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

Nata

LumCAT: 1-0936-N
Luminaire: 92.70.361.000

Report No: 220519-B025	Voltage(V): 37.2100
Test No: 220519-C025	Current(A): 0.3700
LampCAT: Bridgelux C10-(30C2000C)	Power (W): 13.7670
Lamp flux(lm): 1425.8	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1170.85
Efficiency(%): 82.12%
Lumens(lm)/Power(W): 85.05
Central intensity(cd): 5263.708
Maximum intensity(cd): 5263.708
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=22.7
[C90/270]Total=22.7
Field angle(10%Imax): [C0/180]Total=49.0
[C90/270]Total=49.0
Maximum s/h(1/2): C0_180=0.38 C90_270=0.38
Maximum s/h(1/4): C0_180=0.40 C90_270=0.40
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.12%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.072%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5263.708	0.000	0	.000%	.000%
1.0	5231.441	5.022	5.022	.352%	.429%
2.0	5140.915	14.887	19.909	1.044%	1.700%
3.0	4985.110	24.218	44.127	1.699%	3.769%
4.0	4790.315	32.721	76.849	2.295%	6.563%
5.0	4554.291	40.200	117.049	2.819%	9.997%
6.0	4289.511	46.477	163.525	3.260%	13.966%
7.0	3974.091	51.292	214.817	3.597%	18.347%
8.0	3686.679	54.827	269.644	3.845%	23.030%
9.0	3358.412	57.097	326.741	4.005%	27.906%
10.0	3021.405	57.735	384.476	4.049%	32.837%
11.0	2732.799	57.496	441.972	4.033%	37.748%
12.0	2446.209	56.614	498.586	3.971%	42.583%
13.0	2157.677	54.637	553.222	3.832%	47.250%
14.0	1906.640	52.023	605.245	3.649%	51.693%
15.0	1685.853	49.319	654.565	3.459%	55.905%
16.0	1474.089	46.302	700.867	3.247%	59.860%
17.0	1314.825	43.431	744.298	3.046%	63.569%
18.0	1126.155	40.246	784.544	2.823%	67.006%
19.0	1029.475	37.504	822.048	2.630%	70.209%
20.0	918.439	35.652	857.7	2.500%	73.254%
21.0	820.079	33.383	891.083	2.341%	76.106%
22.0	726.192	31.073	922.156	2.179%	78.760%
23.0	646.026	28.793	950.949	2.019%	81.219%
24.0	566.764	26.516	977.465	1.860%	83.483%
25.0	481.788	23.842	1001.306	1.672%	85.520%
26.0	409.337	21.035	1022.342	1.475%	87.316%
27.0	334.392	18.196	1040.537	1.276%	88.870%
28.0	262.846	15.121	1055.658	1.061%	90.162%
29.0	206.035	12.267	1067.925	.860%	91.209%
30.0	156.336	9.784	1077.709	.686%	92.045%
31.0	112.813	7.490	1085.199	.525%	92.685%
32.0	85.798	5.690	1090.889	.399%	93.171%
33.0	67.924	4.529	1095.418	.318%	93.557%
34.0	55.832	3.745	1099.163	.263%	93.877%
35.0	50.319	3.297	1102.46	.231%	94.159%
36.0	46.600	3.086	1105.546	.216%	94.422%
37.0	43.926	2.952	1108.498	.207%	94.675%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	41.379	2.847	1111.345	.200%	94.918%
39.0	38.496	2.726	1114.072	.191%	95.151%
40.0	36.165	2.604	1116.676	.183%	95.373%
41.0	33.828	2.492	1119.168	.175%	95.586%
42.0	31.348	2.368	1121.536	.166%	95.788%
43.0	29.264	2.245	1123.781	.157%	95.980%
44.0	27.277	2.134	1125.915	.150%	96.162%
45.0	25.246	2.019	1127.934	.142%	96.335%
46.0	23.647	1.912	1129.846	.134%	96.498%
47.0	21.870	1.810	1131.656	.127%	96.653%
48.0	20.234	1.702	1133.358	.119%	96.798%
49.0	18.897	1.607	1134.965	.113%	96.935%
50.0	17.500	1.518	1136.483	.106%	97.065%
51.0	16.268	1.429	1137.911	.100%	97.187%
52.0	15.230	1.352	1139.263	.095%	97.302%
53.0	14.296	1.284	1140.547	.090%	97.412%
54.0	13.474	1.224	1141.771	.086%	97.516%
55.0	12.802	1.173	1142.944	.082%	97.617%
56.0	12.227	1.131	1144.075	.079%	97.713%
57.0	11.719	1.095	1145.17	.077%	97.807%
58.0	11.248	1.062	1146.232	.074%	97.897%
59.0	10.853	1.033	1147.265	.072%	97.986%
60.0	10.517	1.010	1148.275	.071%	98.072%
61.0	10.165	0.987	1149.262	.069%	98.156%
62.0	9.889	0.966	1150.228	.068%	98.239%
63.0	9.628	0.949	1151.177	.067%	98.320%
64.0	9.359	0.932	1152.109	.065%	98.399%
65.0	9.120	0.914	1153.024	.064%	98.477%
66.0	8.918	0.900	1153.924	.063%	98.554%
67.0	8.664	0.884	1154.808	.062%	98.630%
68.0	8.448	0.867	1155.674	.061%	98.704%
69.0	8.216	0.850	1156.525	.060%	98.776%
70.0	7.999	0.833	1157.357	.058%	98.848%
71.0	7.798	0.816	1158.174	.057%	98.917%
72.0	7.589	0.800	1158.974	.056%	98.986%
73.0	7.372	0.782	1159.756	.055%	99.052%
74.0	7.185	0.765	1160.522	.054%	99.118%
75.0	7.013	0.750	1161.272	.053%	99.182%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.804	0.734	1162.005	.051%	99.245%
77.0	6.633	0.716	1162.722	.050%	99.306%
78.0	6.461	0.701	1163.423	.049%	99.366%
79.0	6.296	0.685	1164.108	.048%	99.424%
80.0	6.162	0.672	1164.78	.047%	99.482%
81.0	6.050	0.660	1165.44	.046%	99.538%
82.0	5.975	0.652	1166.092	.046%	99.594%
83.0	5.945	0.648	1166.74	.045%	99.649%
84.0	5.654	0.632	1167.372	.044%	99.703%
85.0	5.542	0.611	1167.983	.043%	99.755%
86.0	5.408	0.599	1168.582	.042%	99.806%
87.0	5.273	0.585	1169.166	.041%	99.856%
88.0	5.154	0.571	1169.737	.040%	99.905%
89.0	5.072	0.560	1170.298	.039%	99.953%
90.0	5.004	0.552	1170.85	.039%	100.000%

