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Nata

Client:

LumCAT: 2-1566-M

Luminaire:

Report No:

Voltage(V): 32.9300

Test No: GC2019081203

Current(A): 0.2970

LampCAT: TRIDONIC SLE G7 17MM

Power (W): 9.7800

Lamp flux(lm): 1190.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 70

Width(mm): 70

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1031.23, Efficiency(%): 86.66% , Luminous Efficacy(lm/W): 105.44

Central intensity(cd): 3104.297, Maximum intensity(cd): 3104.297

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=21.6

[C90/270]Total=21.6

Field angle(10%Imax): [C0/180]Total=68.4

[C90/270]Total=68.4

Maximum s/h(1/2): C0_180=0.36 C90_270=0.36

Maximum s/h(1/4): C0_180=0.47 C90_270=0.47

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.66%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.269%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3104.297	0.000	0	.000%	.000%
1.0	3095.227	2.966	2.966	.249%	.288%
2.0	3066.328	8.844	11.81	.743%	1.145%
3.0	3014.086	14.542	26.352	1.222%	2.555%
4.0	2923.523	19.875	46.227	1.670%	4.483%
5.0	2797.313	24.611	70.838	2.068%	6.869%
6.0	2621.531	28.477	99.316	2.393%	9.631%
7.0	2397.586	31.154	130.469	2.618%	12.652%
8.0	2165.203	32.655	163.124	2.744%	15.818%
9.0	1919.531	33.105	196.229	2.782%	19.029%
10.0	1686.938	32.637	228.866	2.743%	22.193%
11.0	1514.531	31.989	260.855	2.688%	25.295%
12.0	1373.906	31.575	292.43	2.653%	28.357%
13.0	1258.770	31.243	323.673	2.625%	31.387%
14.0	1180.287	31.220	354.893	2.624%	34.414%
15.0	1107.366	31.406	386.299	2.639%	37.460%
16.0	1039.641	31.460	417.758	2.644%	40.511%
17.0	983.123	31.500	449.258	2.647%	43.565%
18.0	925.235	31.465	480.723	2.644%	46.616%
19.0	864.338	31.135	511.858	2.616%	49.635%
20.0	814.852	30.734	542.592	2.583%	52.616%
21.0	768.255	30.399	572.991	2.555%	55.564%
22.0	722.025	29.948	602.938	2.517%	58.468%
23.0	682.390	29.468	632.407	2.476%	61.325%
24.0	644.309	29.006	661.413	2.438%	64.138%
25.0	606.846	28.449	689.862	2.391%	66.897%
26.0	574.741	27.892	717.753	2.344%	69.601%
27.0	542.995	27.346	745.099	2.298%	72.253%
28.0	512.930	26.734	771.833	2.247%	74.846%
29.0	487.392	26.171	798.004	2.199%	77.383%
30.0	461.243	25.613	823.617	2.152%	79.867%
31.0	428.611	24.763	848.38	2.081%	82.268%
32.0	395.332	23.605	871.985	1.984%	84.557%
33.0	357.321	22.173	894.159	1.863%	86.708%
34.0	317.194	20.413	914.572	1.715%	88.687%
35.0	278.402	18.497	933.069	1.554%	90.481%
36.0	230.505	16.204	949.272	1.362%	92.052%
37.0	192.347	13.791	963.063	1.159%	93.389%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	150.314	11.438	974.501	.961%	94.499%
39.0	117.176	9.130	983.631	.767%	95.384%
40.0	83.152	6.987	990.618	.587%	96.061%
41.0	56.447	4.971	995.589	.418%	96.543%
42.0	36.724	3.385	998.974	.284%	96.872%
43.0	22.254	2.185	1001.159	.184%	97.084%
44.0	16.095	1.447	1002.606	.122%	97.224%
45.0	13.507	1.138	1003.744	.096%	97.334%
46.0	12.375	1.012	1004.756	.085%	97.432%
47.0	11.482	0.949	1005.705	.080%	97.524%
48.0	10.709	0.897	1006.602	.075%	97.611%
49.0	9.752	0.840	1007.442	.071%	97.693%
50.0	8.712	0.770	1008.212	.065%	97.768%
51.0	7.643	0.692	1008.904	.058%	97.835%
52.0	6.490	0.606	1009.51	.051%	97.893%
53.0	5.815	0.535	1010.045	.045%	97.945%
54.0	5.463	0.497	1010.542	.042%	97.994%
55.0	5.280	0.480	1011.022	.040%	98.040%
56.0	5.210	0.474	1011.496	.040%	98.086%
57.0	5.154	0.474	1011.97	.040%	98.132%
58.0	5.070	0.473	1012.443	.040%	98.178%
59.0	5.013	0.471	1012.914	.040%	98.224%
60.0	4.978	0.472	1013.386	.040%	98.269%
61.0	4.929	0.473	1013.859	.040%	98.315%
62.0	4.908	0.474	1014.333	.040%	98.361%
63.0	4.894	0.477	1014.81	.040%	98.407%
64.0	4.873	0.479	1015.289	.040%	98.454%
65.0	5.126	0.495	1015.784	.042%	98.502%
66.0	5.463	0.528	1016.312	.044%	98.553%
67.0	5.977	0.575	1016.887	.048%	98.609%
68.0	6.476	0.631	1017.518	.053%	98.670%
69.0	6.919	0.683	1018.201	.057%	98.736%
70.0	7.095	0.720	1018.921	.060%	98.806%
71.0	7.214	0.740	1019.661	.062%	98.878%
72.0	7.256	0.752	1020.413	.063%	98.951%
73.0	7.298	0.761	1021.174	.064%	99.025%
74.0	7.327	0.769	1021.943	.065%	99.099%
75.0	7.305	0.773	1022.716	.065%	99.174%

