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Nata

Client:

LumCAT: 2-1572-A

Luminaire: 92.70.064.00+92.70.147.00

Report No: nata-0100

Test No: GC2017092612

LampCAT: SEOUL SAWx10

Lamp flux(lm): 1461.0

Number of Lamps: 1

Length(mm): 65

Phm Type: C

Voltage(V):

Current(A):

Power (W): 10.3500

PF:

Ballast type:

Width(mm): 65

Height(mm): 0

Photometric Results

Lumens(lm): 1215.33, Efficiency(%): 83.18% , Luminous Efficacy(lm/W): 117.42

Central intensity(cd): 2788.882, Maximum intensity(cd): 2788.882

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.2

[C90/270]Total=35.2

Field angle(10%Imax): [C0/180]Total=63.8

[C90/270]Total=63.8

Maximum s/h(1/2): C0_180=0.58 C90_270=0.58

Maximum s/h(1/4): C0_180=0.58 C90_270=0.58

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.25%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.824%

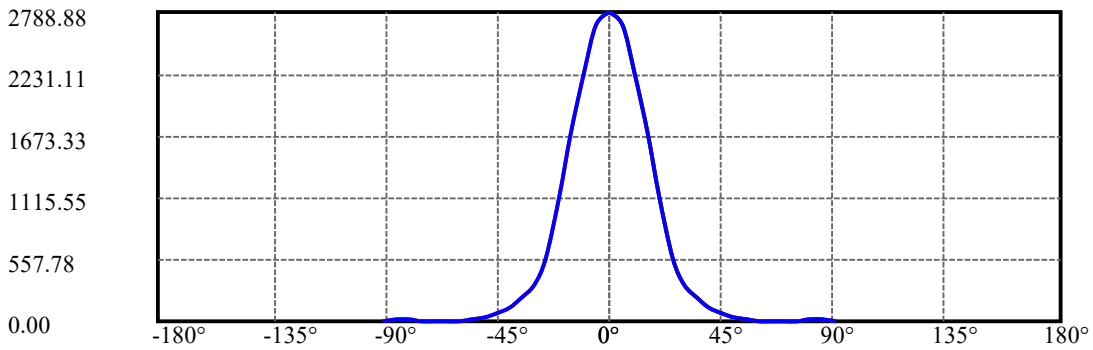
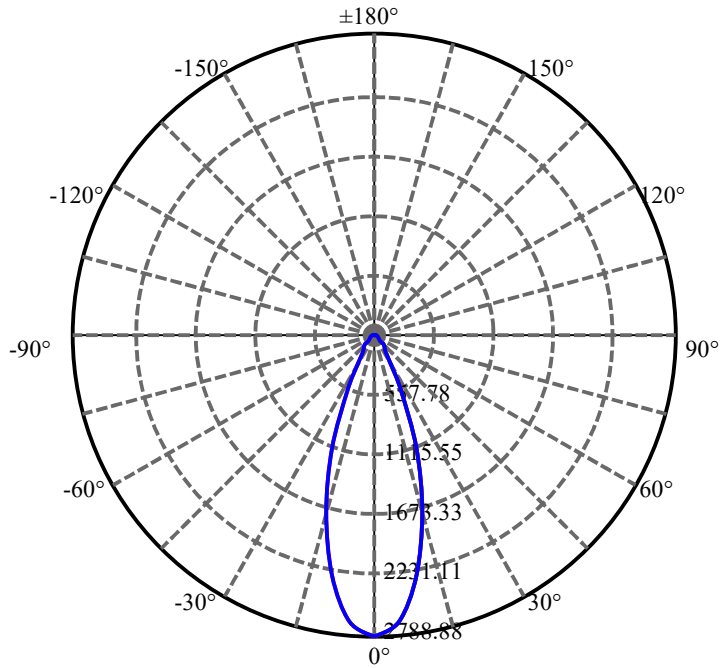
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2788.882	16.678	16.678	1.142%	1.372%
5.0	2660.807	127.116	143.794	8.701%	11.832%
10.0	2246.852	213.862	357.656	14.638%	29.429%
15.0	1699.522	241.109	598.764	16.503%	49.268%
20.0	1119.249	209.830	808.594	14.362%	66.533%
25.0	574.507	133.086	941.681	9.109%	77.484%
30.0	326.030	89.355	1031.035	6.116%	84.836%
35.0	199.559	62.741	1093.776	4.294%	89.998%
40.0	124.847	43.988	1137.764	3.011%	93.618%
45.0	70.651	27.384	1165.148	1.874%	95.871%
50.0	39.200	16.460	1181.608	1.127%	97.225%
55.0	14.287	6.415	1188.023	.439%	97.753%
60.0	7.880	3.741	1191.764	.256%	98.061%
65.0	7.749	3.850	1195.614	.264%	98.378%
70.0	7.791	4.013	1199.626	.275%	98.708%
75.0	8.114	4.296	1203.923	.294%	99.061%
80.0	9.153	4.941	1208.864	.338%	99.468%
85.0	9.312	5.085	1213.948	.348%	99.886%
90.0	5.038	1.381	1215.329	.094%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1031.04	70.57%	84.84%
0-40	1137.76	77.88%	93.62%
0-60	1191.76	81.57%	98.06%
0-90	1213.95	83.09%	99.89%
0-120	1213.95	83.09%	99.89%
0-180	1215.33	83.18%	100.00%
60-90	25.92	1.77%	2.13%
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%
0-26.71	972.26	66.55%	80.00%

