
NATA

Client:

LumCAT: 1444-A

Luminaire:

Report No: nata-0100

Voltage(V): 17.6000

Test No:

Current(A): 0.7100

LampCAT: XICATO XTM LES19

Power (W): 12.5000

Lamp flux(lm): 1308.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 50

Width(mm): 50

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1146.15, Efficiency(%): 87.63% , Luminous Efficacy(lm/W): 91.69

Central intensity(cd): 1124.106, Maximum intensity(cd): 1124.106

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=62.8

[C90/270]Total=62.8

Field angle(10%Imax): [C0/180]Total=93.8

[C90/270]Total=93.8

Maximum s/h(1/2): C0_180=0.90 C90_270=0.90

Maximum s/h(1/4): C0_180=0.95 C90_270=0.95

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.06%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.071%

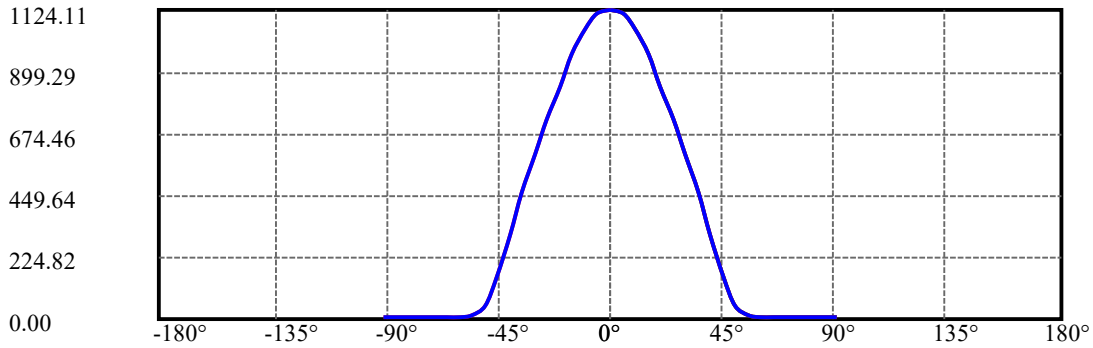
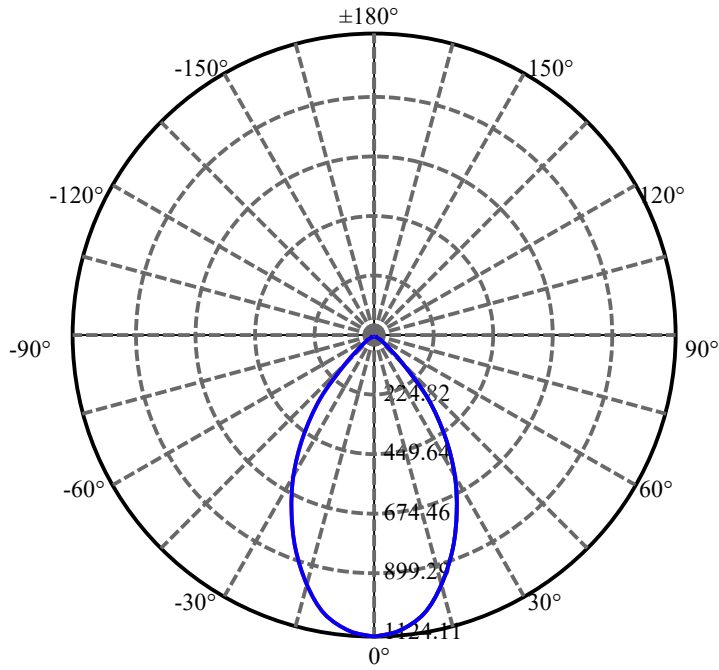
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1124.106	6.722	6.722	.514%	.587%
5.0	1108.210	52.943	59.665	4.048%	5.206%
10.0	1054.707	100.390	160.055	7.675%	13.965%
15.0	966.232	137.078	297.133	10.480%	25.925%
20.0	848.131	159.003	456.136	12.156%	39.797%
25.0	722.932	167.469	623.605	12.803%	54.409%
30.0	603.897	165.509	789.114	12.654%	68.849%
35.0	458.972	144.300	933.414	11.032%	81.439%
40.0	306.856	108.117	1041.531	8.266%	90.872%
45.0	152.528	59.118	1100.649	4.520%	96.030%
50.0	47.156	19.801	1120.45	1.514%	97.758%
55.0	12.250	5.500	1125.95	.421%	98.238%
60.0	7.595	3.605	1129.556	.276%	98.552%
65.0	6.483	3.221	1132.776	.246%	98.834%
70.0	5.938	3.058	1135.835	.234%	99.100%
75.0	5.606	2.968	1138.803	.227%	99.359%
80.0	5.375	2.901	1141.704	.222%	99.612%
85.0	5.539	3.025	1144.729	.231%	99.876%
90.0	5.172	1.417	1146.146	.108%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	789.11	60.33%	68.85%
0-40	1041.53	79.63%	90.87%
0-60	1129.56	86.36%	98.55%
0-90	1144.73	87.52%	99.88%
0-120	1144.73	87.52%	99.88%
0-180	1146.15	87.63%	100.00%
60-90	18.78	1.44%	1.64%
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%
0-34.43	916.92	70.10%	80.00%

