NATA LIGHTING CO.,LTD
www.nata.cn
Email:info@nata.cn
Tel:+86 0750-377 0000(10 lines) Fax:+86 0750-377 1111
Address:380JinOu Road,Gaoxin Zone,Jiang Men City,Guangdong,China

Nata

Client:
LumCAT: 1-0788-M2
Luminaire: 92.70.125.00+92.70.152.00

Report No: 200915-B003	Voltage(V): 17.4300
Test No: 200915-C003	Current(A): 0.3430
LampCAT: Vesta DW LES6 Gen2 PD	Power (W): 5.9780
Lamp flux(lm): 573.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 495.22, Efficiency(%): 86.43% , Luminous Efficacy(lm/W): 82.84
Central intensity(cd): 660.853, Maximum intensity(cd): 660.853
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=42.8
[C90/270]Total=42.8
Field angle(10%Imax): [C0/180]Total=89.8
[C90/270]Total=89.8
Maximum s/h(1/2): C0_180=0.66 C90_270=0.66
Maximum s/h(1/4): C0_180=0.76 C90_270=0.76
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.43%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.366%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	660.853	0.000	0	.000%	.000%
5.0	630.563	15.439	15.439	2.694%	3.117%
10.0	551.053	42.270	57.709	7.377%	11.653%
15.0	446.309	59.163	116.871	10.325%	23.600%
20.0	352.934	65.869	182.74	11.495%	36.901%
25.0	273.628	65.715	248.455	11.469%	50.170%
30.0	218.327	62.257	310.712	10.865%	62.742%
35.0	175.338	57.970	368.682	10.117%	74.448%
40.0	128.250	50.651	419.334	8.840%	84.676%
45.0	64.638	35.715	455.049	6.233%	91.888%
50.0	27.942	18.707	473.756	3.265%	95.665%
55.0	13.022	8.907	482.663	1.554%	97.464%
60.0	6.314	4.469	487.132	.780%	98.366%
65.0	2.897	2.239	489.371	.391%	98.818%
70.0	2.194	1.289	490.66	.225%	99.079%
75.0	2.130	1.130	491.791	.197%	99.307%
80.0	2.130	1.140	492.931	.199%	99.537%
85.0	2.123	1.156	494.087	.202%	99.771%
90.0	2.025	1.136	495.223	.198%	100.000%

