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

Nata

Client:
LumCAT: 4-2273-M
Luminaire: 92.70.131.00
Report No:
Test No: GC2019082206
LampCAT: TRIDONIC SLE 13MM G7
Lamp flux(lm): 1702.0
Number of Lamps: 1
Length(mm): 100
Phm Type: C

Voltage(V): 34.9800
Current(A): 0.3980
Power (W): 13.9200
PF: 1.0000
Ballast type: DC
Width(mm): 100
Height(mm): 0

Photometric Results

Lumens(lm): 1564.06, Efficiency(%): 91.90% , Luminous Efficacy(lm/W): 112.36
Central intensity(cd): 21519.840, Maximum intensity(cd): 21519.840
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=10.4
[C90/270]Total=10.4
Field angle(10%Imax): [C0/180]Total=21.0
[C90/270]Total=21.0
Maximum s/h(1/2): C0_180=0.18 C90_270=0.18
Maximum s/h(1/4): C0_180=0.19 C90_270=0.19
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.90%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.609%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	21519.844	0.000	0	.000%	.000%
1.0	20965.078	20.328	20.328	1.194%	1.300%
2.0	19606.641	58.232	78.561	3.421%	5.023%
3.0	17100.984	87.793	166.353	5.158%	10.636%
4.0	14096.391	104.428	270.781	6.136%	17.313%
5.0	11213.648	108.882	379.663	6.397%	24.274%
6.0	8613.281	104.196	483.859	6.122%	30.936%
7.0	6376.008	93.038	576.897	5.466%	36.884%
8.0	4746.445	79.601	656.499	4.677%	41.974%
9.0	3543.469	67.185	723.684	3.947%	46.269%
10.0	2496.867	54.663	778.347	3.212%	49.764%
11.0	1846.673	43.401	821.748	2.550%	52.539%
12.0	1478.363	36.347	858.095	2.136%	54.863%
13.0	1055.313	30.068	888.163	1.767%	56.786%
14.0	909.239	25.146	913.309	1.477%	58.393%
15.0	800.276	23.469	936.778	1.379%	59.894%
16.0	731.398	22.443	959.222	1.319%	61.329%
17.0	690.968	22.150	981.372	1.301%	62.745%
18.0	666.028	22.374	1003.746	1.315%	64.175%
19.0	647.466	22.852	1026.598	1.343%	65.637%
20.0	631.132	23.402	1050	1.375%	67.133%
21.0	616.711	23.961	1073.961	1.408%	68.665%
22.0	602.276	24.496	1098.457	1.439%	70.231%
23.0	589.929	25.016	1123.472	1.470%	71.830%
24.0	577.891	25.533	1149.005	1.500%	73.463%
25.0	568.505	26.067	1175.072	1.532%	75.129%
26.0	560.320	26.646	1201.718	1.566%	76.833%
27.0	552.832	27.234	1228.951	1.600%	78.574%
28.0	544.627	27.785	1256.737	1.633%	80.351%
29.0	537.054	28.300	1285.036	1.663%	82.160%
30.0	529.608	28.800	1313.836	1.692%	84.001%
31.0	520.812	29.232	1343.068	1.717%	85.870%
32.0	510.989	29.560	1372.628	1.737%	87.760%
33.0	492.602	29.566	1402.194	1.737%	89.651%
34.0	453.530	28.633	1430.827	1.682%	91.481%
35.0	392.794	26.284	1457.11	1.544%	93.162%
36.0	328.795	22.976	1480.086	1.350%	94.631%
37.0	240.848	18.579	1498.664	1.092%	95.819%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	155.236	13.221	1511.885	.777%	96.664%
39.0	94.001	8.507	1520.392	.500%	97.208%
40.0	44.016	4.814	1525.206	.283%	97.516%
41.0	23.984	2.421	1527.627	.142%	97.670%
42.0	16.088	1.456	1529.083	.086%	97.763%
43.0	13.514	1.097	1530.18	.064%	97.834%
44.0	11.433	0.942	1531.121	.055%	97.894%
45.0	9.977	0.823	1531.944	.048%	97.946%
46.0	8.895	0.738	1532.682	.043%	97.994%
47.0	8.698	0.700	1533.382	.041%	98.038%
48.0	8.501	0.695	1534.077	.041%	98.083%
49.0	8.346	0.692	1534.769	.041%	98.127%
50.0	8.184	0.689	1535.458	.040%	98.171%
51.0	8.058	0.687	1536.145	.040%	98.215%
52.0	7.910	0.685	1536.83	.040%	98.259%
53.0	7.791	0.683	1537.513	.040%	98.302%
54.0	7.699	0.683	1538.196	.040%	98.346%
55.0	7.601	0.683	1538.879	.040%	98.390%
56.0	7.509	0.683	1539.562	.040%	98.433%
57.0	7.432	0.683	1540.245	.040%	98.477%
58.0	7.369	0.684	1540.929	.040%	98.521%
59.0	7.298	0.686	1541.615	.040%	98.565%
60.0	7.256	0.688	1542.303	.040%	98.609%
61.0	7.193	0.690	1542.992	.041%	98.653%
62.0	7.151	0.691	1543.683	.041%	98.697%
63.0	7.109	0.694	1544.377	.041%	98.741%
64.0	7.066	0.696	1545.072	.041%	98.786%
65.0	7.045	0.698	1545.771	.041%	98.830%
66.0	7.003	0.701	1546.472	.041%	98.875%
67.0	6.989	0.704	1547.175	.041%	98.920%
68.0	6.954	0.706	1547.882	.041%	98.965%
69.0	6.926	0.708	1548.59	.042%	99.011%
70.0	6.919	0.711	1549.301	.042%	99.056%
71.0	6.905	0.714	1550.015	.042%	99.102%
72.0	6.898	0.718	1550.733	.042%	99.148%
73.0	6.884	0.721	1551.454	.042%	99.194%
74.0	6.884	0.724	1552.177	.043%	99.240%
75.0	6.863	0.726	1552.904	.043%	99.286%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.877	0.729	1553.633	.043%	99.333%
77.0	6.884	0.734	1554.367	.043%	99.380%
78.0	6.926	0.739	1555.106	.043%	99.427%
79.0	6.954	0.746	1555.852	.044%	99.475%
80.0	6.975	0.751	1556.603	.044%	99.523%
81.0	6.926	0.752	1557.354	.044%	99.571%
82.0	6.905	0.750	1558.104	.044%	99.619%
83.0	6.863	0.748	1558.853	.044%	99.667%
84.0	6.870	0.748	1559.601	.044%	99.715%
85.0	6.848	0.749	1560.349	.044%	99.762%
86.0	6.820	0.747	1561.097	.044%	99.810%
87.0	6.792	0.745	1561.842	.044%	99.858%
88.0	6.778	0.743	1562.585	.044%	99.905%
89.0	6.736	0.741	1563.326	.044%	99.953%
90.0	6.736	0.739	1564.064	.043%	100.000%

