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Nata

LumCAT: 3-1742-N
Luminaire: 92.70.045.00+92.70.061.00
Report No: NT2017082203
Test No: nata-0100
LampCAT: CREE CXA2520
Lamp flux(lm): 2662.0
Number of Lamps: 1
Length(mm): 86
Phm Type: C

Voltage(V): 39.0000
Current(A): 0.8000
Power (W): 31.2000
PF: 0.0000
Ballast type: DC
Width(mm): 86
Height(mm): 0

Photometric Results

Lumens(lm): 2200.78
Efficiency(%): 82.67%
Lumens(lm)/Power(W): 70.54
Central intensity(cd): 7202.203
Maximum intensity(cd): 7202.203
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=26.5
[C90/270]Total=26.5
Field angle(10%Imax): [C0/180]Total=53.1
[C90/270]Total=53.1
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
Maximum s/h(1/4): C0_180=0.45 C90_270=0.45
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.21%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.679%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7202.203	43.071	43.071	1.618%	1.957%
5.0	6573.321	314.029	357.1	11.797%	16.226%
10.0	4890.522	465.495	822.595	17.487%	37.377%
15.0	2915.649	413.638	1236.233	15.539%	56.173%
20.0	1403.546	263.128	1499.362	9.885%	68.129%
25.0	805.337	186.559	1685.921	7.008%	76.606%
30.0	526.793	144.378	1830.298	5.424%	83.166%
35.0	348.941	109.706	1940.005	4.121%	88.151%
40.0	253.108	89.179	2029.184	3.350%	92.203%
45.0	157.771	61.151	2090.334	2.297%	94.982%
50.0	98.558	41.384	2131.719	1.555%	96.862%
55.0	51.691	23.210	2154.928	.872%	97.917%
60.0	26.097	12.388	2167.316	.465%	98.480%
65.0	14.411	7.159	2174.475	.269%	98.805%
70.0	12.656	6.519	2180.994	.245%	99.101%
75.0	11.989	6.347	2187.342	.238%	99.389%
80.0	11.004	5.940	2193.282	.223%	99.659%
85.0	9.428	5.148	2198.431	.193%	99.893%
90.0	8.568	2.348	2200.779	.088%	100.000%

Zonal flux distribution table

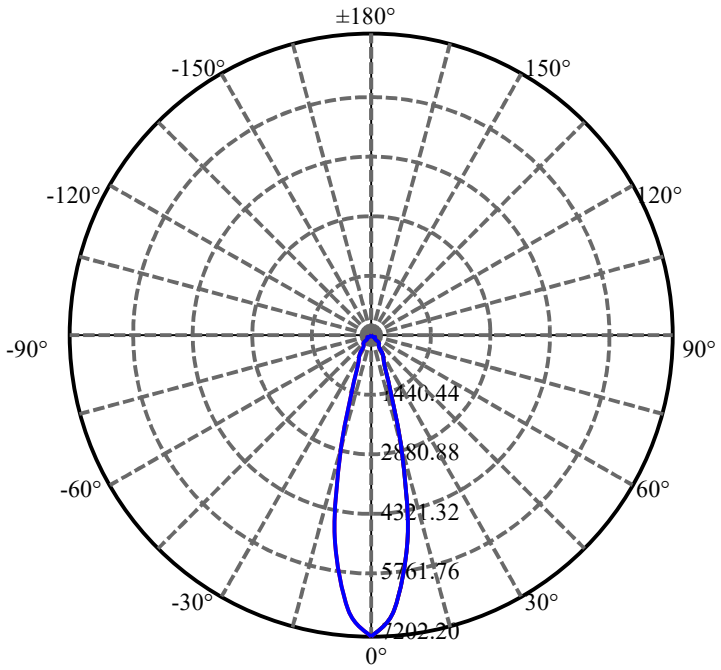
ZONAL LUMEN SUMMARY

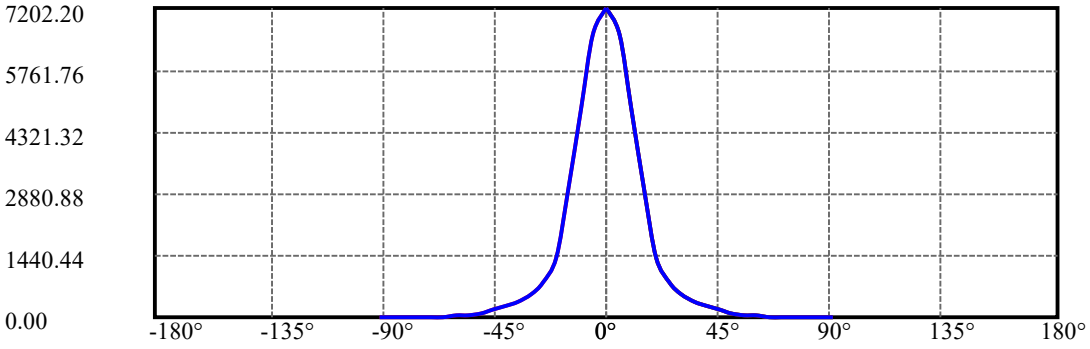
Zone	Lumens	%Lamp	%Fixt
0-30	1830.30	68.76%	83.17%
0-40	2029.18	76.23%	92.20%
0-60	2167.32	81.42%	98.48%
0-90	2198.43	82.59%	99.89%
0-120	2198.43	82.59%	99.89%
0-180	2200.78	82.67%	100.00%
60-90	43.50	1.63%	1.98%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.59	1760.62	66.14%	80.00%

