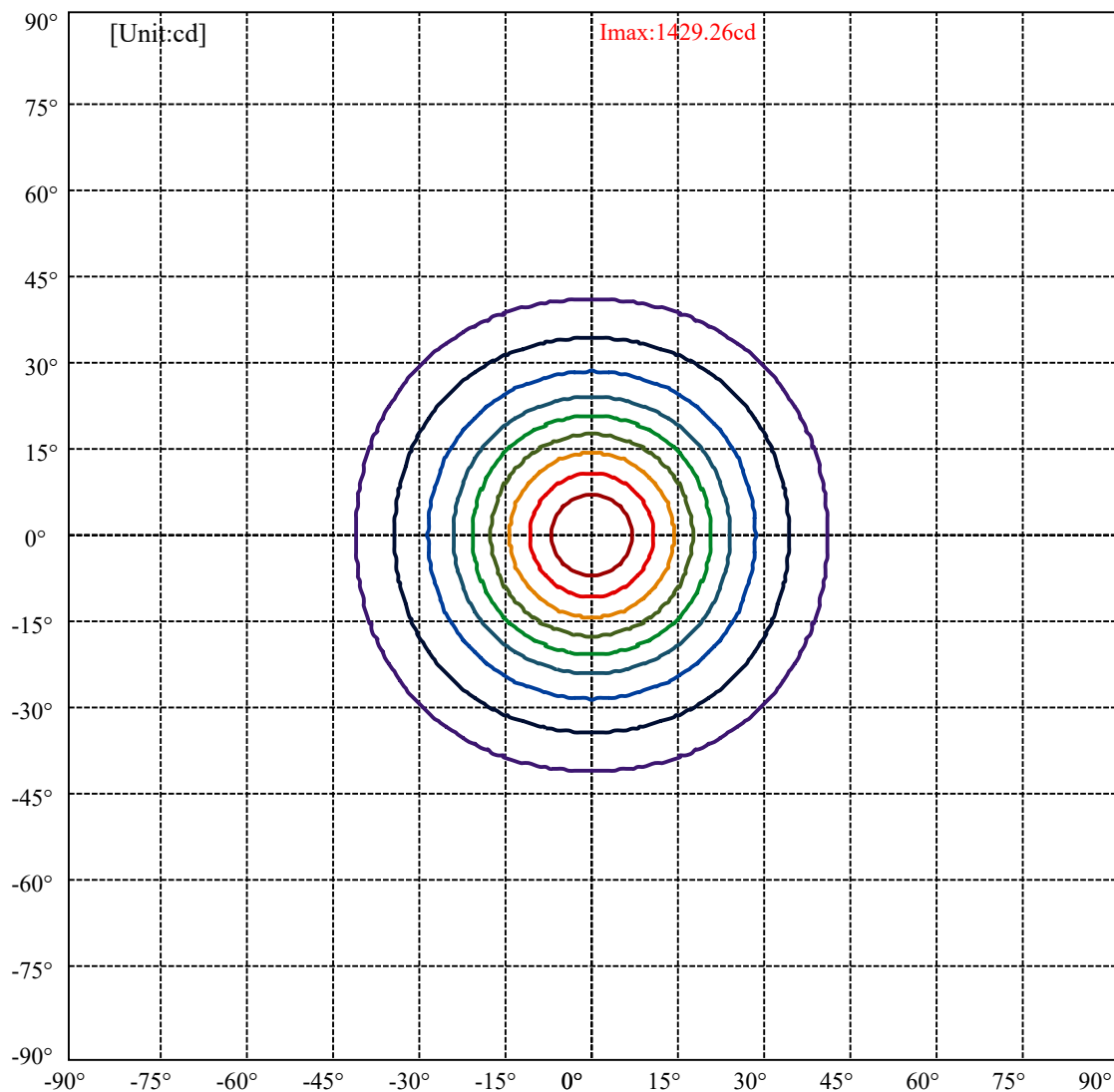
Field angle(10%Imax):C0/180Left:40.5 Right:40.5

