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Nata

LumCAT: 4-2267-M	
Luminaire: 92.70.129.00	
Report No: GC20170616002	Voltage(V): 219.6000
Test No: NT-0010	Current(A): 0.0690
LampCAT: CREE CXA1816	Power (W): 14.1000
Lamp flux(lm): 1248.0	PF: 0.9220
Number of Lamps: 1	Ballast type: DC
Length(mm): 100	Width(mm): 100
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1151.85
Efficiency(%): 92.30%
Lumens(lm)/Power(W): 81.69
Central intensity(cd): 3148.400
Maximum intensity(cd): 3148.400
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=29.3
 [C90/270]Total=29.3
Field angle(10%Imax): [C0/180]Total=66.7
 [C90/270]Total=66.7
Maximum s/h(1/2): C0_180=0.49 C90_270=0.49
Maximum s/h(1/4): C0_180=0.52 C90_270=0.52
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.30%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.732%

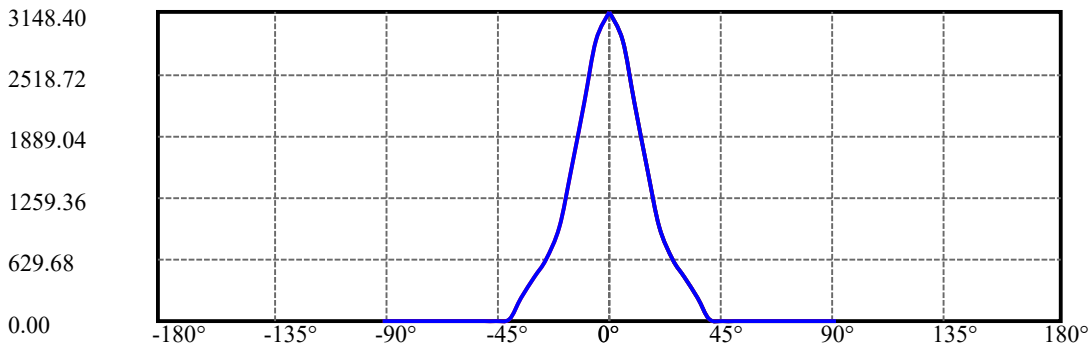
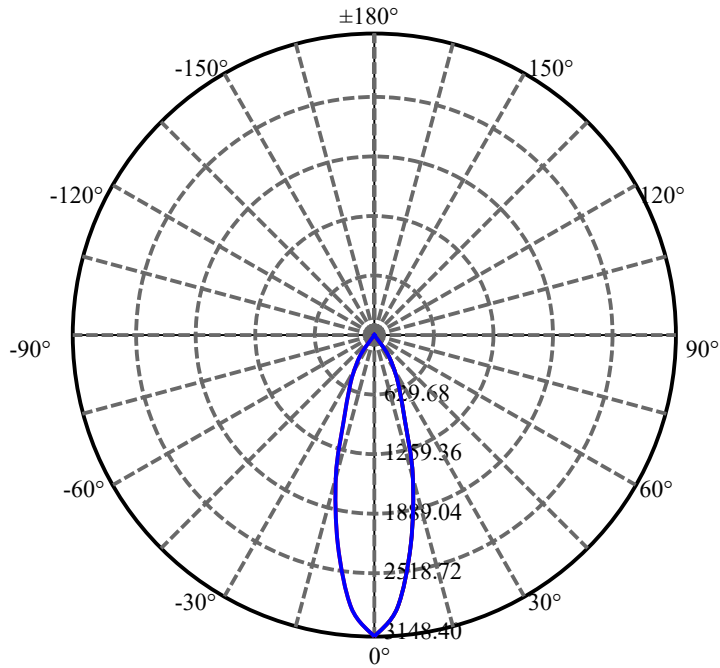
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3148.400	0.000	0	.000%	.000%
5.0	2863.759	71.874	71.874	5.759%	6.240%
10.0	2220.700	181.887	253.761	14.574%	22.031%
15.0	1521.897	222.008	475.769	17.789%	41.305%
20.0	958.208	204.395	680.165	16.378%	59.050%
25.0	617.588	165.272	845.437	13.243%	73.398%
30.0	458.400	136.167	981.604	10.911%	85.220%
35.0	243.012	103.288	1084.891	8.276%	94.187%
40.0	11.748	42.505	1127.396	3.406%	97.877%
45.0	5.788	3.247	1130.643	.260%	98.159%
50.0	5.175	2.215	1132.858	.178%	98.351%
55.0	4.859	2.182	1135.04	.175%	98.540%
60.0	4.707	2.211	1137.251	.177%	98.732%
65.0	4.666	2.279	1139.53	.183%	98.930%
70.0	4.645	2.358	1141.888	.189%	99.135%
75.0	4.645	2.428	1144.316	.195%	99.346%
80.0	4.625	2.480	1146.796	.199%	99.561%
85.0	4.639	2.517	1149.314	.202%	99.780%
90.0	4.632	2.538	1151.852	.203%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	981.60	78.65%	85.22%
0-40	1127.40	90.34%	97.88%
0-60	1137.25	91.13%	98.73%
0-90	1149.31	92.09%	99.78%
0-120	1149.31	92.09%	99.78%
0-180	1151.85	92.30%	100.00%
60-90	14.27	1.14%	1.24%
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%
0-27.79	921.48	73.84%	80.00%

