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Nata

LumCAT: 1-1007-M
Luminaire: BJB 47.360.1030
Report No: NATA0100
Test No: GC2019101909
LampCAT: LUMILEDS LUXEON 1203
Lamp flux(lm): 1293.3
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 35.4700
Current(A): 0.2970
Power (W): 10.5000
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 989.52
Efficiency(%): 76.51%
Lumens(lm)/Power(W): 94.24
Central intensity(cd): 3219.469
Maximum intensity(cd): 3219.469
Angle of maximum intensity: $C=0.0$ $\gamma=0.0$
Beam Angle(50%Imax): [C0/180]Total=33.2
[C90/270]Total=33.2
Field angle(10%Imax): [C0/180]Total=49.2
[C90/270]Total=49.2
Maximum s/h(1/2): C0_180=0.55 C90_270=0.55
Maximum s/h(1/4): C0_180=0.52 C90_270=0.52
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.51%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.179%

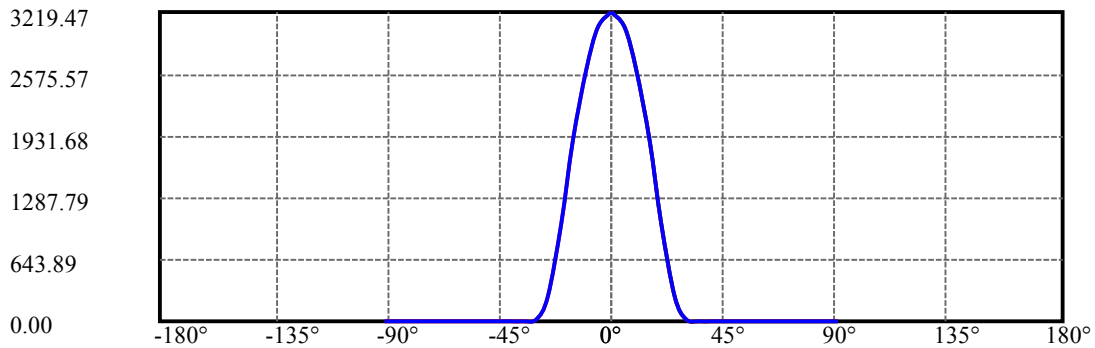
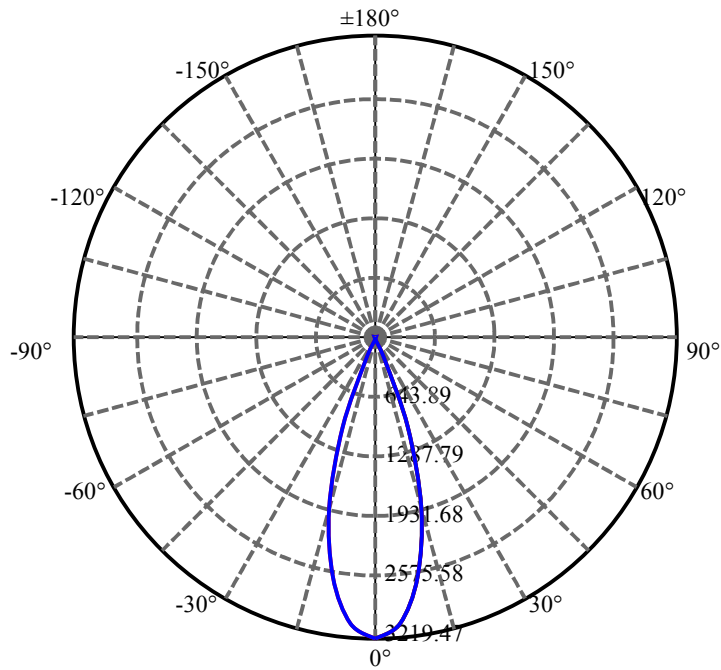
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3219.469	0.000	0	.000%	.000%
5.0	3065.344	75.133	75.133	5.809%	7.593%
10.0	2611.898	203.093	278.226	15.703%	28.117%
15.0	1881.773	266.562	544.788	20.611%	55.055%
20.0	1019.524	239.108	783.895	18.488%	79.219%
25.0	263.981	134.616	918.511	10.409%	92.824%
30.0	18.865	35.794	954.306	2.768%	96.441%
35.0	8.972	4.099	958.405	.317%	96.855%
40.0	7.235	2.704	961.109	.209%	97.128%
45.0	6.546	2.552	963.661	.197%	97.386%
50.0	6.188	2.573	966.234	.199%	97.646%
55.0	5.878	2.623	968.857	.203%	97.911%
60.0	5.569	2.646	971.503	.205%	98.179%
65.0	5.428	2.673	974.176	.207%	98.449%
70.0	7.059	3.162	977.338	.244%	98.768%
75.0	7.207	3.729	981.067	.288%	99.145%
80.0	5.020	3.272	984.339	.253%	99.476%
85.0	4.760	2.658	986.997	.205%	99.745%
90.0	4.472	2.528	989.524	.195%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	954.31	73.79%	96.44%
0-40	961.11	74.31%	97.13%
0-60	971.50	75.12%	98.18%
0-90	987.00	76.32%	99.74%
0-120	987.00	76.32%	99.74%
0-180	989.52	76.51%	100.00%
60-90	18.14	1.40%	1.83%
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%
0-20.29	791.62	61.21%	80.00%