ZONAL LUMEN SUMMARY

0-10	357.66
10-20	450.94
20-30	222.44
30-40	106.73
40-50	43.84
50-60	10.16
60-70	7.86
70-80	9.24
80-90	5.08
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: —————

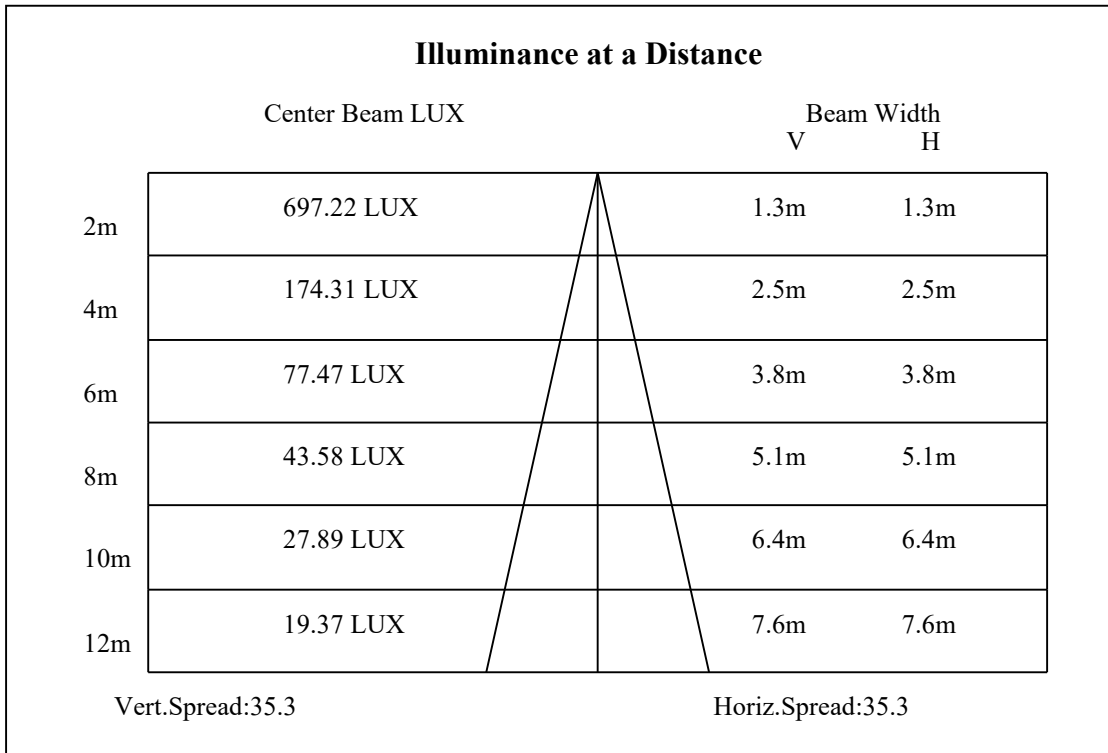
