
Nata

Client:

LumCAT: 1687-M

Luminaire: 92.70.132.00

Report No: NT2017122406

Test No: GC2017122406

LampCAT: NICHIA NFCWL036B-V2

Lamp flux(lm): 1719.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 35.0000

Current(A): 0.3500

Power (W): 12.2500

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

Photometric Results

Lumens(lm): 1545.47, Efficiency(%): 89.90% , Luminous Efficacy(lm/W): 126.16

Central intensity(cd): 1424.447, Maximum intensity(cd): 1424.447

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=67.2

[C90/270]Total=67.2

Field angle(10%Imax): [C0/180]Total=94.6

[C90/270]Total=94.6

Maximum s/h(1/2): C0_180=0.94 C90_270=0.94

Maximum s/h(1/4): C0_180=1.01 C90_270=1.01

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.31%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.203%

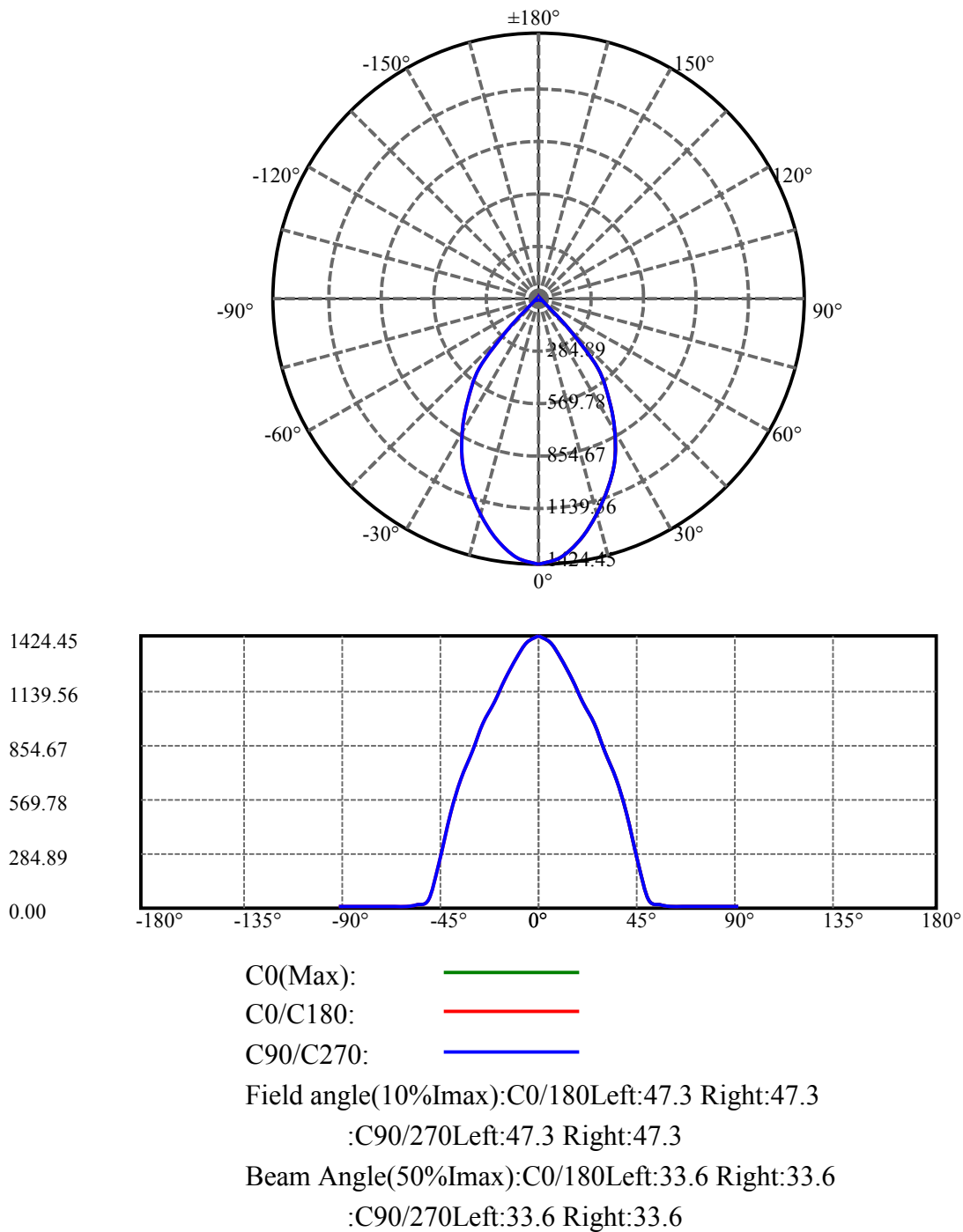
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1424.447	8.518	8.518	.496%	.551%
5.0	1391.688	66.486	75.004	3.868%	4.853%
10.0	1308.071	124.506	199.51	7.243%	12.909%
15.0	1197.821	169.933	369.443	9.886%	23.905%
20.0	1083.482	203.125	572.568	11.816%	37.048%
25.0	962.228	222.903	795.471	12.967%	51.471%
30.0	818.936	224.445	1019.916	13.057%	65.994%
35.0	670.415	210.778	1230.693	12.262%	79.633%
40.0	491.433	173.150	1403.843	10.073%	90.836%
45.0	230.377	89.292	1493.135	5.194%	96.614%
50.0	42.868	18.000	1511.135	1.047%	97.779%
55.0	17.790	7.988	1519.123	.465%	98.295%
60.0	11.562	5.488	1524.611	.319%	98.651%
65.0	8.988	4.465	1529.077	.260%	98.940%
70.0	7.797	4.016	1533.093	.234%	99.199%
75.0	7.006	3.709	1536.802	.216%	99.439%
80.0	6.524	3.522	1540.324	.205%	99.667%
85.0	6.283	3.431	1543.755	.200%	99.889%
90.0	6.242	1.711	1545.466	.100%	100.000%