ZONAL LUMEN SUMMARY

0-10	278.23
10-20	505.67
20-30	170.41
30-40	6.80
40-50	5.12
50-60	5.27
60-70	5.84
70-80	7.00
80-90	2.66
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: —————

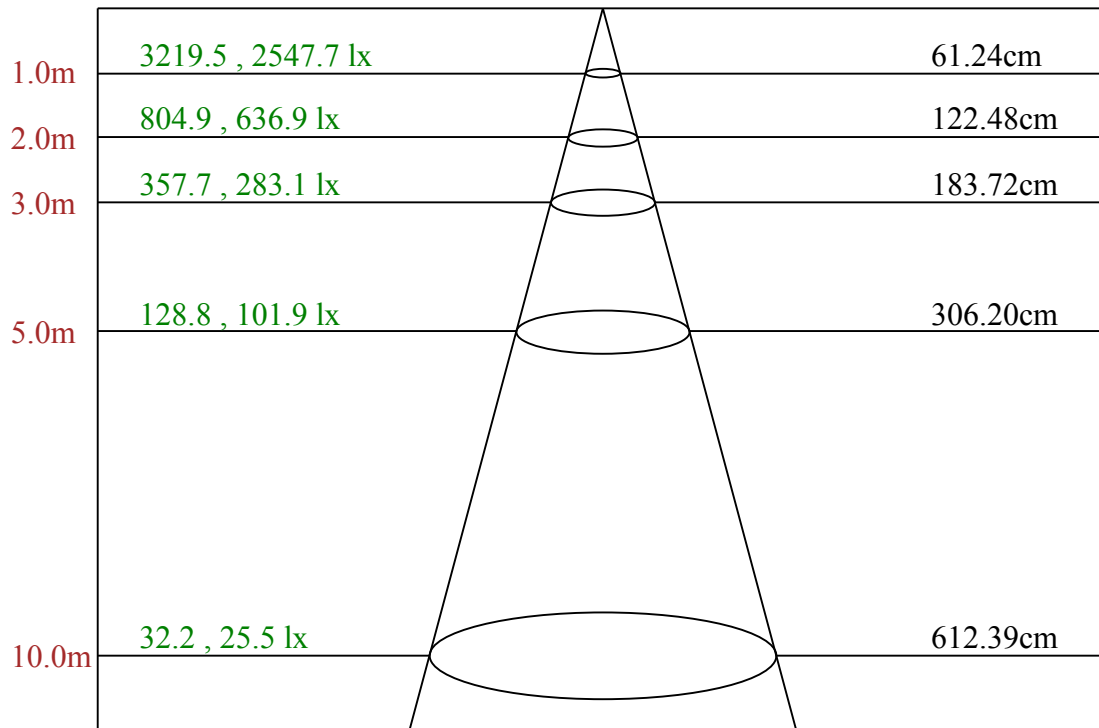
