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Nata

LumCAT: 3-1816-E	
Luminaire: 92.76.263.00	
Report No: NATA0100	Voltage(V): 33.0000
Test No: 2017010401	Current(A): 0.5500
LampCAT: BRIDGELUX Vero13	Power (W): 18.1500
Lamp flux(lm): 1556.0	PF: 0.0000
Number of Lamps: 1	Ballast type:
Length(mm): 20	Width(mm): 76
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1416.19
Efficiency(%): 91.01%
Lumens(lm)/Power(W): 78.54
Central intensity(cd): 1778.872
Maximum intensity(cd): 1778.872
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=59.1
 [C90/270]Total=59.1
Field angle(10%Imax): [C0/180]Total=77.2
 [C90/270]Total=77.2
Maximum s/h(1/2): C0_180=0.90 C90_270=0.90
Maximum s/h(1/4): C0_180=0.88 C90_270=0.88
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.61%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.008%

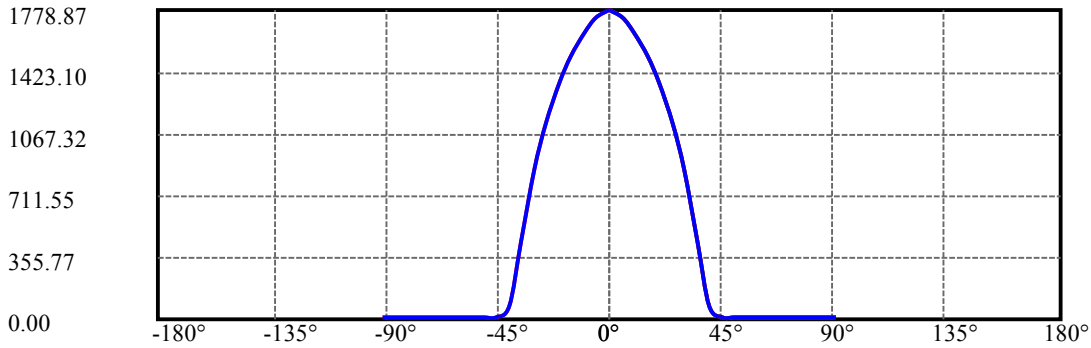
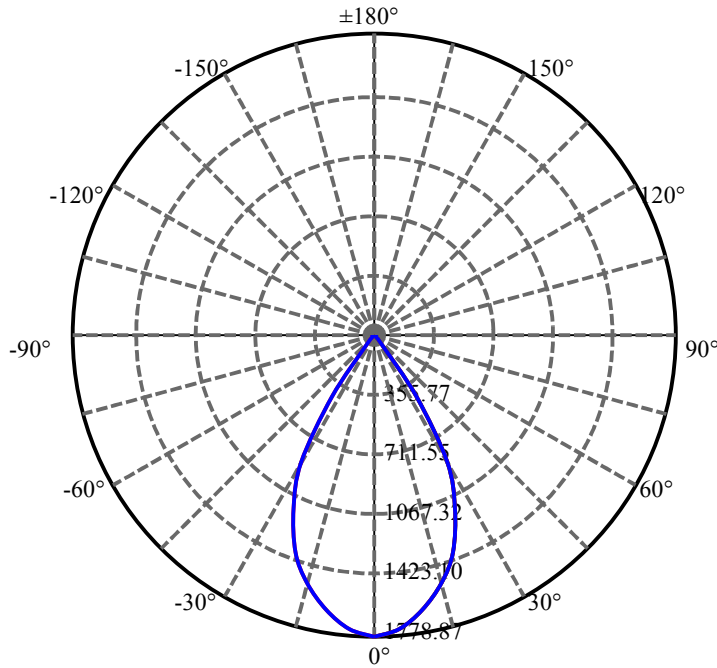
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1778.872	10.638	10.638	.684%	.751%
5.0	1734.621	82.869	93.507	5.326%	6.603%
10.0	1645.636	156.637	250.143	10.067%	17.663%
15.0	1513.845	214.767	464.91	13.802%	32.828%
20.0	1358.104	254.609	719.519	16.363%	50.807%
25.0	1127.555	261.201	980.72	16.787%	69.251%
30.0	865.370	237.171	1217.891	15.242%	85.998%
35.0	439.997	138.334	1356.226	8.890%	95.766%
40.0	74.278	26.171	1382.396	1.682%	97.614%
45.0	11.390	4.415	1386.811	.284%	97.926%
50.0	8.396	3.526	1390.337	.227%	98.175%
55.0	7.536	3.384	1393.72	.217%	98.414%
60.0	7.068	3.355	1397.075	.216%	98.651%
65.0	6.779	3.368	1400.443	.216%	98.888%
70.0	6.579	3.389	1403.832	.218%	99.128%
75.0	6.476	3.429	1407.261	.220%	99.370%
80.0	6.559	3.540	1410.801	.228%	99.620%
85.0	6.765	3.694	1414.495	.237%	99.881%
90.0	6.166	1.690	1416.185	.109%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1217.89	78.27%	86.00%
0-40	1382.40	88.84%	97.61%
0-60	1397.08	89.79%	98.65%
0-90	1414.50	90.91%	99.88%
0-120	1414.50	90.91%	99.88%
0-180	1416.19	91.01%	100.00%
60-90	20.77	1.34%	1.47%
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%
0-28.21	1132.95	72.81%	80.00%