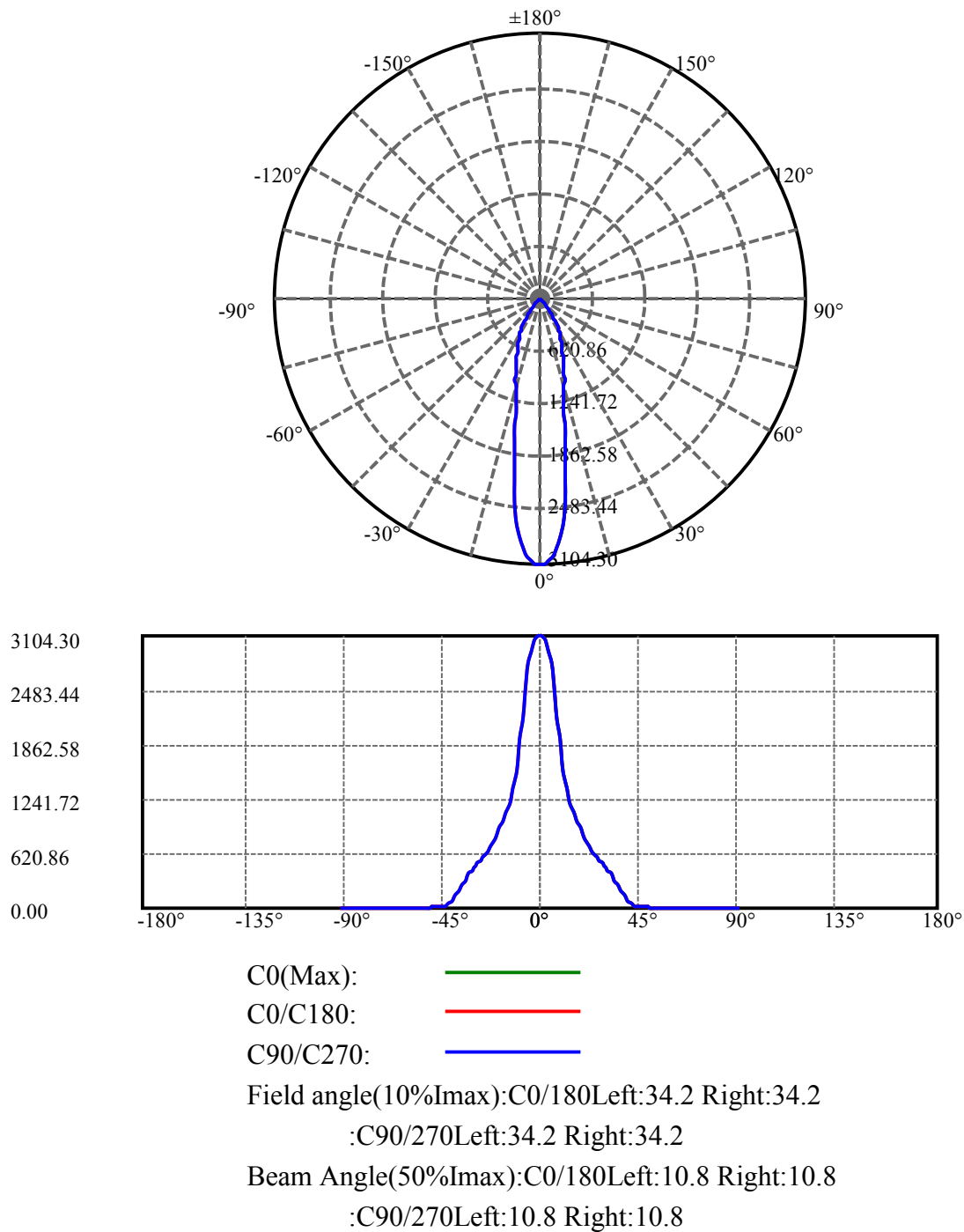
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.207	0.770	1023.486	.065%	99.249%
77.0	6.722	0.743	1024.229	.062%	99.321%
78.0	6.068	0.685	1024.914	.058%	99.387%
79.0	5.695	0.632	1025.546	.053%	99.448%
80.0	4.901	0.571	1026.117	.048%	99.504%
81.0	4.816	0.525	1026.643	.044%	99.555%
82.0	4.823	0.523	1027.165	.044%	99.605%
83.0	4.753	0.521	1027.686	.044%	99.656%
84.0	4.774	0.519	1028.205	.044%	99.706%
85.0	4.767	0.521	1028.726	.044%	99.757%
86.0	4.711	0.518	1029.244	.044%	99.807%
87.0	4.676	0.514	1029.757	.043%	99.857%
88.0	4.493	0.502	1030.26	.042%	99.906%
89.0	4.465	0.491	1030.751	.041%	99.953%
90.0	4.345	0.483	1031.234	.041%	100.000%