Zonal flux distribution table

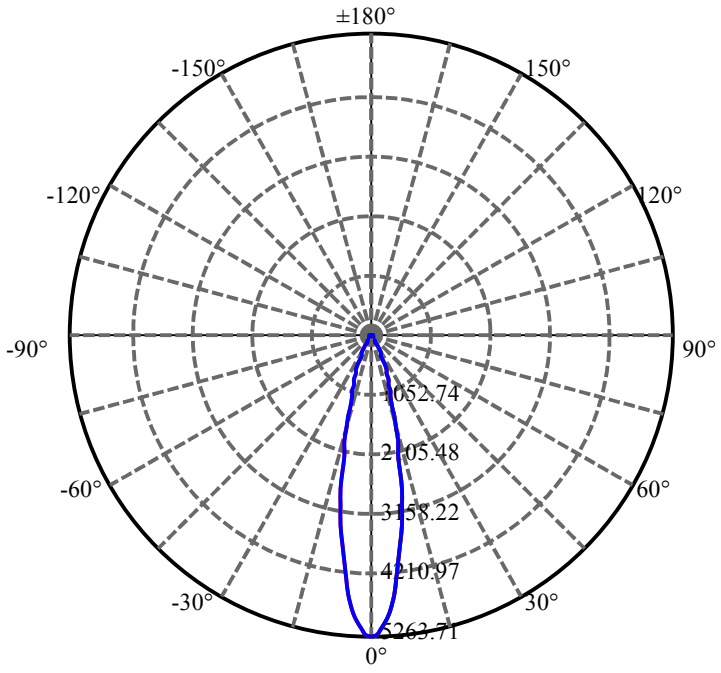
ZONAL LUMEN SUMMARY

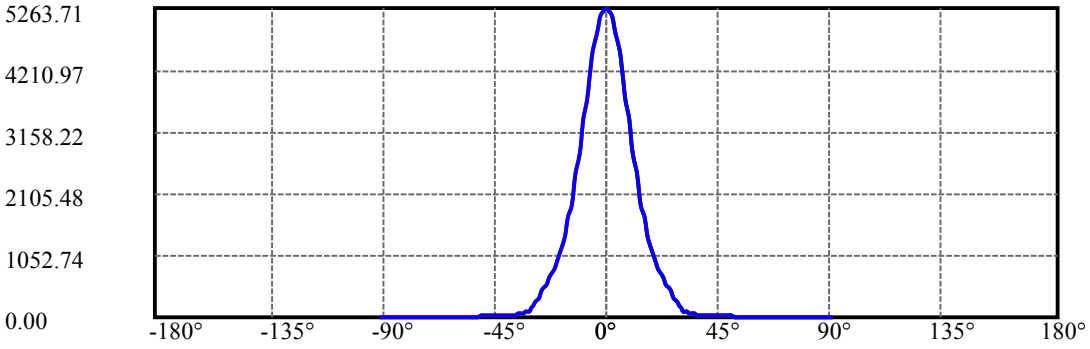
Zone	Lumens	%Lamp	%Fixt
0-30	1077.71	75.59%	92.04%
0-40	1116.68	78.32%	95.37%
0-60	1148.27	80.53%	98.07%
0-90	1170.30	82.08%	99.95%
0-120	1170.30	82.08%	99.95%
0-180	1170.85	82.12%	100.00%
60-90	23.03	1.62%	1.97%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.50	936.68	65.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	384.48
10-20	473.22
20-30	220.01
30-40	38.97
40-50	19.81
50-60	11.79
60-70	9.08
70-80	7.42
80-90	5.52
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):

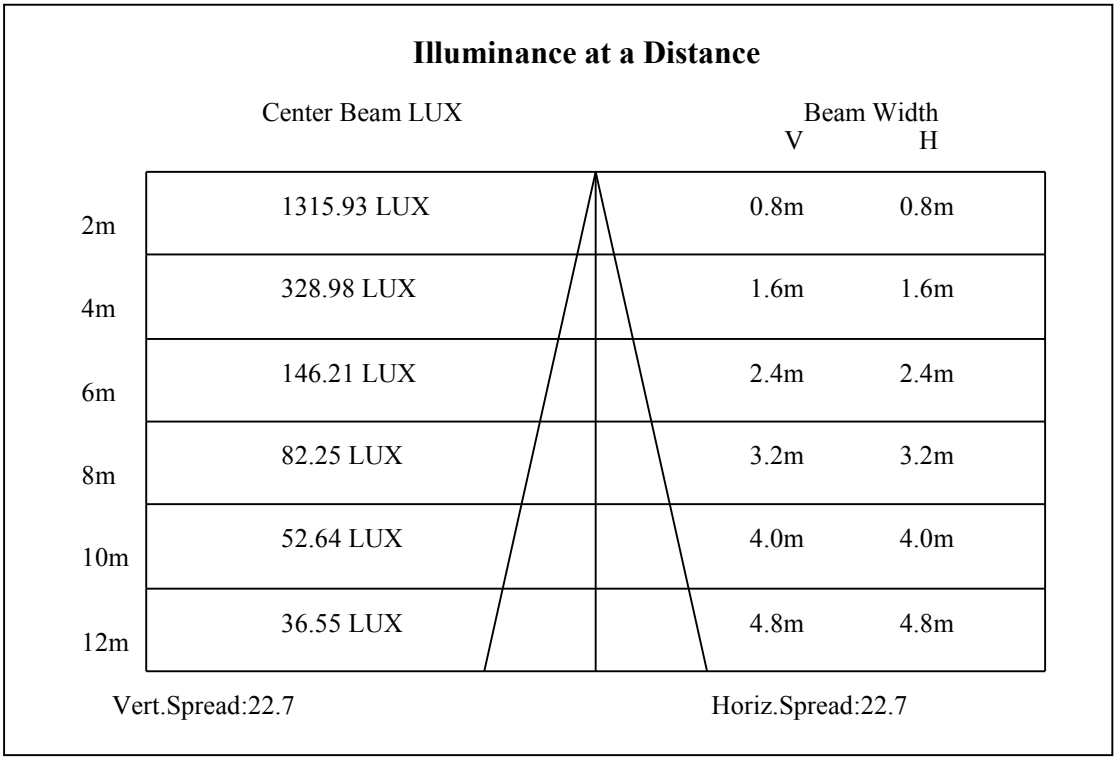
C0/C180:

C90/C270:

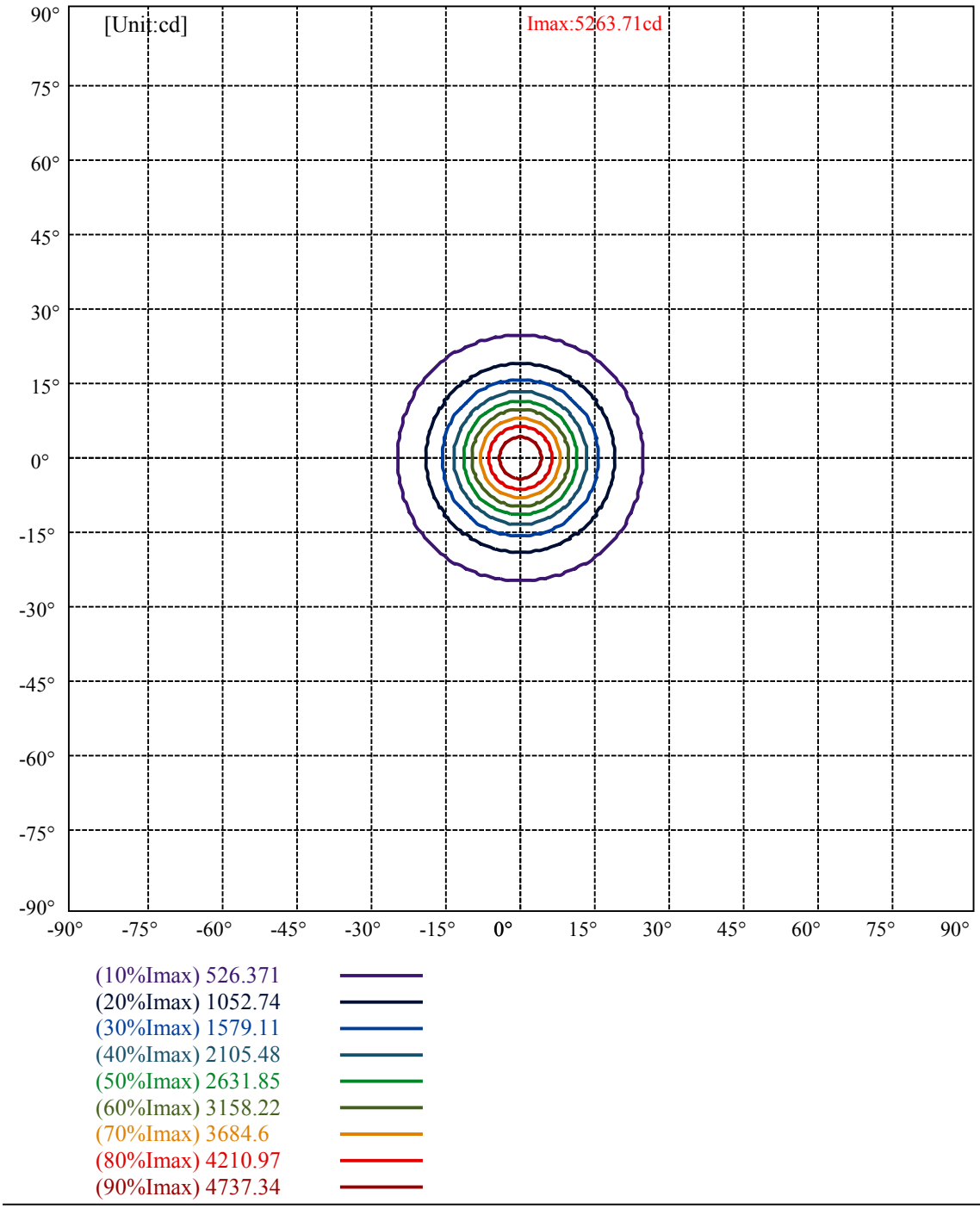
Field angle(10%Imax):C0/180Left:24.5 Right:24.5
:C90/270Left:24.5 Right:24.5

Beam Angle(50%Imax):C0/180Left:11.4 Right:11.4
:C90/270Left:11.4 Right:11.4

Lux distance Curve



ISO-Intensity(V-H)