ZONAL LUMEN SUMMARY

0-10	253.76
10-20	426.40
20-30	301.44
30-40	145.79
40-50	5.46
50-60	4.39
60-70	4.64
70-80	4.91
80-90	2.52
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: —————

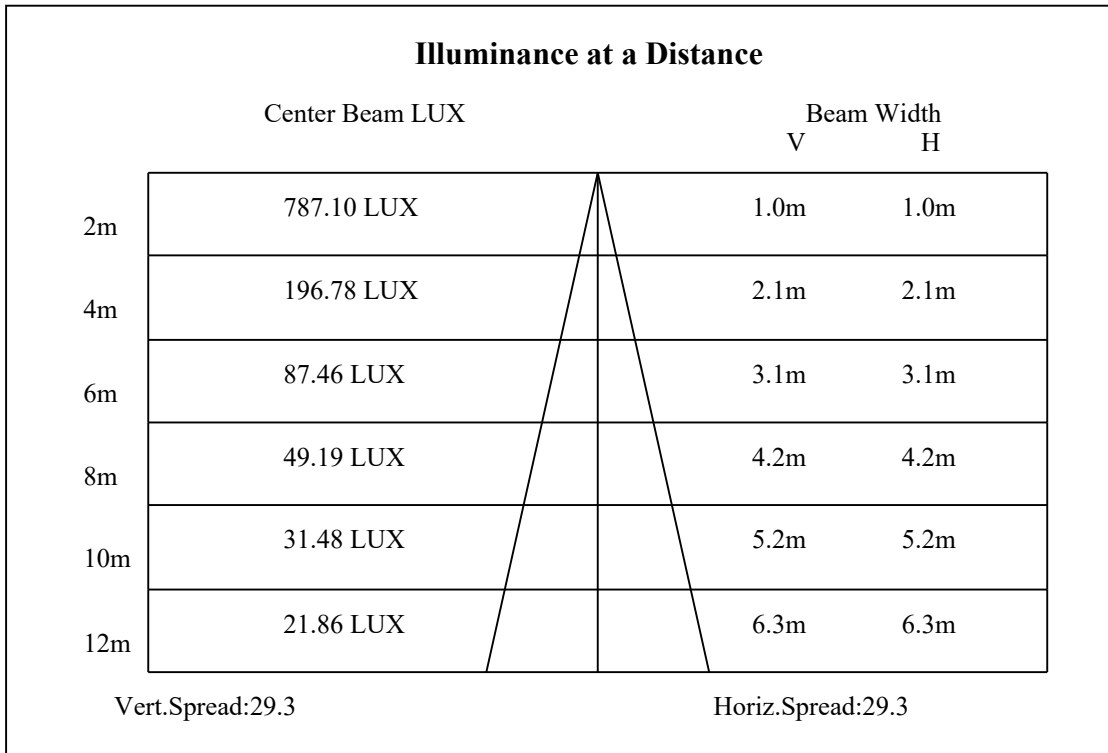
