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Nata

LumCAT: 1655-S	
Luminaire: 92.70.064.00	
Report No: NATA0100	Voltage(V): 36.0000
Test No: GC2018072815	Current(A): 0.3000
LampCAT: BRIDGELUX V6HD	Power (W): 10.8000
Lamp flux(lm): 1137.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 32	Width(mm): 32
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 971.35
Efficiency(%): 85.43%
Lumens(lm)/Power(W): 91.25
Central intensity(cd): 2519.794
Maximum intensity(cd): 2519.794
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=31.7
[C90/270]Total=31.7
Field angle(10%Imax): [C0/180]Total=65.4
[C90/270]Total=65.4
Maximum s/h(1/2): C0_180=0.52 C90_270=0.52
Maximum s/h(1/4): C0_180=0.54 C90_270=0.54
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.67%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.885%

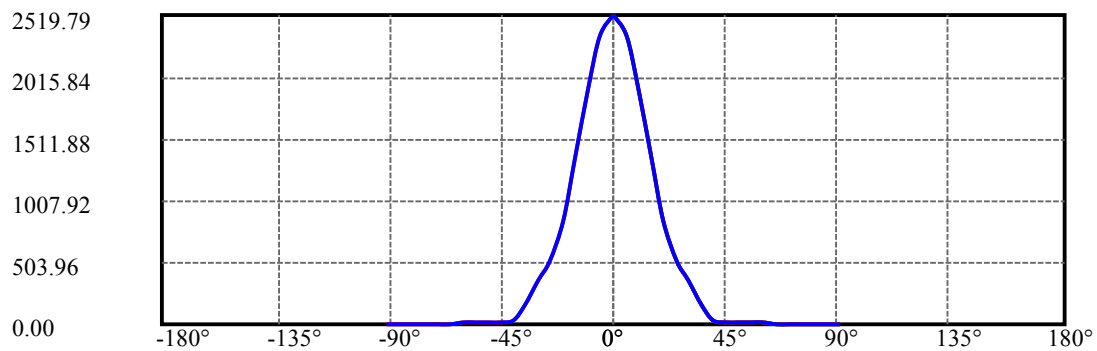
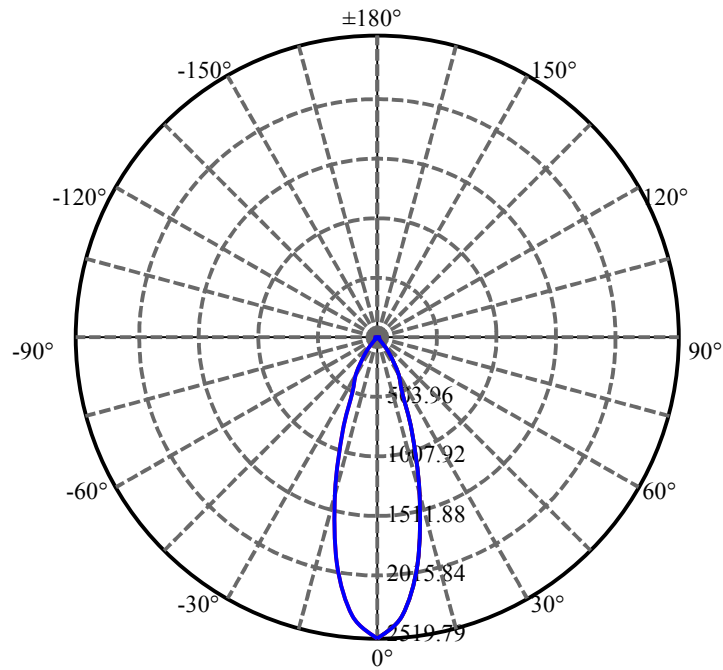
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2519.794	15.069	15.069	1.325%	1.551%
5.0	2341.273	111.850	126.919	9.837%	13.066%
10.0	1929.107	183.618	310.538	16.149%	31.970%
15.0	1348.627	191.328	501.865	16.827%	51.667%
20.0	840.030	157.484	659.349	13.851%	67.880%
25.0	510.139	118.175	777.524	10.394%	80.046%
30.0	354.666	97.203	874.727	8.549%	90.053%
35.0	163.215	51.314	926.042	4.513%	95.336%
40.0	28.774	10.138	936.18	.892%	96.380%
45.0	15.430	5.980	942.16	.526%	96.995%
50.0	11.362	4.771	946.931	.420%	97.486%
55.0	9.208	4.135	951.066	.364%	97.912%
60.0	7.859	3.731	954.796	.328%	98.296%
65.0	6.903	3.429	958.225	.302%	98.649%
70.0	6.345	3.268	961.494	.287%	98.986%
75.0	5.808	3.075	964.569	.270%	99.302%
80.0	5.285	2.853	967.422	.251%	99.596%
85.0	4.934	2.694	970.117	.237%	99.873%
90.0	4.487	1.230	971.346	.108%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	874.73	76.93%	90.05%
0-40	936.18	82.34%	96.38%
0-60	954.80	83.98%	98.30%
0-90	970.12	85.32%	99.87%
0-120	970.12	85.32%	99.87%
0-180	971.35	85.43%	100.00%
60-90	19.05	1.68%	1.96%
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%
0-24.98	777.08	68.34%	80.00%

