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Nata

LumCAT: 1687-M	
Luminaire: 92.70.122.00	
Report No: NATA0100	Voltage(V): 37.6000
Test No: GC2018080212	Current(A): 0.2000
LampCAT: BRIDGELUX V4 HD	Power (W): 7.5200
Lamp flux(lm): 719.0	PF: 0.0000
Number of Lamps: 1	Ballast type: AC
Length(mm): 46	Width(mm): 46
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 666.05
Efficiency(%): 92.64%
Lumens(lm)/Power(W): 88.57
Central intensity(cd): 2402.799
Maximum intensity(cd): 2402.799
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=21.1
 [C90/270]Total=21.1
Field angle(10%Imax): [C0/180]Total=58.4
 [C90/270]Total=58.4
Maximum s/h(1/2): C0_180=0.36 C90_270=0.36
Maximum s/h(1/4): C0_180=0.35 C90_270=0.35
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.94%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.429%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2402.799	2.299	2.299	.320%	.345%
2.0	2377.542	18.198	20.497	2.531%	3.077%
4.0	2240.795	34.281	54.778	4.768%	8.224%
6.0	1996.552	45.770	100.548	6.366%	15.096%
8.0	1686.033	51.462	152.01	7.157%	22.822%
10.0	1294.940	49.316	201.325	6.859%	30.227%
12.0	965.228	44.012	245.338	6.121%	36.835%
14.0	660.085	35.022	280.36	4.871%	42.093%
16.0	453.155	27.394	307.753	3.810%	46.206%
18.0	347.020	23.518	331.271	3.271%	49.737%
20.0	302.776	22.711	353.983	3.159%	53.146%
22.0	282.102	23.176	377.159	3.223%	56.626%
24.0	268.097	23.915	401.074	3.326%	60.217%
26.0	256.047	24.616	425.691	3.424%	63.912%
28.0	245.324	25.259	450.949	3.513%	67.705%
30.0	237.045	25.994	476.943	3.615%	71.607%
32.0	230.156	26.748	503.691	3.720%	75.623%
34.0	223.852	27.453	531.144	3.818%	79.745%
36.0	216.055	27.851	558.996	3.874%	83.927%
38.0	206.709	27.910	586.906	3.882%	88.117%
40.0	198.430	27.973	614.879	3.891%	92.317%
42.0	157.214	23.071	637.95	3.209%	95.781%
44.0	73.342	11.174	649.124	1.554%	97.458%
46.0	16.063	2.534	651.658	.352%	97.839%
48.0	9.428	1.537	653.195	.214%	98.070%
50.0	7.040	1.183	654.377	.165%	98.247%
52.0	5.045	0.872	655.249	.121%	98.378%
54.0	3.950	0.701	655.95	.097%	98.483%
56.0	3.365	0.612	656.562	.085%	98.575%
58.0	3.221	0.599	657.161	.083%	98.665%
60.0	3.104	0.590	657.751	.082%	98.754%
62.0	3.014	0.584	658.334	.081%	98.841%
64.0	2.932	0.578	658.912	.080%	98.928%
66.0	2.884	0.578	659.49	.080%	99.015%
68.0	2.808	0.571	660.061	.079%	99.100%
70.0	2.773	0.572	660.632	.079%	99.186%
72.0	2.732	0.570	661.202	.079%	99.272%
74.0	2.712	0.572	661.774	.080%	99.358%

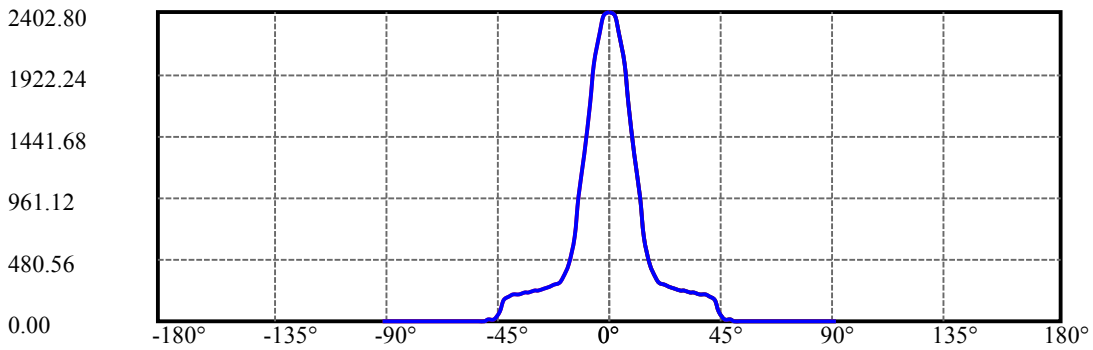
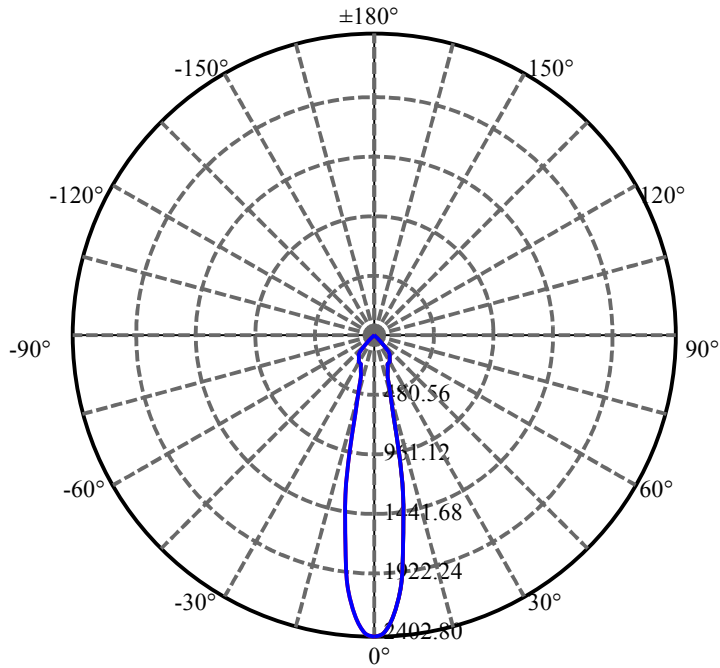
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	2.677	0.570	662.344	.079%	99.443%
78.0	2.650	0.568	662.912	.079%	99.529%
80.0	2.643	0.571	663.483	.079%	99.614%
82.0	2.643	0.574	664.057	.080%	99.700%
84.0	2.622	0.572	664.629	.080%	99.786%
86.0	2.615	0.572	665.201	.080%	99.872%
88.0	2.588	0.567	665.768	.079%	99.957%
90.0	2.595	0.285	666.052	.040%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	476.94	66.33%	71.61%
0-40	614.88	85.52%	92.32%
0-60	657.75	91.48%	98.75%
0-90	665.77	92.60%	99.96%
0-120	665.77	92.60%	99.96%
0-180	666.05	92.64%	100.00%
60-90	8.61	1.20%	1.29%
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%
0-34.12	532.84	74.11%	80.00%