ZONAL LUMEN SUMMARY

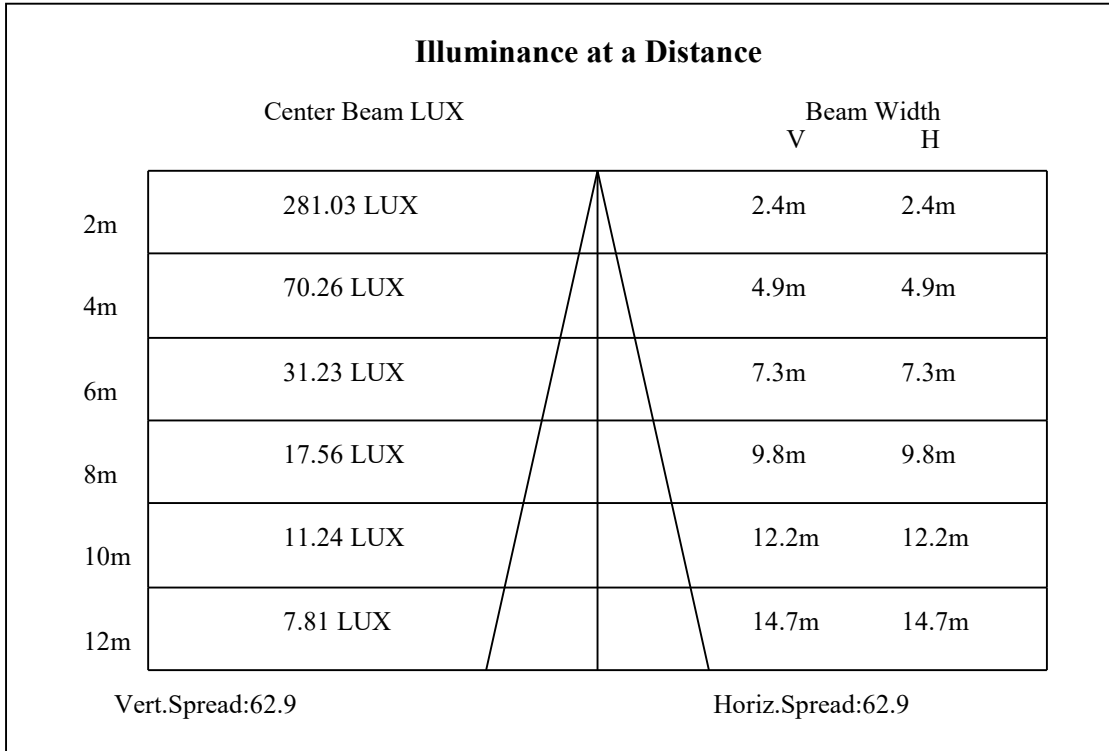
0-10	160.06
10-20	296.08
20-30	332.98
30-40	252.42
40-50	78.92
50-60	9.11
60-70	6.28
70-80	5.87
80-90	3.02
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

