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Nata

Client:

LumCAT: 1408-N

Luminaire: 92.70.064.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT1420

Lamp flux(lm): 1910.2

Number of Lamps: 1

Length(mm): 39

Phm Type: C

Voltage(V): 35.1000

Current(A): 0.4000

Power (W): 14.0400

PF: 0.0000

Ballast type: DC

Width(mm): 39

Height(mm): 0

Photometric Results

Lumens(lm): 1600.32, Efficiency(%): 83.78% , Luminous Efficacy(lm/W): 113.98

Central intensity(cd): 1562.363, Maximum intensity(cd): 1562.363

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=57.0

[C90/270]Total=57.0

Field angle(10%Imax): [C0/180]Total=98.8

[C90/270]Total=98.8

Maximum s/h(1/2): C0_180=0.84 C90_270=0.84

Maximum s/h(1/4): C0_180=0.89 C90_270=0.89

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.19%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.820%

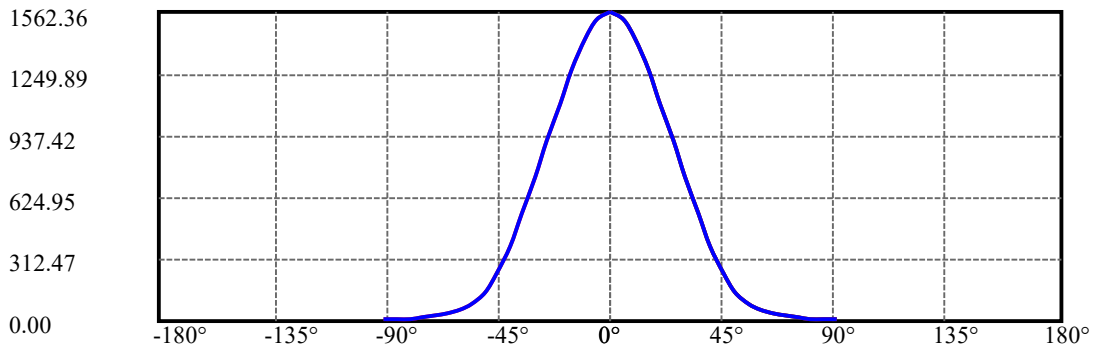
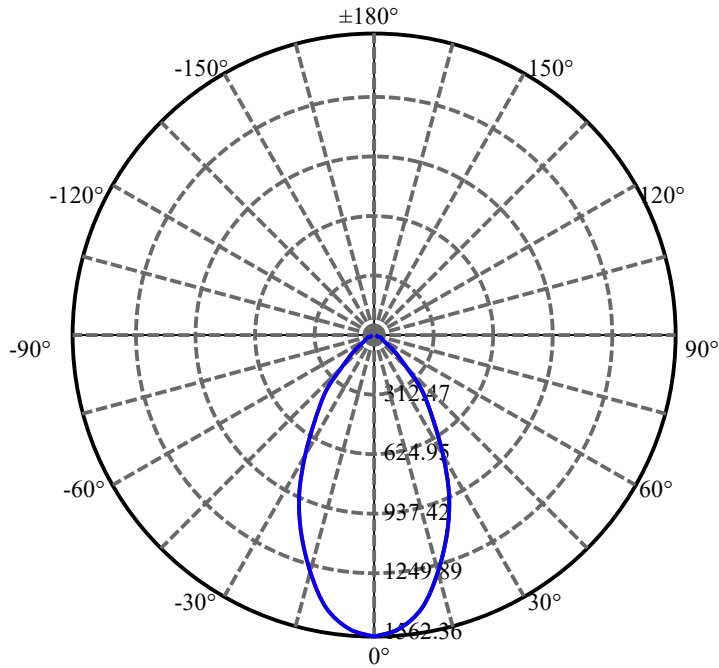
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1562.363	9.343	9.343	.489%	.584%
5.0	1527.746	72.986	82.329	3.821%	5.145%
10.0	1430.434	136.153	218.482	7.128%	13.652%
15.0	1276.070	181.034	399.516	9.477%	24.965%
20.0	1093.647	205.030	604.546	10.733%	37.777%
25.0	907.412	210.205	814.751	11.004%	50.912%
30.0	724.645	198.603	1013.353	10.397%	63.322%
35.0	543.338	170.825	1184.178	8.943%	73.996%
40.0	381.644	134.467	1318.645	7.039%	82.399%
45.0	241.725	93.691	1412.336	4.905%	88.253%
50.0	145.122	60.936	1473.272	3.190%	92.061%
55.0	87.987	39.507	1512.779	2.068%	94.530%
60.0	59.296	28.148	1540.927	1.474%	96.288%
65.0	40.618	20.178	1561.105	1.056%	97.549%
70.0	29.090	14.984	1576.089	.784%	98.486%
75.0	20.268	10.731	1586.82	.562%	99.156%
80.0	13.461	7.267	1594.086	.380%	99.610%
85.0	8.382	4.577	1598.663	.240%	99.896%
90.0	6.056	1.660	1600.323	.087%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1013.35	53.05%	63.32%
0-40	1318.65	69.03%	82.40%
0-60	1540.93	80.67%	96.29%
0-90	1598.66	83.69%	99.90%
0-120	1598.66	83.69%	99.90%
0-180	1600.32	83.78%	100.00%
60-90	85.88	4.50%	5.37%
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%
0-38.57	1280.26	67.02%	80.00%