:C90/270Left:40.5 Right:40.5

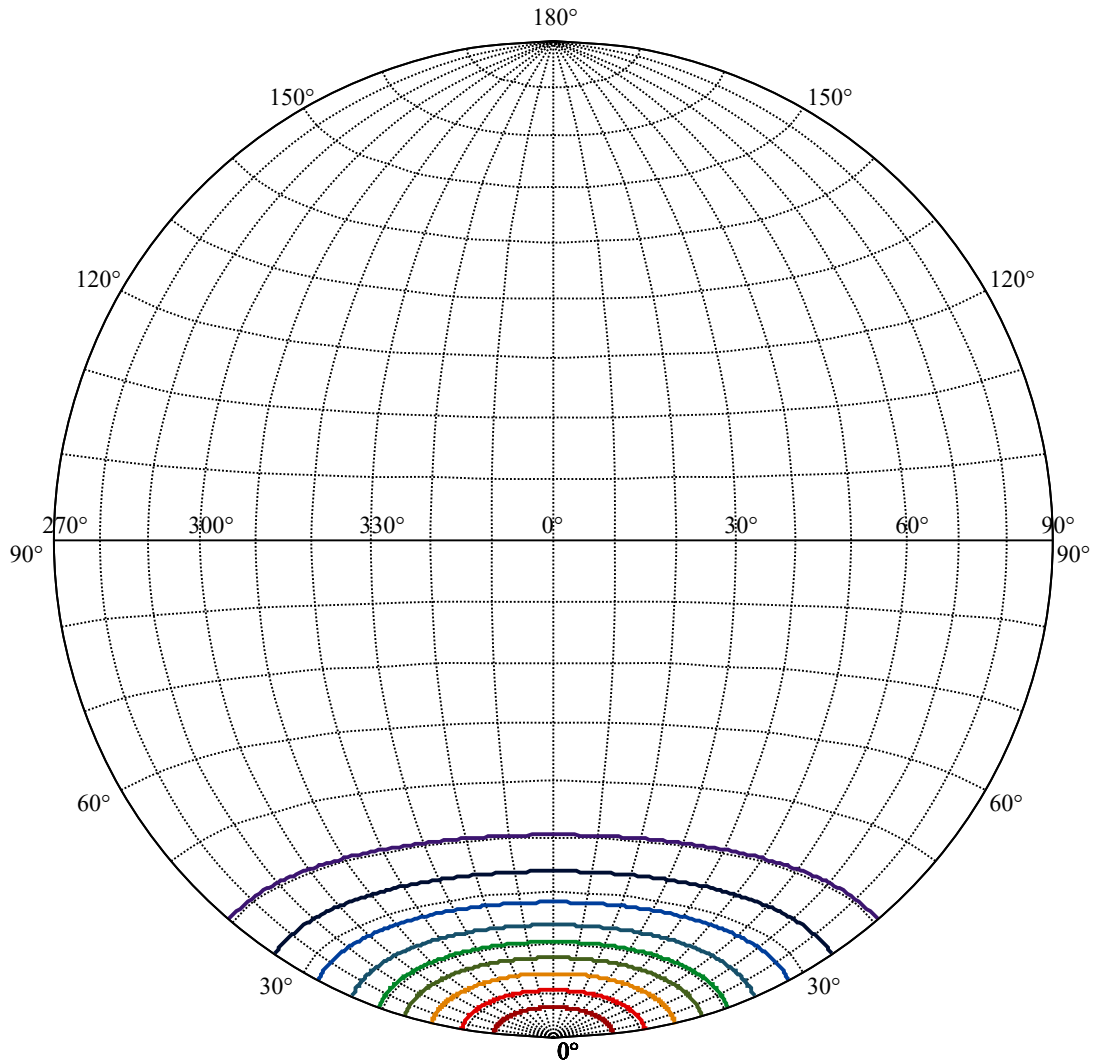
Beam Angle(50%Imax):C0/180Left:20.5 Right:20.5

:C90/270Left:20.5 Right:20.5





(10%Imax) 142.926	—
(20%Imax) 285.853	—
(30%Imax) 428.779	—
(40%Imax) 571.706	—
(50%Imax) 714.632	—
(60%Imax) 857.558	—
(70%Imax) 1000.48	—
(80%Imax) 1143.41	—
(90%Imax) 1286.34	—



