
Client:

LumCAT: 1-0918-M

Luminaire: 92.70.124.00

Report No: nt0100

Test No: GC2019122021

LampCAT: LUMINUS CXM-9-AC40

Lamp flux(lm): 1036.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 33.3400

Current(A): 0.2970

Power (W): 9.9000

PF: 1.0000

Ballast type: DC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 809.20, Efficiency(%): 78.11% , Luminous Efficacy(lm/W): 81.74

Central intensity(cd): 4977.000, Maximum intensity(cd): 4977.000

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=20.4

[C90/270]Total=20.4

Field angle(10%Imax): [C0/180]Total=41.0

[C90/270]Total=41.0

Maximum s/h(1/2): C0_180=0.35 C90_270=0.35

Maximum s/h(1/4): C0_180=0.37 C90_270=0.37

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 78.11%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.492%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4977.000	0.000	0	.000%	.000%
1.0	4956.258	4.753	4.753	.459%	.587%
2.0	4879.898	14.118	18.871	1.363%	2.332%
3.0	4725.141	22.972	41.843	2.217%	5.171%
4.0	4515.328	30.931	72.774	2.986%	8.993%
5.0	4266.211	37.778	110.551	3.646%	13.662%
6.0	3920.906	43.025	153.577	4.153%	18.979%
7.0	3572.367	46.511	200.087	4.489%	24.727%
8.0	3253.711	48.853	248.94	4.716%	30.764%
9.0	2894.414	49.827	298.768	4.810%	36.921%
10.0	2547.070	49.243	348.011	4.753%	43.007%
11.0	2268.914	48.122	396.133	4.645%	48.954%
12.0	1998.563	46.650	442.782	4.503%	54.719%
13.0	1725.750	44.198	486.98	4.266%	60.181%
14.0	1485.640	41.106	528.086	3.968%	65.260%
15.0	1300.352	38.247	566.333	3.692%	69.987%
16.0	1122.996	35.509	601.842	3.427%	74.375%
17.0	942.630	32.167	634.009	3.105%	78.350%
18.0	813.030	28.947	662.956	2.794%	81.928%
19.0	678.438	25.949	688.905	2.505%	85.134%
20.0	557.128	22.614	711.519	2.183%	87.929%
21.0	446.259	19.267	730.786	1.860%	90.310%
22.0	358.917	16.180	746.967	1.562%	92.309%
23.0	257.562	12.935	759.902	1.249%	93.908%
24.0	188.923	9.762	769.664	.942%	95.114%
25.0	110.791	6.815	776.479	.658%	95.956%
26.0	66.347	4.181	780.66	.404%	96.473%
27.0	37.371	2.537	783.198	.245%	96.787%
28.0	18.485	1.414	784.612	.137%	96.962%
29.0	12.122	0.801	785.412	.077%	97.061%
30.0	9.570	0.586	785.998	.057%	97.133%
31.0	8.262	0.496	786.494	.048%	97.194%
32.0	7.495	0.451	786.946	.044%	97.250%
33.0	6.926	0.425	787.371	.041%	97.303%
34.0	6.427	0.404	787.775	.039%	97.352%
35.0	6.019	0.387	788.161	.037%	97.400%
36.0	5.695	0.373	788.534	.036%	97.446%
37.0	5.428	0.363	788.897	.035%	97.491%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	5.196	0.355	789.252	.034%	97.535%
39.0	5.013	0.348	789.6	.034%	97.578%
40.0	4.838	0.344	789.944	.033%	97.620%
41.0	4.725	0.341	790.284	.033%	97.663%
42.0	4.620	0.340	790.624	.033%	97.705%
43.0	4.535	0.339	790.963	.033%	97.746%
44.0	4.458	0.339	791.302	.033%	97.788%
45.0	4.395	0.340	791.642	.033%	97.830%
46.0	4.324	0.341	791.983	.033%	97.873%
47.0	4.282	0.342	792.326	.033%	97.915%
48.0	4.247	0.345	792.67	.033%	97.957%
49.0	4.191	0.346	793.017	.033%	98.000%
50.0	4.177	0.349	793.366	.034%	98.043%
51.0	4.141	0.352	793.718	.034%	98.087%
52.0	4.106	0.354	794.072	.034%	98.131%
53.0	4.071	0.356	794.427	.034%	98.175%
54.0	4.071	0.359	794.786	.035%	98.219%
55.0	4.036	0.362	795.148	.035%	98.264%
56.0	4.022	0.364	795.512	.035%	98.309%
57.0	4.015	0.367	795.88	.035%	98.354%
58.0	3.994	0.370	796.25	.036%	98.400%
59.0	3.987	0.373	796.623	.036%	98.446%
60.0	3.966	0.376	796.999	.036%	98.492%
61.0	3.952	0.378	797.377	.036%	98.539%
62.0	3.952	0.381	797.757	.037%	98.586%
63.0	3.945	0.384	798.141	.037%	98.634%
64.0	3.938	0.387	798.528	.037%	98.681%
65.0	3.916	0.389	798.917	.038%	98.729%
66.0	3.916	0.391	799.308	.038%	98.778%
67.0	3.902	0.393	799.701	.038%	98.826%
68.0	3.902	0.395	800.096	.038%	98.875%
69.0	3.902	0.398	800.494	.038%	98.924%
70.0	3.895	0.400	800.895	.039%	98.974%
71.0	3.895	0.403	801.298	.039%	99.024%
72.0	3.874	0.404	801.702	.039%	99.074%
73.0	3.888	0.406	802.107	.039%	99.124%
74.0	3.881	0.408	802.516	.039%	99.174%
75.0	3.874	0.410	802.926	.040%	99.225%