ZONAL LUMEN SUMMARY

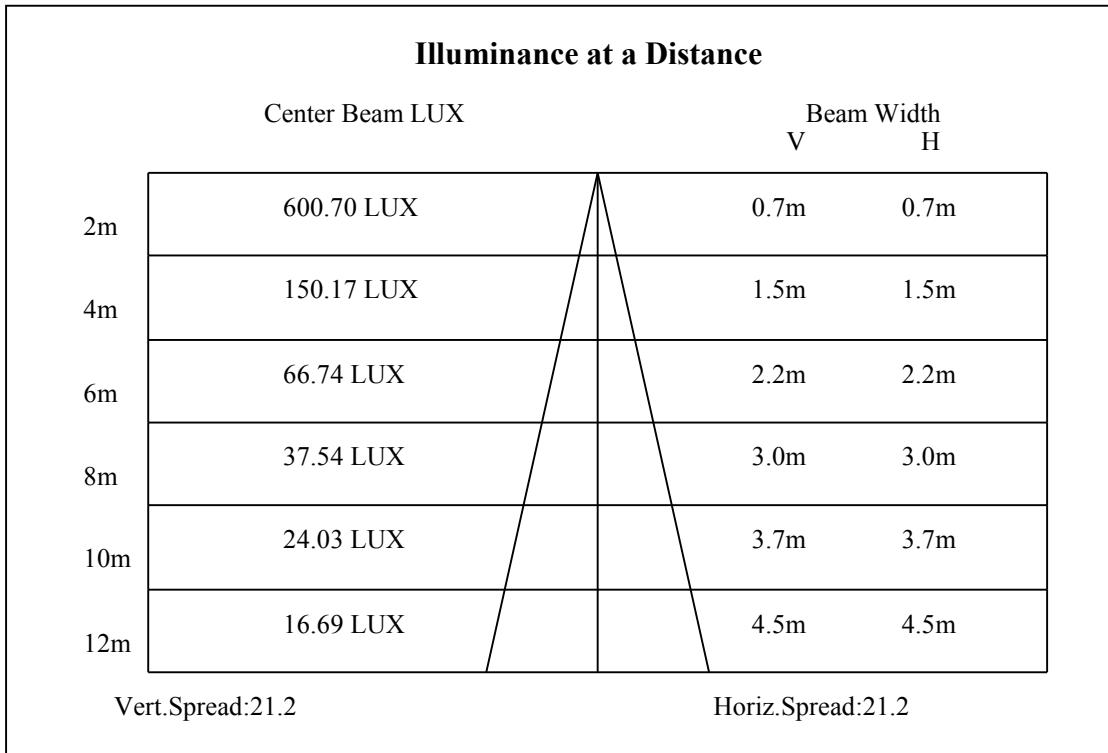
0-10	201.33
10-20	152.66
20-30	122.96
30-40	137.94
40-50	39.50
50-60	3.37
60-70	2.88
70-80	2.85
80-90	2.29
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