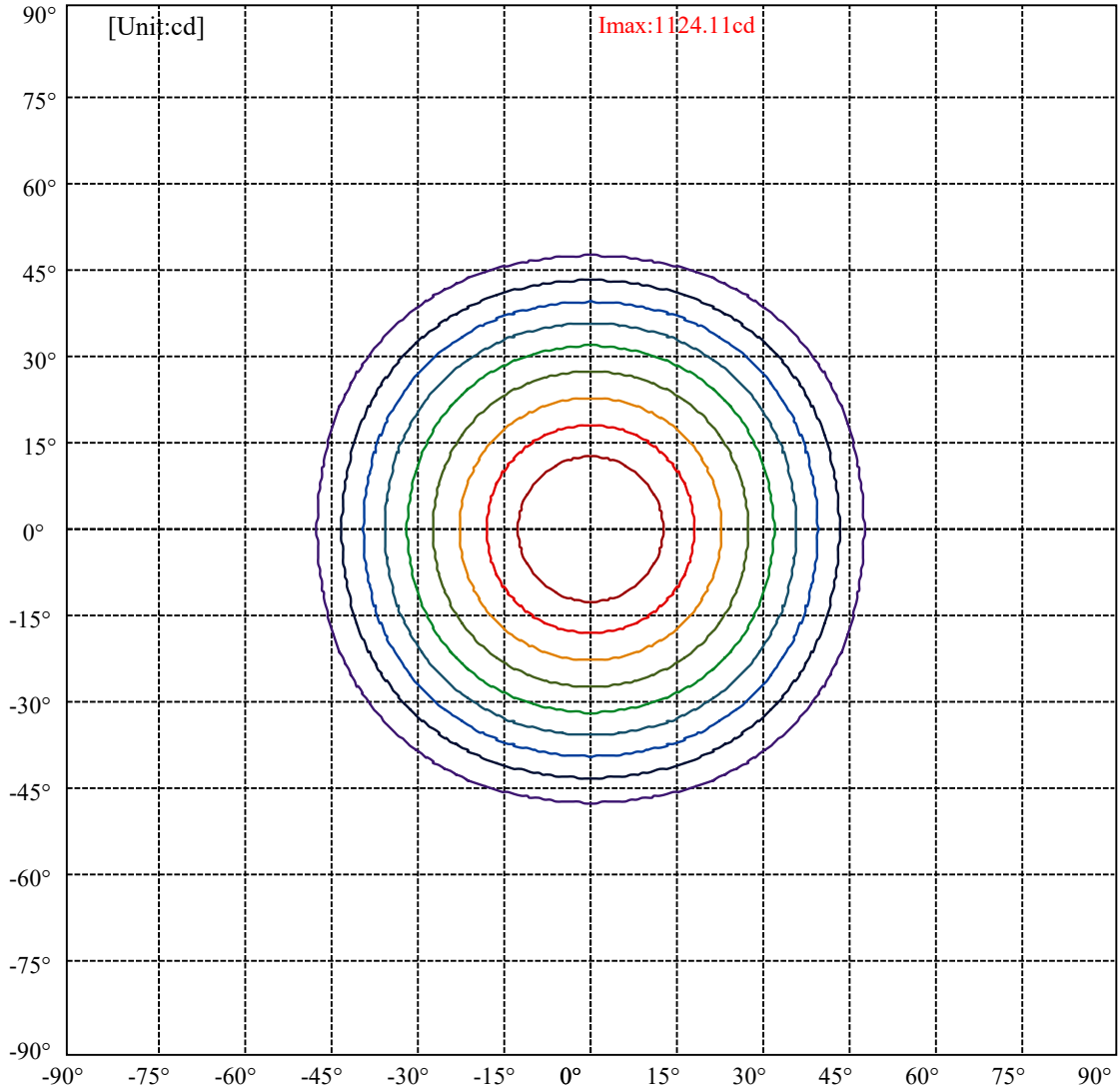


C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:46.9 Right:46.9
:C90/270Left:46.9 Right:46.9