C90/C270: —————

Field angle(10%Imax):C0/180Left:24.6 Right:24.6

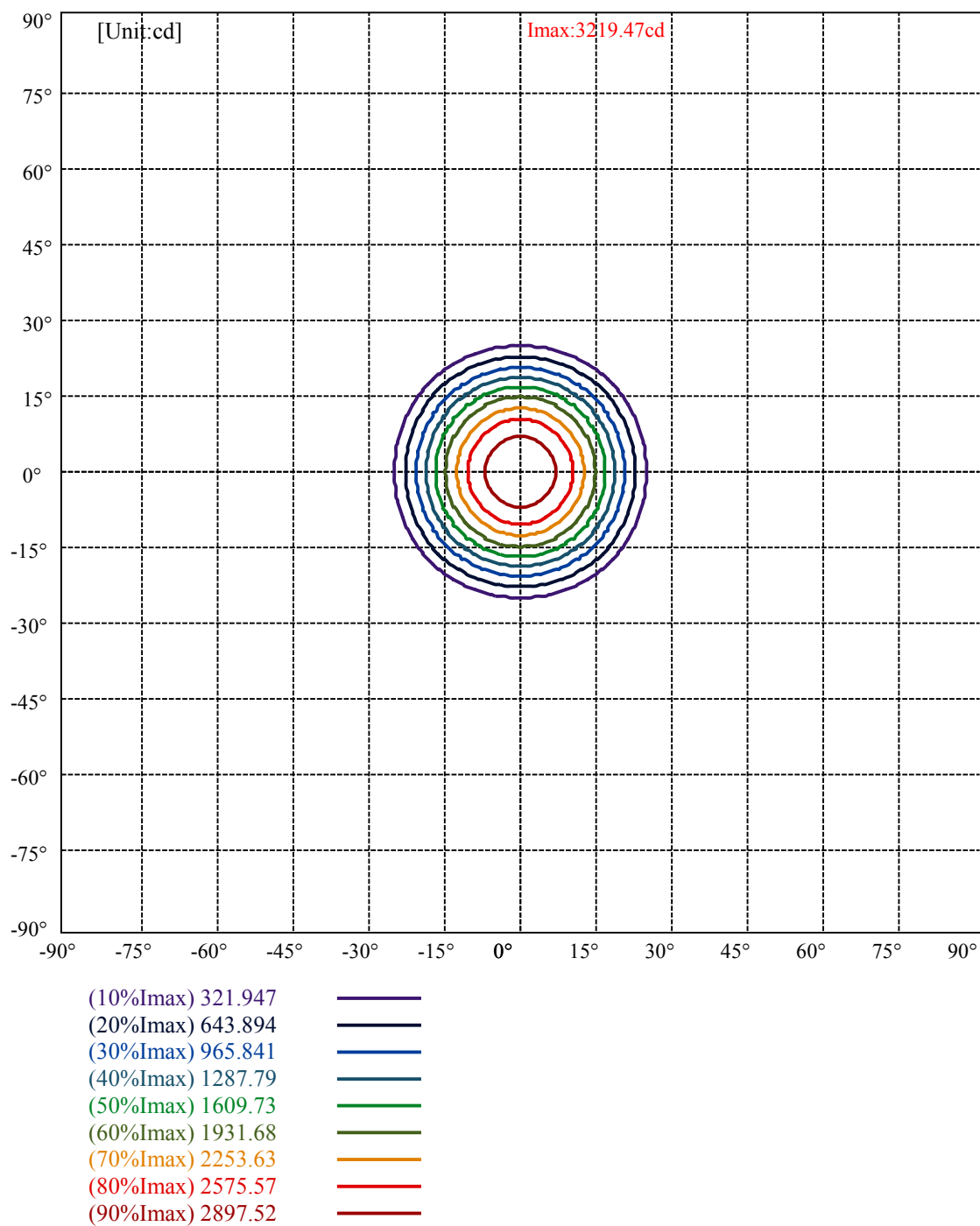
:C90/270Left:24.6 Right:24.6

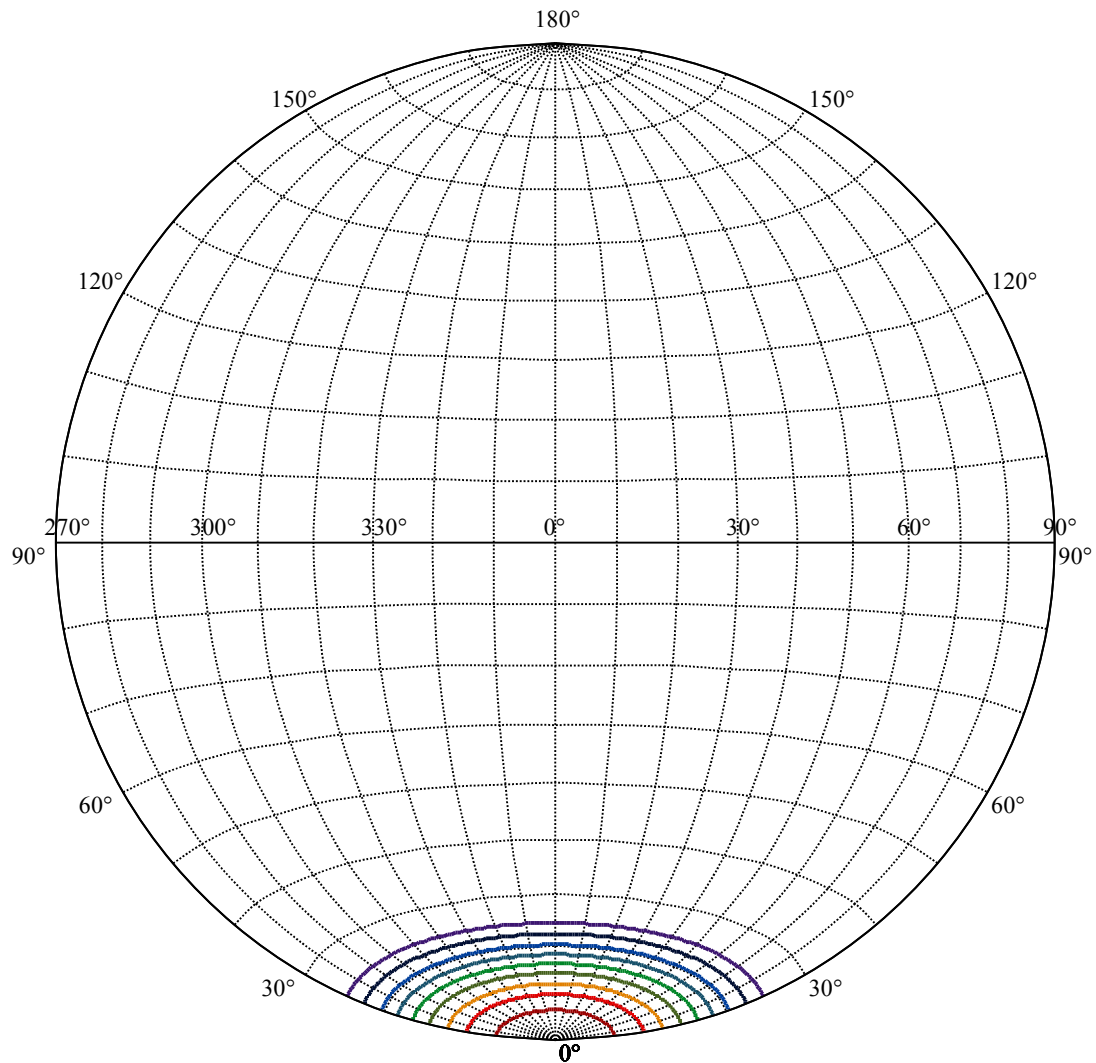
Beam Angle(50%Imax):C0/180Left:16.6 Right:16.6

