NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 3-1594-E
Luminaire: 92.76.263.00

Report No: NATA0100	Voltage(V): 32.1000
Test No: 201600503	Current(A): 0.5000
LampCAT: BRIDGELUX VERO 13	Power (W): 27.3000
Lamp flux(lm): 1430.0	PF: 0.0000
Number of Lamps: 1	Ballast type:
Length(mm): 88	Width(mm): 88
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1330.79
Efficiency(%): 93.06%
Lumens(lm)/Power(W): 48.84
Central intensity(cd): 10970.470
Maximum intensity(cd): 10970.470
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=13.5
[C90/270]Total=13.5
Field angle(10%Imax): [C0/180]Total=25.0
[C90/270]Total=25.0
Maximum s/h(1/2): C0_180=0.23 C90_270=0.23
Maximum s/h(1/4): C0_180=0.23 C90_270=0.23
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.24%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.463%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10970.469	2.625	2.625	.184%	.197%
1.0	10925.254	20.909	23.534	1.462%	1.768%
2.0	10415.776	39.862	63.396	2.788%	4.764%
3.0	9609.544	55.151	118.547	3.857%	8.908%
4.0	8688.485	66.463	185.01	4.648%	13.902%
5.0	7546.168	72.123	257.133	5.044%	19.322%
6.0	6386.267	73.204	330.337	5.119%	24.823%
7.0	5184.799	69.291	399.628	4.846%	30.029%
8.0	4075.412	62.198	461.827	4.350%	34.703%
9.0	3068.500	52.639	514.466	3.681%	38.659%
10.0	2469.555	47.026	561.492	3.289%	42.192%
11.0	1651.313	34.553	596.045	2.416%	44.789%
12.0	1215.215	27.707	623.752	1.938%	46.871%
13.0	981.449	24.211	647.962	1.693%	48.690%
14.0	805.706	21.375	669.337	1.495%	50.296%
15.0	701.952	19.923	689.26	1.393%	51.793%
16.0	631.025	19.074	708.334	1.334%	53.227%
17.0	589.031	18.885	727.219	1.321%	54.646%
18.0	561.758	19.036	746.256	1.331%	56.076%
19.0	545.499	19.475	765.731	1.362%	57.540%
20.0	533.197	19.998	785.729	1.398%	59.042%
21.0	523.765	20.583	806.313	1.439%	60.589%
22.0	515.665	21.183	827.496	1.481%	62.181%
23.0	507.758	21.756	849.252	1.521%	63.816%
24.0	499.644	22.286	871.538	1.558%	65.490%
25.0	491.767	22.791	894.329	1.594%	67.203%
26.0	484.335	23.283	917.612	1.628%	68.953%
27.0	476.400	23.718	941.329	1.659%	70.735%
28.0	468.637	24.127	965.456	1.687%	72.548%
29.0	460.770	24.497	989.953	1.713%	74.388%
30.0	453.386	24.859	1014.812	1.738%	76.257%
31.0	445.977	25.189	1040.001	1.761%	78.149%
32.0	438.617	25.489	1065.489	1.782%	80.065%
33.0	431.928	25.797	1091.287	1.804%	82.003%
34.0	423.315	25.958	1117.245	1.815%	83.954%
35.0	414.465	26.069	1143.314	1.823%	85.913%
36.0	405.766	26.154	1169.469	1.829%	87.878%
37.0	398.250	26.283	1195.751	1.838%	89.853%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	377.167	25.464	1221.216	1.781%	91.766%
39.0	335.820	23.176	1244.391	1.621%	93.508%
40.0	283.540	19.986	1264.377	1.398%	95.010%
41.0	234.403	16.864	1281.241	1.179%	96.277%
42.0	152.709	11.205	1292.447	.784%	97.119%
43.0	93.586	6.999	1299.446	.489%	97.645%
44.0	46.743	3.561	1303.007	.249%	97.912%
45.0	15.836	1.228	1304.235	.086%	98.005%
46.0	9.077	0.716	1304.951	.050%	98.059%
47.0	8.417	0.675	1305.626	.047%	98.109%
48.0	7.753	0.632	1306.257	.044%	98.157%
49.0	6.985	0.578	1306.836	.040%	98.200%
50.0	6.528	0.548	1307.384	.038%	98.241%
51.0	6.421	0.547	1307.931	.038%	98.282%
52.0	6.301	0.544	1308.476	.038%	98.323%
53.0	6.194	0.542	1309.018	.038%	98.364%
54.0	6.122	0.543	1309.561	.038%	98.405%
55.0	6.060	0.544	1310.105	.038%	98.446%
56.0	6.008	0.546	1310.652	.038%	98.487%
57.0	5.953	0.547	1311.199	.038%	98.528%
58.0	5.960	0.554	1311.753	.039%	98.570%
59.0	5.881	0.553	1312.306	.039%	98.611%
60.0	5.867	0.557	1312.863	.039%	98.653%
61.0	5.822	0.558	1313.422	.039%	98.695%
62.0	5.781	0.560	1313.981	.039%	98.737%
63.0	5.729	0.560	1314.541	.039%	98.779%
64.0	5.729	0.565	1315.106	.039%	98.822%
65.0	5.695	0.566	1315.672	.040%	98.864%
66.0	5.702	0.571	1316.243	.040%	98.907%
67.0	5.691	0.575	1316.818	.040%	98.950%
68.0	5.674	0.577	1317.395	.040%	98.994%
69.0	5.691	0.583	1317.977	.041%	99.037%
70.0	5.698	0.587	1318.564	.041%	99.082%
71.0	5.681	0.589	1319.154	.041%	99.126%
72.0	5.678	0.592	1319.746	.041%	99.170%
73.0	5.667	0.594	1320.34	.042%	99.215%
74.0	5.685	0.599	1320.939	.042%	99.260%
75.0	5.729	0.607	1321.546	.042%	99.306%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.729	0.610	1322.156	.043%	99.351%
77.0	5.740	0.613	1322.769	.043%	99.397%
78.0	5.819	0.624	1323.393	.044%	99.444%
79.0	5.894	0.635	1324.028	.044%	99.492%
80.0	5.894	0.637	1324.664	.045%	99.540%
81.0	5.939	0.643	1325.308	.045%	99.588%
82.0	5.950	0.646	1325.954	.045%	99.637%
83.0	5.970	0.650	1326.603	.045%	99.686%
84.0	6.029	0.657	1327.261	.046%	99.735%
85.0	6.073	0.663	1327.924	.046%	99.785%
86.0	6.039	0.661	1328.585	.046%	99.834%
87.0	5.822	0.638	1329.223	.045%	99.882%
88.0	5.767	0.632	1329.855	.044%	99.930%
89.0	5.681	0.623	1330.478	.044%	99.977%
90.0	5.654	0.310	1330.788	.022%	100.000%