ZONAL LUMEN SUMMARY

0-10	310.54
10-20	348.81
20-30	215.38
30-40	61.45
40-50	10.75
50-60	7.87
60-70	6.70
70-80	5.93
80-90	2.69
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:

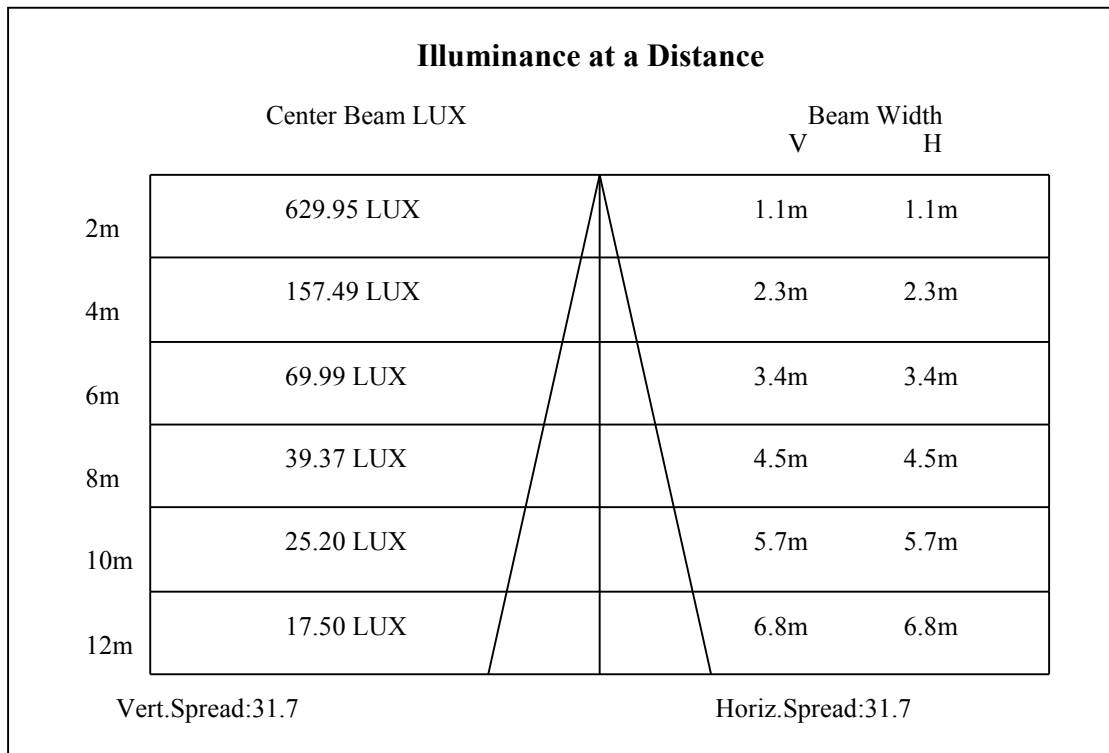
C90/C270:

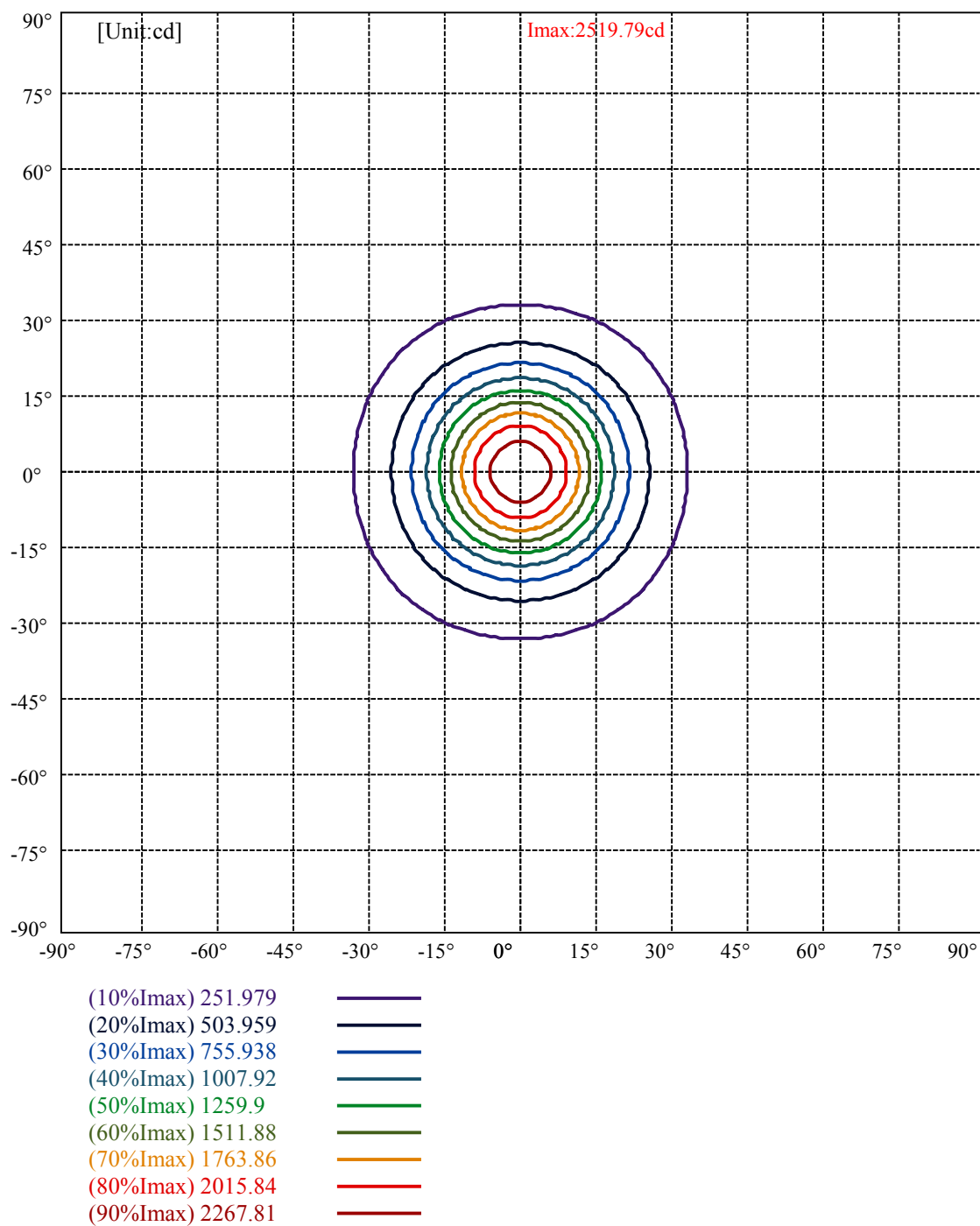
Field angle(10%Imax):C0/180Left:32.7 Right:32.7