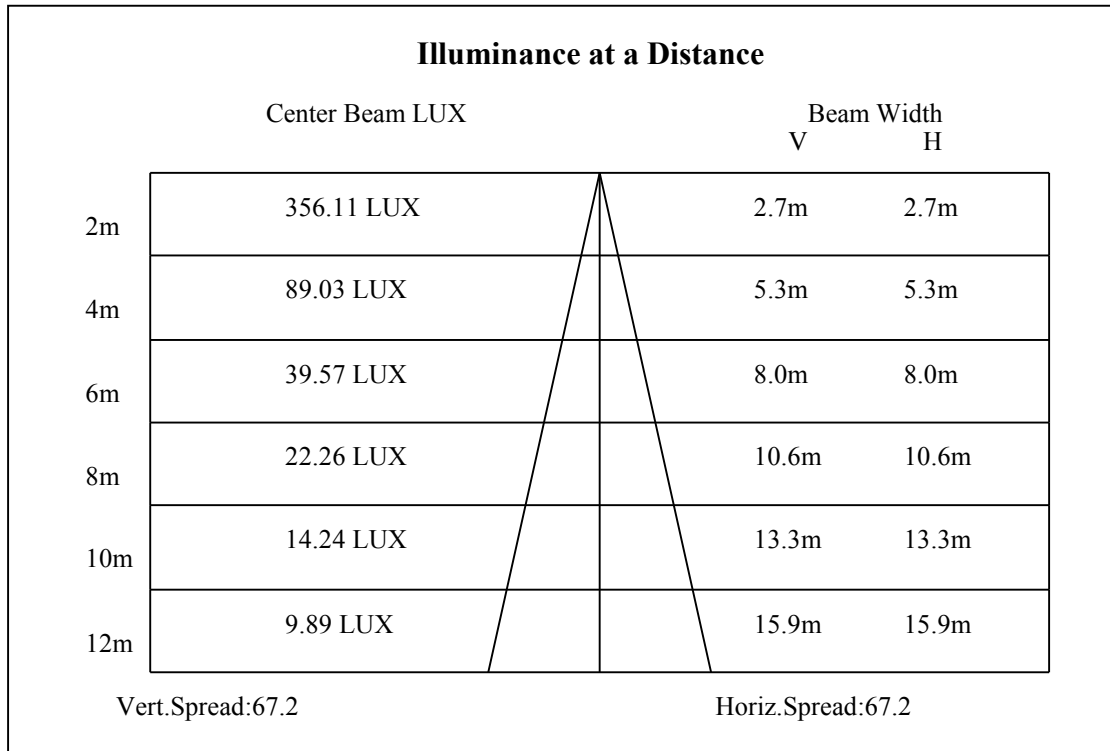
ZONAL LUMEN SUMMARY

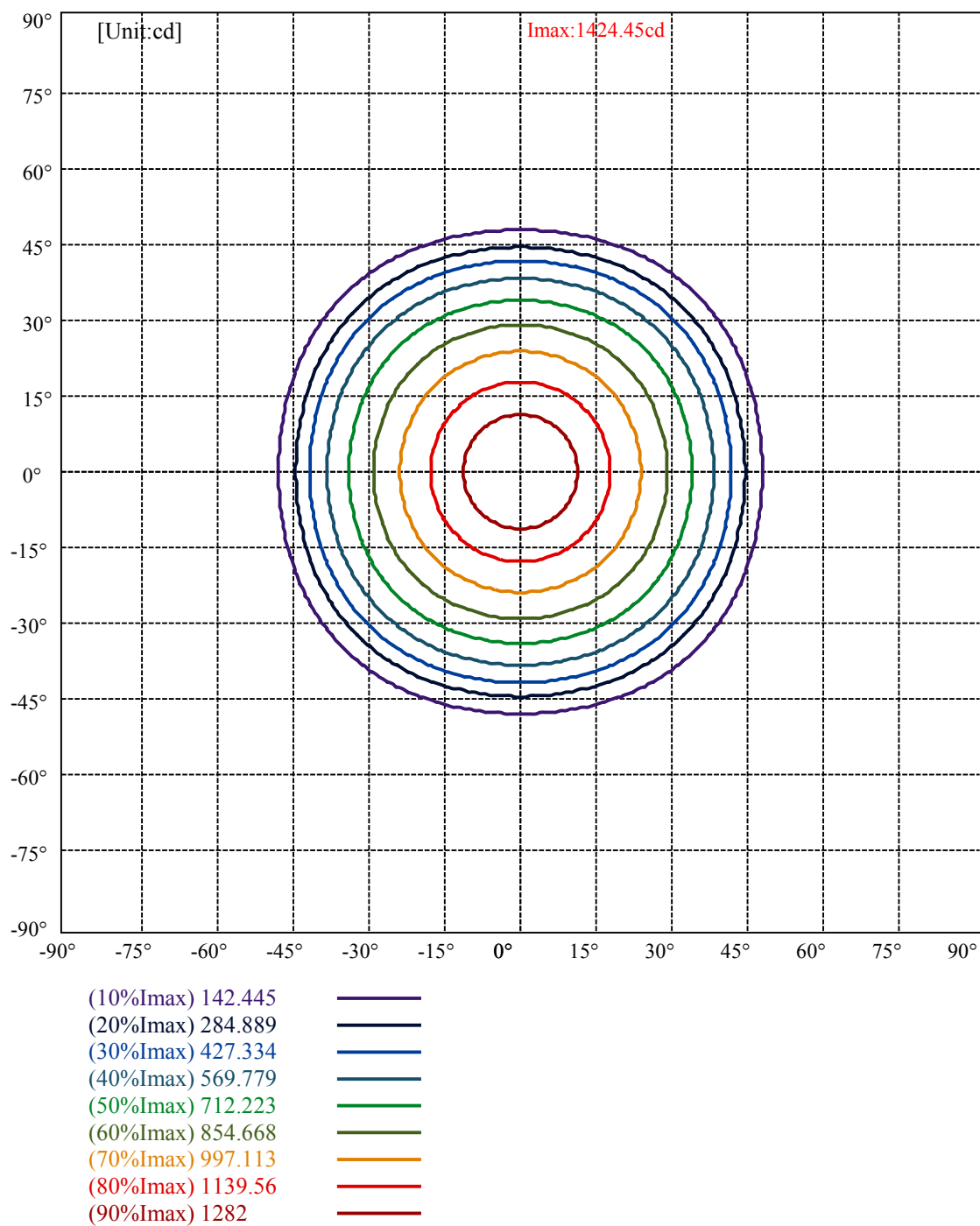
Zone	Lumens	%Lamp	%Fixt
0-30	1019.92	59.33%	65.99%
0-40	1403.84	81.67%	90.84%
0-60	1524.61	88.69%	98.65%
0-90	1543.75	89.81%	99.89%
0-120	1543.75	89.81%	99.89%
0-180	1545.47	89.90%	100.00%
60-90	24.63	1.43%	1.59%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-35.16	1236.37	71.92%	80.00%

