ZhongShan HaoXiang Lighting CO.,LTD
Http://www.diluce.cc
Email:haoxiang88@vip.sina.com
Tel:+86-760-22253325 Fax:+86-760-22287069
Address:12 Wanfu Road Xinglong industrial area,Jiu Zhou ji,Xiaolan town,Zhongshan City,China.

HX-DA616R-40090

LumCAT: HX-DA616R-40090
Report No:
Test No:
LampCAT: 2835 12C12B 40090
Lamp flux(lm): 2522.0
Number of Lamps: 1
Length(mm): -106
Phm Type: C

Luminaire: HX-DA616R
Voltage(V): 230.900
Current(A): 0.099
Power (W): 21.700
PF: 0.945
Ballast type: OSRAM OTFIT 25/220-240/600CS
Width(mm): -106
Height(mm): 0

Photometric Results

Lumens(lm): 1830.27
Efficiency(%): 72.57%
Lumens(lm)/Power(W): 84.34
Central intensity(cd): 761.716
Maximum intensity(cd): 768.746
Angle of maximum intensity: C=30.0 γ=1.0
Beam Angle(50%Imax): [H]Left=51.1 Right=48.0
[V]Left=52.4 Right=46.9
Field angle(10%Imax): [H]Left=76.4 Right=73.3
[V]Left=77.4 Right=72.1
Maximum s/h: C0_180=1.20 C90_270=1.20
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 72.57%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 84.404%

Equipment: GMS-1980
Temperature(°C): 25.0
Date: 2023-9-19
Humidity(%): 65.3%
Operator: MinLi Ke
Distance(m): 7.27

HX-DA616R-40090

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	763.716	.000	.000	.000%	.000%
1.0	763.548	.731	.731	.029%	.029%
2.0	763.011	2.191	2.922	.087%	.116%
3.0	762.117	3.648	6.569	.145%	.260%
4.0	760.813	5.098	11.667	.202%	.463%
5.0	759.254	6.539	18.206	.259%	.722%
6.0	757.294	7.970	26.176	.316%	1.038%
7.0	755.004	9.387	35.563	.372%	1.410%
8.0	752.348	10.788	46.351	.428%	1.838%
9.0	749.392	12.171	58.522	.483%	2.320%
10.0	746.010	13.533	72.055	.537%	2.857%
11.0	742.363	14.872	86.926	.590%	3.447%
12.0	738.236	16.185	103.112	.642%	4.088%
13.0	733.898	17.471	120.582	.693%	4.781%
14.0	729.216	18.728	139.310	.743%	5.524%
15.0	724.089	19.952	159.261	.791%	6.315%
16.0	718.813	21.143	180.404	.838%	7.153%
17.0	712.871	22.295	202.699	.884%	8.037%
18.0	706.925	23.409	226.108	.928%	8.965%
19.0	700.345	24.484	250.592	.971%	9.936%
20.0	693.492	25.511	276.103	1.012%	10.948%
21.0	686.128	26.491	302.595	1.050%	11.998%
22.0	678.794	27.429	330.023	1.088%	13.086%
23.0	670.924	28.321	358.344	1.123%	14.209%
24.0	662.626	29.156	387.500	1.156%	15.365%
25.0	654.028	29.938	417.438	1.187%	16.552%
26.0	645.431	30.674	448.112	1.216%	17.768%
27.0	636.604	31.365	479.477	1.244%	19.012%
28.0	627.188	31.997	511.474	1.269%	20.280%
29.0	617.789	32.572	544.046	1.292%	21.572%
30.0	607.826	33.091	577.137	1.312%	22.884%
31.0	598.211	33.562	610.700	1.331%	24.215%
32.0	587.632	33.973	644.673	1.347%	25.562%
33.0	577.590	34.328	679.000	1.361%	26.923%
34.0	566.874	34.635	713.635	1.373%	28.296%
35.0	556.013	34.873	748.508	1.383%	29.679%
36.0	545.098	35.060	783.567	1.390%	31.069%
37.0	533.973	35.193	818.761	1.395%	32.465%

HX-DA616R-40090

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	522.966	35.279	854.040	1.399%	33.864%
39.0	511.299	35.302	889.342	1.400%	35.263%
40.0	499.958	35.269	924.611	1.398%	36.662%
41.0	487.841	35.175	959.786	1.395%	38.057%
42.0	476.222	35.026	994.812	1.389%	39.445%
43.0	463.881	34.824	1029.637	1.381%	40.826%
44.0	452.223	34.576	1064.213	1.371%	42.197%
45.0	439.754	34.280	1098.493	1.359%	43.556%
46.0	427.800	33.928	1132.421	1.345%	44.902%
47.0	415.274	33.531	1165.952	1.330%	46.231%
48.0	403.171	33.086	1199.038	1.312%	47.543%
49.0	390.812	32.605	1231.643	1.293%	48.836%
50.0	377.872	32.049	1263.692	1.271%	50.107%
51.0	365.584	31.454	1295.147	1.247%	51.354%
52.0	352.419	30.810	1325.957	1.222%	52.576%
53.0	340.104	30.125	1356.081	1.194%	53.770%
54.0	327.076	29.407	1385.488	1.166%	54.936%
55.0	314.616	28.644	1414.132	1.136%	56.072%
56.0	301.671	27.848	1441.980	1.104%	57.176%
57.0	289.268	27.019	1468.999	1.071%	58.247%
58.0	276.535	26.165	1495.164	1.037%	59.285%
59.0	264.401	25.289	1520.453	1.003%	60.288%
60.0	251.404	24.368	1544.822	.966%	61.254%
61.0	239.058	23.406	1568.227	.928%	62.182%
62.0	226.801	22.448	1590.675	.890%	63.072%
63.0	213.883	21.433	1612.108	.850%	63.922%
64.0	201.726	20.394	1632.502	.809%	64.730%
65.0	188.927	19.333	1651.835	.767%	65.497%
66.0	177.048	18.260	1670.095	.724%	66.221%
67.0	164.602	17.179	1687.274	.681%	66.902%
68.0	152.978	16.088	1703.361	.638%	67.540%
69.0	140.888	14.992	1718.353	.594%	68.135%
70.0	129.291	13.876	1732.229	.550%	68.685%
71.0	117.734	12.768	1744.997	.506%	69.191%
72.0	106.384	11.653	1756.650	.462%	69.653%
73.0	95.514	10.558	1767.208	.419%	70.072%
74.0	84.516	9.465	1776.672	.375%	70.447%
75.0	74.166	8.384	1785.057	.332%	70.779%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	64.071	7.338	1792.395	.291%	71.070%
77.0	55.007	6.349	1798.743	.252%	71.322%
78.0	46.339	5.425	1804.168	.215%	71.537%
79.0	39.063	4.589	1808.757	.182%	71.719%
80.0	32.668	3.867	1812.624	.153%	71.872%
81.0	27.770	3.268	1815.892	.130%	72.002%
82.0	24.167	2.816	1818.709	.112%	72.114%
83.0	21.234	2.468	1821.177	.098%	72.212%
84.0	18.450	2.162	1823.339	.086%	72.297%
85.0	15.680	1.863	1825.202	.074%	72.371%
86.0	12.940	1.564	1826.766	.062%	72.433%
87.0	10.324	1.273	1828.039	.050%	72.484%
88.0	7.761	.991	1829.030	.039%	72.523%
89.0	5.365	.719	1829.749	.029%	72.552%
90.0	4.083	.518	1830.267	.021%	72.572%

