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Nata

Client:

LumCAT: 2-1567-M

Luminaire:

Report No:

Voltage(V): 32.9600

Test No: GC2019081203

Current(A): 0.2970

LampCAT: TRIDONIC SLE G7 17MM

Power (W): 9.7900

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): 1028.31, Efficiency(%): 86.41% , Luminous Efficacy(lm/W): 105.04

Central intensity(cd): 3107.672, Maximum intensity(cd): 3107.672

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=27.2

[C90/270]Total=27.2

Field angle(10%Imax): [C0/180]Total=66.2

[C90/270]Total=66.2

Maximum s/h(1/2): C0_180=0.46 C90_270=0.46

Maximum s/h(1/4): C0_180=0.45 C90_270=0.45

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.41%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.907%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3107.672	0.000	0	.000%	.000%
1.0	3102.961	2.972	2.972	.250%	.289%
2.0	3088.688	8.887	11.859	.747%	1.153%
3.0	3058.523	14.702	26.561	1.235%	2.583%
4.0	3013.945	20.326	46.887	1.708%	4.560%
5.0	2948.414	25.650	72.537	2.155%	7.054%
6.0	2855.602	30.502	103.039	2.563%	10.020%
7.0	2734.664	34.699	137.737	2.916%	13.395%
8.0	2591.367	38.117	175.855	3.203%	17.101%
9.0	2411.297	40.544	216.398	3.407%	21.044%
10.0	2222.930	41.938	258.337	3.524%	25.122%
11.0	2047.711	42.672	301.009	3.586%	29.272%
12.0	1862.016	42.739	343.748	3.592%	33.428%
13.0	1664.297	41.848	385.596	3.517%	37.498%
14.0	1480.430	40.252	425.849	3.383%	41.413%
15.0	1271.412	37.779	463.627	3.175%	45.086%
16.0	1128.016	35.158	498.785	2.954%	48.505%
17.0	975.649	32.760	531.545	2.753%	51.691%
18.0	845.895	30.033	561.578	2.524%	54.612%
19.0	747.675	27.725	589.303	2.330%	57.308%
20.0	668.222	25.915	615.218	2.178%	59.828%
21.0	604.786	24.444	639.662	2.054%	62.205%
22.0	560.306	23.413	663.075	1.967%	64.482%
23.0	525.403	22.781	685.857	1.914%	66.698%
24.0	497.004	22.353	708.21	1.878%	68.871%
25.0	474.673	22.094	730.304	1.857%	71.020%
26.0	456.272	21.975	752.279	1.847%	73.157%
27.0	439.657	21.919	774.198	1.842%	75.289%
28.0	425.116	21.894	796.092	1.840%	77.418%
29.0	411.244	21.882	817.974	1.839%	79.546%
30.0	398.123	21.853	839.827	1.836%	81.671%
31.0	376.509	21.557	861.383	1.812%	83.767%
32.0	346.022	20.700	882.083	1.739%	85.780%
33.0	313.980	19.444	901.527	1.634%	87.671%
34.0	279.661	17.965	919.492	1.510%	89.418%
35.0	252.028	16.512	936.005	1.388%	91.024%
36.0	206.564	14.602	950.606	1.227%	92.444%
37.0	171.028	12.315	962.921	1.035%	93.641%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	138.305	10.325	973.246	.868%	94.645%
39.0	104.393	8.284	981.53	.696%	95.451%
40.0	73.800	6.215	987.745	.522%	96.055%
41.0	48.438	4.353	992.098	.366%	96.479%
42.0	26.487	2.722	994.82	.229%	96.743%
43.0	14.358	1.513	996.333	.127%	96.890%
44.0	11.468	0.975	997.308	.082%	96.985%
45.0	10.209	0.833	998.141	.070%	97.066%
46.0	9.415	0.767	998.908	.064%	97.141%
47.0	8.719	0.721	999.63	.061%	97.211%
48.0	8.100	0.680	1000.309	.057%	97.277%
49.0	7.481	0.640	1000.949	.054%	97.339%
50.0	6.834	0.597	1001.546	.050%	97.397%
51.0	6.314	0.556	1002.102	.047%	97.452%
52.0	6.019	0.529	1002.632	.044%	97.503%
53.0	5.857	0.517	1003.148	.043%	97.553%
54.0	5.801	0.514	1003.662	.043%	97.603%
55.0	5.745	0.515	1004.177	.043%	97.653%
56.0	5.681	0.516	1004.694	.043%	97.704%
57.0	5.646	0.518	1005.212	.044%	97.754%
58.0	5.604	0.520	1005.732	.044%	97.805%
59.0	5.583	0.523	1006.255	.044%	97.855%
60.0	5.555	0.526	1006.781	.044%	97.907%
61.0	5.548	0.530	1007.311	.045%	97.958%
62.0	5.562	0.535	1007.846	.045%	98.010%
63.0	5.716	0.549	1008.395	.046%	98.063%
64.0	6.202	0.585	1008.98	.049%	98.120%
65.0	6.778	0.642	1009.622	.054%	98.183%
66.0	7.460	0.710	1010.332	.060%	98.252%
67.0	8.248	0.790	1011.122	.066%	98.329%
68.0	8.965	0.872	1011.994	.073%	98.413%
69.0	9.520	0.943	1012.937	.079%	98.505%
70.0	10.055	1.005	1013.942	.084%	98.603%
71.0	10.441	1.059	1015.002	.089%	98.706%
72.0	10.540	1.091	1016.093	.092%	98.812%
73.0	10.188	1.084	1017.177	.091%	98.917%
74.0	9.605	1.041	1018.217	.087%	99.019%
75.0	8.817	0.973	1019.191	.082%	99.113%