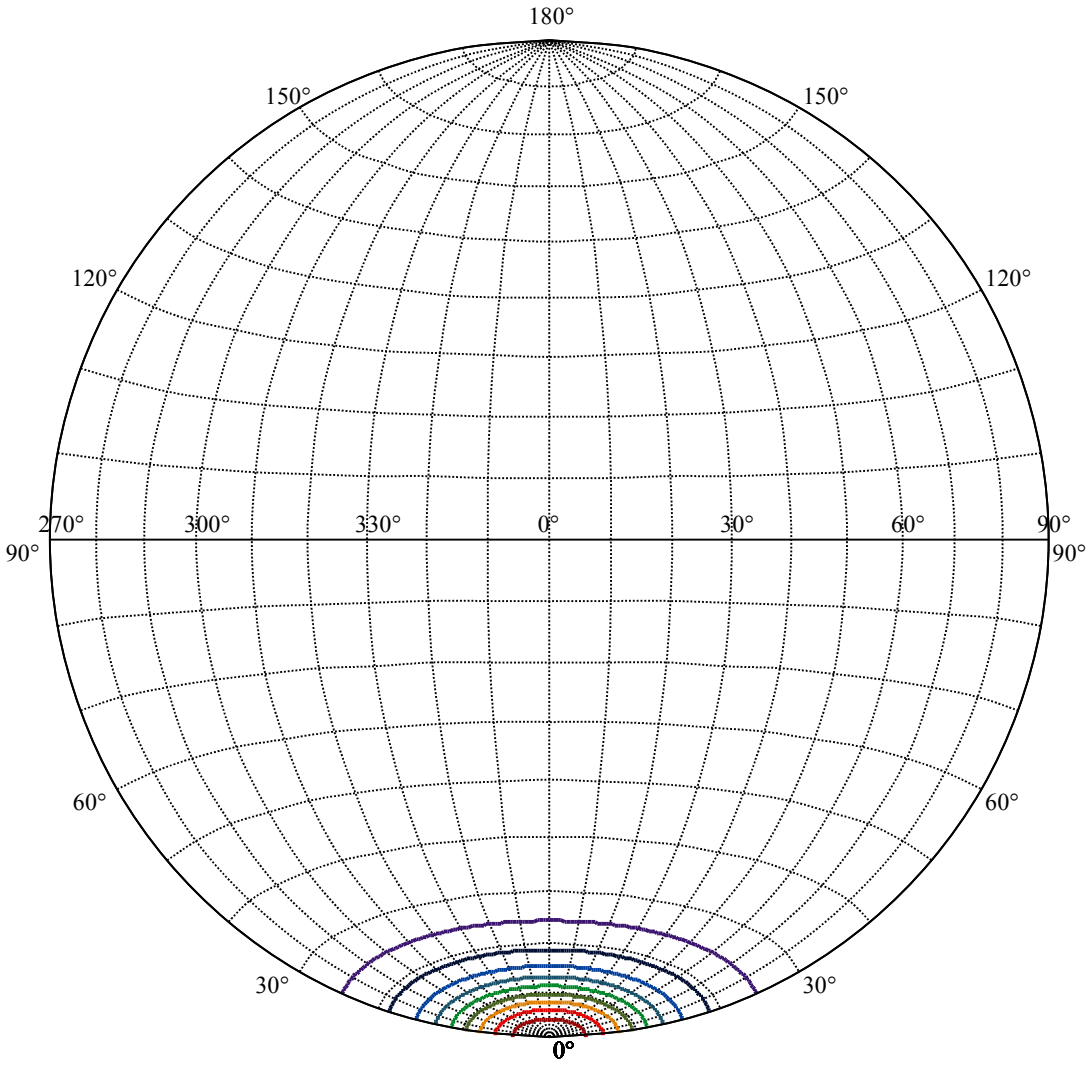


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:5263.71

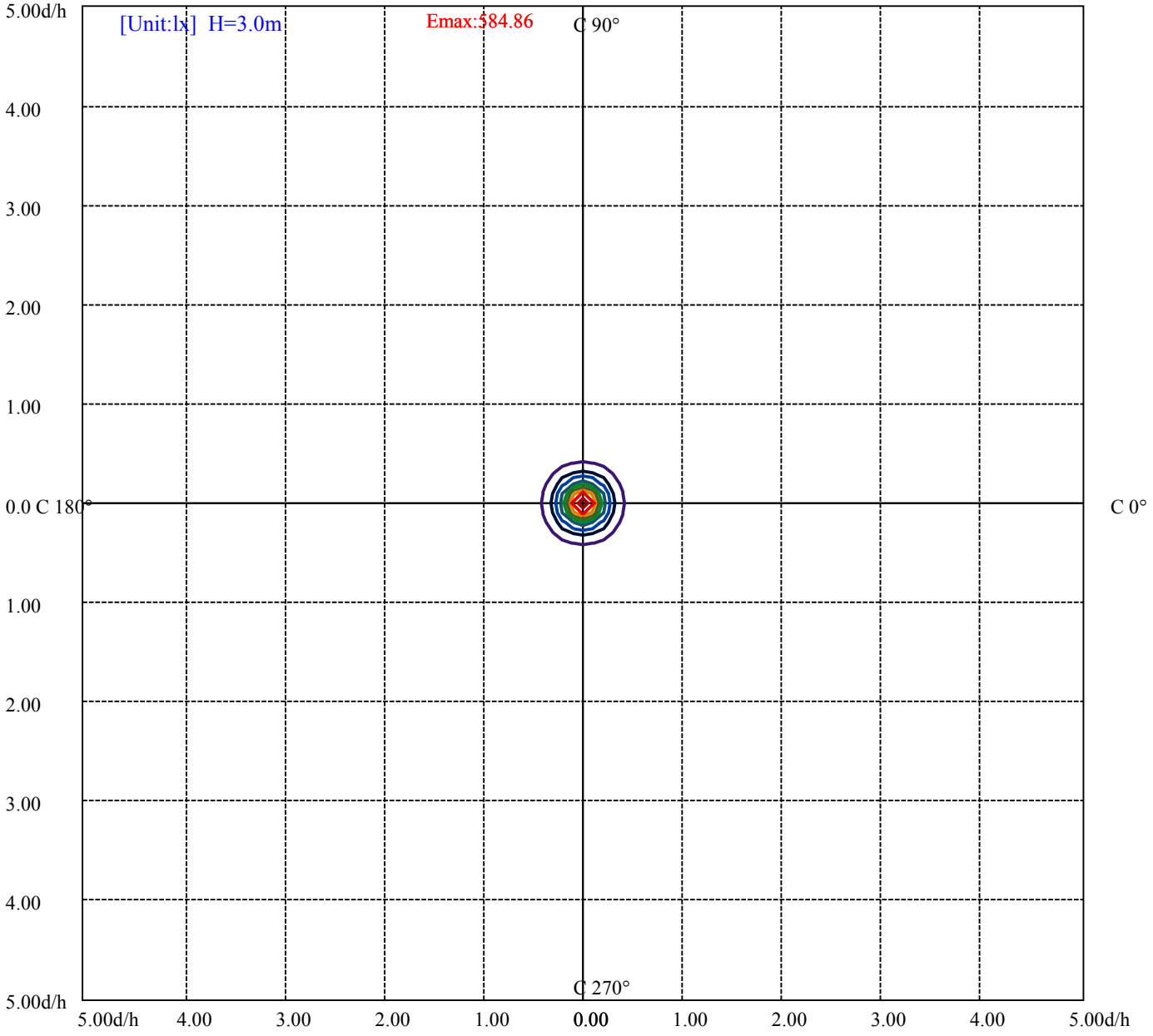
(10%Imax) 526.371
(20%Imax) 1052.74
(30%Imax) 1579.11
(40%Imax) 2105.48
(50%Imax) 2631.85
(60%Imax) 3158.22
(70%Imax) 3684.6
(80%Imax) 4210.97
(90%Imax) 4737.34