Zonal flux distribution table

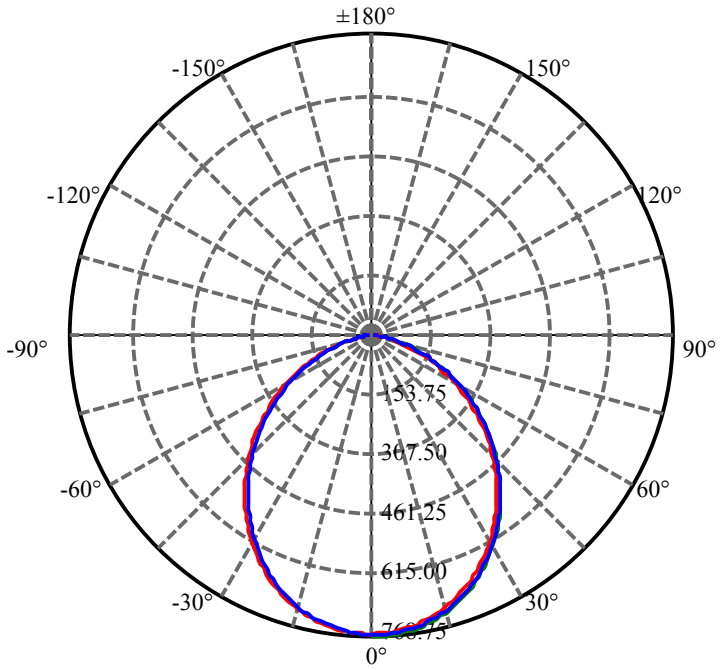
ZONAL LUMEN SUMMARY

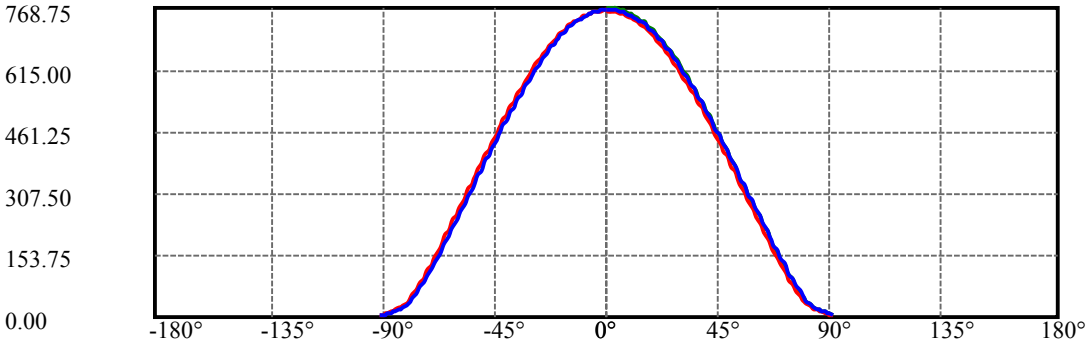
Zone	Lumens	%Lamp	%Fixt
0-30	577.14	22.88%	31.53%
0-40	924.61	36.66%	50.52%
0-60	1544.82	61.25%	84.40%
0-90	1829.75	72.55%	99.97%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-180	1830.27	72.57%	100.00%

ZONAL LUMEN SUMMARY

0-10	72.05
10-20	204.05
20-30	301.03
30-40	347.47
40-50	339.08
50-60	281.13
60-70	187.41
70-80	80.40
80-90	17.13
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]





C30(Max):

C0/C180:

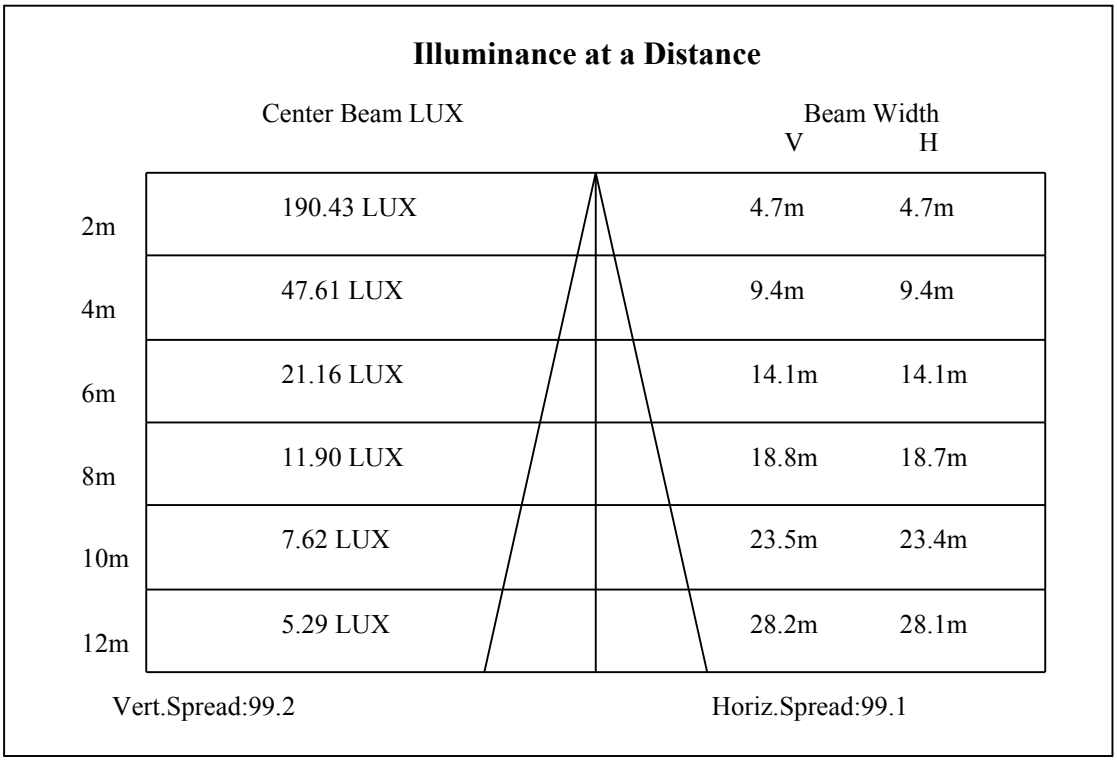
C90/C270:

Equipment: GMS-1980
Temperature(°C): 25.0

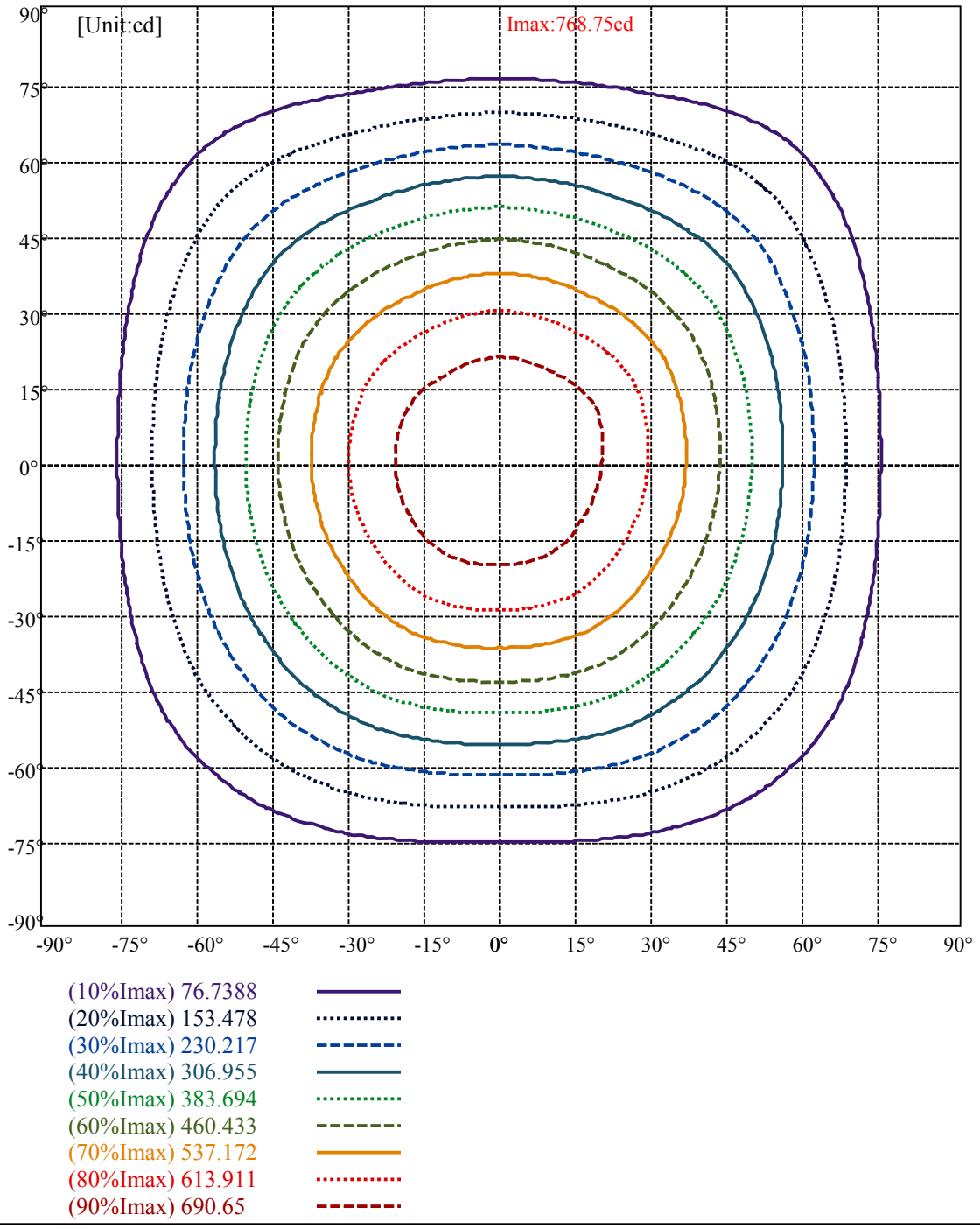
Date: 2023-9-19
Humidity(%): 65.3%

Operator: MinLi Ke
Distance(m): 7.27

Lux distance Curve



ISO-Intensity(V-H)



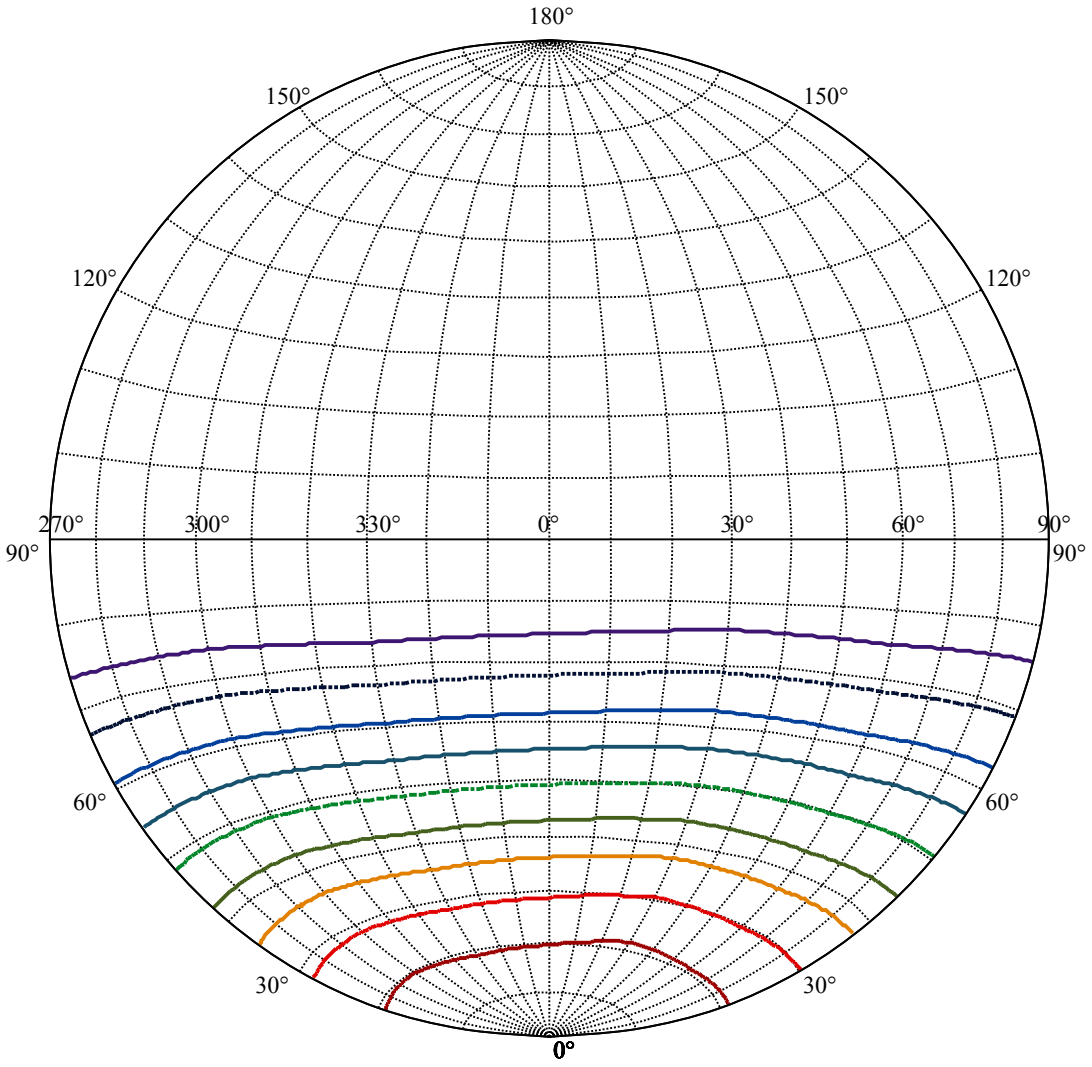
(10%Imax) 76.7388
(20%Imax) 153.478
(30%Imax) 230.217
(40%Imax) 306.955
(50%Imax) 383.694
(60%Imax) 460.433
(70%Imax) 537.172
(80%Imax) 613.911
(90%Imax) 690.65