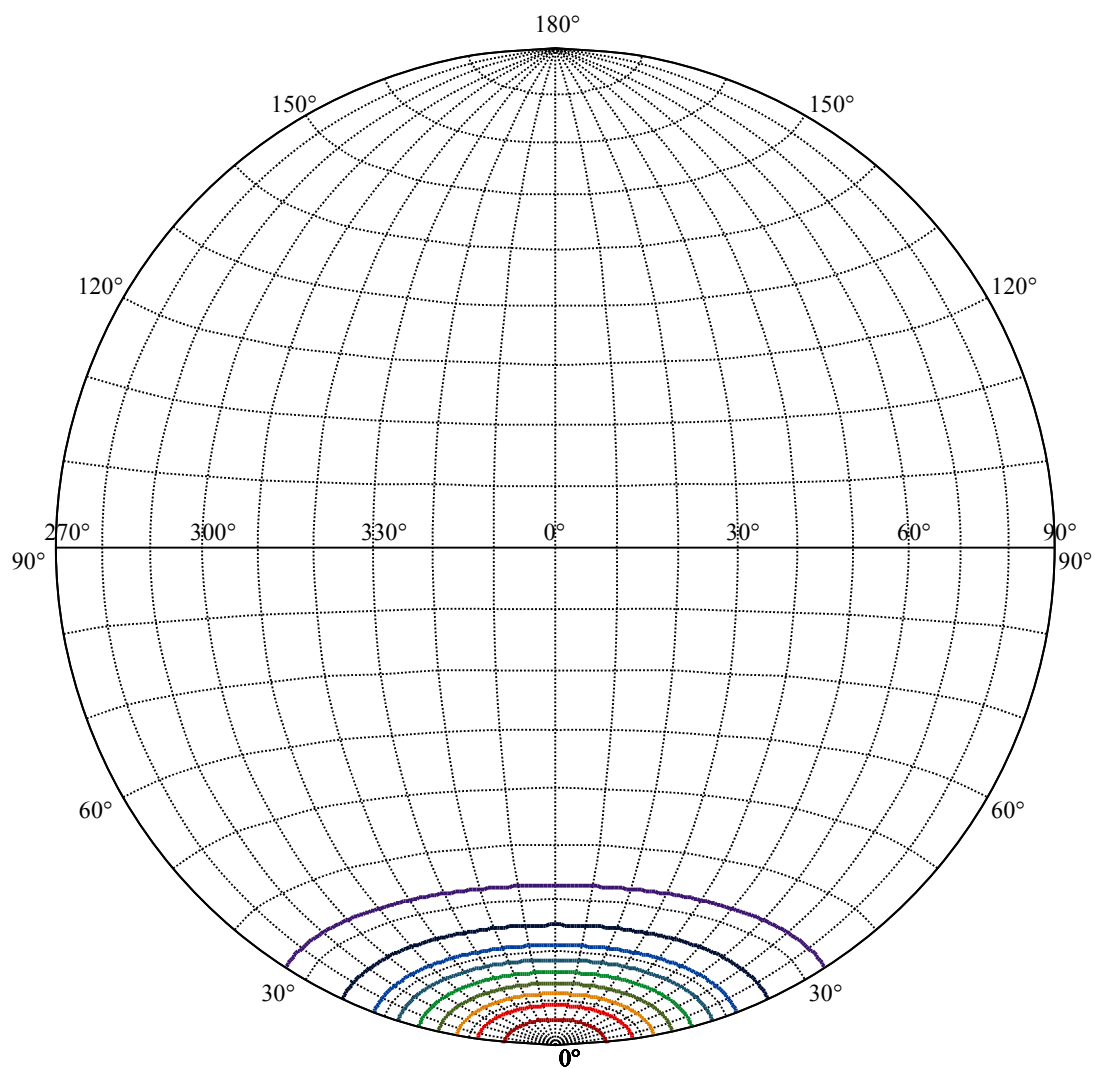
:C90/270Left:32.7 Right:32.7

Beam Angle(50%Imax):C0/180Left:15.9 Right:15.9

:C90/270Left:15.9 Right:15.9







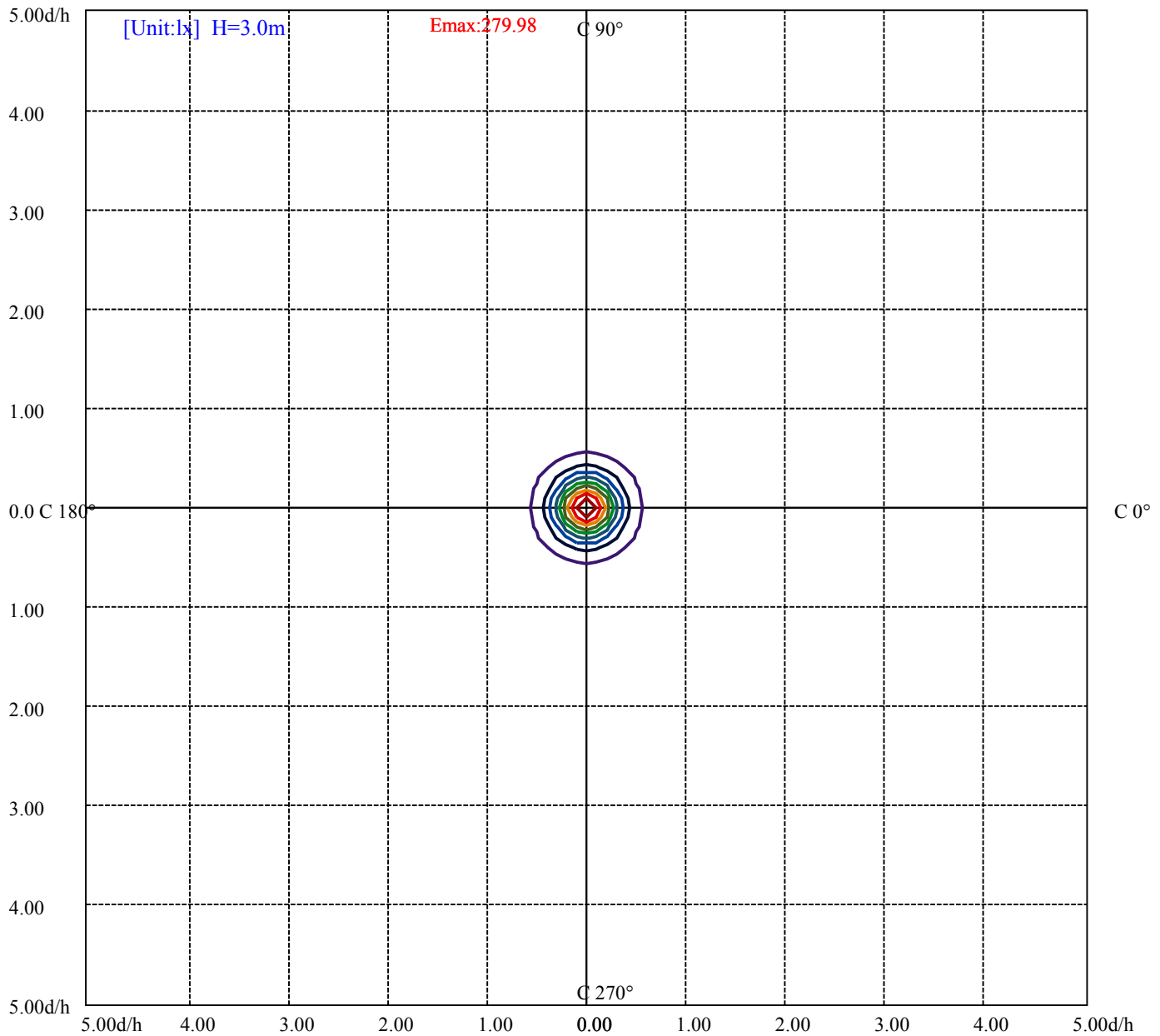
House

[Unit:cd]