C90/C270: —————

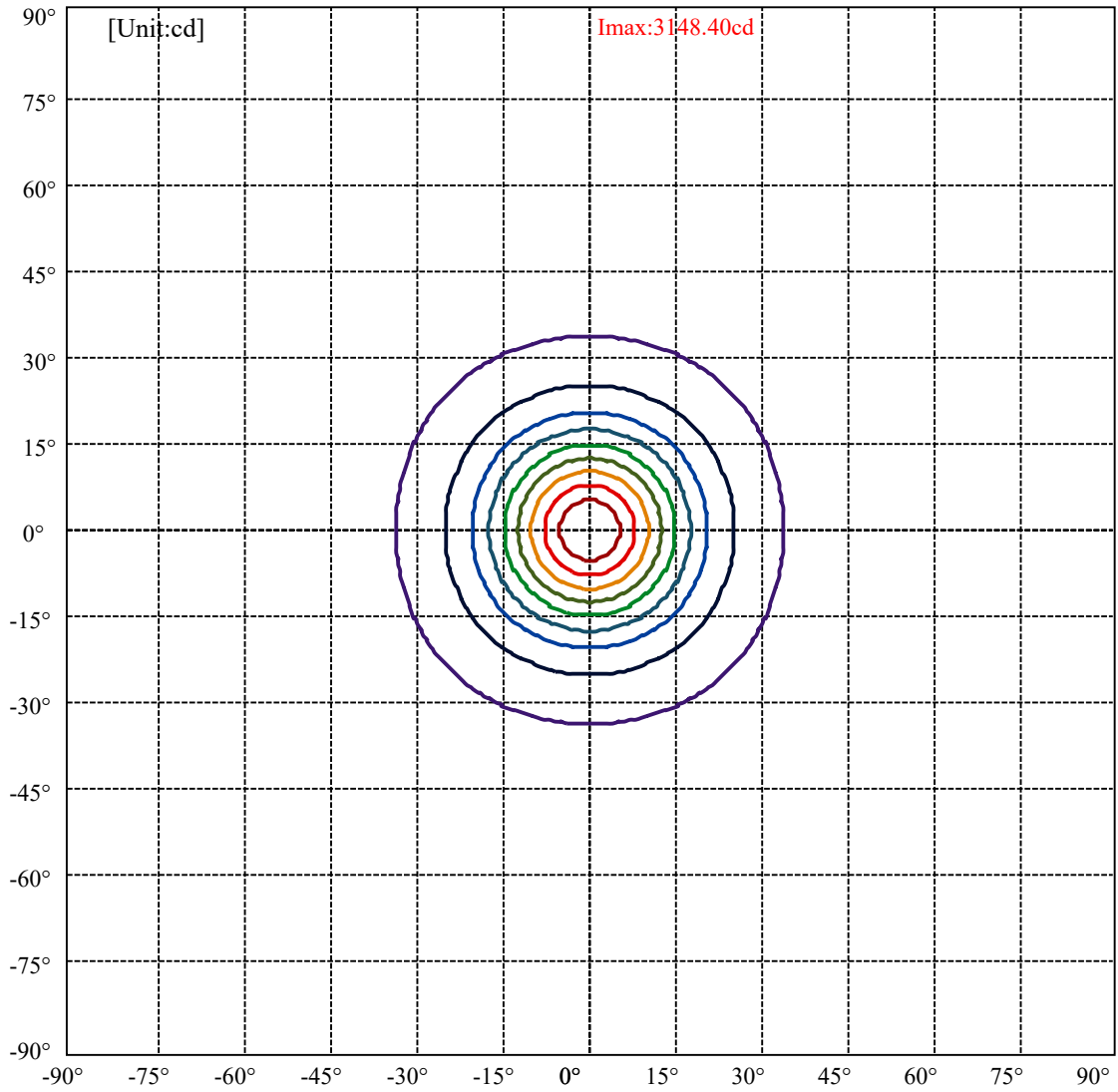
Field angle(10%Imax):C0/180Left:33.3 Right:33.3

:C90/270Left:33.3 Right:33.3

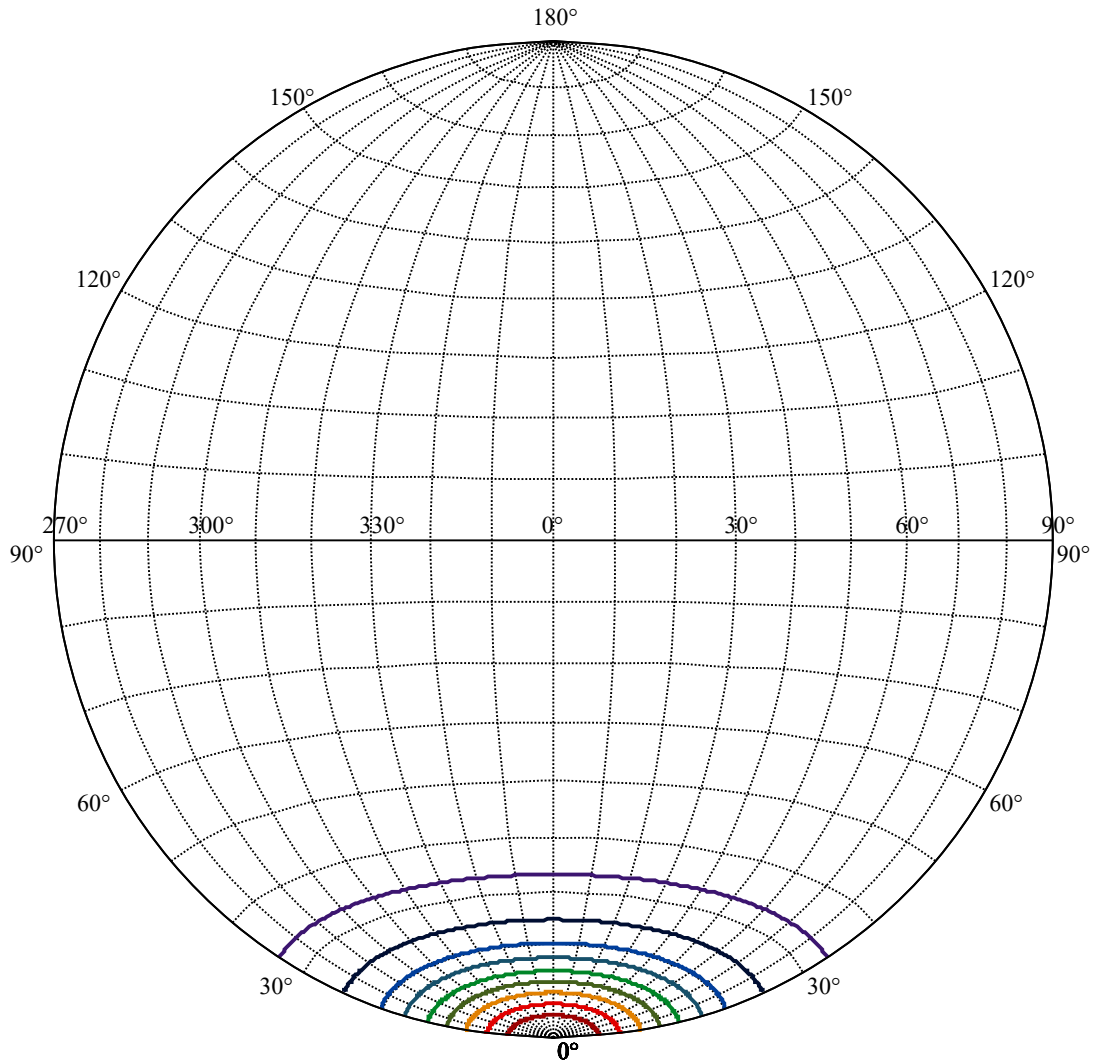
Beam Angle(50%Imax):C0/180Left:14.6 Right:14.6