Equipment: GMS-1980
Temperature(°C): 25.0

Date: 2023-9-19
Humidity(%): 65.3%

Operator: MinLi Ke
Distance(m): 7.27

ISO candela diagram on circular web



Imax:768.75cd

(10%Imax) 76.8745
(20%Imax) 153.749
(30%Imax) 230.624
(40%Imax) 307.498
(50%Imax) 384.373
(60%Imax) 461.247
(70%Imax) 538.122
(80%Imax) 614.996
(90%Imax) 691.871

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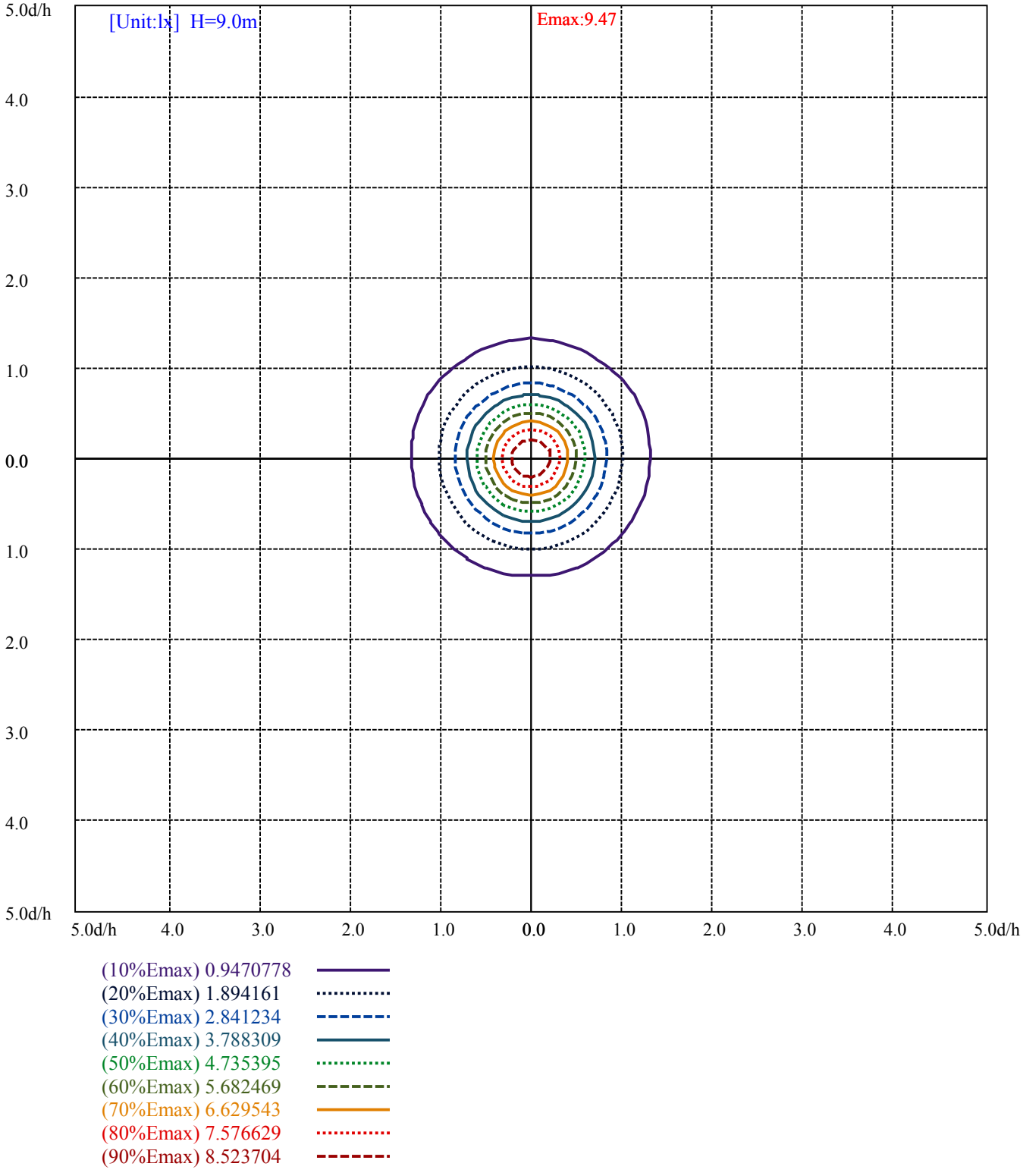
ISO illuminance diagram