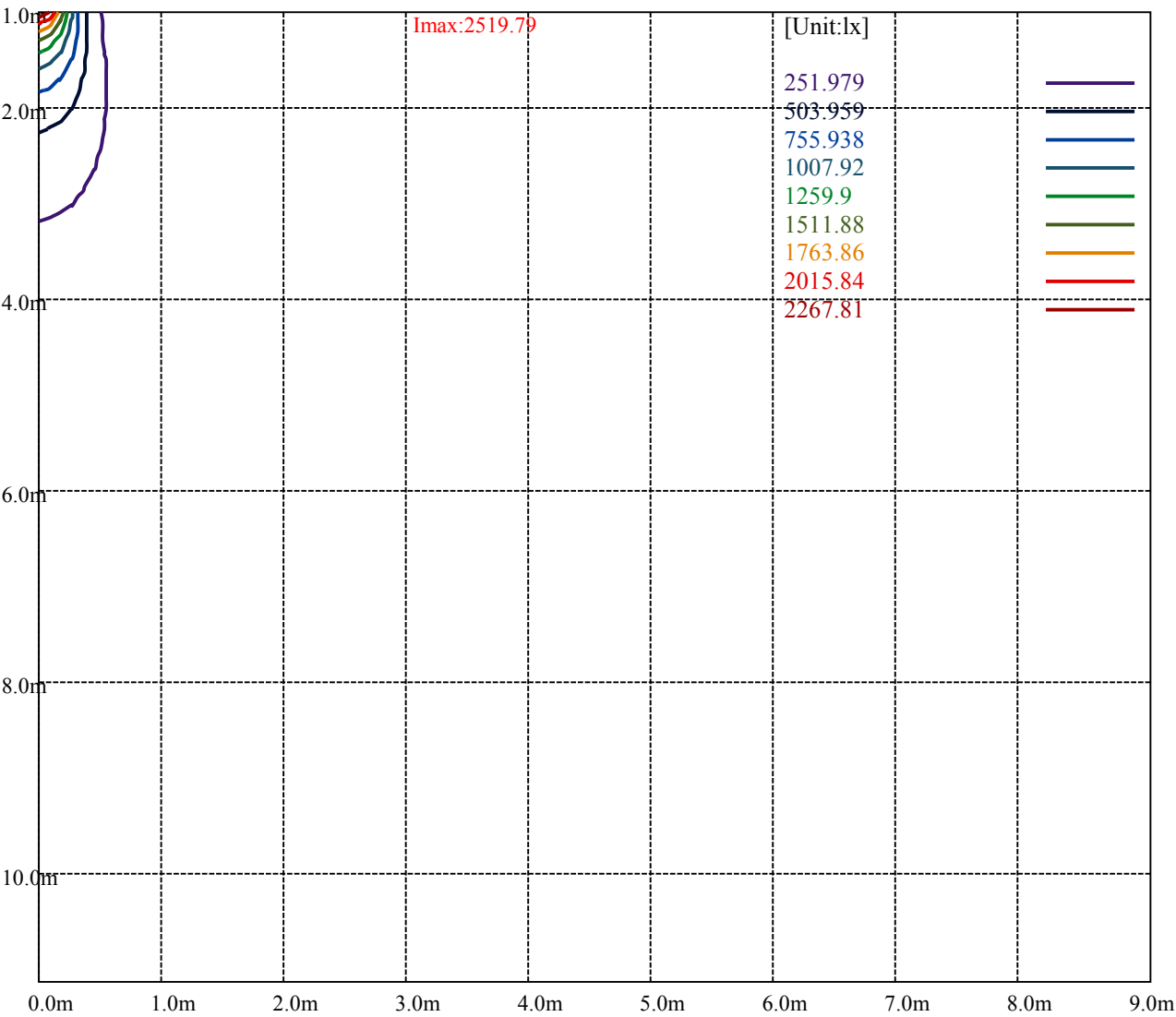
Road

Imax:2519.79

(10%Imax)	251.979	—
(20%Imax)	503.959	—
(30%Imax)	755.938	—
(40%Imax)	1007.92	—
(50%Imax)	1259.9	—
(60%Imax)	1511.88	—
(70%Imax)	1763.86	—
(80%Imax)	2015.84	—
(90%Imax)	2267.81	—