ZONAL LUMEN SUMMARY

0-10	218.48
10-20	386.06
20-30	408.81
30-40	305.29
40-50	154.63
50-60	67.65
60-70	35.16
70-80	18.00
80-90	4.58
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



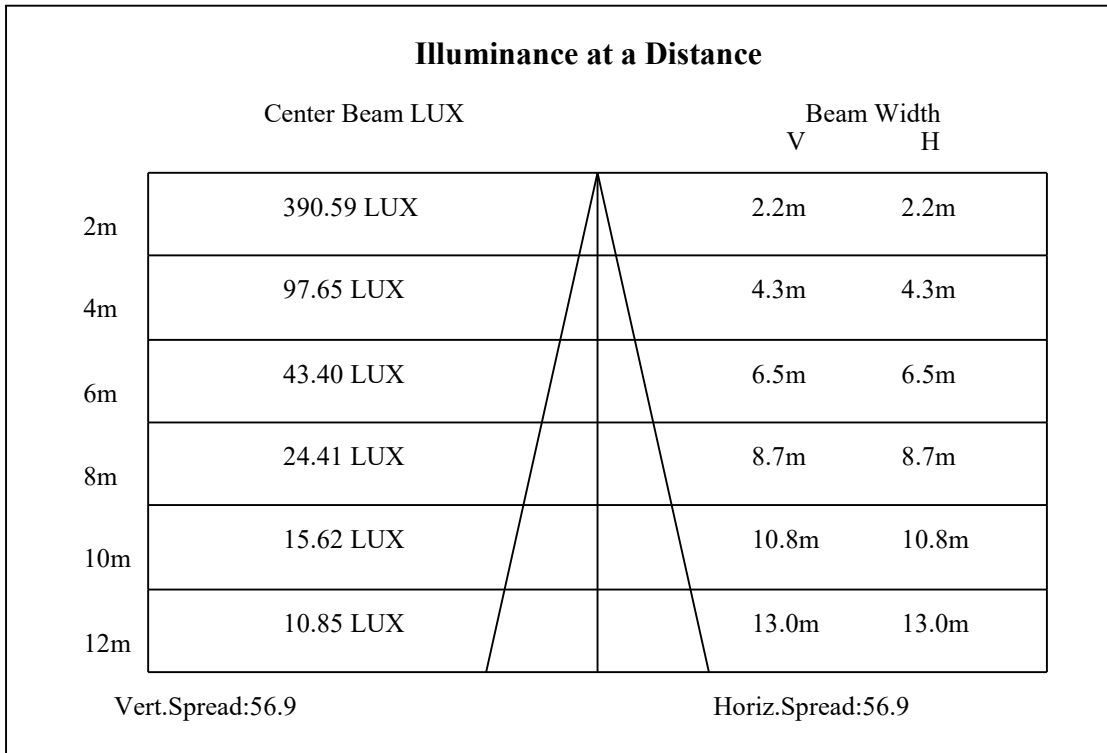