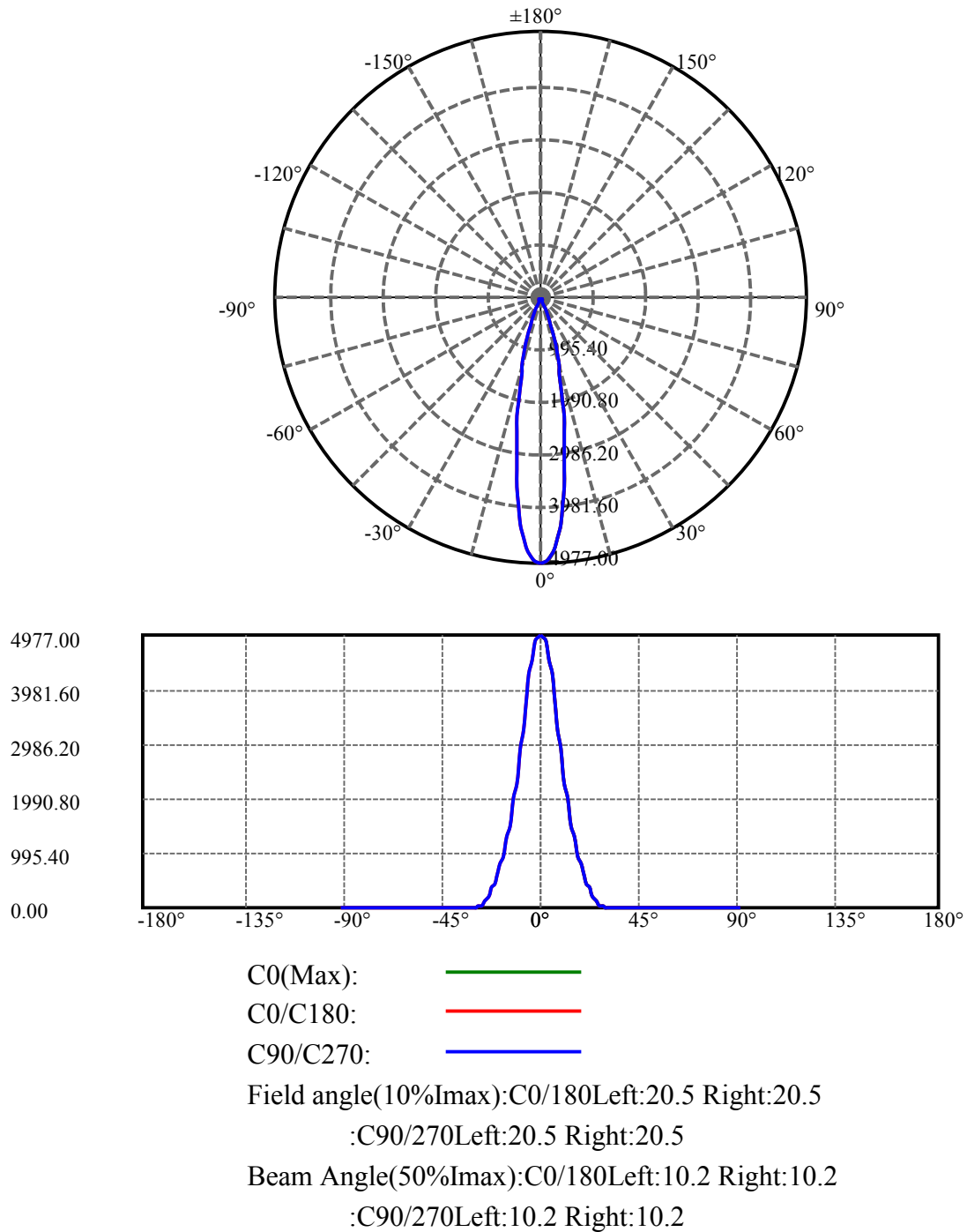
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.860	0.411	803.336	.040%	99.276%
77.0	3.853	0.411	803.747	.040%	99.326%
78.0	3.874	0.414	804.161	.040%	99.377%
79.0	3.881	0.417	804.578	.040%	99.429%
80.0	3.860	0.417	804.995	.040%	99.481%
81.0	3.874	0.418	805.413	.040%	99.532%
82.0	3.867	0.420	805.833	.041%	99.584%
83.0	3.867	0.420	806.254	.041%	99.636%
84.0	3.874	0.422	806.675	.041%	99.688%
85.0	3.888	0.424	807.099	.041%	99.741%
86.0	3.839	0.422	807.521	.041%	99.793%
87.0	3.832	0.420	807.941	.041%	99.845%
88.0	3.818	0.419	808.36	.040%	99.896%
89.0	3.825	0.419	808.779	.040%	99.948%
90.0	3.825	0.419	809.199	.040%	100.000%