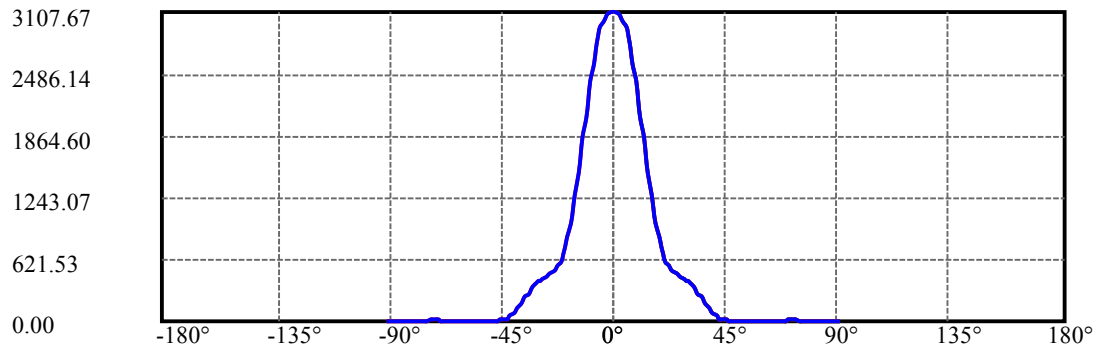
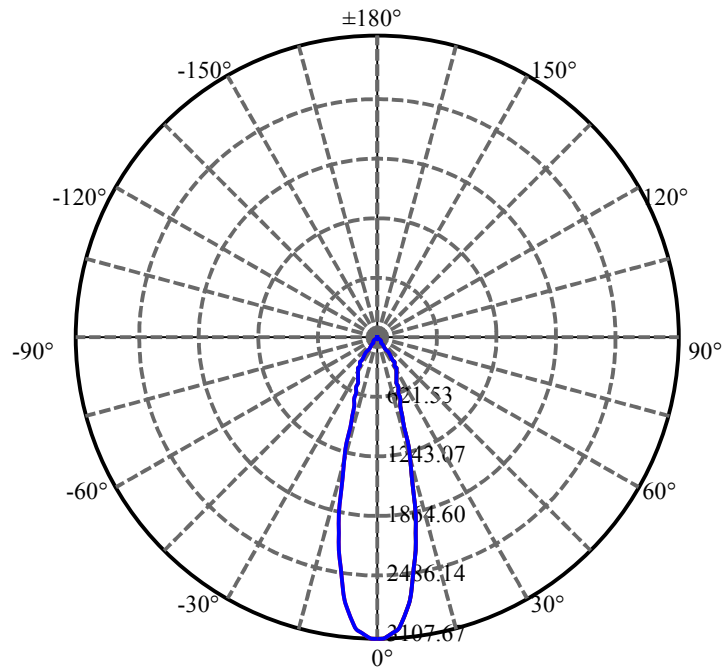
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.840	0.884	1020.075	.074%	99.199%
77.0	6.708	0.776	1020.85	.065%	99.275%
78.0	5.871	0.673	1021.524	.057%	99.340%
79.0	5.527	0.612	1022.136	.051%	99.400%
80.0	5.456	0.592	1022.728	.050%	99.457%
81.0	5.386	0.586	1023.315	.049%	99.514%
82.0	5.393	0.585	1023.899	.049%	99.571%
83.0	5.407	0.587	1024.486	.049%	99.628%
84.0	5.393	0.588	1025.075	.049%	99.686%
85.0	5.316	0.584	1025.659	.049%	99.742%
86.0	5.133	0.571	1026.23	.048%	99.798%
87.0	4.936	0.551	1026.781	.046%	99.851%
88.0	4.711	0.528	1027.31	.044%	99.903%
89.0	4.556	0.508	1027.818	.043%	99.952%
90.0	4.395	0.491	1028.308	.041%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	839.83	70.57%	81.67%
0-40	987.75	83.00%	96.06%
0-60	1006.78	84.60%	97.91%
0-90	1027.82	86.37%	99.95%
0-120	1027.82	86.37%	99.95%
0-180	1028.31	86.41%	100.00%
60-90	21.56	1.81%	2.10%
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%
0-29.21	822.65	69.13%	80.00%

ZONAL LUMEN SUMMARY

0-10	258.34
10-20	356.88
20-30	224.61
30-40	147.92
40-50	13.80
50-60	5.23
60-70	7.16
70-80	8.79
80-90	5.09
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