Beam Angle(50%Imax):C0/180Left:31.4 Right:31.4
:C90/270Left:31.4 Right:31.4



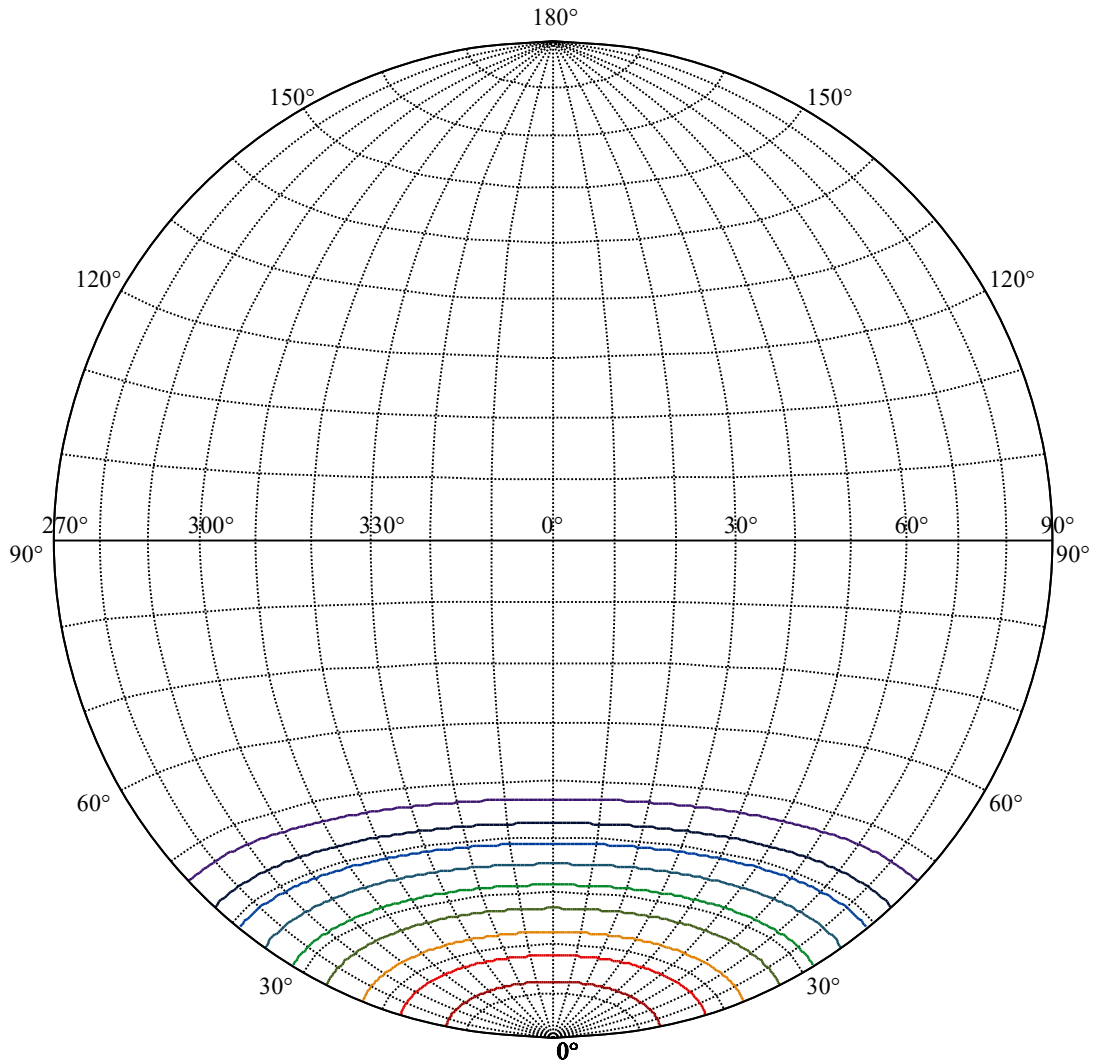


(10%Imax) 112.411	—
(20%Imax) 224.821	—
(30%Imax) 337.232	—
(40%Imax) 449.643	—
(50%Imax) 562.053	—
(60%Imax) 674.464	—
(70%Imax) 786.875	—
(80%Imax) 899.285	—
(90%Imax) 1011.7	—

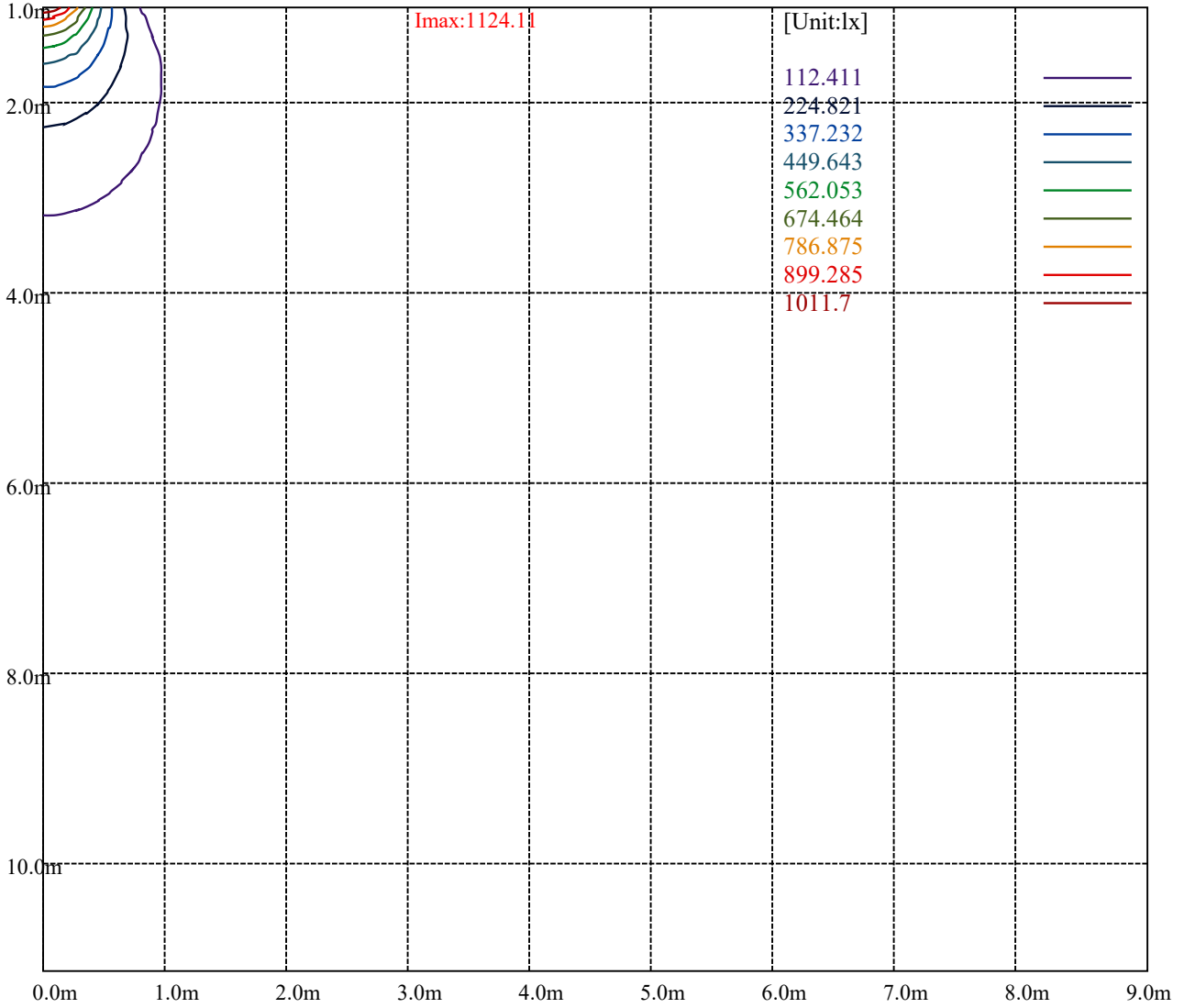
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2015-11-12
Humidity(%): 55.0%