:C90/270Left:14.6 Right:14.6





(10%I _{max}) 314.84	—
(20%I _{max}) 629.68	—
(30%I _{max}) 944.52	—
(40%I _{max}) 1259.36	—
(50%I _{max}) 1574.2	—
(60%I _{max}) 1889.04	—
(70%I _{max}) 2203.88	—
(80%I _{max}) 2518.72	—
(90%I _{max}) 2833.56	—



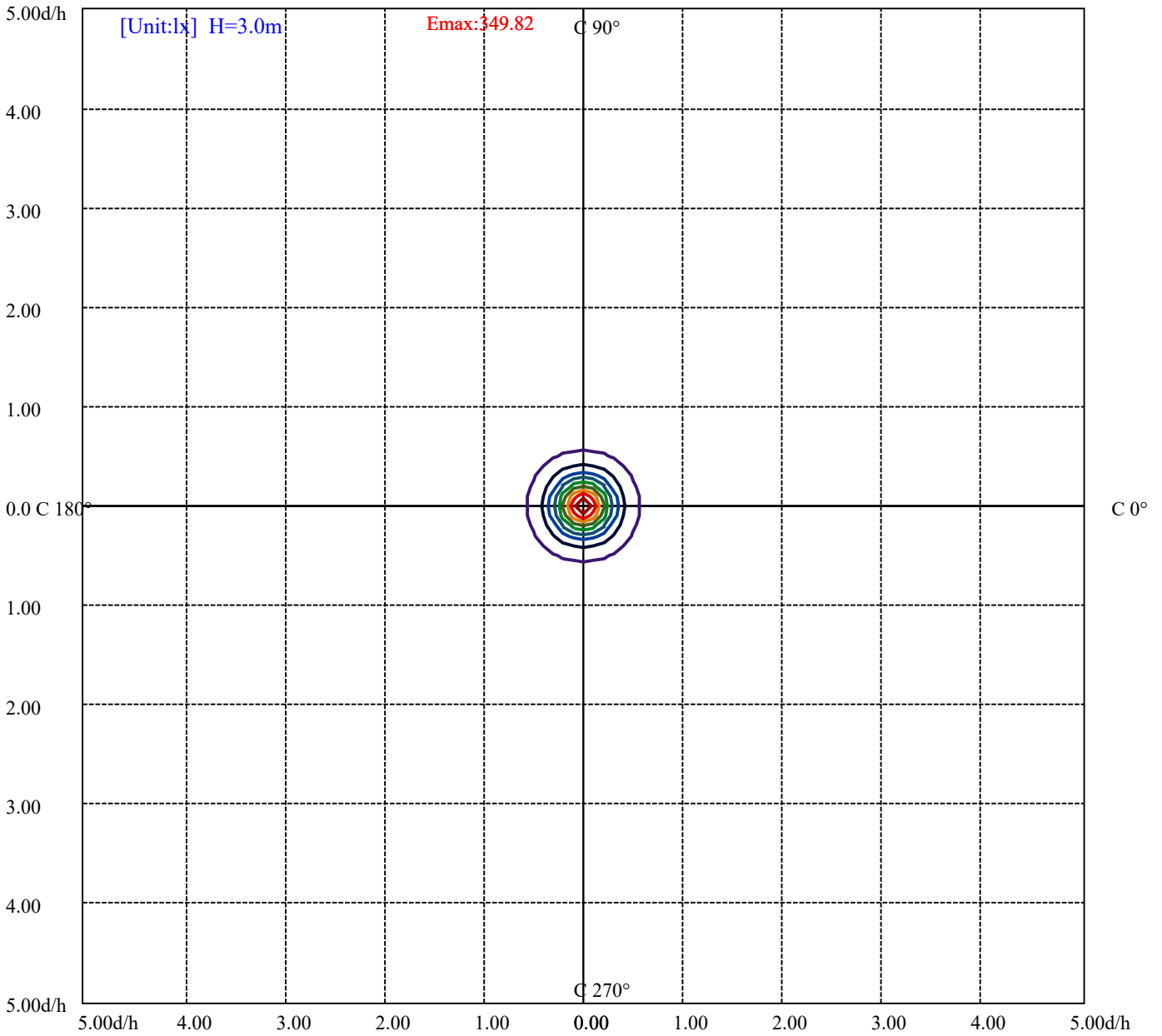
House

[Unit:cd]

