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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,Ching

Nata

LumCAT: 1-0935-N
Luminaire: 92.361.000
Report No: 220518-B009
Test No: 220518-C009
LampCAT: CREE CXA1520
Lamp flux(lm): 1029.7
Number of Lamps: 1
Length(mm): 43
Phm Type: C

Voltage(V): 36.5000
Current(A): 0.3610
Power (W): 12.8150
PF: 0.0000
Ballast type: DC
Width(mm): 43
Height(mm): 0

Photometric Results

Lumens(lm): 870.46
Efficiency(%): 84.53%
Lumens(lm)/Power(W): 67.93
Central intensity(cd): 5331.751
Maximum intensity(cd): 5331.751
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=17.2
[C90/270]Total=17.2
Field angle(10%Imax): [C0/180]Total=43.2
[C90/270]Total=43.2
Maximum s/h(1/2): C0_180=0.29 C90_270=0.29
Maximum s/h(1/4): C0_180=0.32 C90_270=0.32
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.53%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.142%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5331.751	0.000	0	.000%	.000%
1.0	5268.264	5.072	5.072	.493%	.583%
2.0	5120.824	14.911	19.983	1.448%	2.296%
3.0	4871.953	23.899	43.883	2.321%	5.041%
4.0	4539.278	31.502	75.385	3.059%	8.660%
5.0	4158.279	37.416	112.802	3.634%	12.959%
6.0	3747.403	41.546	154.348	4.035%	17.732%
7.0	3295.522	43.715	198.063	4.245%	22.754%
8.0	2910.041	44.412	242.475	4.313%	27.856%
9.0	2501.705	43.859	286.335	4.259%	32.895%
10.0	2147.370	42.072	328.407	4.086%	37.728%
11.0	1857.867	40.021	368.428	3.887%	42.326%
12.0	1629.118	38.118	406.545	3.702%	46.705%
13.0	1411.304	36.082	442.628	3.504%	50.850%
14.0	1237.908	33.910	476.537	3.293%	54.745%
15.0	1105.996	32.178	508.715	3.125%	58.442%
16.0	970.260	30.423	539.138	2.954%	61.937%
17.0	878.965	28.797	567.936	2.797%	65.245%
18.0	786.639	27.462	595.398	2.667%	68.400%
19.0	706.937	25.985	621.383	2.524%	71.386%
20.0	637.272	24.603	645.986	2.389%	74.212%
21.0	570.528	23.192	669.178	2.252%	76.876%
22.0	509.789	21.709	690.888	2.108%	79.370%
23.0	453.943	20.222	711.109	1.964%	81.693%
24.0	405.259	18.785	729.894	1.824%	83.852%
25.0	343.631	17.028	746.923	1.654%	85.808%
26.0	298.062	15.147	762.07	1.471%	87.548%
27.0	242.559	13.226	775.296	1.284%	89.067%
28.0	196.229	11.109	786.405	1.079%	90.344%
29.0	158.263	9.275	795.68	.901%	91.409%
30.0	118.863	7.482	803.162	.727%	92.269%
31.0	89.943	5.811	808.973	.564%	92.936%
32.0	69.754	4.575	813.548	.444%	93.462%
33.0	55.951	3.703	817.252	.360%	93.887%
34.0	45.001	3.055	820.307	.297%	94.238%
35.0	39.317	2.619	822.925	.254%	94.539%
36.0	35.747	2.390	825.315	.232%	94.814%
37.0	33.193	2.248	827.564	.218%	95.072%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	30.780	2.135	829.699	.207%	95.317%
39.0	28.293	2.016	831.715	.196%	95.549%
40.0	25.955	1.892	833.607	.184%	95.766%
41.0	23.699	1.768	835.376	.172%	95.969%
42.0	21.436	1.640	837.015	.159%	96.158%
43.0	19.218	1.506	838.521	.146%	96.331%
44.0	17.418	1.383	839.904	.134%	96.490%
45.0	15.752	1.275	841.179	.124%	96.636%
46.0	14.438	1.181	842.36	.115%	96.772%
47.0	13.288	1.103	843.462	.107%	96.898%
48.0	12.376	1.037	844.5	.101%	97.018%
49.0	11.570	0.983	845.483	.095%	97.131%
50.0	10.890	0.936	846.42	.091%	97.238%
51.0	10.360	0.899	847.319	.087%	97.341%
52.0	9.874	0.868	848.187	.084%	97.441%
53.0	9.396	0.838	849.025	.081%	97.538%
54.0	9.000	0.811	849.836	.079%	97.631%
55.0	8.649	0.788	850.624	.077%	97.721%
56.0	8.313	0.766	851.39	.074%	97.809%
57.0	8.044	0.748	852.138	.073%	97.895%
58.0	7.768	0.731	852.869	.071%	97.979%
59.0	7.529	0.715	853.585	.069%	98.061%
60.0	7.327	0.702	854.286	.068%	98.142%
61.0	7.133	0.690	854.976	.067%	98.221%
62.0	6.946	0.678	855.655	.066%	98.299%
63.0	6.789	0.668	856.323	.065%	98.376%
64.0	6.625	0.658	856.981	.064%	98.452%
65.0	6.453	0.647	857.628	.063%	98.526%
66.0	6.341	0.638	858.267	.062%	98.599%
67.0	6.192	0.630	858.897	.061%	98.672%
68.0	6.043	0.620	859.517	.060%	98.743%
69.0	5.893	0.609	860.126	.059%	98.813%
70.0	5.759	0.598	860.724	.058%	98.882%
71.0	5.609	0.588	861.312	.057%	98.949%
72.0	5.445	0.575	861.886	.056%	99.015%
73.0	5.318	0.563	862.449	.055%	99.080%
74.0	5.184	0.552	863.001	.054%	99.143%
75.0	5.042	0.540	863.542	.052%	99.205%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.900	0.528	864.069	.051%	99.266%
77.0	4.780	0.516	864.585	.050%	99.325%
78.0	4.661	0.505	865.091	.049%	99.383%
79.0	4.571	0.496	865.587	.048%	99.440%
80.0	4.474	0.488	866.074	.047%	99.496%
81.0	4.377	0.479	866.553	.046%	99.551%
82.0	4.280	0.469	867.023	.046%	99.605%
83.0	4.213	0.462	867.484	.045%	99.658%
84.0	4.101	0.453	867.937	.044%	99.710%
85.0	3.996	0.442	868.379	.043%	99.761%
86.0	3.929	0.433	868.812	.042%	99.811%
87.0	3.794	0.423	869.235	.041%	99.859%
88.0	3.764	0.414	869.649	.040%	99.907%
89.0	3.690	0.409	870.057	.040%	99.954%
90.0	3.652	0.403	870.46	.039%	100.000%