ZONAL LUMEN SUMMARY

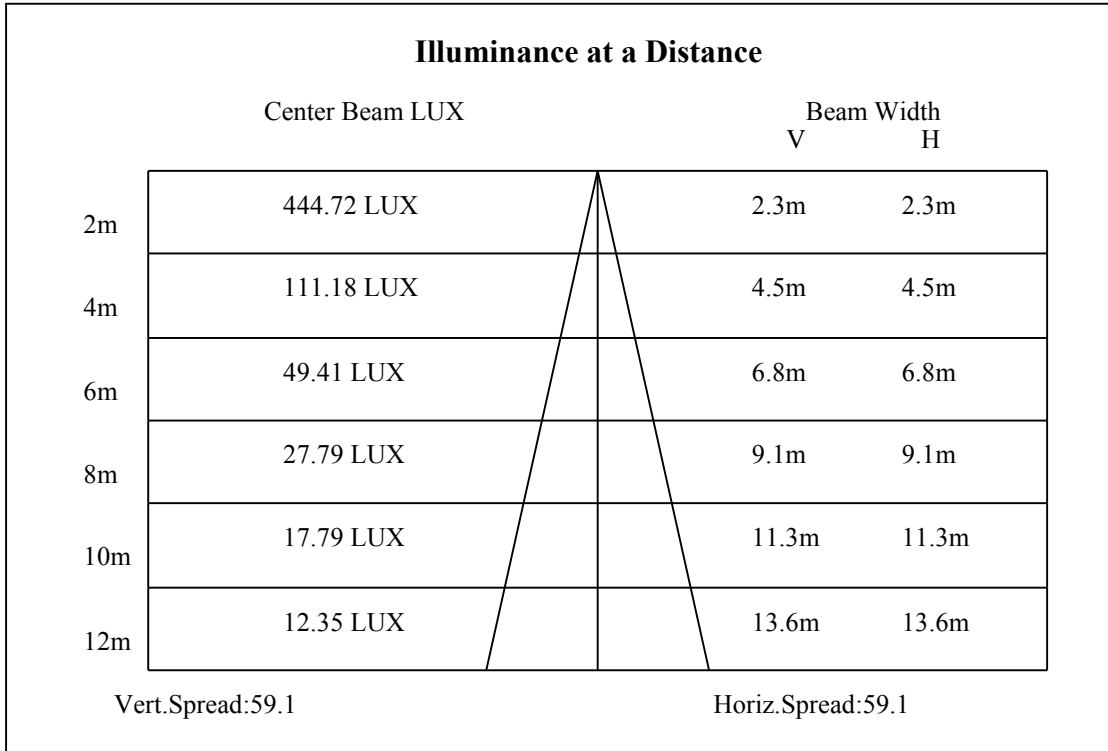
0-10	250.14
10-20	469.38
20-30	498.37
30-40	164.51
40-50	7.94
50-60	6.74
60-70	6.76
70-80	6.97
80-90	3.69
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

