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Nata

LumCAT: LM54D250115AT

Luminaire:

Report No: NATA0100

Voltage(V): 42.6000

Test No:

Current(A): 0.3200

LampCAT: LUMILEDS LUXEON 3030 2D(ROUND LES) Power (W): 13.6320

Lamp flux(lm): 2180.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 250

Width(mm): 250

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1810.23

Efficiency(%): 83.04%

Lumens(lm)/Power(W): 132.92

Central intensity(cd): 579.379

Maximum intensity(cd): 579.379

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=117.3

[C90/270]Total=117.3

Field angle(10%Imax): [C0/180]Total=156.2

[C90/270]Total=156.2

Maximum s/h(1/2): C0_180=1.46 C90_270=1.46

Maximum s/h(1/4): C0_180=1.55 C90_270=1.55

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.12%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 87.062%

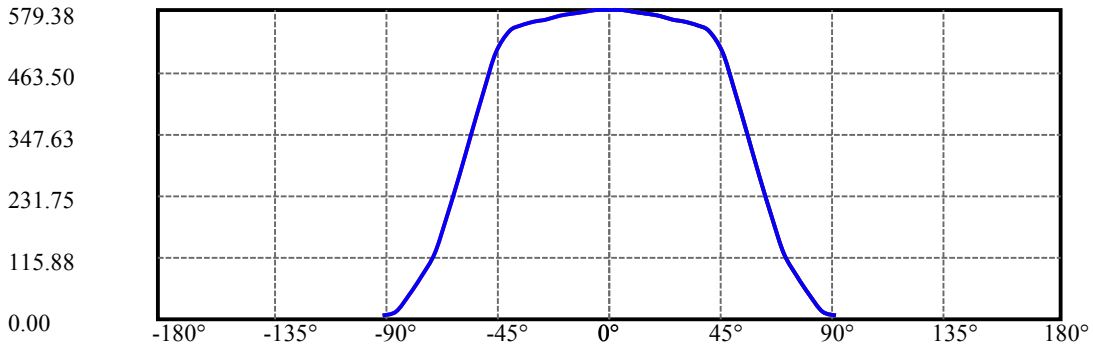
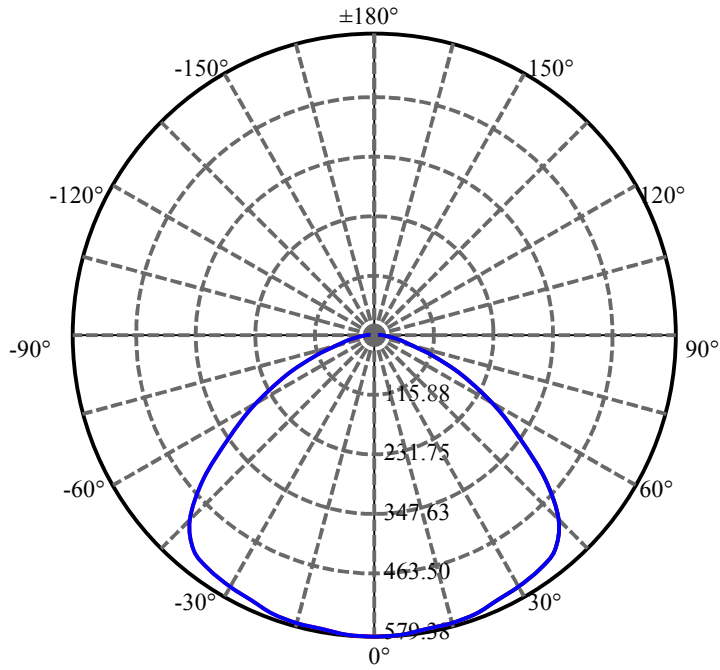
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	579.379	3.465	3.465	.159%	.191%
5.0	578.127	27.619	31.084	1.267%	1.717%
10.0	575.174	54.747	85.831	2.511%	4.741%
15.0	571.568	81.087	166.918	3.720%	9.221%
20.0	568.148	106.513	273.431	4.886%	15.105%
25.0	563.007	130.422	403.853	5.983%	22.309%
30.0	557.171	152.703	556.556	7.005%	30.745%
35.0	551.452	173.376	729.932	7.953%	40.323%
40.0	539.649	190.138	920.07	8.722%	50.826%
45.0	500.146	193.852	1113.922	8.892%	61.535%
50.0	431.126	181.029	1294.951	8.304%	71.535%
55.0	344.495	154.681	1449.632	7.095%	80.080%
60.0	269.432	127.900	1577.532	5.867%	87.145%
65.0	186.951	92.874	1670.405	4.260%	92.276%
70.0	122.328	63.009	1733.414	2.890%	95.756%
75.0	78.676	41.656	1775.07	1.911%	98.058%
80.0	45.098	24.344	1799.414	1.117%	99.402%
85.0	15.939	8.703	1808.118	.399%	99.883%
90.0	7.715	2.114	1810.232	.097%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	556.56	25.53%	30.75%
0-40	920.07	42.20%	50.83%
0-60	1577.53	72.36%	87.15%
0-90	1808.12	82.94%	99.88%
0-120	1808.12	82.94%	99.88%
0-180	1810.23	83.04%	100.00%
60-90	358.49	16.44%	19.80%
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%
0-54.95	1448.19	66.43%	80.00%