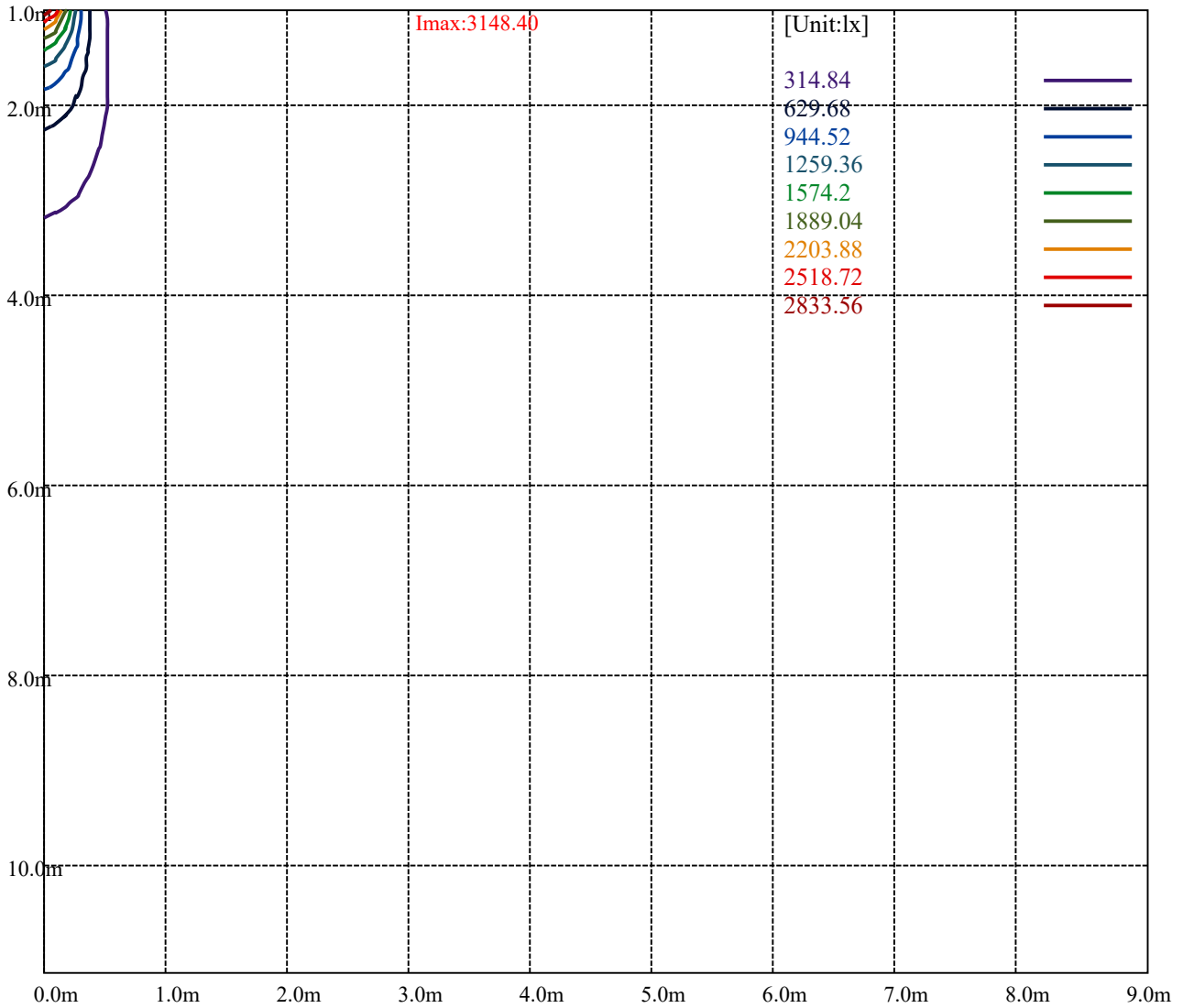
Road

Imax:3148.40

(10%Imax) 314.84	—
(20%Imax) 629.68	—
(30%Imax) 944.52	—
(40%Imax) 1259.36	—
(50%Imax) 1574.2	—
(60%Imax) 1889.04	—
(70%Imax) 2203.88	—
(80%Imax) 2518.72	—
(90%Imax) 2833.56	—



- (10%Emax) 34.98211
- (20%Emax) 69.96422
- (30%Emax) 104.9464