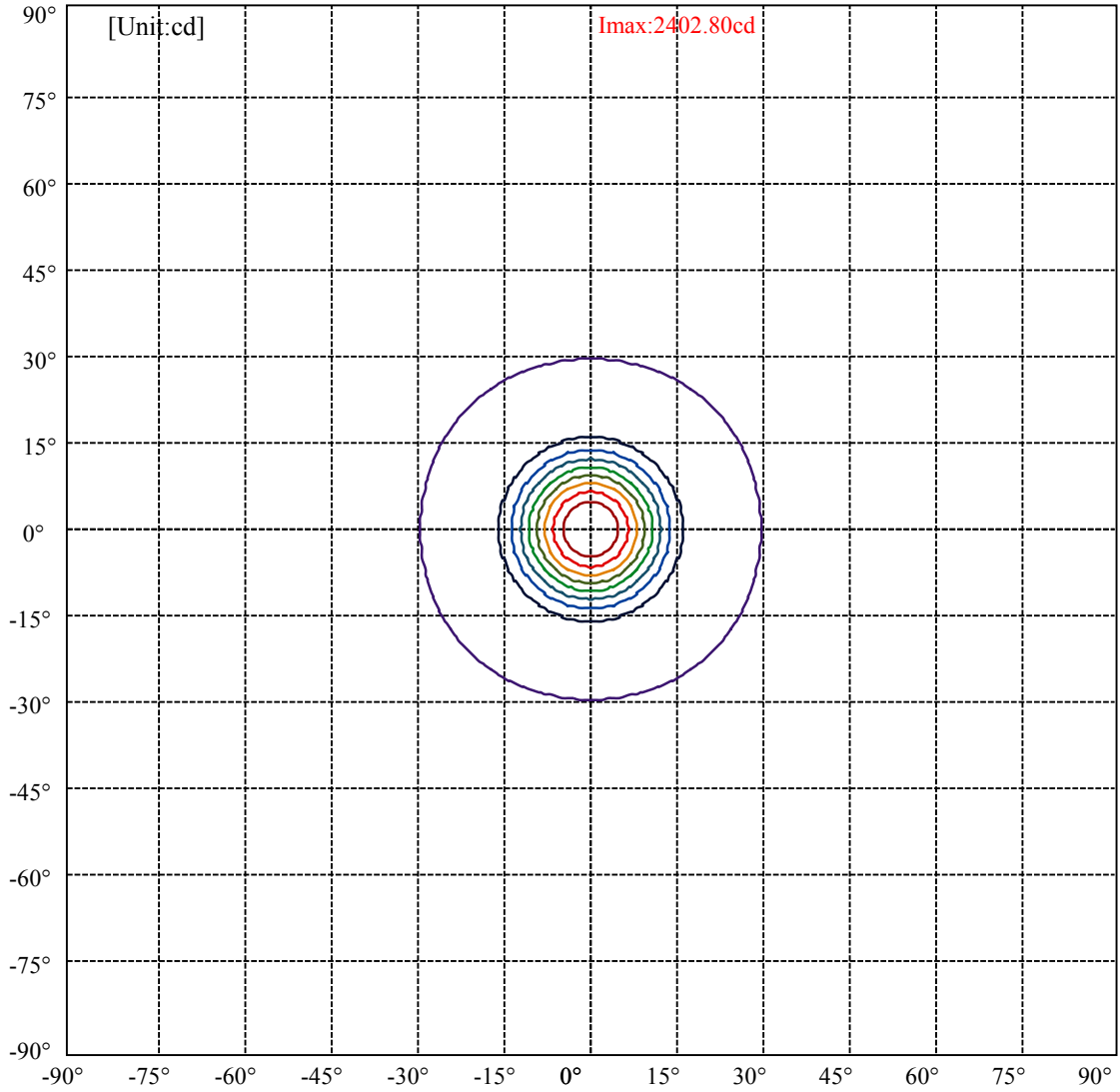


C0(Max): —————
C0/C180: —————
C90/C270: —————

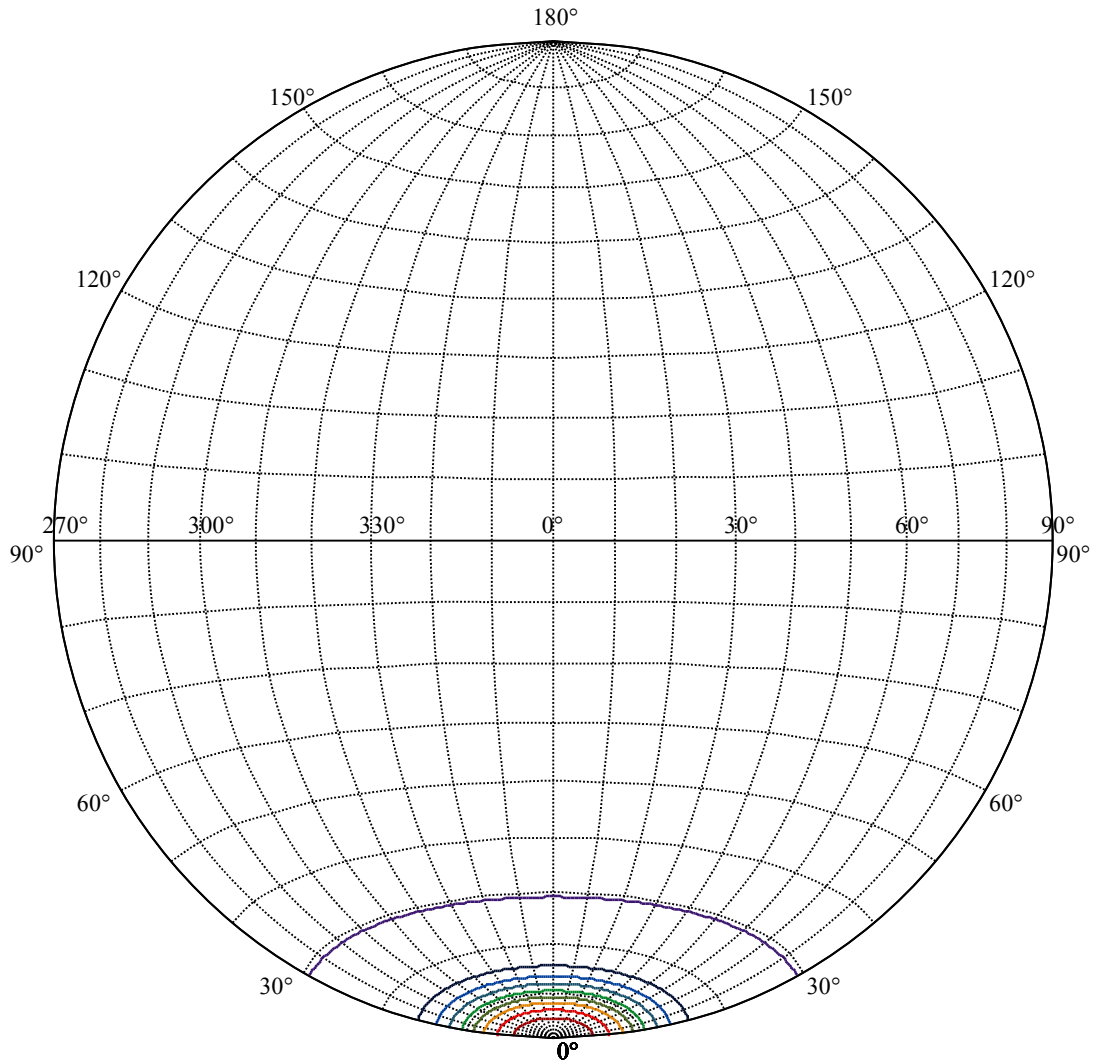
Field angle(10%Imax):C0/180Left:29.2 Right:29.2
:C90/270Left:29.2 Right:29.2