C0(Max): —————

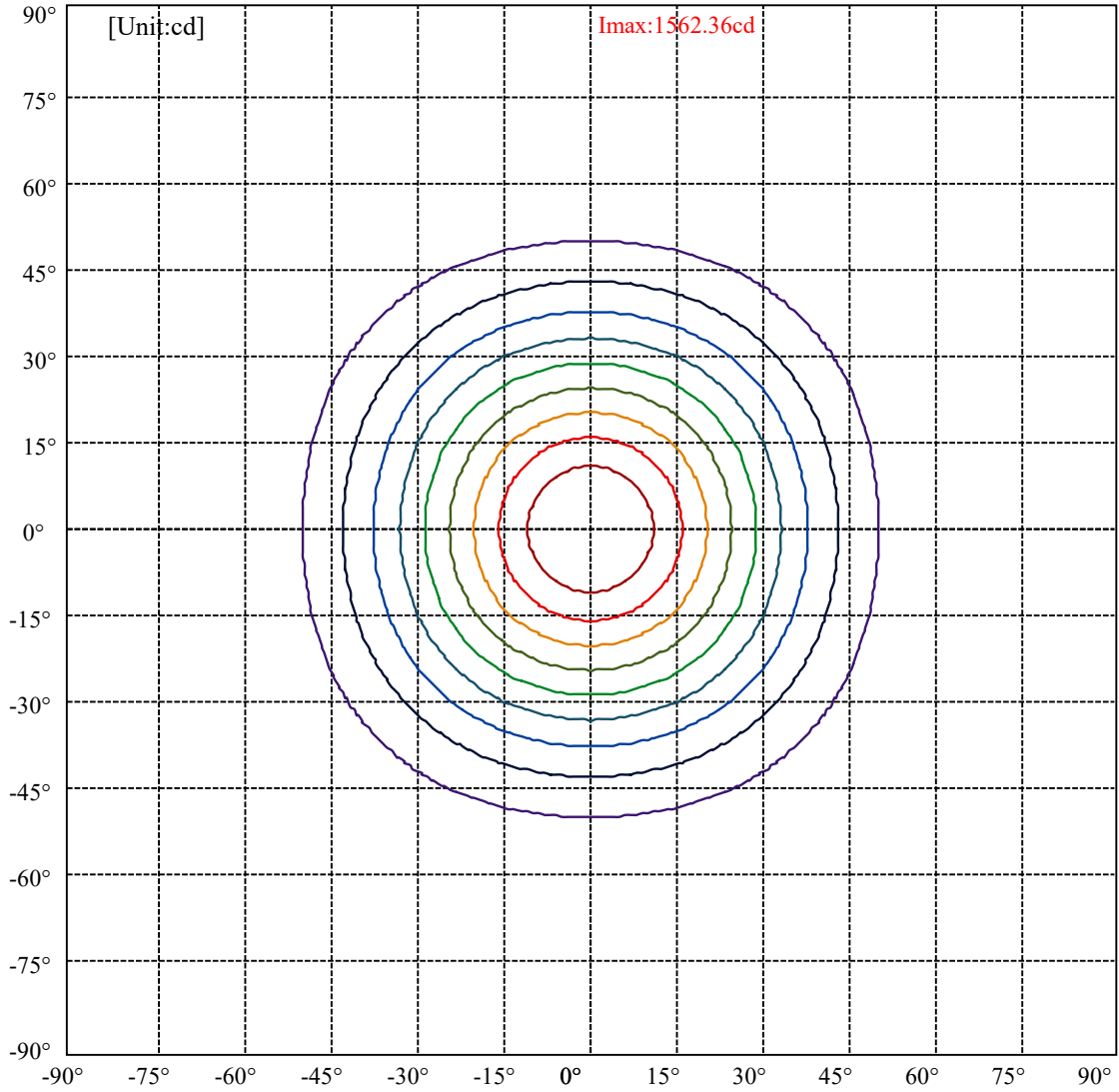
C0/C180: —————

C90/C270: —————

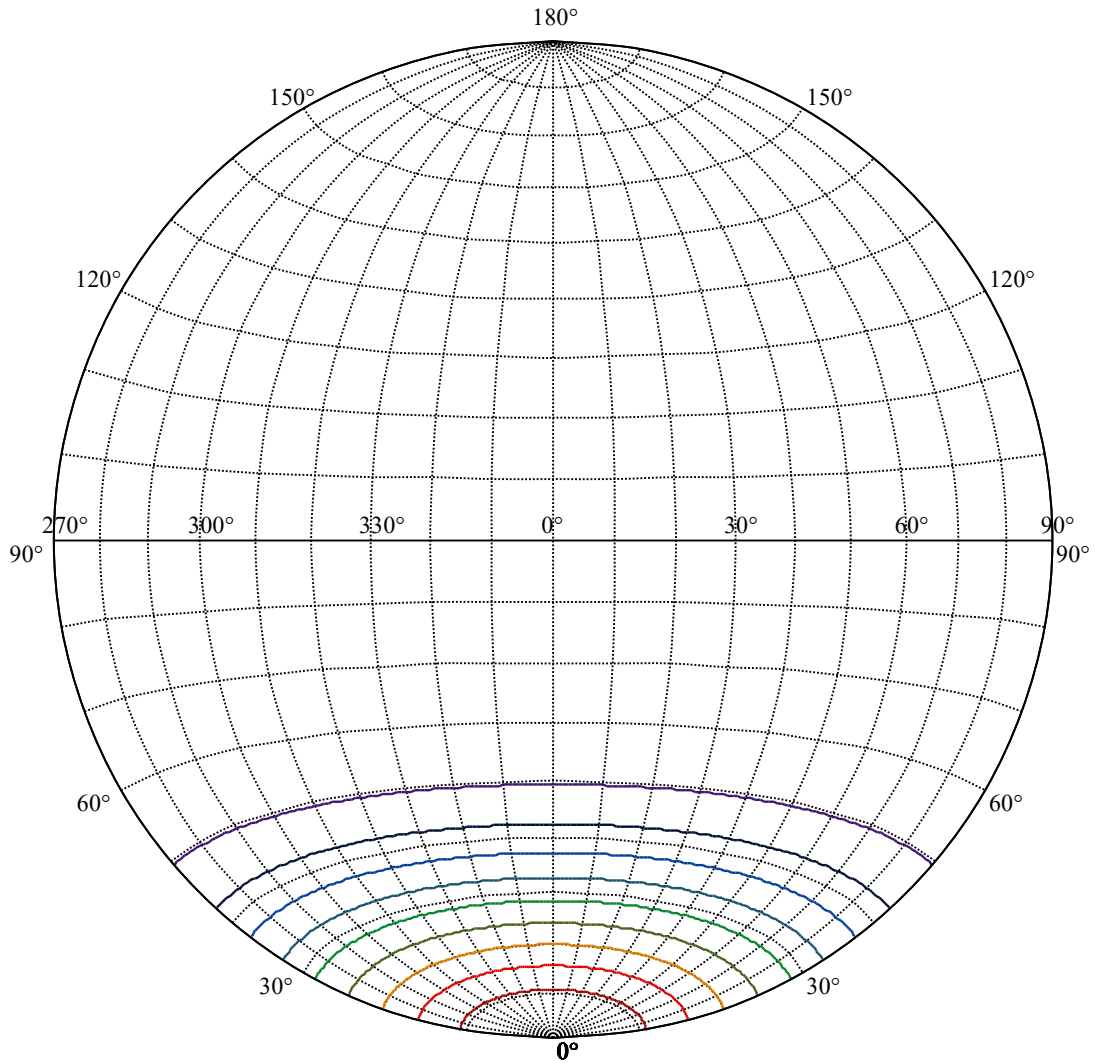
Field angle(10%Imax):C0/180Left:49.4 Right:49.4
:C90/270Left:49.4 Right:49.4