Zonal flux distribution table

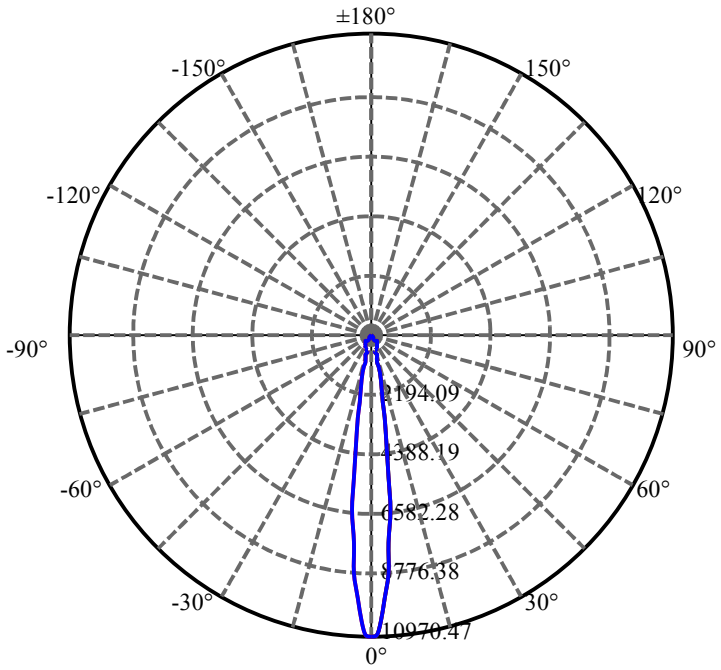
ZONAL LUMEN SUMMARY

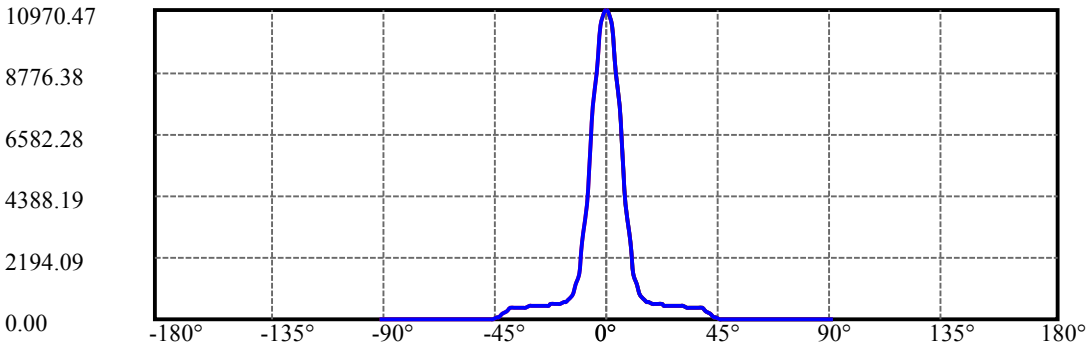
Zone	Lumens	%Lamp	%Fixt
0-30	1014.81	70.97%	76.26%
0-40	1264.38	88.42%	95.01%
0-60	1312.86	91.81%	98.65%
0-90	1330.48	93.04%	99.98%
0-120	1330.48	93.04%	99.98%
0-180	1330.79	93.06%	100.00%
60-90	18.17	1.27%	1.37%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-31.97	1064.63	74.45%	80.00%

ZONAL LUMEN SUMMARY

0-10	561.49
10-20	224.24
20-30	229.08
30-40	249.57
40-50	43.01
50-60	5.48
60-70	5.70
70-80	6.10
80-90	5.81
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:12.5 Right:12.5
:C90/270Left:12.5 Right:12.5

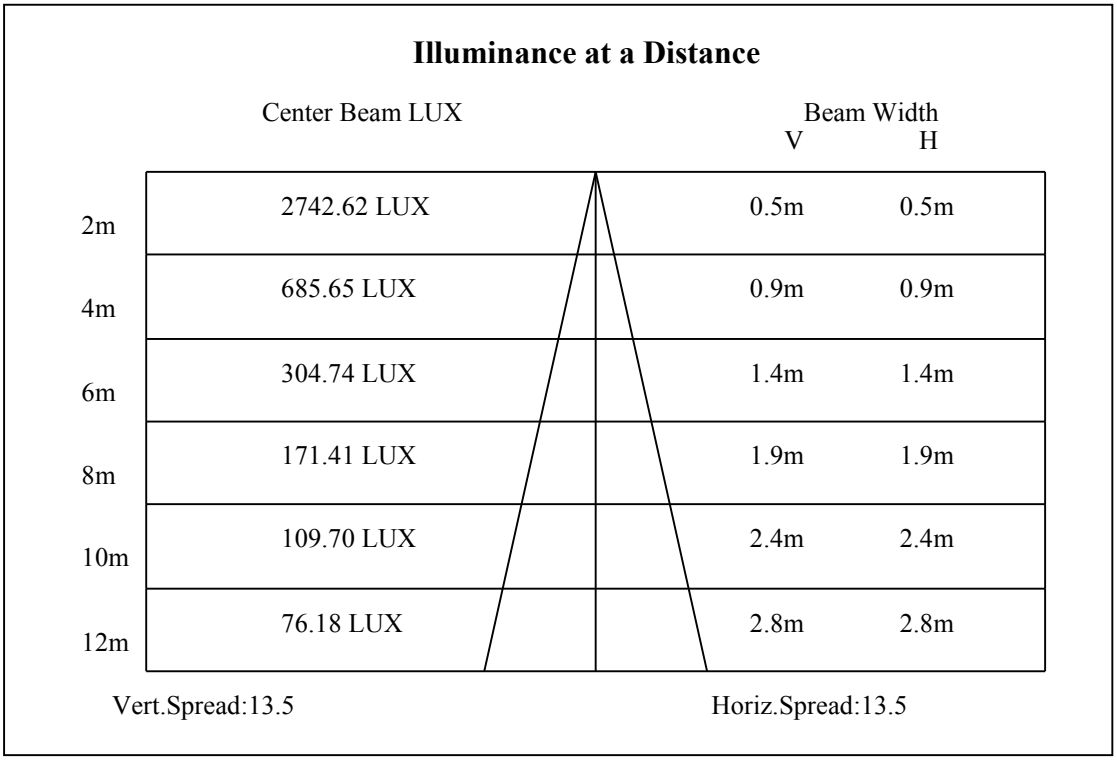
Beam Angle(50%Imax):C0/180Left:6.7 Right:6.7
:C90/270Left:6.7 Right:6.7

Equipment: gms1980
Temperature(°C): 25.0

Date: 2016/5/3
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Lux distance Curve

