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Nata

Client:

LumCAT: 3-1940-M

Luminaire: BJB47.319.2021

Report No: nata-0100

Test No: NT2017070604

LampCAT: SEOUL SAWx15

Lamp flux(lm): 1116.9

Number of Lamps: 1

Length(mm): 78

Phm Type: C

Voltage(V):

Current(A):

Power (W): 17.2800

PF:

Ballast type:

Width(mm): 78

Height(mm): 0

Photometric Results

Lumens(lm): 987.44, Efficiency(%): 88.41% , Luminous Efficacy(lm/W): 57.14

Central intensity(cd): 2257.447, Maximum intensity(cd): 2257.447

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.2

[C90/270]Total=36.2

Field angle(10%Imax): [C0/180]Total=67.0

[C90/270]Total=67.0

Maximum s/h(1/2): C0_180=0.59 C90_270=0.59

Maximum s/h(1/4): C0_180=0.60 C90_270=0.60

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.54%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.512%

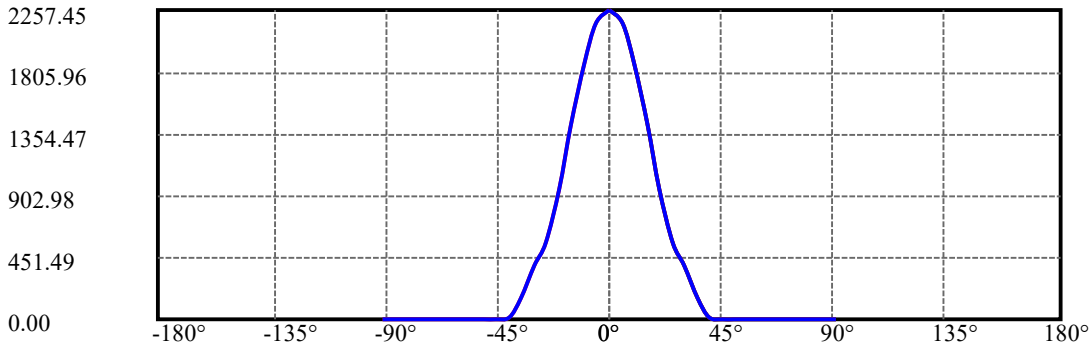
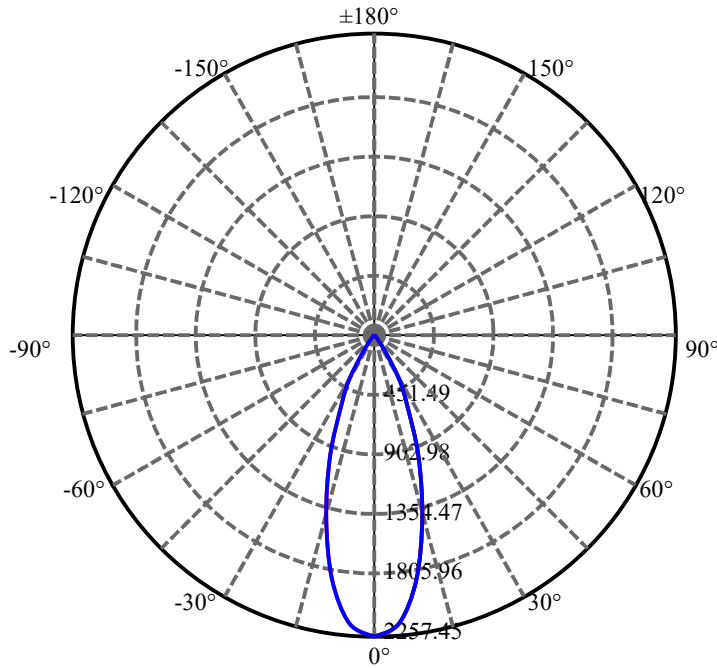
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2257.447	13.500	13.5	1.209%	1.367%
5.0	2161.737	103.273	116.773	9.247%	11.826%
10.0	1860.796	177.116	293.89	15.858%	29.763%
15.0	1414.365	200.654	494.543	17.966%	50.083%
20.0	959.331	179.850	674.393	16.103%	68.297%
25.0	564.381	130.740	805.133	11.706%	81.538%
30.0	385.951	105.777	910.911	9.471%	92.250%
35.0	159.175	50.044	960.955	4.481%	97.318%
40.0	14.403	5.075	966.03	.454%	97.832%
45.0	6.569	2.546	968.576	.228%	98.090%
50.0	5.224	2.193	970.769	.196%	98.312%
55.0	4.832	2.170	972.939	.194%	98.532%
60.0	4.593	2.180	975.119	.195%	98.752%
65.0	4.428	2.200	977.319	.197%	98.975%
70.0	4.315	2.223	979.542	.199%	99.200%
75.0	4.234	2.242	981.784	.201%	99.427%
80.0	4.182	2.258	984.041	.202%	99.656%
85.0	4.153	2.268	986.309	.203%	99.886%
90.0	4.124	1.130	987.439	.101%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	910.91	81.56%	92.25%
0-40	966.03	86.50%	97.83%
0-60	975.12	87.31%	98.75%
0-90	986.31	88.31%	99.89%
0-120	986.31	88.31%	99.89%
0-180	987.44	88.41%	100.00%
60-90	13.37	1.20%	1.35%
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%
0-24.42	789.95	70.73%	80.00%