Beam Angle(50%Imax):C0/180Left:28.5 Right:28.5
:C90/270Left:28.5 Right:28.5





(10%Imax) 156.236	—
(20%Imax) 312.473	—
(30%Imax) 468.709	—
(40%Imax) 624.945	—
(50%Imax) 781.182	—
(60%Imax) 937.418	—
(70%Imax) 1093.65	—
(80%Imax) 1249.89	—
(90%Imax) 1406.13	—



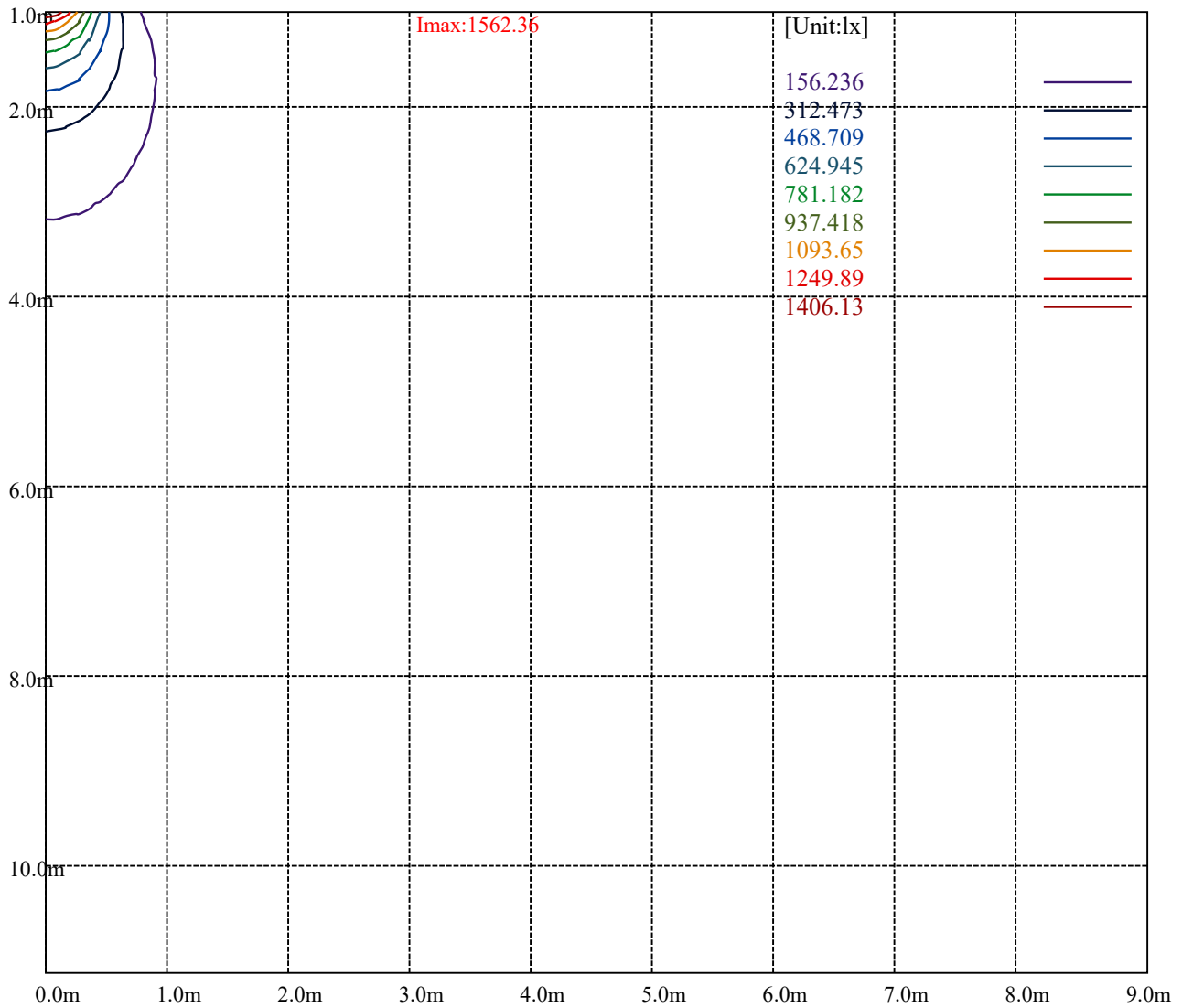
House

[Unit:cd]

Road

Imax:1562.36

(10%Imax) 156.236	—
(20%Imax) 312.473	—
(30%Imax) 468.709	—