C0(Max): —————

C0/C180: —————

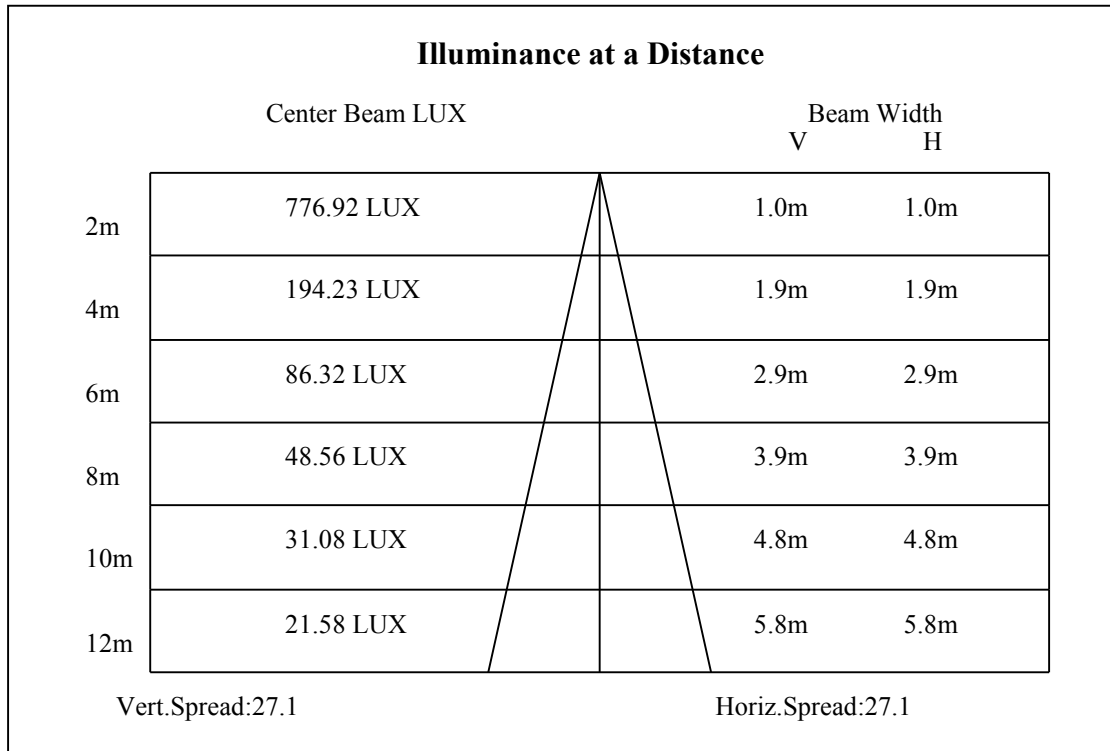
C90/C270: —————

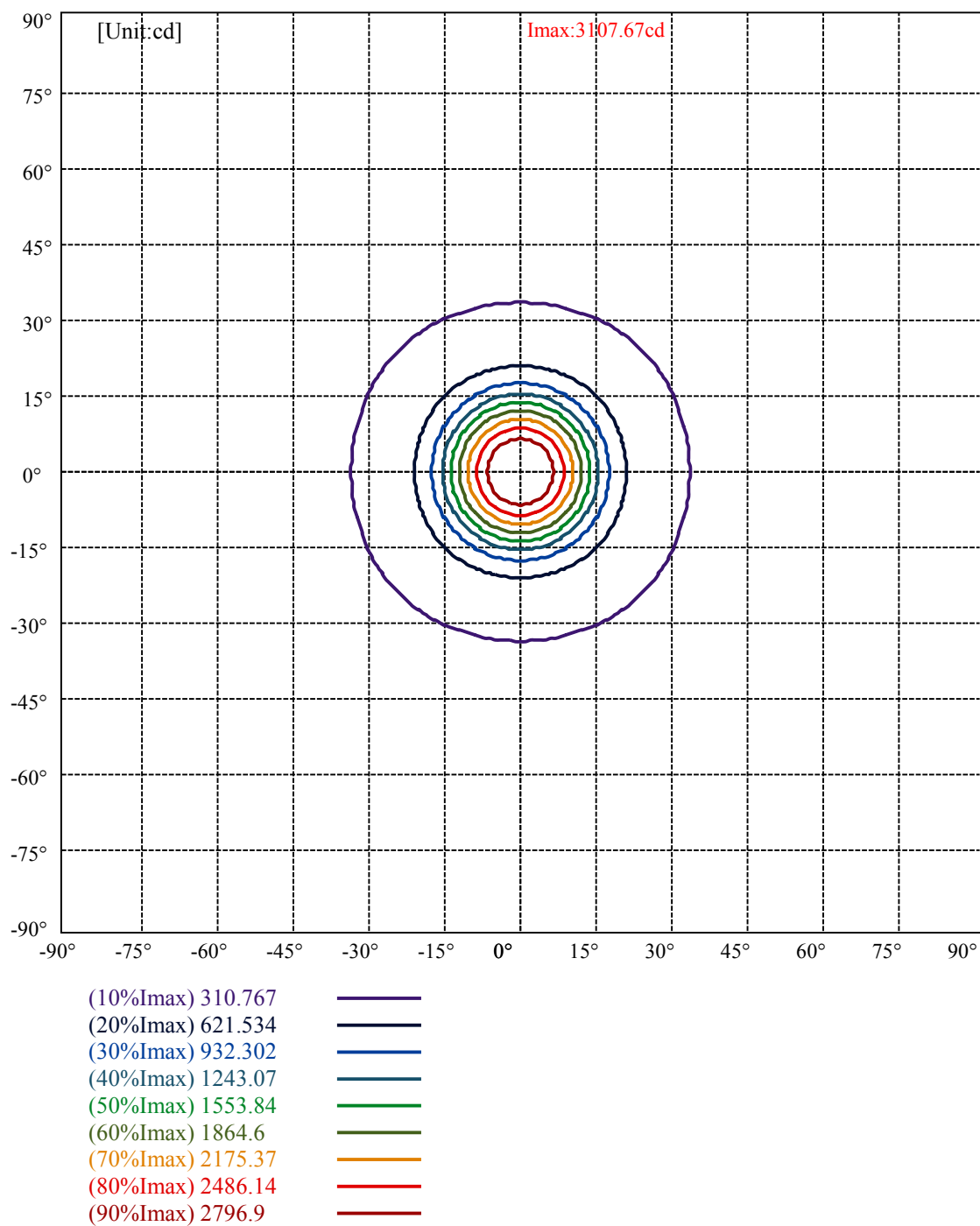
Field angle(10%Imax):C0/180Left:33.1 Right:33.1