C90/C270: —————

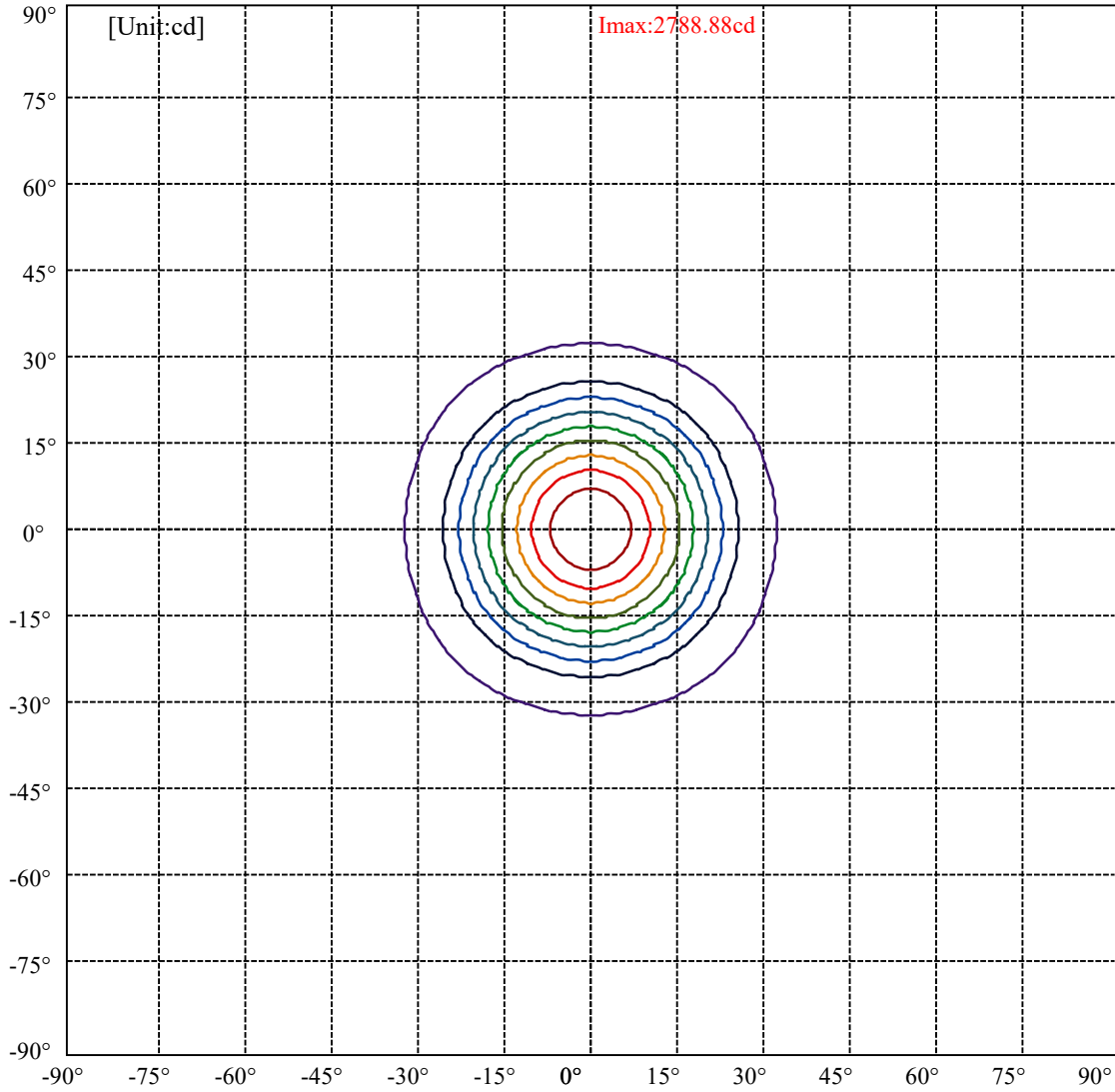
Field angle(10%Imax):C0/180Left:31.9 Right:31.9

:C90/270Left:31.9 Right:31.9

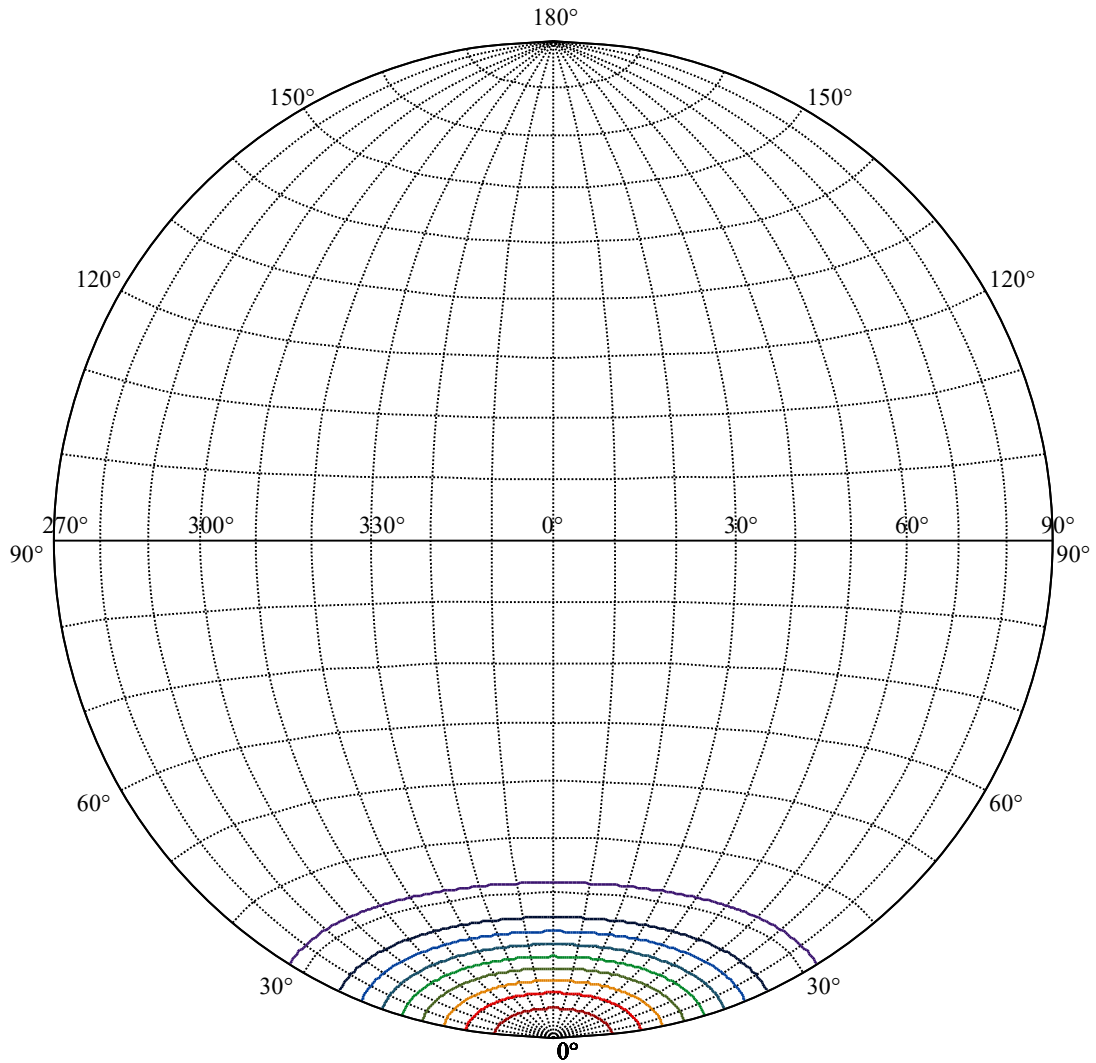
Beam Angle(50%Imax):C0/180Left:17.6 Right:17.6