ZONAL LUMEN SUMMARY

0-10	85.83
10-20	187.60
20-30	283.13
30-40	363.51
40-50	374.88
50-60	282.58
60-70	155.88
70-80	66.00
80-90	8.70
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: ———

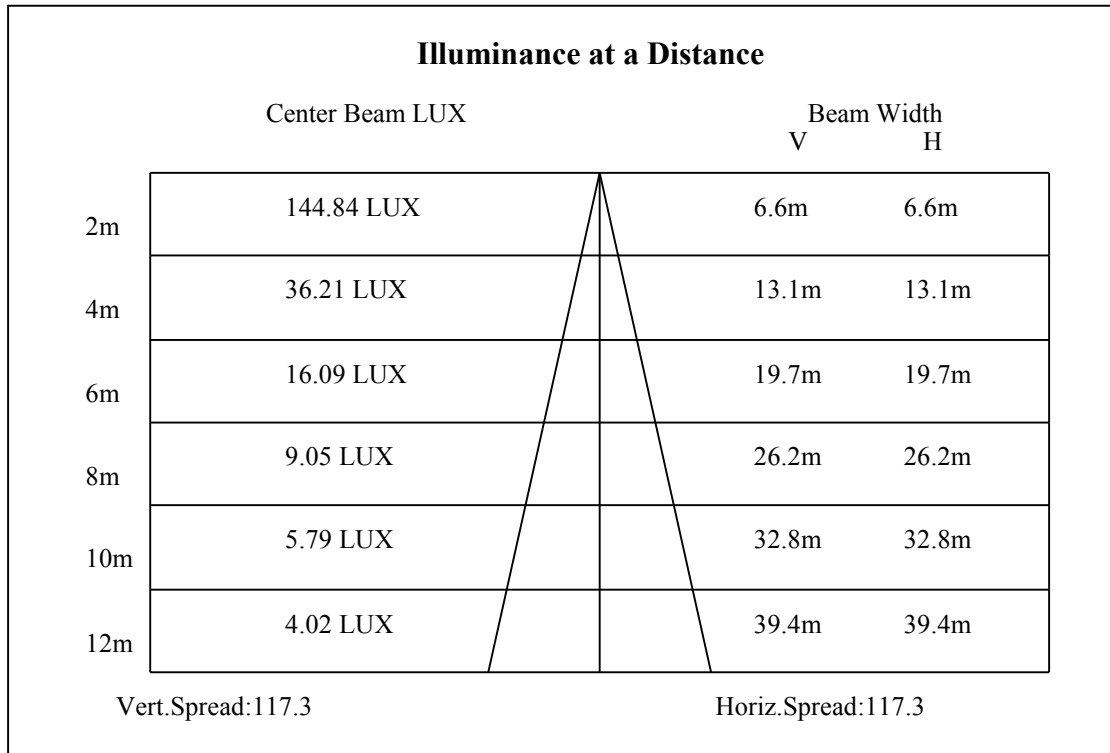