Zonal flux distribution table

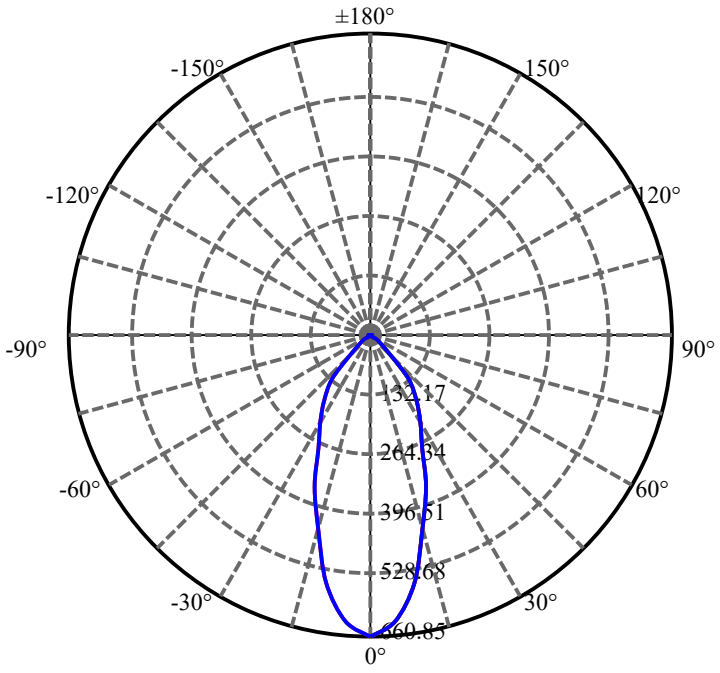
ZONAL LUMEN SUMMARY

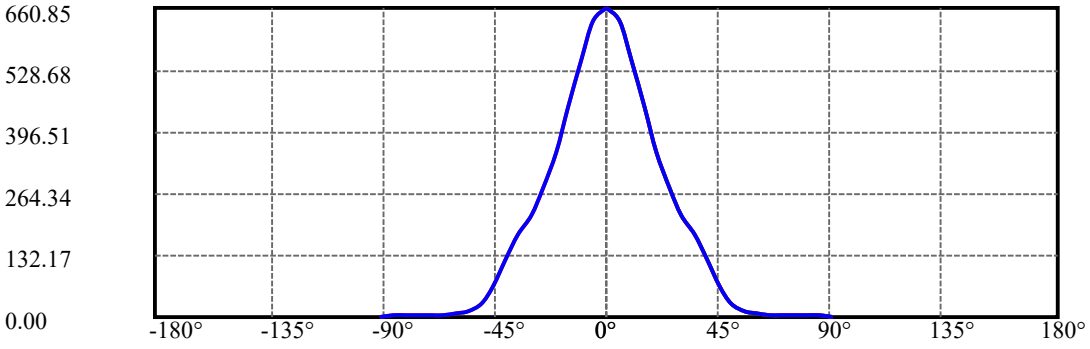
Zone	Lumens	%Lamp	%Fixt
0-30	310.71	54.23%	62.74%
0-40	419.33	73.18%	84.68%
0-60	487.13	85.01%	98.37%
0-90	494.09	86.23%	99.77%
0-120	494.09	86.23%	99.77%
0-180	495.22	86.43%	100.00%
60-90	11.42	1.99%	2.31%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-37.71	396.18	69.14%	80.00%

ZONAL LUMEN SUMMARY

0-10	57.71
10-20	125.03
20-30	127.97
30-40	108.62
40-50	54.42
50-60	13.38
60-70	3.53
70-80	2.27
80-90	1.16
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

Light Distribution Curve [Unit:cd]





C0(Max):

C0/C180:

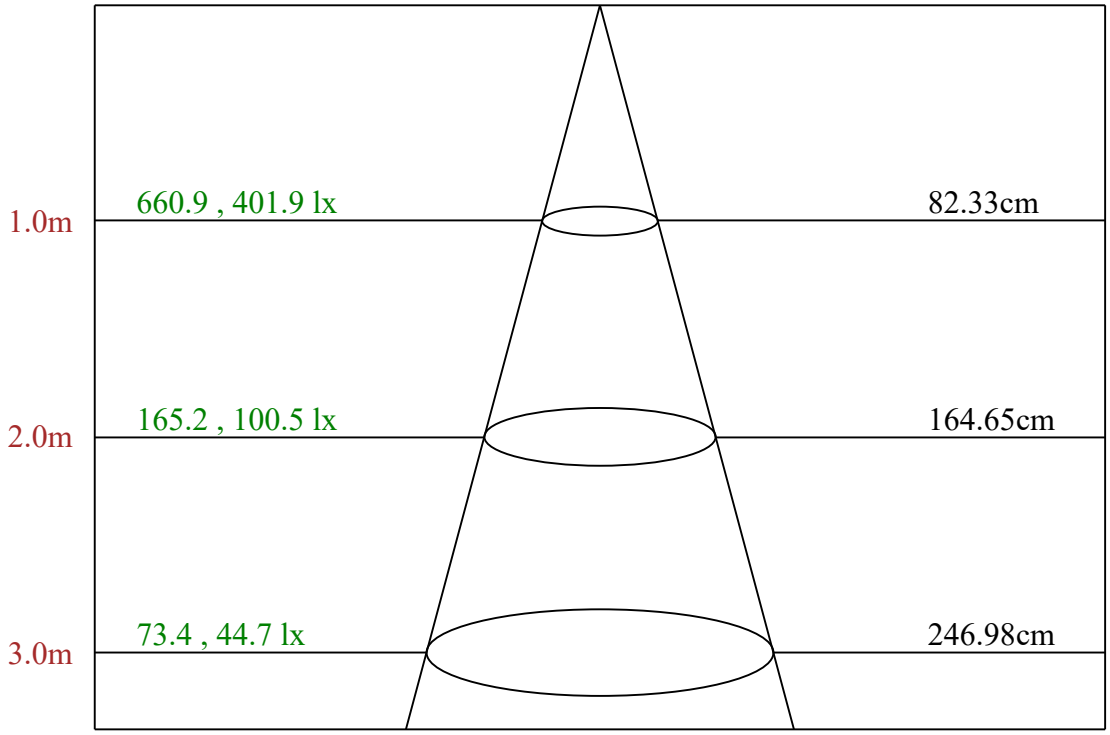
C90/C270:

Field angle(10%Imax):C0/180Left:44.9 Right:44.9
:C90/270Left:44.9 Right:44.9

Beam Angle(50%Imax):C0/180Left:21.4 Right:21.4
:C90/270Left:21.4 Right:21.4

Equipment: GMS1980 Date: 2020/9/15 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

Lux distance Curve

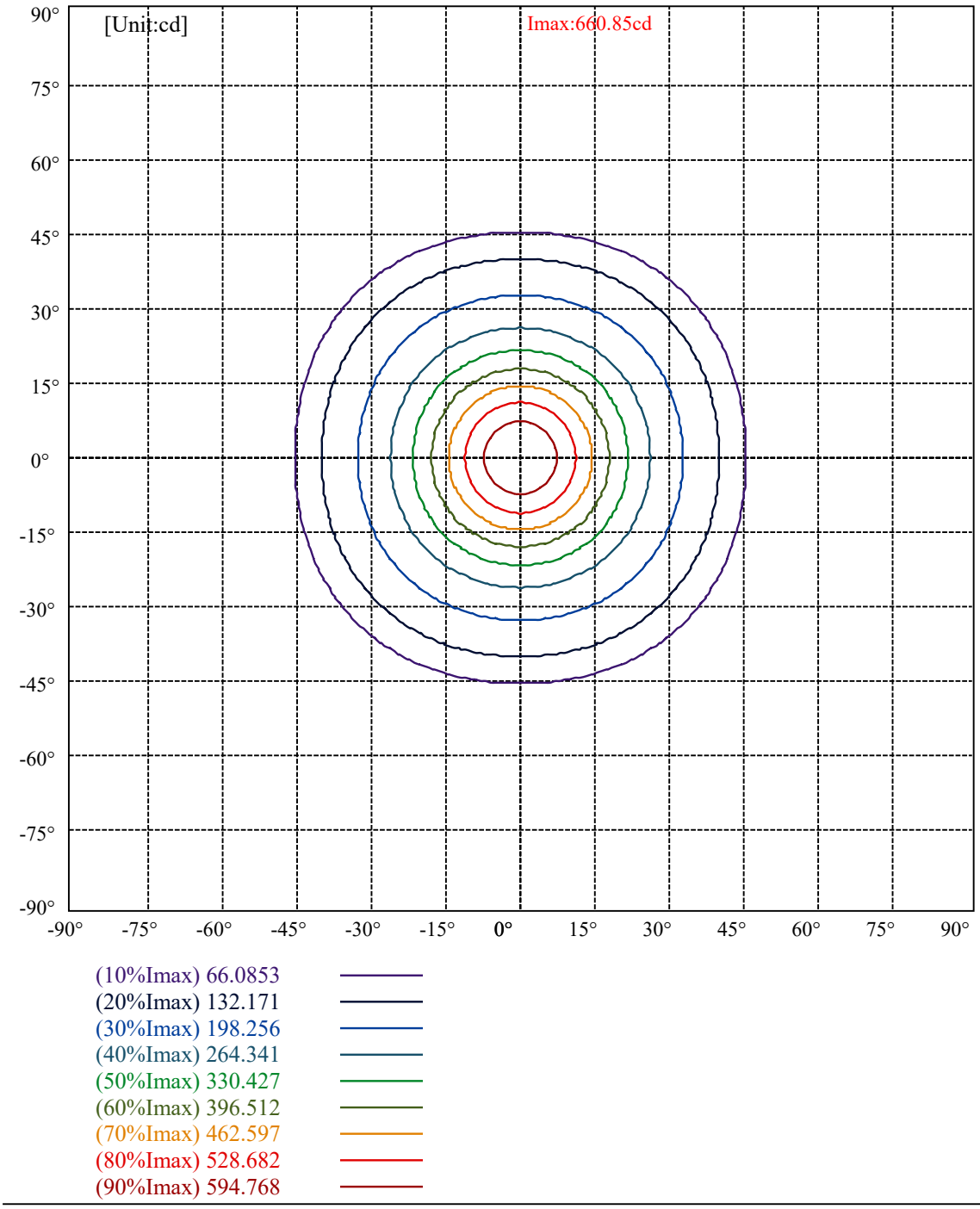


Max , Ave