ZONAL LUMEN SUMMARY

0-10	822.59
10-20	676.77
20-30	330.94
30-40	198.89
40-50	102.53
50-60	35.60
60-70	13.68
70-80	12.29
80-90	5.15
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):

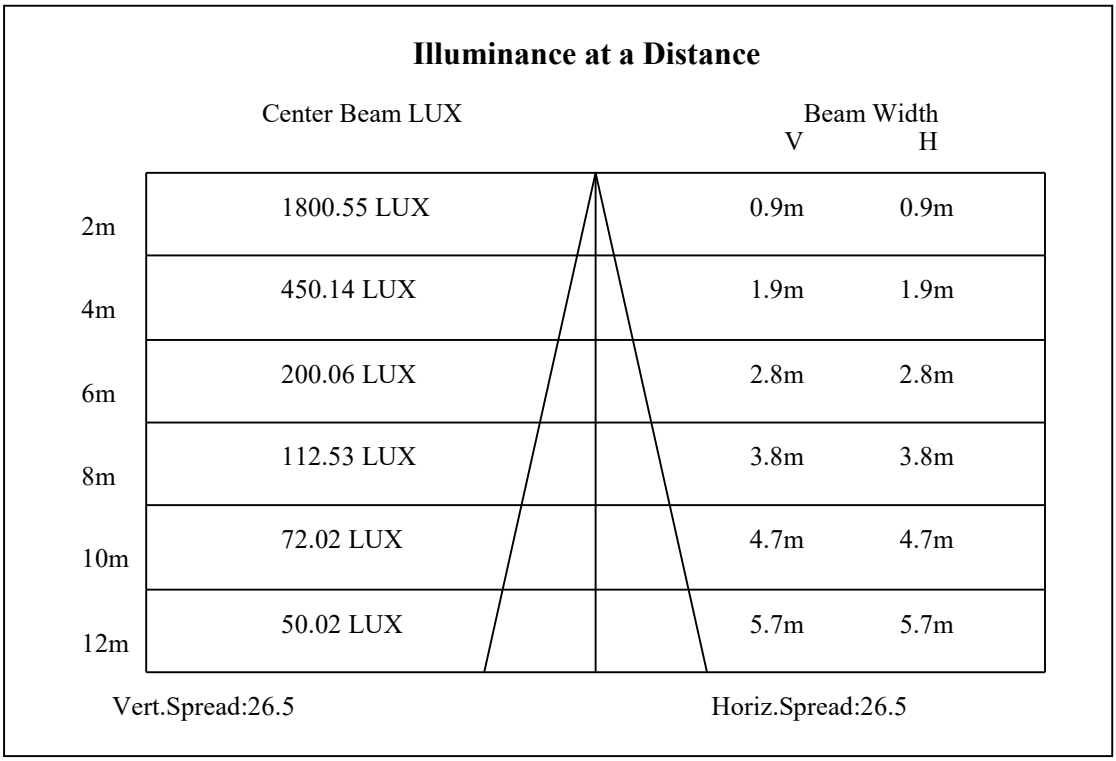
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:26.5 Right:26.5
:C90/270Left:26.5 Right:26.5