C90/C270: ———

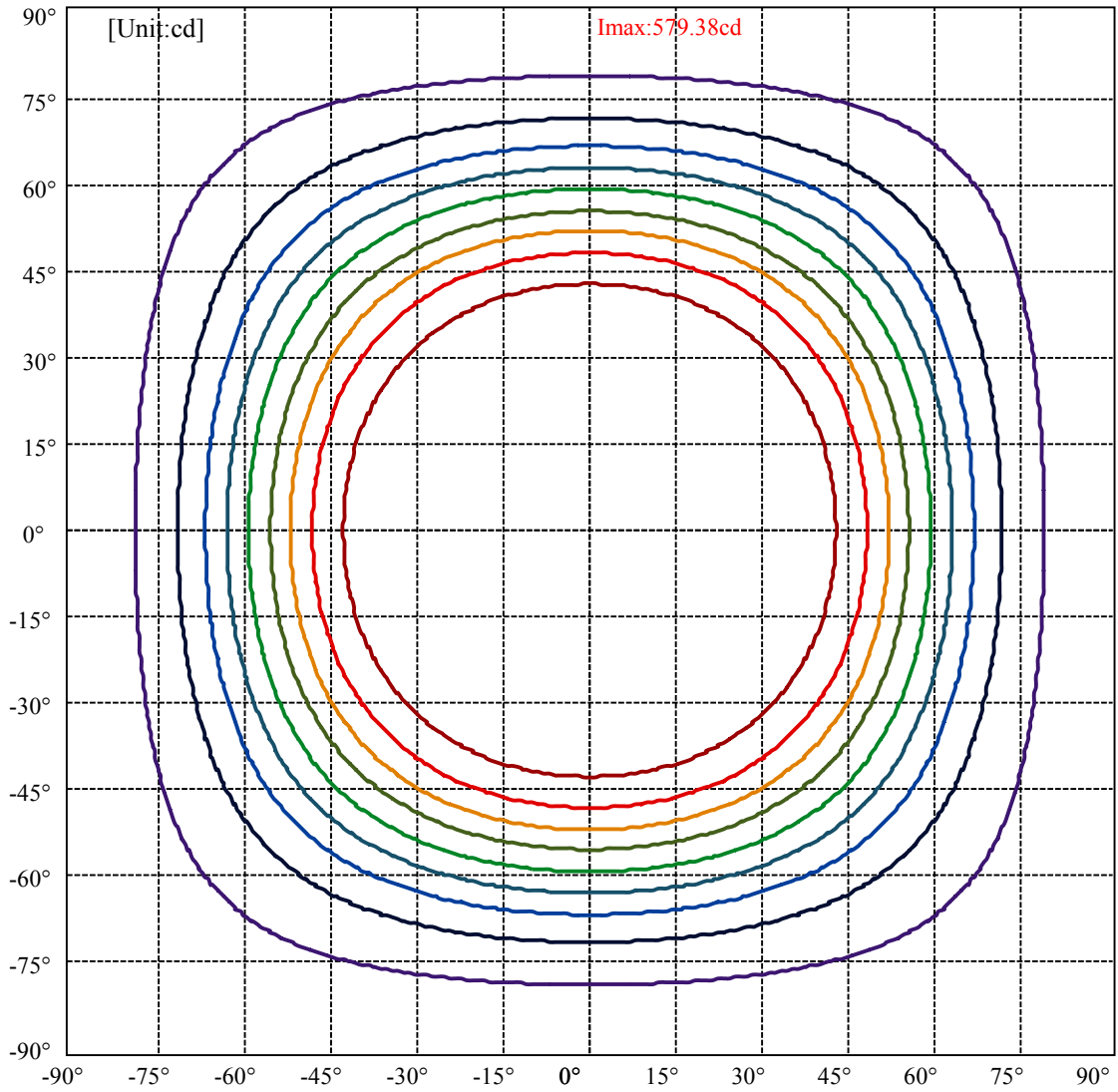
Field angle(10%Imax):C0/180Left:78.1 Right:78.1

:C90/270Left:78.1 Right:78.1

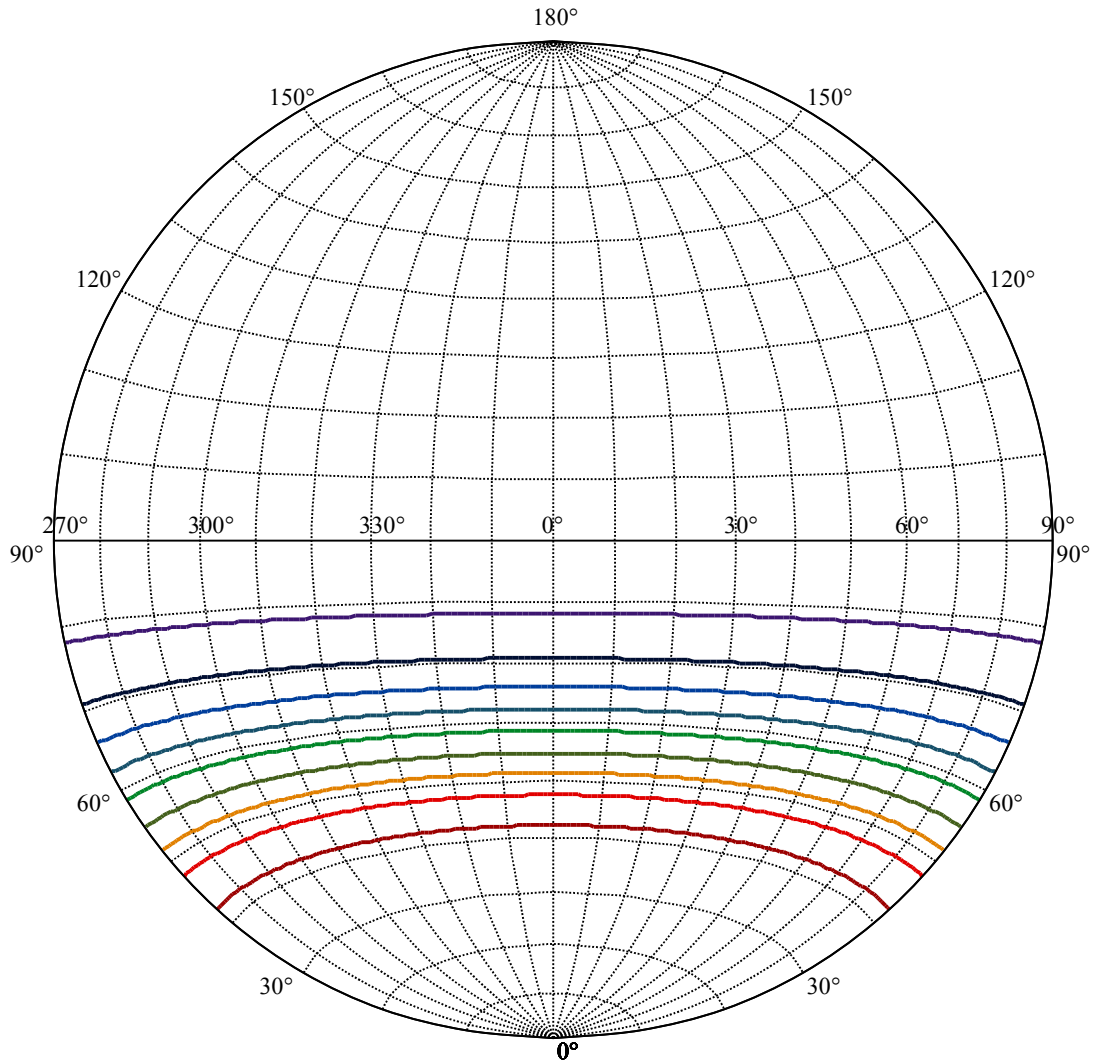
Beam Angle(50%Imax):C0/180Left:58.7 Right:58.7