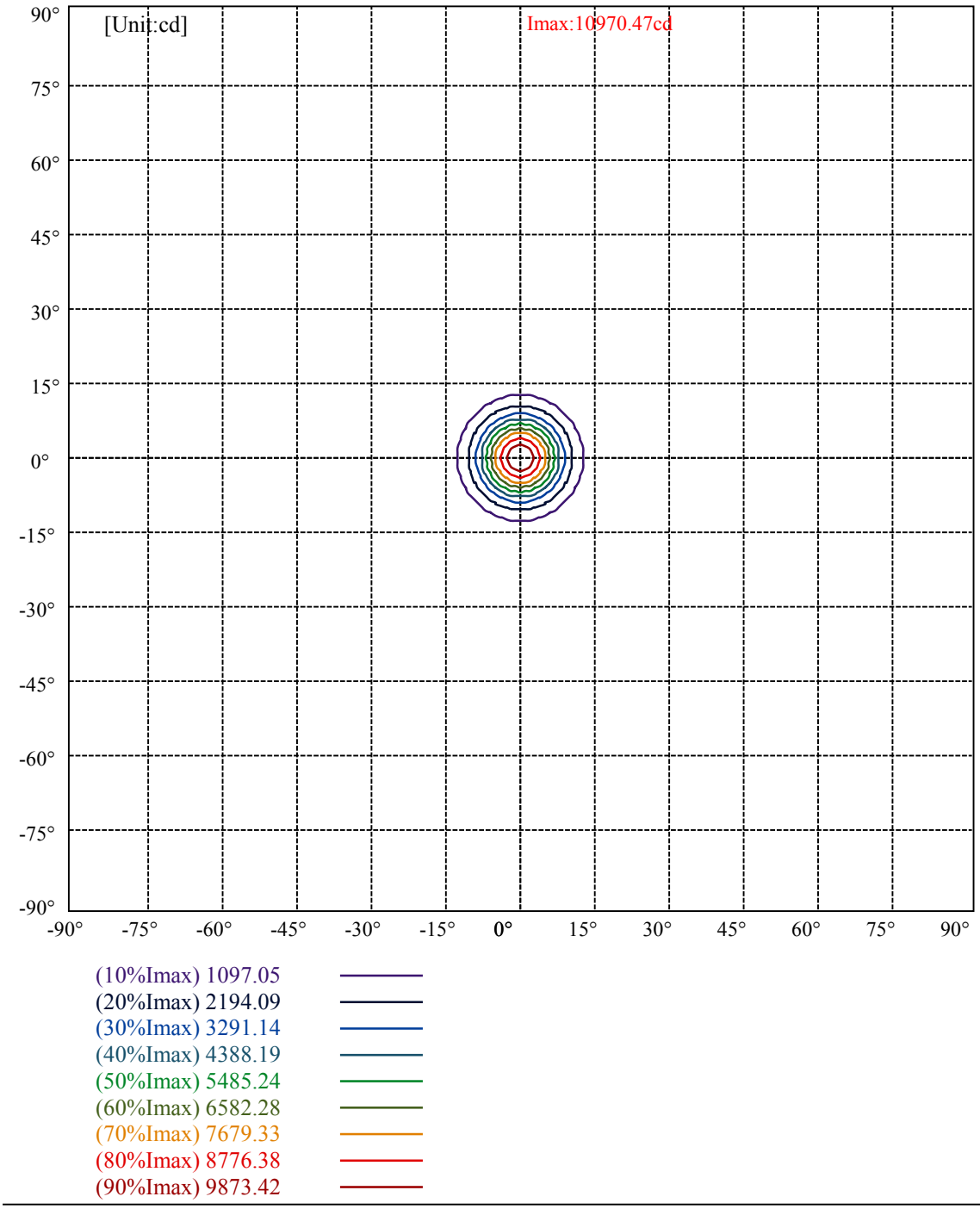


Equipment: gms1980
Temperature(°C): 25.0

Date: 2016/5/3
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

ISO-Intensity(V-H)



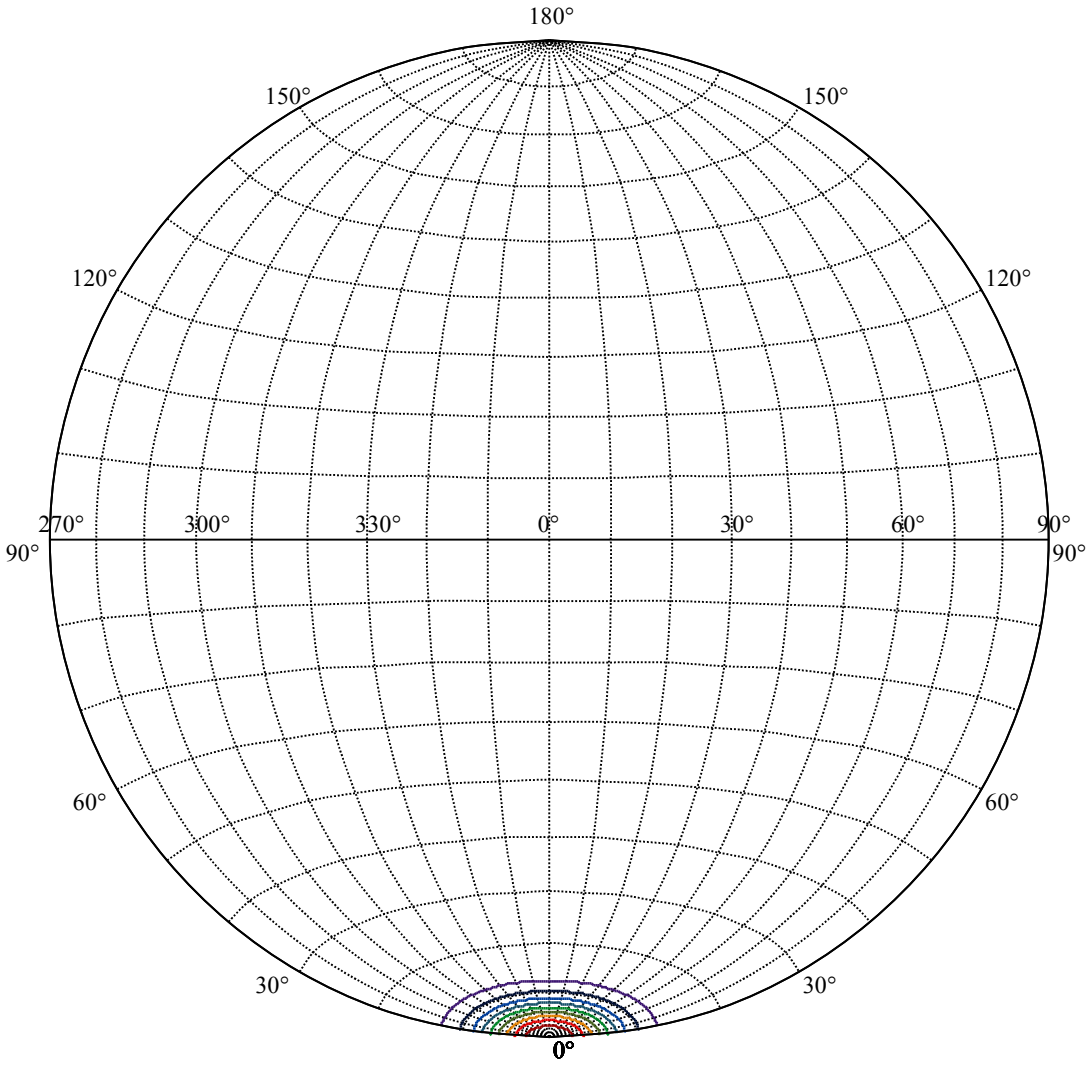
(10%Imax) 1097.05
(20%Imax) 2194.09
(30%Imax) 3291.14
(40%Imax) 4388.19
(50%Imax) 5485.24
(60%Imax) 6582.28
(70%Imax) 7679.33
(80%Imax) 8776.38
(90%Imax) 9873.42