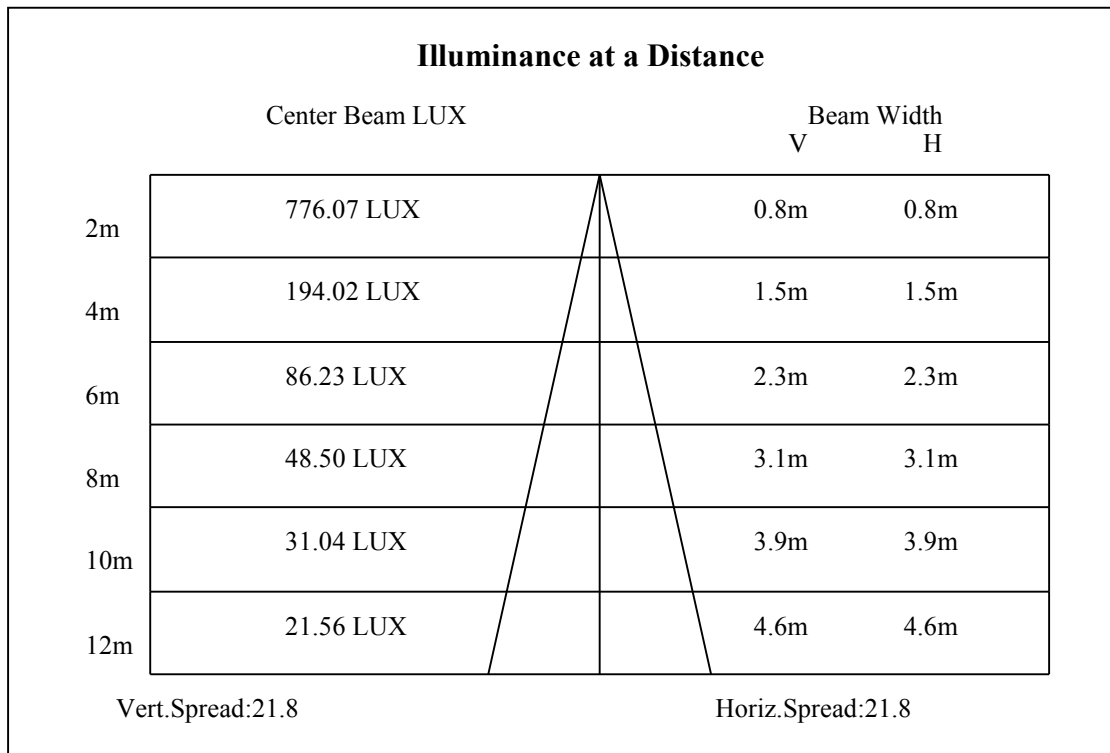
ZONAL LUMEN SUMMARY

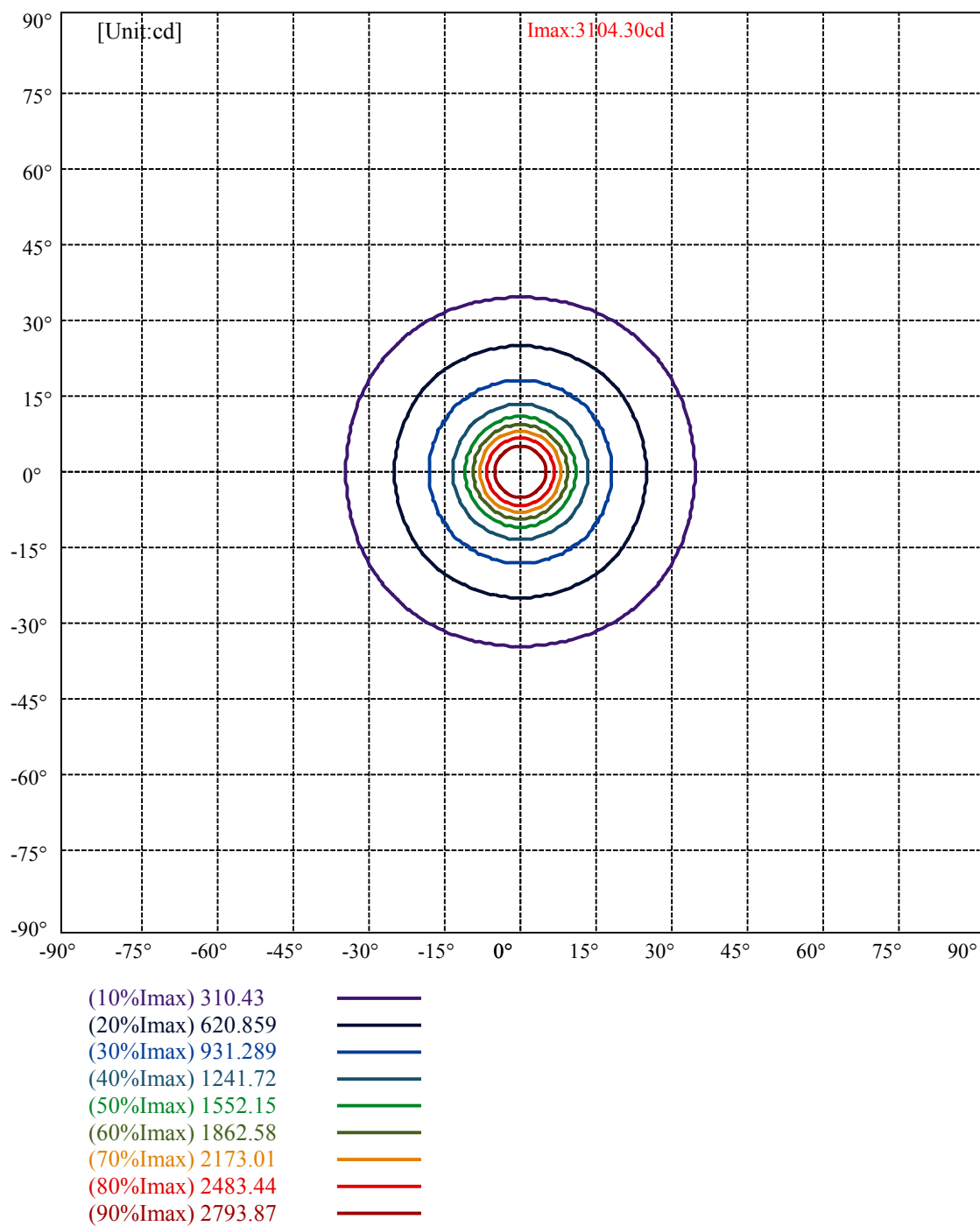
Zone	Lumens	%Lamp	%Fixt
0-30	823.62	69.21%	79.87%
0-40	990.62	83.25%	96.06%
0-60	1013.39	85.16%	98.27%
0-90	1030.75	86.62%	99.95%
0-120	1030.75	86.62%	99.95%
0-180	1031.23	86.66%	100.00%
60-90	17.84	1.50%	1.73%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-30.06	824.99	69.33%	80.00%

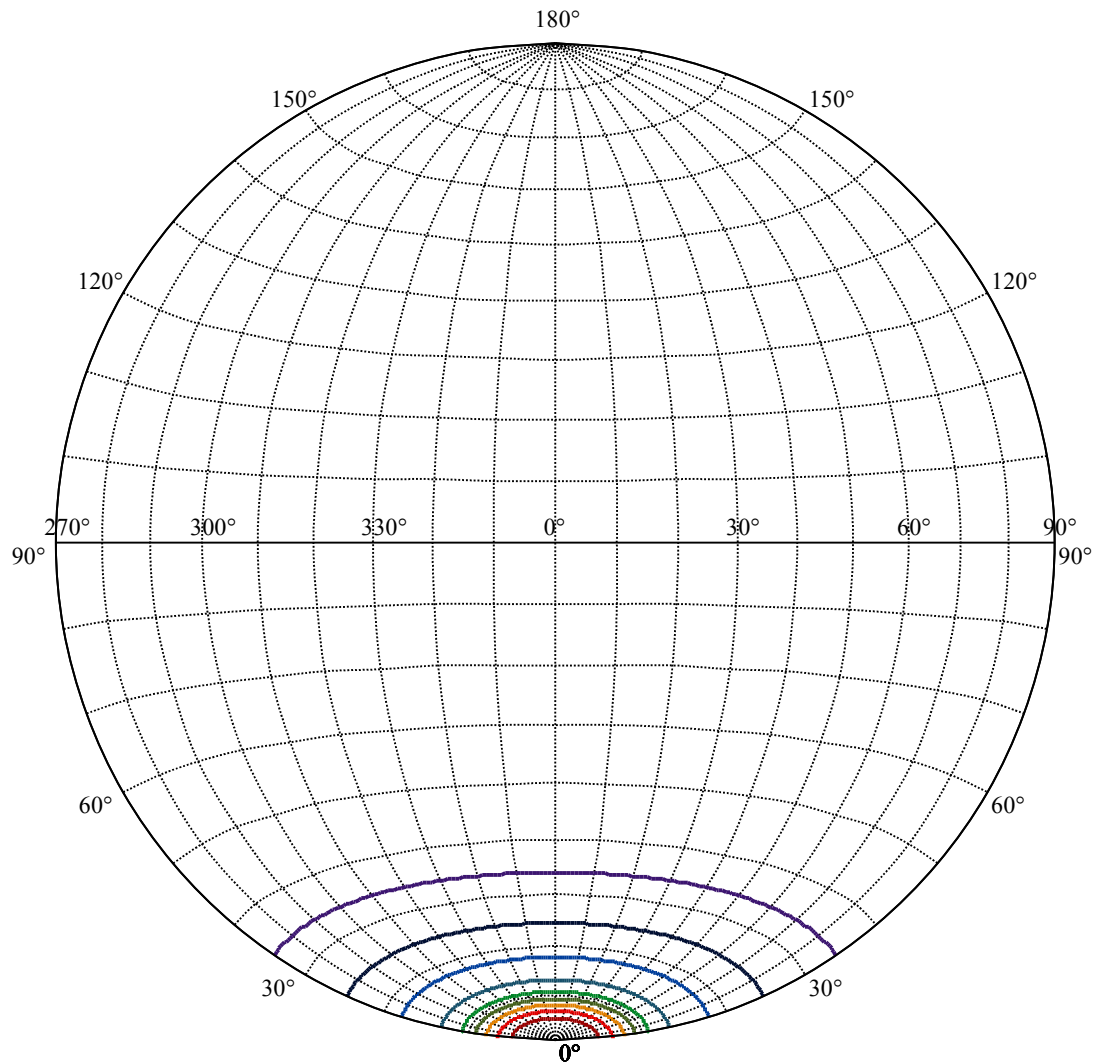
ZONAL LUMEN SUMMARY

0-10	228.87
10-20	313.73
20-30	281.03
30-40	167.00
40-50	17.59
50-60	5.17
60-70	5.53
70-80	7.20
80-90	4.63
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