Zonal flux distribution table

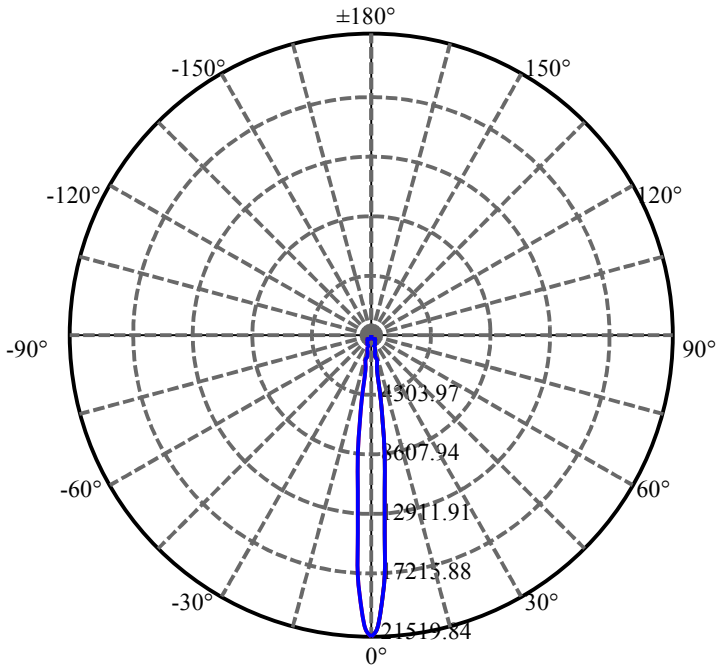
ZONAL LUMEN SUMMARY

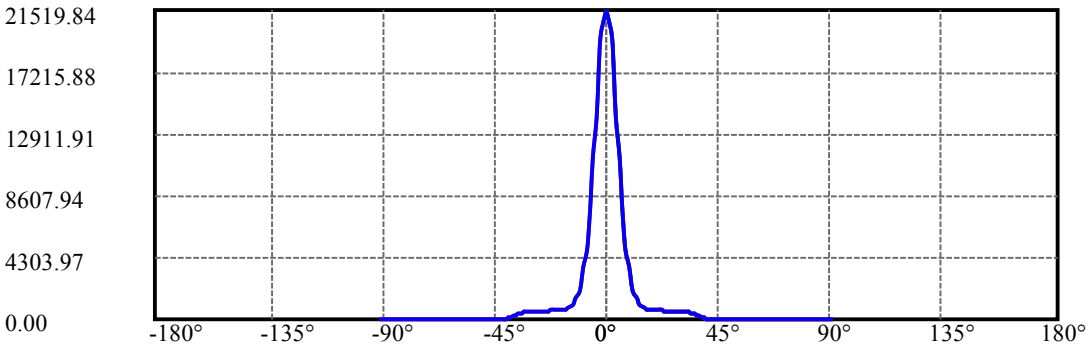
Zone	Lumens	%Lamp	%Fixt
0-30	1313.84	77.19%	84.00%
0-40	1525.21	89.61%	97.52%
0-60	1542.30	90.62%	98.61%
0-90	1563.33	91.85%	99.95%
0-120	1563.33	91.85%	99.95%
0-180	1564.06	91.90%	100.00%
60-90	21.71	1.28%	1.39%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.80	1251.25	73.52%	80.00%

ZONAL LUMEN SUMMARY

0-10	778.35
10-20	271.65
20-30	263.84
30-40	211.37
40-50	10.25
50-60	6.84
60-70	7.00
70-80	7.30
80-90	6.72
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):

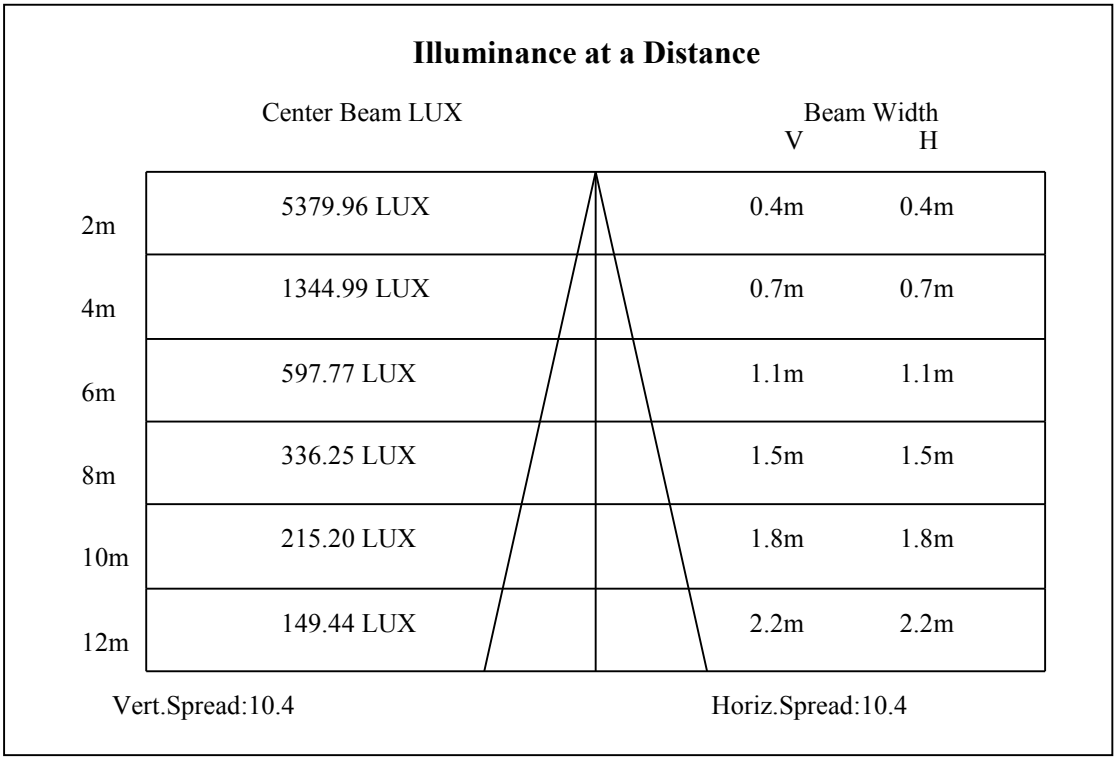
C0/C180:

C90/C270:

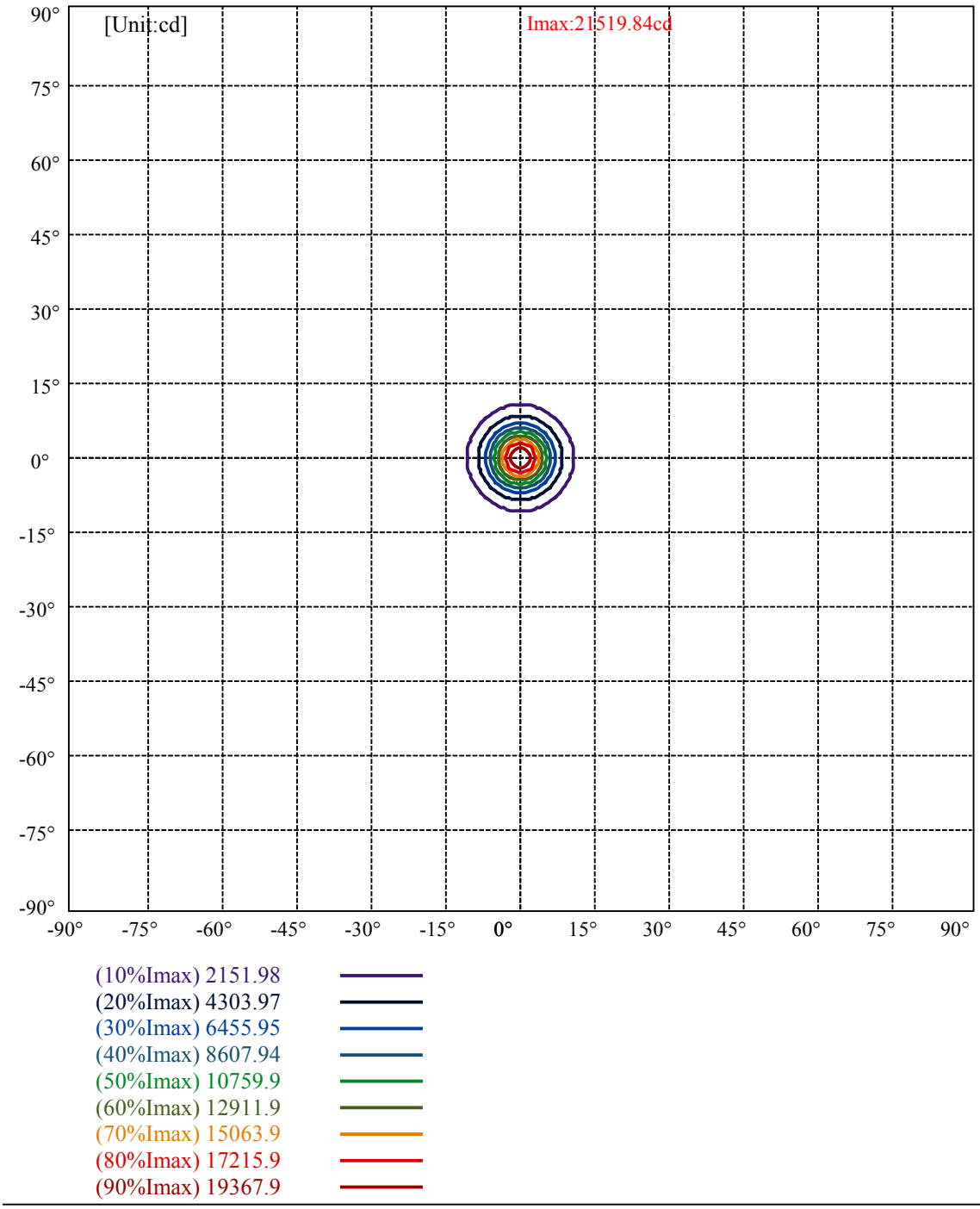
Field angle(10%Imax):C0/180Left:10.5 Right:10.5
:C90/270Left:10.5 Right:10.5

Beam Angle(50%Imax):C0/180Left:5.2 Right:5.2
:C90/270Left:5.2 Right:5.2

Lux distance Curve



ISO-Intensity(V-H)

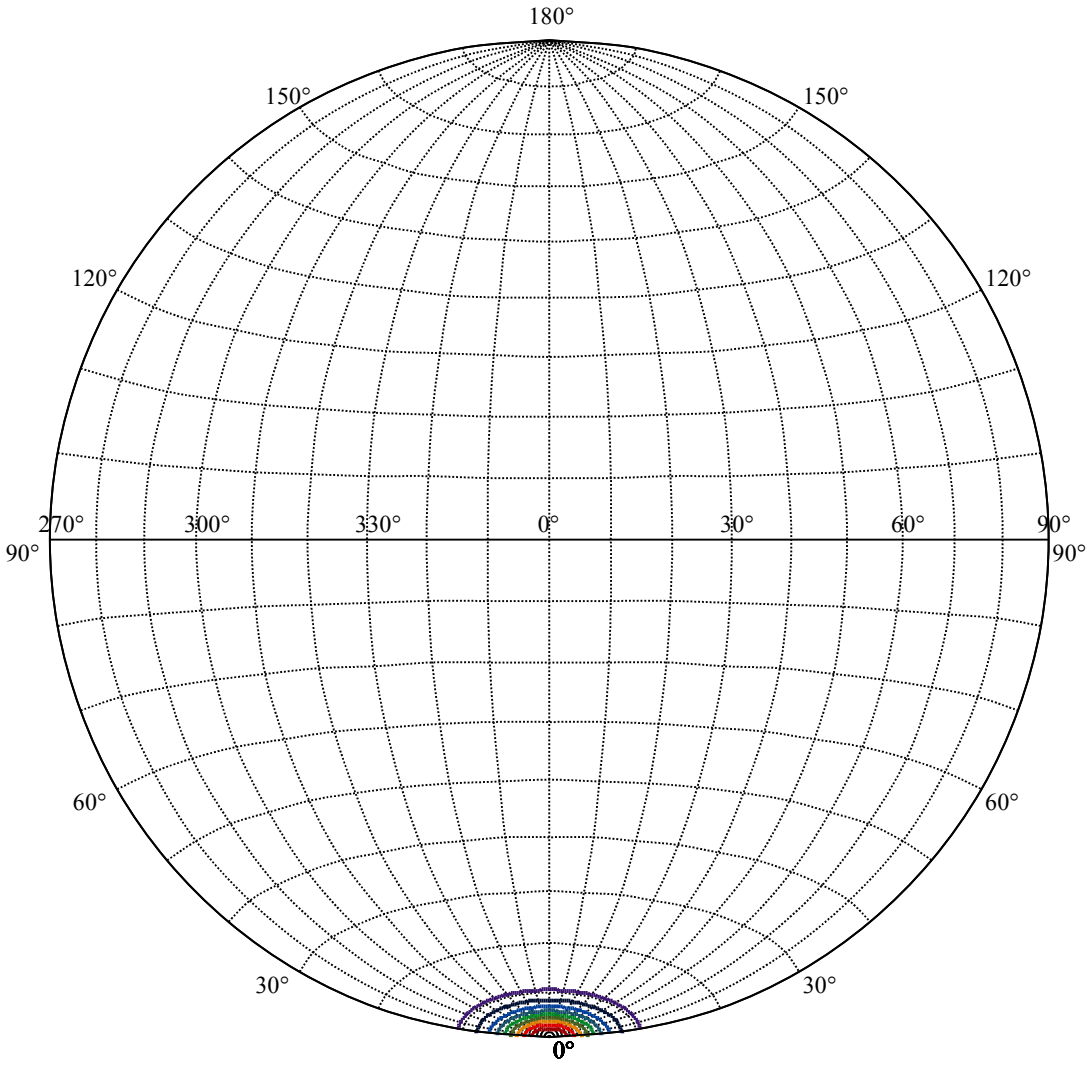


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/22
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:21519.84