:C90/270Left:16.6 Right:16.6



Max , Ave Beam angle of C0 plane 34.05





House

[Unit:cd]

Road

I_{max}:3219.47

(10%I_{max}) 321.947

(20%I_{max}) 643.894

(30%I_{max}) 965.841

(40%I_{max}) 1287.79

(50%I_{max}) 1609.73

(60%I_{max}) 1931.68

(70%I_{max}) 2253.63

(80%I_{max}) 2575.57

(90%I_{max}) 2897.52

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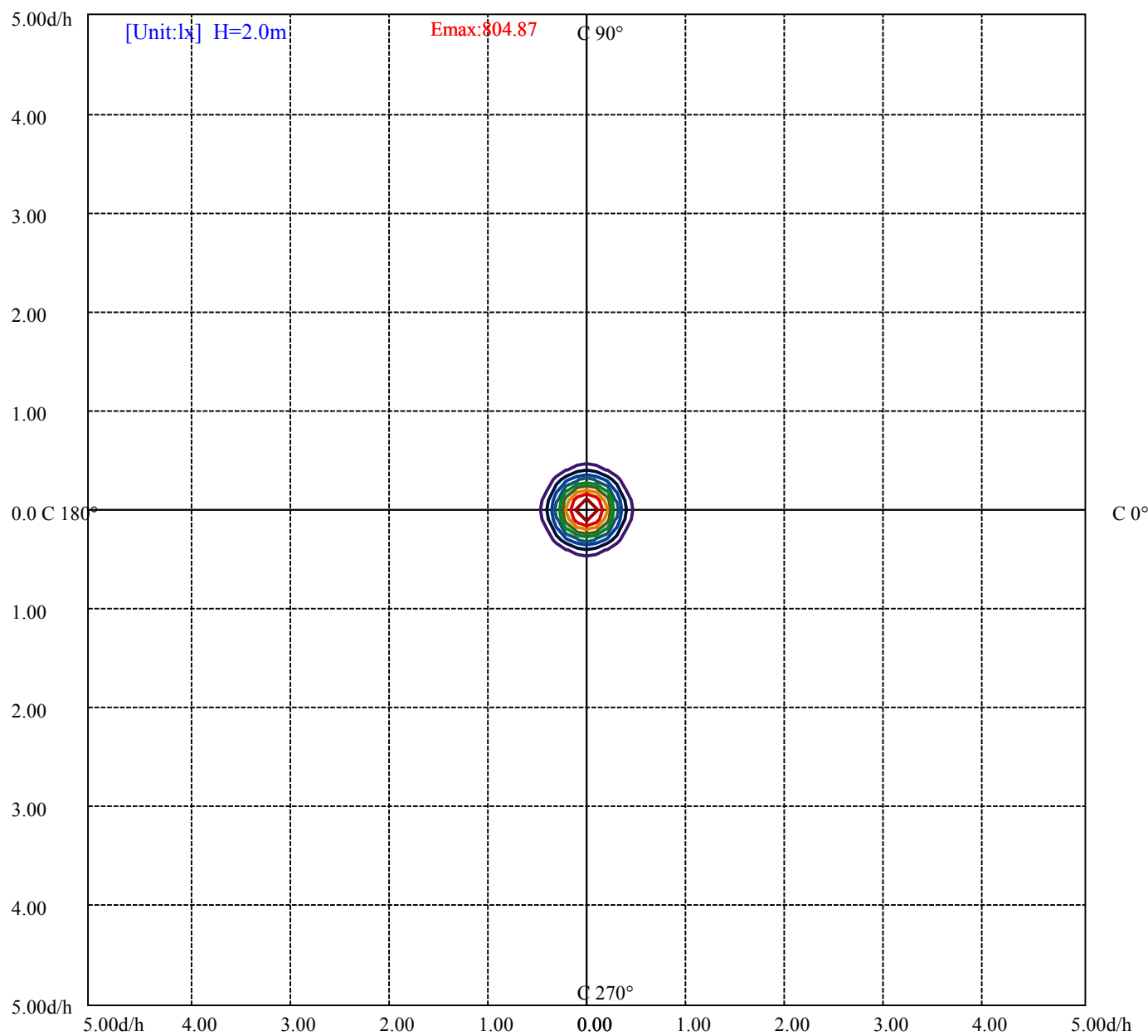