Zonal flux distribution table

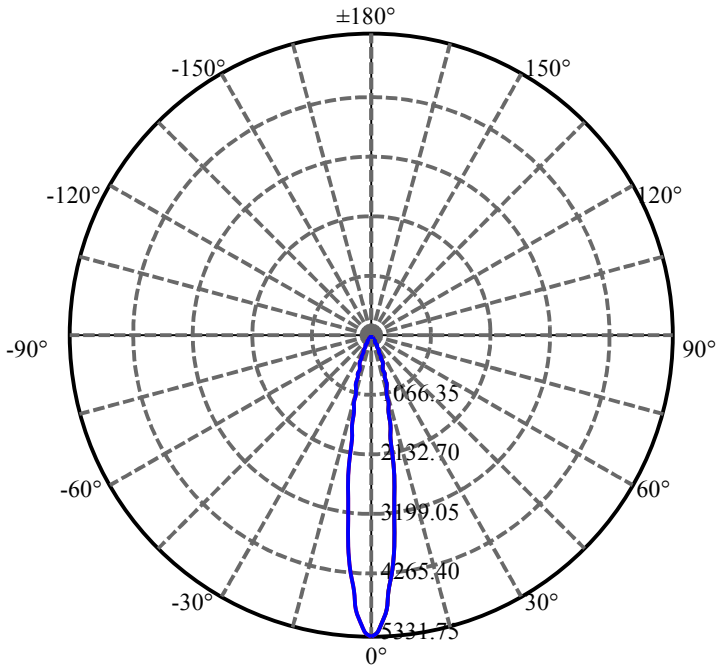
ZONAL LUMEN SUMMARY

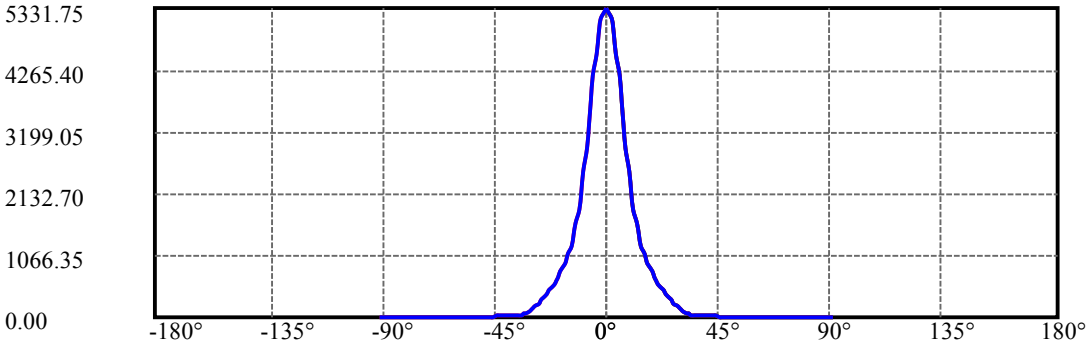
Zone	Lumens	%Lamp	%Fixt
0-30	803.16	78.00%	92.27%
0-40	833.61	80.95%	95.77%
0-60	854.29	82.96%	98.14%
0-90	870.06	84.49%	99.95%
0-120	870.06	84.49%	99.95%
0-180	870.46	84.53%	100.00%
60-90	16.47	1.60%	1.89%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.27	696.37	67.63%	80.00%

ZONAL LUMEN SUMMARY

0-10	328.41
10-20	317.58
20-30	157.18
30-40	30.45
40-50	12.81
50-60	7.87
60-70	6.44
70-80	5.35
80-90	3.98
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):

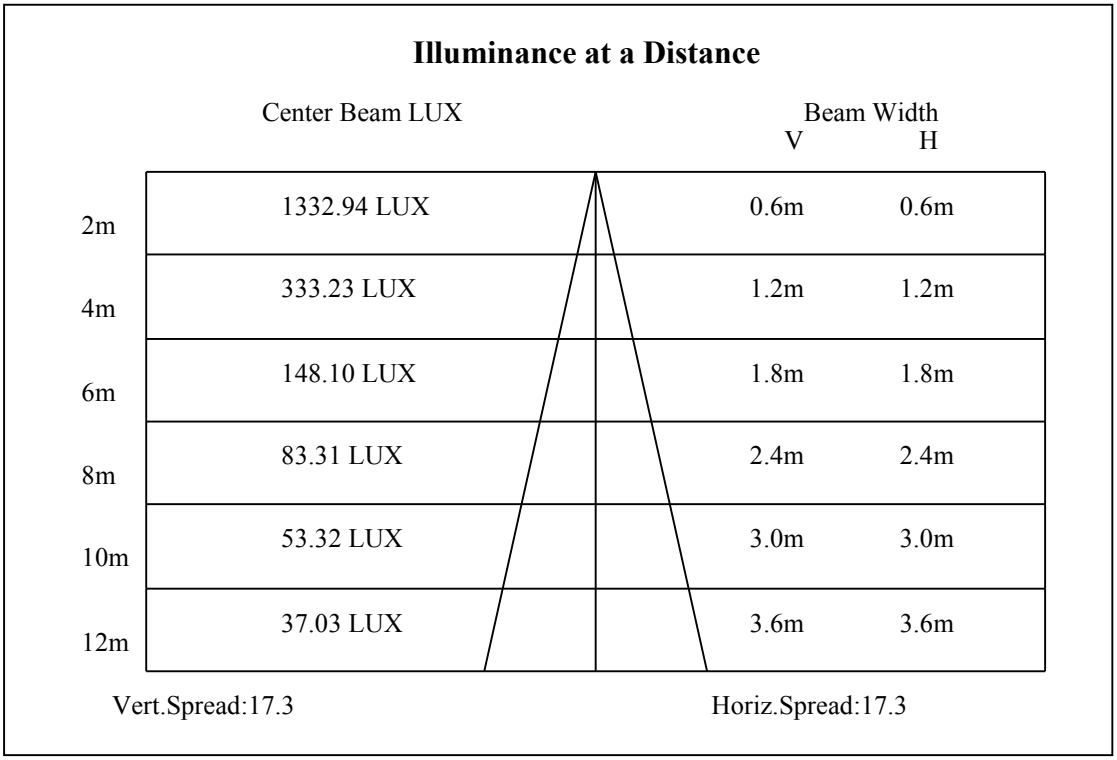
C0/C180:

C90/C270:

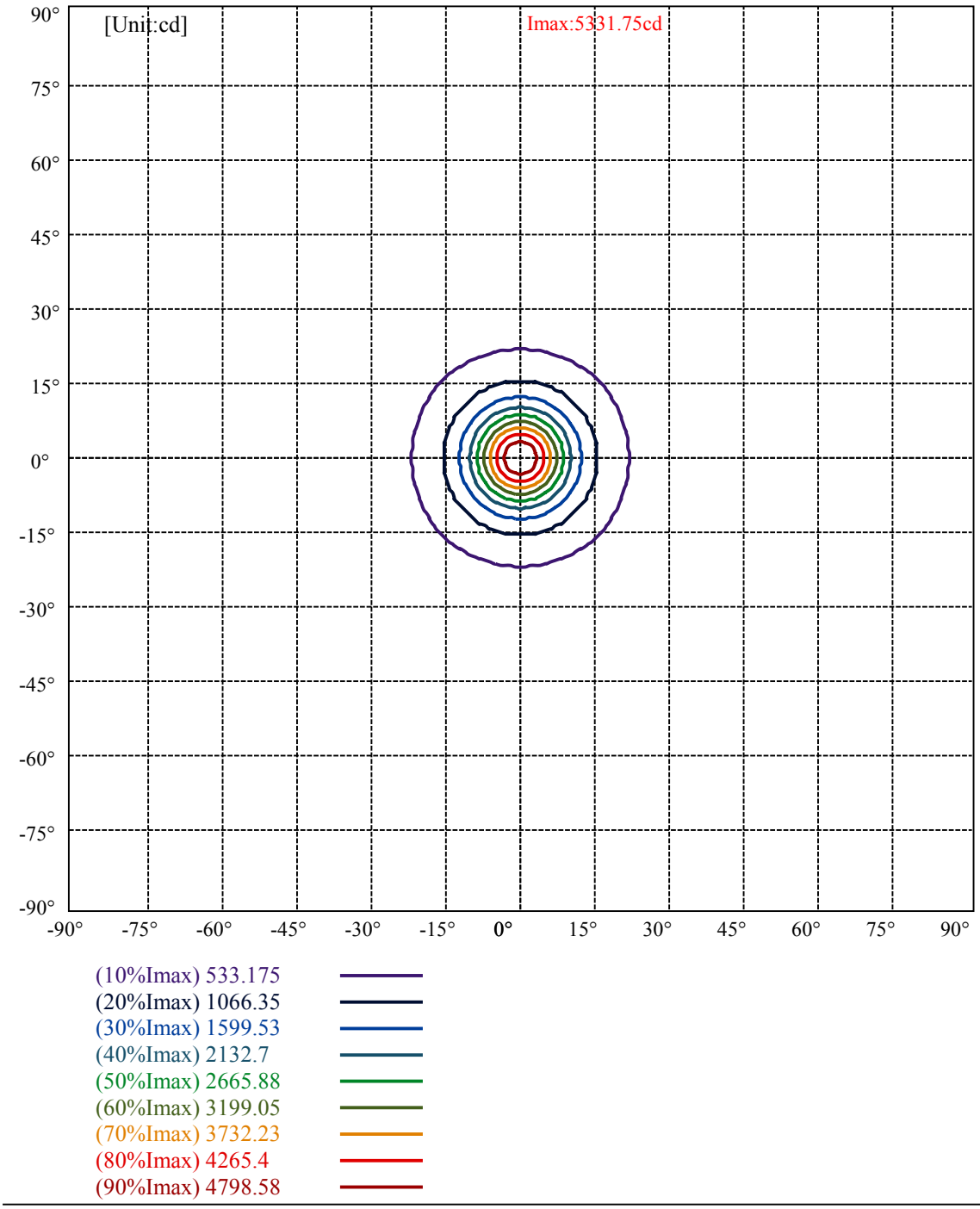
Field angle(10%Imax):C0/180Left:21.6 Right:21.6
:C90/270Left:21.6 Right:21.6

Beam Angle(50%Imax):C0/180Left:8.6 Right:8.6
:C90/270Left:8.6 Right:8.6

Lux distance Curve



ISO-Intensity(V-H)