Beam angle of C0 plane 44.75

Equipment: GMS1980	Date: 2020/9/15	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

ISO-Intensity(V-H)



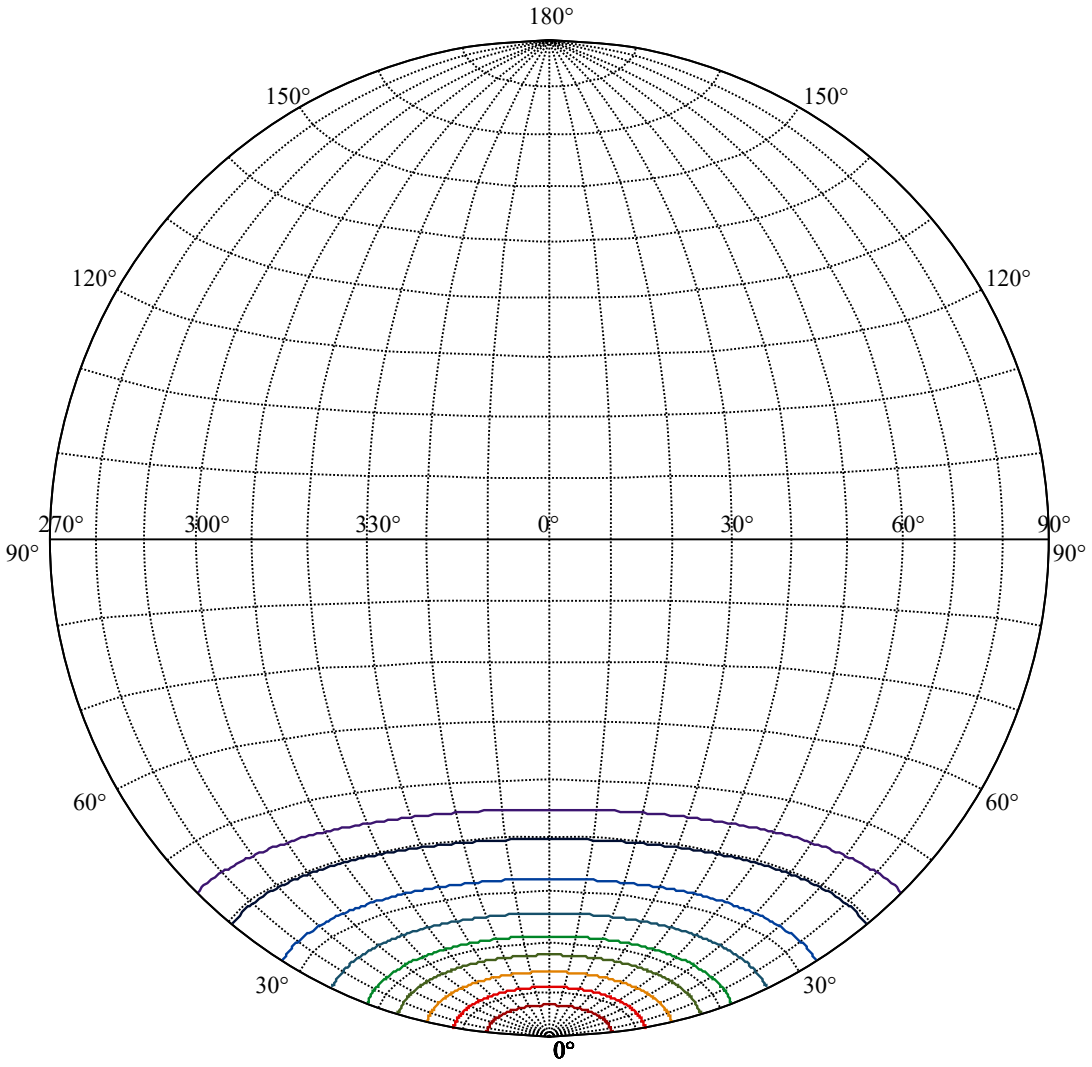
(10%Imax) 66.0853
(20%Imax) 132.171
(30%Imax) 198.256
(40%Imax) 264.341
(50%Imax) 330.427
(60%Imax) 396.512
(70%Imax) 462.597
(80%Imax) 528.682
(90%Imax) 594.768