Equipment: gms1980
Temperature(°C): 25.0

Date: 2016/5/3
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:10970.47

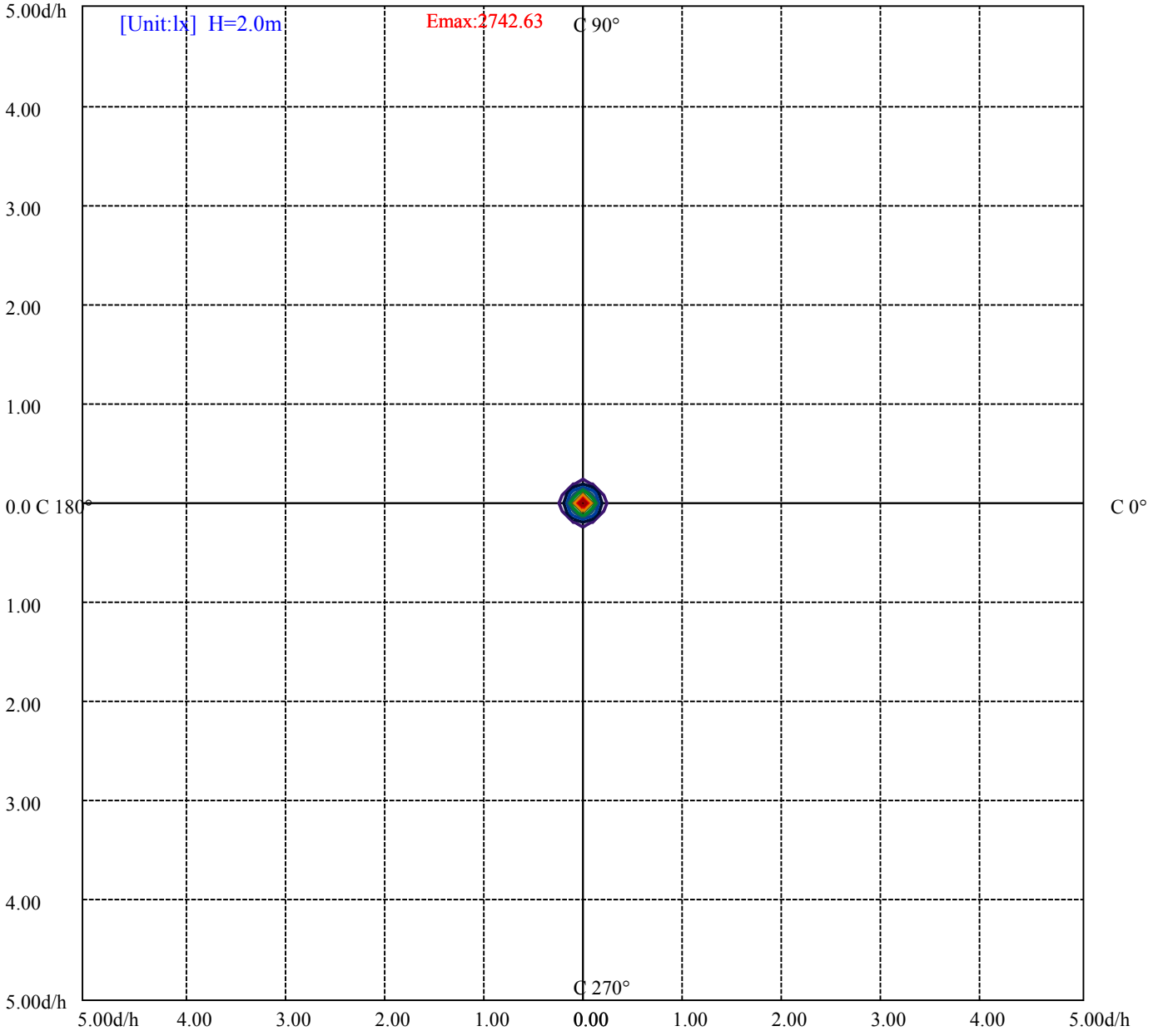
(10%Imax) 1097.05
(20%Imax) 2194.09
(30%Imax) 3291.14
(40%Imax) 4388.19
(50%Imax) 5485.24
(60%Imax) 6582.28
(70%Imax) 7679.33
(80%Imax) 8776.38
(90%Imax) 9873.42

Equipment: gms1980
Temperature(°C): 25.0

Date: 2016/5/3
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

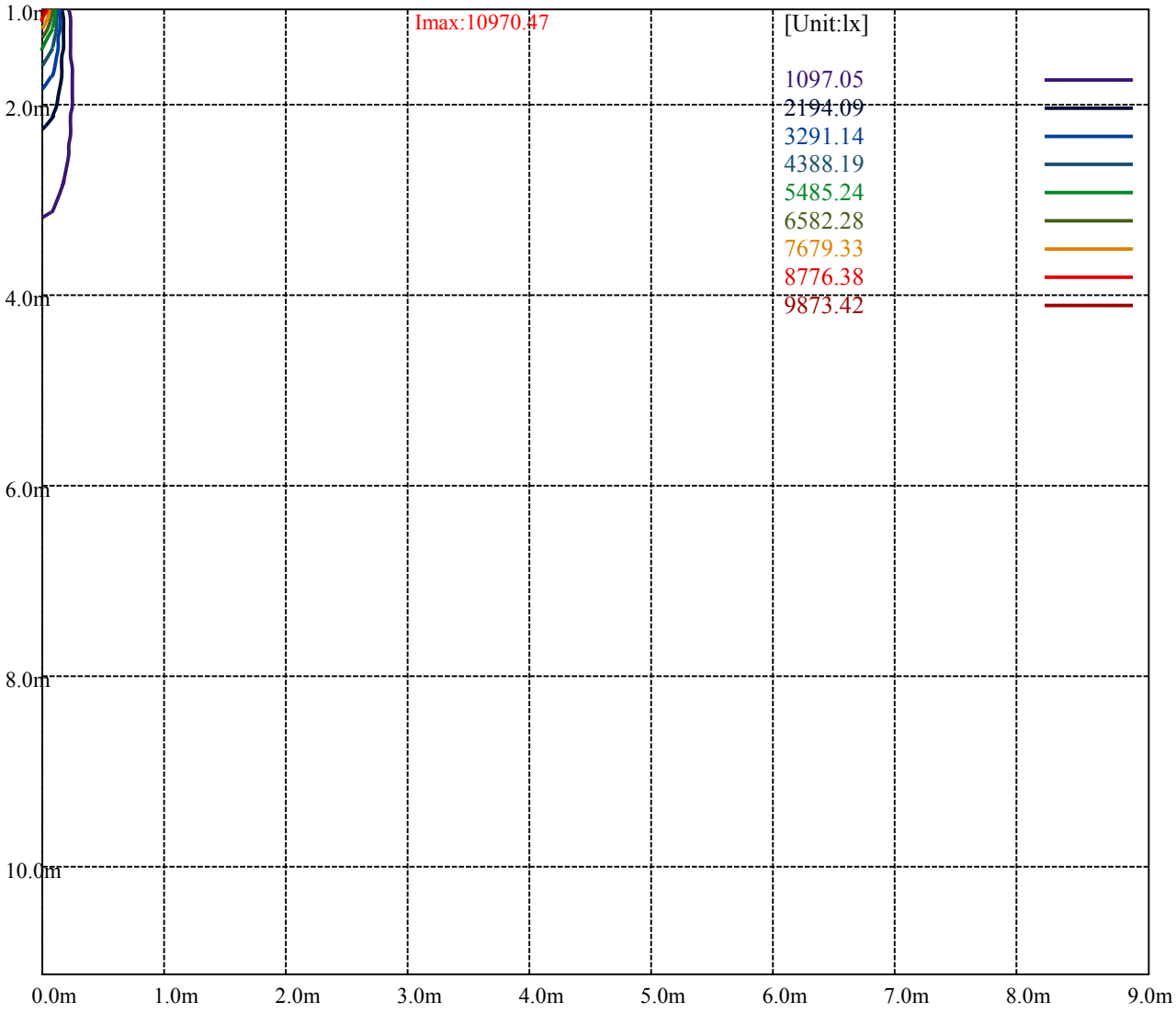
ISO illuminance diagram



(10%Emax) 274.2625
(20%Emax) 548.5225
(30%Emax) 822.785
(40%Emax) 1097.047
(50%Emax) 1371.307
(60%Emax) 1645.57
(70%Emax) 1919.83
(80%Emax) 2194.093
(90%Emax) 2468.355