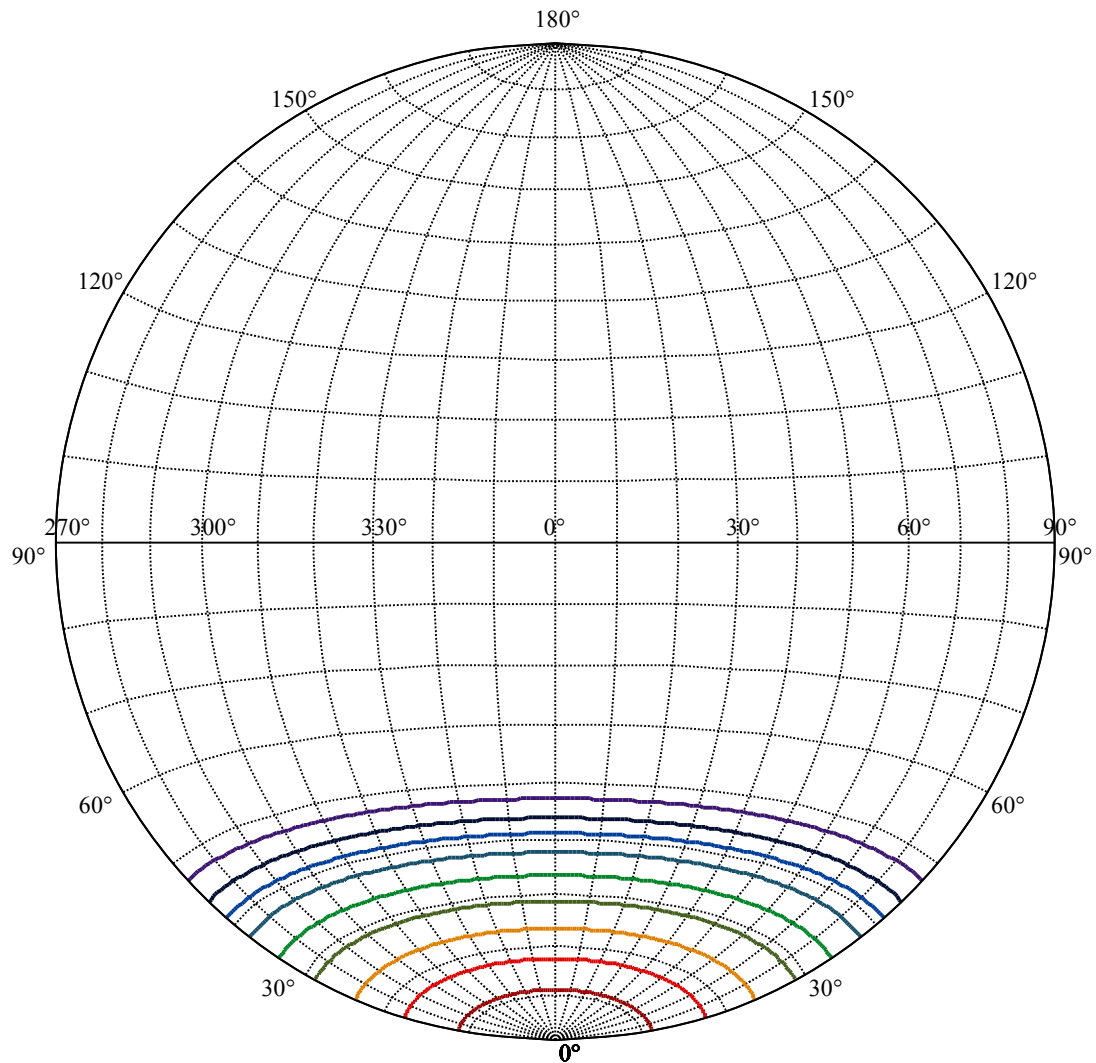
ZONAL LUMEN SUMMARY

0-10	199.51
10-20	373.06
20-30	447.35
30-40	383.93
40-50	107.29
50-60	13.48
60-70	8.48