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/9/15
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



[Unit:cd]

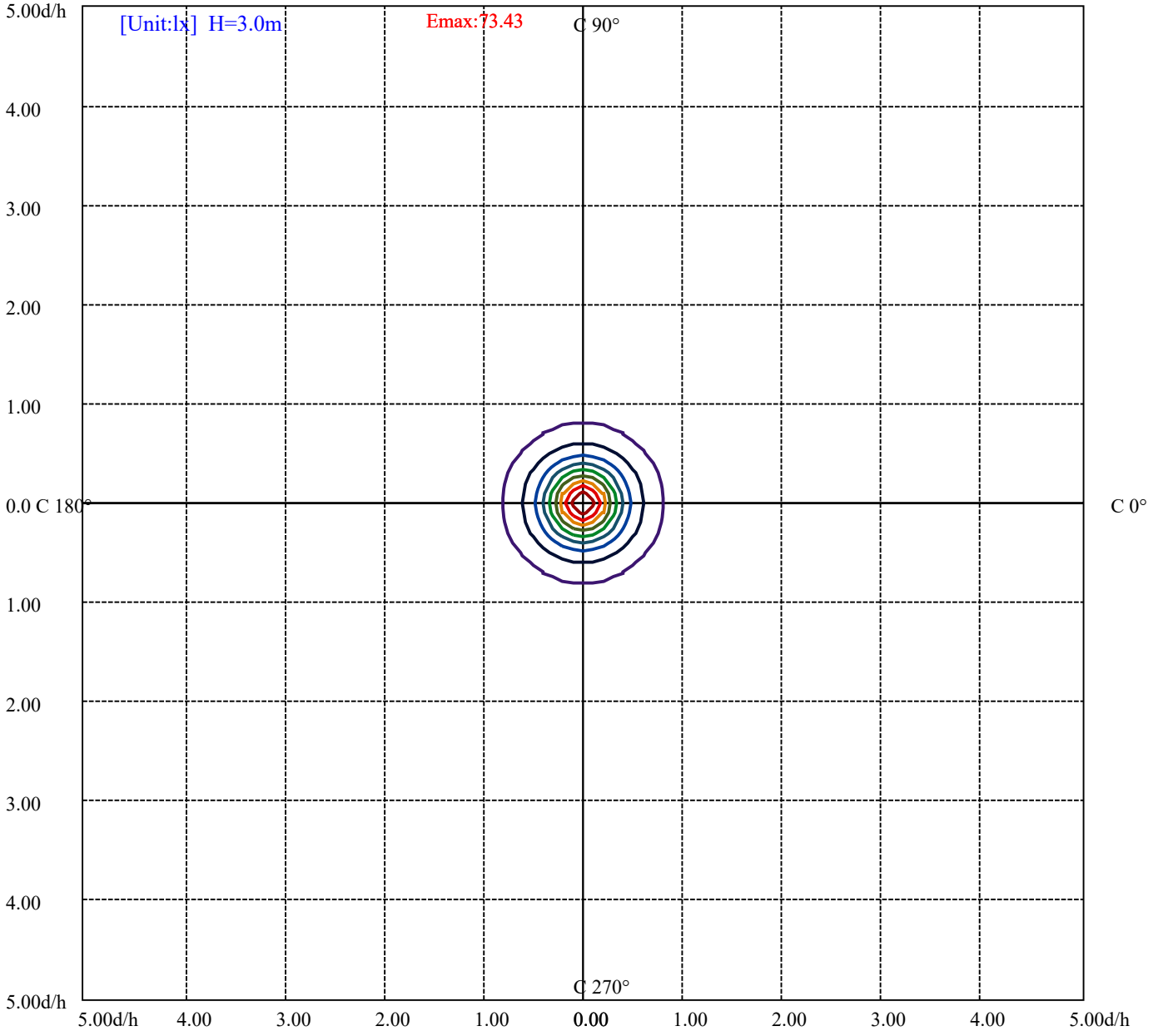
Imax:660.85

(10%Imax) 66.0853
(20%Imax) 132.171
(30%Imax) 198.256
(40%Imax) 264.341
(50%Imax) 330.427
(60%Imax) 396.512
(70%Imax) 462.597
(80%Imax) 528.682
(90%Imax) 594.768