Equipment: gms1980
Temperature(°C): 25.0
Date: 2016/5/3
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.42

Space ISO Lux diagram



Equipment: gms1980
Temperature(°C): 25.0

Date: 2016/5/3
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Luminance Limitting Curve(no luminous side)

Luminance Table

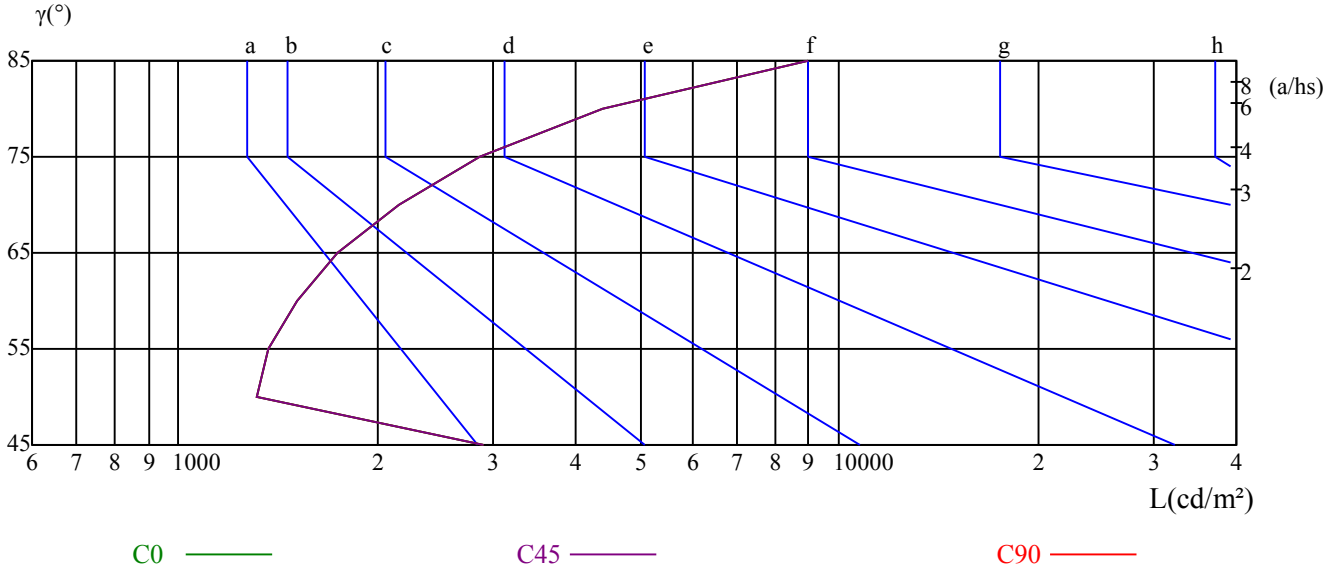
γ	45	50	55	60	65	70	75	80	85
C0	2892	1311	1364	1515	1740	2151	2859	4383	8999
C45	2892	1311	1364	1515	1740	2151	2859	4383	8999
C90	2892	1311	1364	1515	1740	2151	2859	4383	8999

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1740	1740	1740	2859	2859	2859	8999	8999	8999