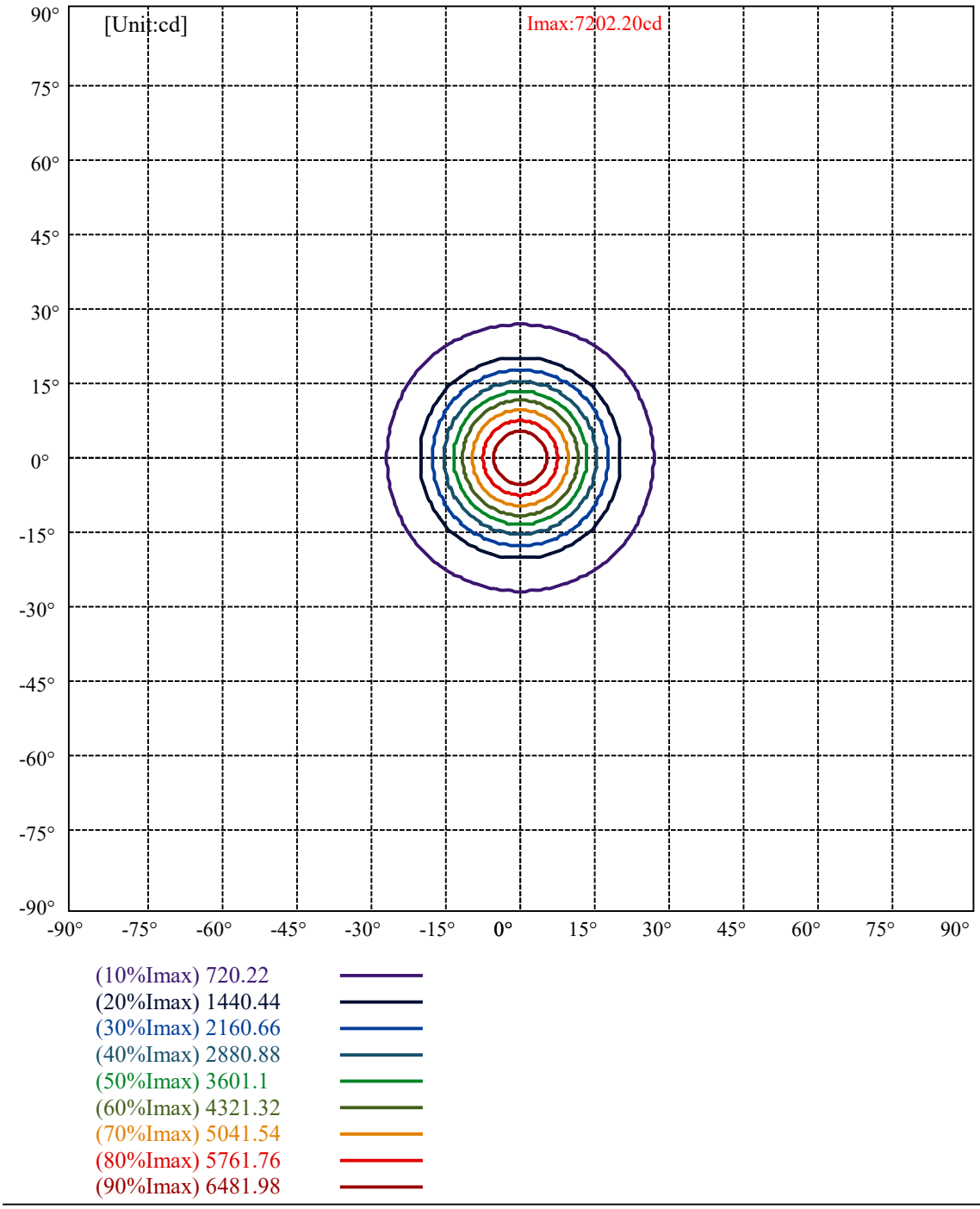
Beam Angle(50%Imax):C0/180Left:13.3 Right:13.3
:C90/270Left:13.3 Right:13.3

Lux distance Curve



Equipment: GMS1980 Date: 2017/8/22 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

ISO-Intensity(V-H)