:C90/270Left:17.6 Right:17.6





(10%Imax) 278.888	—
(20%Imax) 557.776	—
(30%Imax) 836.665	—
(40%Imax) 1115.55	—
(50%Imax) 1394.44	—
(60%Imax) 1673.33	—
(70%Imax) 1952.22	—
(80%Imax) 2231.11	—
(90%Imax) 2509.99	—



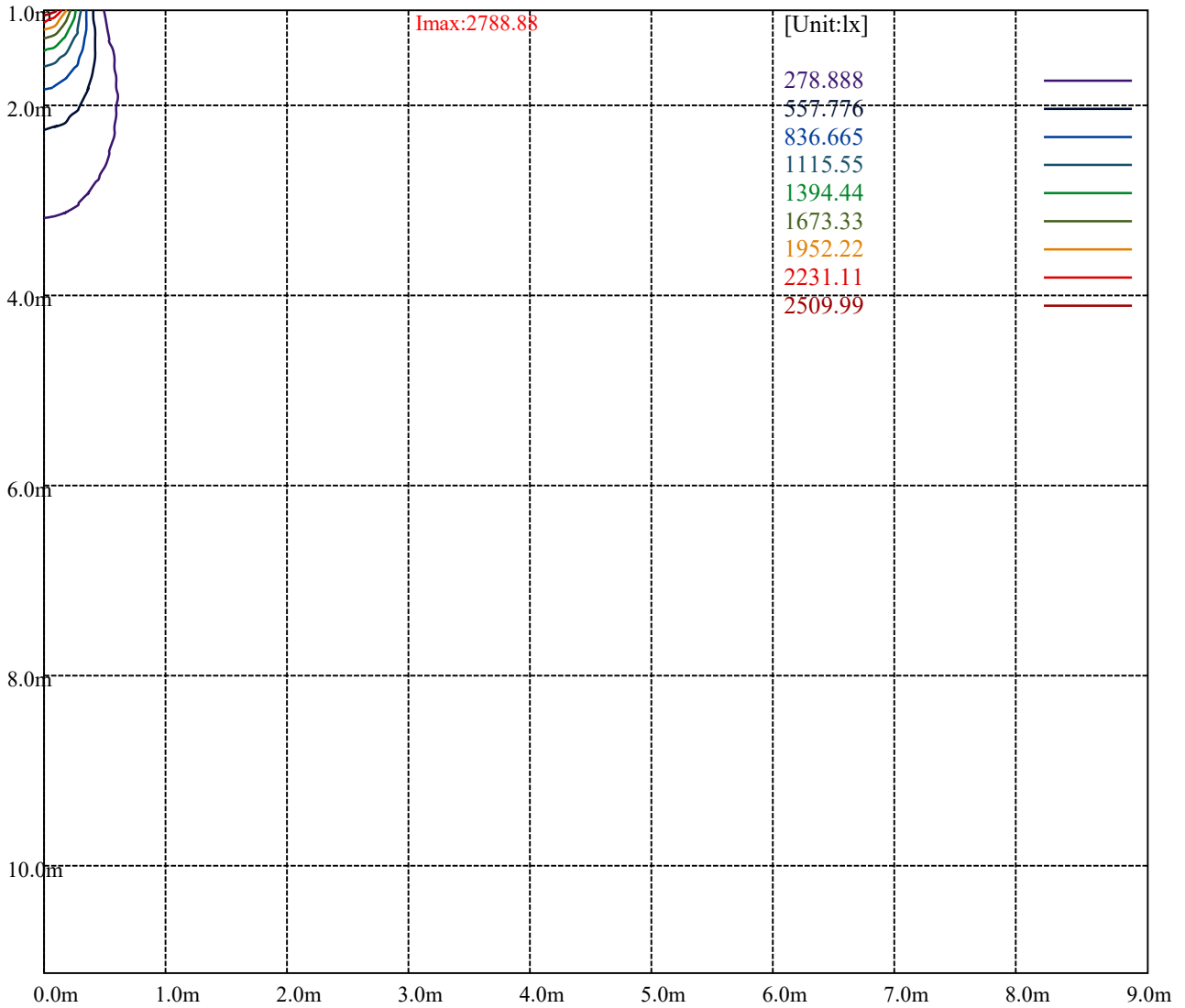
House

[Unit:cd]

Road

Imax:2788.88

(10%Imax) 278.888	—
(20%Imax) 557.776	—
(30%Imax) 836.665	—