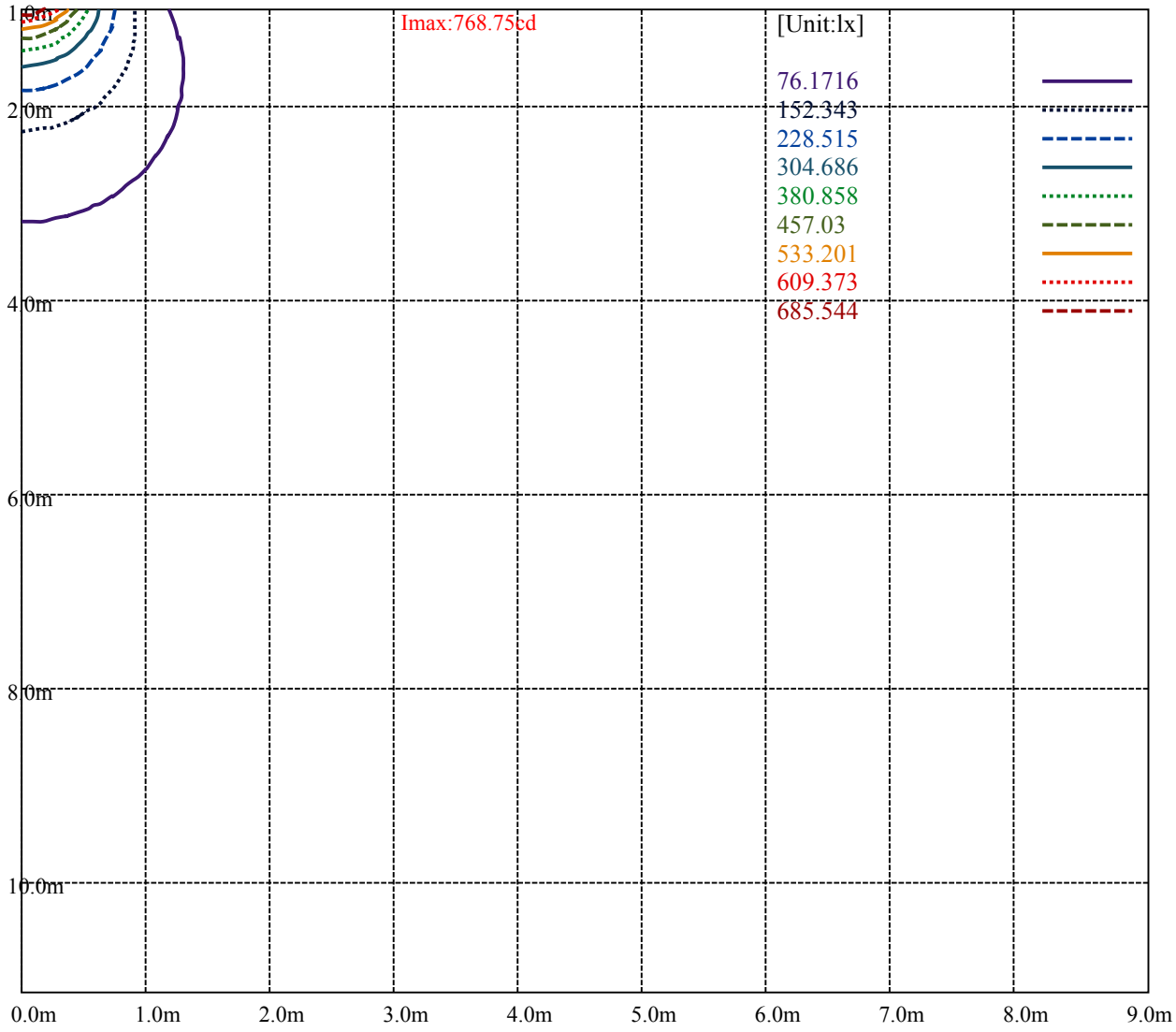


Equipment: GMS-1980
Temperature(°C): 25.0

Date: 2023-9-19
Humidity(%): 65.3%

Operator: MinLi Ke
Distance(m): 7.27

Space ISO Lux diagram



Equipment: GMS-1980
Temperature(°C): 25.0

Date: 2023-9-19
Humidity(%): 65.3%

Operator: MinLi Ke
Distance(m): 7.27

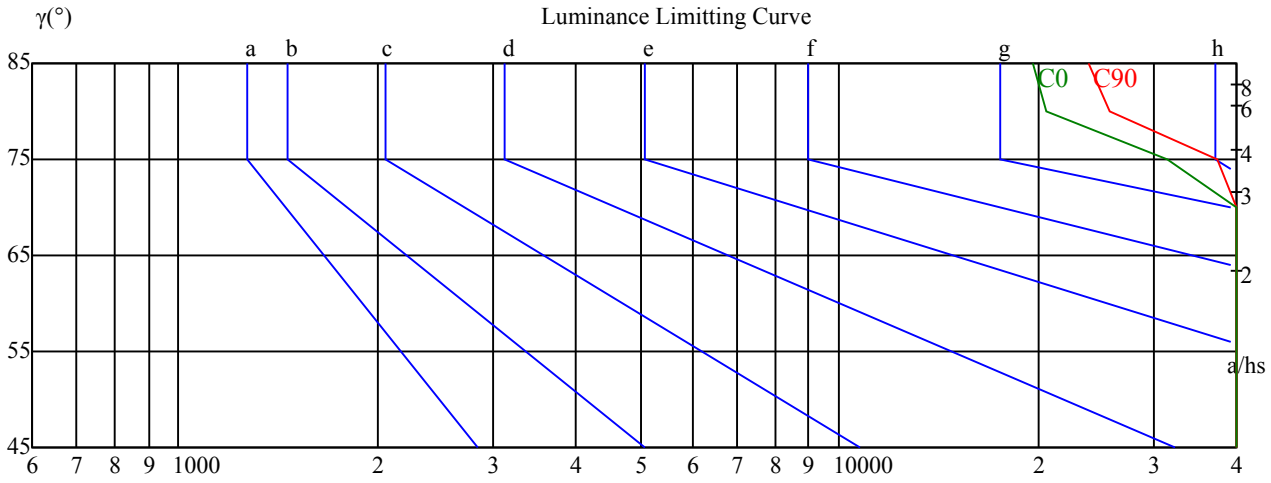
Luminance Limitting Curve(no luminous side)

Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	69937	65949	61575	56310	50026	42009	31517	20556	19722
C45	0	0	0	0	0	0	0	0	0
C90	72351	68810	64677	60083	54391	47175	37464	25730	23845

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



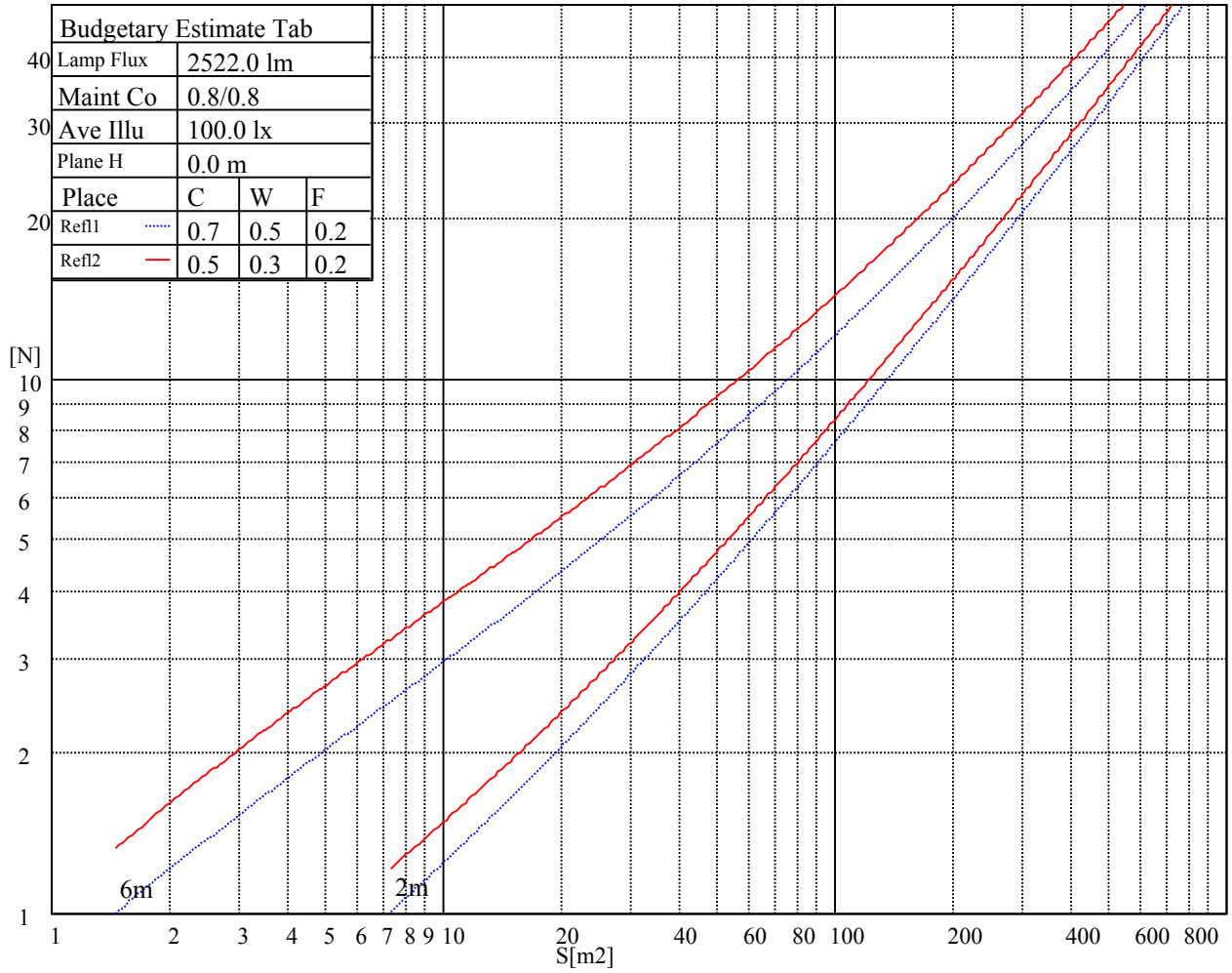
Equipment: GMS-1980
Temperature(°C): 25.0