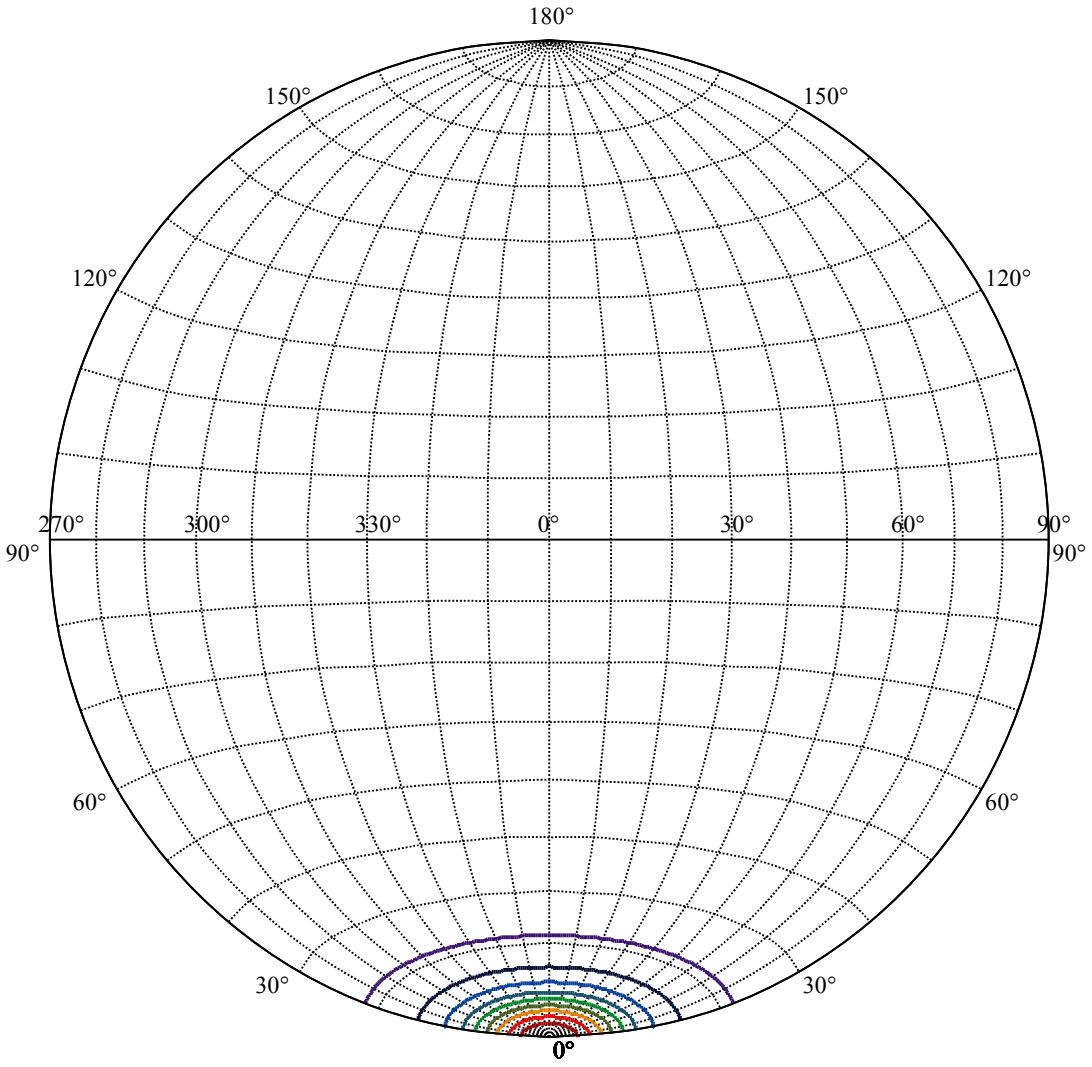


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/18
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5331.75

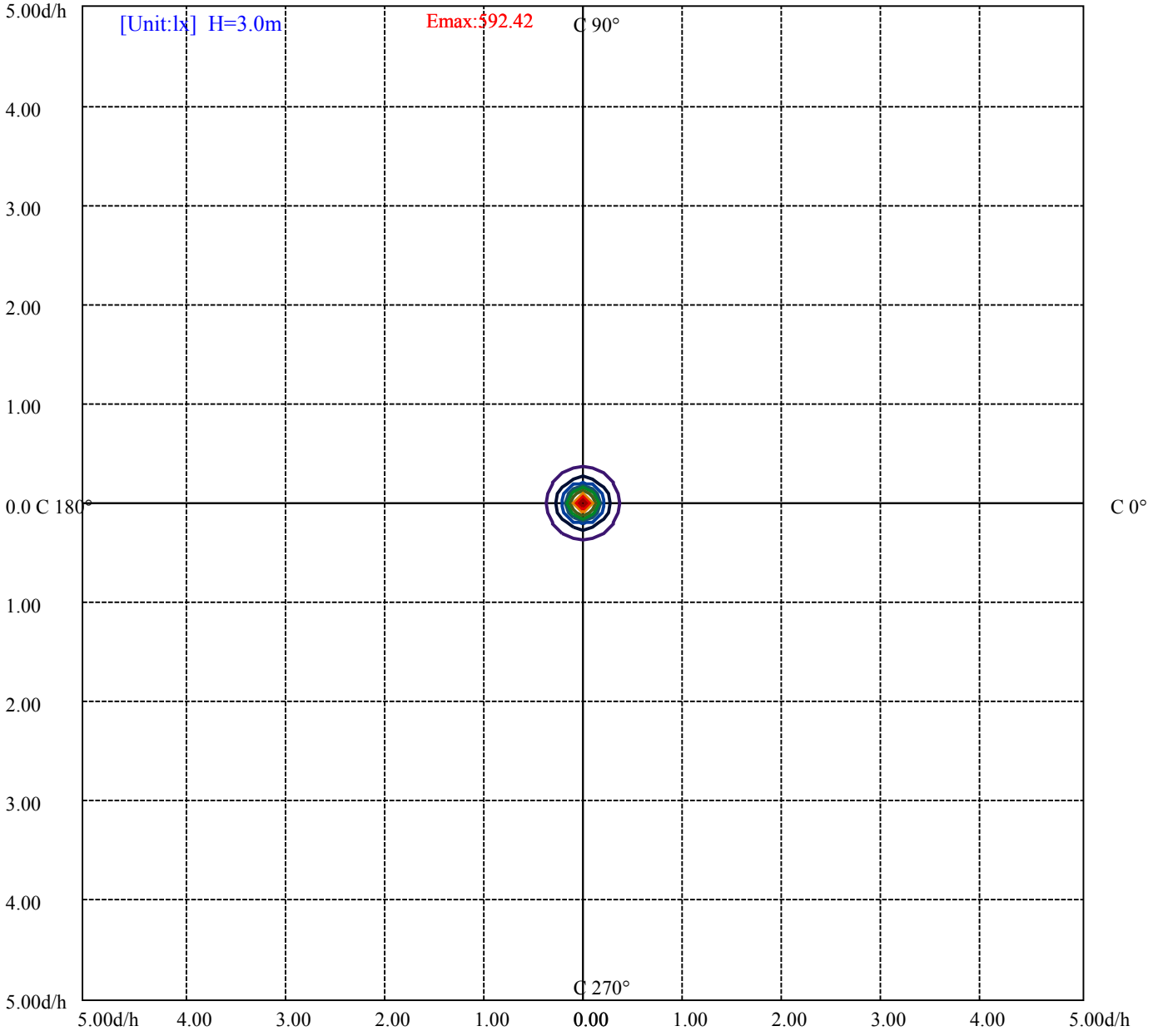
(10%Imax) 533.175
(20%Imax) 1066.35
(30%Imax) 1599.53
(40%Imax) 2132.7
(50%Imax) 2665.88
(60%Imax) 3199.05
(70%Imax) 3732.23
(80%Imax) 4265.4
(90%Imax) 4798.58