70-80	7.23
80-90	3.43
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









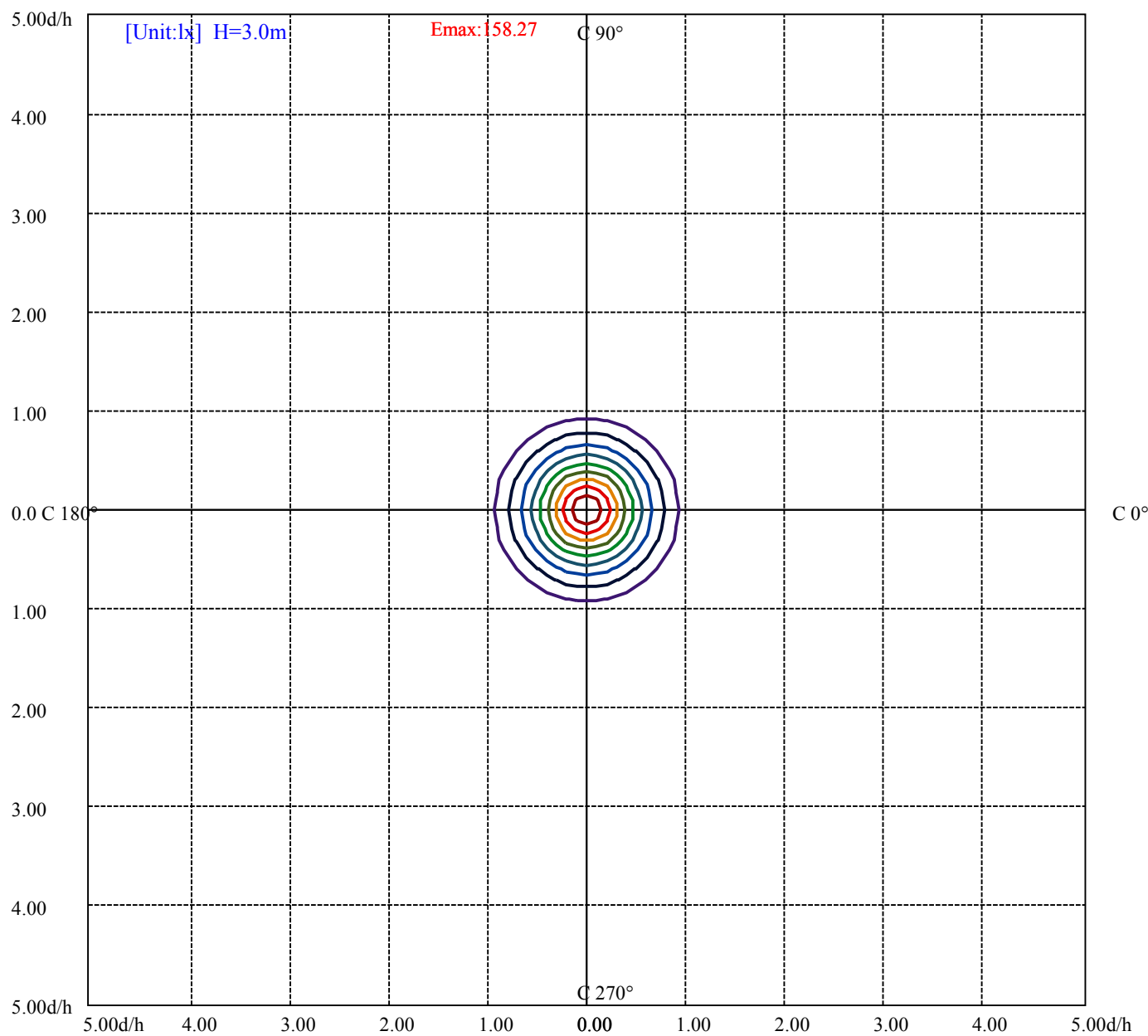
House

[Unit:cd]