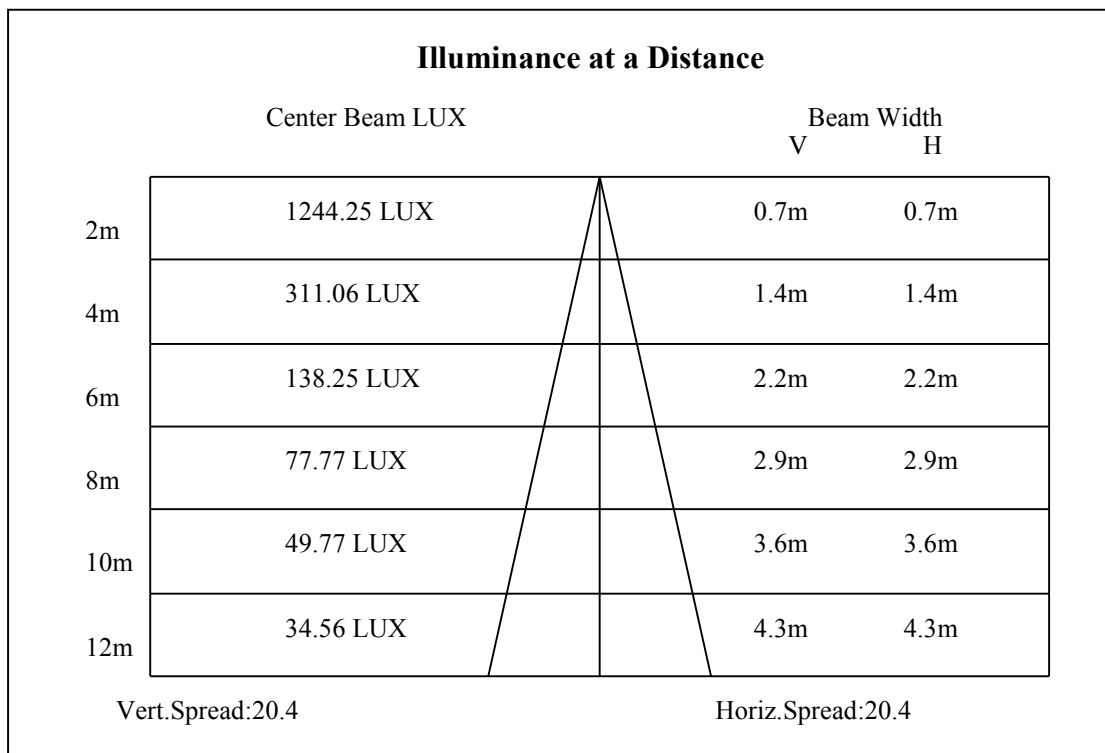
ZONAL LUMEN SUMMARY

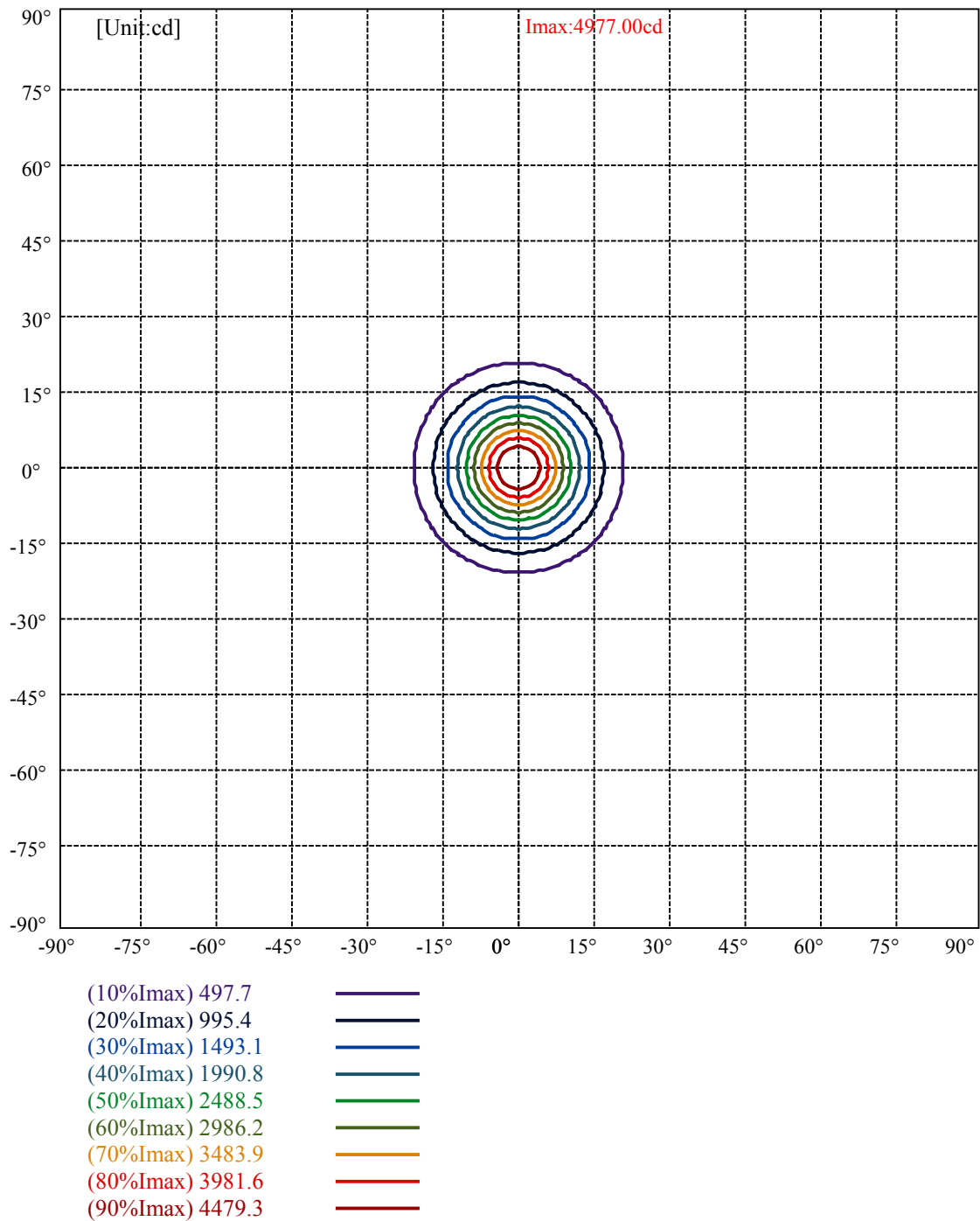
Zone	Lumens	%Lamp	%Fixt
0-30	786.00	75.87%	97.13%
0-40	789.94	76.25%	97.62%
0-60	797.00	76.93%	98.49%
0-90	808.78	78.07%	99.95%
0-120	808.78	78.07%	99.95%
0-180	809.20	78.11%	100.00%
60-90	12.16	1.17%	1.50%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-17.46	647.36	62.49%	80.00%