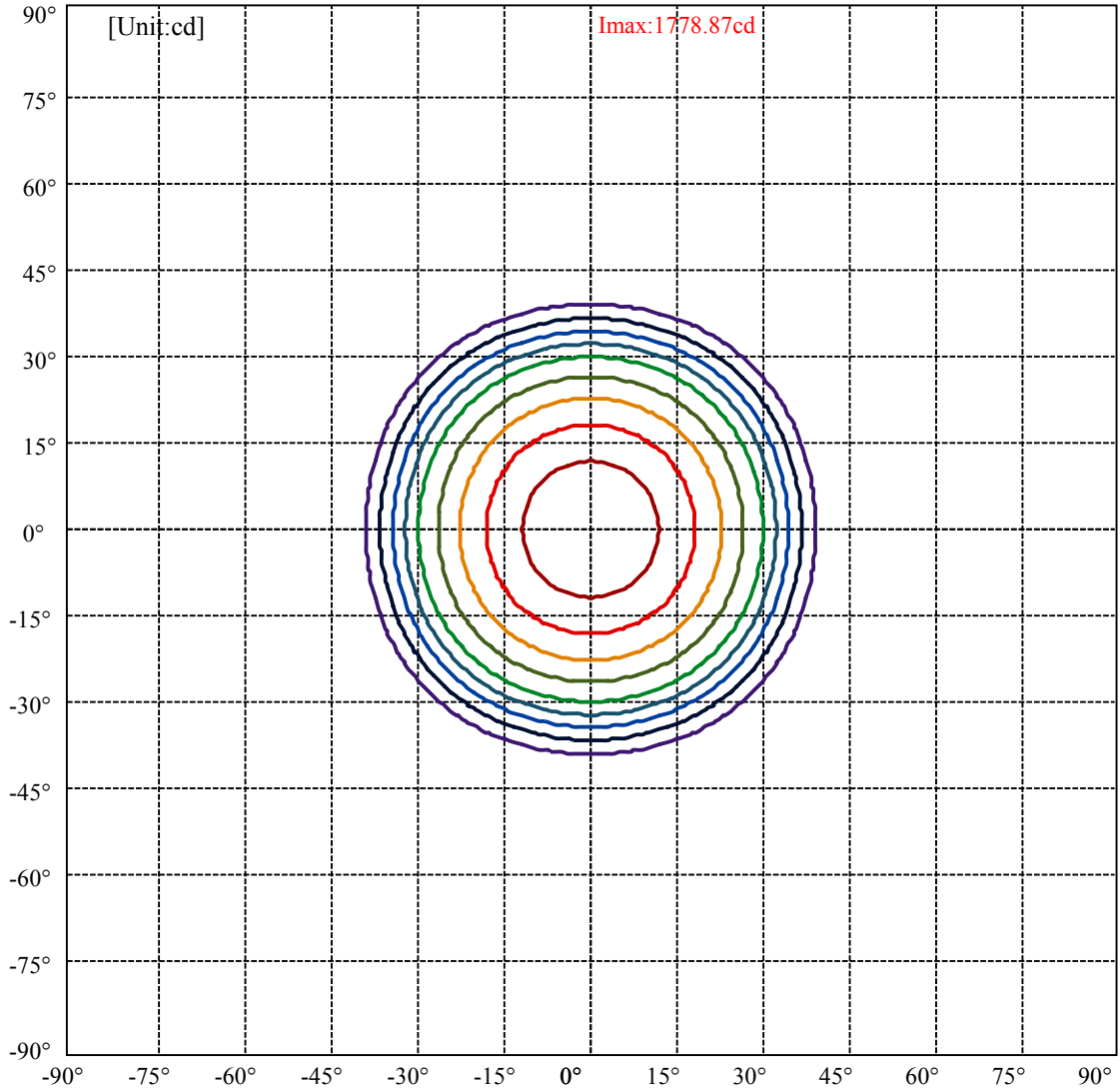


C0(Max): ———
C0/C180: ———
C90/C270: ———