ZONAL LUMEN SUMMARY

0-10	293.89
10-20	380.50
20-30	236.52
30-40	55.12
40-50	4.74
50-60	4.35
60-70	4.42
70-80	4.50
80-90	2.27
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: —————

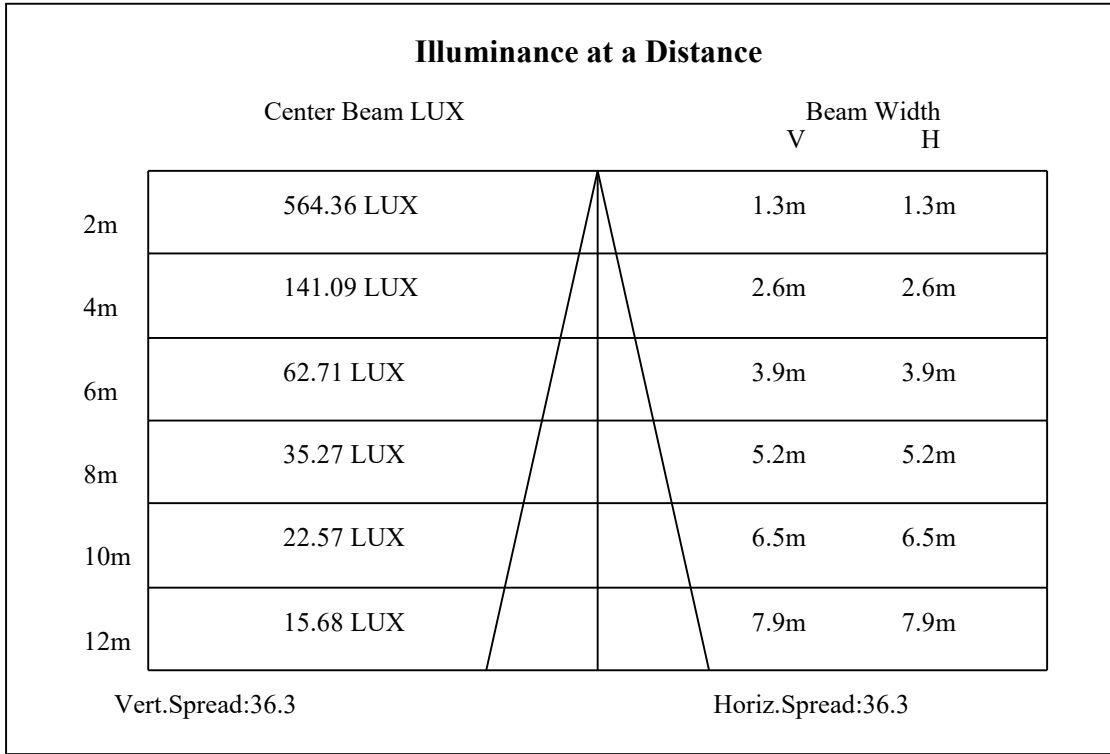