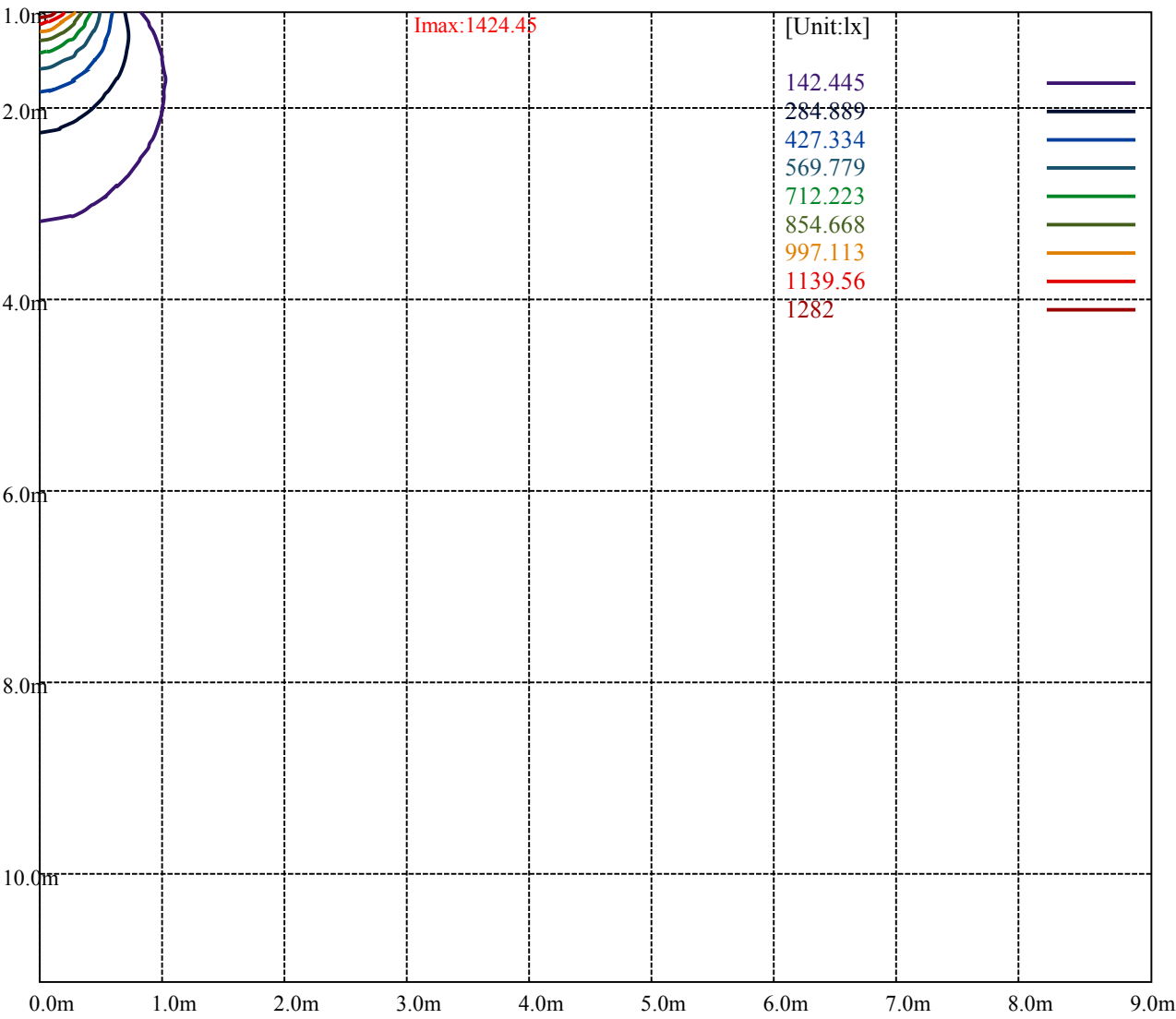
Road

Imax:1424.45

(10%Imax)	142.445	
(20%Imax)	284.889	
(30%Imax)	427.334	
(40%Imax)	569.779	
(50%Imax)	712.223	
(60%Imax)	854.668	
(70%Imax)	997.113	
(80%Imax)	1139.56	
(90%Imax)	1282	



(10%E _{max}) 15.82722	—
(20%E _{max}) 31.65434	—
(30%E _{max}) 47.48156	—
(40%E _{max}) 63.30867	—
(50%E _{max}) 79.13589	—
(60%E _{max}) 94.963	—
(70%E _{max}) 110.7902	—
(80%E _{max}) 126.6178	—
(90%E _{max}) 142.4444	—



Luminance Table

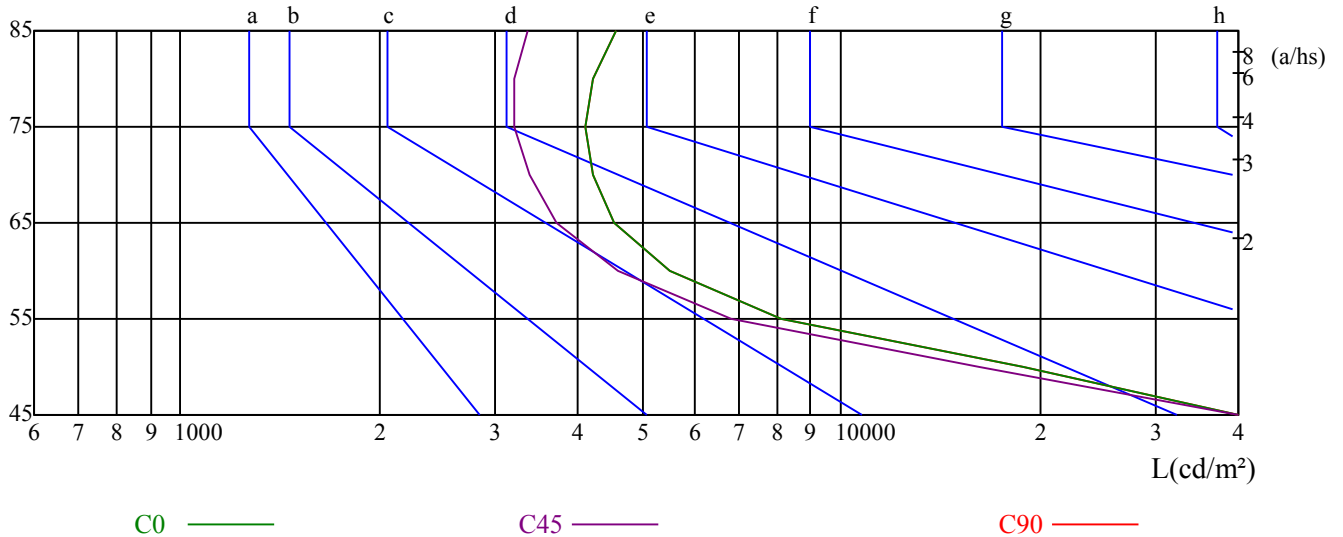
γ	45	50	55	60	65	70	75	80	85
C0	98370	18832	8111	5522	4543	4220	4114	4222	4567
C45	85571	16141	6844	4583	3703	3371	3212	3209	3361
C90	98370	18832	8111	5522	4543	4220	4114	4222	4567