:C90/270Left:58.7 Right:58.7





- (10%Imax) 57.9379
- (20%Imax) 115.876
- (30%Imax) 173.814
- (40%Imax) 231.752
- (50%Imax) 289.69
- (60%Imax) 347.628
- (70%Imax) 405.565
- (80%Imax) 463.503
- (90%Imax) 521.441



House

[Unit:cd]

Road

I_{max}:579.38

(10%I_{max}) 57.9379

(20%I_{max}) 115.876

(30%I_{max}) 173.814

(40%I_{max}) 231.752

(50%I_{max}) 289.69

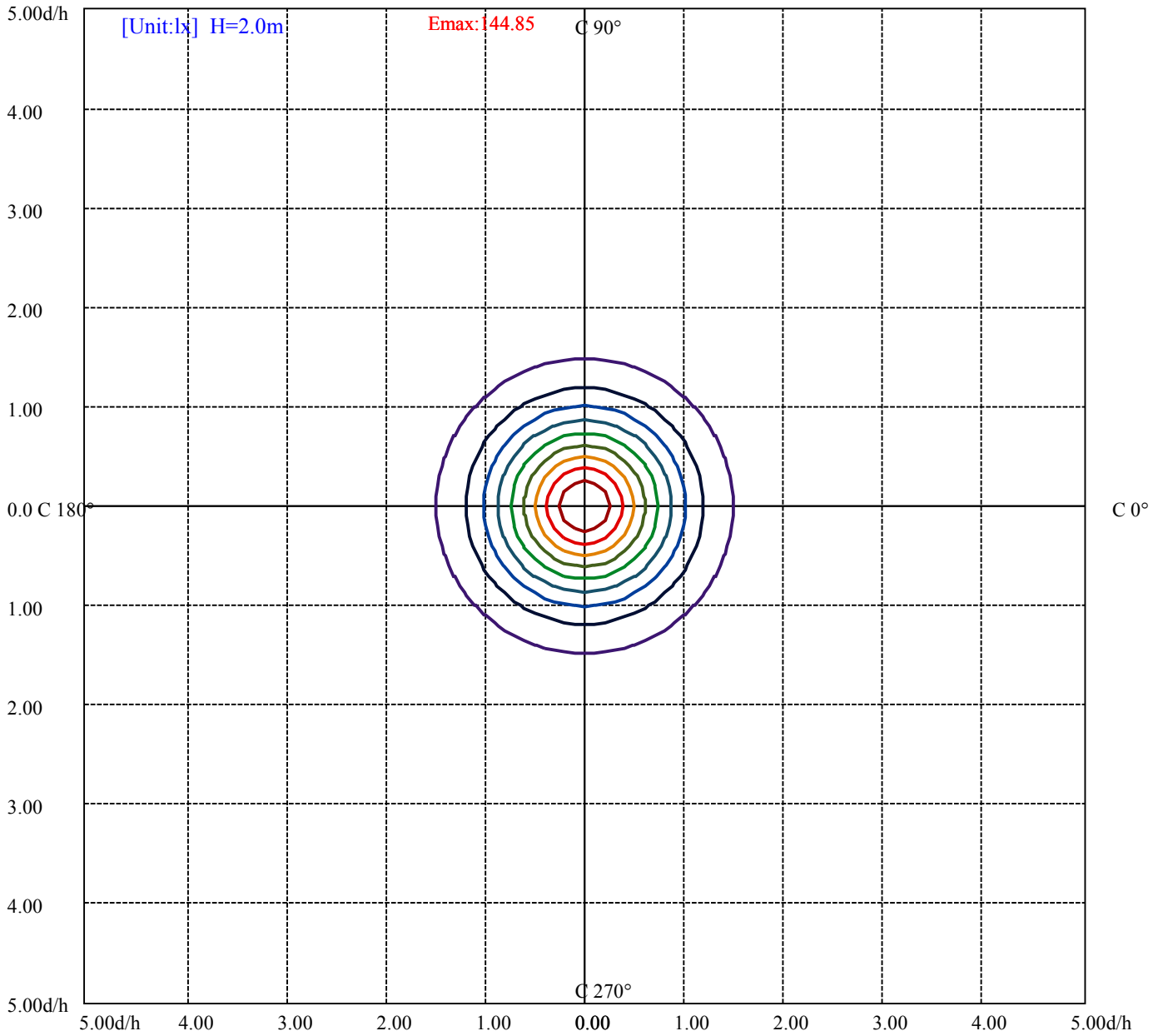
(60%I_{max}) 347.628

(70%I_{max}) 405.565

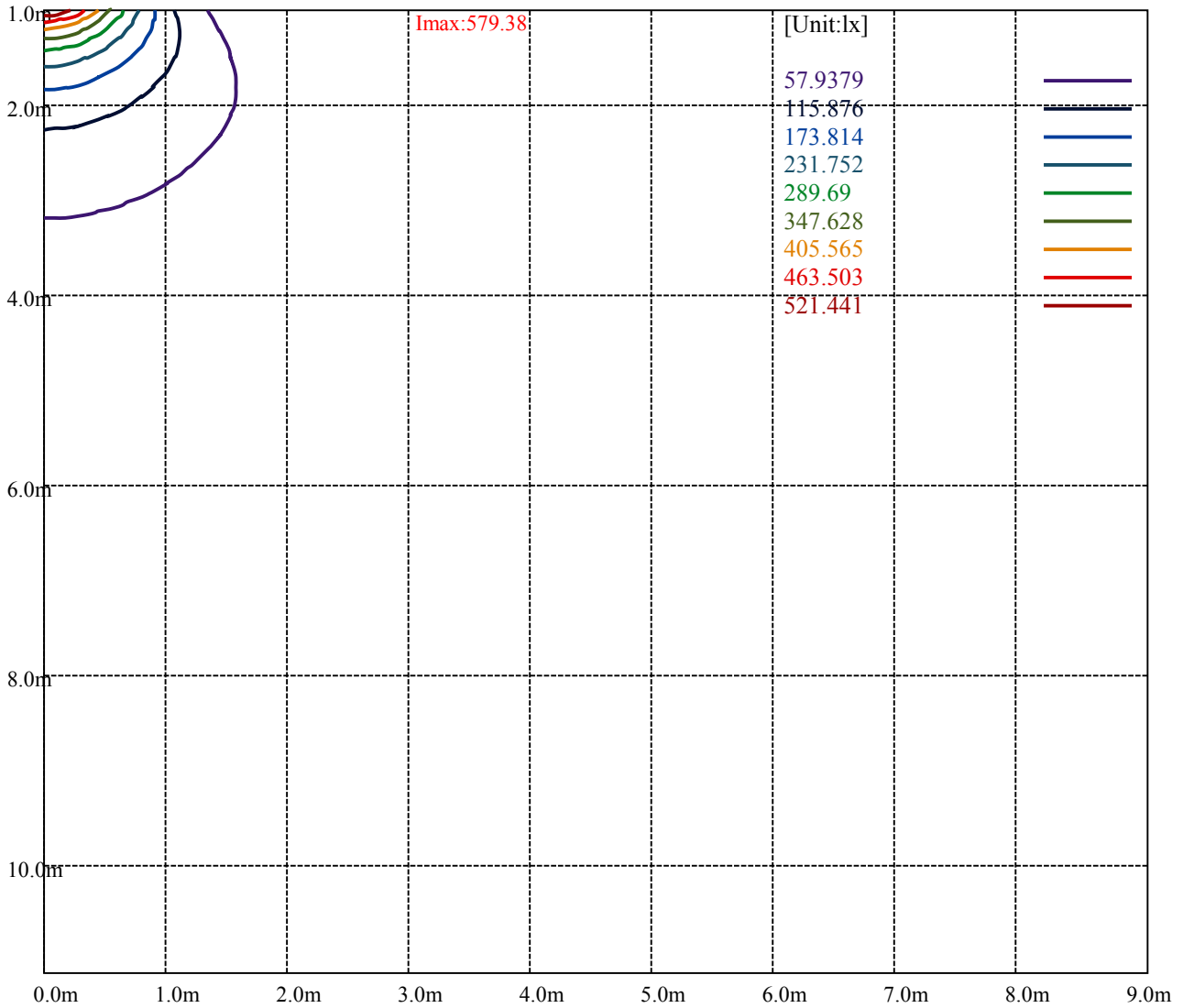
(80%I_{max}) 463.503

(90%I_{max}) 521.441





- (10%Emax) 14.48448
- (20%Emax) 28.969
- (30%Emax) 43.4535
- (40%Emax) 57.938
- (50%Emax) 72.4225
- (60%Emax) 86.90675
- (70%Emax) 101.3913
- (80%Emax) 115.8757
- (90%Emax) 130.3602