C90/C270: —————

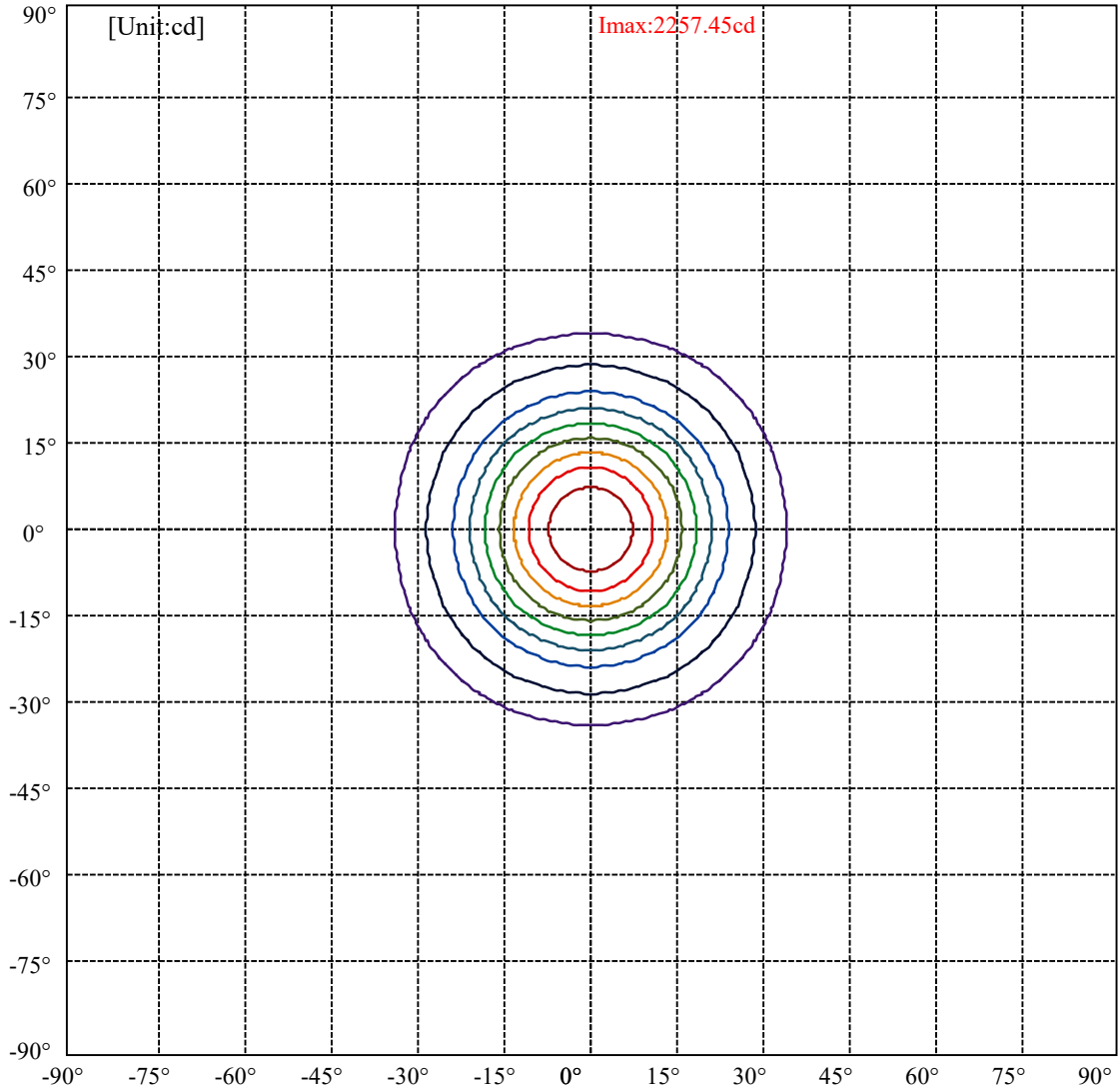
Field angle(10%Imax):C0/180Left:33.5 Right:33.5

:C90/270Left:33.5 Right:33.5

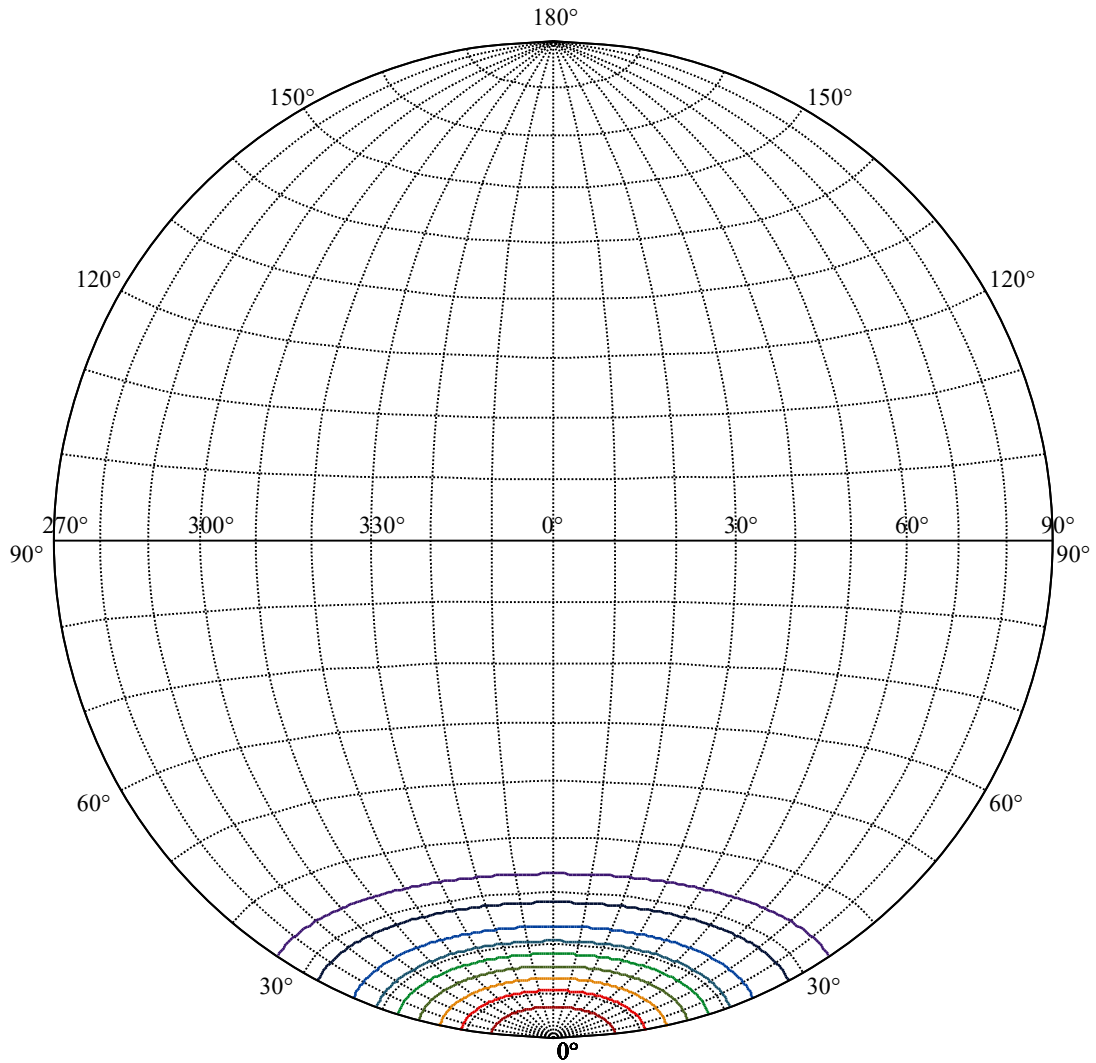
Beam Angle(50%Imax):C0/180Left:18.1 Right:18.1