Operator: P
Distance(m): 7.48



	Imax:1124.11	
(10%Imax)	112.411	—
(20%Imax)	224.821	—
(30%Imax)	337.232	—
(40%Imax)	449.643	—
(50%Imax)	562.053	—
(60%Imax)	674.464	—
(70%Imax)	786.875	—
(80%Imax)	899.285	—
(90%Imax)	1011.7	—



Luminance Table

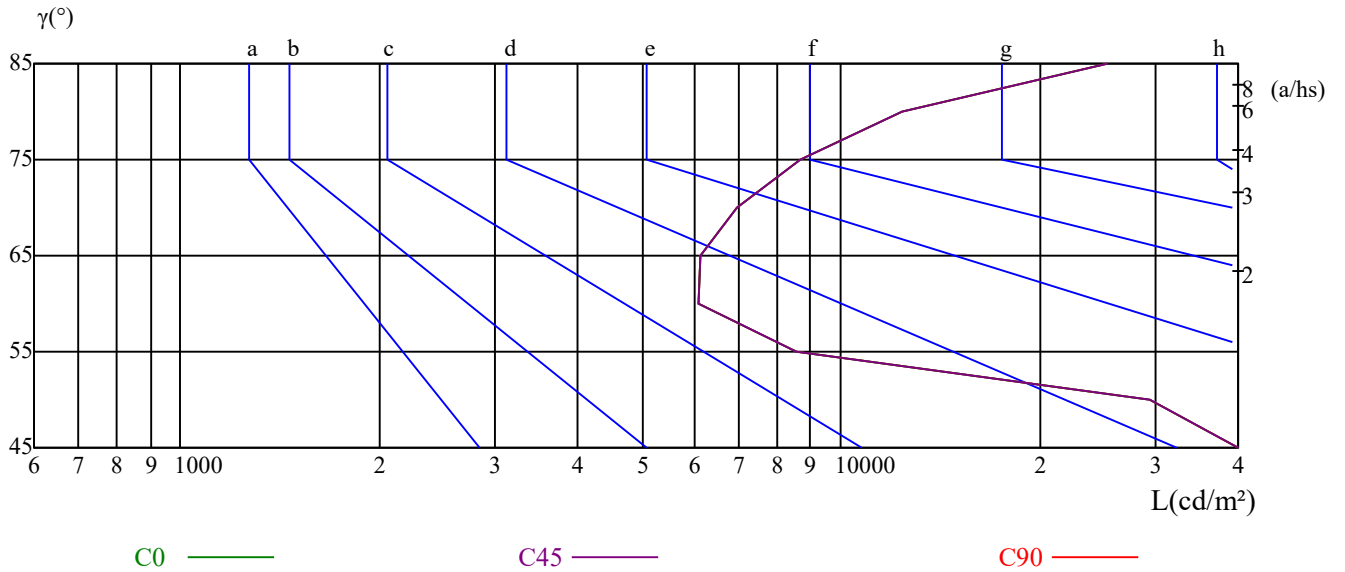
γ	45	50	55	60	65	70	75	80	85
C0	86283	29345	8543	6076	6136	6944	8663	12381	25422
C45	86283	29345	8543	6076	6136	6944	8663	12381	25422
C90	86283	29345	8543	6076	6136	6944	8663	12381	25422