Luminance Table

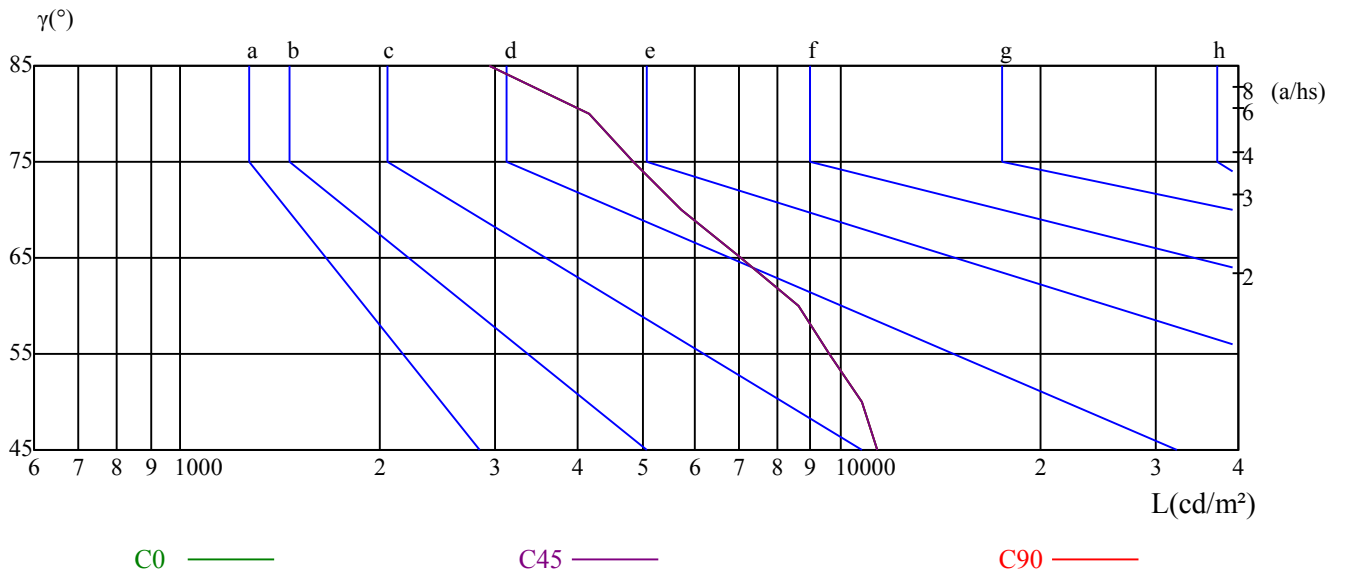
γ	45	50	55	60	65	70	75	80	85
C0	11317	10731	9610	8622	7078	5723	4864	4155	2926
C45	11317	10731	9610	8622	7078	5723	4864	4155	2926
C90	11317	10731	9610	8622	7078	5723	4864	4155	2926