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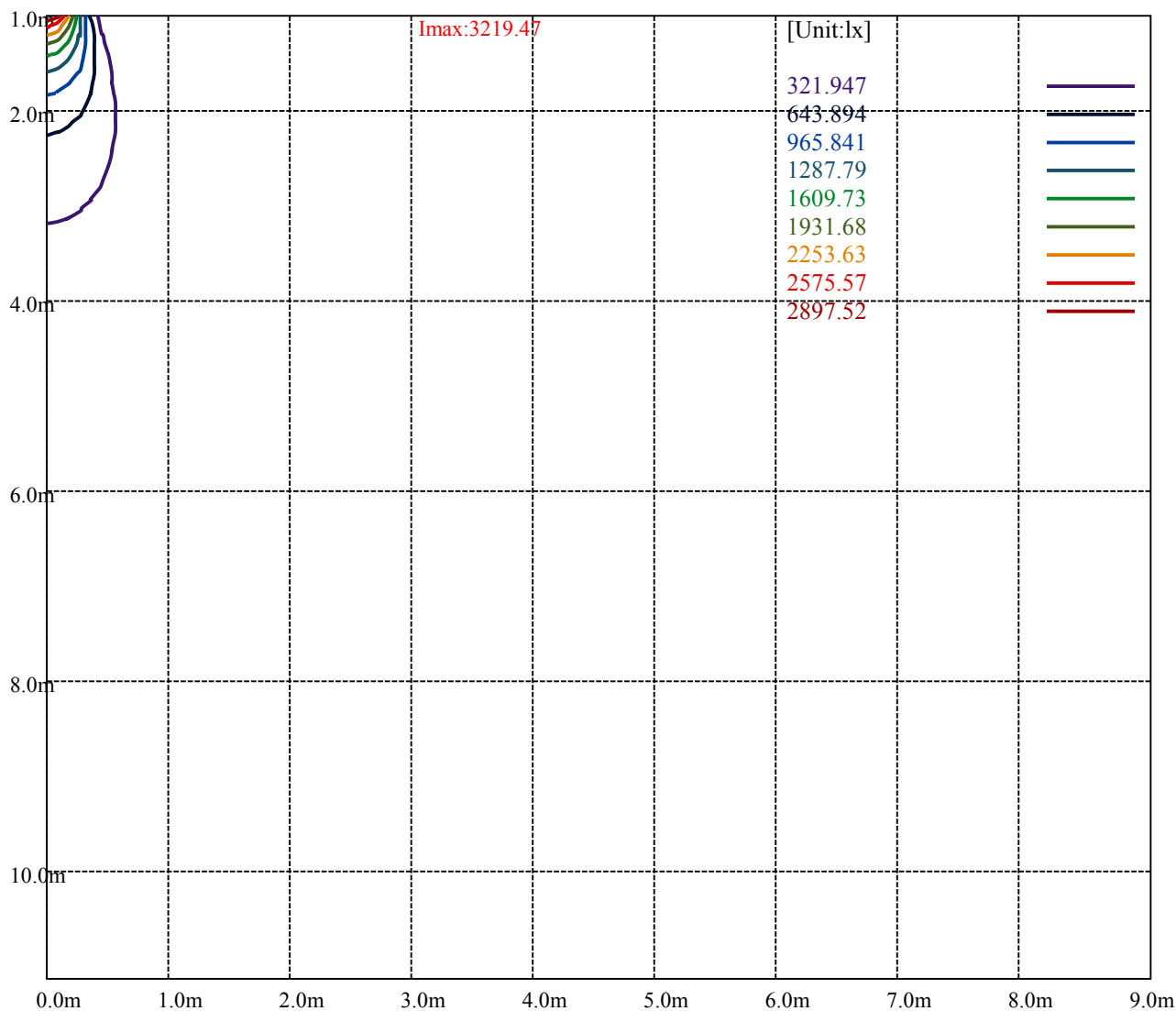
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(10%E_{max}) 80.4865(20%E_{max}) 160.9733(30%E_{max}) 241.4597(40%E_{max}) 321.9475(50%E_{max}) 402.4325(60%E_{max}) 482.92(70%E_{max}) 563.4075(80%E_{max}) 643.8925(90%E_{max}) 724.38