Beam Angle(50%Imax):C0/180Left:10.6 Right:10.6
:C90/270Left:10.6 Right:10.6





(10%Imax) 240.28	—
(20%Imax) 480.56	—
(30%Imax) 720.84	—
(40%Imax) 961.12	—
(50%Imax) 1201.4	—
(60%Imax) 1441.68	—
(70%Imax) 1681.96	—
(80%Imax) 1922.24	—
(90%Imax) 2162.52	—



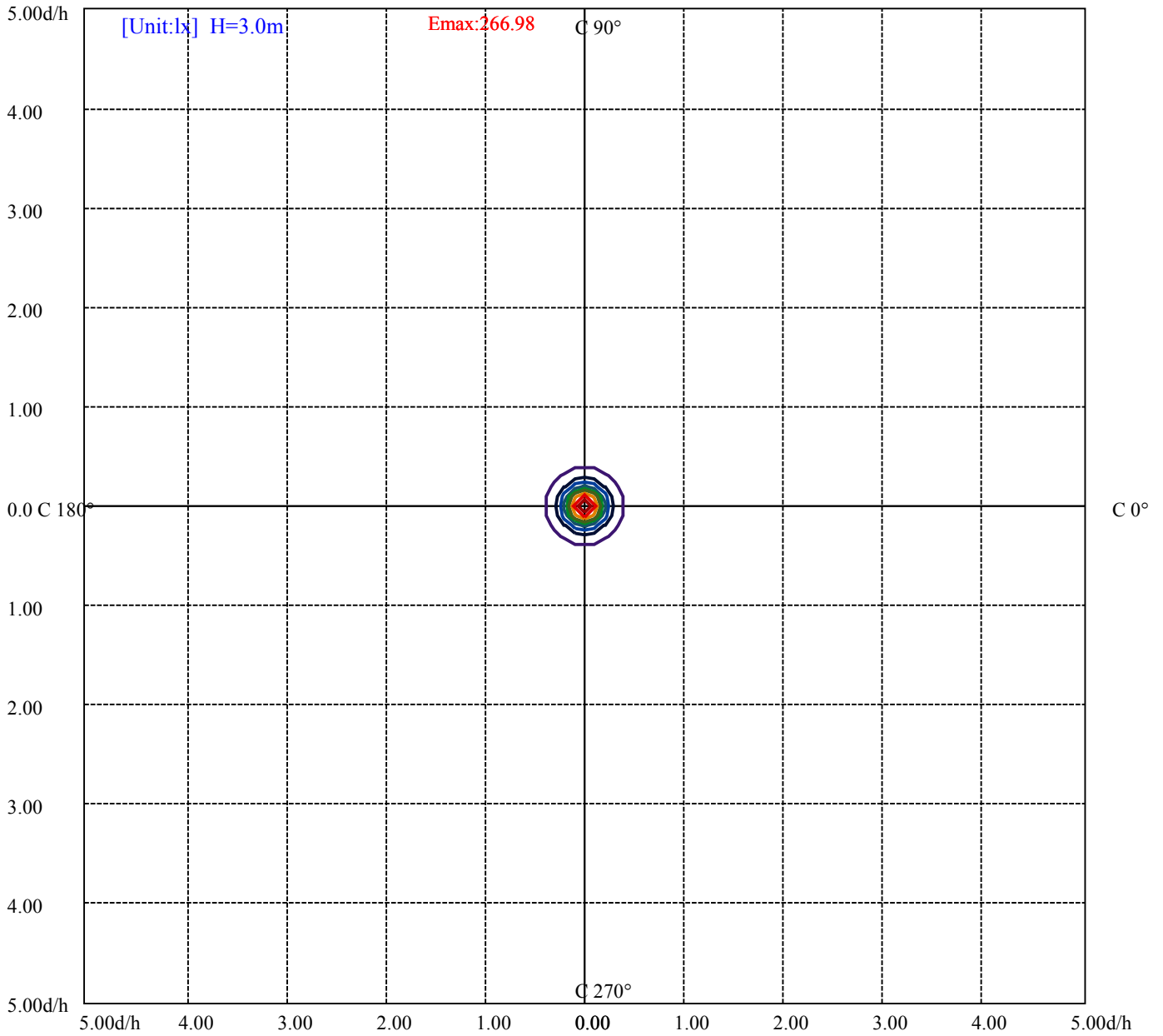
House

[Unit:cd]