- (40%Emax) 139.9289
- (50%Emax) 174.9111
- (60%Emax) 209.8933
- (70%Emax) 244.8745
- (80%Emax) 279.8567
- (90%Emax) 314.8389



Luminance Table

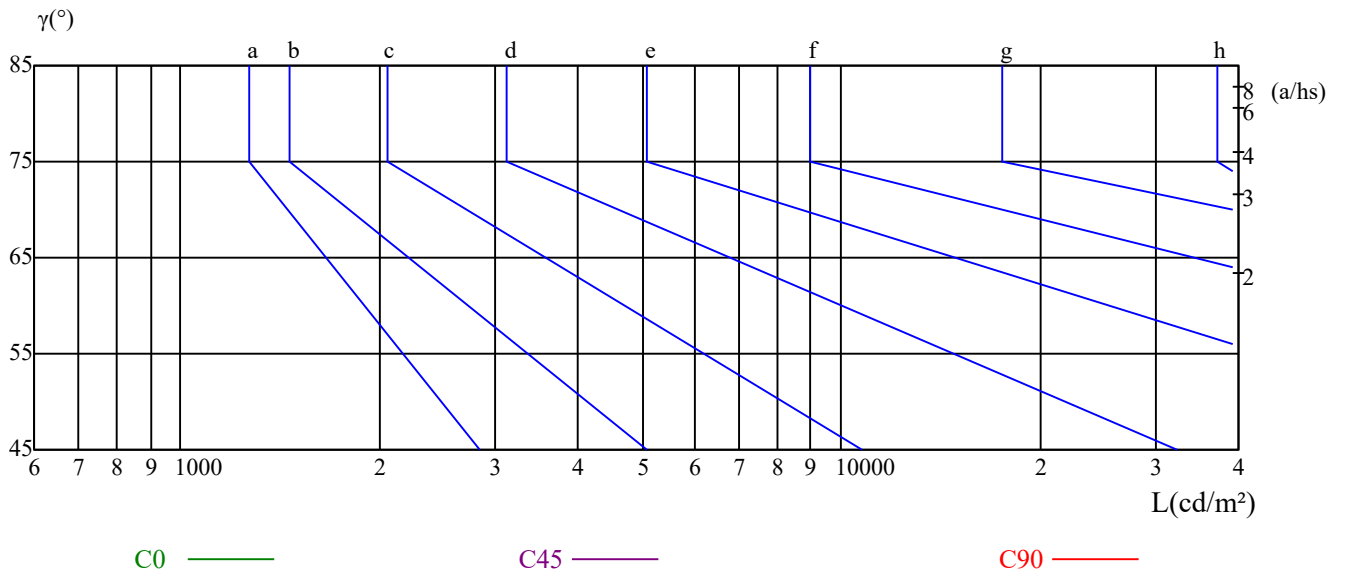
γ	45	50	55	60	65	70	75	80	85
C0	109	92	82	77	74	72	71	70	71
C45	80	67	60	56	53	52	51	50	50
C90	109	92	82	77	74	72	71	70	71