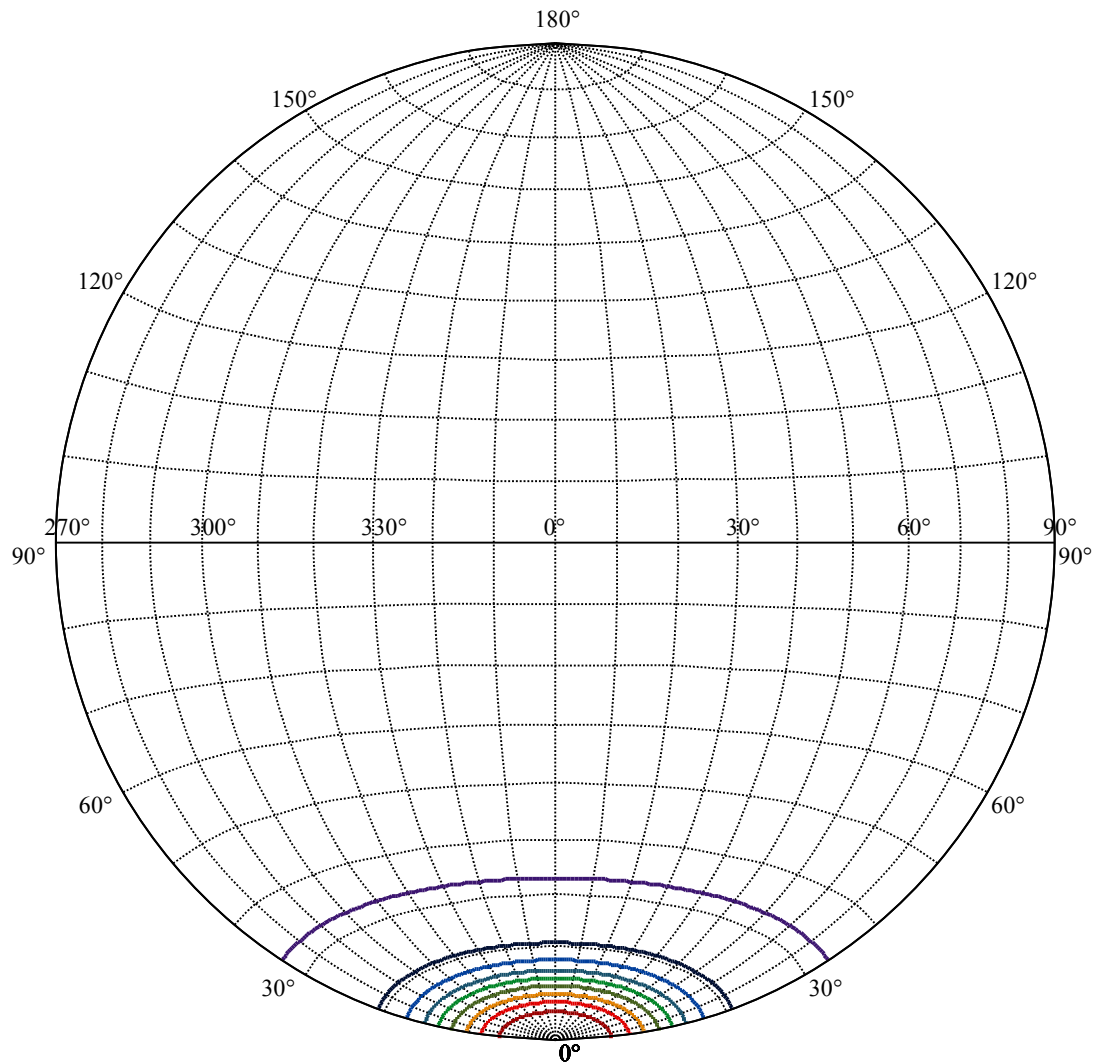
:C90/270Left:33.1 Right:33.1

Beam Angle(50%Imax):C0/180Left:13.6 Right:13.6

:C90/270Left:13.6 Right:13.6







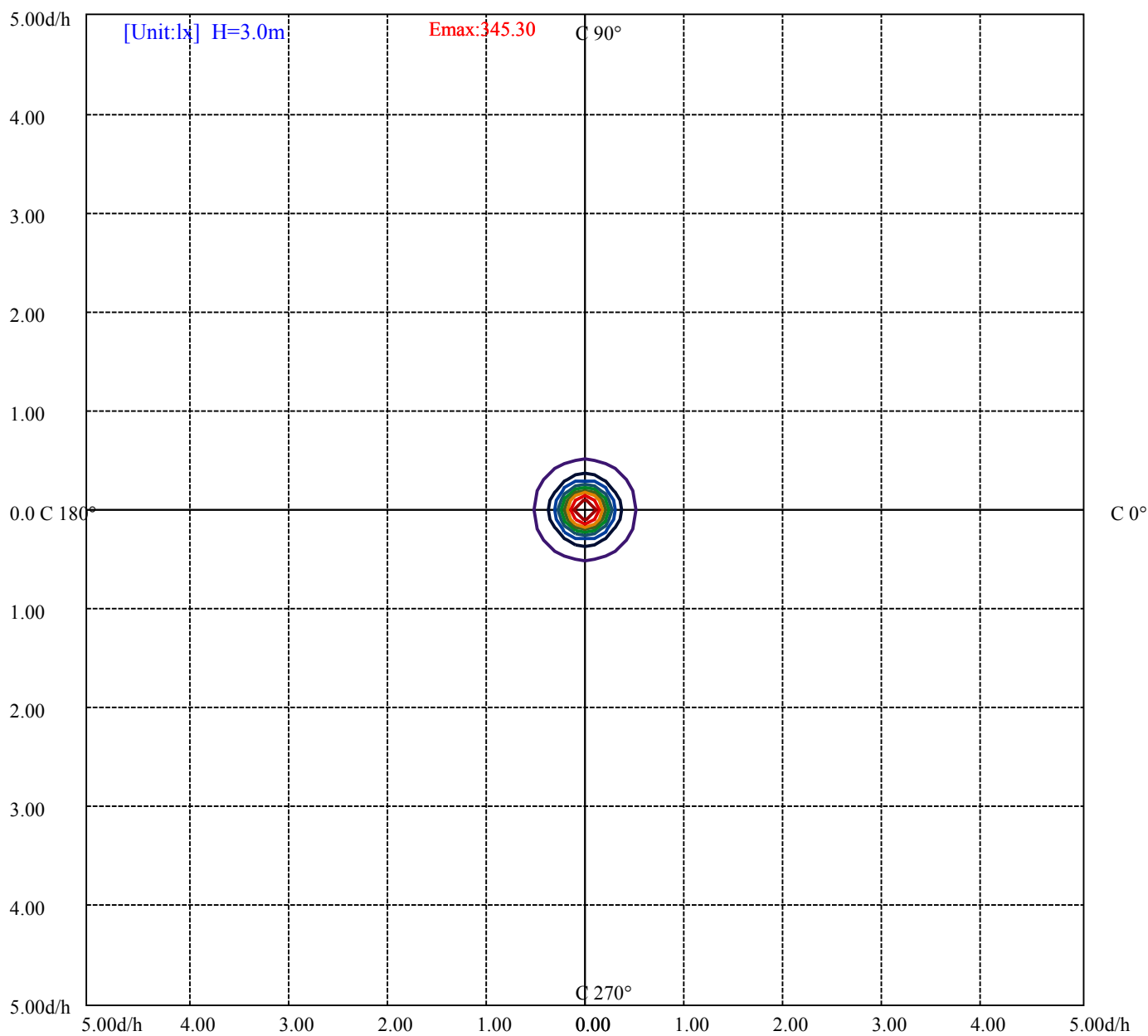
House

[Unit:cd]