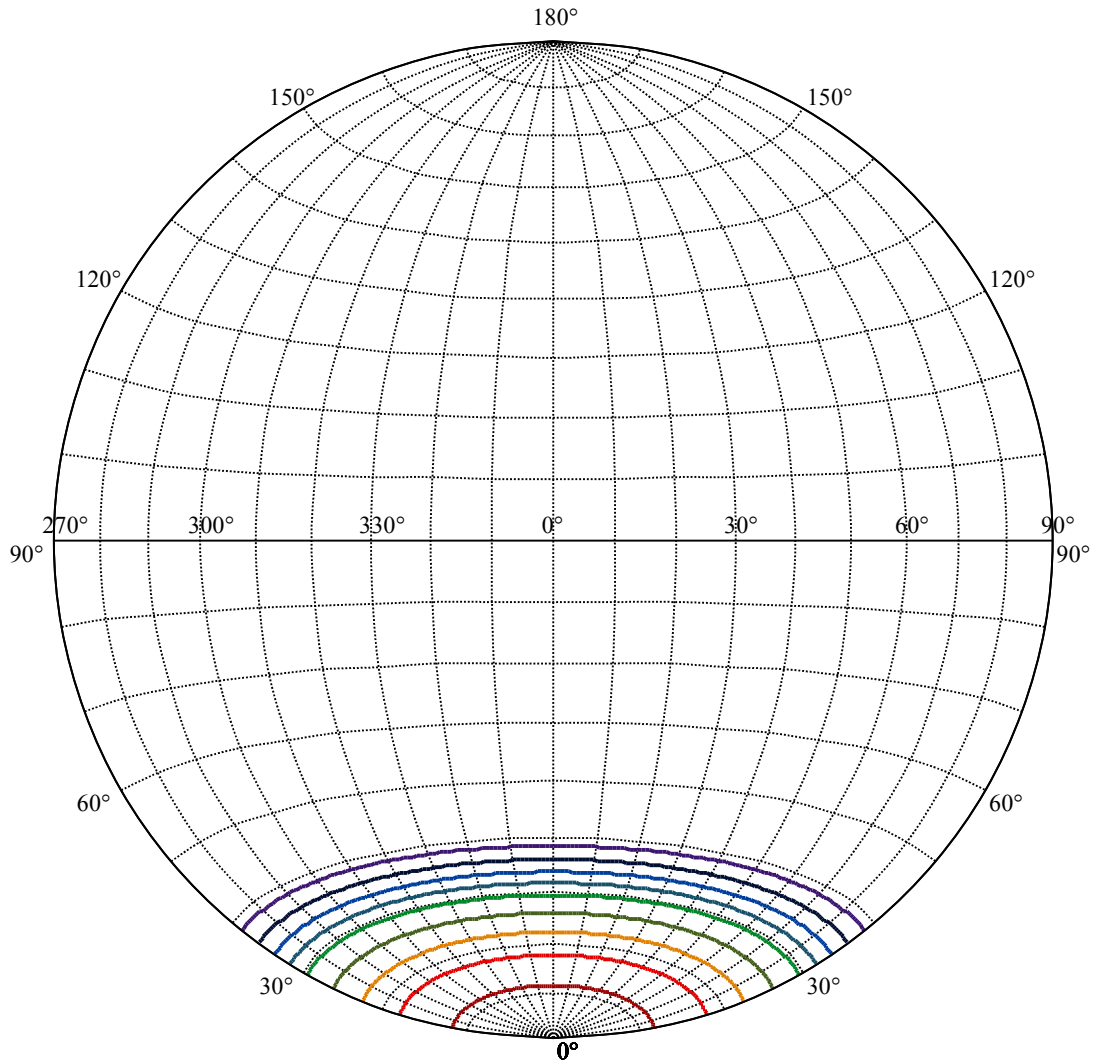
Field angle(10%Imax):C0/180Left:38.6 Right:38.6
:C90/270Left:38.6 Right:38.6