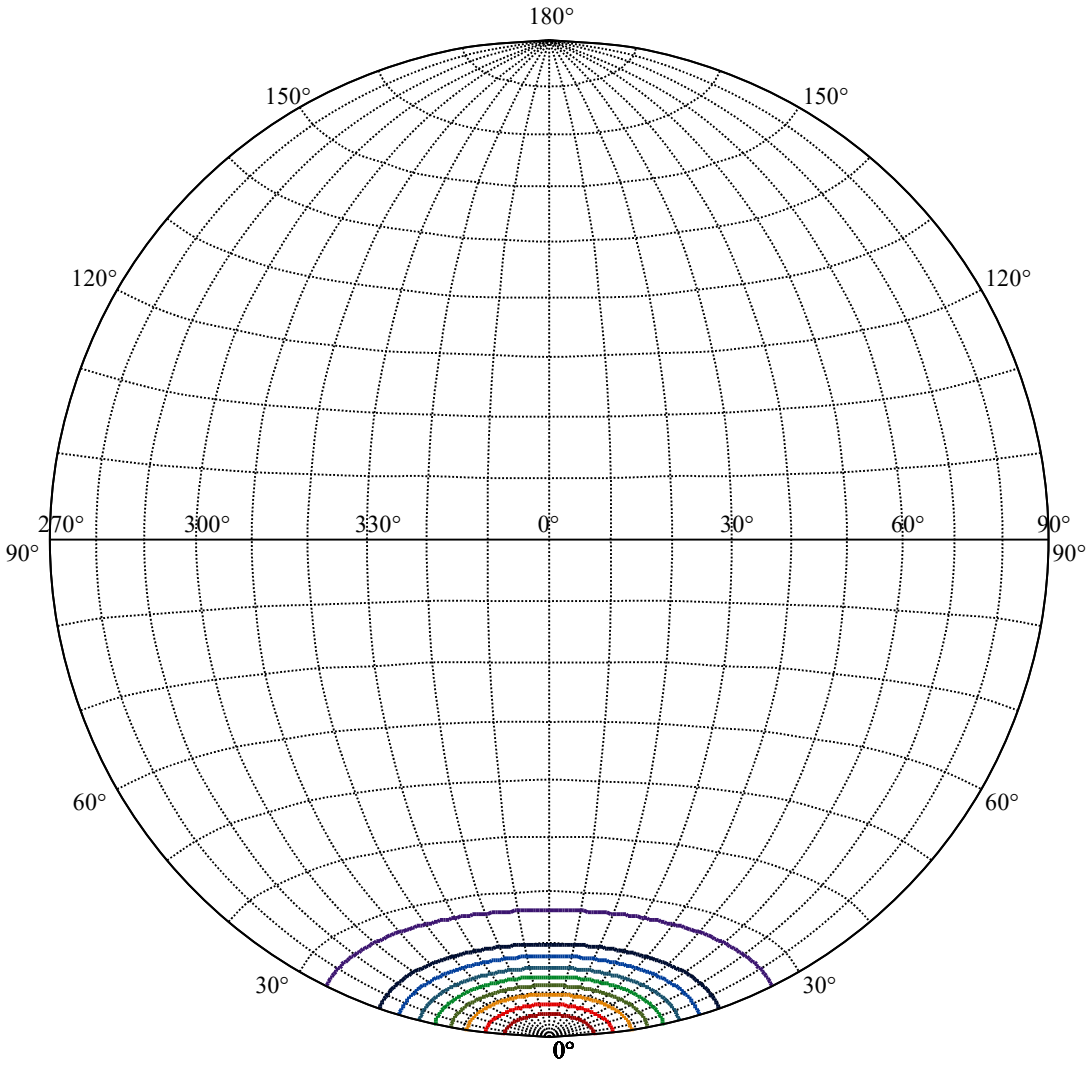
(10%Imax) 720.22
(20%Imax) 1440.44
(30%Imax) 2160.66
(40%Imax) 2880.88
(50%Imax) 3601.1
(60%Imax) 4321.32
(70%Imax) 5041.54
(80%Imax) 5761.76
(90%Imax) 6481.98

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/8/22
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