:C90/270Left:18.1 Right:18.1





(10%Imax) 225.745	—
(20%Imax) 451.489	—
(30%Imax) 677.234	—
(40%Imax) 902.979	—
(50%Imax) 1128.72	—
(60%Imax) 1354.47	—
(70%Imax) 1580.21	—
(80%Imax) 1805.96	—
(90%Imax) 2031.7	—



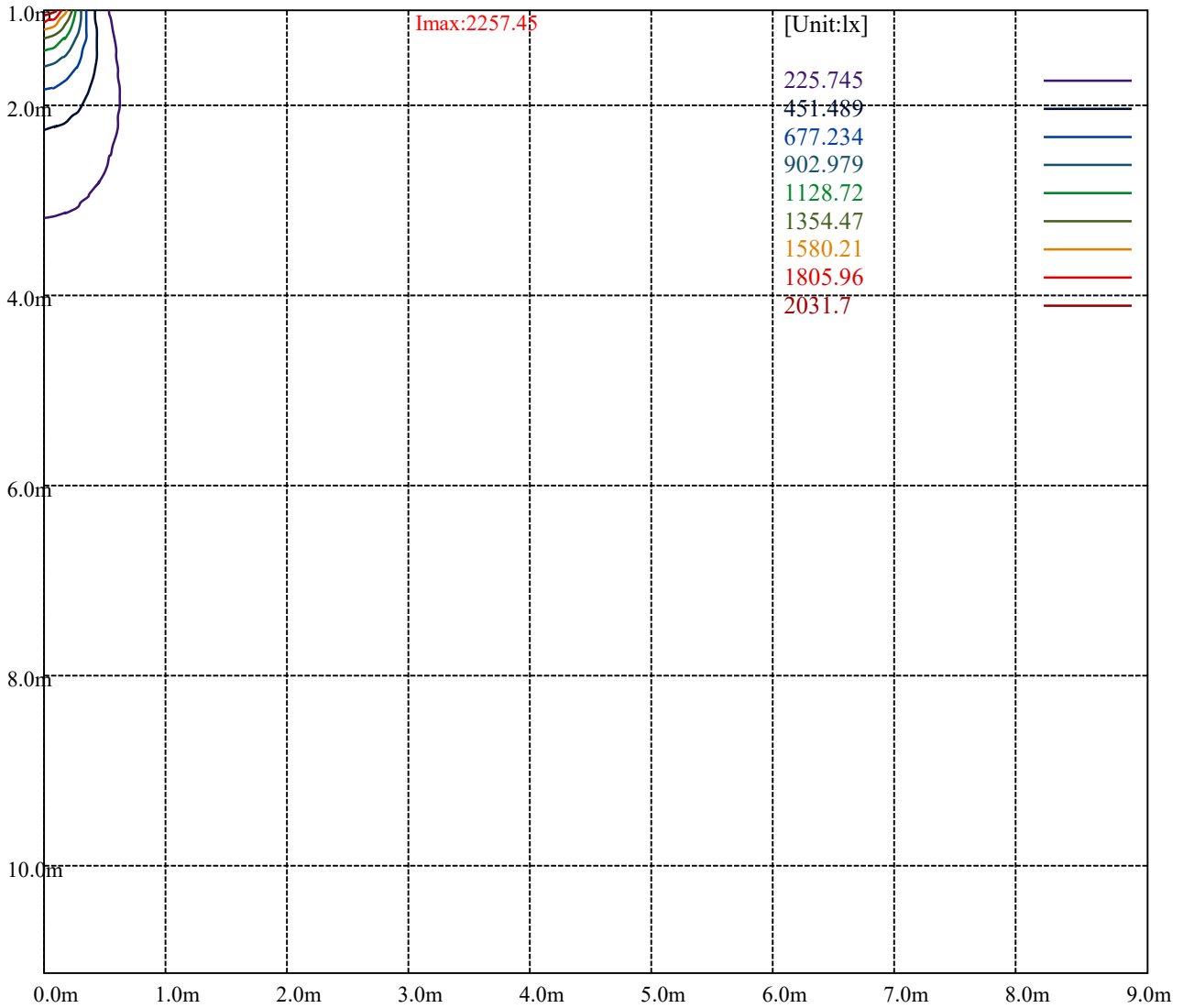
House

[Unit:cd]

Road

Imax:2257.45

(10%Imax) 225.745	—
(20%Imax) 451.489	—
(30%Imax) 677.234	—