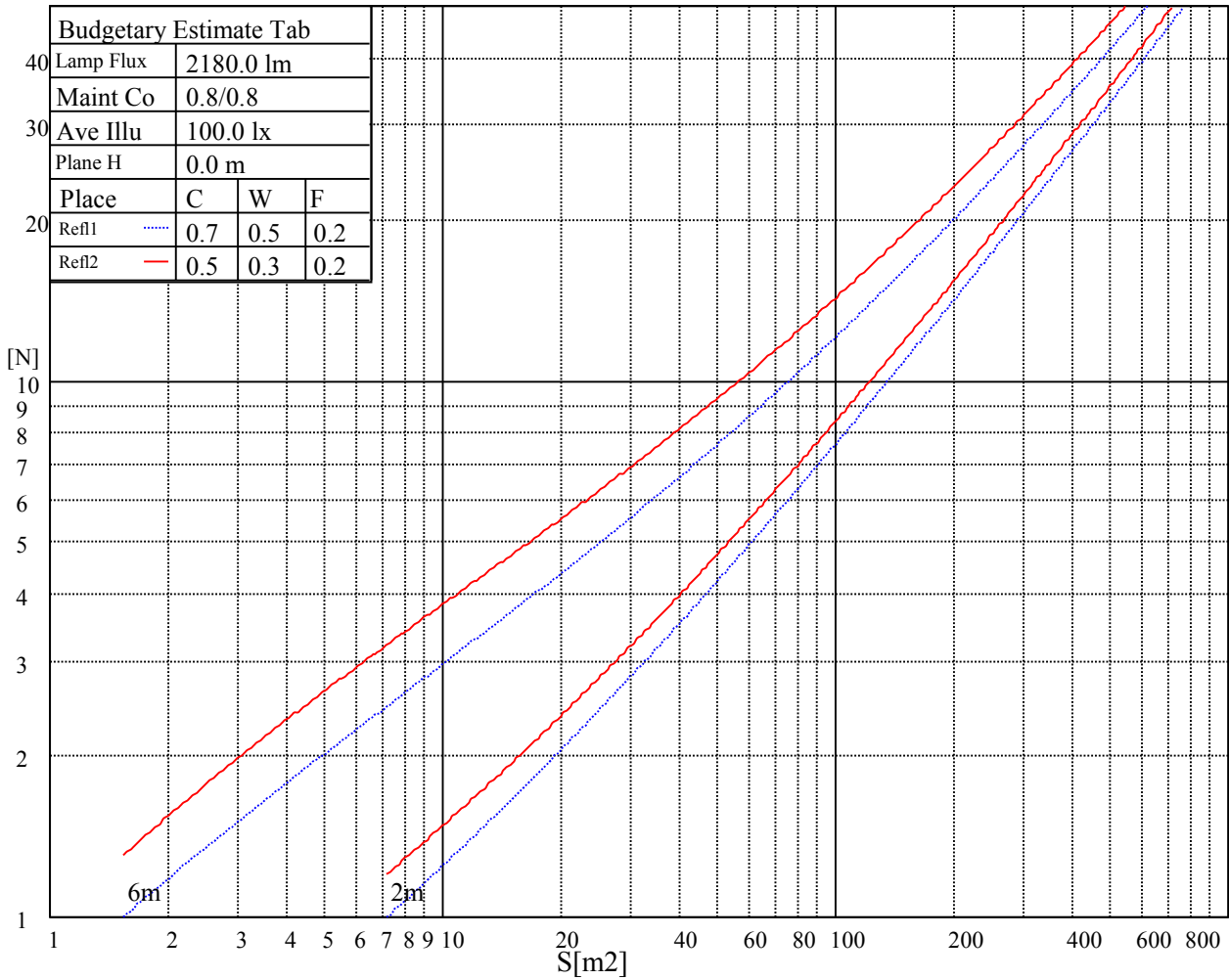
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7078	7078	7078	4864	4864	4864	2926	2926	2926