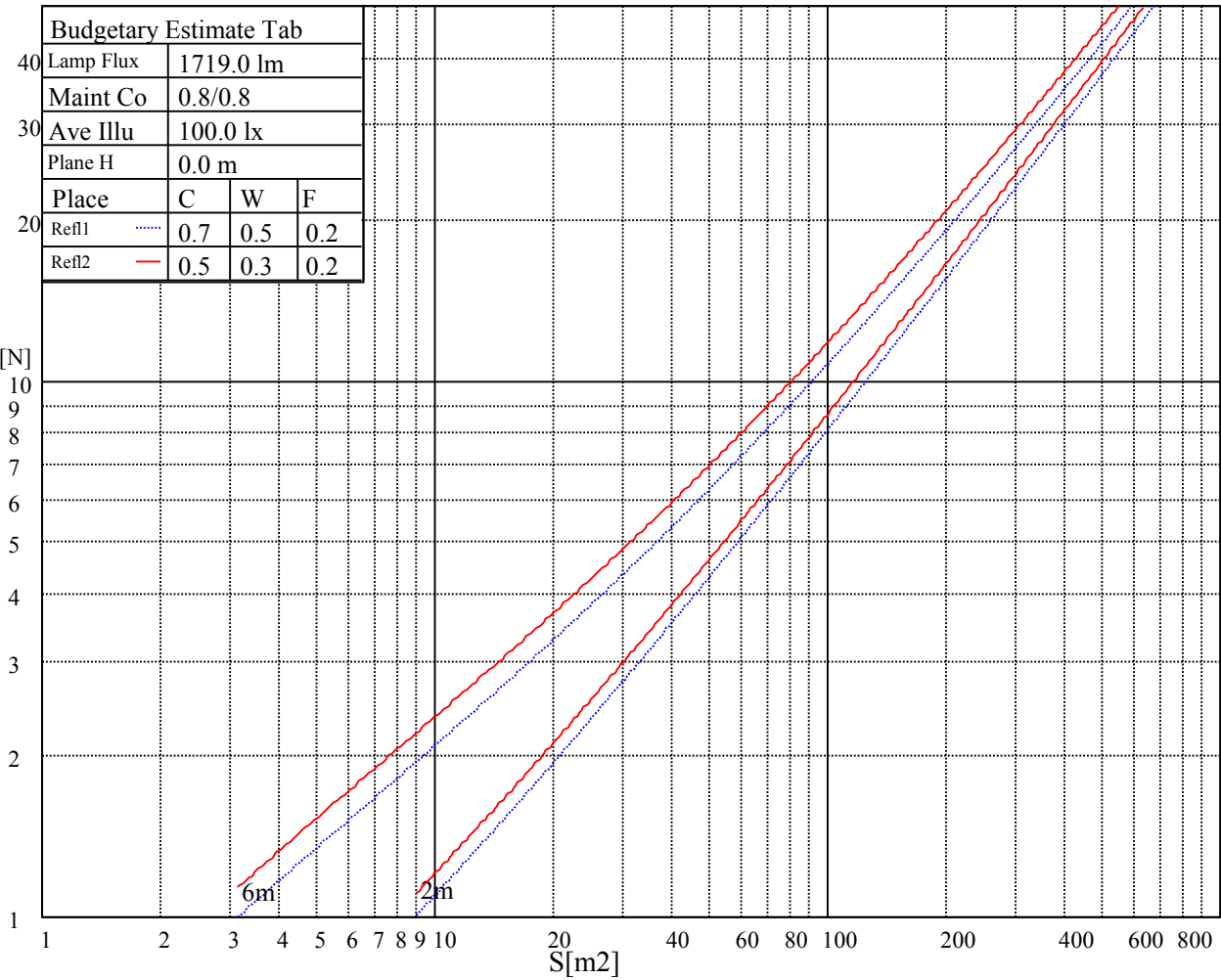
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10051	10051	10051	12792	12792	12792	34070	34070	34070