(40%Imax) 902.979	—
(50%Imax) 1128.72	—
(60%Imax) 1354.47	—
(70%Imax) 1580.21	—
(80%Imax) 1805.96	—
(90%Imax) 2031.7	—



Luminance Table

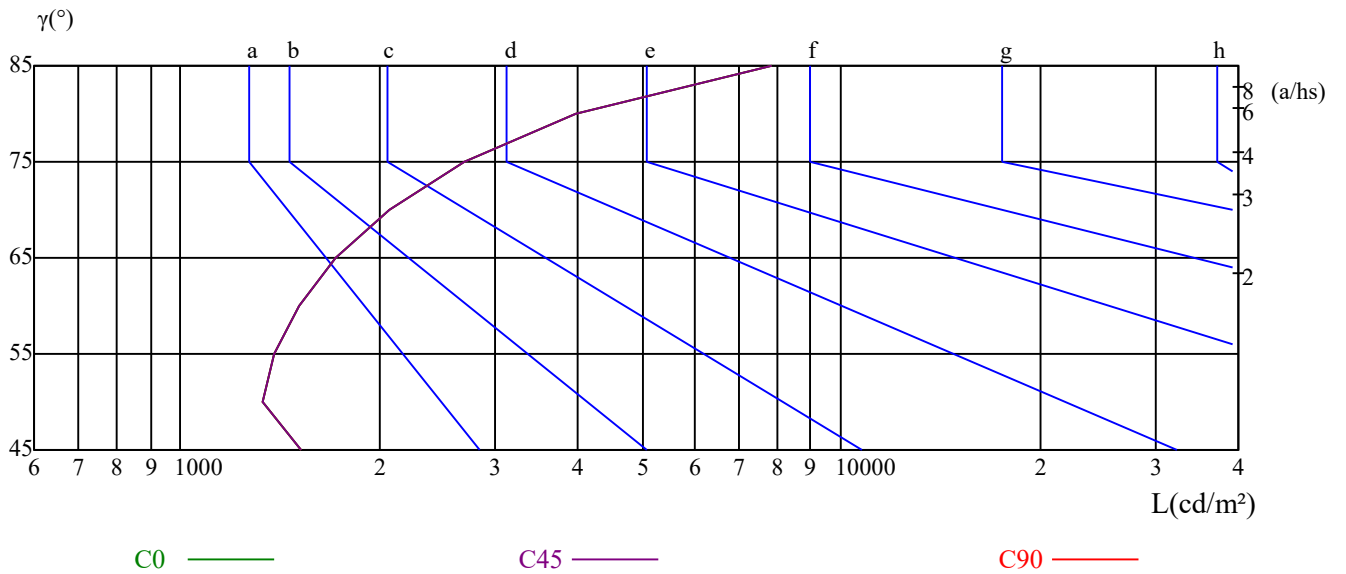
γ	45	50	55	60	65	70	75	80	85
C0	1527	1336	1385	1510	1722	2074	2689	3959	7832
C45	1527	1336	1385	1510	1722	2074	2689	3959	7832
C90	1527	1336	1385	1510	1722	2074	2689	3959	7832