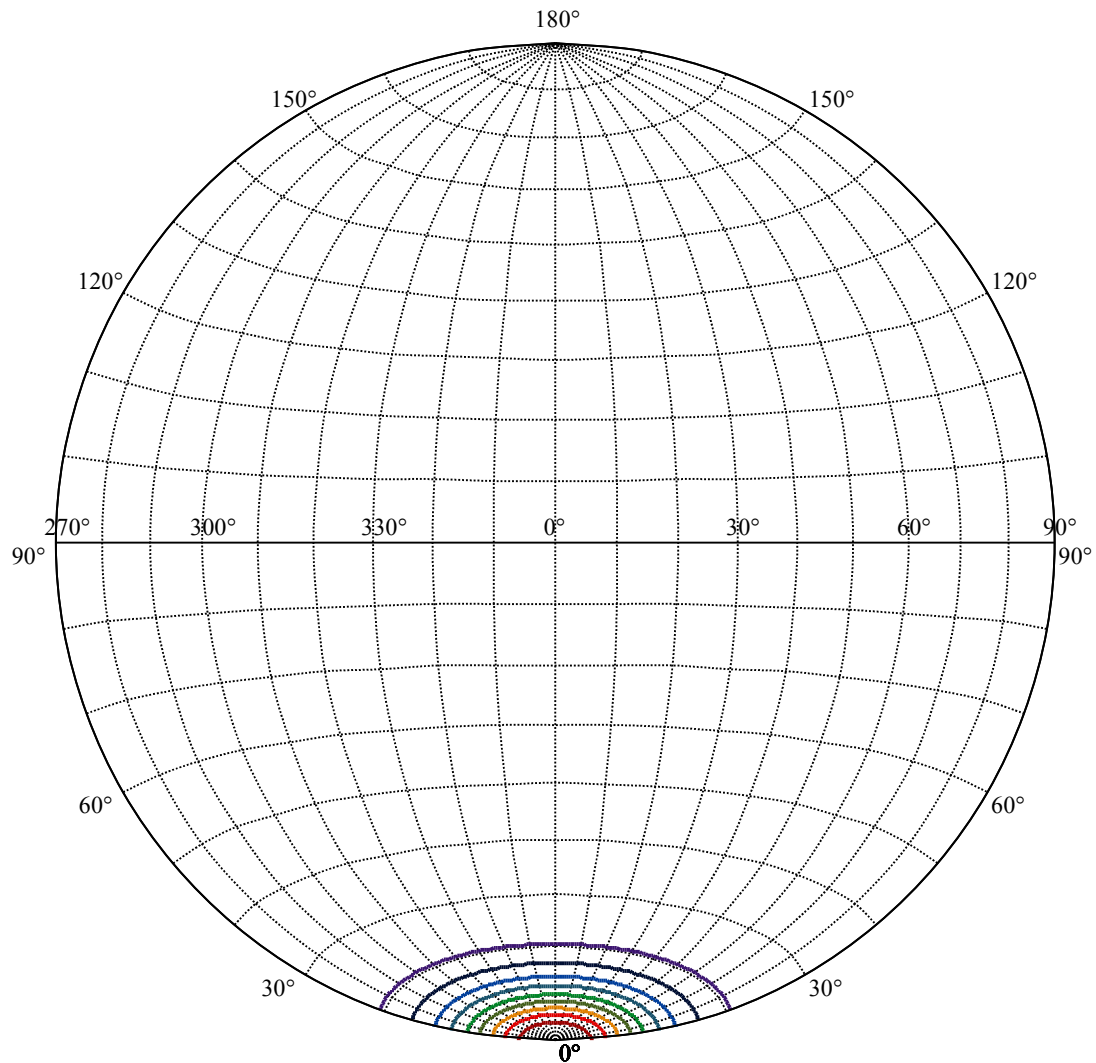
ZONAL LUMEN SUMMARY

0-10	348.01
10-20	363.51
20-30	74.48
30-40	3.95
40-50	3.42
50-60	3.63
60-70	3.90
70-80	4.10
80-90	3.78
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