Luminance Table

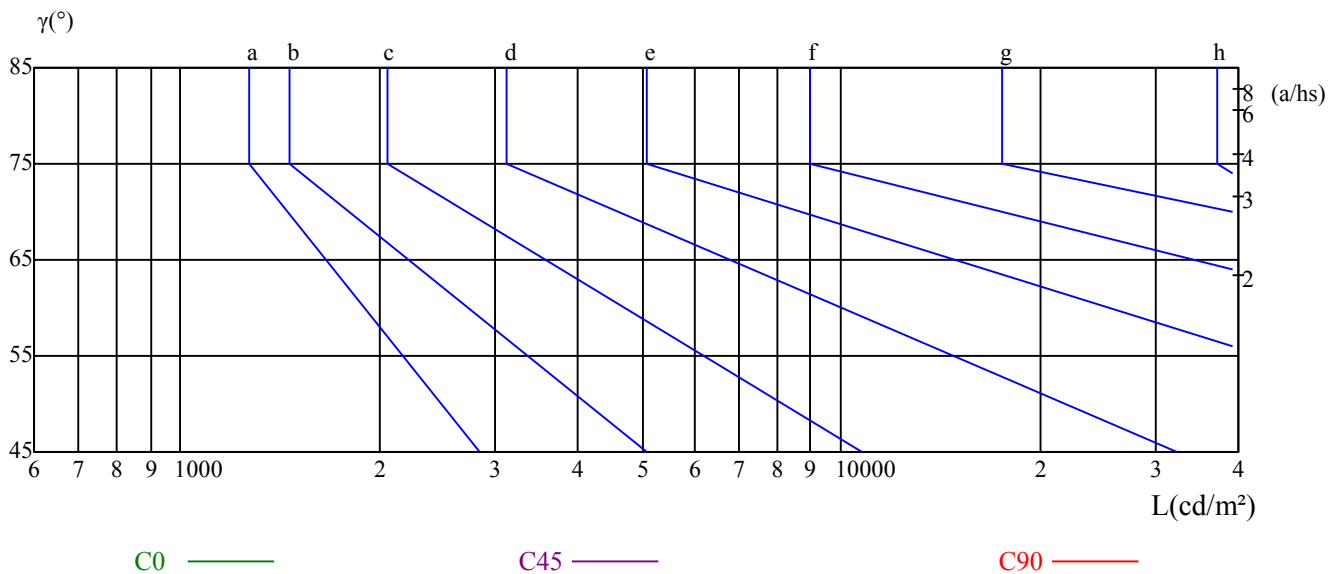
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