(10%Emax)	27.99767	—
(20%Emax)	55.99533	—
(30%Emax)	83.993	—
(40%Emax)	111.9911	—
(50%Emax)	139.9878	—
(60%Emax)	167.9855	—
(70%Emax)	195.9833	—
(80%Emax)	223.9811	—
(90%Emax)	251.9789	—



Luminance Table

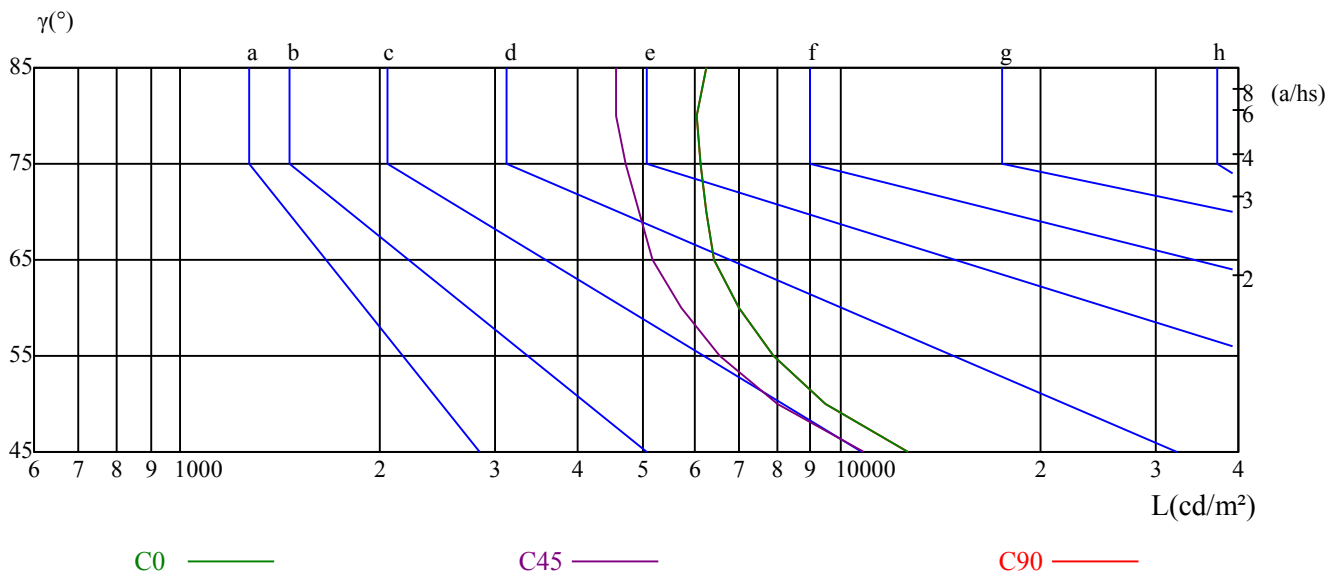
γ	45	50	55	60	65	70	75	80	85
C0	12628	9488	7911	7007	6446	6271	6146	6067	6242
C45	10804	7997	6564	5719	5170	4935	4735	4563	4564
C90	12628	9488	7911	7007	6446	6271	6146	6067	6242