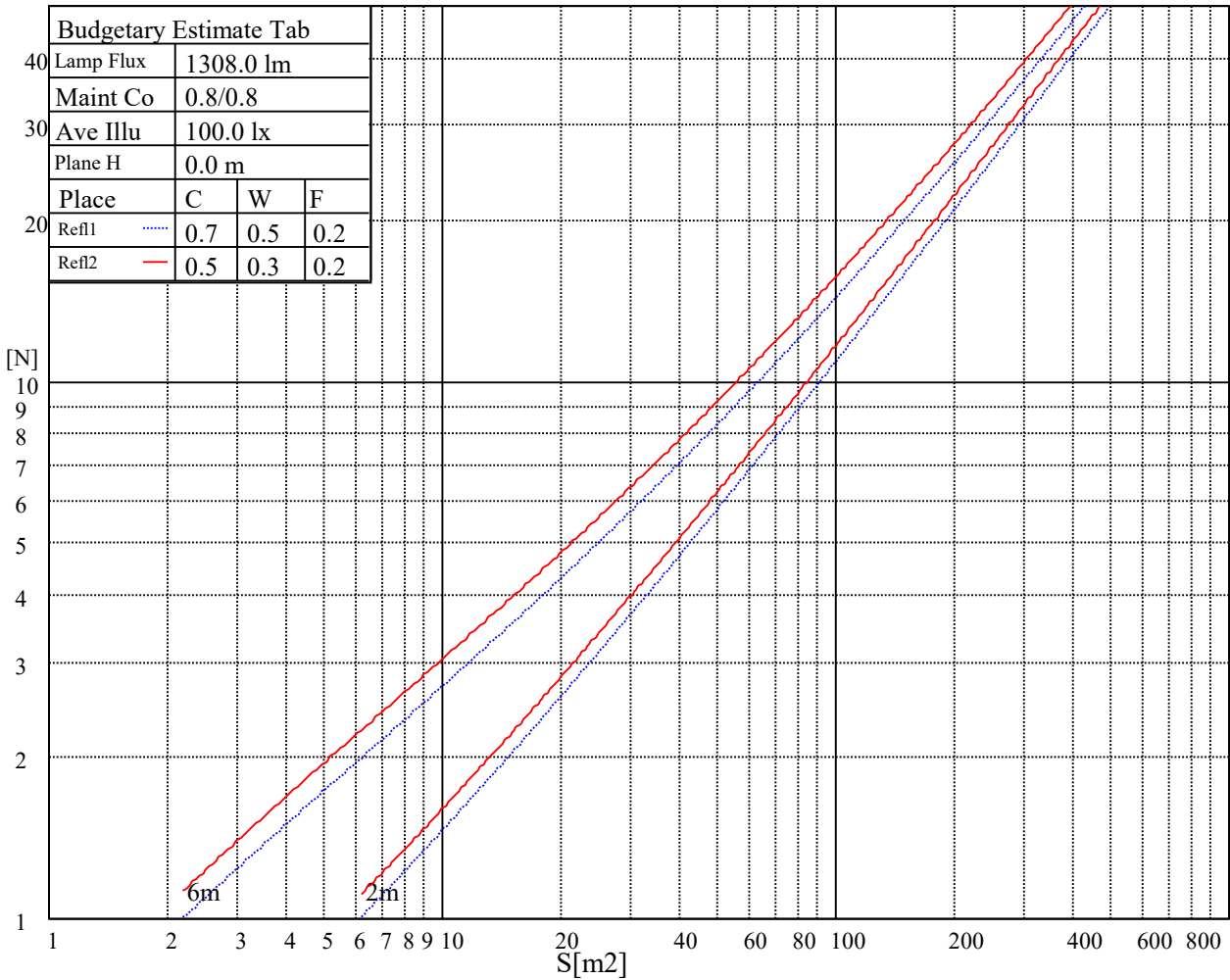
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6136	6136	6136	8663	8663	8663	25422	25422	25422

Glare Table

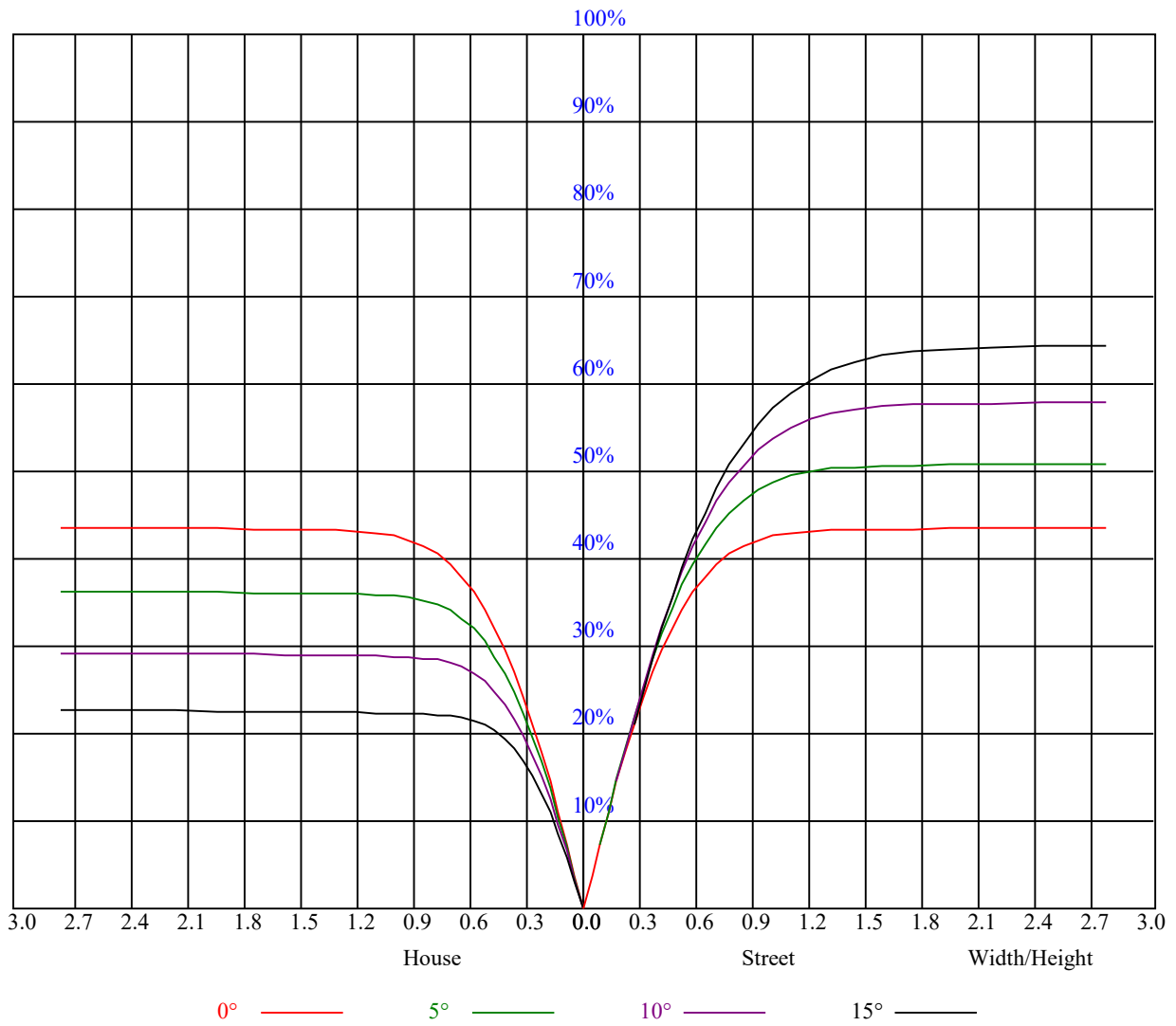
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