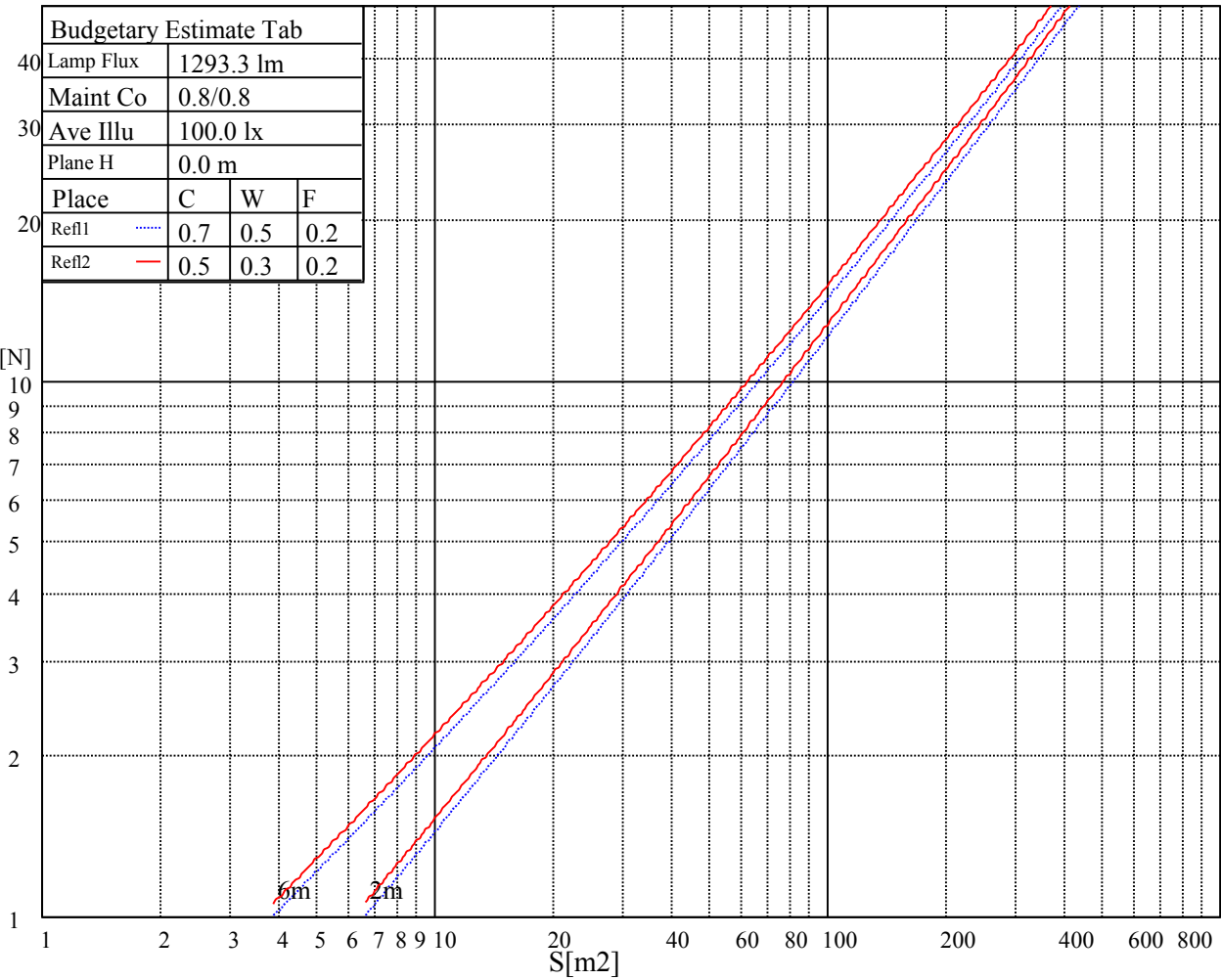
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