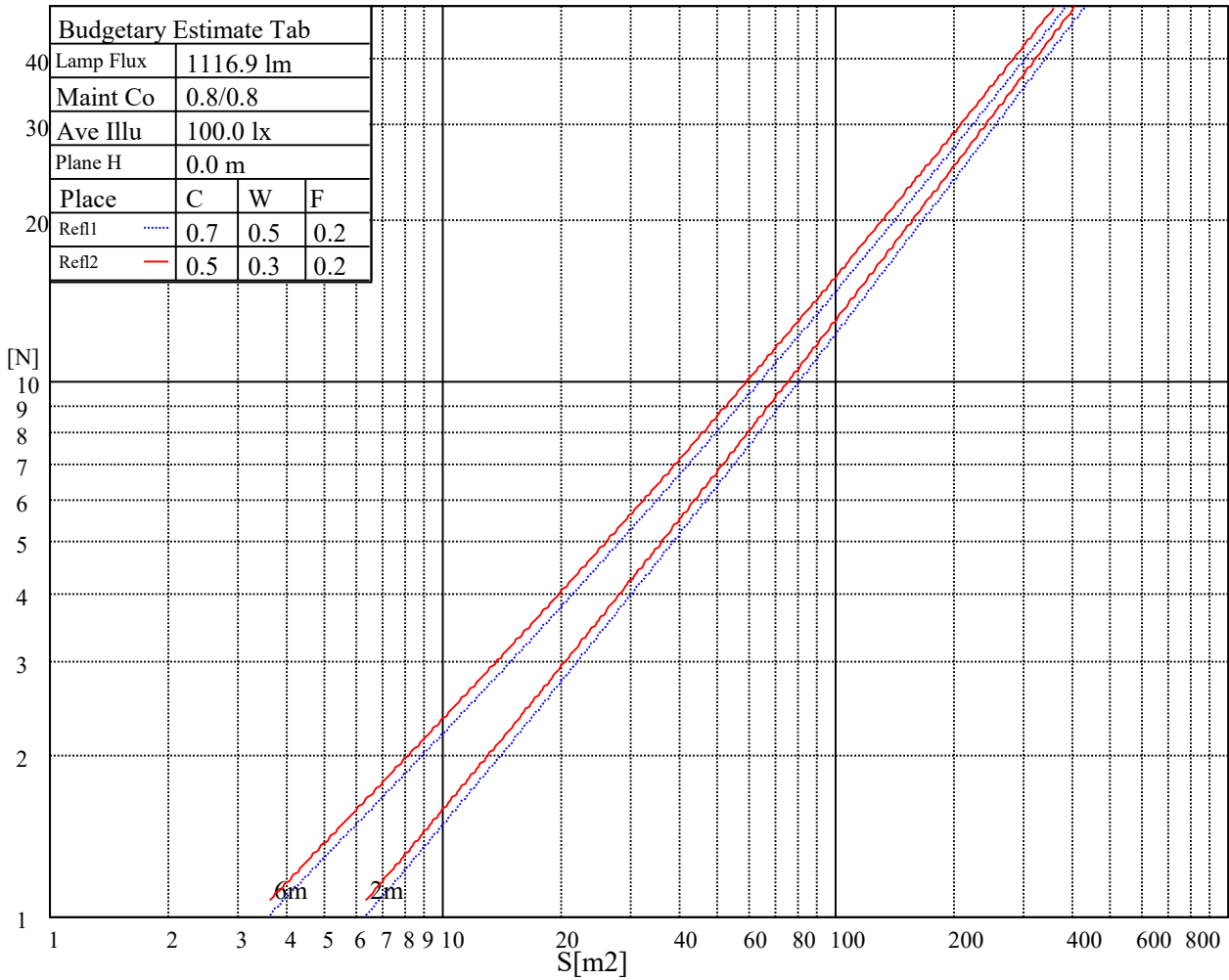
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1722	1722	1722	2689	2689	2689	7832	7832	7832