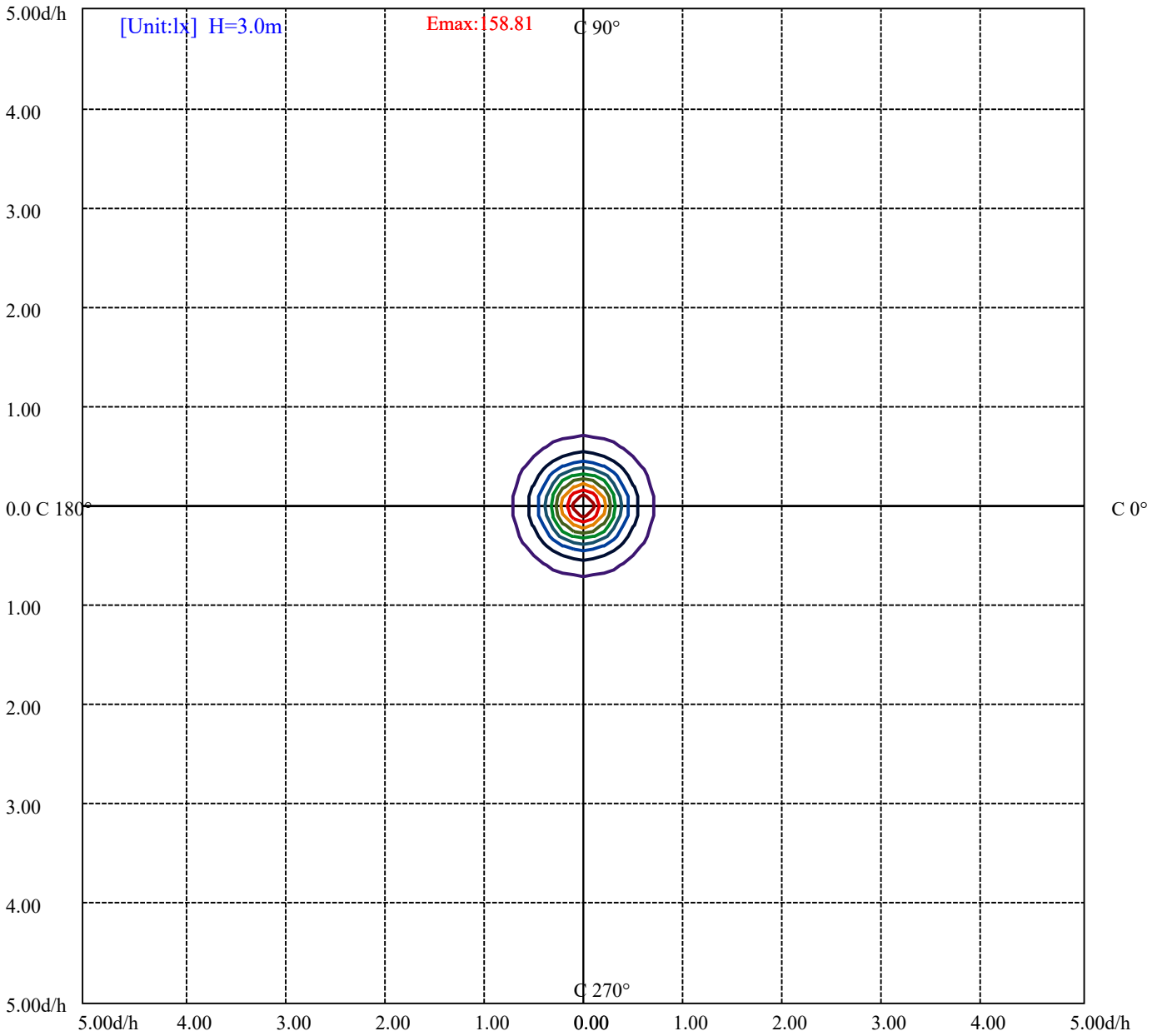
House

[Unit:cd]