(40%Imax) 1115.55	—
(50%Imax) 1394.44	—
(60%Imax) 1673.33	—
(70%Imax) 1952.22	—
(80%Imax) 2231.11	—
(90%Imax) 2509.99	—



Luminance Table

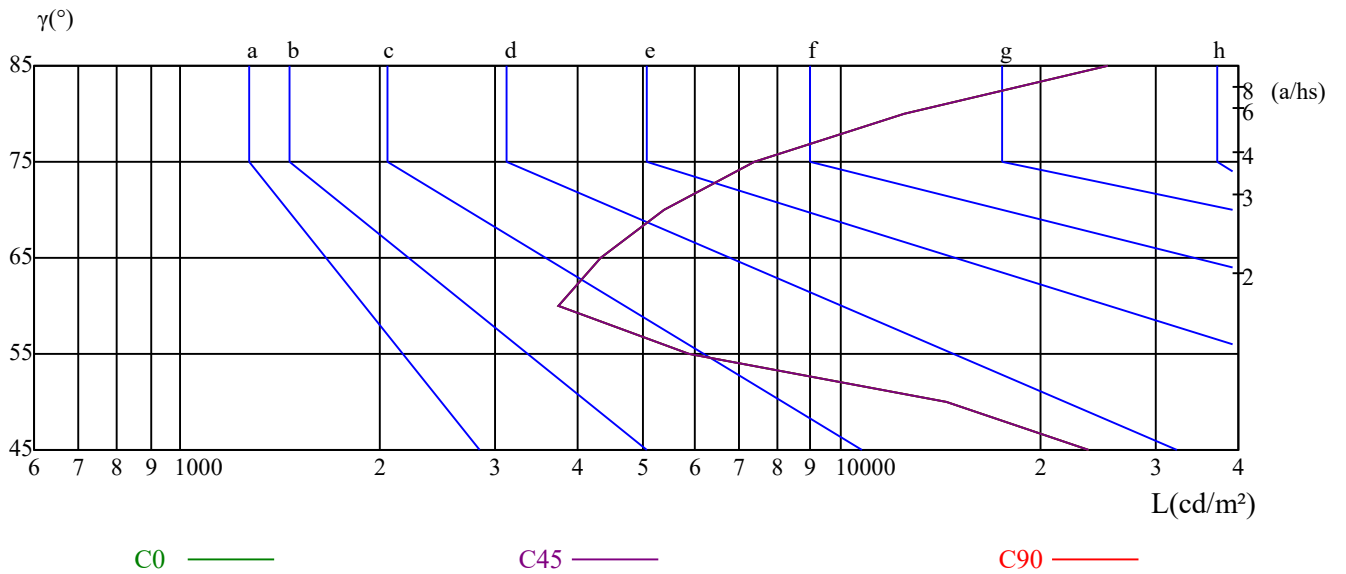
γ	45	50	55	60	65	70	75	80	85
C0	23649	14434	5896	3730	4340	5391	7420	12476	25287
C45	23649	14434	5896	3730	4340	5391	7420	12476	25287
C90	23649	14434	5896	3730	4340	5391	7420	12476	25287