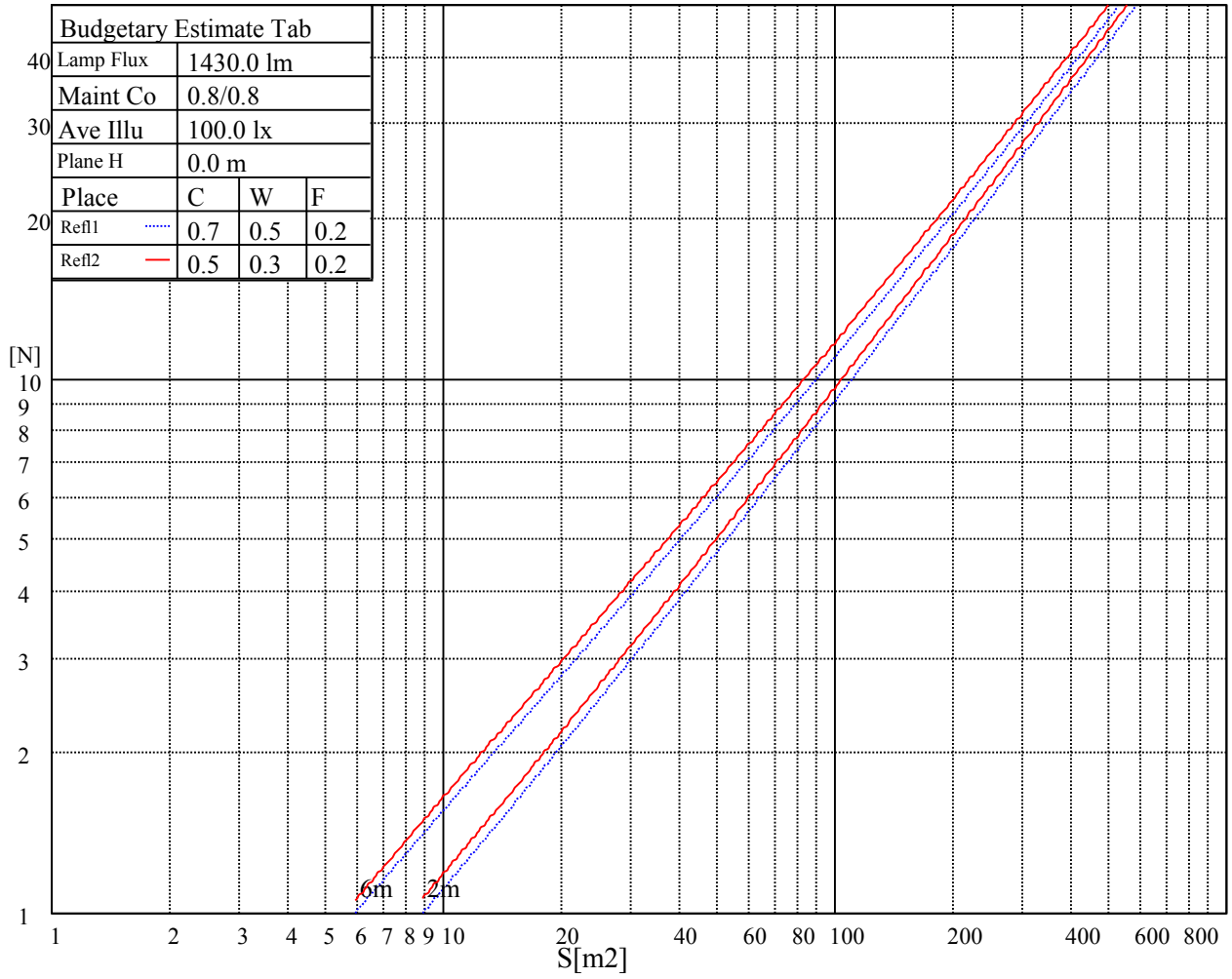
Glare Table

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

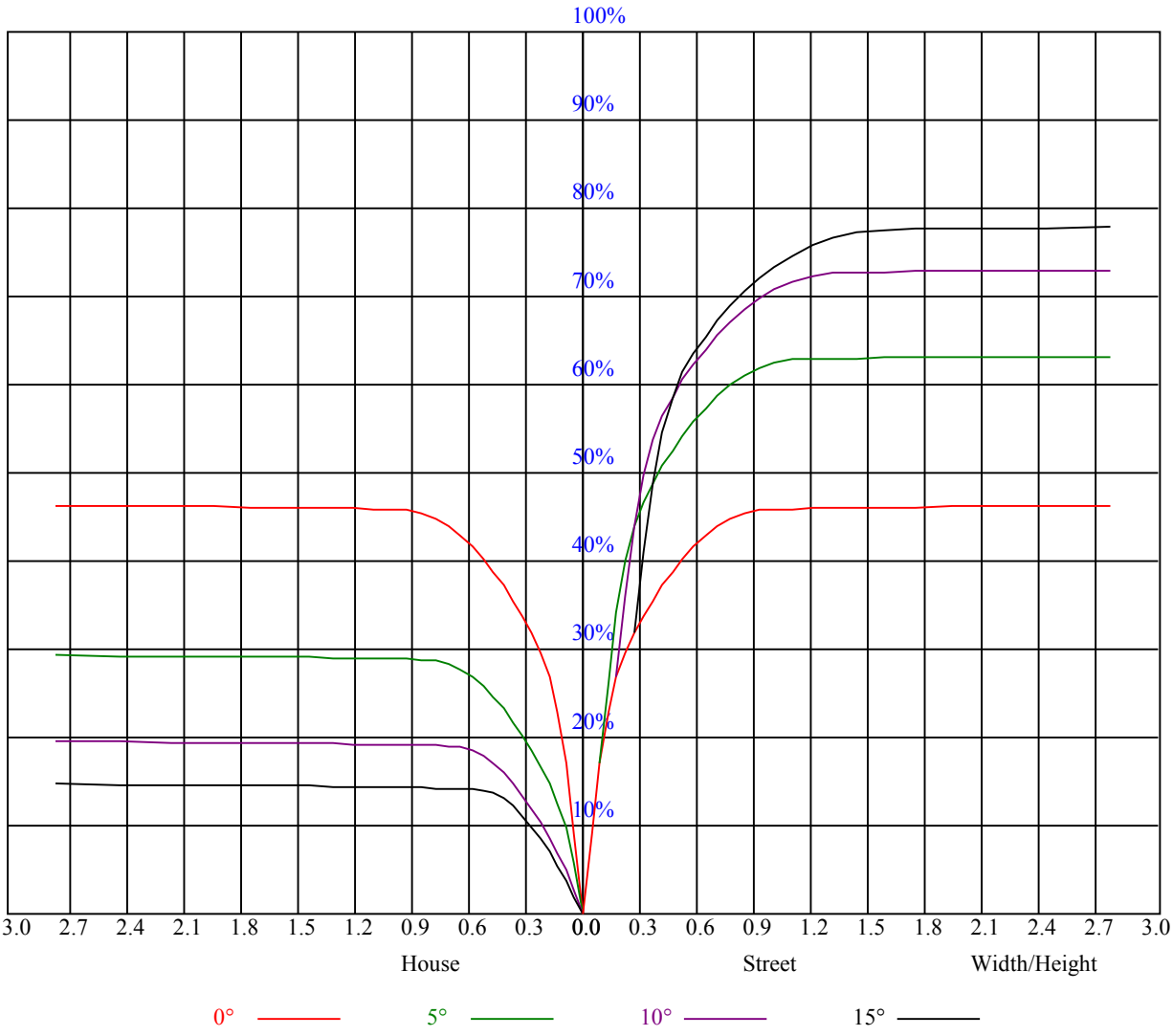


Equipment: gms1980 Date: 2016/5/3 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

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	1.11	1.11	1.11	1.08	1.08	1.08	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.04	1.02	1.00	1.02	1.00	0.99	0.98	0.97	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.88
2	0.98	0.95	0.92	0.97	0.94	0.91	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.86	0.84
3	0.93	0.89	0.86	0.92	0.88	0.86	0.90	0.87	0.84	0.87	0.85	0.83	0.85	0.83	0.82	0.80
4	0.89	0.85	0.81	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.83	0.80	0.78	0.77
5	0.85	0.81	0.77	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.81	0.77	0.74	0.81	0.77	0.73	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
7	0.78	0.74	0.71	0.78	0.73	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.68
8	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
9	0.73	0.69	0.66	0.73	0.68	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.64
10	0.71	0.66	0.64	0.70	0.66	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62

Coefficient Utilization Curve



Equipment: gms1980
Temperature(°C): 25.0

Date: 2016/5/3
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	10989.26	10956.22	10389.14	9629.36	8704.42	7399.58	6287.44	5202.83	4041.14
22.5	10922.09	11005.77	10477.23	9640.38	8737.45	7586.77	6359.01	5246.87	4184.29
45.0	10975.49	10782.25	10172.77	9290.77	8344.90	7172.75	6058.96	4798.17	3643.63
67.5	10974.94	11082.85	10631.39	9976.22	9144.87	7917.11	6838.00	5709.35	4487.10
90.0	10969.44	10903.37	10458.51	9569.35	8660.92	7642.93	6250.55	5119.14	4059.31
112.5	10973.84	11143.42	10824.09	10163.41	9359.59	8280.48	7085.76	5940.59	4844.96
135.0	10987.06	10955.67	10495.95	9735.62	8864.08	7741.48	6633.75	5347.08	4118.22
157.5	10971.64	11137.91	10774.54	10174.42	9376.10	8203.40	7135.31	5990.14	4745.86
180.0	10989.26	10892.91	10445.30	9553.39	8661.47	7663.85	6423.98	5137.31	4053.25
202.5	10922.09	10881.90	10401.26	9600.74	8588.80	7549.33	6451.51	5070.69	4021.87
225.0	10975.49	11077.35	10691.95	9882.62	9023.74	7900.59	6678.34	5593.73	4542.15
247.5	10974.94	10775.64	10148.00	9269.85	8322.88	7112.74	6006.10	4791.01	3673.91
270.0	10969.44	10961.73	10455.21	9722.96	8698.91	7537.22	6436.09	5175.30	4112.71
292.5	10973.84	10638.00	10005.40	9079.90	7979.32	6887.56	5773.76	4439.20	3485.07
315.0	10987.06	10972.74	10477.23	9513.75	8577.79	7537.22	6122.27	4960.58	3947.54
337.5	10971.64	10636.35	9804.44	8949.97	7970.52	6605.67	5639.43	4434.79	3245.57
360.0	10989.26	10956.22	10389.14	9629.36	8704.42	7399.58	6287.44	5202.83	4041.14