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

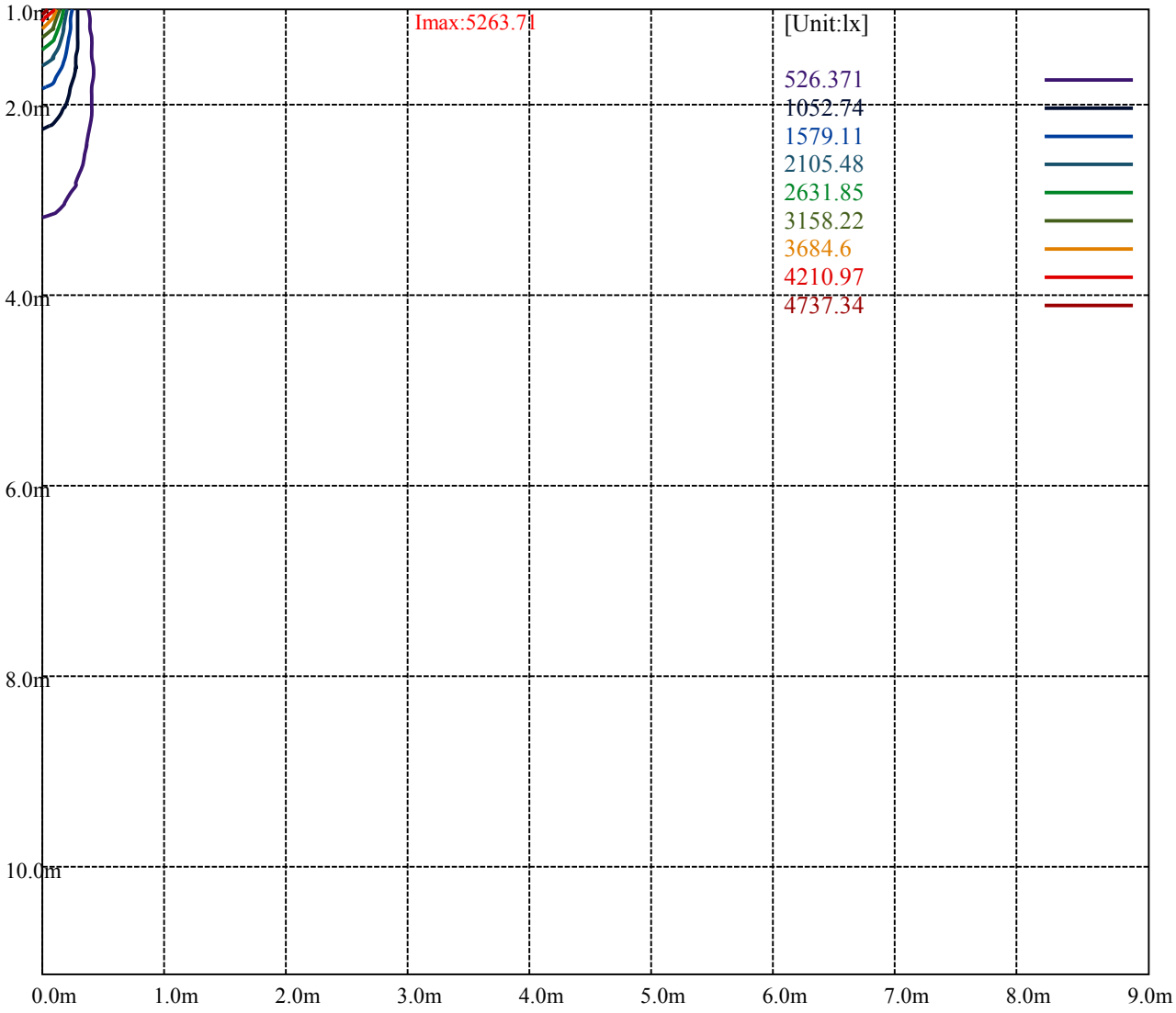
ISO illuminance diagram



(10%Emax) 58.48555
(20%Emax) 116.9711
(30%Emax) 175.4567
(40%Emax) 233.9422
(50%Emax) 292.4278
(60%Emax) 350.9133
(70%Emax) 409.3989
(80%Emax) 467.8844
(90%Emax) 526.37

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2022/5/19
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.73

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.73

Luminance Limitting Curve(no luminous side)

Luminance Table

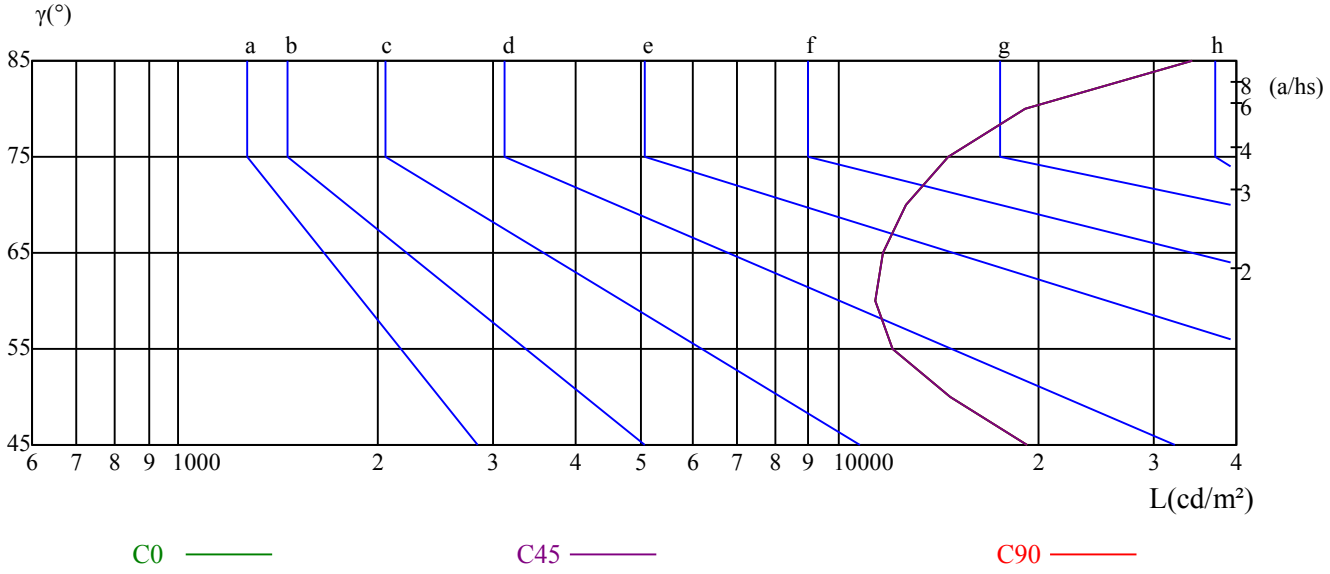
γ	45	50	55	60	65	70	75	80	85
C0	19309	14724	12071	11375	11671	12649	14656	19192	34391
C45	19309	14724	12071	11375	11671	12649	14656	19192	34391
C90	19309	14724	12071	11375	11671	12649	14656	19192	34391