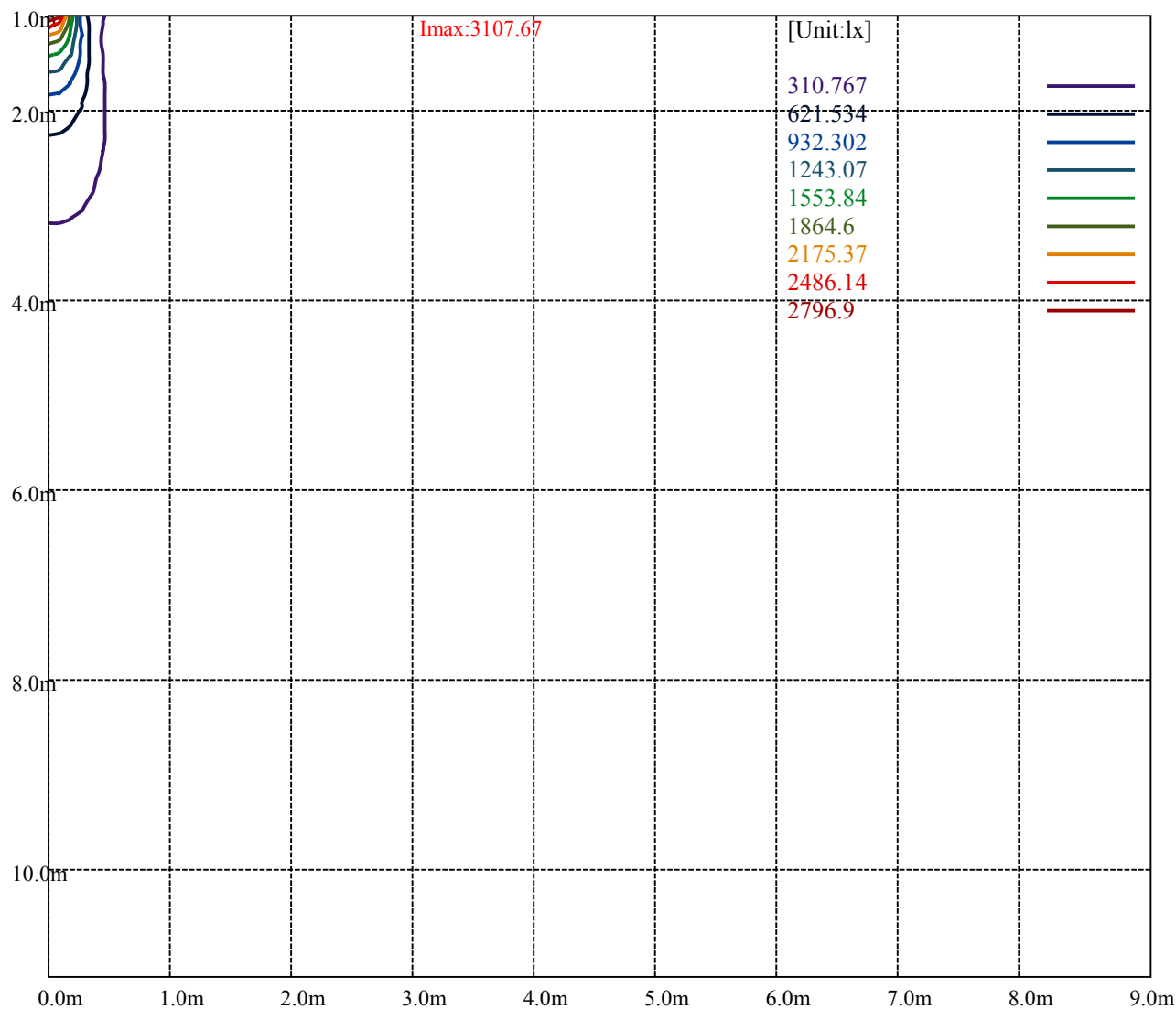
Road

Imax:3107.67

(10%Imax)	310.767	—
(20%Imax)	621.534	—
(30%Imax)	932.302	—
(40%Imax)	1243.07	—
(50%Imax)	1553.84	—
(60%Imax)	1864.6	—
(70%Imax)	2175.37	—
(80%Imax)	2486.14	—
(90%Imax)	2796.9	—



(10%Emax)	34.52967	—
(20%Emax)	69.05933	—
(30%Emax)	103.589	—
(40%Emax)	138.1189	—
(50%Emax)	172.6489	—
(60%Emax)	207.1778	—
(70%Emax)	241.7078	—
(80%Emax)	276.2378	—
(90%Emax)	310.7667	—



Luminance Table

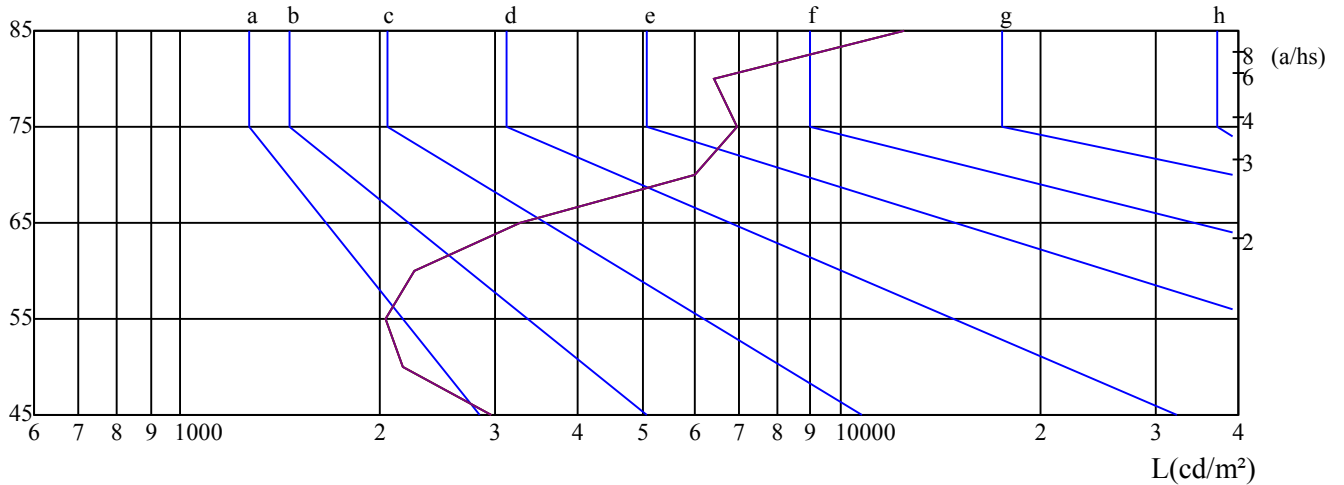
γ	45	50	55	60	65	70	75	80	85
C0	2947	2170	2044	2267	3273	6000	6952	6413	12447
C45	2947	2170	2044	2267	3273	6000	6952	6413	12447
C90	2947	2170	2044	2267	3273	6000	6952	6413	12447

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3273	3273	3273	6952	6952	6952	12447	12447	12447