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/18
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

ISO illuminance diagram



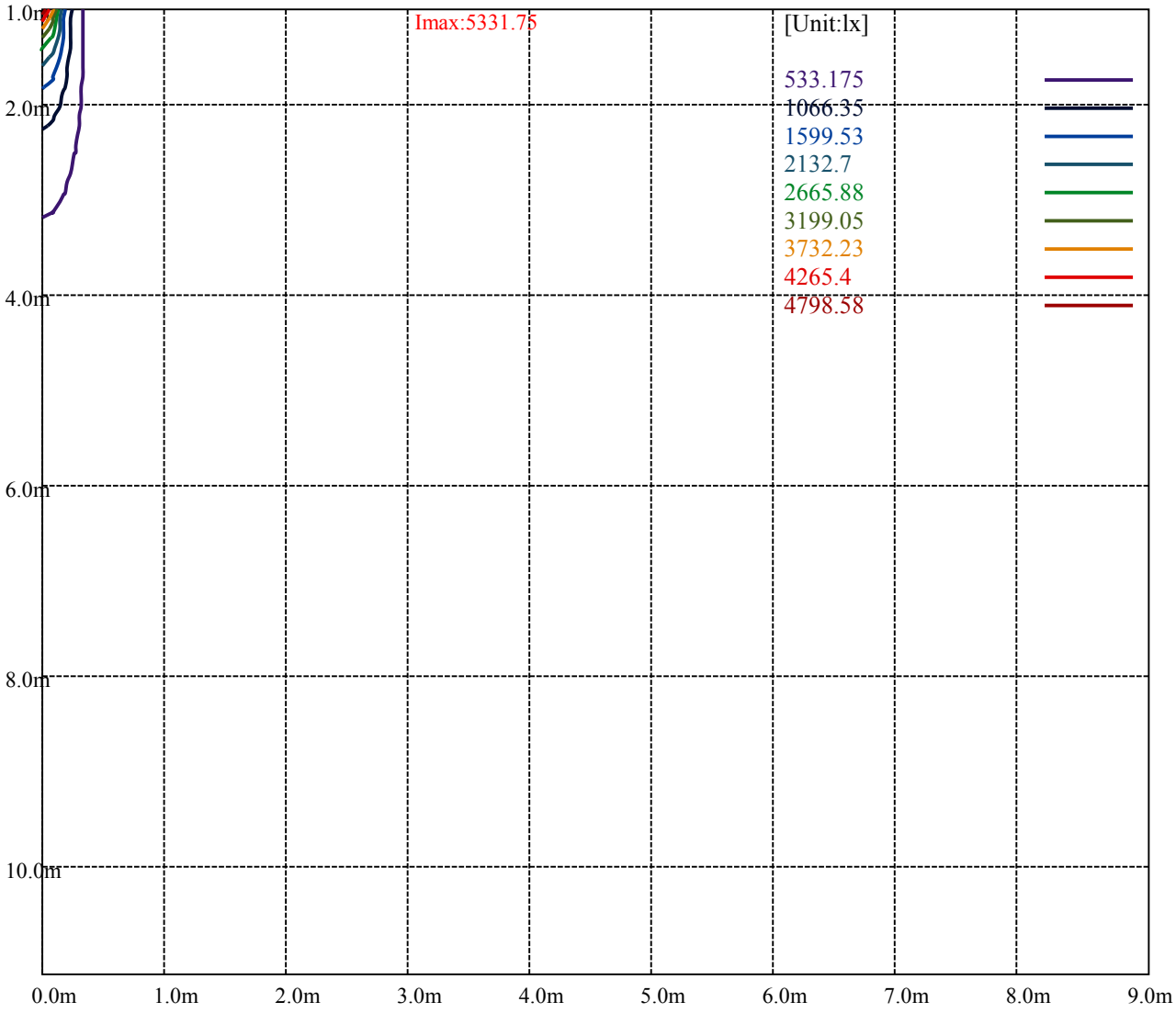
(10%Emax) 59.24156
(20%Emax) 118.4833
(30%Emax) 177.7244
(40%Emax) 236.9667
(50%Emax) 296.2078
(60%Emax) 355.4489
(70%Emax) 414.6911
(80%Emax) 473.9323
(90%Emax) 533.1744

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/18
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/18
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

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Luminance Limitting Curve(no luminous side)

Luminance Table

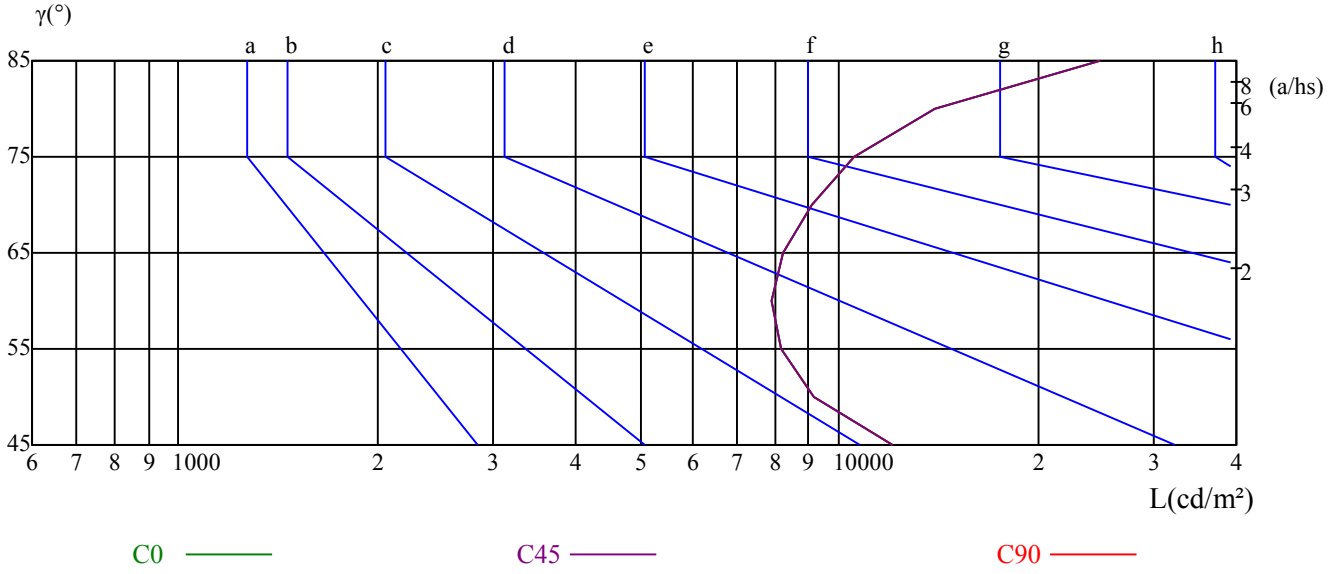
γ	45	50	55	60	65	70	75	80	85
C0	12048	9163	8155	7926	8258	9106	10535	13934	24796
C45	12048	9163	8155	7926	8258	9106	10535	13934	24796
C90	12048	9163	8155	7926	8258	9106	10535	13934	24796