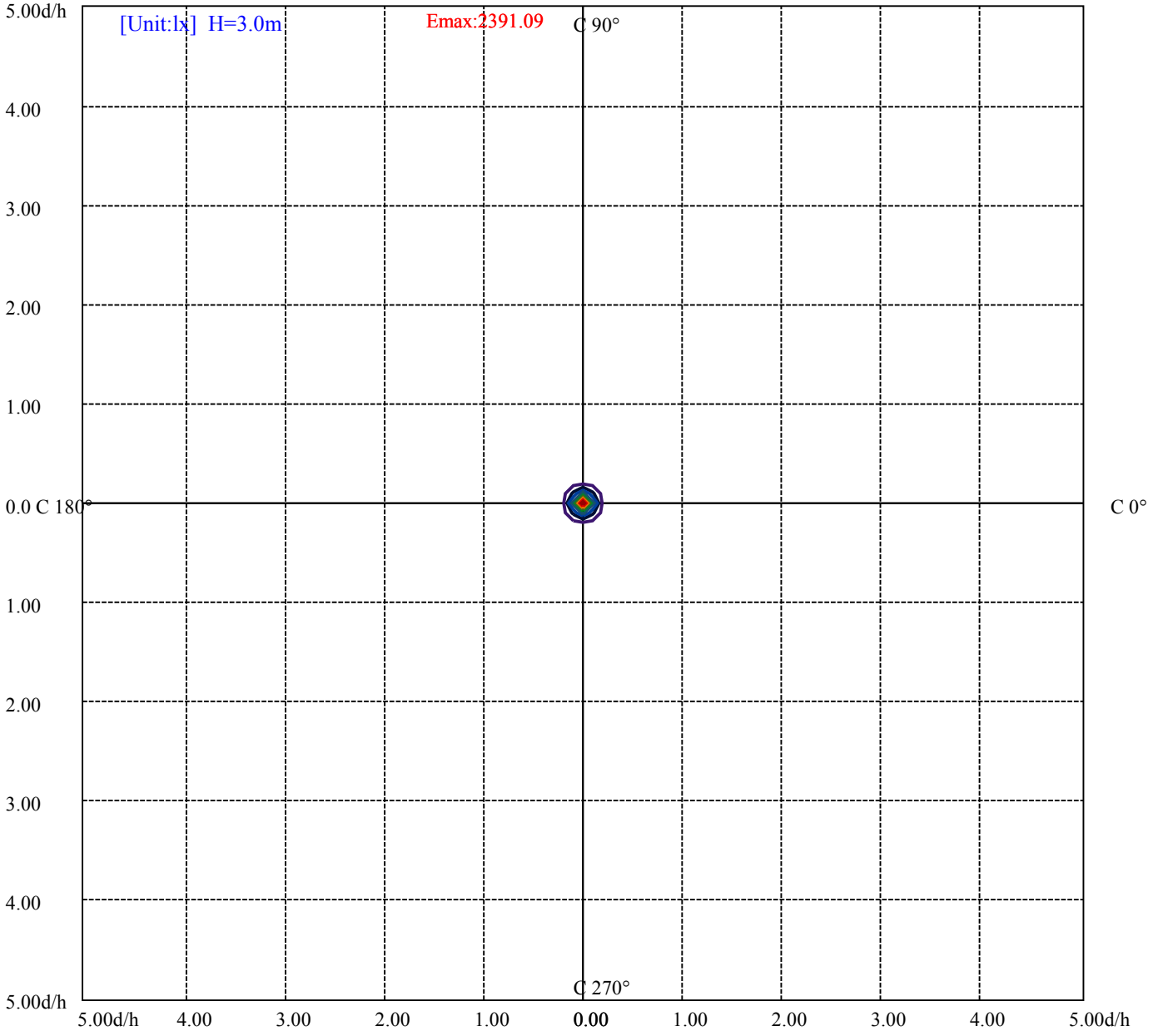
(10%Imax) 2151.98
(20%Imax) 4303.97
(30%Imax) 6455.95
(40%Imax) 8607.94
(50%Imax) 10759.9
(60%Imax) 12911.9
(70%Imax) 15063.9
(80%Imax) 17215.9
(90%Imax) 19367.9

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/22
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO illuminance diagram