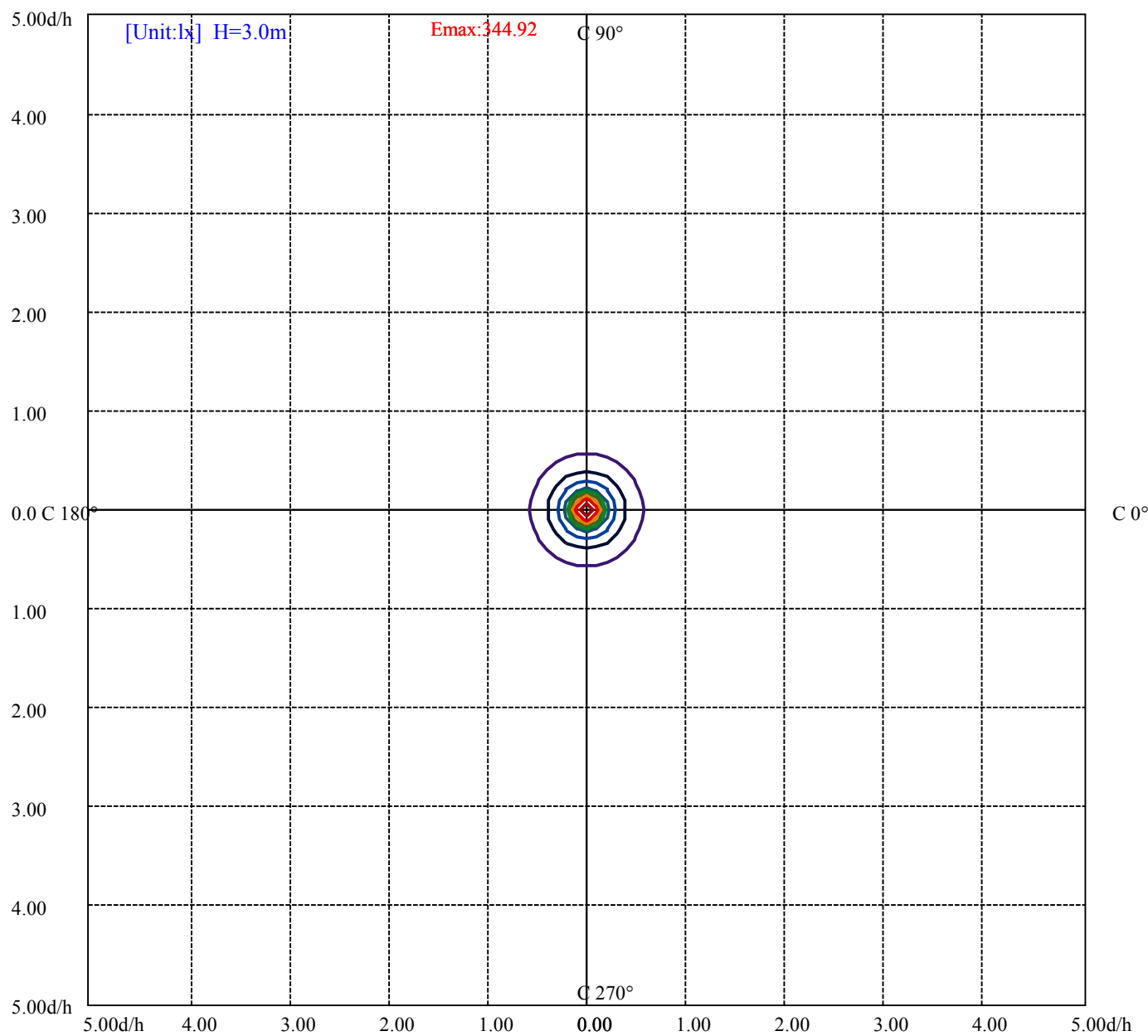
House

[Unit:cd]