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8258	8258	8258	10535	10535	10535	24796	24796	24796

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

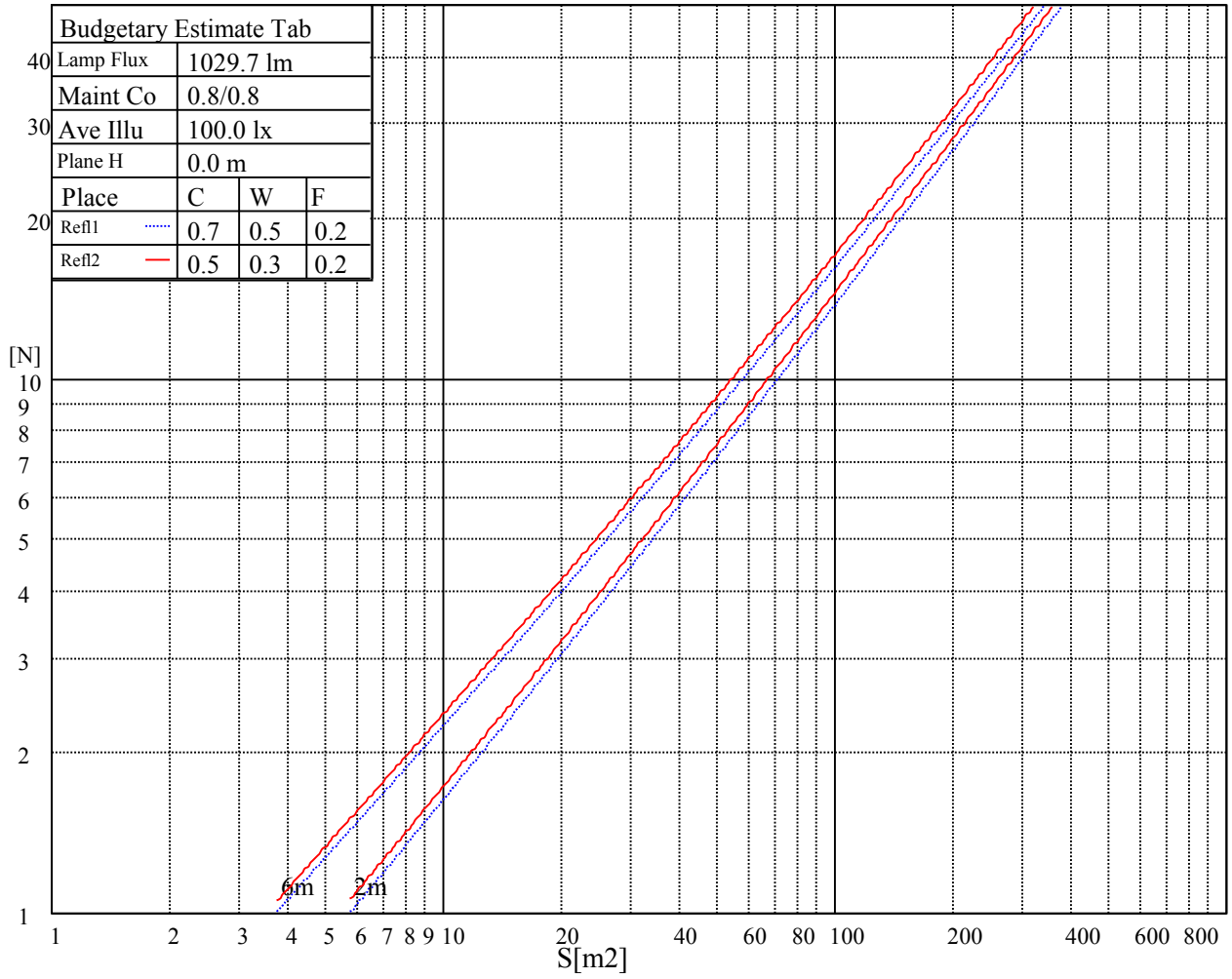


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/18
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Budgetary Estimate Table