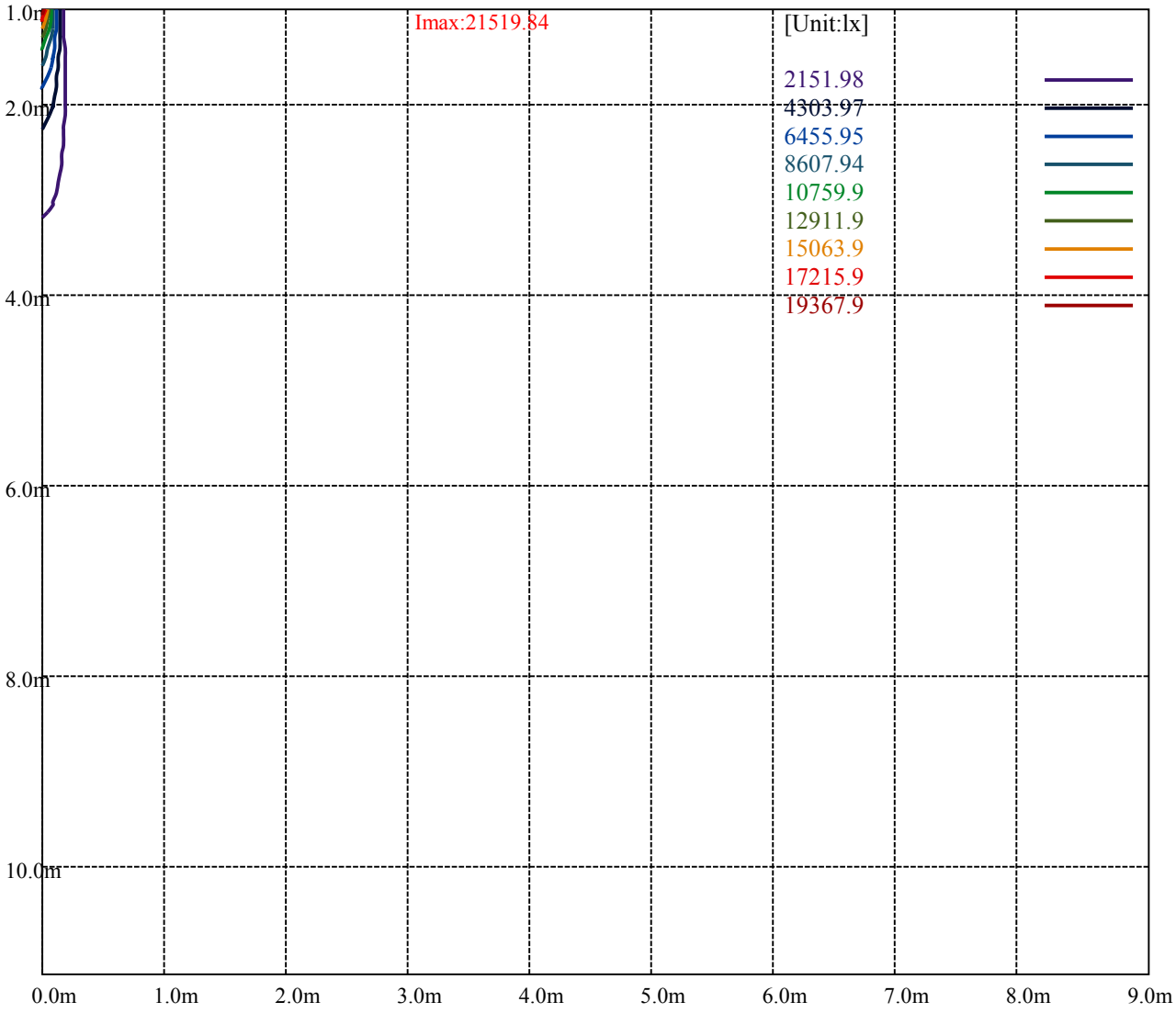


Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/22
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram



Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/22
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Luminance Limitting Curve(no luminous side)

Luminance Table

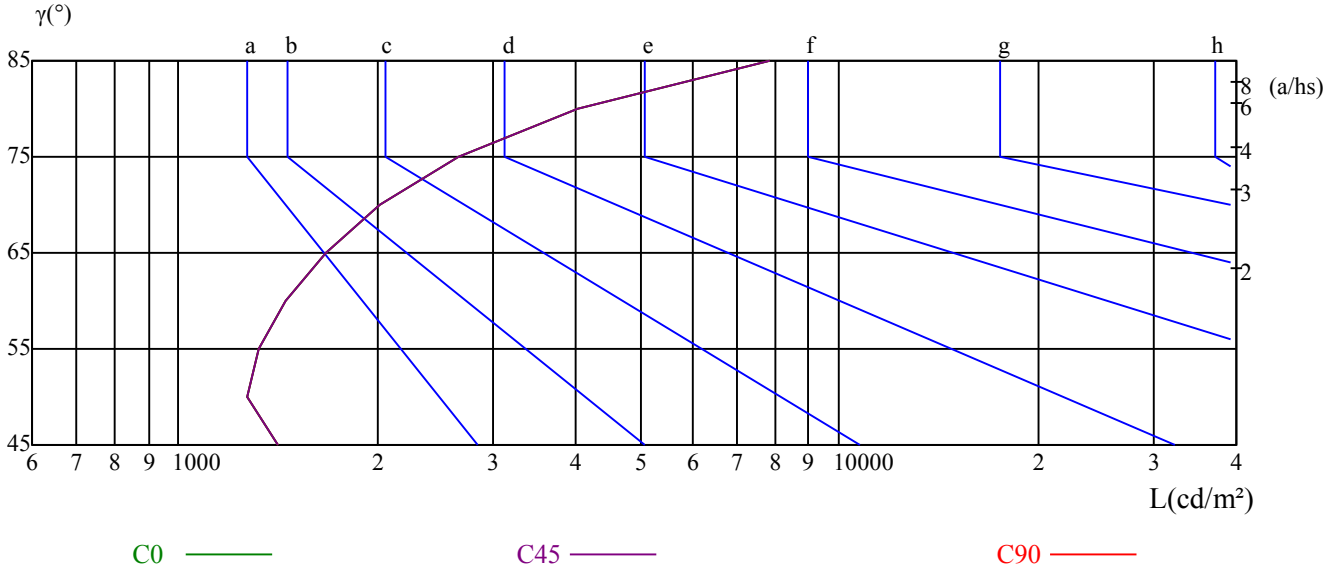
γ	45	50	55	60	65	70	75	80	85
C0	1411	1273	1325	1451	1667	2023	2651	4017	7858
C45	1411	1273	1325	1451	1667	2023	2651	4017	7858
C90	1411	1273	1325	1451	1667	2023	2651	4017	7858

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1667	1667	1667	2651	2651	2651	7858	7858	7858