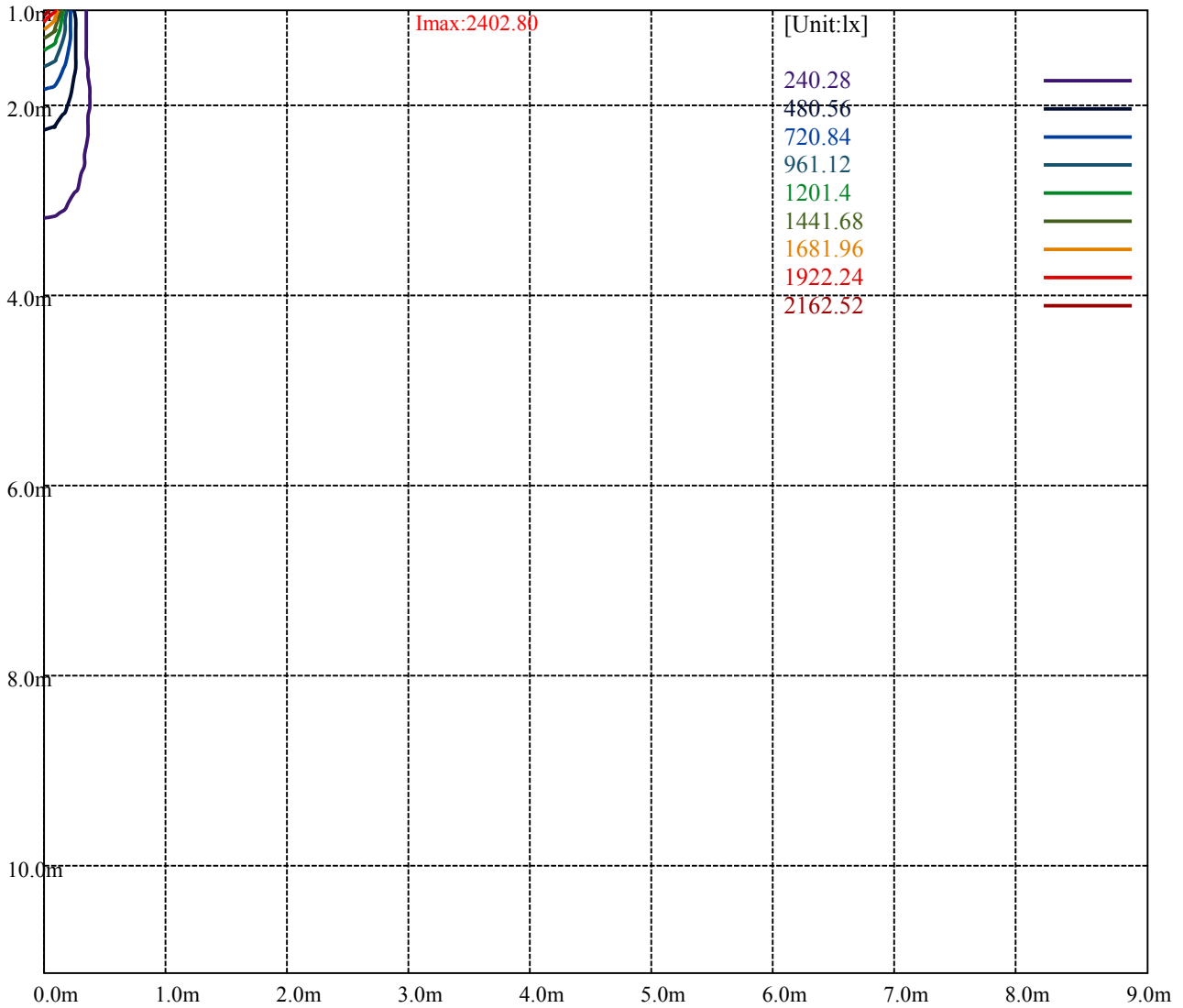
Road

Imax:2402.80

(10%Imax) 240.28	—
(20%Imax) 480.56	—
(30%Imax) 720.84	—
(40%Imax) 961.12	—
(50%Imax) 1201.4	—
(60%Imax) 1441.68	—
(70%Imax) 1681.96	—
(80%Imax) 1922.24	—
(90%Imax) 2162.52	—



(10%Emax) 26.69778	—
(20%Emax) 53.39544	—
(30%Emax) 80.09322	—
(40%Emax) 106.791	—
(50%Emax) 133.4889	—
(60%Emax) 160.1867	—
(70%Emax) 186.8844	—
(80%Emax) 213.5822	—
(90%Emax) 240.28	—