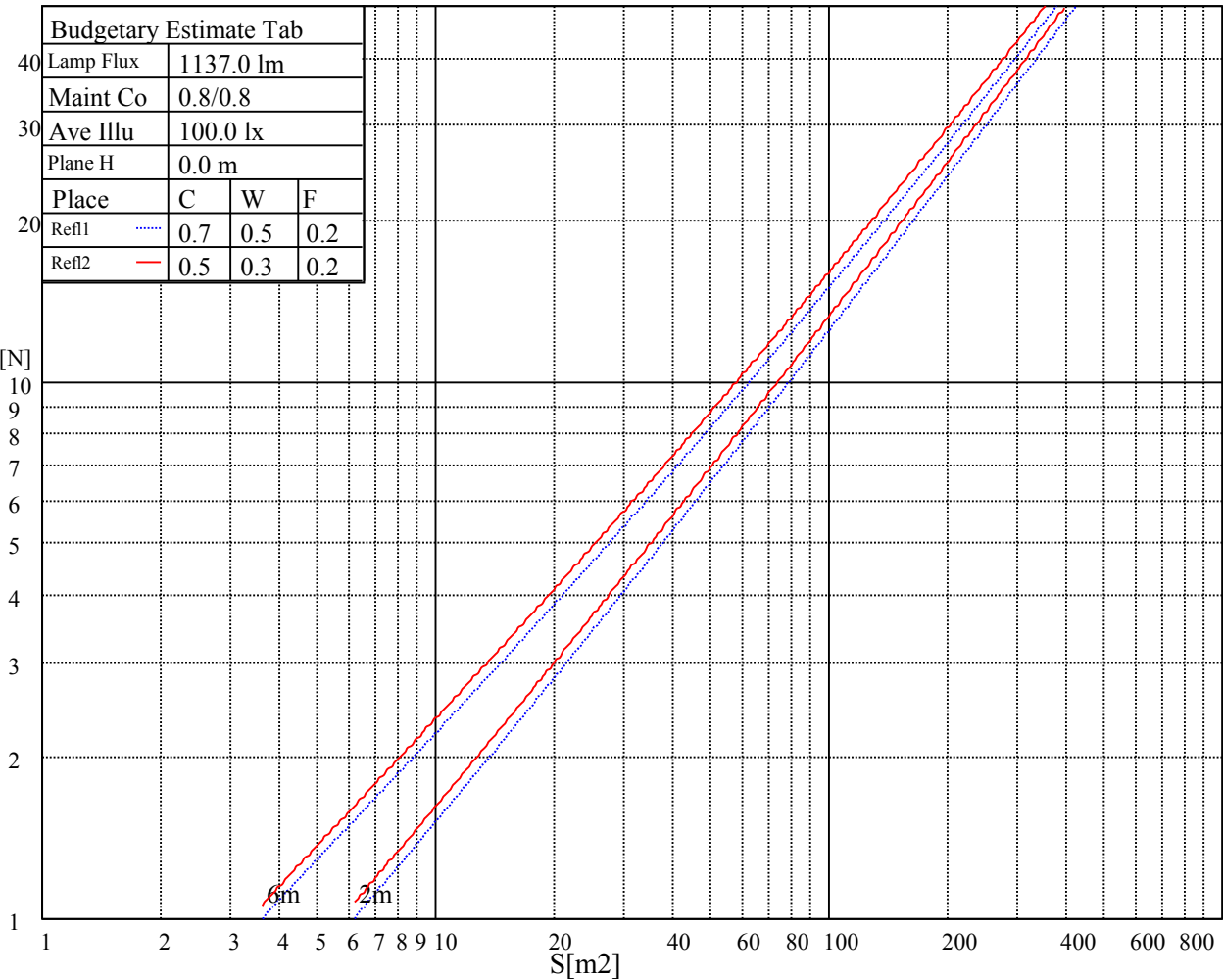
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
15950	15950	15950	21916	21916	21916	55289	55289	55289