Road

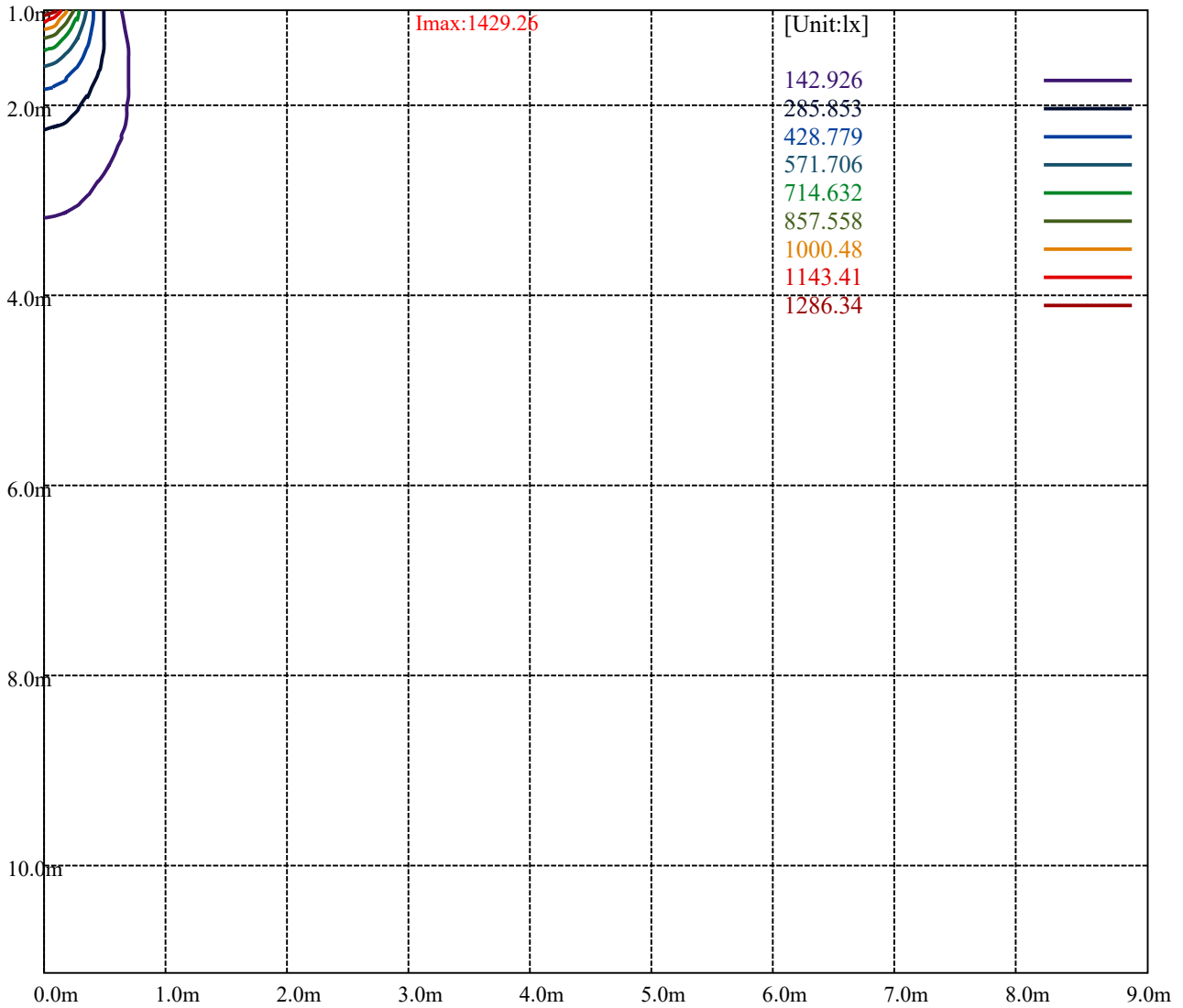
**I<sub>max</sub>:1429.26**

(10%I <sub>max</sub> ) 142.926	—
(20%I <sub>max</sub> ) 285.853	—
(30%I <sub>max</sub> ) 428.779	—
(40%I <sub>max</sub> ) 571.706	—
(50%I <sub>max</sub> ) 714.632	—
(60%I <sub>max</sub> ) 857.558	—
(70%I <sub>max</sub> ) 1000.48	—
(80%I <sub>max</sub> ) 1143.41	—
(90%I <sub>max</sub> ) 1286.34	—



(10%Emax) 15.88067	—
(20%Emax) 31.76133	—
(30%Emax) 47.64211	—
(40%Emax) 63.52278	—
(50%Emax) 79.40344	—
(60%Emax) 95.28411	—
(70%Emax) 111.1644	—
(80%Emax) 127.0456	—
(90%Emax) 142.9267	—