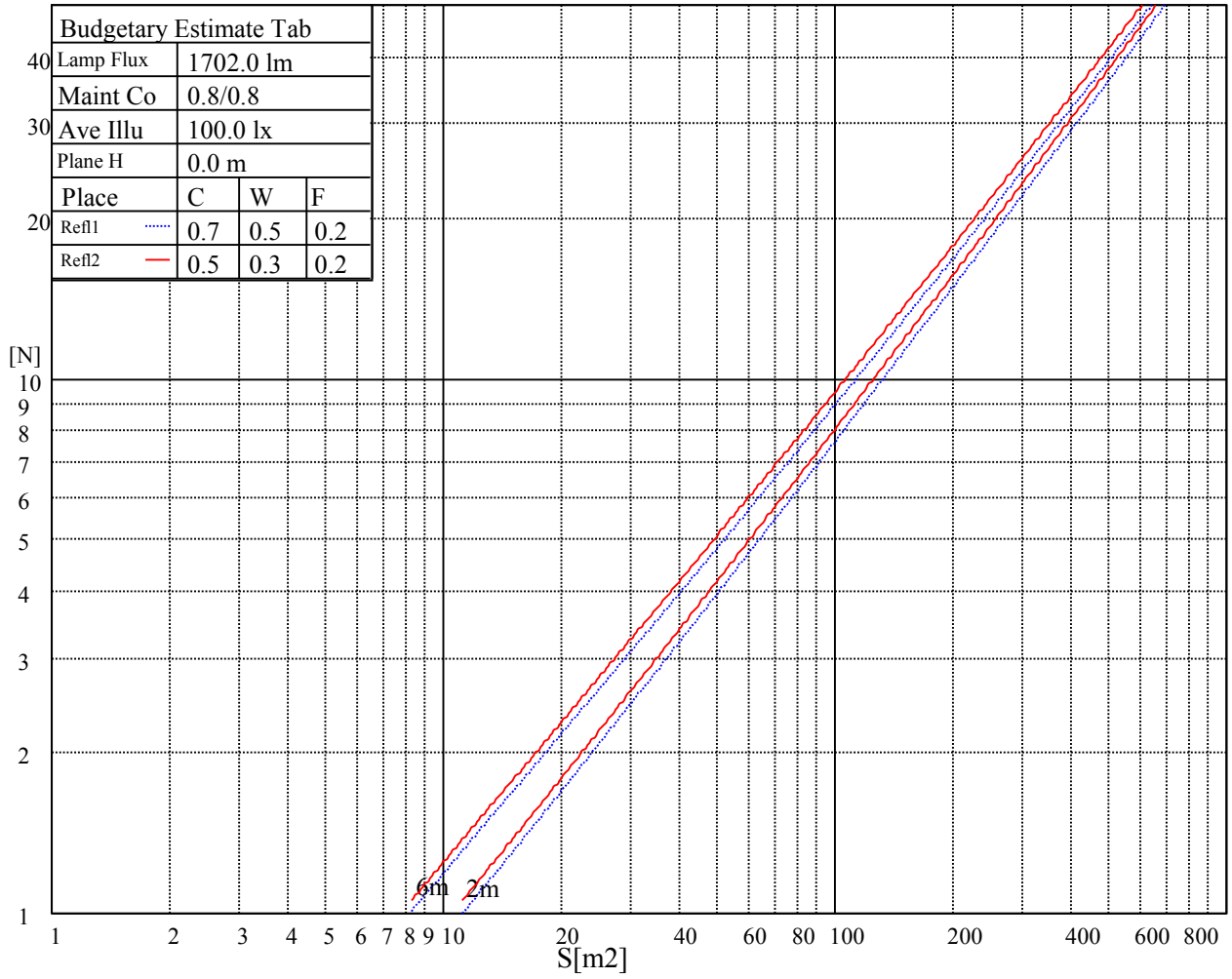
Glare Table

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

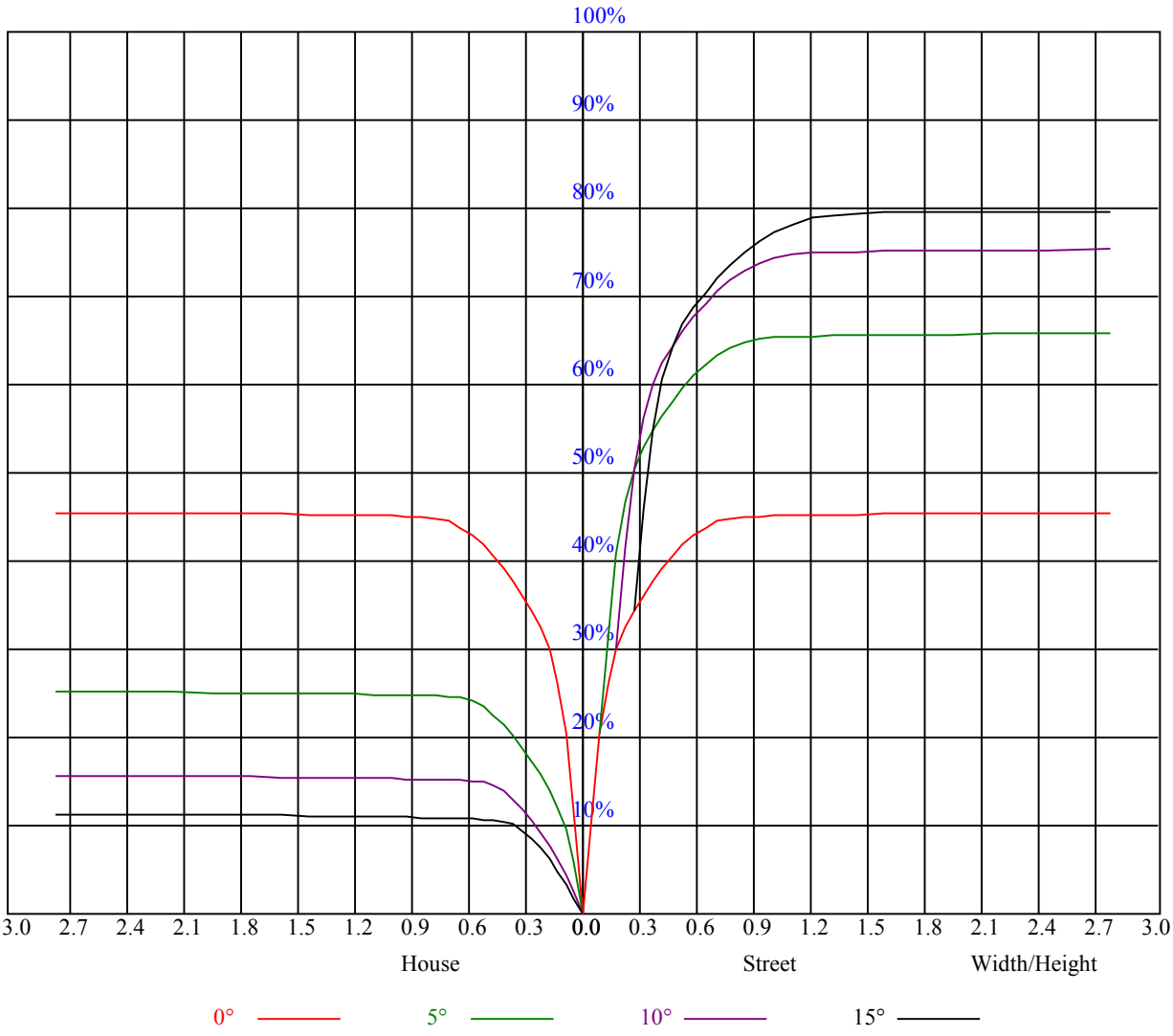


Equipment: GMS1980 Date: 2019/8/22 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