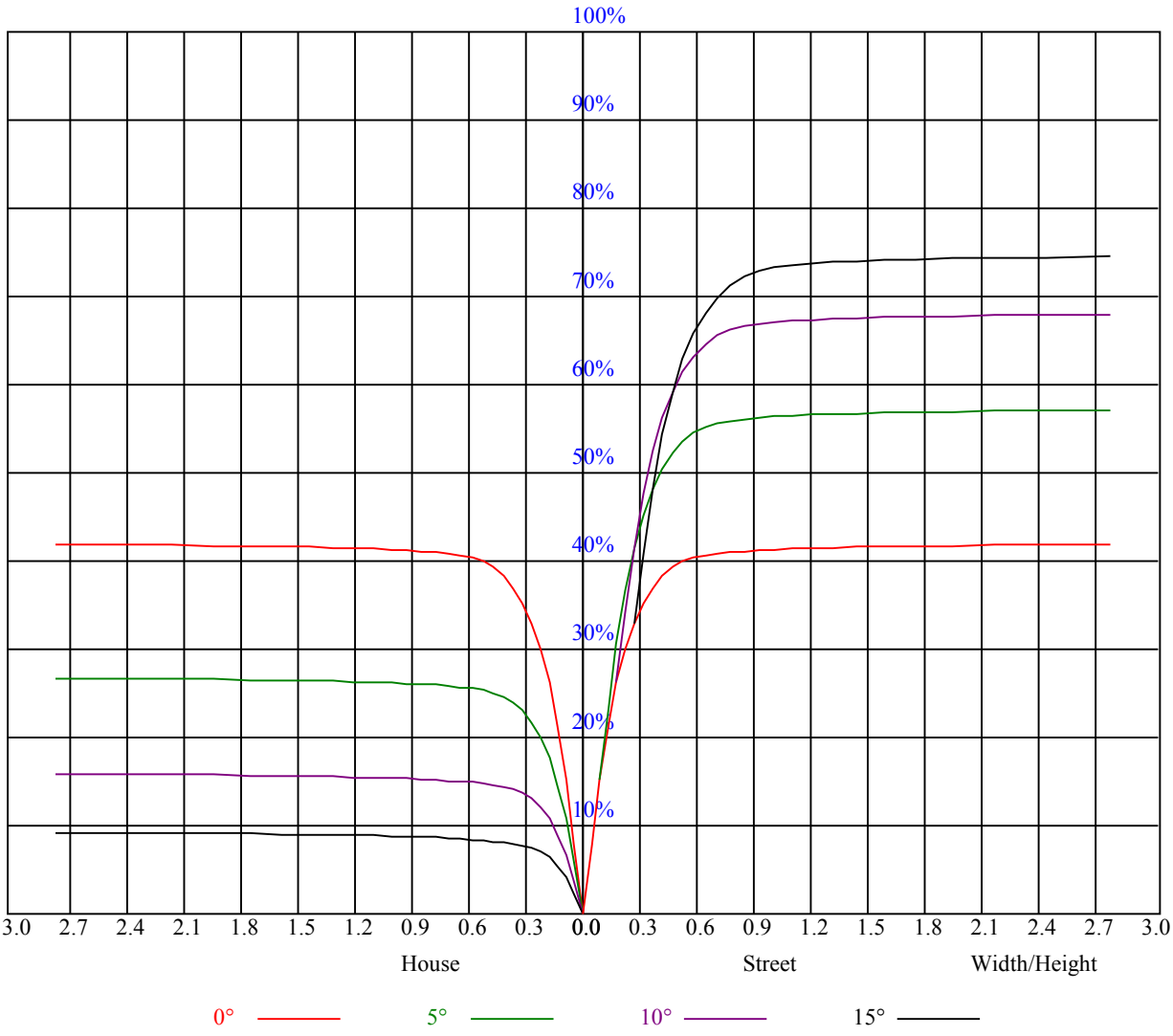


Equipment: GMS1980 Date: 2022/5/18 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.73

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

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2022/5/18	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.73

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	5246.90	5435.12	5540.89	5533.12	5424.37	5194.92	4891.37	4463.54	4024.96
45.0	5449.46	5353.26	5139.94	4862.09	4456.37	3973.57	3502.12	2989.44	2586.70
90.0	5252.88	4987.57	4642.20	4115.78	3646.12	3169.89	2682.91	2272.40	1968.86
135.0	5377.76	5043.74	4631.45	4254.41	3661.06	3123.88	2688.28	2275.39	1976.03
180.0	5246.90	4929.61	4558.55	4073.95	3541.55	3070.70	2644.66	2198.31	1906.12
225.0	5449.46	5433.33	5331.75	5076.01	4776.65	4396.62	3898.28	3377.83	2935.06
270.0	5252.88	5439.90	5515.79	5487.11	5345.49	5080.79	4758.72	4308.18	3856.45
315.0	5377.76	5523.56	5606.02	5573.15	5462.61	5255.87	4912.88	4479.08	4026.15
360.0	5246.90	5435.12	5540.89	5533.12	5424.37	5194.92	4891.37	4463.54	4024.96

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3438.78	2987.05	2581.33	2233.56	1874.45	1645.00	1452.59	1252.42	1118.57
45.0	2200.10	1884.01	1659.94	1472.31	1275.72	1143.67	1028.35	904.06	818.02
90.0	1698.18	1481.27	1278.71	1152.10	1051.47	939.14	843.41	766.63	695.76
135.0	1701.17	1476.49	1310.98	1172.35	1024.16	924.97	840.13	746.31	678.20
180.0	1668.30	1430.48	1186.10	1138.47	1010.72	902.09	819.09	735.44	666.36
225.0	2496.48	2124.22	1849.35	1595.40	1410.77	1183.29	1090.07	981.02	885.96
270.0	3330.03	2838.26	2452.26	2121.23	1781.83	1563.14	1379.69	1191.47	1064.80
315.0	3480.61	2957.17	2544.28	2147.52	1861.30	1601.98	1394.63	1184.72	1104.05
360.0	3438.78	2987.05	2581.33	2233.56	1874.45	1645.00	1452.59	1252.42	1118.57

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1004.45	895.10	800.69	718.23	651.90	586.18	535.39	483.40	435.00
45.0	742.13	674.61	600.52	544.35	492.96	436.20	386.00	333.42	304.74
90.0	613.84	555.58	505.99	446.35	395.21	342.80	290.28	228.14	182.96
135.0	614.86	553.31	498.94	447.55	384.21	326.85	304.74	210.93	166.29
180.0	595.38	534.61	484.95	427.23	368.68	316.21	264.53	203.04	158.76
225.0	785.15	712.73	646.65	572.49	522.54	475.10	417.67	357.68	304.26
270.0	957.84	855.66	767.82	697.32	625.61	569.45	515.67	461.89	410.50
315.0	979.47	873.89	792.62	710.70	637.20	578.77	527.80	470.55	421.97
360.0	1004.45	895.10	800.69	718.23	651.90	586.18	535.39	483.40	435.00