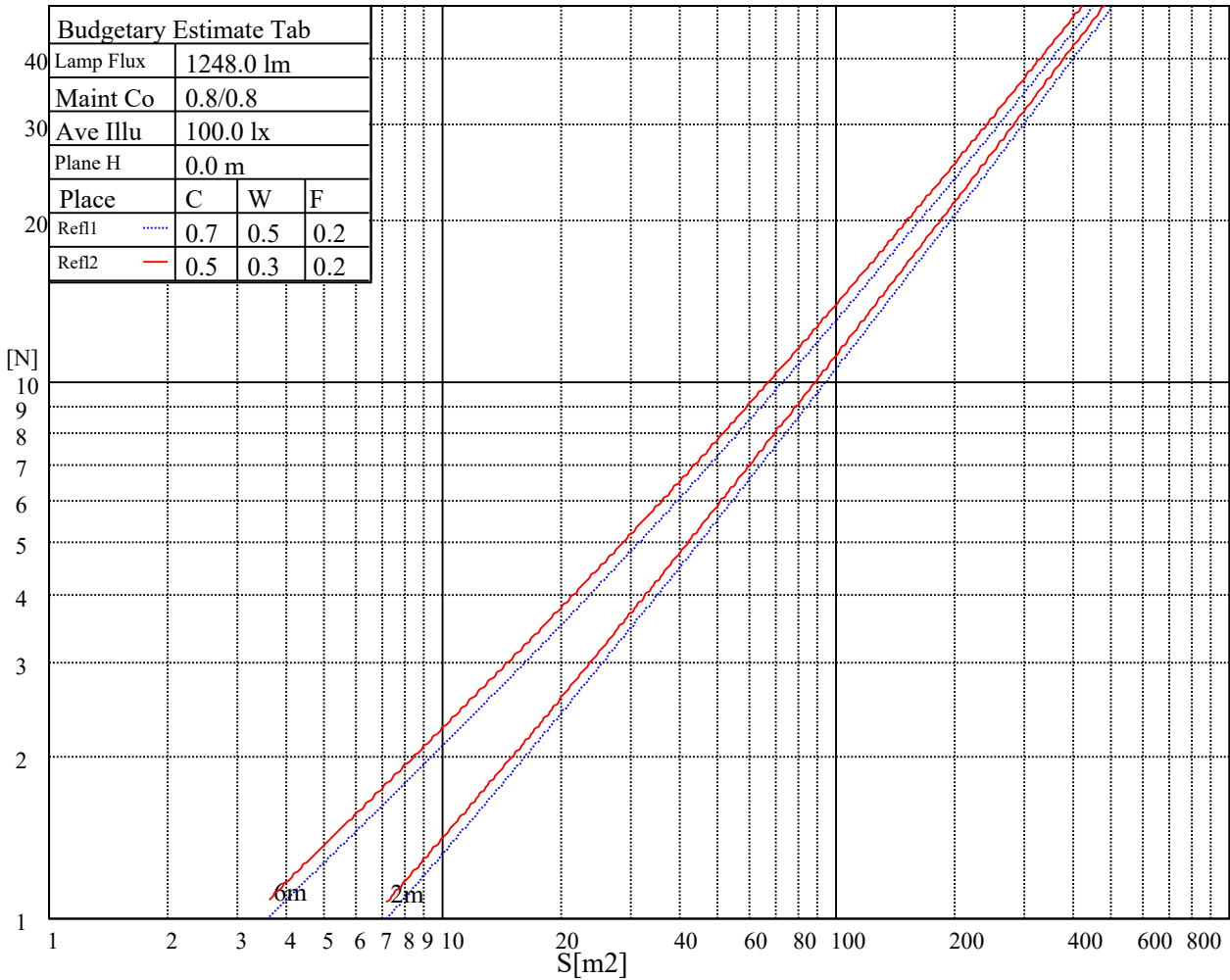
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1104	1104	1104	1795	1795	1795	5322	5322	5322