Beam Angle(50%Imax):C0/180Left:29.5 Right:29.5
:C90/270Left:29.5 Right:29.5





(10%Imax) 177.887	—
(20%Imax) 355.774	—
(30%Imax) 533.662	—
(40%Imax) 711.549	—
(50%Imax) 889.436	—
(60%Imax) 1067.32	—
(70%Imax) 1245.21	—
(80%Imax) 1423.1	—
(90%Imax) 1600.98	—



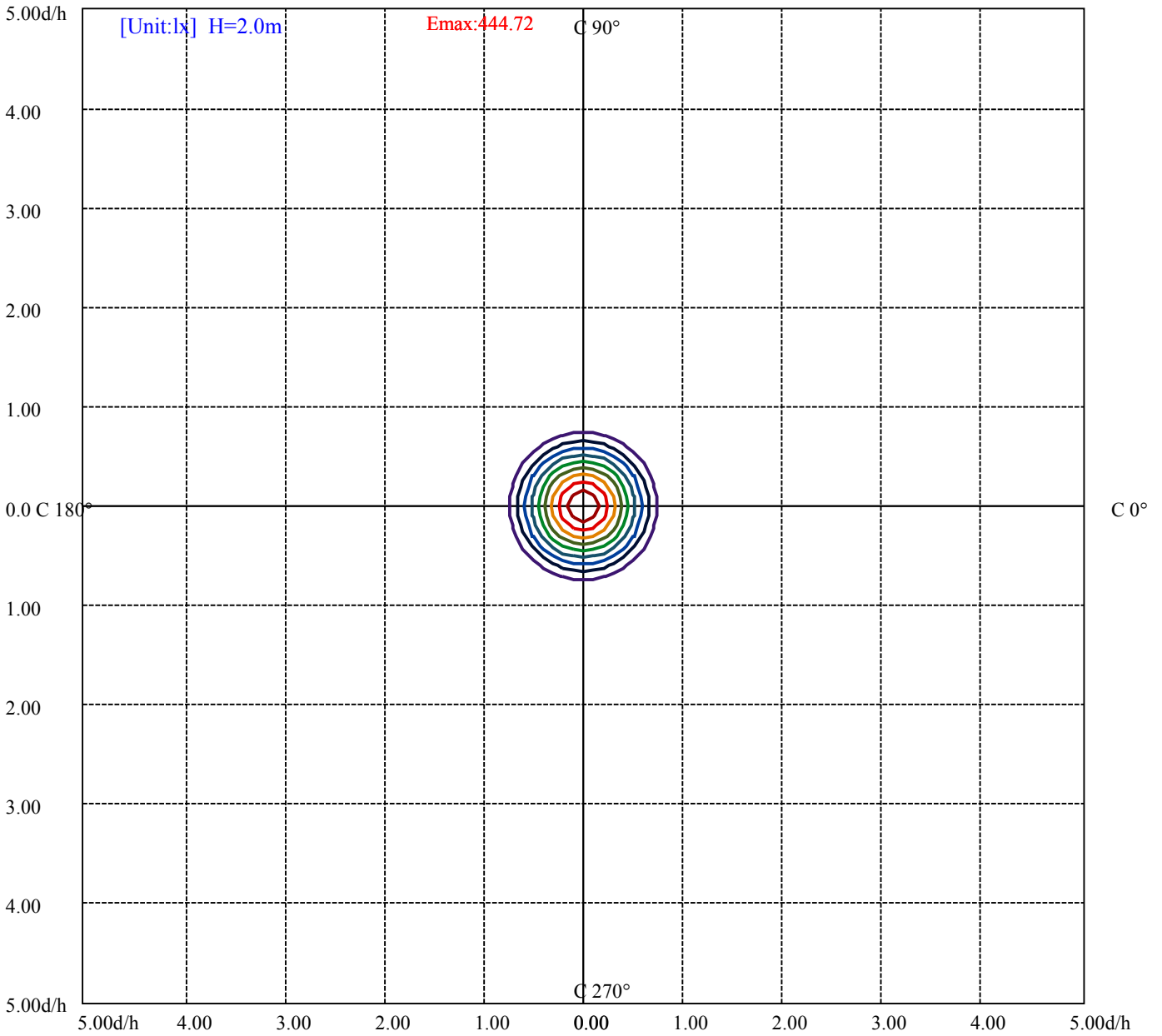
House

[Unit:cd]