Utilization factor table for indoor luminaire

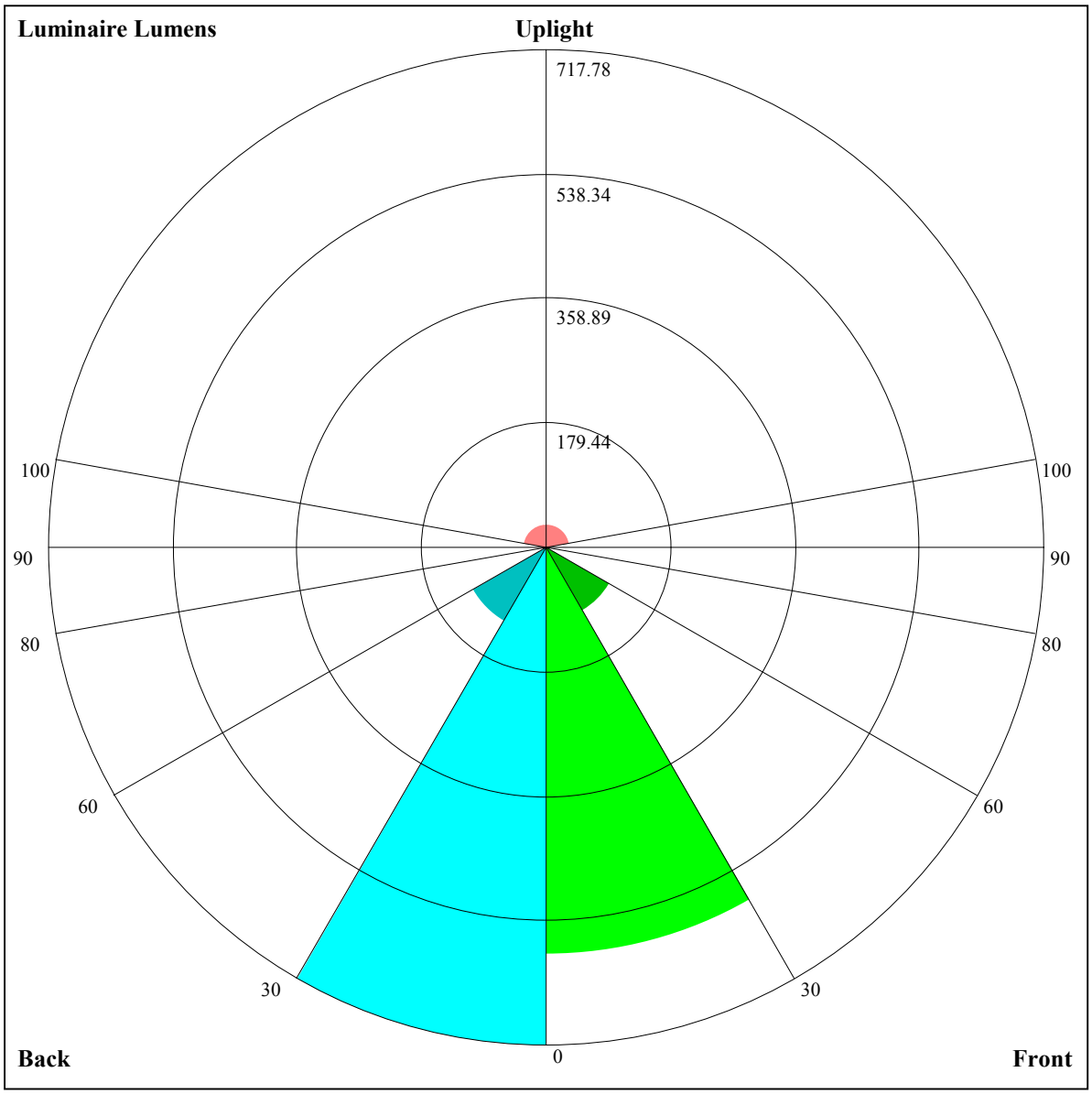
RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.03	1.01	1.00	1.01	1.00	0.98	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.90	0.88
2	0.98	0.95	0.93	0.97	0.94	0.92	0.94	0.92	0.90	0.91	0.90	0.88	0.89	0.87	0.86	0.85
3	0.94	0.90	0.88	0.93	0.90	0.87	0.90	0.88	0.86	0.88	0.86	0.84	0.86	0.85	0.83	0.82
4	0.90	0.86	0.83	0.89	0.86	0.83	0.87	0.84	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.79
5	0.87	0.83	0.80	0.86	0.82	0.80	0.84	0.81	0.79	0.83	0.80	0.78	0.82	0.79	0.78	0.77
6	0.84	0.80	0.77	0.83	0.79	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.74
7	0.81	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
8	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
9	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.69
10	0.75	0.71	0.68	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.67

Coefficient Utilization Curve



Equipment: GMS1980	Date: 2019/8/22	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 65.0%	Distance(m): 7.50

LCS Graph



Luminaire Lumens:

FL=588.07,FM=105,FH=7.16,FVH=3.74

BL=717.78,BM=122.44,BH=7.15,BVH=3.73

UL=7.35,UH=34.97

BUG Rating:B2-U2-G0

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	21836.25	19833.75	17145.00	14163.75	10710.00	7751.25	5810.63	4179.38	3127.50
45.0	21723.75	21408.75	20143.13	17476.88	14743.13	11767.50	8358.75	6204.38	4629.38
90.0	21718.13	22173.75	21583.13	19642.50	16830.00	11091.38	10712.81	7053.19	5376.38
135.0	20801.25	22471.88	23124.38	22488.75	20671.88	18078.75	14236.88	10985.63	8128.13
180.0	21836.25	22651.88	22421.25	20542.50	18213.75	15423.75	11111.63	8637.75	6399.56
225.0	21723.75	20649.38	19141.88	16526.25	11038.50	10320.75	7607.25	5736.94	4146.75
270.0	21718.13	20278.13	17848.13	14754.38	11733.75	8690.63	6311.25	4775.63	3594.38
315.0	20801.25	18253.13	15446.25	11212.88	8830.13	6585.19	4757.06	3435.19	2569.50
360.0	21836.25	19833.75	17145.00	14163.75	10710.00	7751.25	5810.63	4179.38	3127.50

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2908.13	1649.81	1270.69	1039.50	863.44	776.25	721.69	681.75	659.81
45.0	3217.50	2885.63	1779.19	1305.00	1012.50	864.00	763.88	717.75	687.38
90.0	3984.19	2625.75	2009.81	1502.44	1107.28	914.18	797.51	730.24	690.41
135.0	5557.50	4123.13	3037.50	2925.00	1554.19	1200.94	973.69	823.50	741.38
180.0	4768.88	3284.44	2433.38	1825.88	1113.02	1057.61	892.35	779.91	723.66
225.0	3080.25	2201.63	1626.75	1119.71	1023.81	874.18	786.38	730.63	688.33
270.0	2891.25	1923.19	1495.69	1169.44	964.13	844.88	763.88	714.38	683.44
315.0	1940.06	1281.38	1120.39	939.94	804.15	741.88	702.84	673.03	653.34
360.0	2908.13	1649.81	1270.69	1039.50	863.44	776.25	721.69	681.75	659.81

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	645.75	631.69	618.19	606.94	594.00	585.00	575.44	567.56	561.38
45.0	663.75	649.13	635.63	621.56	605.81	591.19	575.44	567.00	559.13
90.0	665.66	646.43	631.13	617.74	605.31	591.19	579.21	568.18	558.90
135.0	700.31	673.88	651.94	637.88	620.44	606.94	591.19	579.94	570.94
180.0	688.73	662.85	646.59	627.19	607.05	591.75	580.05	567.39	558.51
225.0	664.03	647.49	630.96	614.87	601.31	588.60	577.29	568.86	560.48
270.0	661.50	644.63	625.50	610.31	597.38	586.69	576.00	568.69	560.81
315.0	638.49	623.64	609.13	597.21	586.91	578.08	568.52	560.42	552.43
360.0	645.75	631.69	618.19	606.94	594.00	585.00	575.44	567.56	561.38