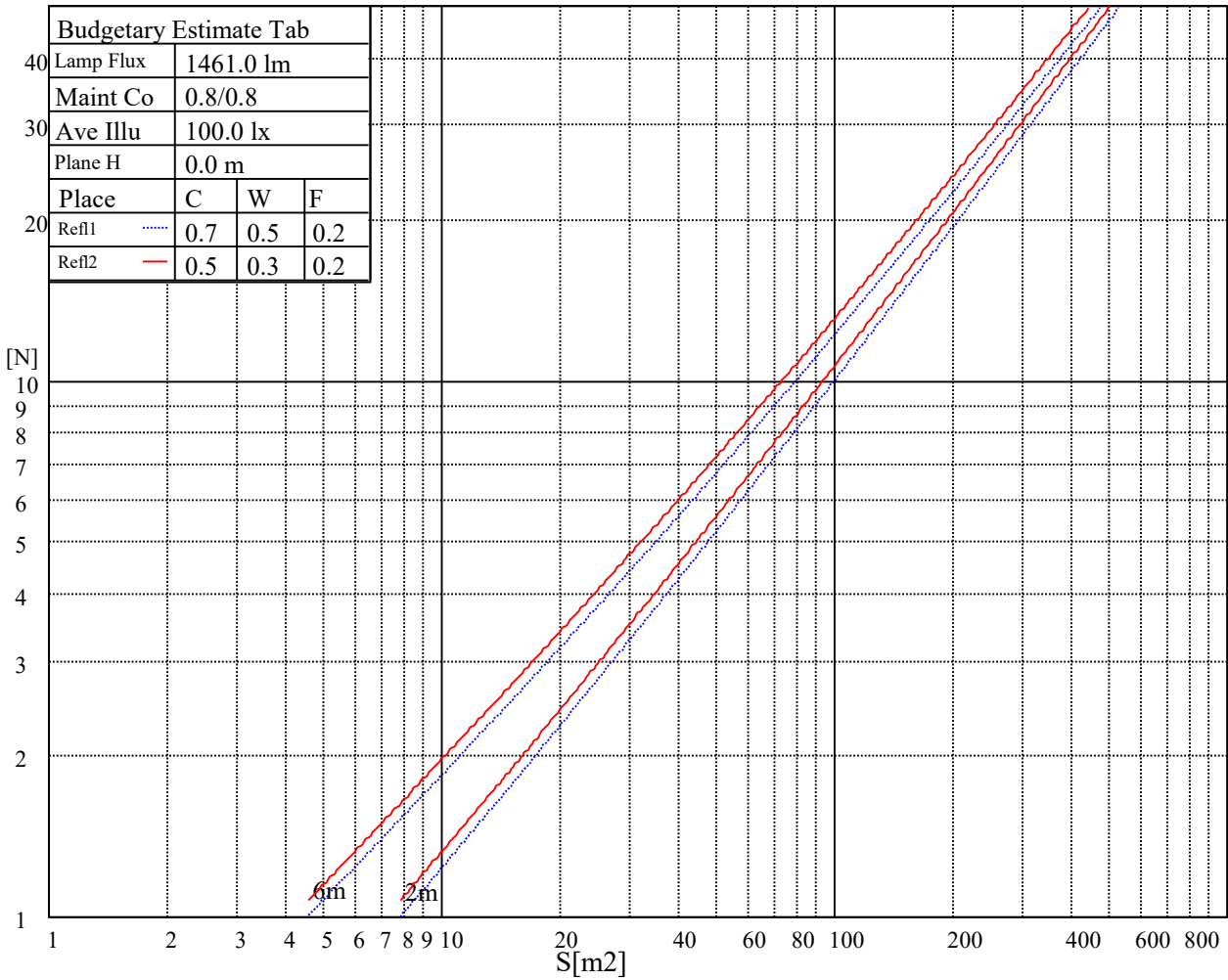
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4340	4340	4340	7420	7420	7420	25287	25287	25287