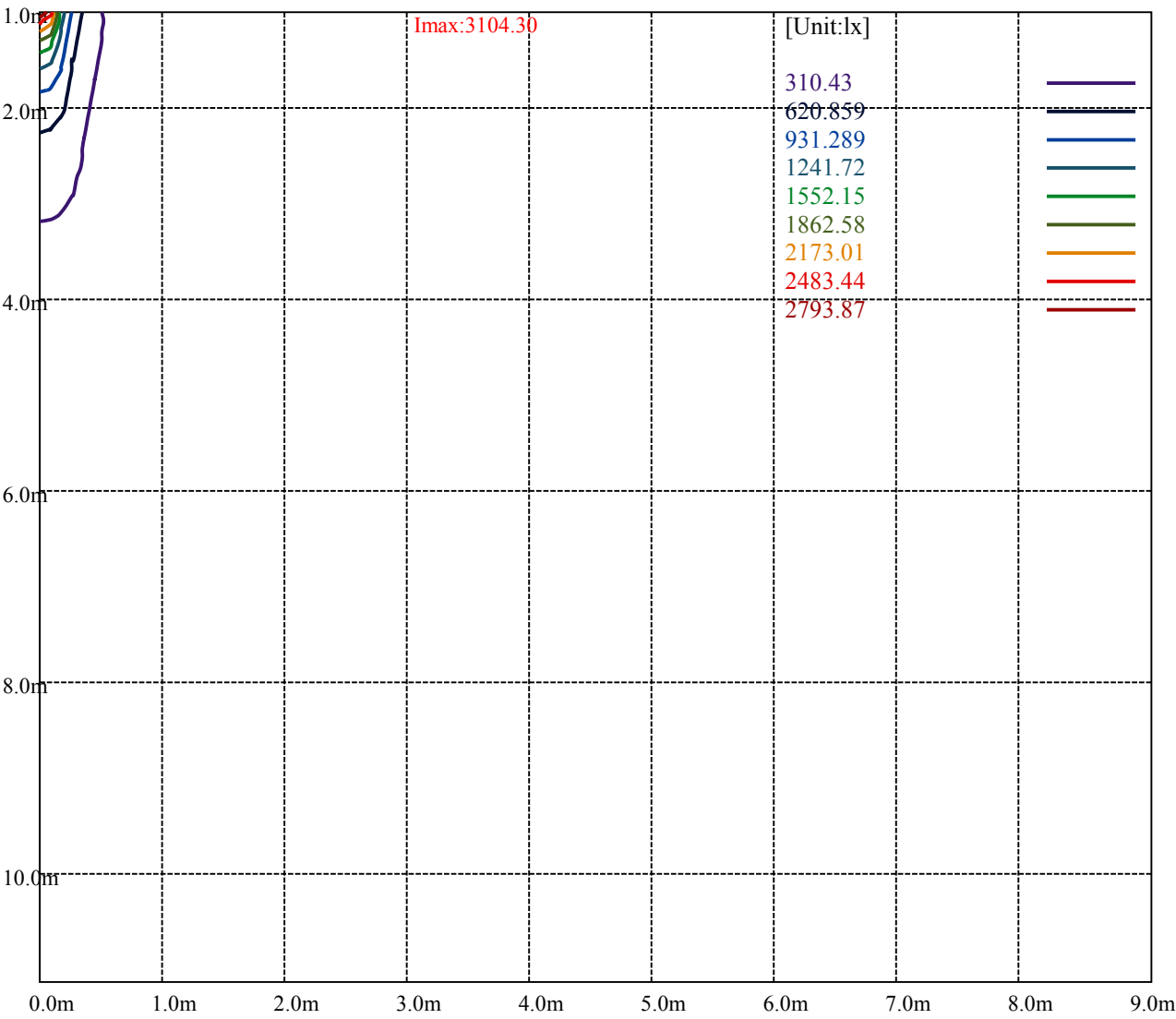
Road

Imax:3104.30

(10%Imax)	310.43	—
(20%Imax)	620.859	—
(30%Imax)	931.289	—
(40%Imax)	1241.72	—
(50%Imax)	1552.15	—
(60%Imax)	1862.58	—
(70%Imax)	2173.01	—
(80%Imax)	2483.44	—
(90%Imax)	2793.87	—



(10%Emax)	34.49222	
(20%Emax)	68.98434	
(30%Emax)	103.4766	
(40%Emax)	137.9689	
(50%Emax)	172.4611	
(60%Emax)	206.9533	
(70%Emax)	241.4456	
(80%Emax)	275.9378	
(90%Emax)	310.43	



Luminance Table

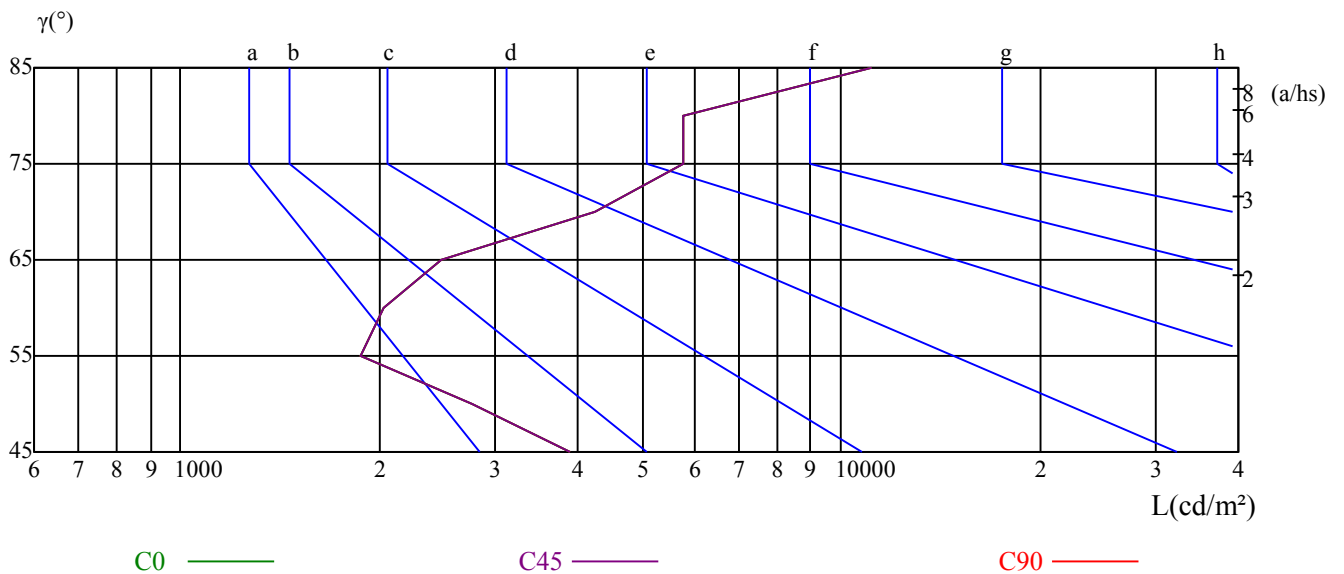
γ	45	50	55	60	65	70	75	80	85
C0	3898	2766	1879	2032	2475	4233	5760	5760	11163
C45	3898	2766	1879	2032	2475	4233	5760	5760	11163
C90	3898	2766	1879	2032	2475	4233	5760	5760	11163