Equipment: GMS1980	Date: 2020/9/15	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

Nata 1-0788-M2

ISO illuminance diagram



Equipment: GMS1980
Date: 2020/9/15
Operator: NT07
Temperature(°C): 25.0
Humidity(%): 65.0%
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

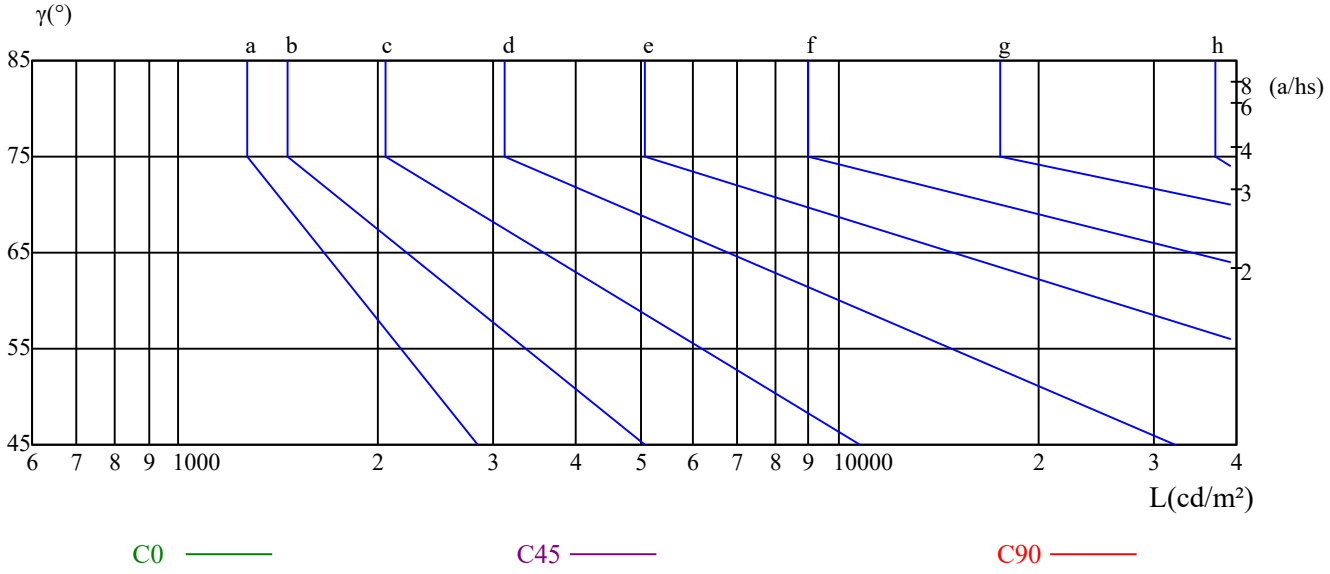
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