(40%Imax) 624.945	—
(50%Imax) 781.182	—
(60%Imax) 937.418	—
(70%Imax) 1093.65	—
(80%Imax) 1249.89	—
(90%Imax) 1406.13	—



Luminance Table

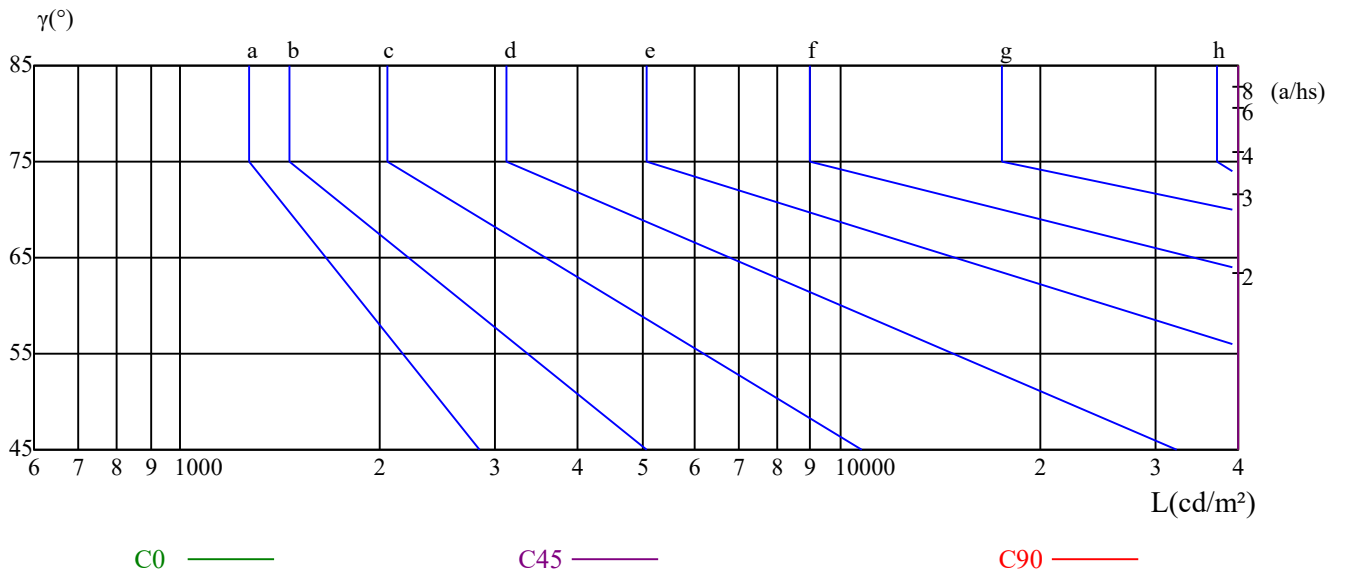
γ	45	50	55	60	65	70	75	80	85
C0	224754	148435	100855	77969	63189	55920	51485	50967	63232
C45	224754	148435	100855	77969	63189	55920	51485	50967	63232
C90	224754	148435	100855	77969	63189	55920	51485	50967	63232