Glare Table

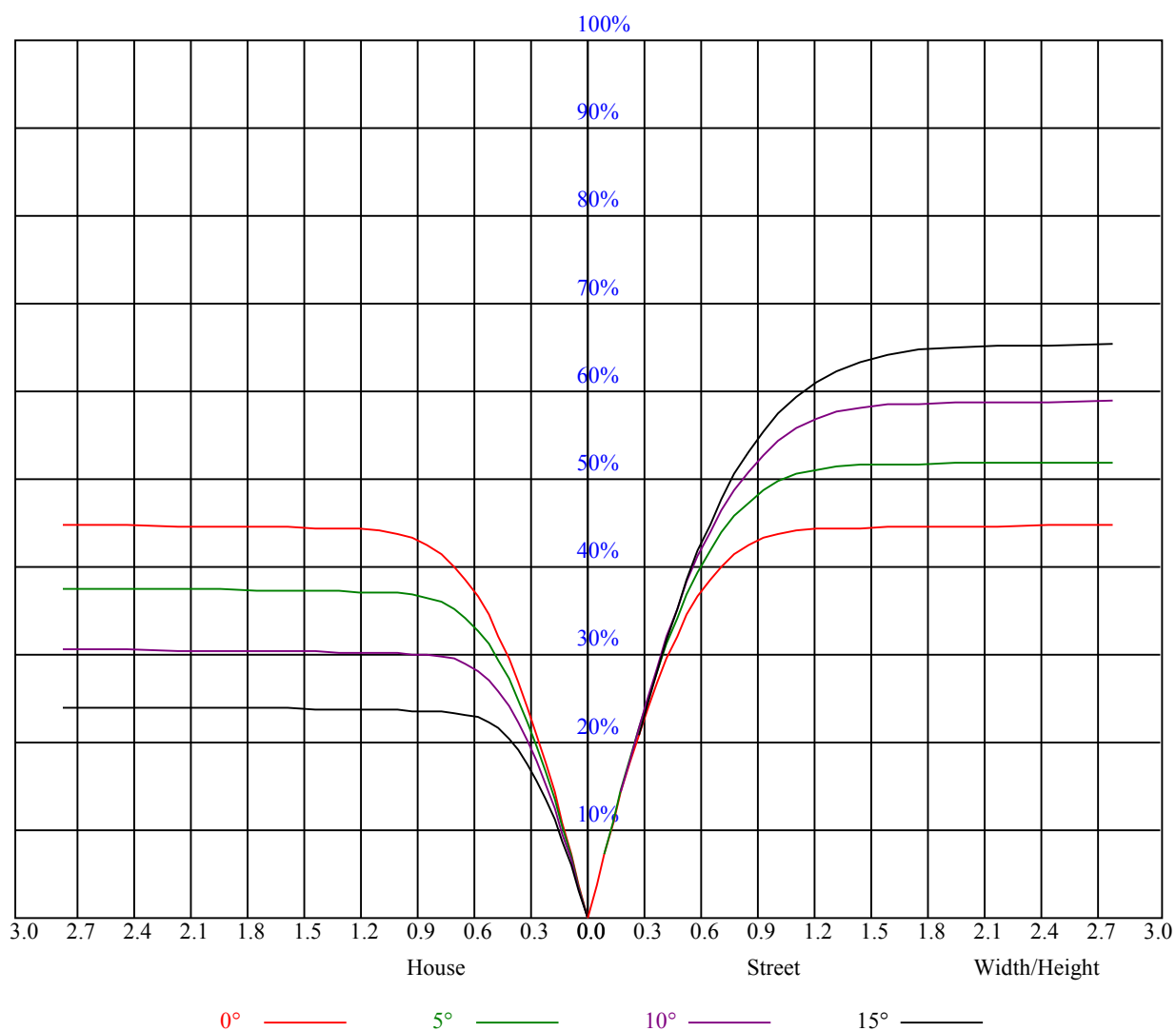
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