Glare Table

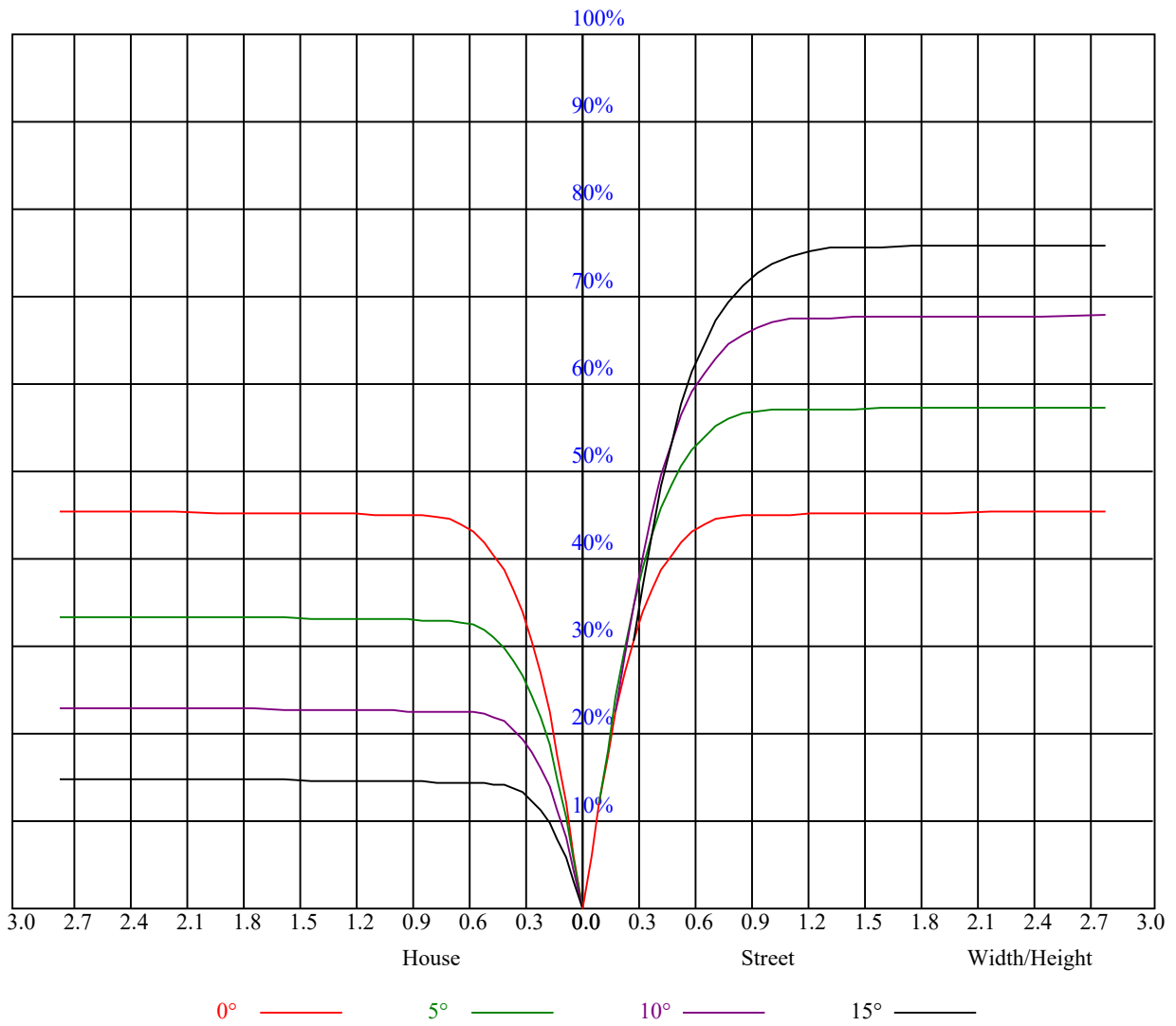
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.10	1.10	1.10	1.07	1.07	1.07	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.03	1.01	0.99	1.01	0.99	0.97	0.97	0.96	0.94	0.94	0.93	0.92	0.91	0.90	0.89	0.87
2	0.97	0.94	0.91	0.95	0.93	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.83
3	0.92	0.88	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.81	0.84	0.82	0.80	0.79
4	0.87	0.83	0.79	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.80	0.77	0.81	0.78	0.76	0.75
5	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.72
6	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.68
7	0.76	0.71	0.68	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
8	0.72	0.68	0.65	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.63
9	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60
10	0.67	0.62	0.59	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.58



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	3148.12	2893.21	2265.57	1559.75	979.45	630.40	462.47	286.29	12.55
45.0	3153.63	2937.81	2337.69	1613.15	1039.46	646.36	472.93	291.25	12.00
90.0	3155.28	2880.55	2196.20	1485.97	914.54	604.63	449.54	190.50	10.19
135.0	3136.56	2927.35	2352.56	1632.42	1030.66	661.23	482.84	291.80	14.76
180.0	3148.12	2840.36	2153.81	1489.83	924.34	604.19	452.67	210.70	10.35
225.0	3153.63	2796.87	2113.62	1408.34	901.60	583.38	435.83	199.63	10.68
270.0	3155.28	2862.93	2233.64	1564.70	991.02	624.34	473.49	289.05	12.61
315.0	3136.56	2770.99	2112.51	1421.01	884.59	586.19	437.42	184.88	10.85
360.0	3148.12	2893.21	2265.57	1559.75	979.45	630.40	462.47	286.29	12.55
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	5.95	5.18	4.84	4.68	4.68	4.62	4.62	4.62	4.68
45.0	5.73	5.23	4.90	4.73	4.73	4.68	4.68	4.62	4.68
90.0	5.62	5.12	4.84	4.73	4.62	4.68	4.62	4.62	4.68
135.0	6.06	5.23	4.90	4.73	4.68	4.62	4.62	4.62	4.62
180.0	5.73	5.12	4.90	4.68	4.68	4.62	4.68	4.62	4.62
225.0	5.73	5.18	4.84	4.73	4.68	4.68	4.62	4.68	4.62
270.0	5.84	5.23	4.84	4.73	4.62	4.62	4.68	4.57	4.57
315.0	5.67	5.12	4.79	4.62	4.62	4.62	4.62	4.62	4.62
360.0	5.95	5.18	4.84	4.68	4.68	4.62	4.62	4.62	4.68
C/γ(°)	90.0								
0.0	4.62								
45.0	4.62								
90.0	4.68								
135.0	4.57								
180.0	4.62								
225.0	4.68								
270.0	4.68								
315.0	4.57								
360.0	4.62								