Glare Table

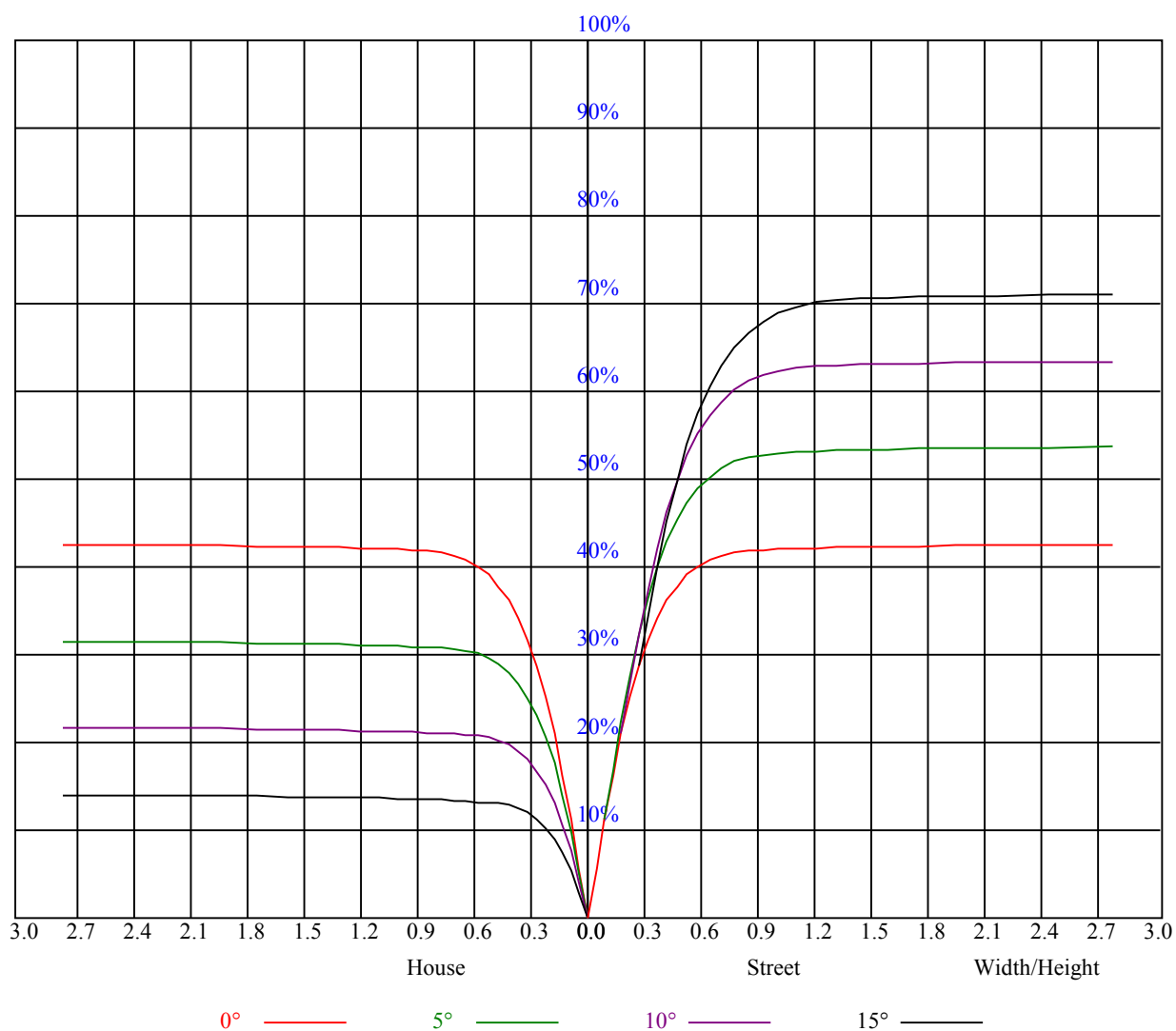
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOC	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	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.95	0.93	0.91	0.93	0.91	0.89	0.90	0.88	0.87	0.87	0.85	0.84	0.84	0.83	0.82	0.80
2	0.90	0.87	0.84	0.89	0.86	0.83	0.86	0.83	0.81	0.83	0.81	0.80	0.81	0.79	0.78	0.77
3	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.73
4	0.82	0.78	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.72	0.76	0.73	0.72	0.70
5	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.69	0.73	0.71	0.69	0.68
6	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.65
7	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.57



Nata 1655-S

Intensity data(cd)

Appendix Page: 14 Total:14

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2507.82	2411.47	2094.90	1575.16	994.87	573.69	411.82	278.59	34.41
45.0	2530.39	2305.76	1914.86	1295.48	753.72	480.09	349.06	118.26	21.75
90.0	2498.46	2218.77	1692.43	1069.53	607.05	387.21	252.05	60.45	18.88
135.0	2542.50	2263.37	1814.11	1214.54	721.24	451.46	312.72	103.62	20.37
180.0	2507.82	2250.71	1756.30	1094.91	725.70	475.30	306.83	86.55	19.60
225.0	2530.39	2358.07	1960.01	1424.86	898.14	552.27	393.54	167.54	24.67
270.0	2498.46	2488.55	2143.35	1621.41	1066.44	607.27	403.56	279.14	53.74
315.0	2542.50	2433.49	2056.91	1493.13	953.08	553.81	407.75	211.58	36.78
360.0	2507.82	2411.47	2094.90	1575.16	994.87	573.69	411.82	278.59	34.41
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.44	12.44	9.91	8.37	7.21	6.44	5.78	5.40	4.96
45.0	13.32	10.85	8.86	7.65	6.77	6.17	5.62	5.18	4.79
90.0	12.44	10.30	8.70	7.65	6.99	6.50	5.67	5.23	4.73
135.0	12.88	10.35	8.53	7.60	6.77	6.55	6.00	5.29	4.90
180.0	12.50	10.24	8.48	7.32	6.61	6.06	5.78	5.23	4.96
225.0	15.42	11.12	8.86	7.54	6.61	6.06	5.67	5.18	4.84
270.0	20.10	12.99	10.35	8.53	7.21	6.61	6.11	5.56	5.40
315.0	18.33	12.61	9.97	8.20	7.05	6.39	5.84	5.23	4.90
360.0	18.44	12.44	9.91	8.37	7.21	6.44	5.78	5.40	4.96
C/γ(°)	90.0								
0.0	4.62								
45.0	4.40								
90.0	4.40								
135.0	4.40								
180.0	4.40								
225.0	4.57								
270.0	4.51								
315.0	4.57								
360.0	4.62								