Glare Table

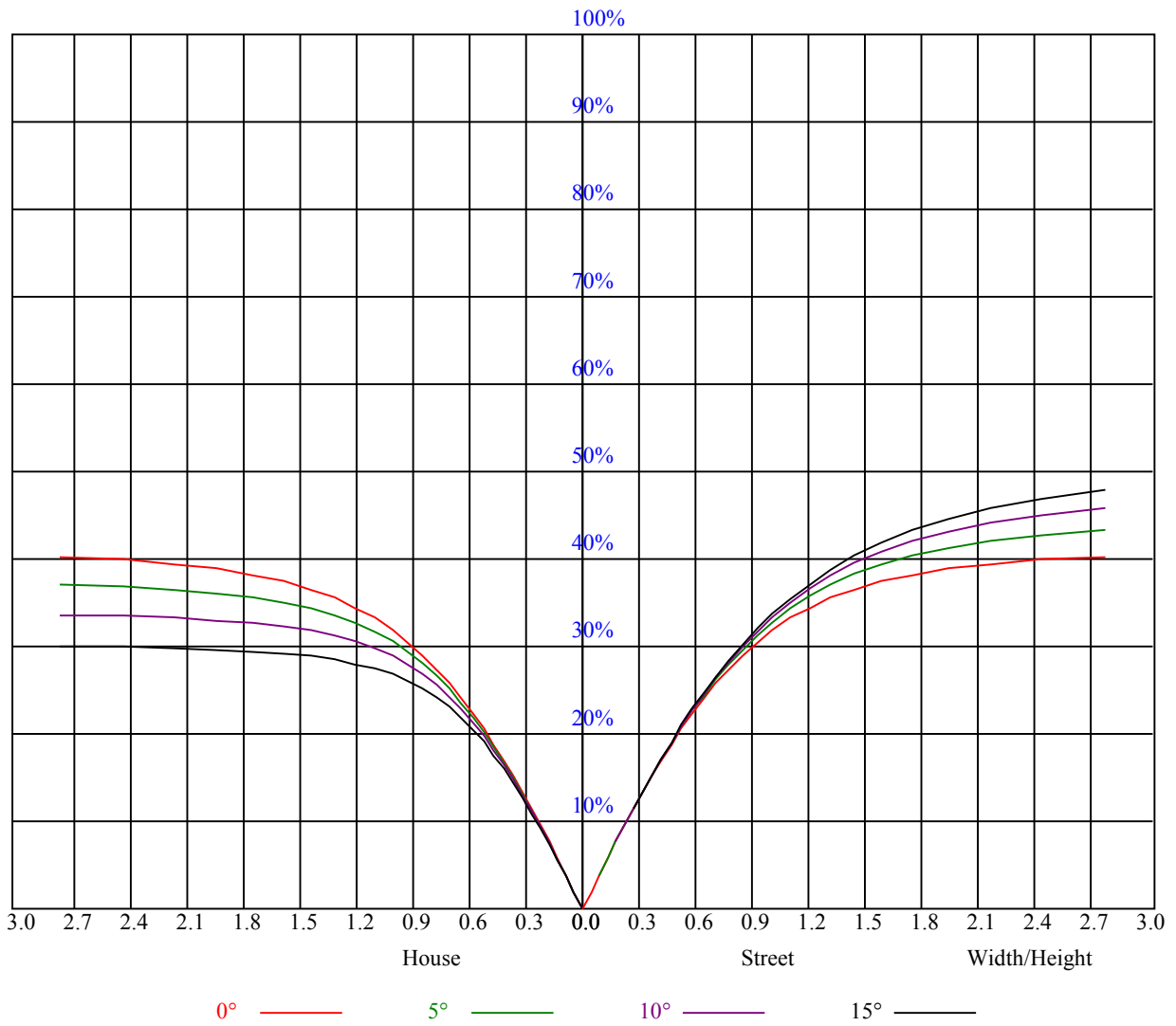
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.99	0.99	0.99	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.88	0.85	0.82	0.86	0.83	0.81	0.83	0.80	0.78	0.79	0.78	0.76	0.76	0.75	0.74	0.72
2	0.78	0.73	0.68	0.76	0.72	0.68	0.73	0.69	0.66	0.71	0.67	0.64	0.68	0.65	0.63	0.61
3	0.69	0.63	0.58	0.68	0.62	0.57	0.65	0.60	0.56	0.63	0.59	0.55	0.61	0.57	0.54	0.53
4	0.62	0.55	0.50	0.60	0.54	0.49	0.58	0.53	0.49	0.57	0.52	0.48	0.55	0.51	0.47	0.46
5	0.55	0.48	0.43	0.54	0.48	0.43	0.53	0.47	0.42	0.51	0.46	0.42	0.50	0.45	0.41	0.40
6	0.50	0.43	0.38	0.49	0.42	0.38	0.48	0.42	0.37	0.46	0.41	0.37	0.45	0.40	0.37	0.35
7	0.45	0.38	0.34	0.45	0.38	0.33	0.43	0.38	0.33	0.42	0.37	0.33	0.41	0.36	0.33	0.31
8	0.42	0.35	0.30	0.41	0.34	0.30	0.40	0.34	0.30	0.39	0.34	0.30	0.38	0.33	0.29	0.28
9	0.38	0.32	0.27	0.38	0.31	0.27	0.37	0.31	0.27	0.36	0.31	0.27	0.35	0.30	0.27	0.25
10	0.35	0.29	0.25	0.35	0.29	0.25	0.34	0.28	0.24	0.33	0.28	0.24	0.33	0.28	0.24	0.23



Nata LM54D250120AT

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	576.72	581.29	583.93	587.18	590.81	589.71	582.72	575.12	554.58
45.0	580.18	582.94	584.42	584.26	583.38	578.64	570.77	561.74	545.94
90.0	580.29	579.14	576.17	572.75	570.00	566.70	561.96	556.79	551.06
135.0	580.13	574.57	567.63	558.88	550.67	541.15	534.49	530.36	527.00
180.0	577.10	570.82	561.36	551.33	542.80	534.16	527.83	522.65	516.59
225.0	580.18	574.40	567.63	560.36	552.88	544.67	538.51	532.95	517.36
270.0	580.29	578.92	576.55	574.68	573.58	570.99	565.26	561.69	556.84
315.0	580.13	582.94	583.71	583.10	581.07	578.04	575.83	570.33	547.81
360.0	576.72	581.29	583.93	587.18	590.81	589.71	582.72	575.12	554.58

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	480.92	375.26	296.48	272.97	201.84	134.01	88.42	53.29	19.27
45.0	499.64	446.18	373.01	285.19	203.76	130.70	85.39	50.60	19.21
90.0	527.28	467.98	370.03	294.72	196.33	124.98	79.28	44.49	16.85
135.0	510.76	467.87	393.49	292.24	203.65	133.35	83.14	47.79	17.73
180.0	486.15	399.98	298.63	254.86	185.87	124.59	81.76	45.59	15.42
225.0	477.23	423.00	341.74	240.10	169.90	108.79	68.71	38.04	11.56
270.0	522.76	442.43	355.94	275.23	173.65	116.44	74.49	42.78	13.32
315.0	496.44	426.30	326.65	240.16	160.60	105.76	68.21	38.21	14.15
360.0	480.92	375.26	296.48	272.97	201.84	134.01	88.42	53.29	19.27

C/γ(°)	90.0
0.0	7.65
45.0	7.32
90.0	7.38
135.0	7.98
180.0	8.15
225.0	8.20
270.0	7.38
315.0	7.65
360.0	7.65