Date: 2023-9-19
Humidity(%): 65.3%

Operator: MinLi Ke
Distance(m): 7.27

Illuminatin assessment acconding UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	23.7	25.0	24.0	25.3	25.5	23.8	25.1	24.1	25.3	25.5
	3H	24.8	26.0	25.2	26.3	26.6	25.0	26.1	25.3	26.4	26.7
	4H	25.0	26.0	25.4	26.3	26.7	25.2	26.2	25.6	26.5	26.9
	6H	25.2	26.2	25.6	26.5	26.9	25.5	26.4	25.8	26.8	27.1
	8H	25.3	26.3	25.6	26.6	26.9	25.5	26.5	25.9	26.8	27.2
	12H	25.1	25.9	25.6	26.3	26.7	25.4	26.1	25.8	26.5	26.9
4H	2H	24.1	25.1	24.5	25.4	25.8	24.1	25.1	24.5	25.5	25.8
	3H	25.4	26.2	25.9	26.5	27.0	25.5	26.2	25.9	26.6	27.0
	4H	25.9	26.6	26.3	27.0	27.4	26.0	26.7	26.4	27.1	27.5
	6H	26.2	26.9	26.6	27.3	27.7	26.3	27.0	26.7	27.4	27.8
	8H	26.1	26.5	26.6	27.0	27.5	26.2	26.7	26.7	27.1	27.6
	12H	26.1	26.6	26.6	27.0	27.5	26.3	26.7	26.8	27.2	27.7
8H	4H	26.0	26.4	26.5	26.9	27.4	26.1	26.5	26.6	27.0	27.5
	6H	26.3	26.7	26.8	27.2	27.7	26.5	26.9	26.9	27.3	27.8
	8H	26.4	26.9	26.9	27.3	27.8	26.6	27.0	27.1	27.5	28.0
	12H	26.5	27.0	27.0	27.4	27.9	26.7	27.1	27.2	27.6	28.1
12H	4H	26.0	26.4	26.5	26.9	27.4	26.1	26.5	26.6	27.0	27.5
	6H	26.4	26.8	26.9	27.2	27.8	26.5	26.9	27.0	27.4	27.9
	8H	26.5	26.9	27.0	27.4	27.9	26.6	27.0	27.1	27.5	28.0
Variation with the observer position at spacings:											
S = 1.0H		0.4/-0.4					0.4/-0.4				
S = 1.5H		0.7/-0.9					0.7/-0.8				
S = 2.0H		1.4/-1.4					1.4/-1.2				
Standard tables:		BK3					BK3				
Uncorrected UGR		7.3					7.5				
According 1000lm											

Budgetary Estimate Table



Equipment: GMS-1980 Date: 2023-9-19 Operator: MinLi Ke
Temperature(°C): 25.0 Humidity(%): 65.3% Distance(m): 7.27

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	0.86	0.86	0.86	0.84	0.84	0.84	0.81	0.81	0.81	0.77	0.77	0.77	0.74	0.74	0.74	0.73
1	0.77	0.74	0.71	0.75	0.72	0.70	0.72	0.70	0.68	0.69	0.67	0.66	0.66	0.65	0.64	0.62
2	0.67	0.63	0.59	0.66	0.62	0.58	0.64	0.60	0.57	0.61	0.58	0.56	0.59	0.57	0.54	0.53
3	0.60	0.54	0.50	0.59	0.53	0.49	0.56	0.52	0.48	0.55	0.51	0.48	0.53	0.50	0.47	0.45
4	0.53	0.47	0.43	0.52	0.47	0.42	0.51	0.46	0.42	0.49	0.45	0.41	0.47	0.44	0.41	0.39
5	0.48	0.42	0.37	0.47	0.41	0.37	0.46	0.40	0.36	0.44	0.40	0.36	0.43	0.39	0.36	0.34
6	0.43	0.37	0.33	0.43	0.37	0.32	0.41	0.36	0.32	0.40	0.35	0.32	0.39	0.35	0.32	0.30
7	0.39	0.33	0.29	0.39	0.33	0.29	0.38	0.32	0.29	0.37	0.32	0.28	0.36	0.31	0.28	0.27
8	0.36	0.30	0.26	0.35	0.30	0.26	0.35	0.29	0.26	0.34	0.29	0.26	0.33	0.29	0.25	0.24
9	0.33	0.27	0.23	0.33	0.27	0.23	0.32	0.27	0.23	0.31	0.26	0.23	0.30	0.26	0.23	0.22
10	0.31	0.25	0.21	0.30	0.25	0.21	0.30	0.25	0.21	0.29	0.24	0.21	0.28	0.24	0.21	0.20

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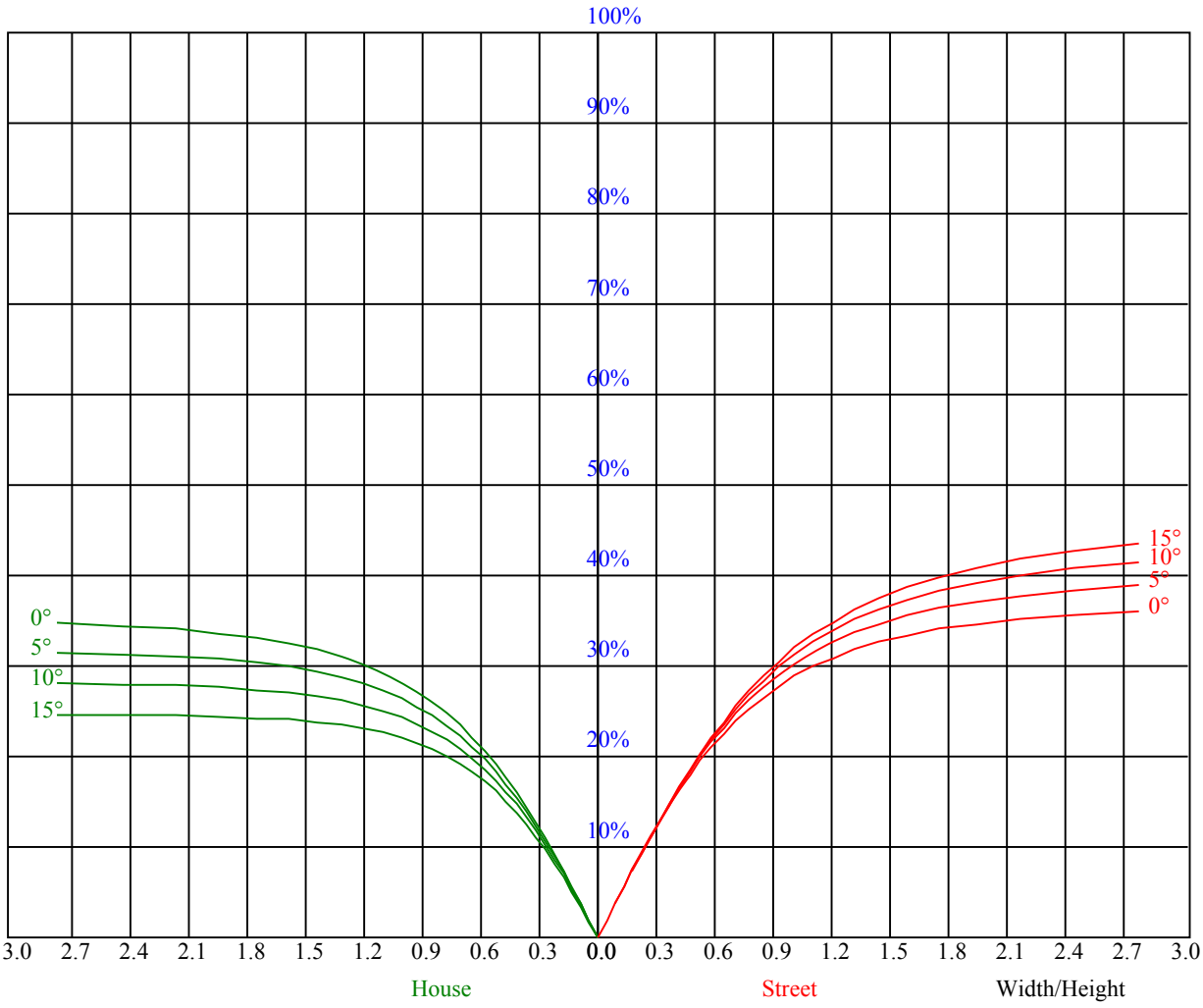
Coefficient Utilization Curve