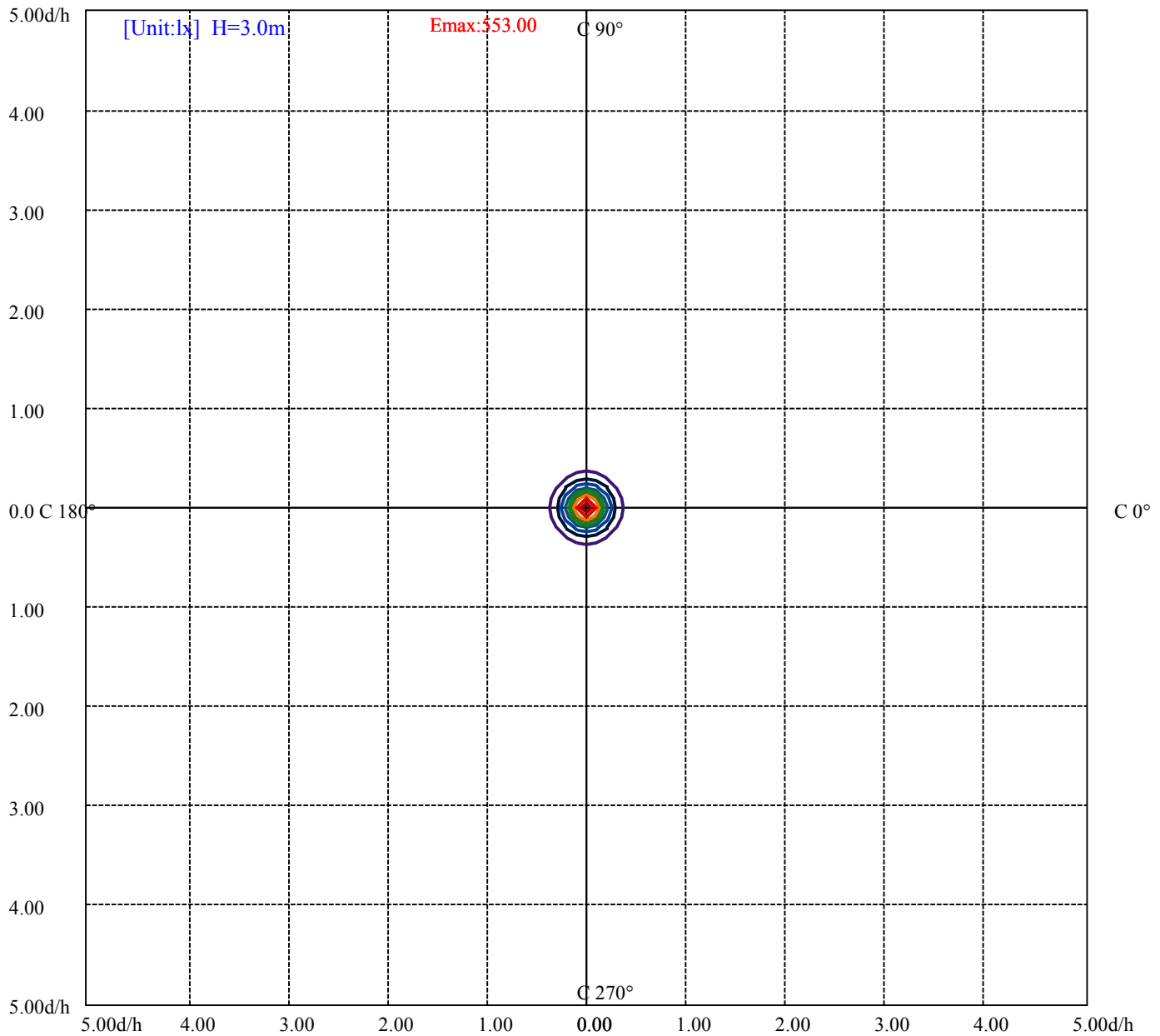
House

[Unit:cd]