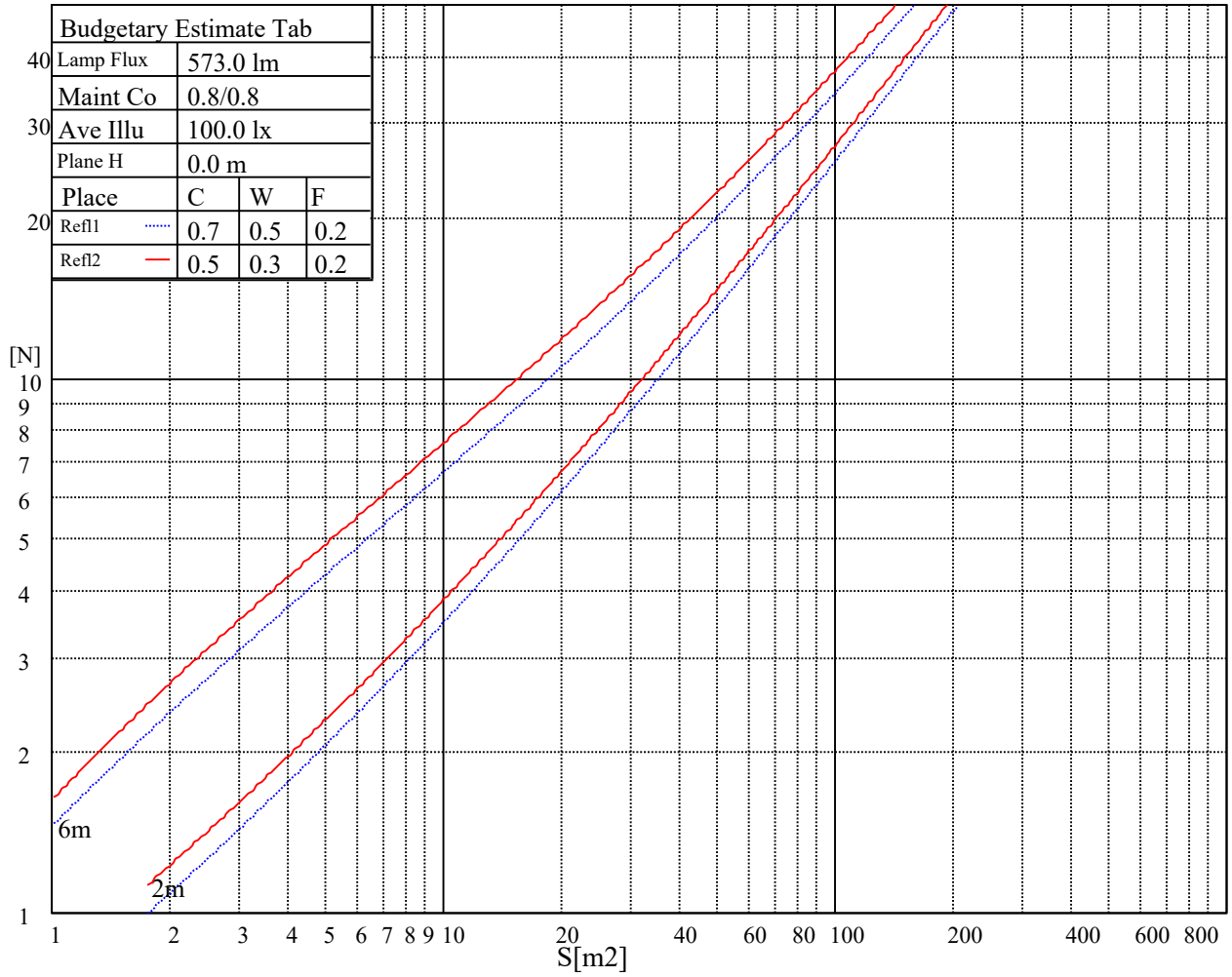
Glare Table

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 Limitting Curve



Budgetary Estimate Table



Equipment: GMS1980 Date: 2020/9/15 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

Utilization factor table for indoor luminaire

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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.03	1.03	1.03	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.95	0.93	0.91	0.93	0.91	0.89	0.90	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.78	0.81	0.79	0.77	0.79	0.77	0.75	0.74
3	0.82	0.77	0.73	0.80	0.76	0.73	0.78	0.74	0.72	0.76	0.73	0.70	0.74	0.71	0.69	0.68
4	0.76	0.71	0.67	0.75	0.70	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.64	0.63
5	0.71	0.65	0.61	0.70	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.65	0.62	0.59	0.58
6	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.54
7	0.62	0.56	0.53	0.61	0.56	0.52	0.60	0.56	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.50
8	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	0.48	0.47
9	0.55	0.49	0.46	0.54	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.45	0.52	0.48	0.45	0.44
10	0.52	0.47	0.43	0.51	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.49	0.45	0.43	0.41