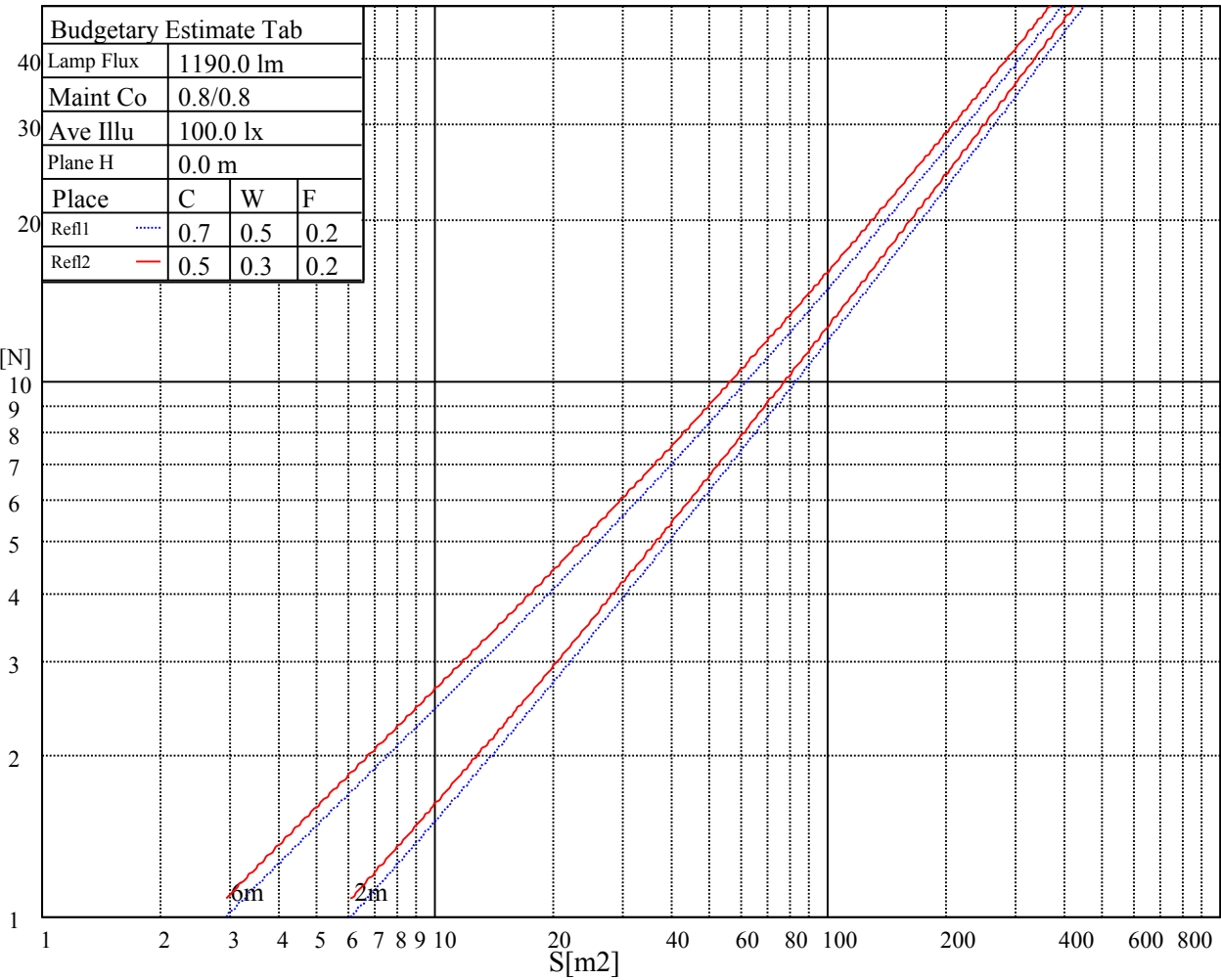
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2475	2475	2475	5760	5760	5760	11163	11163	11163

Glare Table

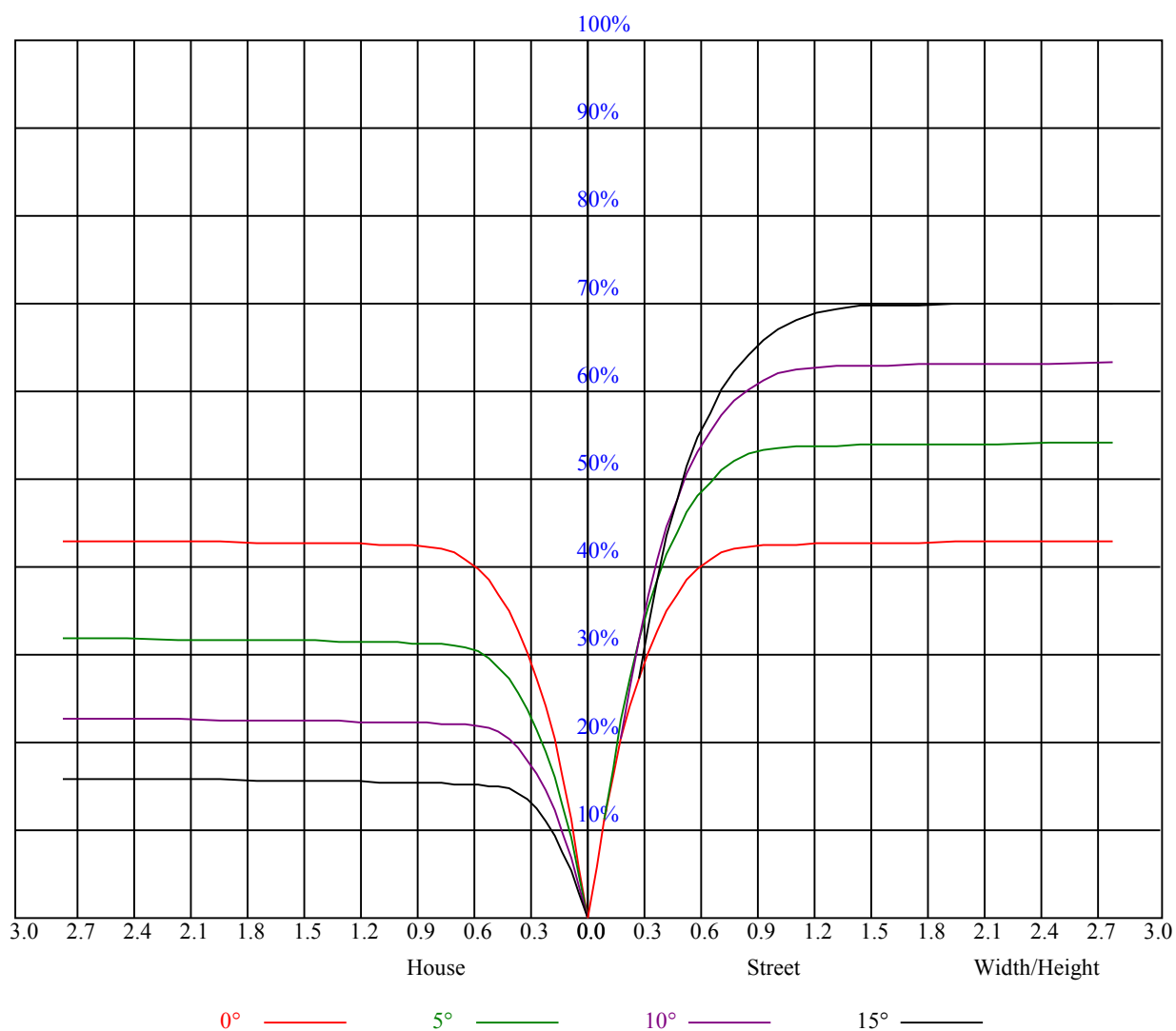
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