Glare Table

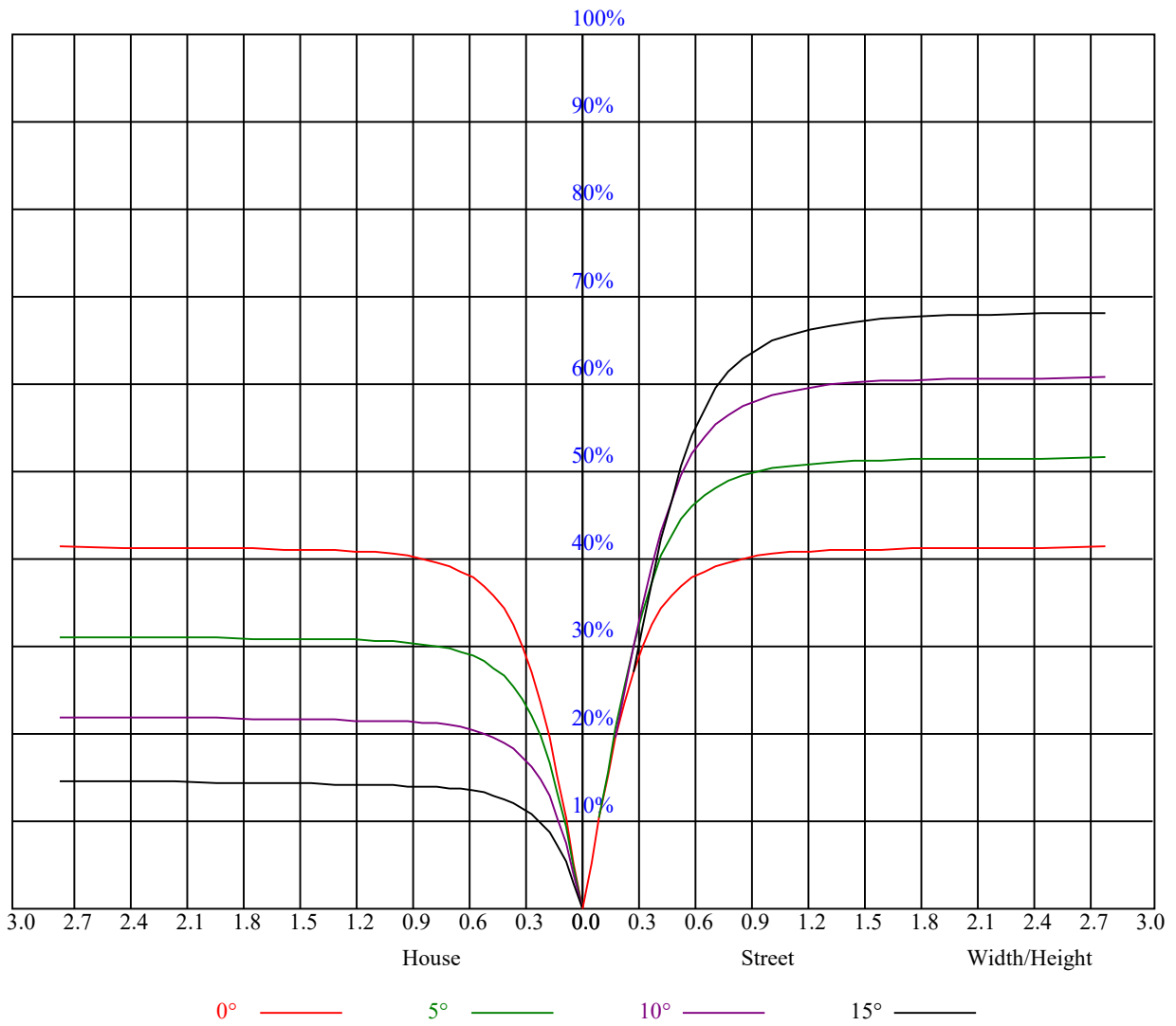
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