ISO candela diagram on circular web



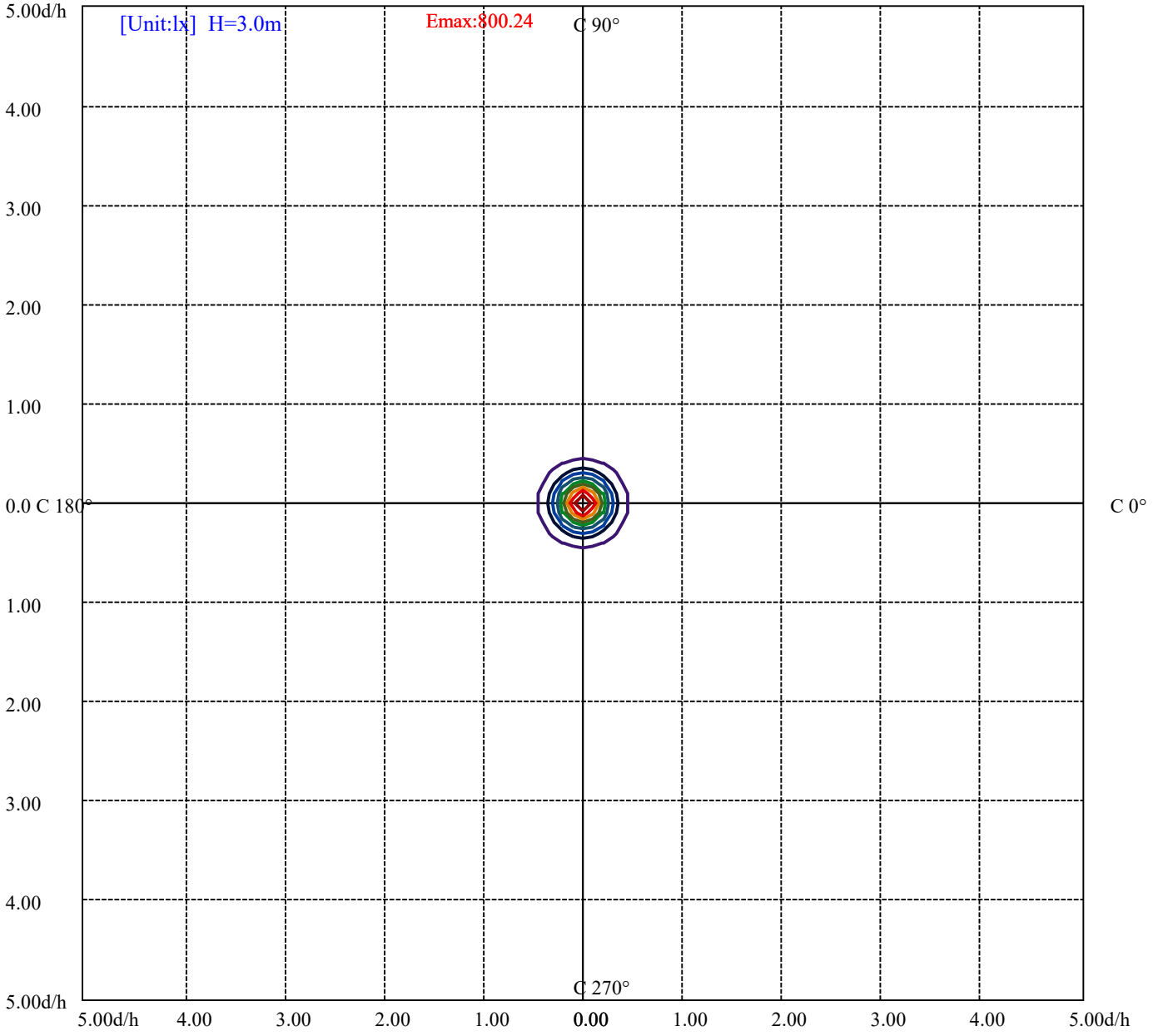
House [Unit:cd] Road

Imax:7202.20

(10%Imax) 720.22
(20%Imax) 1440.44
(30%Imax) 2160.66
(40%Imax) 2880.88
(50%Imax) 3601.1
(60%Imax) 4321.32
(70%Imax) 5041.54
(80%Imax) 5761.76
(90%Imax) 6481.98

Equipment: GMS1980 Date: 2017/8/22 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