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

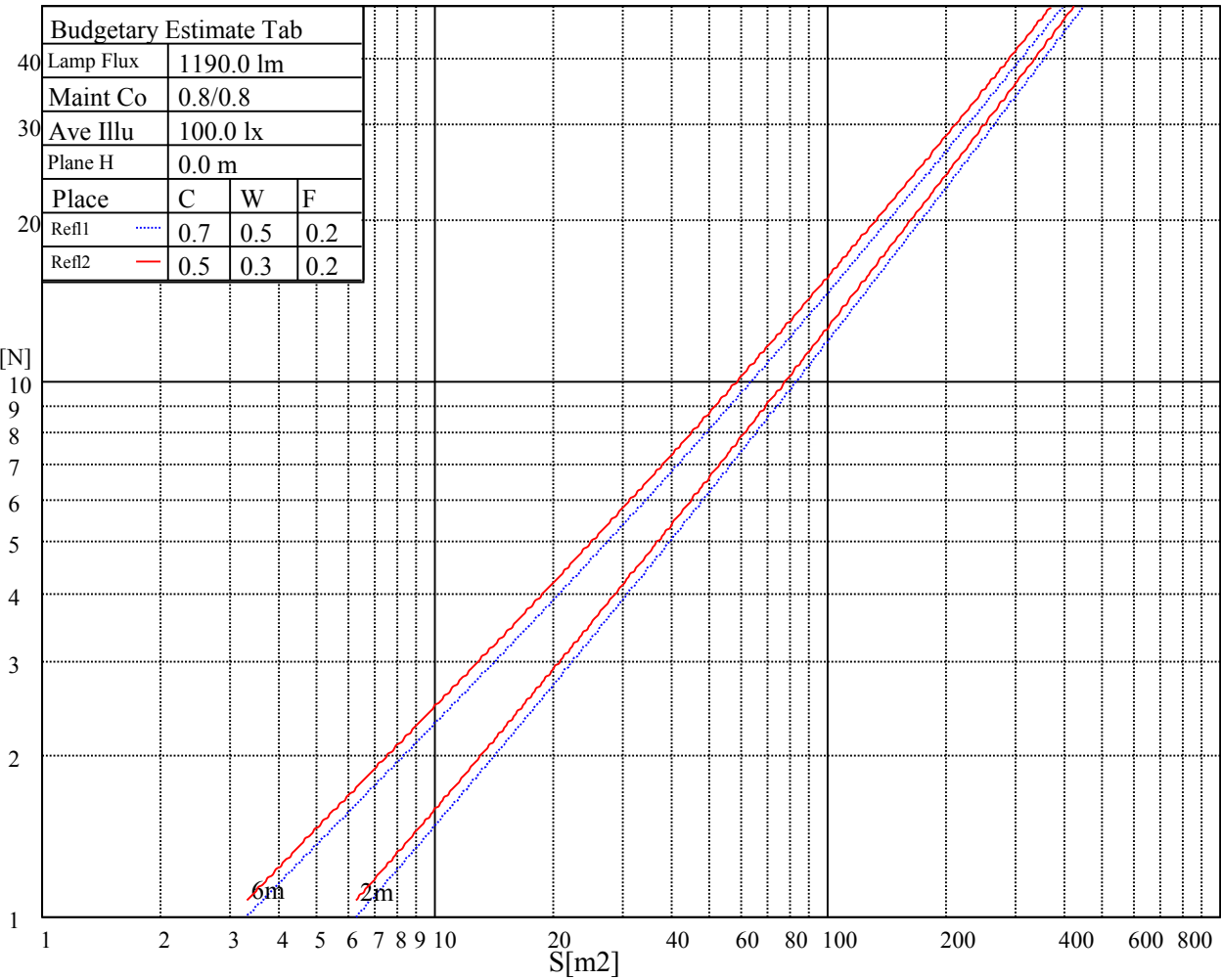
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