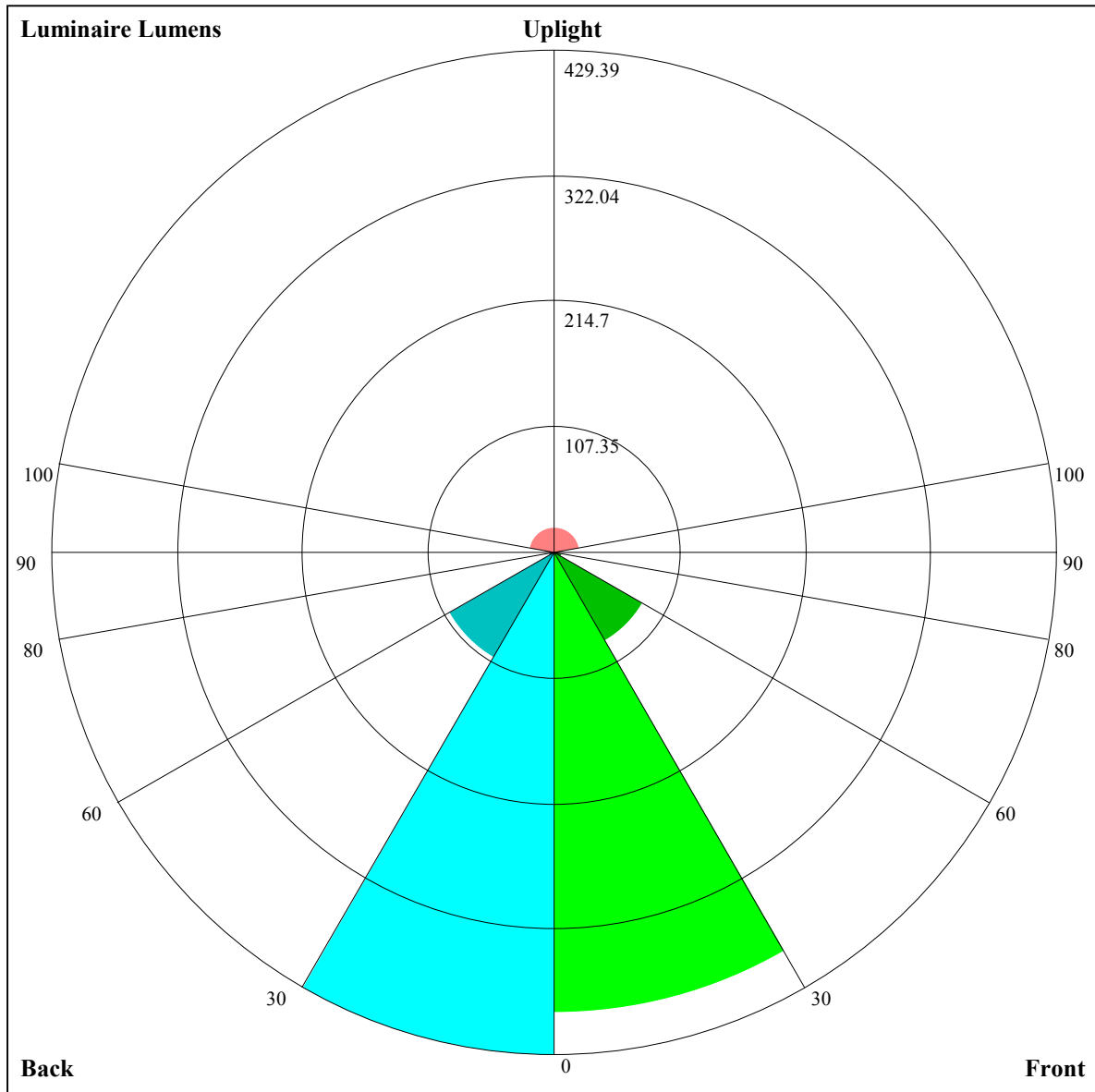
Luminance Limiting Curve





RHOC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.96	0.94	0.93	0.95	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.90	0.87	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.81	0.80	0.78	0.77
3	0.85	0.81	0.78	0.84	0.81	0.78	0.82	0.79	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
4	0.81	0.76	0.73	0.80	0.76	0.73	0.78	0.74	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.69
5	0.76	0.72	0.69	0.76	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.71	0.69	0.67	0.65
6	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.62
7	0.69	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.59
8	0.66	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57
9	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.54
10	0.61	0.56	0.53	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.52





Luminaire Lumens:

FL=393.59,FM=86.64,FH=6.18,FVH=2.54

BL=429.39,BM=104.24,BH=5.86,BVH=2.54

UL=4.74,UH=22.56

BUG Rating:B1-U2-G0

Nata 2-1566-M

Intensity data(cd)										Appendix Page: 17 Total:19	
C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0		
0.0	3101.06	3081.94	3025.69	2929.50	2793.38	2587.50	2328.19	2084.63	1849.50		
45.0	3108.38	3103.31	3082.50	3027.94	2940.19	2795.06	2614.50	2355.75	2106.56		
90.0	3111.19	3108.94	3098.81	3071.25	2990.81	2884.50	2709.00	2498.63	2225.81		
135.0	3096.56	3113.44	3117.38	3104.44	3085.31	3034.13	2920.50	2784.94	2603.81		
180.0	3101.06	3108.94	3102.75	3089.25	3048.19	2986.31	2888.44	2707.31	2512.69		
225.0	3108.38	3097.13	3074.63	3028.50	2952.56	2851.88	2711.81	2468.25	2232.56		
270.0	3111.19	3090.94	3054.94	2991.38	2874.38	2738.81	2562.19	2315.81	2047.50		
315.0	3096.56	3057.19	2973.94	2870.44	2703.38	2500.31	2237.63	1965.38	1743.19		
360.0	3101.06	3081.94	3025.69	2929.50	2793.38	2587.50	2328.19	2084.63	1849.50		
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0		
0.0	1603.13	1445.06	1328.63	1231.88	1154.25	1094.06	1029.38	966.38	911.81		
45.0	1815.19	1613.81	1449.00	1316.81	1220.63	1151.44	1084.50	1021.50	966.94		
90.0	1978.88	1726.31	1523.25	1387.69	1276.31	1198.69	1122.24	1057.11	999.23		
135.0	2318.06	2067.75	1828.69	1598.63	1421.44	1307.25	1214.44	1139.63	1078.88		
180.0	2270.81	1947.94	1724.06	1536.19	1366.31	1269.00	1194.19	1116.62	1060.48		
225.0	1989.56	1709.44	1528.88	1392.19	1279.13	1196.44	1118.14	1058.06	1000.97		
270.0	1821.38	1603.13	1449.56	1321.88	1230.19	1161.00	1088.44	1019.81	964.69		
315.0	1559.25	1382.06	1284.19	1206.00	1121.91	1064.42	1007.61	938.03	882.00		
360.0	1603.13	1445.06	1328.63	1231.88	1154.25	1094.06	1029.38	966.38	911.81		
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0		
0.0	852.75	804.94	753.75	707.06	669.94	635.63	595.69	567.00	540.00		
45.0	911.25	849.38	796.50	754.31	707.63	663.75	624.38	594.56	563.06		
90.0	941.85	872.83	822.66	776.14	723.83	684.90	649.91	611.10	574.03		
135.0	1010.81	948.94	889.88	834.19	789.19	744.19	696.94	660.38	625.50		
180.0	995.91	932.85	878.12	823.50	777.15	725.46	691.54	643.95	608.91		
225.0	941.23	883.24	837.96	788.74	742.78	703.18	665.21	621.39	588.32		
270.0	916.31	848.25	802.69	766.69	714.38	679.50	643.50	606.38	570.94		
315.0	831.77	774.28	737.27	695.42	651.32	622.52	587.31	550.01	527.18		
360.0	852.75	804.94	753.75	707.06	669.94	635.63	595.69	567.00	540.00		
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0		
0.0	508.50	486.56	465.19	433.13	395.44	357.19	311.63	287.44	223.65		
45.0	528.19	503.44	479.81	456.19	419.63	384.75	345.94	297.56	287.44		
90.0	544.67	511.82	484.93	459.62	431.04	398.19	357.69	315.45	277.76		
135.0	582.75	552.94	524.81	498.38	469.69	447.75	416.81	379.69	338.06		
180.0	576.23	545.23	511.48	486.73	464.85	436.84	405.17	369.51	325.91		
225.0	556.26	520.03	494.33	470.70	441.00	408.09	370.80	325.63	284.01		
270.0	544.50	511.31	489.38	467.44	429.75	396.00	357.19	308.81	288.00		
315.0	502.88	472.11	449.21	417.77	377.49	333.84	293.34	253.46	202.39		
360.0	508.50	486.56	465.19	433.13	395.44	357.19	311.63	287.44	223.65		
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0		
0.0	179.16	142.43	104.06	71.27	46.24	26.78	15.86	14.23	13.05		
45.0	223.76	175.78	136.18	105.02	72.51	45.84	26.04	16.31	14.68		
90.0	240.64	194.34	158.34	124.99	87.24	60.13	37.52	19.97	15.08		
135.0	292.50	287.44	211.16	177.98	132.53	100.46	71.89	41.85	24.30		
180.0	280.80	242.16	199.69	163.07	124.26	89.27	61.82	36.17	18.79		
225.0	238.56	195.36	159.08	124.88	87.64	60.81	37.69	19.01	15.36		
270.0	223.76	174.04	137.87	105.92	73.69	46.41	27.68	16.99	15.08		
315.0	164.87	127.24	96.13	64.29	41.12	21.88	15.30	13.50	12.43		
360.0	179.16	142.43	104.06	71.27	46.24	26.78	15.86	14.23	13.05		