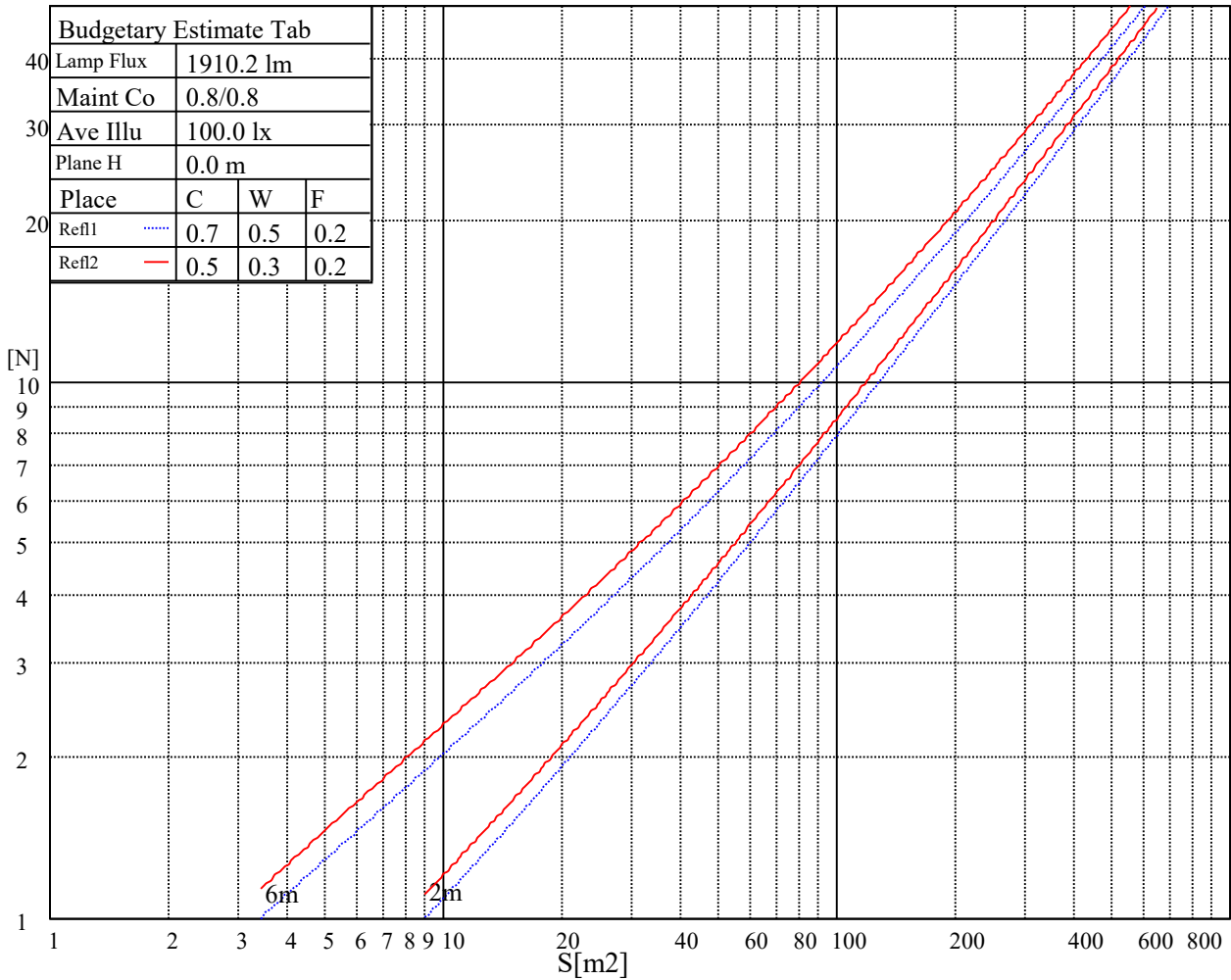
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
63189	63189	63189	51485	51485	51485	63232	63232	63232