Equipment: GMS-1980
Temperature(°C): 25.0

Date: 2023-9-19
Humidity(%): 65.3%

Operator: MinLi Ke
Distance(m): 7.27

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	761.72	761.45	760.76	759.76	758.49	756.70	754.58	752.31	749.45
30.0	768.48	768.75	768.43	767.79	766.84	765.42	763.94	761.66	759.39
60.0	765.79	765.57	765.31	764.41	763.14	761.82	759.87	757.54	755.11
90.0	763.41	763.57	763.41	762.83	761.93	760.39	758.86	757.01	754.58
120.0	762.14	762.03	761.66	761.03	759.92	758.39	756.43	754.37	751.73
150.0	760.76	760.98	760.76	760.18	759.28	758.17	756.75	754.85	752.57
180.0	761.72	761.72	761.35	760.50	759.28	757.96	756.17	754.11	751.52
210.0	768.48	768.11	767.05	766.05	764.36	762.46	760.39	757.65	754.90
240.0	765.79	765.47	764.83	763.88	762.46	760.82	758.60	756.11	753.31
270.0	763.41	762.83	761.98	760.76	758.91	757.17	754.69	752.20	749.08
300.0	762.14	761.98	761.29	760.02	758.44	756.75	754.79	752.52	749.61
330.0	760.76	760.13	759.28	758.17	756.70	755.00	752.47	749.72	746.92
360.0	761.72	761.45	760.76	759.76	758.49	756.70	754.58	752.31	749.45

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	746.65	743.01	739.04	735.24	730.48	725.99	720.49	715.42	709.18
30.0	756.59	753.47	750.25	746.28	742.37	737.56	733.12	727.78	722.13
60.0	752.20	748.61	745.28	741.05	737.03	732.17	726.99	722.02	716.21
90.0	751.99	748.71	745.65	741.84	737.62	733.55	728.52	723.77	718.22
120.0	749.08	745.65	742.32	738.20	733.60	729.42	724.40	719.59	713.73
150.0	750.09	747.39	743.85	740.42	736.19	731.64	726.89	722.23	716.84
180.0	748.82	745.33	741.58	737.30	733.28	728.47	723.98	718.59	713.41
210.0	751.41	748.03	743.85	739.31	734.44	729.69	724.72	718.75	712.30
240.0	750.51	746.92	743.32	738.83	734.60	729.48	724.08	718.91	712.67
270.0	745.54	742.11	737.88	733.49	729.16	724.51	718.69	712.72	706.22
300.0	746.39	743.27	739.36	735.45	730.80	726.20	720.76	714.89	708.76
330.0	743.43	739.62	735.98	731.43	727.20	721.92	716.42	711.08	704.79
360.0	746.65	743.01	739.04	735.24	730.48	725.99	720.49	715.42	709.18

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	702.84	696.02	689.62	682.12	674.93	667.53	659.02	650.09	640.79
30.0	716.05	710.24	703.16	696.71	689.89	682.01	673.45	664.78	656.86
60.0	710.55	703.68	697.34	689.68	681.70	673.45	665.84	656.96	648.93
90.0	712.30	706.43	699.72	692.37	685.66	678.58	670.49	661.98	653.05
120.0	707.44	701.46	694.49	686.98	680.01	671.81	664.31	655.69	646.97
150.0	711.72	705.37	698.61	692.16	684.60	677.68	669.54	661.98	653.26
180.0	707.17	700.51	694.17	686.72	679.79	671.60	663.15	654.53	646.71
210.0	706.17	699.09	691.42	684.34	676.09	668.43	659.71	650.51	642.16
240.0	706.85	699.83	692.58	685.08	677.84	670.28	661.61	653.58	644.33
270.0	700.30	693.06	686.29	678.37	671.07	662.56	653.68	644.49	636.03
300.0	702.89	696.81	689.57	682.07	675.09	666.74	658.07	650.14	640.89
330.0	698.82	691.63	684.92	676.94	668.85	660.40	652.63	643.59	635.19
360.0	702.84	696.02	689.62	682.12	674.93	667.53	659.02	650.09	640.79

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	632.28	622.40	613.52	603.47	594.44	584.13	573.24	563.31	552.00
30.0	647.66	639.10	629.43	619.22	609.98	599.30	589.84	578.90	568.96
60.0	640.79	631.06	621.02	610.66	601.41	590.68	580.91	569.70	558.39
90.0	644.91	635.56	626.99	616.90	607.81	597.50	586.93	577.26	566.16
120.0	638.83	629.32	620.49	610.19	600.99	590.47	579.58	568.54	558.66
150.0	644.07	634.76	626.15	616.21	607.28	596.97	587.67	576.78	565.84
180.0	638.52	629.11	620.23	610.03	599.62	589.10	579.37	568.22	558.29
210.0	632.33	623.56	613.36	604.06	593.38	582.44	571.45	561.40	549.99
240.0	634.66	624.72	615.84	605.54	596.34	585.87	576.20	565.05	553.53
270.0	627.36	617.43	607.28	598.03	587.35	576.41	566.58	555.27	545.12
300.0	632.38	622.61	612.62	603.58	593.33	582.91	573.24	563.31	551.78
330.0	625.46	616.63	606.54	596.02	586.61	575.78	566.05	554.74	543.43
360.0	632.28	622.40	613.52	603.47	594.44	584.13	573.24	563.31	552.00

Intensity data(cd)

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	541.64	530.06	518.28	506.17	495.44	483.39	472.56	460.30	449.14
30.0	557.65	545.97	534.18	523.61	511.51	500.36	487.78	476.68	464.15
60.0	548.24	536.83	526.41	514.36	503.53	490.90	478.37	465.74	454.43
90.0	556.12	544.75	533.18	522.66	510.72	498.46	487.41	474.94	463.94
120.0	547.29	537.36	525.83	515.26	503.05	490.47	479.53	467.06	455.91
150.0	555.96	544.75	534.77	523.24	511.35	500.46	488.04	475.73	464.68
180.0	547.08	537.04	525.52	513.57	502.63	490.05	479.11	466.64	454.06
210.0	538.47	527.89	517.22	505.01	494.17	481.75	469.18	456.49	445.13
240.0	543.12	531.44	520.71	508.60	496.39	484.24	473.40	461.09	449.88
270.0	533.50	521.66	510.88	498.77	487.94	475.62	464.37	451.73	438.94
300.0	540.05	528.37	517.69	505.54	494.76	482.71	471.82	459.66	447.14
330.0	532.07	521.55	510.93	498.77	487.99	475.68	463.10	450.52	439.26
360.0	541.64	530.06	518.28	506.17	495.44	483.39	472.56	460.30	449.14