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3028.10	2829.90	1605.44	1192.52	983.86	792.81	698.12	630.95	586.90
22.5	3039.11	2840.91	1649.49	1255.29	951.93	803.82	708.03	627.09	590.20
45.0	2775.39	2002.40	1453.49	1087.09	908.16	745.08	664.75	611.73	574.24
67.5	3430.01	2813.38	1822.37	1371.45	1039.46	836.86	724.54	645.81	598.46
90.0	2924.05	2197.85	1645.09	1095.07	951.93	777.23	673.39	614.81	576.99
112.5	3611.70	2857.43	1993.59	1548.19	1080.21	874.85	760.88	657.37	606.72
135.0	3168.50	2300.26	1669.86	1079.88	992.01	786.70	688.98	625.50	579.69
157.5	3628.22	2890.46	1933.58	1460.65	1100.03	872.64	747.67	659.58	606.17
180.0	2997.27	2251.81	1635.73	1076.46	966.74	788.57	670.86	619.38	580.35
202.5	3091.97	2171.97	1640.13	1080.43	971.80	798.26	700.32	628.08	587.56
225.0	3363.95	2851.92	1895.04	1401.74	1073.05	884.76	749.87	662.88	613.33
247.5	2823.29	2064.62	1567.46	1074.10	944.44	784.72	683.97	623.57	583.76
270.0	3121.70	2929.00	1728.77	1332.36	1005.88	840.16	732.80	644.71	601.22
292.5	2671.89	1887.88	1445.78	1094.36	894.94	753.34	671.85	610.58	576.33
315.0	2873.94	2780.35	1645.64	1233.81	968.99	815.94	706.37	634.80	594.06
337.5	2546.91	1842.74	1089.57	1060.06	869.78	735.55	648.84	599.56	568.51
360.0	3028.10	2829.90	1605.44	1192.52	983.86	792.81	698.12	630.95	586.90

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	565.43	552.22	536.25	528.54	522.49	516.43	510.37	503.22	495.51
22.5	565.98	549.46	537.90	529.09	520.83	512.58	505.42	496.61	490.00
45.0	550.78	536.97	525.79	516.15	507.84	499.53	491.65	482.62	473.32
67.5	571.49	556.07	542.86	533.50	525.79	516.98	506.52	497.71	491.10
90.0	550.95	534.93	524.91	515.99	507.79	500.46	493.09	484.06	476.51
112.5	580.29	556.07	542.86	534.60	524.14	516.43	509.82	501.01	494.41
135.0	551.67	535.64	523.59	514.23	506.85	498.70	491.43	483.29	475.63
157.5	576.99	557.72	541.20	532.40	524.14	515.33	507.07	501.56	494.41
180.0	548.47	535.92	525.62	516.65	508.17	500.96	492.70	484.77	477.61
202.5	559.87	542.42	531.35	521.22	511.86	504.21	498.21	487.96	480.37
225.0	578.64	559.37	545.06	533.50	525.79	517.53	503.77	500.46	494.41
247.5	552.93	537.46	526.28	515.33	507.68	500.30	492.31	484.17	477.12
270.0	572.59	553.87	539.00	530.19	521.93	513.68	505.42	497.71	490.00
292.5	551.39	534.82	523.81	513.57	504.37	496.55	489.01	479.98	472.93
315.0	565.43	551.67	540.10	530.19	523.04	513.68	504.87	497.71	488.35
337.5	545.22	533.39	524.58	515.11	507.95	500.79	492.64	485.43	477.67
360.0	565.43	552.22	536.25	528.54	522.49	516.43	510.37	503.22	495.51

Intensity data(cd)

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	487.25	477.34	469.63	461.37	455.87	448.16	439.90	430.54	418.98
22.5	482.84	474.59	467.98	462.47	450.91	444.31	439.35	427.79	420.63
45.0	465.17	457.35	447.77	440.07	432.80	424.59	418.76	410.56	402.19
67.5	481.19	472.93	466.88	458.62	449.81	443.20	437.70	429.99	420.08
90.0	469.08	459.72	452.18	444.97	436.98	429.16	422.17	413.20	404.94
112.5	487.25	477.89	470.73	464.13	455.87	447.61	441.55	432.19	426.14
135.0	468.59	461.87	453.61	446.56	439.68	431.26	424.71	417.77	406.87
157.5	483.95	478.44	471.28	460.82	455.32	449.26	442.10	433.84	423.38
180.0	469.19	462.14	454.00	446.12	438.85	431.26	423.88	415.46	407.64
202.5	472.99	465.23	456.03	449.04	441.99	433.51	426.80	418.48	409.45
225.0	485.60	478.99	472.38	465.23	458.62	452.01	444.31	437.70	427.79
247.5	469.36	462.20	454.71	447.22	440.45	432.96	425.70	416.94	409.34
270.0	483.95	477.34	466.88	461.37	452.56	446.51	441.00	434.39	423.93
292.5	465.94	458.90	450.47	443.64	436.54	428.78	423.38	414.13	406.04
315.0	480.64	471.28	464.13	456.97	450.91	444.86	437.15	427.79	419.53
337.5	469.41	461.98	453.66	445.57	438.47	430.43	422.39	412.26	404.50
360.0	487.25	477.34	469.63	461.37	455.87	448.16	439.90	430.54	418.98

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	411.82	405.77	379.89	338.60	285.19	202.39	145.18	91.34	47.18
22.5	414.02	404.11	380.99	344.65	280.24	234.04	147.11	87.15	40.25
45.0	394.64	386.17	355.83	305.67	250.23	184.49	127.46	69.65	27.25
67.5	401.36	395.86	376.04	341.35	295.65	282.44	157.85	100.20	60.12
90.0	397.29	389.52	369.04	328.03	270.82	211.64	152.29	83.91	42.23
112.5	412.37	402.46	393.10	365.02	311.62	278.03	181.47	118.65	67.72
135.0	399.27	392.22	369.48	331.00	279.80	208.61	159.77	96.46	39.15
157.5	414.57	408.52	396.96	365.02	319.88	279.69	178.05	120.96	70.31
180.0	399.05	392.17	373.12	331.99	274.29	216.65	150.14	87.37	43.71
202.5	401.64	394.86	374.44	328.74	277.32	215.93	159.00	97.84	43.71
225.0	420.63	414.02	401.36	364.47	318.23	284.09	173.59	117.33	66.51
247.5	401.20	394.20	371.41	322.85	271.70	212.19	143.70	83.69	41.18
270.0	417.33	410.17	389.80	355.66	308.32	279.14	163.63	106.86	54.07
292.5	398.83	391.23	362.44	310.52	258.71	192.97	135.33	77.52	29.73
315.0	412.37	405.77	385.39	340.25	289.05	282.44	148.21	93.05	46.58
337.5	395.86	384.95	355.39	299.29	245.61	185.71	120.57	65.41	28.19
360.0	411.82	405.77	379.89	338.60	285.19	202.39	145.18	91.34	47.18

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	13.87	9.30	8.81	8.26	7.43	6.66	6.55	6.55	6.44
22.5	12.33	8.97	8.42	7.93	7.27	6.55	6.50	6.28	6.22
45.0	10.30	8.81	8.31	7.60	6.99	6.50	6.61	6.72	6.22
67.5	17.95	8.92	8.48	7.87	6.83	6.55	6.39	6.28	6.11
90.0	15.69	8.92	8.37	7.87	6.61	6.44	6.33	6.17	6.11
112.5	23.78	9.41	8.09	7.71	6.83	6.17	6.06	6.06	5.95
135.0	14.81	8.15	7.32	6.83	6.06	5.95	6.11	5.95	6.00
157.5	23.89	9.63	8.70	8.31	7.27	6.61	6.50	6.39	6.33
180.0	13.71	8.92	8.04	7.49	6.55	6.55	6.28	6.22	6.11
202.5	15.20	9.58	8.86	7.87	7.10	6.72	6.66	6.66	6.39
225.0	21.58	9.97	9.30	8.92	7.54	6.88	6.77	6.55	6.44
247.5	14.15	9.36	8.75	7.82	7.32	6.50	6.33	6.22	6.17
270.0	22.46	9.47	8.59	8.09	7.38	6.66	6.55	6.50	6.33
292.5	10.52	8.42	8.20	6.94	6.88	6.55	6.44	6.28	6.11
315.0	13.16	8.64	8.09	7.49	6.83	6.66	6.44	5.67	5.89
337.5	9.97	8.75	8.31	7.05	6.88	6.50	6.22	6.33	6.28
360.0	13.87	9.30	8.81	8.26	7.43	6.66	6.55	6.55	6.44