Luminance Table

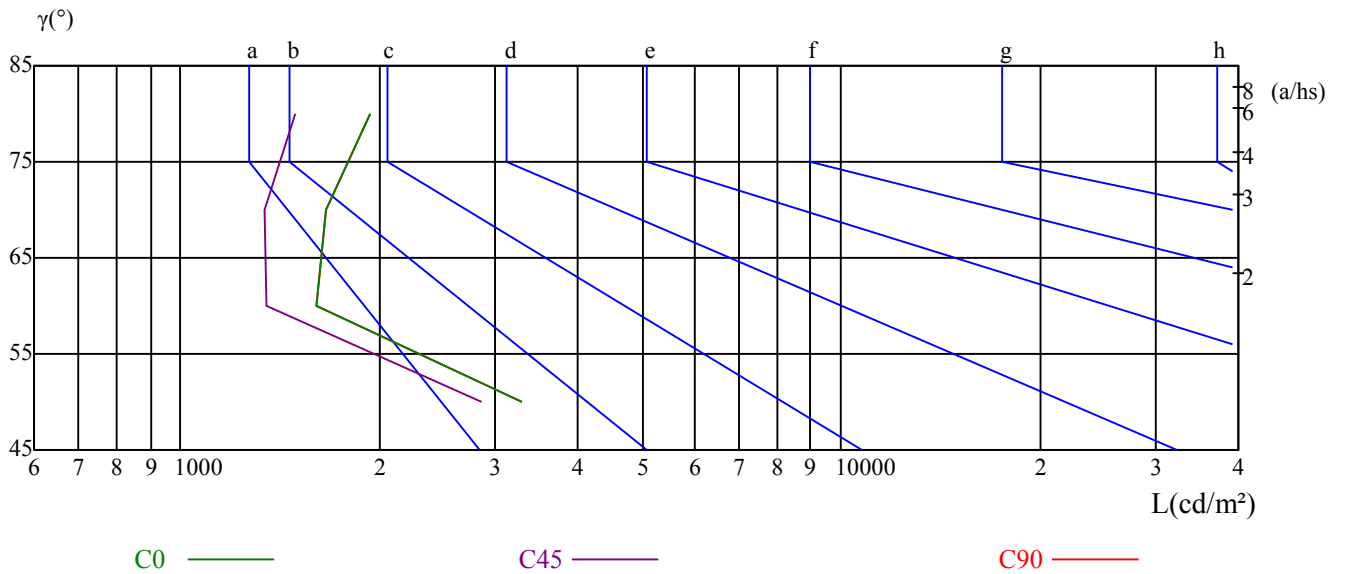
γ	45	50	55	60	65	70	75	80	85
C0	0	3297	0	1605	0	1656	0	1937	0
C45	0	2866	0	1351	0	1341	0	1487	0
C90	0	3297	0	1605	0	1656	0	1937	0

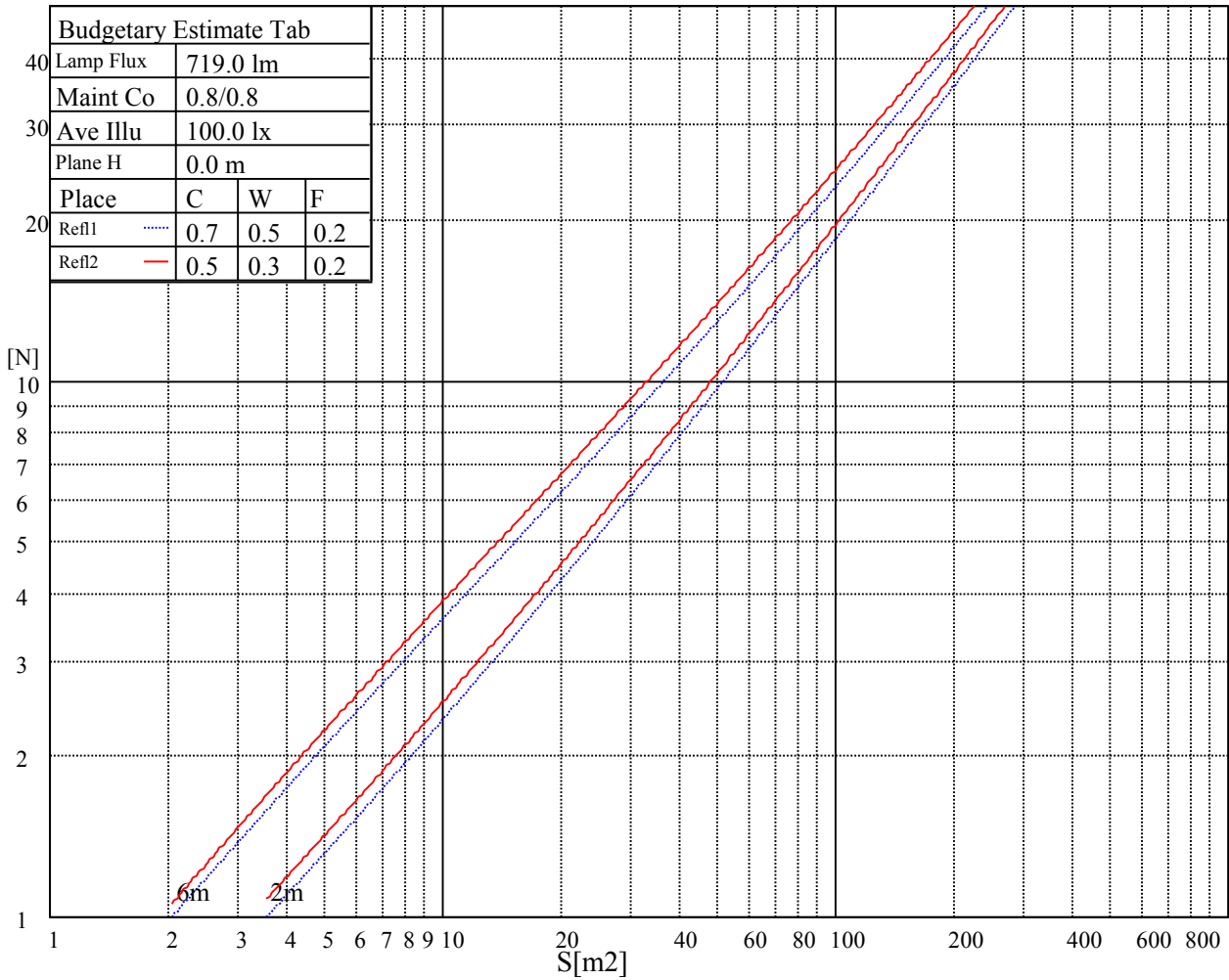
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