Luminance Table

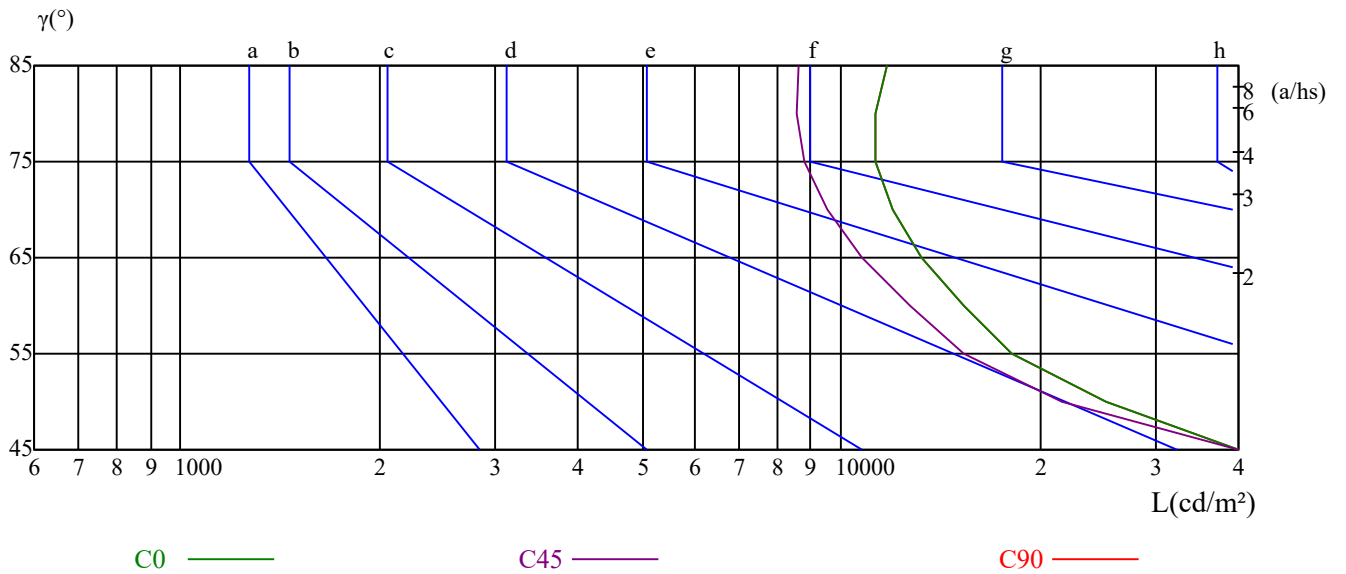
$\gamma$	45	50	55	60	65	70	75	80	85
C0	75989	25121	18157	15334	13211	11948	11287	11282	11751
C45	66153	21549	15334	12737	10775	9550	8817	8579	8652
C90	75989	25121	18157	15334	13211	11948	11287	11282	11751

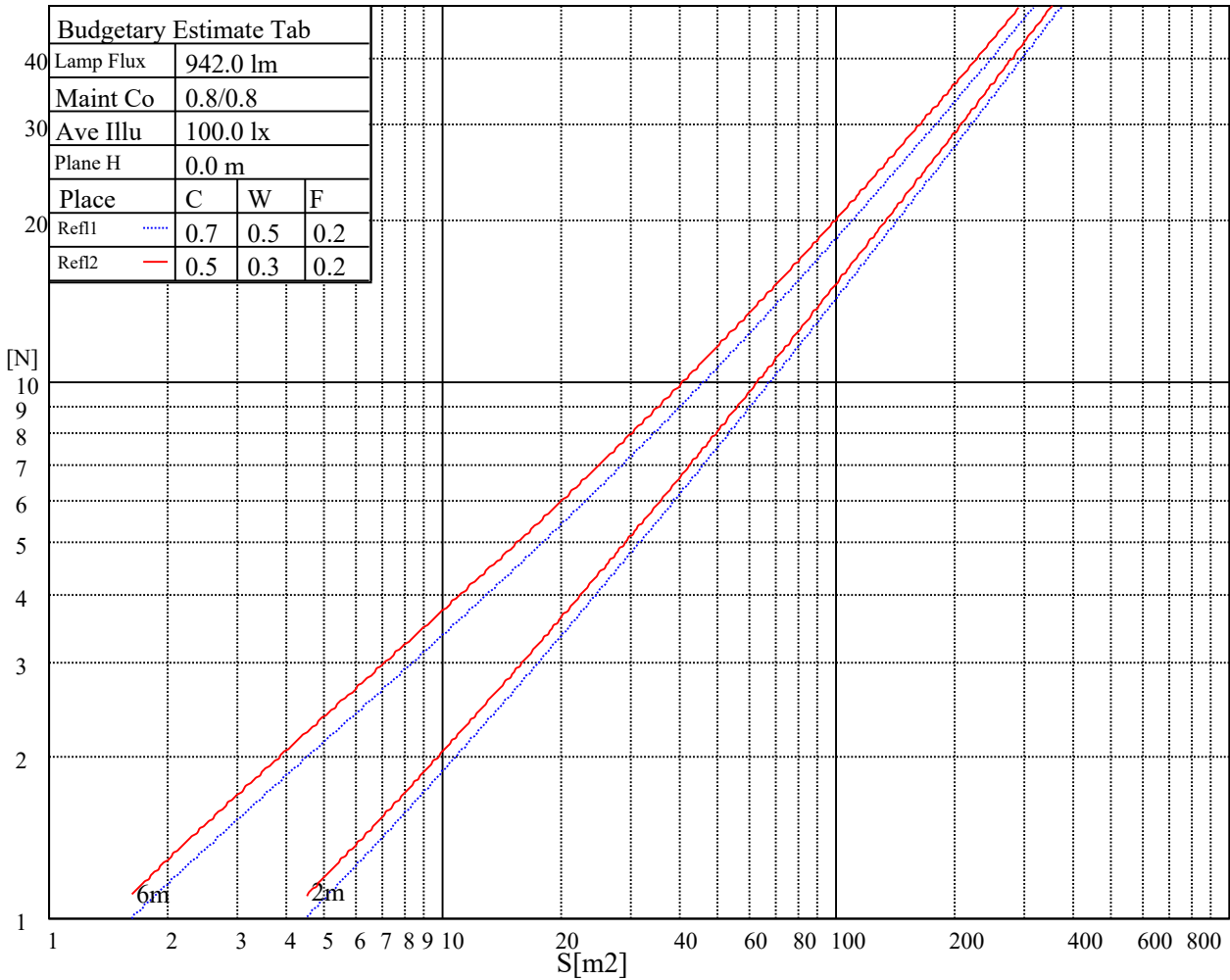
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
29076	29076	29076	34876	34876	34876	86968	86968	86968