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11671	11671	11671	14656	14656	14656	34391	34391	34391

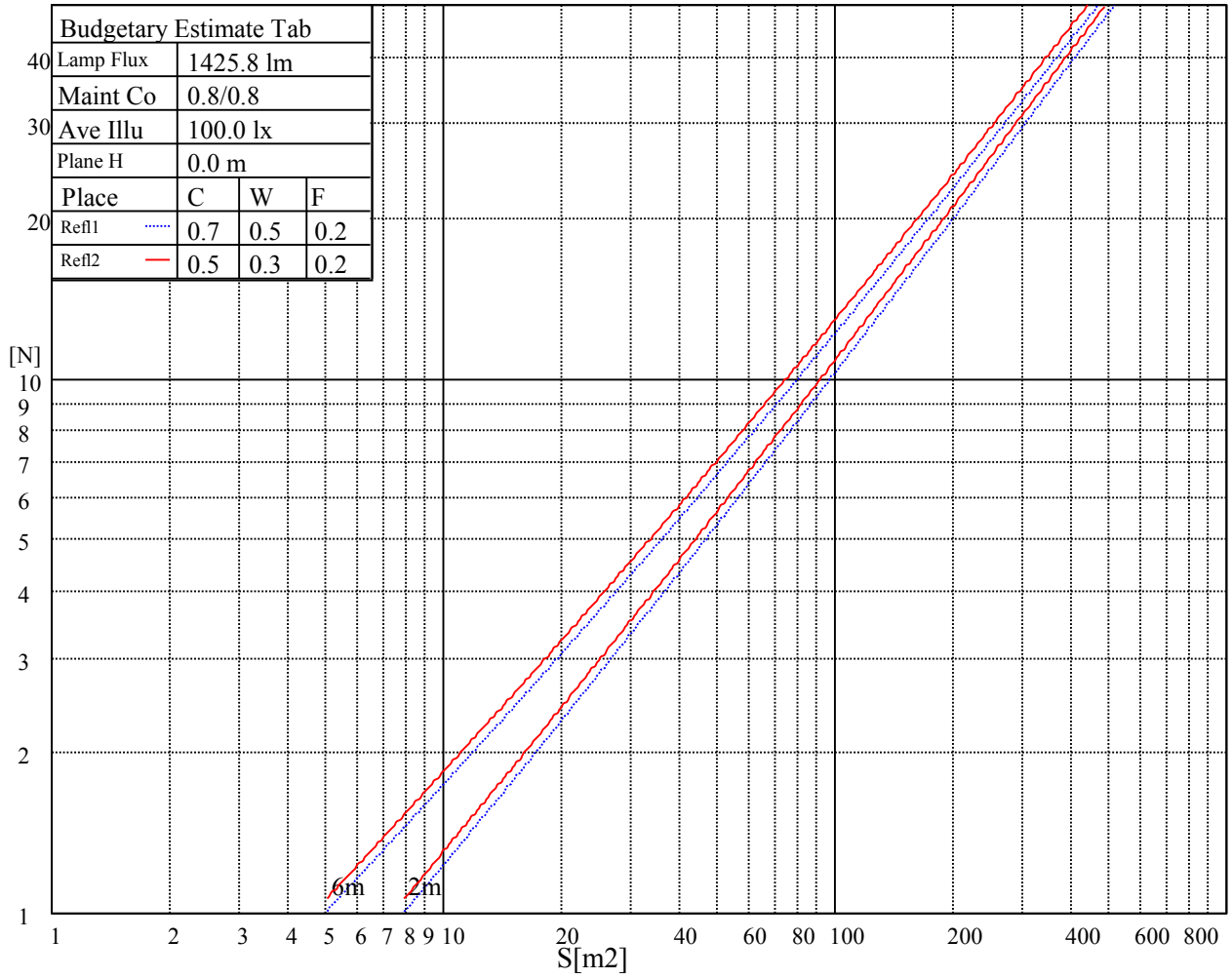
Glare Table

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

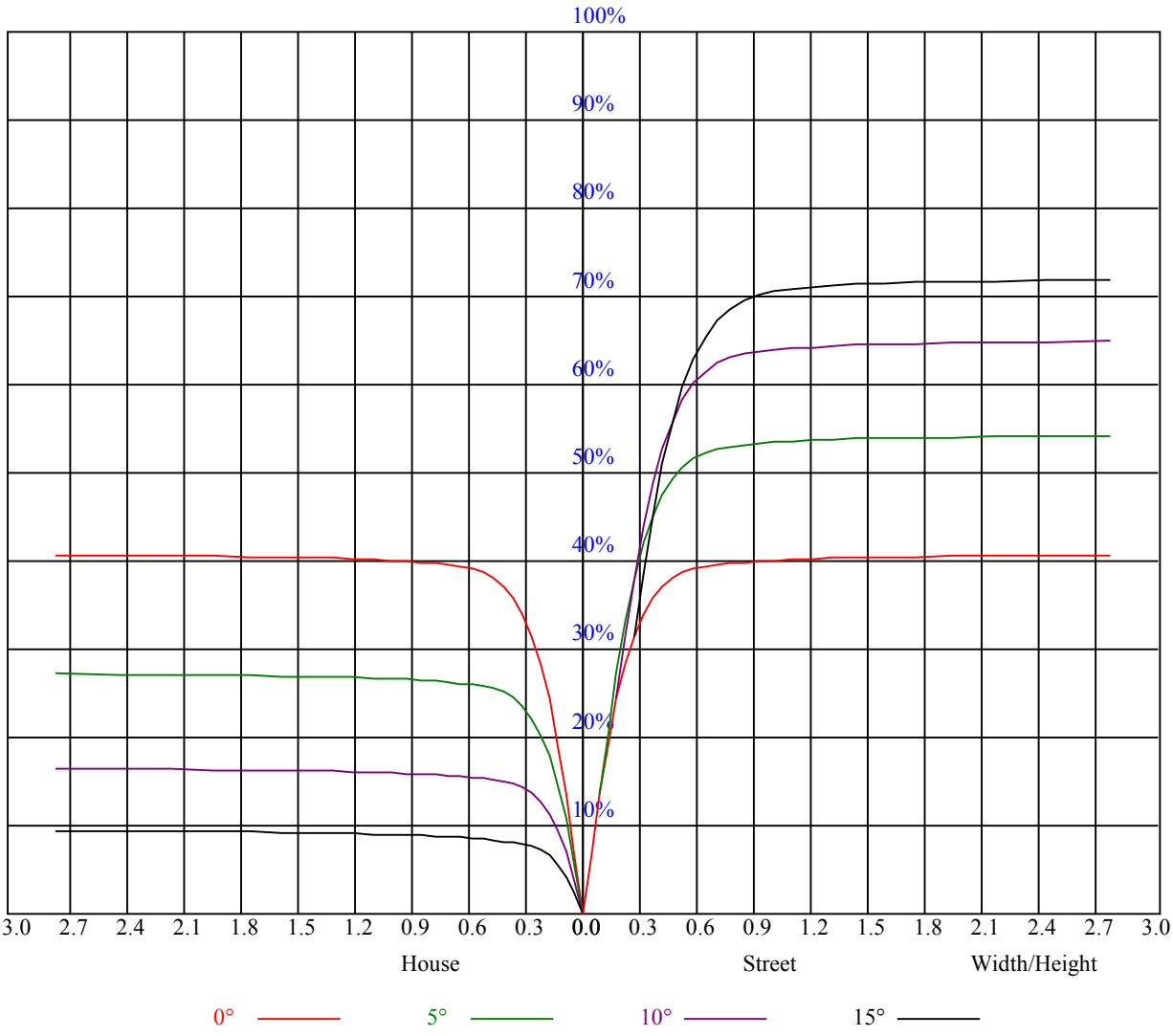


Equipment: GMS1980 Date: 2022/5/19 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.73

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	0.98	0.98	0.98	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.82
1	0.92	0.90	0.89	0.90	0.89	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.80	0.78
2	0.87	0.85	0.82	0.86	0.83	0.81	0.83	0.81	0.80	0.81	0.79	0.78	0.79	0.77	0.76	0.75
3	0.83	0.80	0.77	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.74	0.76	0.75	0.73	0.72
4	0.80	0.76	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.76	0.73	0.71	0.74	0.72	0.71	0.70
5	0.76	0.73	0.70	0.76	0.72	0.70	0.74	0.71	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.67
6	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.68	0.66	0.65
7	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.64	0.63
8	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.61
9	0.66	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.59
10	0.64	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.57

Coefficient Utilization Curve



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2022/5/19
Humidity(%): 65.0%

Operator: NT07
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	5252.28	5318.61	5307.25	5236.15	5092.74	4896.75	4679.25	4394.23	4121.16
45.0	5288.73	5197.31	5033.58	4816.68	4587.23	4295.64	3973.57	3677.19	3379.62
90.0	5221.81	5044.94	4881.81	4629.65	4308.78	4065.59	3769.81	3355.13	3086.83
135.0	5286.34	5180.58	4978.61	4773.06	4546.60	4213.77	3926.96	3633.57	3333.61