Glare Table

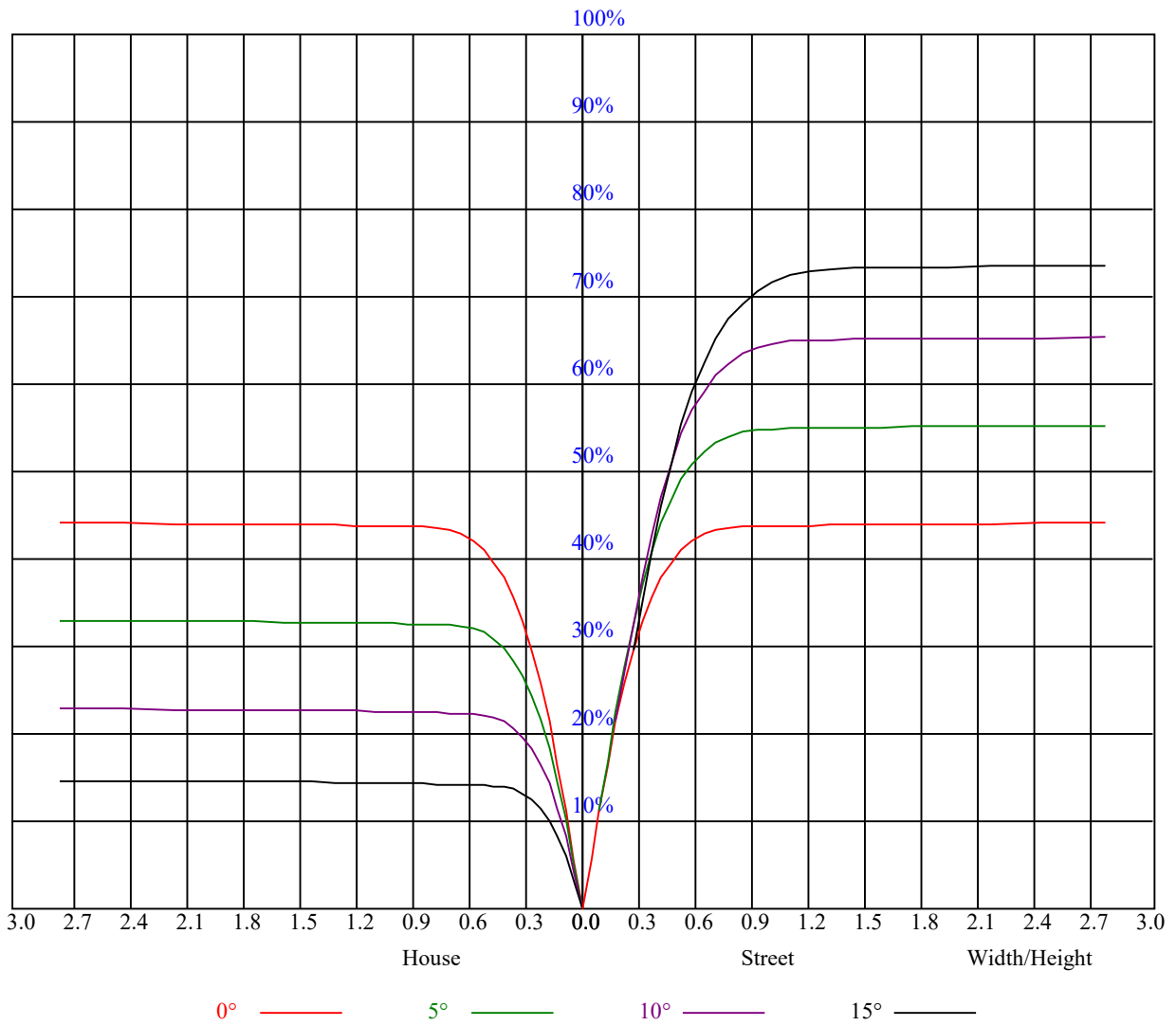
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