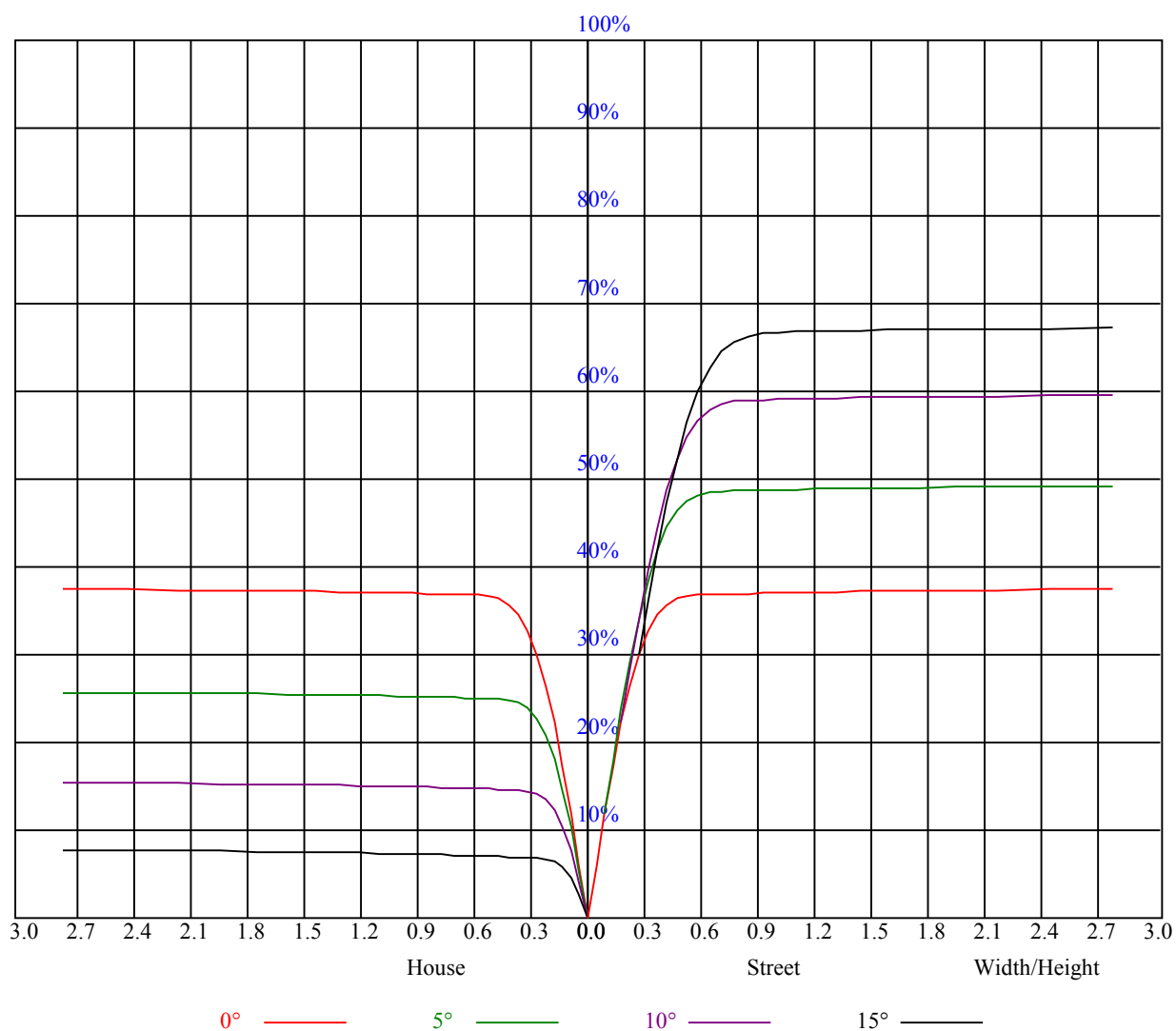
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.91	0.91	0.91	0.89	0.89	0.89	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.77
1	0.86	0.84	0.83	0.84	0.83	0.82	0.81	0.80	0.79	0.78	0.77	0.77	0.76	0.75	0.74	0.73
2	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.76	0.74	0.73	0.74	0.72	0.71	0.70
3	0.78	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.73	0.71	0.70	0.72	0.70	0.69	0.68
4	0.75	0.71	0.69	0.74	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.67	0.70	0.68	0.66	0.65
5	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.66	0.65	0.68	0.66	0.64	0.63
6	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.61
7	0.67	0.63	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.60	0.64	0.62	0.60	0.59
8	0.65	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.58	0.62	0.60	0.58	0.57
9	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.61	0.58	0.57	0.56
10	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.59	0.57	0.55	0.54



Nata 1-1007-M

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	3220.88	3019.50	2535.75	1791.00	908.44	294.19	14.79	8.38	6.69		
45.0	3223.69	3049.88	2620.69	1869.19	975.94	309.94	16.48	8.55	7.03		
90.0	3222.56	3069.00	2592.56	1837.69	998.16	199.52	16.14	8.83	7.43		
135.0	3210.75	3149.44	2788.31	2169.56	1316.81	416.25	33.69	9.51	7.31		
180.0	3220.88	3093.19	2696.63	1992.94	1117.63	307.13	20.87	8.94	7.14		
225.0	3223.69	3083.06	2589.75	1901.81	1023.86	205.99	18.34	9.28	7.43		
270.0	3222.56	3076.31	2642.63	1892.81	1058.06	295.31	17.89	9.96	7.99		
315.0	3210.75	2982.38	2428.88	1599.19	757.29	83.53	12.71	8.33	6.86		
360.0	3220.88	3019.50	2535.75	1791.00	908.44	294.19	14.79	8.38	6.69		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	6.02	5.63	5.34	5.18	5.01	4.95	4.84	4.61	4.56		
45.0	6.36	5.96	5.68	5.46	5.34	5.23	5.23	4.95	4.61		
90.0	6.98	6.75	6.24	5.68	5.63	12.21	11.14	4.84	4.67		
135.0	6.41	6.02	5.79	5.63	5.46	5.40	5.34	5.46	5.06		
180.0	6.24	5.85	5.63	5.40	5.18	5.06	5.01	4.84	4.56		
225.0	6.64	6.19	5.91	5.68	5.57	5.46	5.46	5.12	4.67		
270.0	7.48	7.26	6.69	5.96	5.85	12.88	15.41	4.89	4.84		
315.0	6.24	5.85	5.74	5.57	5.40	5.29	5.23	5.46	5.12		
360.0	6.02	5.63	5.34	5.18	5.01	4.95	4.84	4.61	4.56		
C/γ(°)	90.0										
0.0	4.39										
45.0	4.56										
90.0	4.50										
135.0	4.44										
180.0	4.39										
225.0	4.56										
270.0	4.50										
315.0	4.44										
360.0	4.39										