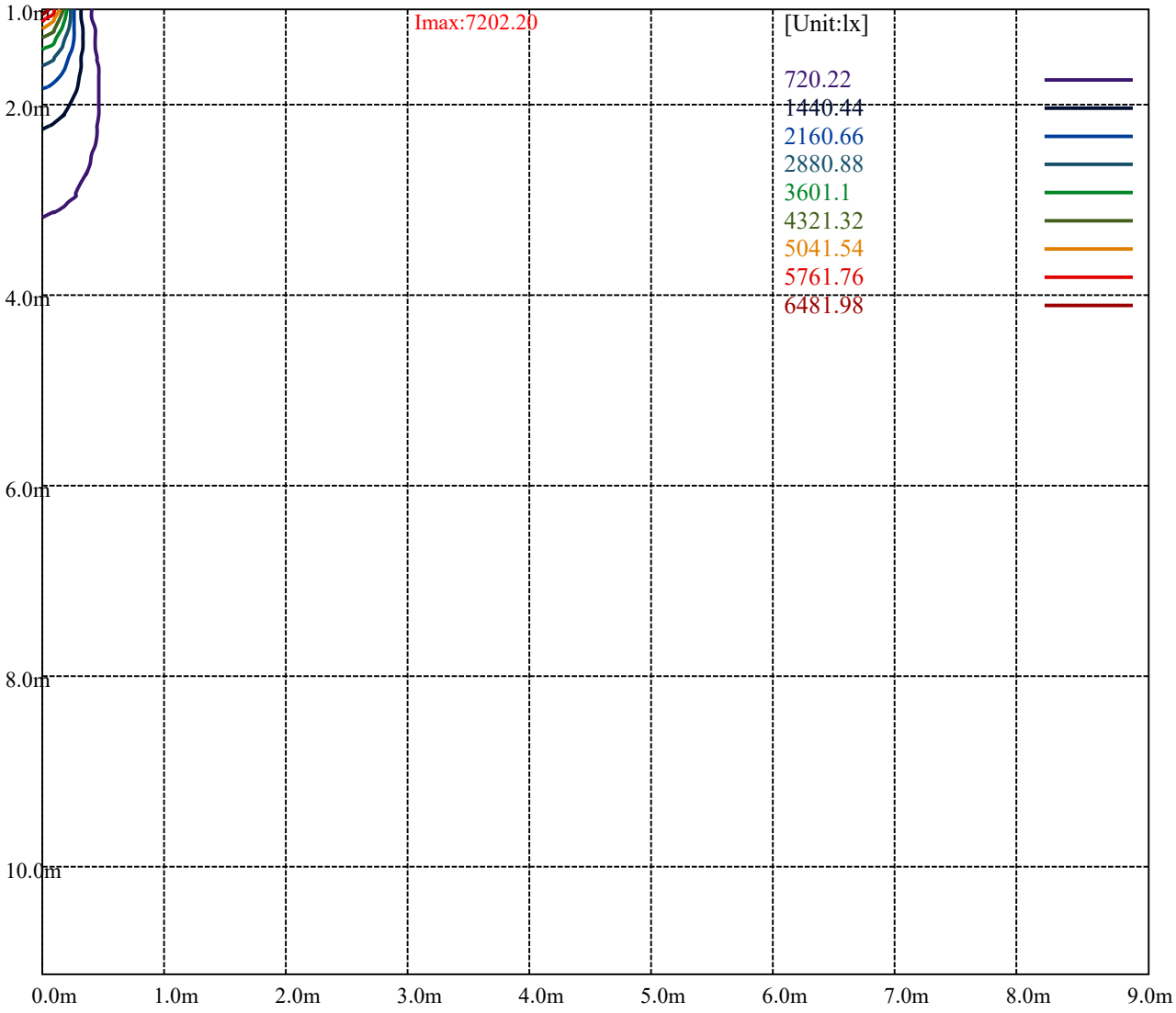
ISO illuminance diagram



(10%Emax) 80.02422
(20%Emax) 160.0489
(30%Emax) 240.0733
(40%Emax) 320.0967
(50%Emax) 400.1211
(60%Emax) 480.1456
(70%Emax) 560.17
(80%Emax) 640.1945
(90%Emax) 720.2189

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2017/8/22
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.42

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/8/22
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Luminance Limitting Curve(no luminous side)

Luminance Table

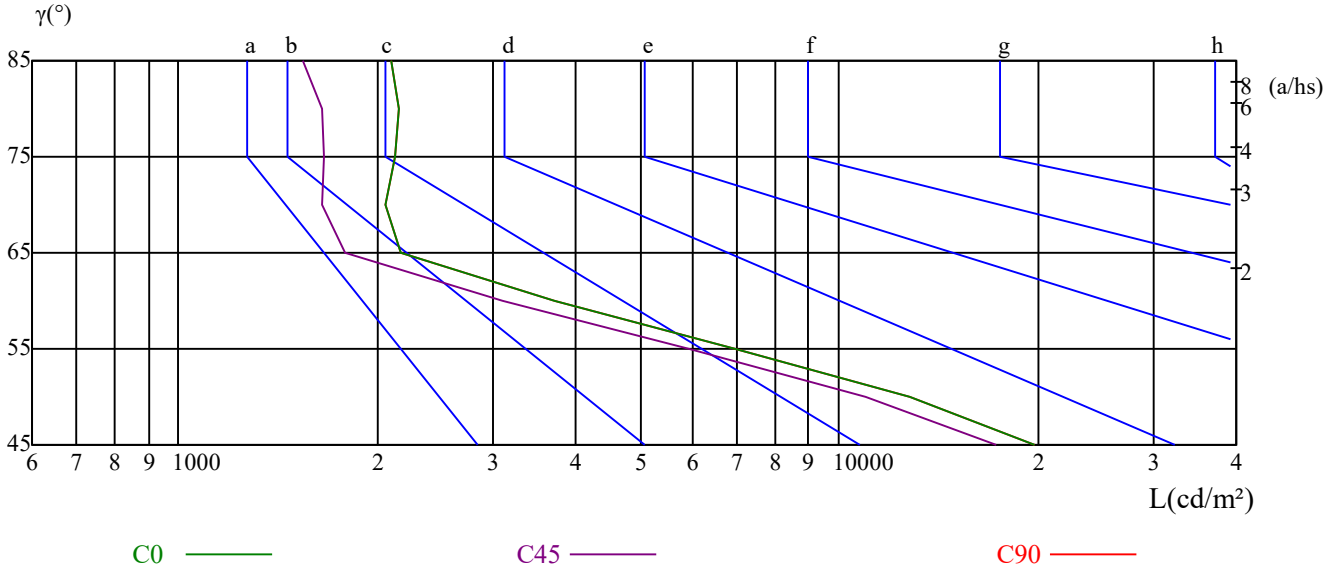
γ	45	50	55	60	65	70	75	80	85
C0	19805	12769	6974	3702	2173	2052	2121	2160	2095
C45	17338	11016	5924	3093	1782	1650	1665	1649	1546
C90	19805	12769	6974	3702	2173	2052	2121	2160	2095

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4611	4611	4611	6263	6263	6263	14627	14627	14627