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	662.68	622.86	529.76	427.67	339.19	267.58	221.96	181.24	128.87
45.0	660.66	631.01	549.23	441.79	351.56	273.49	217.97	175.67	127.63
90.0	662.18	635.68	559.80	455.74	360.51	273.99	210.49	166.73	123.30
135.0	657.90	651.26	585.73	486.68	382.22	291.71	230.40	182.87	139.33
180.0	662.68	634.11	565.26	452.81	352.01	274.28	217.52	174.15	132.81
225.0	660.66	631.97	554.06	445.33	355.39	273.38	216.96	176.23	128.98
270.0	662.18	630.23	548.27	449.72	357.36	276.92	220.78	181.91	132.81
315.0	657.90	607.39	516.32	410.74	325.24	257.68	210.54	163.91	112.28
360.0	662.68	622.86	529.76	427.67	339.19	267.58	221.96	181.24	128.87

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	64.13	26.21	11.76	5.79	2.70	2.19	2.19	2.19	2.31
45.0	63.00	27.73	12.60	6.24	2.93	2.31	2.19	2.19	2.19
90.0	62.78	27.56	13.50	6.52	2.87	2.19	2.08	2.08	2.08
135.0	80.04	37.41	17.21	8.10	3.71	2.25	2.08	2.08	2.03
180.0	70.88	30.99	14.06	6.98	3.04	2.14	2.08	2.08	2.03
225.0	63.68	26.72	12.83	6.13	2.81	2.19	2.19	2.19	2.03
270.0	63.11	26.16	12.21	5.91	2.76	2.14	2.08	2.08	2.14
315.0	49.50	20.76	10.01	4.84	2.36	2.14	2.14	2.14	2.19
360.0	64.13	26.21	11.76	5.79	2.70	2.19	2.19	2.19	2.31

C/γ(°)	90.0
0.0	2.03
45.0	2.03
90.0	2.03
135.0	2.03
180.0	2.03
225.0	2.03
270.0	2.03
315.0	2.03
360.0	2.03