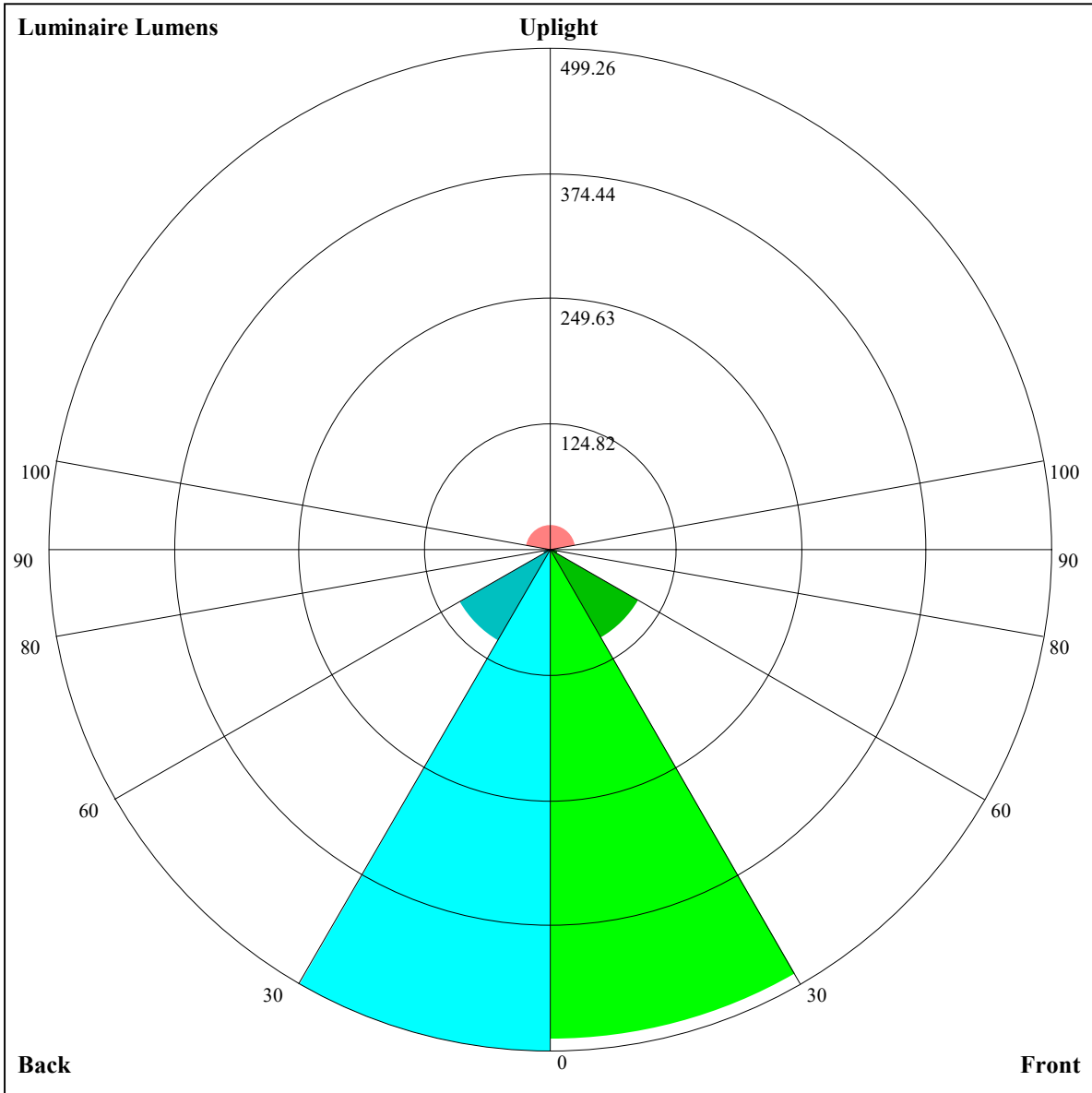
Luminance Limiting Curve





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	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.93	0.90	0.88	0.91	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.87	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.78	0.77	0.75	0.74
3	0.83	0.79	0.76	0.82	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.75	0.73	0.72	0.70
4	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.69	0.73	0.70	0.69	0.67
5	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.70	0.68	0.66	0.65
6	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
7	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.60
8	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.58	0.57
9	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.55
10	0.62	0.58	0.55	0.61	0.57	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.54	0.54





Luminaire Lumens:

FL=487.67,FM=101.02,FH=8.15,FVH=4.47

BL=499.26,BM=104.49,BH=8.33,BVH=4.44

UL=5.5,UH=26.16

BUG Rating:B1-U2-G0

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	2791.36	2674.09	2290.35	1745.29	1167.20	621.59	341.90	202.72	128.39
45.0	2786.96	2605.27	2167.02	1607.10	993.44	497.93	297.97	181.96	110.06
90.0	2783.10	2644.91	2220.98	1669.31	1120.40	574.79	322.63	201.73	124.92
135.0	2794.11	2626.19	2196.20	1668.21	1109.94	565.43	326.48	201.01	126.19
180.0	2791.36	2655.37	2198.40	1675.92	1087.69	527.17	320.65	193.91	120.13
225.0	2786.96	2752.82	2416.43	1858.15	1313.65	662.33	363.37	219.62	136.76
270.0	2783.10	2674.09	2260.62	1702.34	1095.73	568.68	315.36	197.93	125.14
315.0	2794.11	2653.72	2224.83	1669.86	1065.95	578.15	319.88	197.60	127.18
360.0	2791.36	2674.09	2290.35	1745.29	1167.20	621.59	341.90	202.72	128.39

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	72.23	40.36	14.92	7.82	7.65	7.76	8.09	9.64	9.75
45.0	61.28	34.74	10.24	7.49	7.38	7.38	7.54	8.81	9.75
90.0	72.56	41.07	15.47	7.71	7.49	7.54	7.82	8.59	8.53
135.0	72.79	40.08	16.24	8.64	8.64	8.70	9.36	10.68	10.19
180.0	67.66	37.88	13.21	7.93	7.82	7.82	8.04	8.70	8.59
225.0	75.92	42.45	17.84	7.65	7.49	7.43	7.54	7.82	9.36
270.0	70.86	38.15	12.99	7.93	7.82	7.87	8.31	9.69	9.47
315.0	71.90	38.87	13.38	7.87	7.71	7.82	8.20	9.31	8.86
360.0	72.23	40.36	14.92	7.82	7.65	7.76	8.09	9.64	9.75

C/γ(°)	90.0
0.0	5.07
45.0	5.01
90.0	5.01
135.0	5.07
180.0	5.07
225.0	5.01
270.0	5.01
315.0	5.07
360.0	5.07