180.0	5263.63	5137.55	4976.22	4713.91	4475.49	4204.81	3918.60	3548.13	3245.18
225.0	5288.73	5328.17	5298.89	5198.50	5034.78	4839.98	4606.35	4279.50	4001.65
270.0	5221.81	5309.64	5340.71	5292.31	5187.15	5034.78	4779.04	4536.44	4271.73
315.0	5286.34	5334.74	5310.24	5220.61	5089.75	4883.01	4662.52	4368.53	4053.64
360.0	5252.28	5318.61	5307.25	5236.15	5092.74	4896.75	4679.25	4394.23	4121.16

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3791.92	3452.52	3147.19	2890.25	2496.48	2226.39	2005.31	1698.18	1503.38
45.0	3001.39	2702.62	2420.59	2123.62	1856.52	1650.97	1450.20	1275.13	1141.28
90.0	2785.08	2397.88	2170.23	1933.01	1695.79	1488.44	1284.09	1187.05	1047.29
135.0	2956.57	2660.20	2382.95	2061.48	1832.62	1634.24	1438.25	1270.94	1138.29
180.0	2947.01	2581.33	2311.24	2062.07	1807.53	1587.04	1417.34	1179.64	1114.87
225.0	3709.46	3336.00	3036.64	2743.26	2424.77	2129.00	1893.57	1658.14	1473.51
270.0	3919.79	3625.21	3318.68	2984.06	2657.21	2381.75	2086.57	1823.66	1615.12
315.0	3756.07	3415.48	3074.88	2771.94	2490.50	2155.29	1911.50	1699.97	1484.86
360.0	3791.92	3452.52	3147.19	2890.25	2496.48	2226.39	2005.31	1698.18	1503.38

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1313.37	1174.14	1042.69	951.27	829.97	745.72	674.01	580.80	502.52
45.0	1008.03	902.27	797.10	709.86	631.59	559.29	464.28	390.19	323.26
90.0	924.62	827.22	733.83	647.90	570.64	485.55	413.07	332.11	260.58
135.0	1006.84	900.48	803.68	715.24	630.99	547.34	460.69	384.81	321.47
180.0	986.04	872.69	786.29	703.29	617.90	542.26	465.83	373.58	305.28
225.0	1177.25	1131.78	1031.99	918.82	806.07	742.79	670.13	563.89	495.89
270.0	1414.95	1265.57	1120.96	997.87	899.28	809.65	720.62	648.32	570.64
315.0	1178.15	1161.66	1030.98	916.37	823.10	735.62	665.47	580.62	495.05
360.0	1313.37	1174.14	1042.69	951.27	829.97	745.72	674.01	580.80	502.52