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

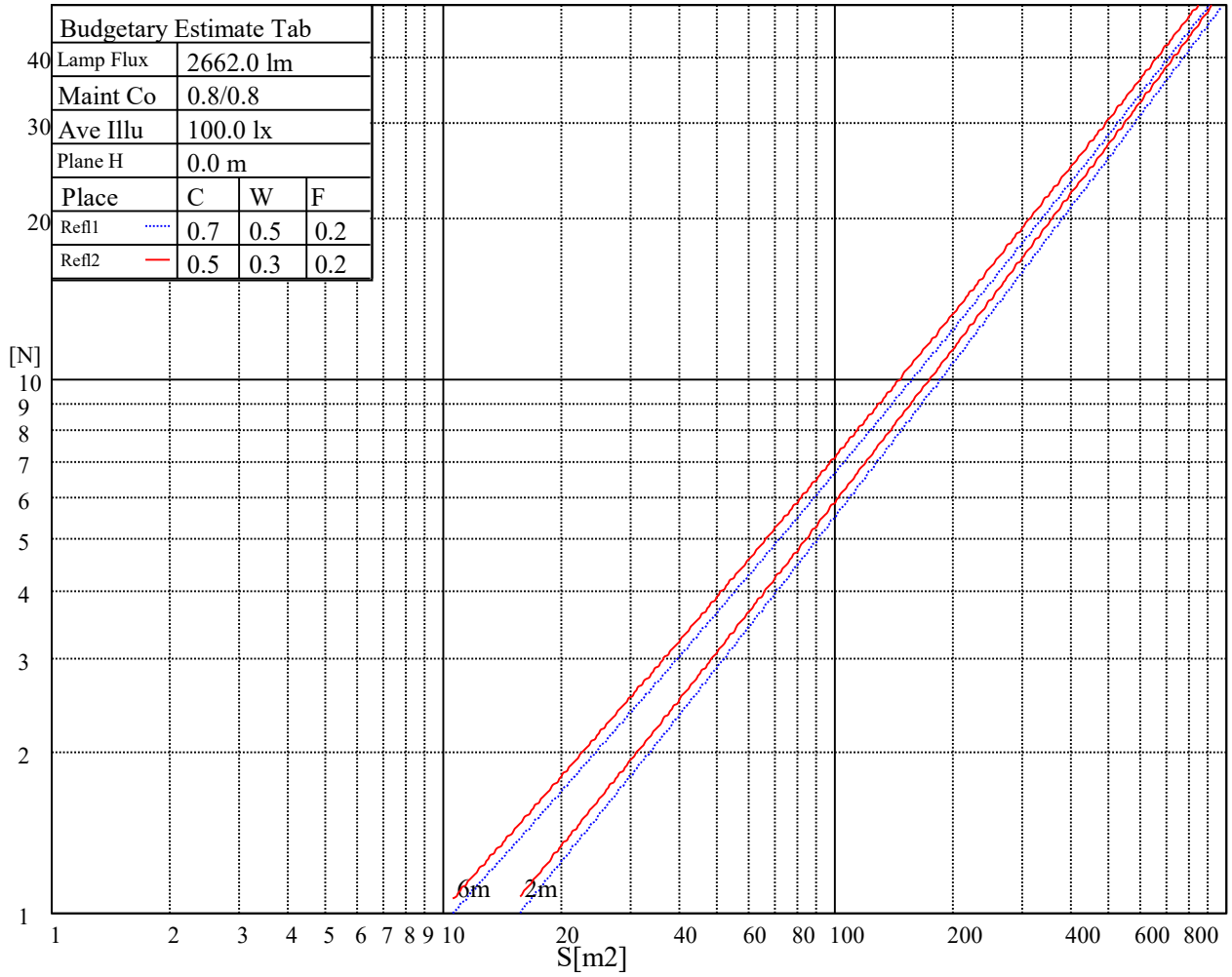


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/8/22
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Budgetary Estimate Table