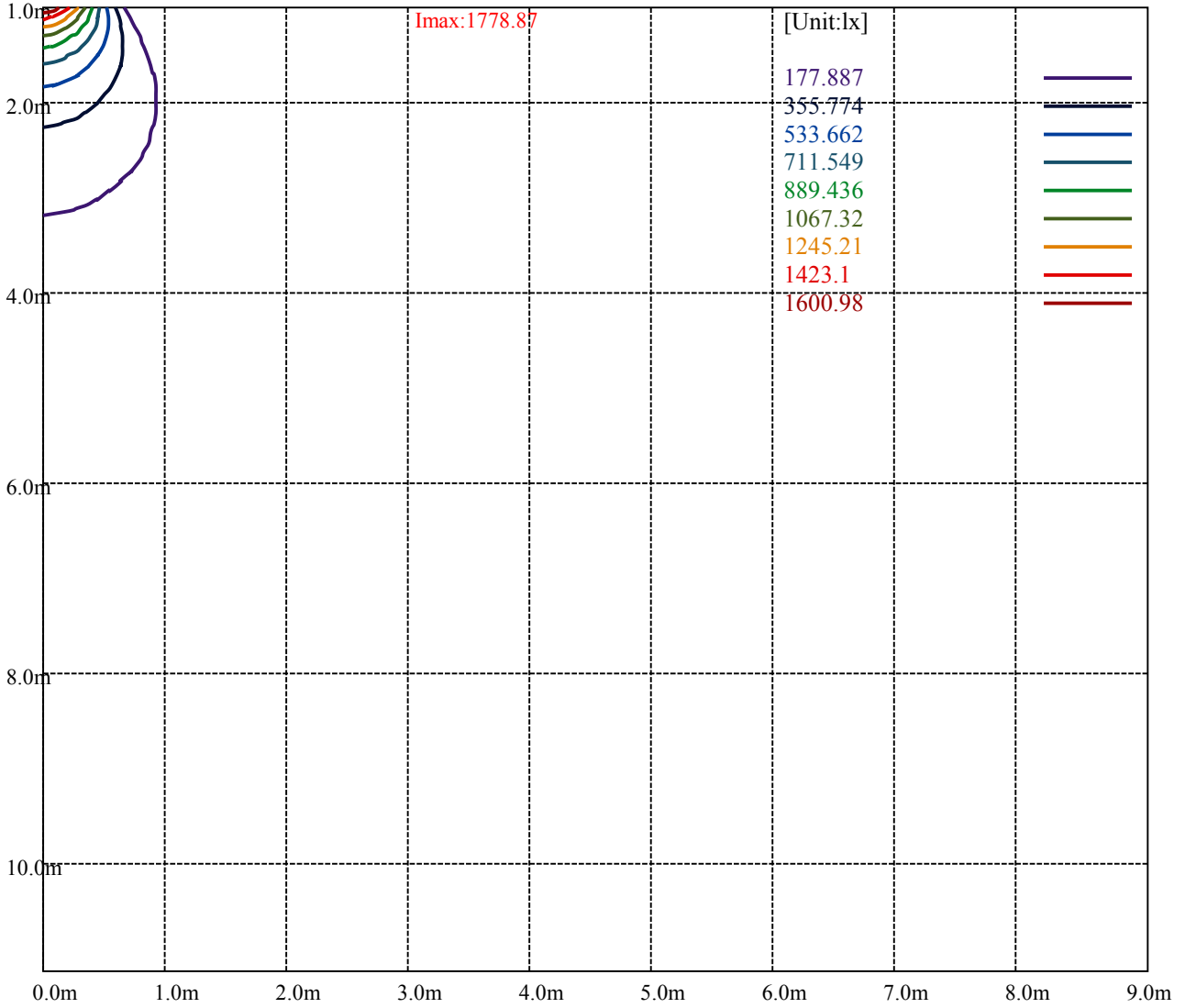
Road

I_{max}:1778.87

(10%I _{max}) 177.887	—
(20%I _{max}) 355.774	—
(30%I _{max}) 533.662	—
(40%I _{max}) 711.549	—
(50%I _{max}) 889.436	—
(60%I _{max}) 1067.32	—
(70%I _{max}) 1245.21	—
(80%I _{max}) 1423.1	—
(90%I _{max}) 1600.98	—



- (10%E_{max}) 44.47175
- (20%E_{max}) 88.9435
- (30%E_{max}) 133.4153
- (40%E_{max}) 177.887
- (50%E_{max}) 222.3587
- (60%E_{max}) 266.83
- (70%E_{max}) 311.3025
- (80%E_{max}) 355.775
- (90%E_{max}) 400.245



Luminance Table

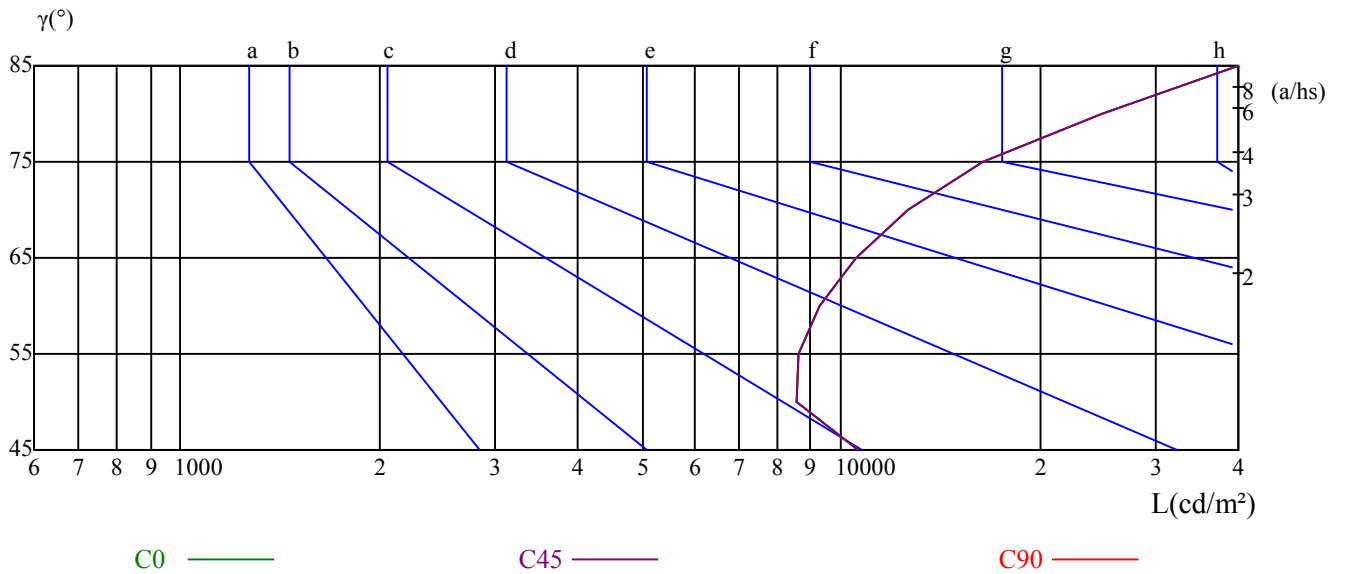
γ	45	50	55	60	65	70	75	80	85
C0	10597	8593	8644	9300	10553	12656	16461	24848	51066
C45	10597	8593	8644	9300	10553	12656	16461	24848	51066
C90	10597	8593	8644	9300	10553	12656	16461	24848	51066