Nata 2-1566-M

Intensity data(cd)										Appendix Page: 18 Total:19	
C/ γ (°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0		
0.0	12.21	11.36	10.69	10.01	8.89	7.54	6.13	5.68	5.46		
45.0	13.33	12.54	11.81	11.19	10.24	9.23	7.76	6.19	5.68		
90.0	13.22	12.21	11.42	10.58	9.73	8.83	7.82	6.47	5.91		
135.0	15.69	13.67	12.49	11.81	10.91	10.29	9.68	8.61	6.98		
180.0	14.34	12.71	11.59	10.86	10.13	9.34	8.55	7.48	6.19		
225.0	13.78	12.83	11.87	11.03	10.07	9.06	7.88	6.30	5.68		
270.0	13.78	12.88	11.98	11.08	10.07	8.89	7.54	5.79	5.40		
315.0	11.70	10.80	10.01	9.11	7.99	6.53	5.79	5.40	5.23		
360.0	12.21	11.36	10.69	10.01	8.89	7.54	6.13	5.68	5.46		
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0		
0.0	5.40	5.29	5.29	5.23	5.12	5.06	5.06	5.01	5.01		
45.0	5.51	5.40	5.34	5.29	5.18	5.06	5.01	4.95	4.95		
90.0	5.46	5.23	5.18	5.12	5.01	5.01	4.89	4.89	4.89		
135.0	5.91	5.51	5.34	5.29	5.18	5.12	5.06	5.01	5.01		
180.0	5.68	5.40	5.29	5.29	5.23	5.18	5.12	5.06	5.01		
225.0	5.40	5.29	5.23	5.18	5.06	5.01	5.01	4.95	4.89		
270.0	5.23	5.12	5.01	4.95	4.89	4.84	4.84	4.78	4.73		
315.0	5.12	5.01	5.01	4.89	4.89	4.84	4.84	4.78	4.78		
360.0	5.40	5.29	5.29	5.23	5.12	5.06	5.06	5.01	5.01		
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0		
0.0	5.06	5.18	7.20	9.28	11.03	11.59	11.98	12.38	12.77		
45.0	4.95	4.89	4.95	5.79	7.82	8.33	8.44	8.38	8.21		
90.0	4.78	4.78	4.78	4.73	4.73	4.73	4.67	4.67	4.67		
135.0	4.95	4.89	4.89	4.84	4.84	4.84	4.84	4.78	4.78		
180.0	5.01	4.95	4.95	4.95	5.18	7.71	10.80	11.93	12.71		
225.0	4.89	4.84	4.84	4.78	4.89	5.29	5.34	5.40	5.34		
270.0	4.73	4.67	4.67	4.61	4.61	4.61	4.61	4.56	4.56		
315.0	4.78	4.78	4.73	4.73	4.73	4.73	4.67	4.67	4.67		
360.0	5.06	5.18	7.20	9.28	11.03	11.59	11.98	12.38	12.77		
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0		
0.0	12.88	13.16	13.39	13.44	13.22	9.90	5.74	5.74	5.29		
45.0	8.04	7.93	7.88	7.59	7.14	6.69	5.79	4.78	4.78		
90.0	4.61	4.67	4.67	4.61	4.61	4.61	4.61	4.56	4.61		
135.0	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73	4.73		
180.0	13.16	13.28	13.39	13.33	13.33	13.22	13.16	11.64	5.91		
225.0	5.40	5.40	5.40	5.46	5.40	5.40	5.29	4.89	4.67		
270.0	4.56	4.56	4.50	4.56	4.56	4.50	4.50	4.50	4.50		
315.0	4.67	4.67	4.67	4.73	4.67	4.73	4.73	4.73	4.73		
360.0	12.88	13.16	13.39	13.44	13.22	9.90	5.74	5.74	5.29		
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0		
0.0	5.06	5.18	5.18	5.34	5.29	5.12	5.06	4.39	4.33		
45.0	4.73	4.73	4.73	4.73	4.67	4.61	4.67	4.39	4.39		
90.0	4.61	4.56	4.56	4.56	4.56	4.50	4.50	4.44	4.39		
135.0	4.73	4.73	4.67	4.67	4.73	4.73	4.67	4.61	4.56		
180.0	5.57	5.57	5.01	5.06	5.06	5.06	5.01	4.95	4.89		
225.0	4.61	4.61	4.61	4.56	4.56	4.50	4.44	4.39	4.39		
270.0	4.50	4.50	4.50	4.56	4.56	4.56	4.50	4.44	4.39		
315.0	4.73	4.73	4.78	4.73	4.73	4.61	4.56	4.33	4.39		
360.0	5.06	5.18	5.18	5.34	5.29	5.12	5.06	4.39	4.33		

Intensity data(cd)

Appendix Page: 19 Total:19

C/ $\gamma(^{\circ})$	90.0
0.0	4.33
45.0	4.33
90.0	4.33
135.0	4.39
180.0	4.33
225.0	4.33
270.0	4.33
315.0	4.39
360.0	4.33