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	426.64	333.42	308.32	209.37	148.61	109.77	80.37	59.51	52.52
45.0	266.20	187.98	140.48	105.34	71.94	58.56	54.02	49.83	47.38
90.0	203.94	155.30	107.38	78.99	63.76	56.41	52.64	50.01	46.91
135.0	227.54	174.24	129.31	92.44	69.19	59.87	55.09	51.39	48.70
180.0	242.18	179.62	128.23	94.89	70.27	59.33	54.91	51.15	48.52
225.0	419.88	336.95	262.14	204.18	148.84	106.06	77.38	59.99	53.72
270.0	469.06	391.98	315.50	267.57	179.86	133.31	93.45	65.79	54.49
315.0	419.70	343.28	256.94	197.90	150.04	103.07	75.53	58.98	50.31
360.0	426.64	333.42	308.32	209.37	148.61	109.77	80.37	59.51	52.52

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	48.82	45.95	43.26	40.63	38.30	35.97	33.34	31.31	29.34
45.0	44.75	42.01	39.50	36.99	34.18	31.97	29.40	27.25	25.63
90.0	43.80	41.53	38.90	35.79	33.52	31.07	28.80	27.01	24.74
135.0	45.23	42.54	39.97	36.69	34.48	32.15	29.40	27.55	25.69
180.0	45.17	42.36	40.15	36.69	34.12	31.73	29.58	27.31	25.45
225.0	49.36	46.73	44.22	41.23	38.96	36.45	33.88	31.43	29.22
270.0	49.06	46.07	43.50	40.93	38.60	36.81	33.88	31.91	29.88
315.0	46.61	44.22	41.53	39.02	37.17	34.48	32.51	30.35	28.26
360.0	48.82	45.95	43.26	40.63	38.30	35.97	33.34	31.31	29.34

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	27.31	25.51	23.84	21.99	20.38	18.94	17.75	16.55	15.36
45.0	23.54	21.69	20.44	19.12	17.33	16.31	15.24	14.04	13.27
90.0	22.95	21.57	19.78	18.28	17.33	15.89	14.82	13.92	13.38
135.0	23.24	21.87	20.50	18.76	17.51	16.37	15.00	14.04	13.38
180.0	23.48	21.87	20.20	18.70	17.51	16.13	14.94	13.98	13.32
225.0	27.25	25.69	23.12	21.51	20.38	18.52	17.27	16.31	15.00
270.0	27.61	25.99	24.44	22.29	20.79	19.54	17.93	16.79	15.72
315.0	26.59	24.98	22.65	21.21	19.96	18.28	17.21	16.19	14.94
360.0	27.31	25.51	23.84	21.99	20.38	18.94	17.75	16.55	15.36

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	14.46	13.62	13.03	12.43	11.89	11.47	11.05	10.70	10.40
45.0	12.73	12.07	11.53	11.17	10.70	10.34	10.10	9.74	9.50
90.0	12.61	12.13	11.59	11.17	10.76	10.46	10.16	9.80	9.56
135.0	12.73	12.13	11.65	11.11	10.82	10.46	10.16	9.86	9.62
180.0	12.67	12.07	11.59	11.17	10.76	10.40	10.16	9.80	9.56
225.0	13.92	13.27	12.61	12.01	11.41	10.99	10.64	10.28	9.98
270.0	14.58	13.68	13.03	12.43	11.95	11.47	10.93	10.58	10.28
315.0	14.10	13.44	12.79	12.25	11.71	11.23	10.93	10.58	10.22
360.0	14.46	13.62	13.03	12.43	11.89	11.47	11.05	10.70	10.40

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	10.10	9.80	9.56	9.38	9.08	8.84	8.54	8.43	8.19
45.0	9.26	8.96	8.72	8.54	8.25	8.01	7.89	7.65	7.41
90.0	9.26	9.02	8.78	8.54	8.37	8.19	7.95	7.71	7.53
135.0	9.38	9.08	8.84	8.60	8.37	8.19	7.95	7.71	7.53
180.0	9.32	9.02	8.78	8.60	8.31	8.19	7.95	7.71	7.53
225.0	9.74	9.50	9.26	9.02	8.78	8.48	8.25	8.07	7.89
270.0	9.98	9.74	9.50	9.32	9.08	8.90	8.66	8.43	8.19
315.0	9.98	9.74	9.50	9.32	9.08	8.78	8.54	8.31	8.13
360.0	10.10	9.80	9.56	9.38	9.08	8.84	8.54	8.43	8.19

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.95	7.71	7.47	7.29	7.05	6.93	6.69	6.45	6.33
45.0	7.23	6.99	6.87	6.63	6.45	6.21	6.09	5.92	5.80
90.0	7.29	7.11	6.93	6.81	6.69	6.57	6.39	6.27	6.21
135.0	7.35	7.17	6.99	6.81	6.63	6.45	6.27	6.09	5.92
180.0	7.29	7.05	6.93	6.81	6.51	6.39	6.21	6.09	5.92
225.0	7.71	7.41	7.23	7.05	6.87	6.63	6.51	6.33	6.15
270.0	8.01	7.83	7.59	7.41	7.17	6.99	6.81	6.63	6.57
315.0	7.89	7.71	7.47	7.29	7.05	6.87	6.69	6.57	6.39
360.0	7.95	7.71	7.47	7.29	7.05	6.93	6.69	6.45	6.33

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.21	6.04	5.92	5.80	5.68	5.56	5.44	5.32	5.20
45.0	5.68	5.56	5.44	5.32	5.26	5.14	5.02	4.96	4.90
90.0	6.21	6.45	7.05	5.38	5.26	5.14	5.02	4.96	4.96
135.0	5.80	5.68	5.56	5.50	5.38	5.20	5.08	5.02	5.02
180.0	5.80	5.68	5.62	5.50	5.32	5.20	5.14	5.02	4.96
225.0	6.04	5.98	5.80	5.74	5.68	5.56	5.38	5.20	5.08
270.0	6.45	6.33	6.21	6.09	5.98	5.80	5.62	5.38	5.26
315.0	6.21	6.09	5.98	5.92	5.80	5.68	5.50	5.38	5.20
360.0	6.21	6.04	5.92	5.80	5.68	5.56	5.44	5.32	5.20

Intensity data(cd)

C/γ(°)	90.0
0.0	5.08
45.0	4.90
90.0	4.96
135.0	5.02
180.0	4.96
225.0	4.96
270.0	5.08
315.0	5.08
360.0	5.08