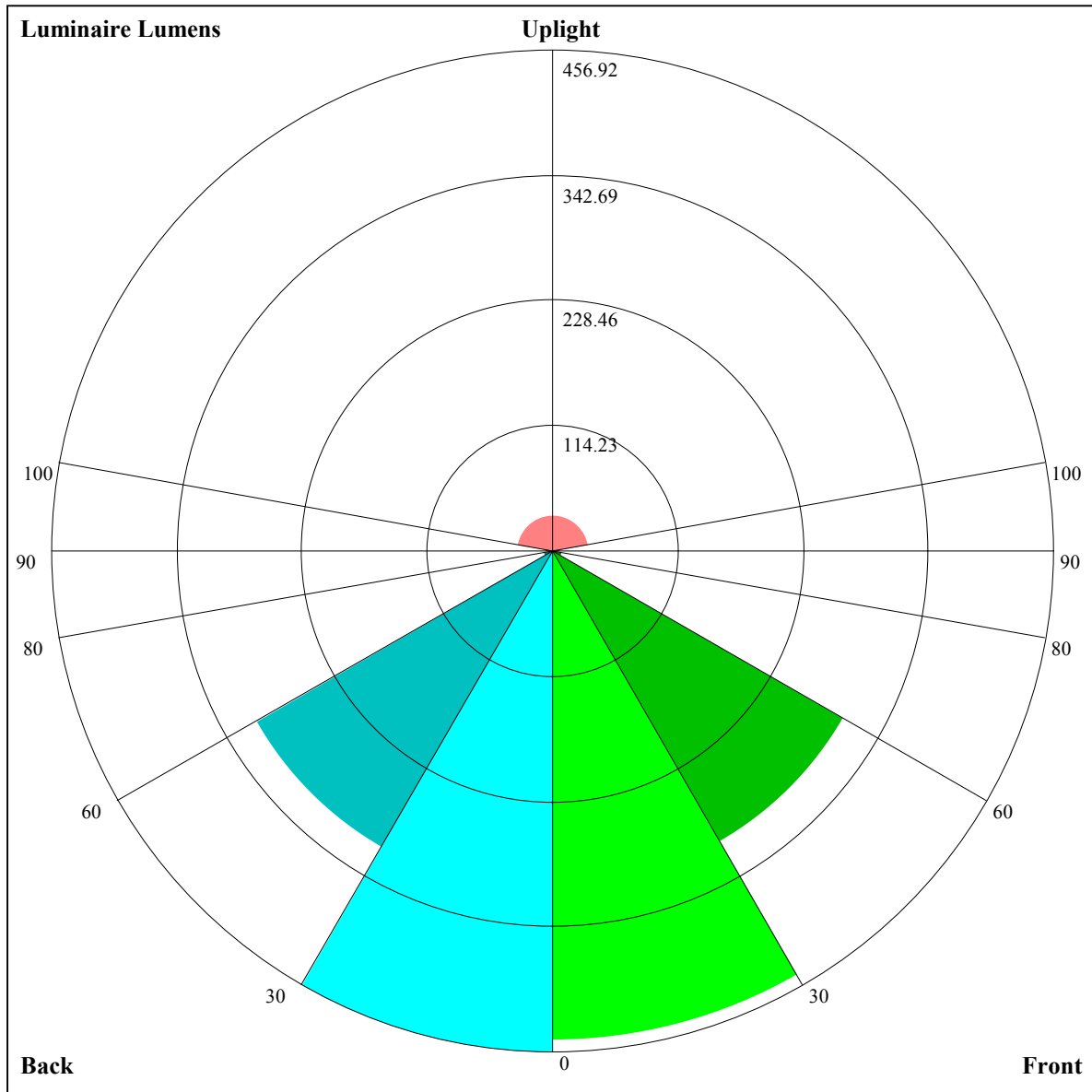
Luminance Limiting Curve

 $\gamma(^{\circ})$ 



RHOC	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	1.08	1.08	1.08	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	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	0.92	0.88	0.85	0.90	0.87	0.84	0.87	0.85	0.82	0.85	0.82	0.80	0.82	0.80	0.79	0.77
3	0.86	0.81	0.77	0.84	0.80	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.71
4	0.80	0.75	0.71	0.79	0.74	0.70	0.77	0.73	0.69	0.75	0.71	0.69	0.73	0.70	0.68	0.66
5	0.75	0.69	0.65	0.74	0.69	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.62
6	0.70	0.64	0.60	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.62	0.59	0.65	0.62	0.59	0.58
7	0.66	0.60	0.56	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.54
8	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.50
9	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.49	0.47
10	0.55	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.53	0.49	0.46	0.45





Luminaire Lumens:

FL=446.93,FM=305.63,FH=8.63,FVH=3.46

BL=456.92,BM=313.07,BH=8.16,BVH=3.46

UL=6.81,UH=32.41

BUG Rating:B1-U2-G0

Nata 1687-M

Intensity data(cd)										Appendix Page: 15 Total:15	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	1418.25	1385.77	1294.93	1180.96	1068.64	938.71	812.08	676.09	478.99		
45.0	1429.81	1390.72	1310.89	1189.77	1075.80	946.97	806.58	663.98	470.73		
90.0	1427.06	1379.16	1281.16	1166.09	1044.31	910.96	780.59	644.27	455.43		
135.0	1422.66	1400.08	1319.15	1207.39	1106.63	981.66	837.41	688.76	540.65		
180.0	1418.25	1385.77	1316.40	1224.45	1094.52	1002.69	845.28	676.42	509.33		
225.0	1429.81	1401.74	1326.86	1221.15	1098.27	996.63	839.33	673.39	489.89		
270.0	1427.06	1408.34	1331.81	1222.25	1120.95	1002.58	852.82	693.71	540.10		
315.0	1422.66	1381.92	1283.36	1170.50	1058.73	917.63	777.40	646.69	446.34		
360.0	1418.25	1385.77	1294.93	1180.96	1068.64	938.71	812.08	676.09	478.99		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	281.34	46.03	20.10	12.83	9.47	7.87	6.88	6.50	6.28		
45.0	281.34	46.96	21.42	13.71	9.80	8.04	7.16	6.55	6.28		
90.0	154.98	42.89	18.61	12.17	9.41	7.98	7.05	6.55	6.28		
135.0	286.29	48.89	18.11	11.01	8.70	7.65	6.99	6.50	6.28		
180.0	205.42	37.27	14.09	9.30	7.98	7.32	6.83	6.44	6.28		
225.0	212.19	38.21	14.31	9.97	8.31	7.54	6.94	6.55	6.33		
270.0	281.89	43.16	17.56	11.23	8.97	7.98	7.16	6.61	6.28		
315.0	139.57	39.53	18.11	12.28	9.25	7.98	7.05	6.50	6.28		
360.0	281.34	46.03	20.10	12.83	9.47	7.87	6.88	6.50	6.28		
C/γ(°)	90.0										
0.0	6.28										
45.0	6.22										
90.0	6.22										
135.0	6.22										
180.0	6.22										
225.0	6.28										
270.0	6.28										
315.0	6.22										
360.0	6.28										