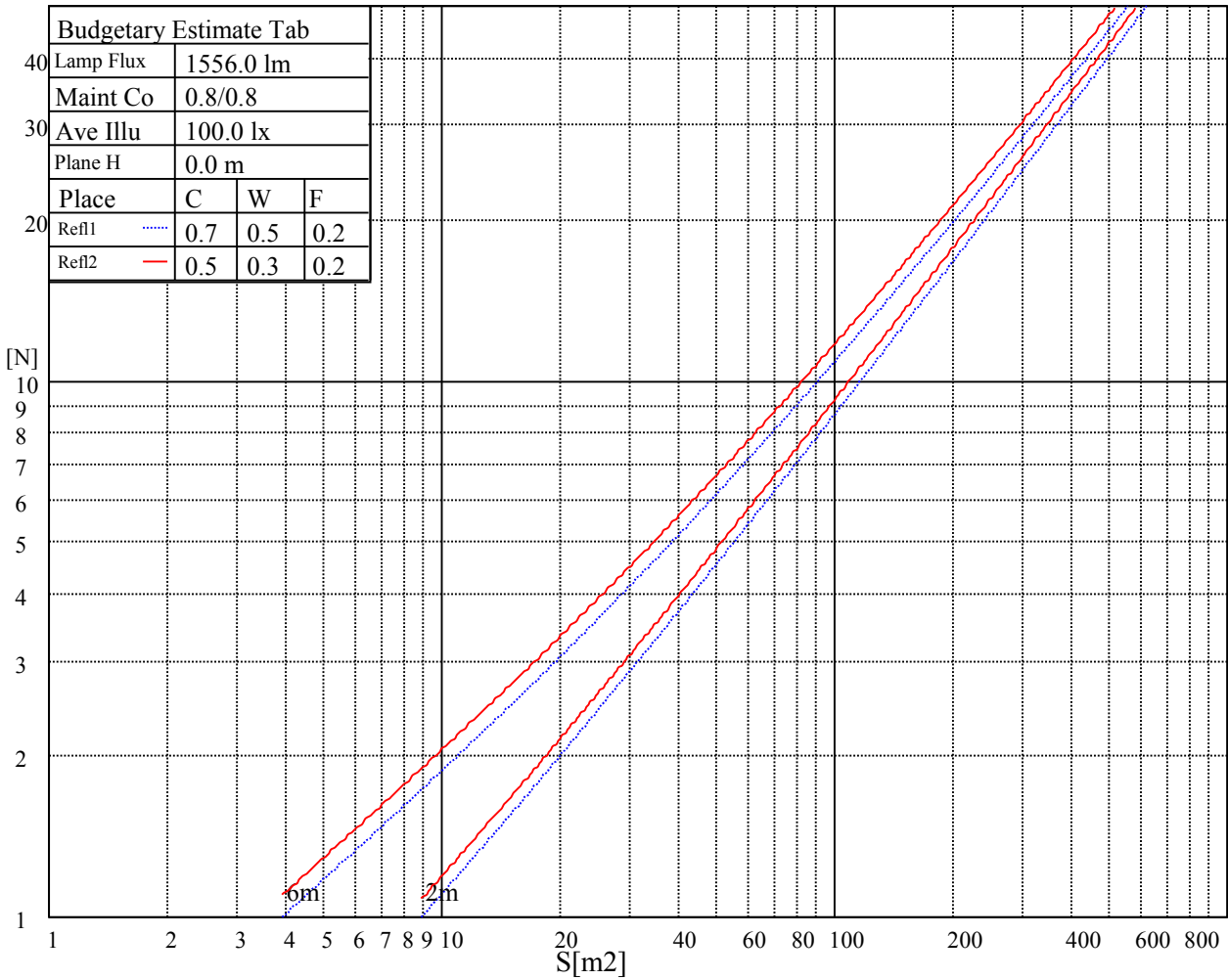
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10553	10553	10553	16461	16461	16461	51066	51066	51066