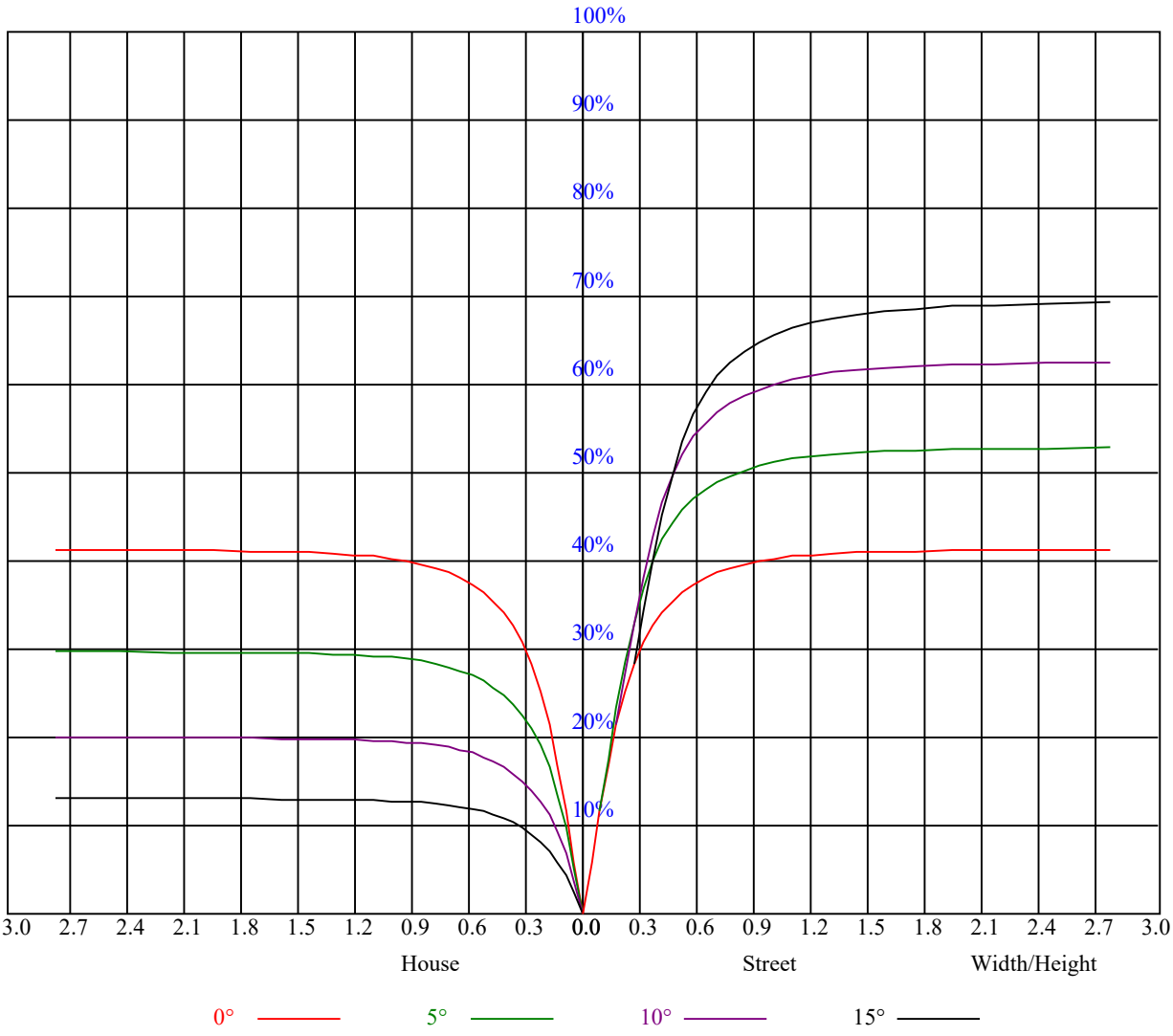


Equipment: GMS1980 Date: 2017/8/22 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

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	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.92	0.90	0.88	0.90	0.88	0.86	0.87	0.85	0.84	0.84	0.82	0.81	0.81	0.80	0.79	0.77
2	0.87	0.84	0.81	0.86	0.83	0.80	0.83	0.80	0.78	0.80	0.78	0.77	0.78	0.76	0.75	0.74
3	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.75	0.73	0.72	0.70
4	0.79	0.74	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.69	0.73	0.70	0.69	0.67
5	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.66	0.70	0.68	0.66	0.65
6	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.62
7	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
8	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58
9	0.65	0.61	0.58	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.55

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/8/22
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

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	7216.79	6512.62	4837.26	2861.83	1522.86	819.79	553.32	373.28	279.14
45.0	7214.04	6578.14	4975.45	2936.16	1539.38	825.85	537.90	356.21	278.03
90.0	7204.13	6559.97	4842.21	2814.48	1286.12	787.69	511.64	344.82	229.86
135.0	7173.85	6889.76	5445.08	3535.72	1794.29	886.41	573.69	373.83	281.89
180.0	7216.79	6600.16	4979.30	2908.08	1314.75	797.33	517.86	342.34	233.49
225.0	7214.04	6530.24	4578.49	2748.42	1075.03	738.42	493.09	322.13	220.23
270.0	7204.13	6600.16	4975.45	2966.99	1630.77	836.31	531.84	359.52	279.69
315.0	7173.85	6315.52	4490.95	2553.52	1065.18	750.91	495.01	319.38	222.54
360.0	7216.79	6512.62	4837.26	2861.83	1522.86	819.79	553.32	373.28	279.14

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	167.32	102.07	52.41	26.70	14.59	12.77	12.00	10.90	9.25
45.0	168.58	103.01	55.11	27.09	14.48	12.77	12.17	11.18	9.47
90.0	151.96	96.35	49.33	24.17	13.87	12.44	11.95	11.07	9.41
135.0	164.67	107.30	58.14	29.29	14.92	12.66	12.17	11.56	9.63
180.0	153.66	96.24	48.56	26.26	14.48	12.72	11.95	10.74	9.41
225.0	151.24	93.21	48.72	25.38	14.53	12.77	11.95	10.90	9.47
270.0	158.01	100.81	53.13	26.37	14.59	12.77	12.06	11.01	9.52
315.0	146.73	89.47	48.12	23.51	13.82	12.33	11.67	10.68	9.25
360.0	167.32	102.07	52.41	26.70	14.59	12.77	12.00	10.90	9.25

C/γ(°)	90.0
0.0	8.48
45.0	8.59
90.0	8.59
135.0	8.53
180.0	8.53
225.0	8.64
270.0	8.59
315.0	8.59
360.0	8.48