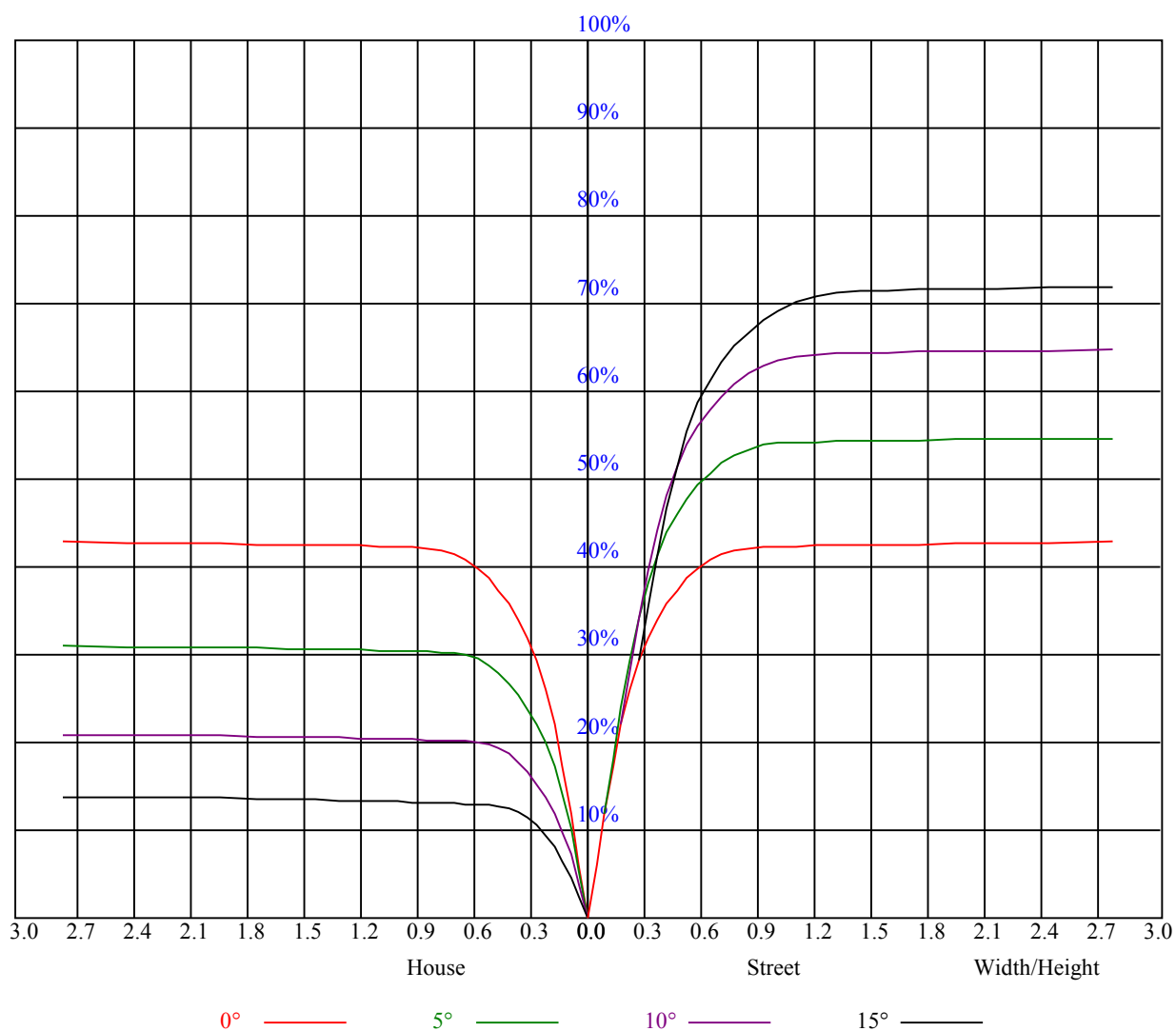
C0 ———

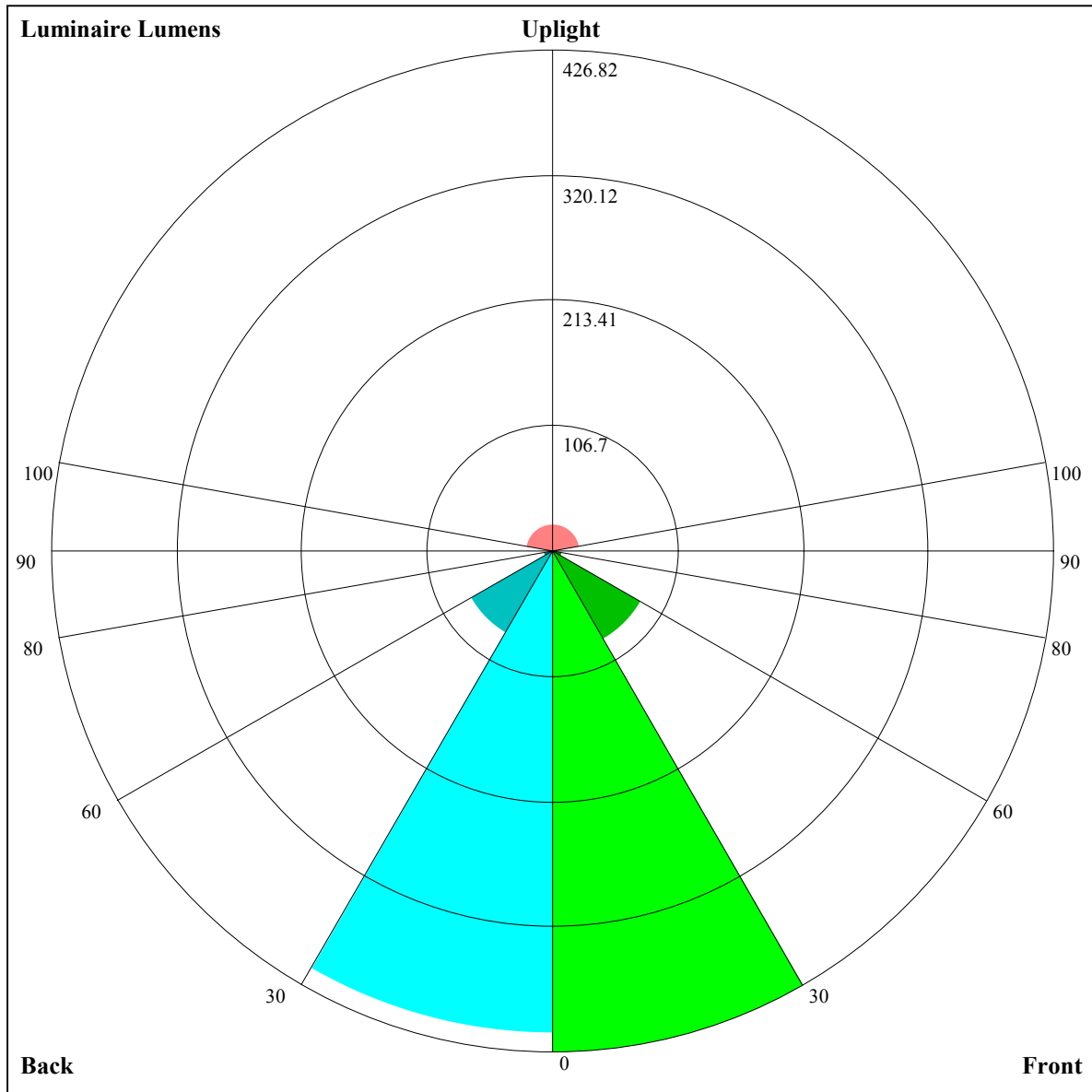
C45 ———

C90 ———



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	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.96	0.94	0.92	0.94	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	0.91	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	0.79	0.77
3	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.73
4	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.77	0.73	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.68	0.72	0.70	0.68	0.67
6	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
7	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.61
8	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.58
9	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.63	0.58	0.56	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.54





Luminaire Lumens:

FL=426.82,FM=87.27,FH=8.5,FVH=2.79

BL=411.1,BM=81.36,BH=8.21,BVH=2.77

UL=4.79,UH=22.82

BUG Rating:B1-U2-G0

Nata 2-1567-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	3111.75	3110.63	3098.25	3074.06	3037.50	2965.50	2888.44	2790.56	2652.19
45.0	3103.88	3103.31	3098.25	3073.50	3041.44	2995.31	2905.88	2808.56	2687.06
90.0	3106.13	3103.31	3084.75	3054.38	3005.44	2941.31	2842.88	2706.75	2556.00
135.0	3108.94	3107.81	3096.56	3072.94	3036.38	2971.13	2876.63	2773.13	2651.06
180.0	3111.75	3105.56	3087.00	3054.94	2999.25	2928.94	2834.44	2693.25	2515.50
225.0	3103.88	3092.63	3075.19	3033.56	2978.44	2897.44	2790.00	2643.75	2485.13
270.0	3106.13	3101.63	3087.56	3058.88	3013.31	2953.13	2855.81	2749.50	2616.19
315.0	3108.94	3098.81	3081.94	3045.94	2999.81	2934.56	2850.75	2711.81	2567.81
360.0	3111.75	3110.63	3098.25	3074.06	3037.50	2965.50	2888.44	2790.56	2652.19
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2483.44	2326.50	2140.31	1971.56	1776.94	1579.50	1408.50	1221.19	1051.88
45.0	2500.88	2341.13	2179.69	2011.50	1792.13	1616.63	1420.88	1251.00	1076.63
90.0	2390.63	2175.19	2005.88	1831.50	1610.44	1436.06	1209.38	1086.47	927.96
135.0	2432.25	2259.56	2104.31	1859.63	1681.88	1526.06	1310.06	1129.50	1003.50
180.0	2341.69	2144.81	1947.38	1769.63	1594.69	1378.13	1113.19	1057.56	907.71
225.0	2311.31	2091.94	1915.31	1739.25	1517.63	1350.56	1106.04	1015.54	873.79
270.0	2423.25	2251.69	2075.06	1874.25	1676.81	1503.56	1315.69	1155.38	992.25
315.0	2406.94	2192.63	2013.75	1838.81	1663.88	1452.94	1287.56	1107.51	971.49
360.0	2483.44	2326.50	2140.31	1971.56	1776.94	1579.50	1408.50	1221.19	1051.88
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	923.06	817.31	712.69	645.75	594.00	549.56	514.13	489.94	465.75
45.0	924.75	809.44	717.75	642.38	586.69	542.25	506.25	482.06	464.06
90.0	810.17	707.68	637.14	575.16	530.44	500.06	474.69	453.77	439.03
135.0	848.81	744.19	672.75	601.88	558.56	523.69	494.44	473.63	457.31
180.0	787.22	703.01	631.80	576.39	540.23	509.34	486.11	463.95	443.03
225.0	774.51	688.28	629.10	578.25	539.27	513.62	487.80	466.03	448.99
270.0	857.81	763.31	679.50	616.50	573.19	541.13	513.00	491.06	472.50
315.0	840.83	748.18	665.04	601.99	560.08	523.58	499.61	476.94	459.51
360.0	923.06	817.31	712.69	645.75	594.00	549.56	514.13	489.94	465.75
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	447.19	433.69	421.88	408.94	389.81	364.50	331.31	294.75	286.88
45.0	443.81	429.19	416.81	403.88	383.63	357.75	327.94	292.50	284.06
90.0	426.09	411.02	398.98	385.93	365.01	330.19	298.07	261.39	225.39
135.0	437.63	424.69	410.63	397.13	374.63	344.81	308.81	284.06	237.04
180.0	430.03	416.36	398.64	386.44	362.93	322.59	294.86	262.29	225.68
225.0	433.07	416.48	403.59	390.99	362.19	333.56	302.01	260.27	226.41
270.0	455.63	439.88	425.81	410.63	392.63	367.88	333.00	299.25	286.31
315.0	443.81	429.64	413.61	401.06	381.26	346.89	315.84	282.77	244.46
360.0	447.19	433.69	421.88	408.94	389.81	364.50	331.31	294.75	286.88
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	221.85	188.49	154.97	115.99	87.02	60.81	33.24	17.55	11.87
45.0	224.94	184.67	153.00	122.74	87.02	60.30	34.93	17.10	12.15
90.0	192.77	157.67	127.63	95.40	64.29	39.66	21.15	12.43	11.03
135.0	199.58	167.46	132.81	99.39	71.49	46.58	22.44	13.56	11.93
180.0	189.45	157.22	122.57	89.83	62.78	36.68	19.86	12.54	10.80
225.0	192.71	152.04	124.03	90.39	57.32	37.74	20.48	12.04	10.58
270.0	224.66	186.86	153.34	117.79	84.77	57.83	32.23	16.03	12.21
315.0	206.55	173.81	138.09	103.61	75.71	47.93	27.56	13.61	11.19
360.0	221.85	188.49	154.97	115.99	87.02	60.81	33.24	17.55	11.87