Glare Table

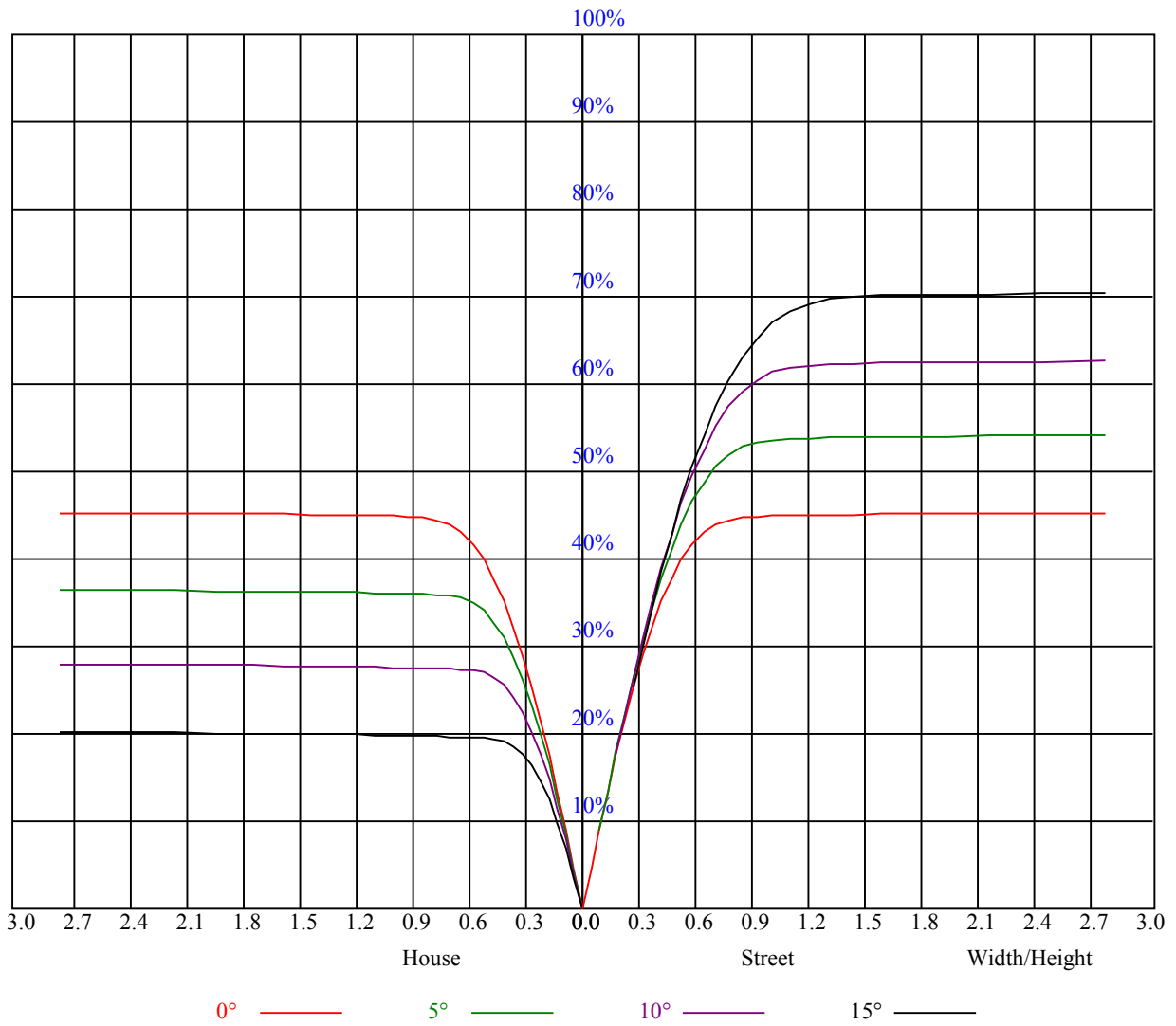
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.92
1	1.01	0.99	0.97	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85
2	0.95	0.91	0.88	0.93	0.90	0.87	0.90	0.88	0.85	0.88	0.86	0.84	0.85	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.79	0.77	0.76
4	0.84	0.80	0.76	0.83	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.69	0.68
6	0.76	0.71	0.67	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.66	0.65
7	0.72	0.67	0.64	0.72	0.67	0.64	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.62
8	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.59
9	0.66	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.56
10	0.63	0.58	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.53



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	1775.02	1769.51	1685.83	1583.42	1444.13	1222.80	935.41	573.69	281.34
45.0	1777.77	1759.05	1675.92	1557.55	1412.20	1182.06	889.71	518.63	75.65
90.0	1780.52	1720.51	1637.93	1482.12	1310.89	1088.35	808.28	348.73	33.75
135.0	1782.18	1726.02	1634.62	1481.02	1327.41	1123.15	846.22	394.20	35.84
180.0	1775.02	1700.14	1601.59	1445.78	1286.67	1056.09	802.56	312.33	25.33
225.0	1777.77	1712.80	1617.01	1475.51	1319.70	1091.82	828.93	366.29	26.54
270.0	1780.52	1744.74	1652.79	1542.13	1378.06	1169.40	927.15	532.95	63.81
315.0	1782.18	1744.19	1659.40	1543.23	1385.77	1086.76	884.70	473.15	51.97
360.0	1775.02	1769.51	1685.83	1583.42	1444.13	1222.80	935.41	573.69	281.34
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	12.06	8.42	7.60	7.10	6.83	6.61	6.44	6.39	6.28
45.0	11.78	8.64	7.71	7.16	6.88	6.61	6.55	6.66	6.94
90.0	11.78	8.53	7.60	7.10	6.77	6.61	6.55	6.99	7.82
135.0	12.06	8.59	7.54	7.10	6.83	6.61	6.55	6.88	6.66
180.0	10.08	8.04	7.32	6.94	6.66	6.55	6.44	6.33	6.66
225.0	9.86	8.09	7.43	6.94	6.72	6.55	6.50	6.55	7.10
270.0	12.28	8.53	7.65	7.16	6.83	6.61	6.39	6.33	6.44
315.0	11.23	8.31	7.43	7.05	6.72	6.50	6.39	6.33	6.22
360.0	12.06	8.42	7.60	7.10	6.83	6.61	6.44	6.39	6.28
C/γ(°)	90.0								
0.0	6.17								
45.0	6.17								
90.0	6.17								
135.0	6.17								
180.0	6.17								
225.0	6.17								
270.0	6.17								
315.0	6.17								
360.0	6.17								