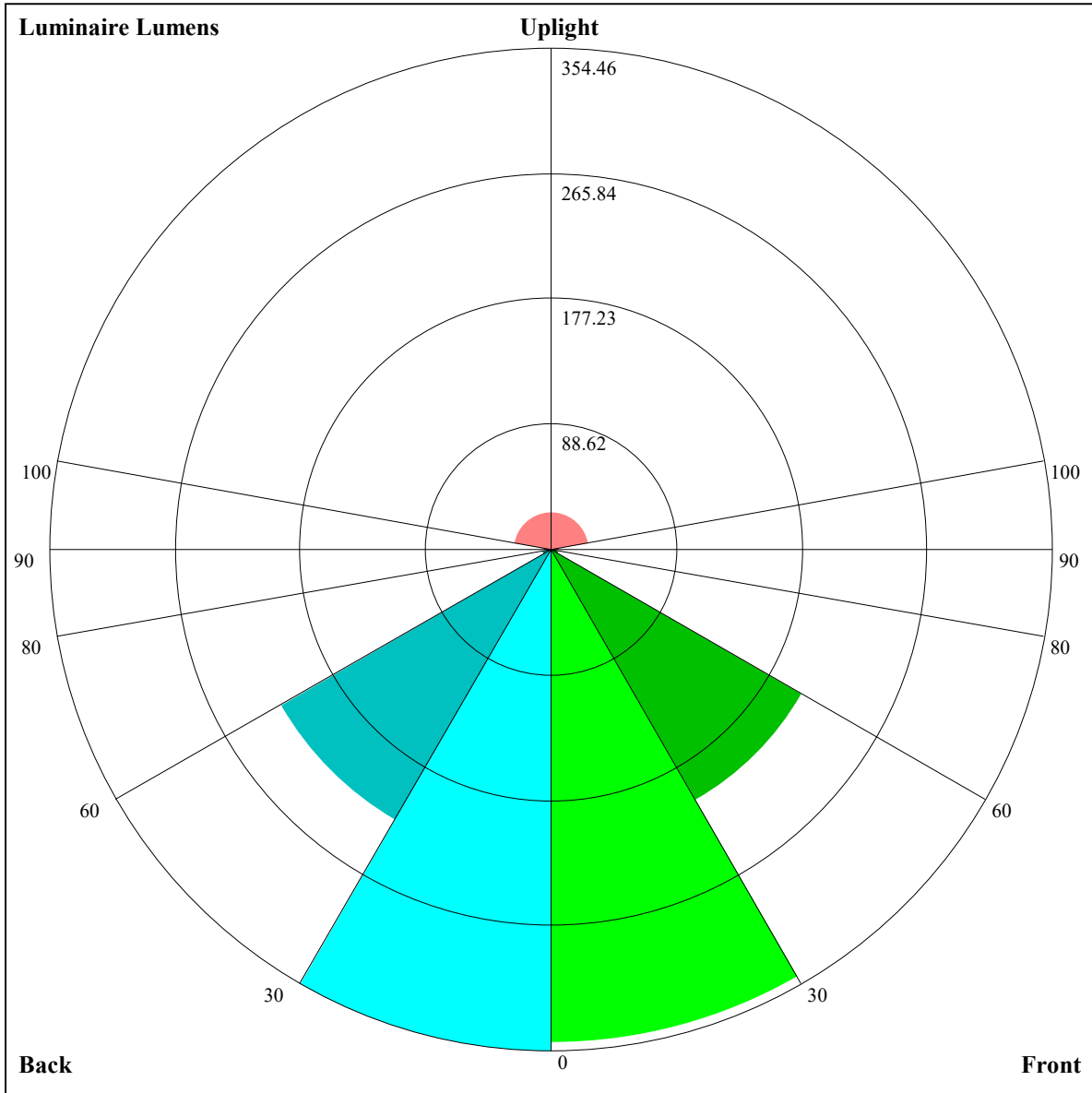
Luminance Limiting Curve





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	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.97	0.94	0.92	0.95	0.93	0.91	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.84	0.83	0.81
2	0.90	0.86	0.83	0.88	0.85	0.82	0.85	0.83	0.80	0.83	0.81	0.79	0.80	0.79	0.77	0.75
3	0.84	0.79	0.76	0.83	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.70
4	0.78	0.73	0.69	0.77	0.73	0.69	0.75	0.71	0.68	0.74	0.70	0.67	0.72	0.69	0.67	0.65
5	0.73	0.68	0.64	0.72	0.68	0.64	0.71	0.67	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.61
6	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.62	0.59	0.66	0.62	0.59	0.64	0.61	0.58	0.57
7	0.65	0.59	0.56	0.64	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.53
8	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.50
9	0.58	0.53	0.49	0.57	0.52	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.48	0.47
10	0.55	0.50	0.46	0.54	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.49	0.46	0.45





Luminaire Lumens:

FL=349.35,FM=204.74,FH=6.21,FVH=2.97

BL=354.46,BM=220.83,BH=6.33,BVH=2.94

UL=5.64,UH=26.85

BUG Rating:B1-U2-G0

NATA 1444-A

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	1131.88	1101.66	1036.20	937.73	810.72	677.56	551.67	390.53	287.59
22.5	1116.32	1130.76	1091.59	1018.30	911.43	773.79	654.06	525.37	359.76
45.0	1134.11	1113.75	1076.93	998.66	880.44	757.90	635.76	504.67	333.30
67.5	1116.21	1130.76	1094.95	1017.74	920.38	783.31	665.25	538.80	396.69
90.0	1131.88	1115.87	1079.51	1003.25	888.94	761.43	648.86	524.76	355.68
112.5	1114.81	1129.64	1095.51	1020.54	918.15	787.22	684.83	551.67	389.97
135.0	1133.00	1116.27	1076.49	1000.06	894.31	771.33	653.95	524.48	359.43
157.5	1114.64	1129.64	1094.39	1018.30	917.03	794.50	680.36	557.27	392.77
180.0	1131.88	1115.43	1074.08	997.26	884.80	768.65	653.78	529.79	354.22