Glare Table

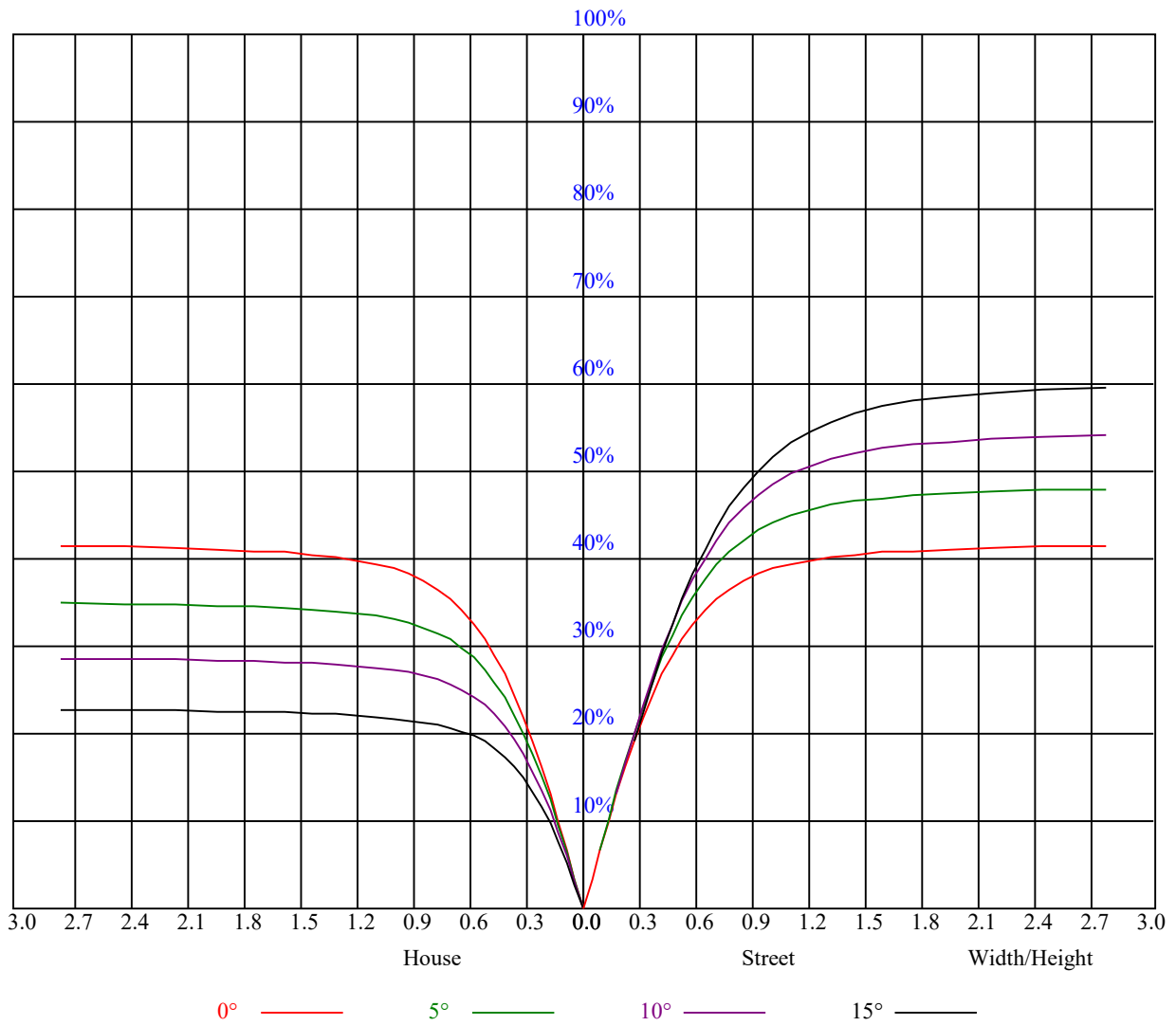
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