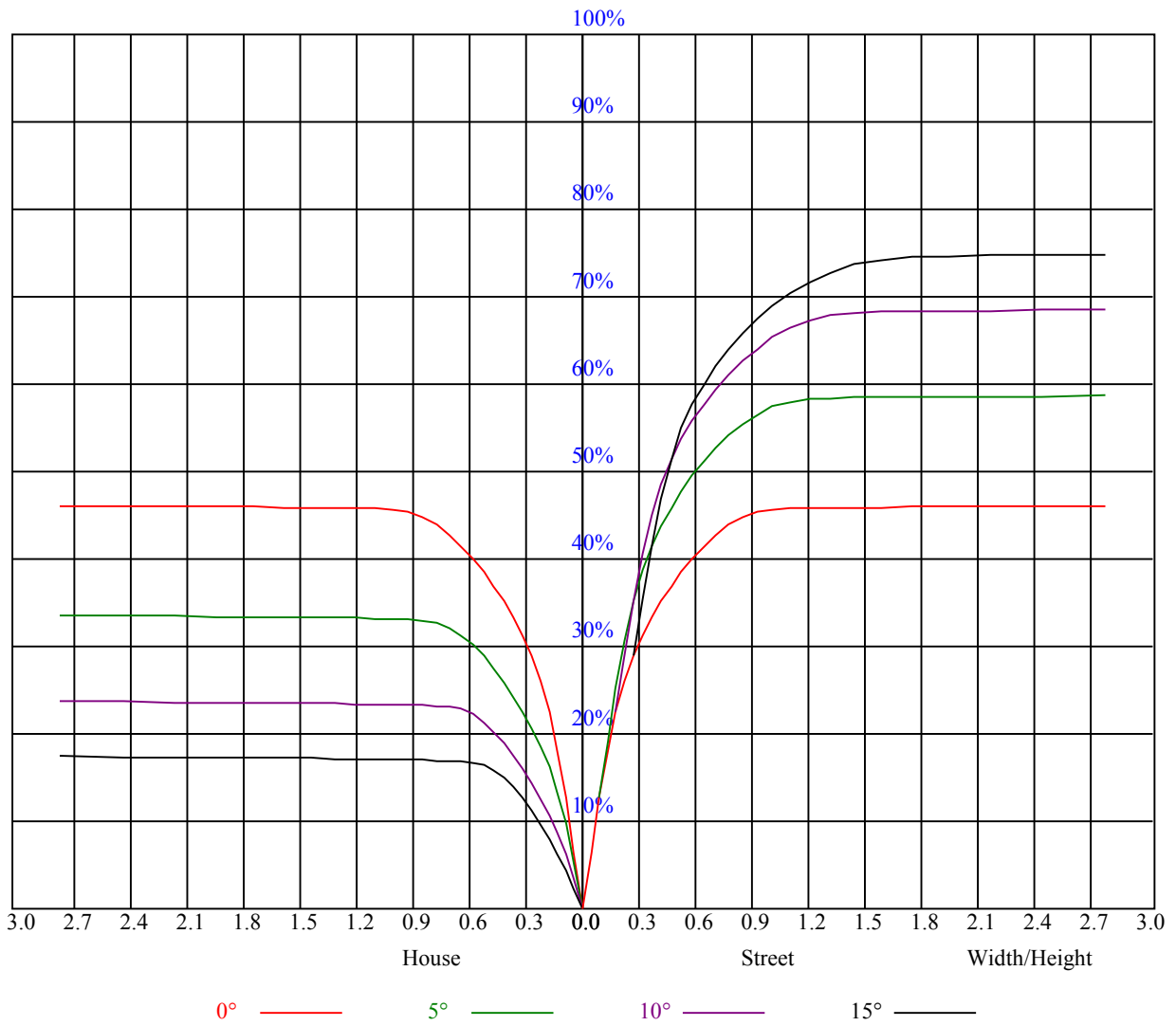
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.03	1.01	0.99	1.01	0.99	0.97	0.97	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.89	0.87
2	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.90	0.87	0.89	0.87	0.85	0.87	0.85	0.84	0.82
3	0.91	0.87	0.83	0.90	0.86	0.83	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.78
4	0.86	0.81	0.78	0.85	0.81	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.73
5	0.82	0.77	0.73	0.81	0.76	0.73	0.79	0.75	0.72	0.78	0.74	0.72	0.76	0.73	0.71	0.70
6	0.78	0.73	0.69	0.77	0.72	0.69	0.76	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.66
7	0.74	0.69	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.64	0.63
8	0.71	0.66	0.62	0.70	0.66	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.60
9	0.68	0.63	0.60	0.67	0.63	0.60	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.58
10	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.56



Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	2396.61	2371.28	2234.74	1994.14	1717.76	1336.22	961.84	641.96	423.93
45.0	2408.17	2356.41	2208.31	1969.37	1658.30	1256.39	913.39	601.22	410.17
90.0	2397.71	2342.10	2165.37	1875.22	1552.04	1096.28	848.09	575.83	407.53
135.0	2408.72	2371.83	2246.85	2011.21	1703.45	1336.77	1020.20	695.91	474.59
180.0	2396.61	2371.28	2220.98	1990.29	1646.74	1270.15	954.68	669.49	471.89
225.0	2408.17	2409.82	2289.80	2040.94	1724.37	1344.48	998.72	717.27	502.17
270.0	2397.71	2412.02	2328.34	2105.91	1809.70	1439.72	1095.07	761.43	512.58
315.0	2408.72	2385.59	2231.99	1985.33	1675.92	1279.51	929.85	617.57	422.39
360.0	2396.61	2371.28	2234.74	1994.14	1717.76	1336.22	961.84	641.96	423.93
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	329.24	302.26	286.29	273.52	259.26	248.36	241.92	234.71	227.88
45.0	330.89	300.61	282.44	267.79	258.21	246.93	239.39	231.40	225.79
90.0	326.04	294.55	275.50	263.72	252.82	241.37	234.15	227.05	221.11
135.0	362.82	300.06	278.59	262.23	251.17	241.92	233.00	226.23	219.62
180.0	353.35	301.82	279.30	266.31	255.52	244.62	236.69	230.08	223.20
225.0	364.36	307.99	281.39	263.67	252.16	241.75	230.80	224.41	218.79
270.0	379.34	313.82	290.70	278.59	261.35	251.17	241.42	234.98	228.81
315.0	330.12	301.10	282.60	268.95	257.88	246.49	239.00	232.39	225.62
360.0	329.24	302.26	286.29	273.52	259.26	248.36	241.92	234.71	227.88
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	220.67	209.43	201.40	163.85	76.53	15.47	9.25	6.72	4.73
45.0	216.37	206.46	199.69	147.28	59.30	13.65	9.08	6.50	4.68
90.0	211.97	203.27	193.14	135.55	46.47	11.12	9.14	6.44	4.57
135.0	212.74	202.99	195.40	156.64	78.35	16.02	9.86	7.49	5.34
180.0	215.33	205.75	197.32	158.23	73.17	15.47	9.30	7.21	5.23
225.0	211.20	204.20	195.73	163.74	85.50	19.88	9.74	7.71	5.62
270.0	222.10	213.07	204.70	179.10	99.76	23.89	10.08	7.82	5.67
315.0	218.08	208.50	200.07	153.33	67.66	12.99	8.97	6.44	4.51
360.0	220.67	209.43	201.40	163.85	76.53	15.47	9.25	6.72	4.73
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	3.80	3.30	3.19	3.08	2.97	2.86	2.86	2.81	2.75
45.0	3.74	3.25	3.14	3.03	2.97	2.92	2.86	2.75	2.75
90.0	3.85	3.36	3.19	3.08	3.03	2.92	2.86	2.81	2.75
135.0	4.13	3.41	3.30	3.14	3.08	2.97	2.92	2.81	2.81
180.0	4.07	3.41	3.25	3.14	3.03	2.97	2.86	2.81	2.81
225.0	4.24	3.52	3.30	3.19	3.08	3.03	2.97	2.86	2.81
270.0	4.07	3.41	3.25	3.14	3.03	2.92	2.92	2.86	2.75
315.0	3.69	3.25	3.14	3.03	2.92	2.86	2.81	2.75	2.75
360.0	3.80	3.30	3.19	3.08	2.97	2.86	2.86	2.81	2.75
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	2.70	2.70	2.64	2.64	2.64	2.64	2.59	2.64	2.59
45.0	2.75	2.70	2.70	2.64	2.64	2.64	2.64	2.59	2.59
90.0	2.70	2.70	2.64	2.64	2.64	2.64	2.59	2.59	2.59
135.0	2.75	2.70	2.70	2.64	2.64	2.64	2.64	2.59	2.59
180.0	2.75	2.75	2.70	2.64	2.64	2.64	2.59	2.64	2.59
225.0	2.75	2.75	2.70	2.64	2.64	2.64	2.64	2.64	2.59
270.0	2.75	2.70	2.70	2.70	2.64	2.64	2.64	2.64	2.59
315.0	2.70	2.70	2.64	2.64	2.64	2.64	2.64	2.59	2.59
360.0	2.70	2.70	2.64	2.64	2.64	2.64	2.59	2.64	2.59

Intensity data(cd)

C/γ(°)	90.0
0.0	2.59
45.0	2.59
90.0	2.59
135.0	2.64
180.0	2.59
225.0	2.59
270.0	2.59
315.0	2.59
360.0	2.59