202.5	1116.32	1091.82	1017.68	917.64	786.61	678.06	555.87	392.94	217.37
225.0	1134.11	1101.10	1035.08	943.32	812.40	682.59	566.78	410.12	286.47
247.5	1116.21	1087.62	1012.70	906.73	775.70	653.33	521.91	369.05	203.32
270.0	1131.88	1098.31	1035.64	931.01	802.89	671.96	558.94	392.77	289.26
292.5	1114.81	1081.63	1012.93	909.31	776.59	661.33	537.96	374.70	201.42
315.0	1133.00	1099.43	1033.40	927.10	810.72	685.95	565.66	396.69	289.26
337.5	1114.64	1087.68	1008.23	912.77	779.00	657.98	526.72	359.93	193.20
360.0	1131.88	1101.66	1036.20	937.73	810.72	677.56	551.67	390.53	287.59
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	88.01	19.02	8.62	6.83	6.15	5.76	5.54	5.32	6.77
22.5	189.34	74.53	14.60	7.67	6.55	5.99	5.65	5.43	5.32
45.0	186.99	61.99	13.88	7.55	6.49	5.93	5.60	5.37	5.26
67.5	244.39	86.67	16.45	8.84	6.83	6.15	5.76	5.48	5.26
90.0	203.38	72.40	15.83	8.17	6.88	6.15	5.76	5.43	5.26
112.5	241.31	88.91	17.57	8.90	7.05	6.32	5.82	5.54	5.32
135.0	195.99	66.75	15.55	8.11	6.83	6.15	5.76	5.48	5.26
157.5	288.14	89.35	17.12	9.34	6.88	6.21	5.76	5.54	5.32
180.0	198.68	69.32	14.60	7.89	6.71	6.04	5.71	5.48	5.26
202.5	93.10	17.90	9.12	6.71	6.10	5.71	5.48	5.26	5.20
225.0	99.26	25.40	9.85	6.88	6.15	5.76	5.48	5.26	5.54
247.5	79.00	14.16	8.22	6.83	6.15	5.71	5.43	5.26	5.87
270.0	94.33	19.25	9.01	7.11	6.38	5.87	5.54	5.32	6.27
292.5	78.89	15.89	8.67	6.94	6.27	5.76	5.48	5.32	5.71
315.0	89.41	18.13	8.95	7.11	6.27	5.82	5.48	5.26	5.76
337.5	70.22	14.83	7.94	6.66	6.04	5.65	5.43	5.26	5.26
360.0	88.01	19.02	8.62	6.83	6.15	5.76	5.54	5.32	6.77
C/γ(°)	90.0								
0.0	5.15								
22.5	5.15								
45.0	5.15								
67.5	5.15								
90.0	5.15								
112.5	5.32								
135.0	5.32								
157.5	5.32								
180.0	5.15								
202.5	5.15								
225.0	5.09								
247.5	5.15								
270.0	5.15								
292.5	5.15								
315.0	5.15								
337.5	5.09								
360.0	5.15								