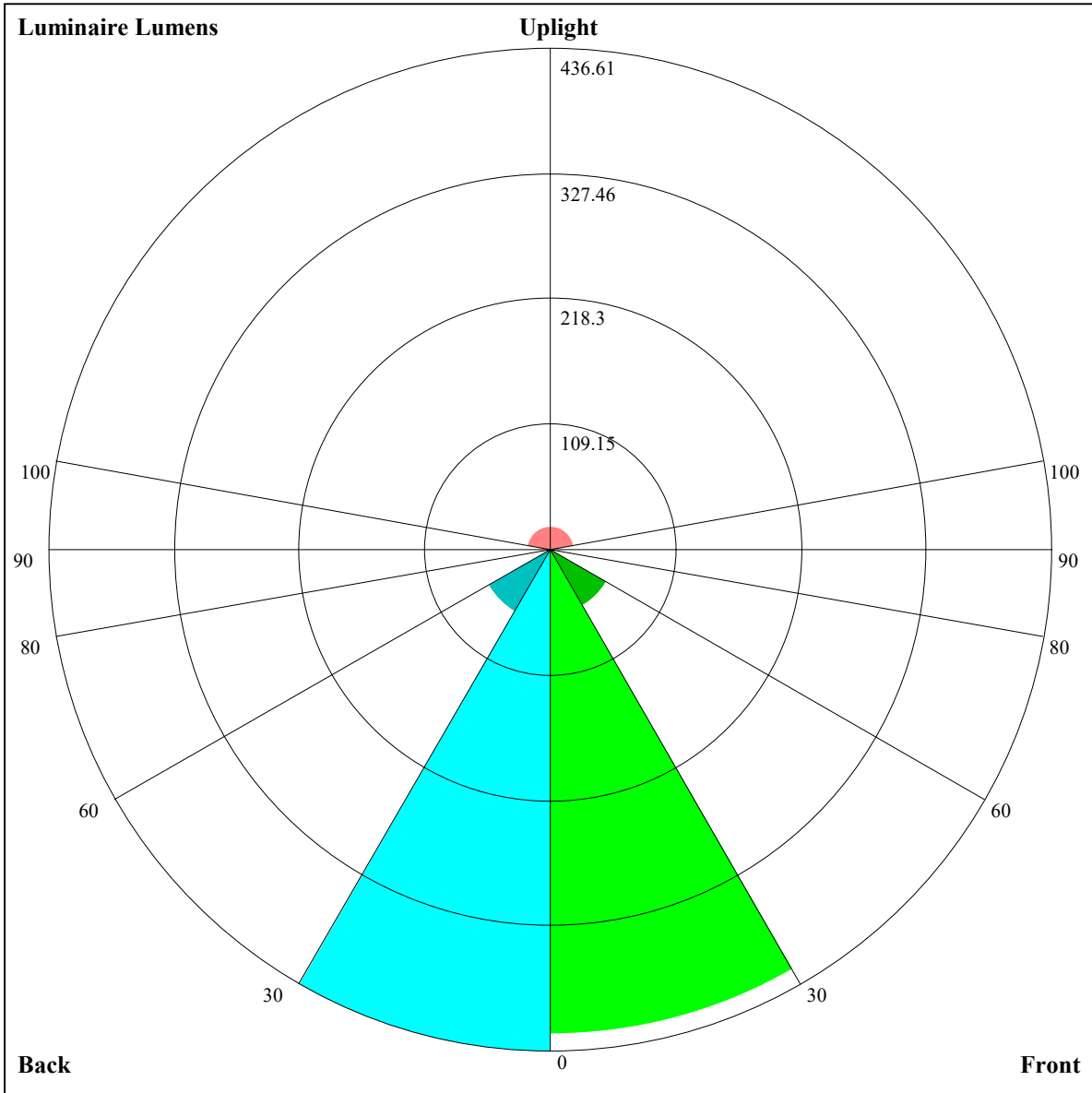
Luminance Limiting Curve





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	1.07	1.07	1.07	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	0.99	0.97	0.94	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.83
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.83	0.81	0.80
3	0.89	0.85	0.82	0.88	0.84	0.81	0.85	0.83	0.80	0.83	0.81	0.79	0.81	0.79	0.78	0.76
4	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.75	0.79	0.76	0.75	0.73
5	0.81	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.72	0.71
6	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.66
8	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
9	0.70	0.66	0.63	0.69	0.65	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59





Luminaire Lumens:

FL=421.52,FM=55.99,FH=4.43,FVH=2.26

BL=436.61,BM=62.39,BH=4.45,BVH=2.26

UL=4.5,UH=21.41

BUG Rating:B1-U2-G0

Nata 3-1940-M

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	2263.92	2175.16	1878.10	1421.13	981.75	603.44	387.11	156.03	12.06
45.0	2249.43	2102.19	1759.33	1286.05	865.56	508.24	330.91	113.73	11.05
90.0	2255.12	2138.16	1851.71	1404.05	951.47	591.01	387.11	156.55	12.26
135.0	2261.33	2159.89	1873.96	1426.30	966.22	618.44	399.79	166.38	14.08
180.0	2263.92	2161.45	1828.16	1394.47	940.86	509.19	391.87	154.84	12.34
225.0	2249.43	2210.35	1952.62	1536.53	1073.09	674.85	431.36	216.07	27.43
270.0	2255.12	2179.30	1895.44	1440.02	960.79	499.90	384.63	162.14	14.39
315.0	2261.33	2167.40	1847.05	1406.38	934.91	509.97	374.84	147.65	11.62
360.0	2263.92	2175.16	1878.10	1421.13	981.75	603.44	387.11	156.03	12.06

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6.65	5.20	4.84	4.58	4.45	4.35	4.27	4.19	4.17
45.0	6.00	5.12	4.76	4.55	4.37	4.27	4.19	4.17	4.11
90.0	6.42	5.18	4.76	4.55	4.37	4.27	4.19	4.14	4.11
135.0	6.52	5.25	4.87	4.63	4.45	4.37	4.24	4.24	4.19
180.0	6.60	5.28	4.89	4.61	4.45	4.35	4.27	4.19	4.19
225.0	7.38	5.43	4.94	4.68	4.48	4.35	4.24	4.19	4.14
270.0	6.55	5.18	4.79	4.55	4.40	4.27	4.19	4.14	4.11
315.0	6.44	5.15	4.81	4.58	4.45	4.30	4.27	4.19	4.19
360.0	6.65	5.20	4.84	4.58	4.45	4.35	4.27	4.19	4.17

C/γ(°)	90.0
0.0	4.11
45.0	4.11
90.0	4.09
135.0	4.14
180.0	4.14
225.0	4.11
270.0	4.11
315.0	4.17
360.0	4.11