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	1.10	1.10	1.10	1.07	1.07	1.07	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	1.00	0.98	1.00	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.86
2	0.95	0.92	0.89	0.94	0.90	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.81
3	0.89	0.85	0.81	0.88	0.84	0.80	0.86	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.75
4	0.84	0.79	0.75	0.83	0.78	0.74	0.81	0.77	0.74	0.79	0.75	0.73	0.77	0.74	0.72	0.71
5	0.79	0.73	0.70	0.78	0.73	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.66
6	0.74	0.69	0.65	0.73	0.68	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.62
7	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.59
8	0.66	0.61	0.57	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.55
9	0.63	0.58	0.54	0.62	0.57	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.52
10	0.60	0.55	0.51	0.59	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	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	1424.86	1384.67	1224.45	1009.73	773.54	547.26	389.25	288.50	163.41
45.0	1432.57	1387.42	1229.96	998.17	775.74	547.26	389.25	281.34	164.89
90.0	1431.47	1367.05	1200.78	966.90	722.34	528.82	379.89	253.37	155.42
135.0	1428.16	1373.11	1226.66	999.27	769.69	559.92	402.46	278.03	169.13
180.0	1424.86	1331.81	1087.09	926.60	700.81	493.14	358.25	240.21	142.65
225.0	1432.57	1349.98	1097.60	922.53	711.16	500.63	364.03	244.23	143.04
270.0	1431.47	1357.69	1187.57	965.69	733.35	514.23	372.73	281.34	147.06
315.0	1428.16	1345.03	1088.13	921.37	689.86	467.48	346.75	225.73	132.08
360.0	1424.86	1384.67	1224.45	1009.73	773.54	547.26	389.25	288.50	163.41

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	73.45	11.29	4.90	4.46	4.13	3.96	3.74	3.69	3.58
45.0	73.56	14.53	4.96	4.51	4.18	3.96	3.85	3.69	3.63
90.0	64.80	9.69	4.90	4.51	4.18	4.02	3.80	3.69	3.58
135.0	75.92	15.58	5.01	4.57	4.24	3.96	3.80	3.69	3.58
180.0	56.16	7.76	4.84	4.40	4.13	3.91	3.74	3.63	3.58
225.0	54.18	6.28	4.79	4.35	4.13	3.96	3.80	3.69	3.63
270.0	62.49	8.64	4.90	4.57	4.24	4.07	3.80	3.69	3.63
315.0	50.71	5.78	4.79	4.40	4.07	3.96	3.74	3.69	3.58
360.0	73.45	11.29	4.90	4.46	4.13	3.96	3.74	3.69	3.58

C/γ(°)	90.0
0.0	3.58
45.0	3.63
90.0	3.58
135.0	3.58
180.0	3.52
225.0	3.63
270.0	3.58
315.0	3.58
360.0	3.58