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	554.06	543.94	536.06	528.75	519.75	511.88	477.00	394.31	316.69
45.0	551.81	546.19	540.00	531.56	522.56	514.69	506.25	478.69	407.81
90.0	552.43	546.41	538.88	529.76	521.83	512.38	503.83	493.14	442.52
135.0	563.63	552.38	545.06	538.88	527.06	519.75	513.00	503.44	493.31
180.0	550.69	542.14	536.06	528.81	519.02	512.72	505.58	496.91	477.79
225.0	553.67	546.47	536.29	528.81	522.28	513.23	506.08	473.79	392.79
270.0	551.81	543.94	536.63	529.88	520.88	513.56	497.81	433.13	357.19
315.0	544.56	535.56	527.46	520.43	513.11	489.71	431.27	354.83	254.25
360.0	554.06	543.94	536.06	528.75	519.75	511.88	477.00	394.31	316.69

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	286.31	141.58	61.37	21.66	17.16	14.96	12.54	9.84	9.06
45.0	328.50	284.63	158.57	79.09	26.44	19.80	17.33	14.57	11.48
90.0	367.99	292.73	201.60	124.20	51.97	19.86	17.89	15.47	13.05
135.0	456.19	383.63	301.50	244.01	120.99	57.26	20.14	17.94	15.53
180.0	411.13	318.09	248.57	160.43	74.19	31.78	18.79	15.81	13.73
225.0	308.03	225.79	138.71	63.84	26.16	17.49	15.24	12.54	10.07
270.0	297.56	178.99	95.57	40.73	18.84	16.93	14.79	12.54	9.45
315.0	174.66	101.36	36.00	18.06	16.37	13.78	11.98	9.39	9.11
360.0	286.31	141.58	61.37	21.66	17.16	14.96	12.54	9.84	9.06

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	8.78	8.55	8.44	8.21	8.10	7.99	7.82	7.71	7.59
45.0	9.00	8.72	8.55	8.38	8.27	8.10	8.04	7.88	7.76
90.0	9.28	9.00	8.78	8.61	8.44	8.27	8.16	7.99	7.88
135.0	13.61	9.34	9.06	8.83	8.66	8.49	8.33	8.21	8.04
180.0	11.81	9.00	8.78	8.55	8.38	8.21	8.10	7.93	7.82
225.0	9.17	8.94	8.72	8.49	8.33	8.16	7.99	7.88	7.76
270.0	9.23	8.94	8.78	8.61	8.38	8.21	8.10	7.93	7.82
315.0	8.94	8.66	8.49	8.33	8.21	8.04	7.93	7.76	7.65
360.0	8.78	8.55	8.44	8.21	8.10	7.99	7.82	7.71	7.59

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	7.48	7.43	7.37	7.31	7.26	7.20	7.14	7.09	7.09
45.0	7.65	7.59	7.48	7.43	7.37	7.31	7.26	7.20	7.14
90.0	7.82	7.71	7.59	7.48	7.43	7.37	7.31	7.26	7.20
135.0	7.93	7.82	7.76	7.65	7.54	7.48	7.43	7.31	7.31
180.0	7.76	7.65	7.54	7.48	7.37	7.31	7.26	7.20	7.14
225.0	7.65	7.54	7.43	7.37	7.31	7.20	7.20	7.14	7.09
270.0	7.71	7.59	7.48	7.43	7.37	7.31	7.26	7.20	7.14
315.0	7.59	7.48	7.43	7.31	7.31	7.20	7.20	7.14	7.09
360.0	7.48	7.43	7.37	7.31	7.26	7.20	7.14	7.09	7.09

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.03	6.98	6.98	6.92	6.92	6.92	6.86	6.86	6.86
45.0	7.14	7.09	7.09	7.03	7.03	6.98	6.98	6.98	6.98
90.0	7.14	7.14	7.09	7.03	7.03	6.98	6.98	6.92	6.92
135.0	7.26	7.14	7.14	7.09	7.09	7.03	6.98	6.98	6.98
180.0	7.09	7.09	7.03	6.98	6.98	6.92	6.92	6.92	6.86
225.0	7.09	6.98	6.98	6.98	6.98	6.92	6.86	6.86	6.86
270.0	7.09	7.09	7.03	7.03	6.98	6.98	6.92	6.92	6.92
315.0	7.03	7.03	7.03	6.98	6.92	6.92	6.92	6.92	6.86
360.0	7.03	6.98	6.98	6.92	6.92	6.92	6.86	6.86	6.86

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.86	6.81	6.81	6.81	6.81	6.81	6.81	6.92	7.03
45.0	6.92	6.92	6.92	6.92	6.92	6.98	6.98	7.03	7.03
90.0	6.92	6.92	6.86	6.86	6.86	6.81	6.81	6.81	6.81
135.0	6.92	6.92	6.92	6.86	6.86	6.86	6.86	6.81	6.81
180.0	6.86	6.86	6.86	6.86	6.86	6.81	6.86	6.86	6.86
225.0	6.86	6.86	6.86	6.81	6.81	6.81	6.81	6.75	6.81
270.0	6.92	6.92	6.92	6.86	6.92	6.92	6.98	7.03	7.09
315.0	6.92	6.86	6.92	6.92	6.98	7.09	7.31	7.43	7.37
360.0	6.86	6.81	6.81	6.81	6.81	6.81	6.81	6.92	7.03

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.86	6.81	6.81	6.81	6.81	6.75	6.69	6.69	6.69
45.0	6.98	6.98	6.86	6.86	6.81	6.81	6.75	6.75	6.75
90.0	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.75	6.75
135.0	6.81	6.86	6.81	6.81	6.81	6.81	6.81	6.81	6.75
180.0	6.86	6.86	6.86	6.92	6.86	6.86	6.86	6.92	6.69
225.0	6.86	6.86	6.86	6.86	6.86	6.81	6.81	6.75	6.75
270.0	7.09	7.03	6.98	6.98	6.92	6.86	6.86	6.81	6.75
315.0	7.14	7.03	6.92	6.92	6.92	6.86	6.75	6.75	6.75
360.0	6.86	6.81	6.81	6.81	6.81	6.75	6.69	6.69	6.69

Intensity data(cd)

C/γ(°)	90.0
0.0	6.69
45.0	6.75
90.0	6.75
135.0	6.75
180.0	6.69
225.0	6.75
270.0	6.75
315.0	6.75
360.0	6.69