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	377.04	314.90	307.73	210.03	156.13	120.52	91.60	64.11	50.07
45.0	216.48	170.83	124.70	93.69	68.60	50.43	42.90	39.44	36.99
90.0	137.91	104.69	75.17	54.08	44.70	40.75	38.00	36.09	34.12
135.0	123.57	89.51	66.03	50.25	41.83	38.84	36.51	33.94	31.91
180.0	120.28	81.86	60.41	47.56	41.29	38.00	35.67	33.46	31.49
225.0	245.52	196.71	148.43	108.09	79.29	56.17	44.58	40.15	37.47
270.0	349.55	301.75	233.22	185.05	134.09	100.74	74.63	52.88	44.52
315.0	370.11	309.58	250.42	202.14	153.62	112.57	83.71	59.93	47.98
360.0	377.04	314.90	307.73	210.03	156.13	120.52	91.60	64.11	50.07

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	43.14	39.62	37.11	35.02	32.45	30.29	27.67	24.86	22.41
45.0	35.07	32.98	30.18	27.84	25.34	22.59	20.02	17.93	16.07
90.0	31.25	29.04	26.77	23.72	21.39	19.06	17.21	15.30	14.04
135.0	29.88	27.31	24.86	22.41	19.90	17.99	16.19	14.58	13.44
180.0	29.22	26.71	24.38	21.69	19.42	17.51	15.89	14.28	13.27
225.0	34.78	32.80	30.83	28.14	25.93	23.60	20.73	18.70	16.97
270.0	40.63	38.12	35.37	33.28	31.31	28.86	26.41	23.90	21.33
315.0	42.01	38.96	36.75	34.24	31.91	29.70	27.37	24.20	21.81
360.0	43.14	39.62	37.11	35.02	32.45	30.29	27.67	24.86	22.41

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	19.90	17.75	16.13	14.82	13.50	12.73	12.01	11.29	10.76
45.0	14.46	13.38	12.43	11.71	11.05	10.46	9.98	9.56	9.02
90.0	13.09	12.19	11.47	10.82	10.34	9.80	9.38	8.96	8.60
135.0	12.55	11.77	11.17	10.64	10.10	9.62	9.26	8.84	8.48
180.0	12.43	11.65	11.05	10.58	10.04	9.56	9.20	8.78	8.48
225.0	15.06	13.98	12.91	11.89	11.35	10.70	10.10	9.74	9.26
270.0	18.94	17.21	15.42	14.16	12.97	12.01	11.35	10.88	10.16
315.0	19.60	17.57	15.72	14.40	13.21	12.25	11.59	10.93	10.40
360.0	19.90	17.75	16.13	14.82	13.50	12.73	12.01	11.29	10.76

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.28	9.80	9.38	9.02	8.66	8.37	8.13	7.83	7.59
45.0	8.72	8.37	8.01	7.77	7.53	7.29	7.11	6.93	6.75
90.0	8.25	7.95	7.65	7.47	7.23	7.05	6.93	6.75	6.57
135.0	8.19	7.95	7.71	7.53	7.29	7.11	6.93	6.81	6.63
180.0	8.19	7.83	7.65	7.47	7.29	7.11	6.93	6.75	6.63
225.0	8.78	8.54	8.19	7.89	7.59	7.35	7.17	6.99	6.81
270.0	9.68	9.32	8.84	8.48	8.25	7.89	7.59	7.41	7.17
315.0	9.92	9.44	9.08	8.72	8.31	8.07	7.83	7.59	7.41
360.0	10.28	9.80	9.38	9.02	8.66	8.37	8.13	7.83	7.59

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.41	7.23	7.05	6.93	6.69	6.57	6.39	6.27	6.09
45.0	6.63	6.39	6.27	6.15	5.98	5.86	5.74	5.62	5.44
90.0	6.39	6.27	6.09	5.98	5.86	5.74	5.56	5.38	5.26
135.0	6.51	6.33	6.21	6.09	5.98	5.80	5.62	5.50	5.32
180.0	6.51	6.33	6.21	6.09	5.98	5.80	5.68	5.50	5.32
225.0	6.63	6.51	6.33	6.21	6.09	5.98	5.80	5.68	5.56
270.0	6.99	6.87	6.63	6.57	6.39	6.21	6.09	5.98	5.86
315.0	7.23	7.05	6.81	6.69	6.57	6.39	6.27	6.15	6.04
360.0	7.41	7.23	7.05	6.93	6.69	6.57	6.39	6.27	6.09

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.98	5.80	5.62	5.50	5.32	5.20	5.02	4.90	4.84
45.0	5.26	5.14	4.96	4.84	4.72	4.60	4.48	4.42	4.30
90.0	5.08	4.96	4.84	4.72	4.60	4.54	4.42	4.30	4.24
135.0	5.20	5.08	4.96	4.78	4.66	4.54	4.42	4.36	4.30
180.0	5.20	5.08	5.02	4.90	4.72	4.60	4.54	4.42	4.30
225.0	5.38	5.26	5.14	4.96	4.84	4.72	4.60	4.54	4.42
270.0	5.68	5.56	5.38	5.26	5.14	4.96	4.84	4.78	4.60
315.0	5.80	5.68	5.56	5.38	5.20	5.08	4.96	4.84	4.78
360.0	5.98	5.80	5.62	5.50	5.32	5.20	5.02	4.90	4.84

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.72	4.54	4.48	4.36	4.24	4.18	4.06	3.94	3.88
45.0	4.18	4.06	4.00	3.94	3.88	3.76	3.64	3.64	3.53
90.0	4.18	4.12	4.06	3.88	3.76	3.70	3.59	3.59	3.59
135.0	4.18	4.18	4.12	4.00	3.88	3.76	3.64	3.64	3.64
180.0	4.24	4.24	4.12	4.00	3.88	3.82	3.64	3.70	3.64
225.0	4.30	4.18	4.18	4.06	4.00	4.00	3.76	3.70	3.59
270.0	4.54	4.42	4.30	4.24	4.12	4.06	4.00	3.94	3.76
315.0	4.66	4.48	4.42	4.30	4.18	4.12	4.00	3.94	3.88
360.0	4.72	4.54	4.48	4.36	4.24	4.18	4.06	3.94	3.88

Intensity data(cd)

C/γ(°)	90.0
0.0	3.82
45.0	3.53
90.0	3.59
135.0	3.64
180.0	3.64
225.0	3.53
270.0	3.70
315.0	3.76
360.0	3.82