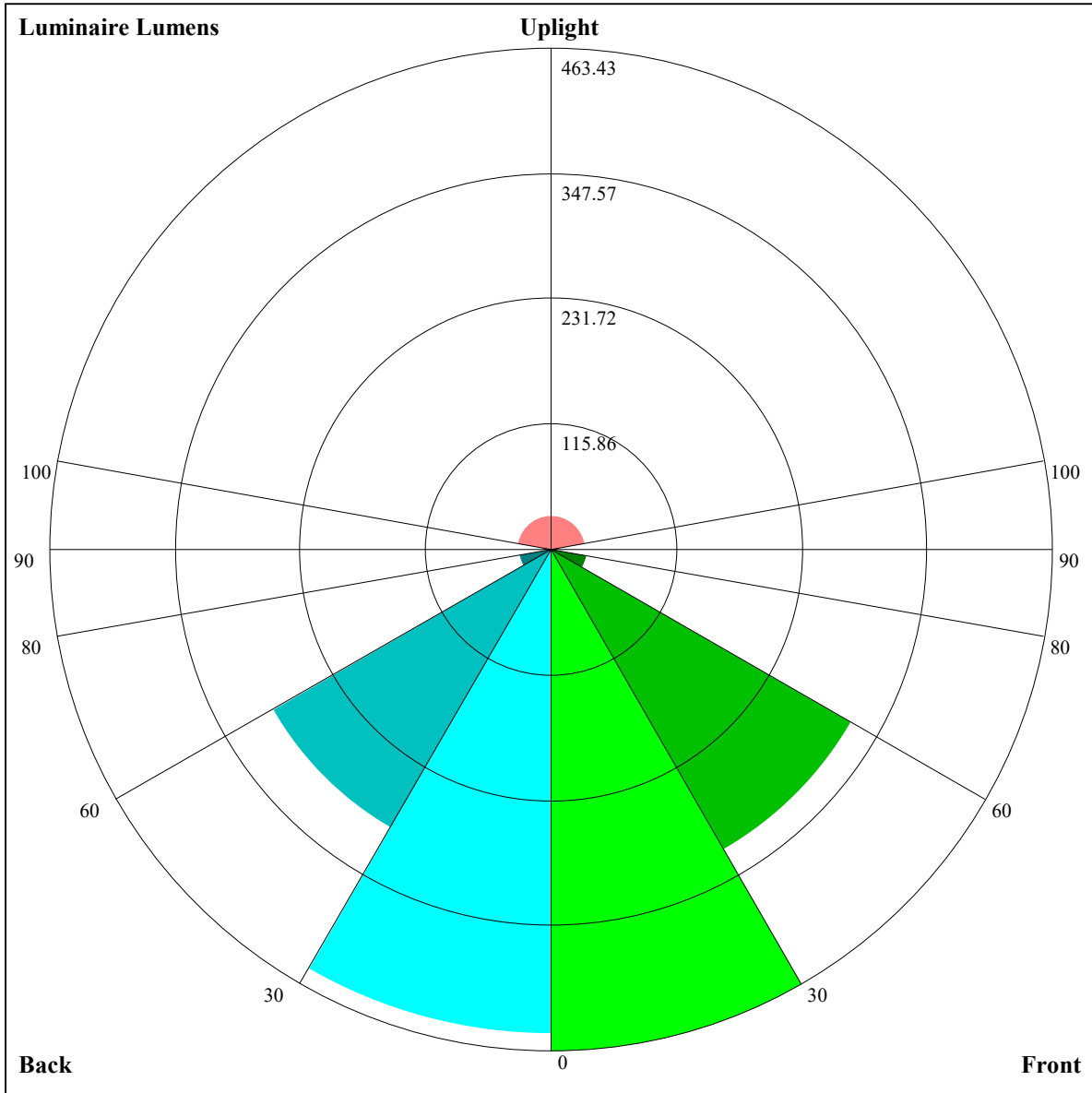
Luminance Limiting Curve





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	0.92	0.89	0.87	0.90	0.88	0.86	0.86	0.85	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.77
2	0.85	0.81	0.78	0.83	0.80	0.77	0.80	0.77	0.75	0.78	0.75	0.73	0.75	0.73	0.72	0.70
3	0.78	0.74	0.70	0.77	0.73	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.71	0.68	0.66	0.65
4	0.73	0.68	0.64	0.72	0.67	0.63	0.70	0.66	0.62	0.68	0.65	0.62	0.67	0.64	0.61	0.60
5	0.68	0.62	0.58	0.67	0.62	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.59	0.57	0.55
6	0.63	0.58	0.54	0.63	0.58	0.54	0.61	0.57	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.51
7	0.59	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.49	0.48
8	0.56	0.51	0.47	0.55	0.50	0.47	0.55	0.50	0.47	0.54	0.49	0.46	0.53	0.49	0.46	0.45
9	0.53	0.48	0.44	0.52	0.47	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.43	0.42
10	0.50	0.45	0.41	0.50	0.45	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.48	0.44	0.41	0.40





Luminaire Lumens:

FL=463.43,FM=319.9,FH=32.82,FVH=5.07

BL=448.07,BM=297.06,BH=30.96,BVH=4.81

UL=6.61,UH=31.44

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	1559.20	1541.58	1466.70	1324.66	1151.78	957.98	785.10	599.56	425.59
45.0	1566.91	1554.24	1479.37	1340.62	1177.66	984.41	801.07	621.59	453.66
90.0	1563.60	1537.17	1439.17	1305.39	1097.44	936.18	756.86	583.05	413.86
135.0	1559.75	1536.62	1453.49	1300.98	1121.50	938.16	756.47	573.14	416.23
180.0	1559.20	1504.14	1392.38	1222.80	1032.58	845.67	662.60	478.16	331.33
225.0	1566.91	1511.85	1393.48	1205.74	1034.12	833.99	640.69	473.76	317.01
270.0	1563.60	1525.06	1415.50	1259.69	1066.99	890.26	693.71	507.07	351.26
315.0	1559.75	1511.30	1403.39	1248.68	1067.10	872.64	700.65	510.37	344.21
360.0	1559.20	1541.58	1466.70	1324.66	1151.78	957.98	785.10	599.56	425.59
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	280.24	159.99	95.03	65.85	44.16	31.99	22.79	15.58	9.41
45.0	286.84	175.96	102.79	65.96	44.87	32.92	23.01	14.87	8.64
90.0	258.32	160.05	94.53	62.32	43.55	31.05	21.42	14.26	9.19
135.0	284.64	159.61	95.80	64.36	43.66	30.83	22.19	14.65	8.97
180.0	203.98	126.52	78.95	55.11	37.99	26.37	18.50	12.11	7.71
225.0	192.92	121.78	76.47	51.70	35.13	24.83	16.85	11.18	7.43
270.0	214.17	130.81	82.97	55.44	37.99	27.58	18.66	12.39	7.65
315.0	212.68	126.24	77.35	53.62	37.60	27.14	18.72	12.66	8.04
360.0	280.24	159.99	95.03	65.85	44.16	31.99	22.79	15.58	9.41
C/γ(°)	90.0								
0.0	6.50								
45.0	6.11								
90.0	6.17								
135.0	6.00								
180.0	6.00								
225.0	5.89								
270.0	5.84								
315.0	5.95								
360.0	6.50								