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	436.41	423.62	412.04	398.93	387.31	374.09	360.93	349.30	336.30
30.0	451.52	440.26	427.47	415.95	402.90	389.53	377.69	364.26	350.84
60.0	441.59	430.33	417.54	406.23	393.23	380.07	368.12	354.59	342.65
90.0	451.47	438.94	427.69	414.90	403.32	390.32	378.64	365.32	351.95
120.0	443.28	430.59	417.86	406.60	395.18	382.07	370.23	356.70	343.28
150.0	453.58	440.95	428.21	415.42	403.85	390.74	378.96	365.69	353.85
180.0	441.27	429.96	417.22	405.86	394.34	381.12	367.70	354.27	342.43
210.0	432.23	420.76	407.65	396.08	382.76	369.49	357.71	344.39	332.55
240.0	437.09	425.62	412.46	399.30	387.62	374.46	362.73	349.57	337.94
270.0	426.21	414.63	401.73	390.05	376.84	365.06	351.79	338.68	326.74
300.0	435.88	422.93	411.30	398.25	385.03	373.35	360.03	346.93	335.30
330.0	426.52	415.00	402.10	390.48	377.37	364.16	352.48	339.32	327.42
360.0	436.41	423.62	412.04	398.93	387.31	374.09	360.93	349.30	336.30

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	323.35	311.67	298.41	286.67	273.30	261.62	248.46	235.35	223.62
30.0	339.00	325.89	314.37	301.16	287.84	276.05	263.00	251.10	238.05
60.0	329.38	316.17	304.43	291.22	278.11	266.80	253.91	242.33	229.22
90.0	338.89	327.37	314.53	302.90	289.85	278.22	265.11	251.90	240.27
120.0	330.17	318.49	305.28	293.44	280.23	268.81	255.81	242.70	231.02
150.0	340.53	327.37	314.37	302.58	290.80	277.53	264.32	252.43	239.21
180.0	329.33	317.59	304.27	290.85	279.12	266.22	253.11	241.38	229.65
210.0	319.23	305.81	292.44	280.60	267.33	255.49	242.17	230.23	217.01
240.0	324.89	311.78	298.51	286.73	274.78	261.57	248.46	235.35	223.73
270.0	313.58	301.68	288.42	275.10	262.04	250.36	237.20	225.47	214.05
300.0	322.35	310.62	297.35	284.03	272.09	258.87	247.25	234.09	222.41
330.0	314.21	300.94	287.68	275.95	262.94	251.26	238.05	226.37	213.37
360.0	323.35	311.67	298.41	286.67	273.30	261.62	248.46	235.35	223.62

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	210.67	197.78	186.57	173.94	162.73	150.26	137.79	126.79	114.69
30.0	226.42	213.42	200.31	187.47	176.16	163.47	152.37	139.90	129.07
60.0	216.12	204.54	191.64	180.18	167.54	156.50	144.02	132.03	120.24
90.0	227.32	215.80	202.85	190.01	177.27	165.96	154.91	142.39	131.45
120.0	217.75	206.18	193.02	180.07	167.23	156.02	143.44	132.56	120.56
150.0	226.00	214.32	201.26	189.74	177.00	164.27	153.17	140.64	129.70
180.0	216.38	203.33	190.16	178.59	165.69	154.54	142.12	131.29	119.45
210.0	204.01	192.23	179.12	167.60	154.86	143.60	131.18	118.92	106.92
240.0	210.78	199.41	186.84	175.58	162.89	150.42	137.84	126.79	116.07
270.0	201.11	188.16	175.37	164.06	151.58	140.59	128.38	117.76	106.13
300.0	209.61	196.77	184.09	172.88	160.30	149.15	136.68	125.74	113.74
330.0	200.42	188.79	175.89	164.48	151.95	140.96	128.75	116.70	104.81
360.0	210.67	197.78	186.57	173.94	162.73	150.26	137.79	126.79	114.69

Intensity data(cd)

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	104.23	92.60	82.61	71.99	62.00	52.75	44.98	37.21	31.50
30.0	116.75	104.97	94.66	83.45	73.84	63.63	54.23	45.66	38.69
60.0	109.78	99.42	87.89	76.80	67.44	57.35	48.20	40.80	33.72
90.0	119.24	107.29	95.72	85.57	74.52	65.22	55.44	46.67	39.43
120.0	109.88	98.20	86.63	76.69	66.01	57.08	47.94	40.59	33.46
150.0	117.44	106.87	95.24	83.88	72.83	63.53	53.86	46.03	38.16
180.0	107.50	97.20	85.62	75.74	65.22	55.18	47.20	39.01	32.29
210.0	96.46	86.26	75.26	64.80	55.07	47.20	39.06	33.09	27.96
240.0	104.23	92.55	82.50	71.88	61.84	53.59	44.92	38.00	31.45
270.0	94.71	84.78	74.05	64.85	55.13	46.46	38.58	32.61	27.43
300.0	101.95	91.59	80.44	71.03	61.20	52.11	43.71	37.05	30.81
330.0	94.45	84.46	73.57	63.32	53.75	45.98	37.95	32.03	27.11
360.0	104.23	92.60	82.61	71.99	62.00	52.75	44.98	37.21	31.50

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	26.74	23.52	20.67	17.86	15.17	12.47	9.88	7.24	5.07
30.0	31.98	27.11	23.57	20.93	18.08	15.38	12.74	9.99	7.56
60.0	28.43	24.68	21.83	19.29	16.44	13.58	10.94	8.56	5.97
90.0	32.61	27.64	23.94	20.93	18.34	15.54	12.95	10.15	7.61
120.0	28.22	24.74	21.99	19.13	16.28	13.69	10.94	8.40	5.87
150.0	32.29	27.11	23.73	20.98	18.08	15.33	12.68	9.88	7.35
180.0	27.43	24.15	21.56	18.76	16.01	13.42	10.73	8.19	5.50
210.0	24.47	21.78	19.03	16.23	13.42	10.57	7.82	5.34	3.44
240.0	26.80	23.52	20.82	17.71	14.96	12.21	9.67	7.03	4.55
270.0	23.89	21.35	18.60	15.96	13.11	10.31	7.93	5.44	3.44
300.0	26.59	23.10	20.45	17.65	15.01	12.26	9.67	7.29	4.60
330.0	23.78	21.30	18.60	15.96	13.27	10.52	7.93	5.60	3.44
360.0	26.74	23.52	20.67	17.86	15.17	12.47	9.88	7.24	5.07

C/γ(°)	90.0
0.0	3.38
30.0	4.97
60.0	4.70
90.0	5.07
120.0	4.60
150.0	4.76
180.0	4.28
210.0	3.44
240.0	3.49
270.0	3.44
300.0	3.44
330.0	3.44
360.0	3.38