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	10.24	9.51	8.89	8.16	7.54	6.92	6.19	5.79	5.63
45.0	10.74	9.79	9.17	8.49	7.82	7.26	6.81	6.41	6.02
90.0	9.96	9.28	8.55	8.04	7.54	6.75	6.19	5.96	5.85
135.0	10.29	9.68	8.94	8.27	7.59	7.03	6.41	5.85	5.74
180.0	9.90	9.28	8.44	7.82	7.20	6.47	5.91	5.74	5.68
225.0	9.62	8.61	7.99	7.43	6.86	6.36	6.02	5.96	5.91
270.0	11.03	9.96	9.34	8.72	8.04	7.48	6.98	6.64	6.30
315.0	9.90	9.23	8.44	7.88	7.26	6.41	6.02	5.79	5.74
360.0	10.24	9.51	8.89	8.16	7.54	6.92	6.19	5.79	5.63
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.51	5.46	5.40	5.34	5.29	5.29	5.23	5.23	5.18
45.0	5.96	5.91	5.79	5.74	5.63	5.63	5.57	5.57	5.57
90.0	5.79	5.68	5.63	5.51	5.51	5.40	5.34	5.34	5.34
135.0	5.68	5.63	5.57	5.51	5.51	5.51	5.51	5.57	5.63
180.0	5.57	5.57	5.51	5.51	5.51	5.57	5.63	5.63	5.57
225.0	5.85	5.74	5.68	5.63	5.51	5.46	5.40	5.34	5.29
270.0	6.30	6.24	6.19	6.19	6.13	6.08	6.02	5.96	6.24
315.0	5.74	5.74	5.68	5.74	5.74	5.74	5.74	5.74	5.68
360.0	5.51	5.46	5.40	5.34	5.29	5.29	5.23	5.23	5.18
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.18	5.18	5.18	5.23	5.23	5.23	5.23	5.23	5.18
45.0	5.91	7.09	8.21	9.62	11.48	13.05	14.63	16.20	16.93
90.0	5.57	6.30	7.31	8.27	9.28	9.45	8.78	8.44	9.11
135.0	5.63	5.63	5.63	5.63	5.63	5.68	6.02	6.24	6.64
180.0	5.57	5.57	5.51	5.51	5.46	5.46	5.40	5.40	5.40
225.0	5.34	6.13	7.26	8.78	10.41	12.49	14.06	15.08	15.13
270.0	6.92	8.04	9.34	10.69	12.38	14.01	15.36	16.76	17.83
315.0	5.63	5.68	5.79	5.96	6.13	6.36	6.69	7.09	7.31
360.0	5.18	5.18	5.18	5.23	5.23	5.23	5.23	5.23	5.18
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	5.12	5.12	5.12	5.12	5.06	5.06	5.06	5.06	5.12
45.0	16.59	15.75	14.57	13.05	11.36	9.84	7.88	5.96	5.85
90.0	9.96	9.90	9.90	9.06	7.37	5.23	4.95	4.84	4.67
135.0	6.75	6.53	6.30	6.02	5.74	5.40	5.34	5.34	5.34
180.0	5.40	5.34	5.34	5.29	5.29	5.34	5.34	5.40	5.46
225.0	14.68	13.78	12.38	10.74	9.11	6.92	5.79	5.74	5.46
270.0	18.51	17.89	16.48	14.91	12.88	10.29	7.09	6.41	6.19
315.0	7.31	7.20	6.75	6.36	5.91	5.57	5.51	5.46	5.57
360.0	5.12	5.12	5.12	5.12	5.06	5.06	5.06	5.06	5.12
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.12	5.18	5.23	5.29	5.34	5.29	5.18	5.06	5.01
45.0	5.68	5.57	5.63	5.68	5.68	5.46	5.34	5.29	5.18
90.0	4.67	4.73	4.89	4.89	4.78	4.67	4.50	4.50	4.33
135.0	5.40	5.51	5.51	5.57	5.46	5.29	5.06	4.56	4.33
180.0	5.46	5.51	5.57	5.57	5.46	5.18	4.89	4.44	4.44
225.0	5.34	5.29	5.34	5.34	5.29	5.23	4.95	4.44	4.39
270.0	5.91	5.96	5.91	5.79	5.63	5.23	4.89	4.67	4.33
315.0	5.51	5.40	5.18	5.01	4.89	4.73	4.67	4.73	4.44
360.0	5.12	5.18	5.23	5.29	5.34	5.29	5.18	5.06	5.01

Intensity data(cd)

Appendix Page: 19 Total:19

C/ $\gamma(^{\circ})$	90.0
0.0	4.44
45.0	4.44
90.0	4.33
135.0	4.33
180.0	4.44
225.0	4.44
270.0	4.33
315.0	4.39
360.0	4.44