Intensity data(cd)

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.28	6.17	5.95	5.95	5.95	5.89	5.95	6.11	5.89
22.5	6.22	6.17	6.06	6.00	6.33	5.95	5.95	5.89	5.95
45.0	6.22	6.11	6.17	6.00	6.28	5.89	5.95	5.84	5.84
67.5	5.89	6.00	5.95	5.84	5.95	5.95	5.95	5.89	5.84
90.0	6.06	5.89	5.89	5.84	5.78	5.95	5.84	5.78	5.78
112.5	5.95	6.00	6.06	5.95	6.00	6.00	5.95	5.89	5.78
135.0	5.95	5.95	5.51	5.95	5.78	5.56	5.62	5.62	5.56
157.5	6.22	6.11	6.00	6.06	6.00	6.00	5.89	5.78	5.89
180.0	6.11	5.89	6.00	5.89	5.89	5.73	5.67	5.51	5.56
202.5	6.33	6.22	6.33	6.17	6.28	6.11	6.17	6.11	6.06
225.0	6.22	6.17	6.06	6.11	6.11	6.00	6.00	6.00	5.89
247.5	6.17	6.06	6.17	5.89	5.84	5.84	6.00	5.78	5.84
270.0	6.22	6.11	6.17	6.06	6.06	6.11	5.95	5.95	5.89
292.5	6.17	6.17	6.06	5.89	5.89	5.84	5.84	5.78	5.78
315.0	5.84	5.84	5.84	5.84	5.84	5.89	5.84	5.78	5.84
337.5	6.11	6.11	5.95	5.84	5.40	5.40	5.34	5.45	5.12
360.0	6.28	6.17	5.95	5.95	5.95	5.89	5.95	6.11	5.89

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.73	5.78	5.73	5.67	5.73	5.78	5.62	5.62	5.67
22.5	5.73	5.95	5.89	5.67	5.56	5.56	5.51	5.56	5.62
45.0	5.89	5.89	5.89	6.00	6.00	5.95	5.78	5.73	5.78
67.5	5.84	5.89	5.89	5.84	6.00	5.89	5.78	5.95	5.95
90.0	5.73	5.62	5.62	5.56	5.45	5.51	5.73	5.67	5.62
112.5	5.95	5.51	5.62	5.62	5.67	5.62	5.67	5.67	5.62
135.0	5.56	5.56	5.62	5.56	5.62	5.56	5.51	5.56	5.45
157.5	5.84	5.73	5.67	5.56	5.56	5.56	5.45	5.40	5.18
180.0	5.56	5.51	5.56	5.40	5.29	5.51	5.67	5.67	5.67
202.5	5.95	5.78	5.84	5.73	5.78	5.89	6.00	5.89	6.06
225.0	5.84	6.44	5.40	5.67	5.67	5.56	5.62	5.73	5.62
247.5	5.78	5.78	5.78	5.67	5.67	5.62	5.67	5.67	5.67
270.0	5.89	5.89	5.95	5.89	5.89	5.84	5.78	5.78	5.78
292.5	5.78	5.78	5.78	5.73	5.73	5.78	5.73	5.67	5.67
315.0	5.84	5.89	5.95	5.89	5.89	5.78	5.84	5.89	5.78
337.5	4.79	4.68	4.96	5.78	5.56	5.40	5.73	5.73	5.78
360.0	5.73	5.78	5.73	5.67	5.73	5.78	5.62	5.62	5.67

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.73	5.78	5.95	5.84	5.89	6.11	6.06	6.22	6.06
22.5	5.73	5.73	5.78	5.89	6.33	5.89	6.22	6.33	6.50
45.0	5.84	5.78	5.73	5.89	5.84	5.95	6.17	6.44	6.33
67.5	5.89	5.95	5.89	6.11	6.00	5.95	6.55	6.22	6.06
90.0	5.45	5.45	5.40	5.29	5.34	5.56	5.62	5.62	5.56
112.5	5.67	5.67	5.67	5.78	5.78	5.78	5.89	5.95	6.00
135.0	5.40	5.29	5.40	5.40	5.29	5.29	5.29	6.06	6.11
157.5	5.23	5.29	5.40	5.51	5.62	5.67	5.67	5.84	5.89
180.0	5.73	5.62	5.62	5.67	5.62	5.51	5.62	5.62	5.56
202.5	5.95	6.00	6.00	6.06	6.06	5.95	6.00	6.06	5.95
225.0	5.67	5.67	5.62	5.67	5.51	5.62	5.67	5.67	5.62
247.5	5.51	5.40	5.51	5.45	5.40	5.40	5.23	5.12	5.07
270.0	5.89	5.78	5.78	5.84	5.84	5.78	5.73	5.84	5.84
292.5	5.67	5.62	5.62	5.62	5.62	5.62	5.67	5.62	5.73
315.0	5.78	5.95	5.84	5.95	5.95	6.00	5.95	5.89	6.11
337.5	5.73	5.73	5.78	5.73	5.62	5.78	5.78	5.84	5.95
360.0	5.73	5.78	5.95	5.84	5.89	6.11	6.06	6.22	6.06

Intensity data(cd)

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.17	6.28	6.44	6.33	6.44	6.66	6.28	6.06	5.89
22.5	6.61	6.66	6.44	6.50	6.61	6.77	6.22	5.78	5.62
45.0	6.44	6.39	6.33	6.33	6.33	6.28	5.84	6.06	5.84
67.5	6.17	5.62	5.84	5.73	5.78	5.73	5.67	5.89	5.73
90.0	5.62	5.56	5.56	5.78	5.67	5.67	5.67	5.56	5.56
112.5	6.11	6.17	6.00	5.95	5.89	5.89	5.84	5.67	5.78
135.0	6.11	6.17	6.28	6.22	6.33	6.00	5.34	5.12	4.90
157.5	5.95	6.00	5.89	6.11	6.17	6.17	5.95	5.67	5.56
180.0	5.67	5.95	5.84	5.78	6.06	5.95	5.62	5.62	5.56
202.5	6.06	6.11	6.28	6.28	6.06	5.95	6.00	5.84	5.78
225.0	5.73	5.84	5.84	5.73	5.73	5.78	5.62	5.62	5.56
247.5	5.12	5.01	5.18	5.56	5.56	5.45	5.51	5.62	5.45
270.0	5.78	5.84	6.00	6.11	6.28	6.28	6.06	5.78	5.84
292.5	5.73	5.78	5.89	6.11	6.28	6.22	6.11	5.95	5.95
315.0	5.89	6.00	6.00	6.17	6.28	6.44	6.17	5.95	5.95
337.5	5.89	5.84	5.73	5.78	5.73	5.40	5.29	6.11	5.95
360.0	6.17	6.28	6.44	6.33	6.44	6.66	6.28	6.06	5.89

C/γ(°)	90.0
0.0	5.67
22.5	5.34
45.0	5.73
67.5	5.84
90.0	5.62
112.5	5.78
135.0	5.34
157.5	5.62
180.0	5.40
202.5	6.06
225.0	5.40
247.5	5.40
270.0	5.78
292.5	5.95
315.0	6.00
337.5	5.56
360.0	5.67