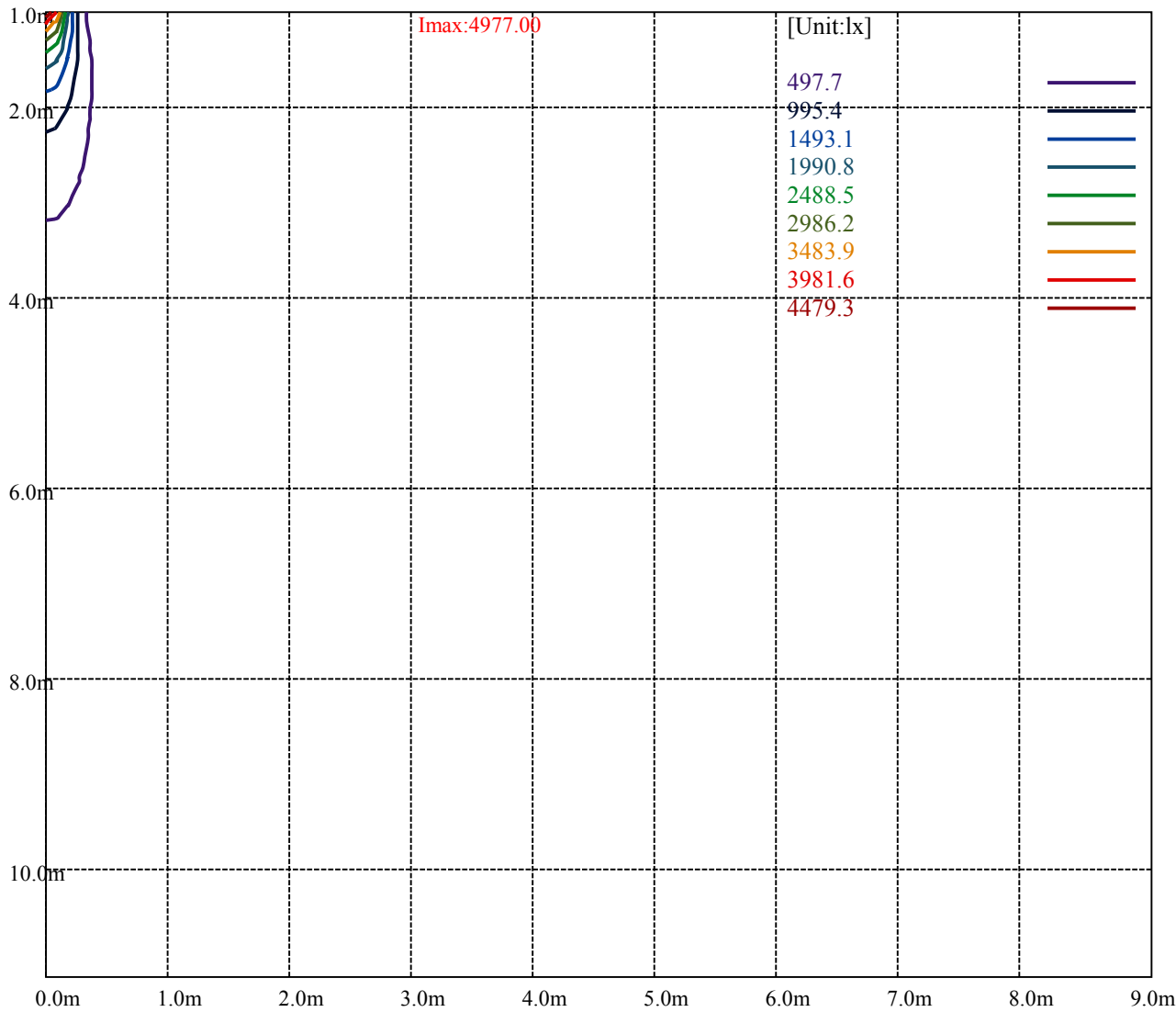
Road

Imax:4977.00

(10%Imax)	497.7	
(20%Imax)	995.4	
(30%Imax)	1493.1	
(40%Imax)	1990.8	
(50%Imax)	2488.5	
(60%Imax)	2986.2	
(70%Imax)	3483.9	
(80%Imax)	3981.6	
(90%Imax)	4479.3	



(10%E _{max}) 55.3	—
(20%E _{max}) 110.5999	—
(30%E _{max}) 165.9	—
(40%E _{max}) 221.2	—
(50%E _{max}) 276.5	—
(60%E _{max}) 331.8	—
(70%E _{max}) 387.1	—
(80%E _{max}) 442.4	—
(90%E _{max}) 497.7	—



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

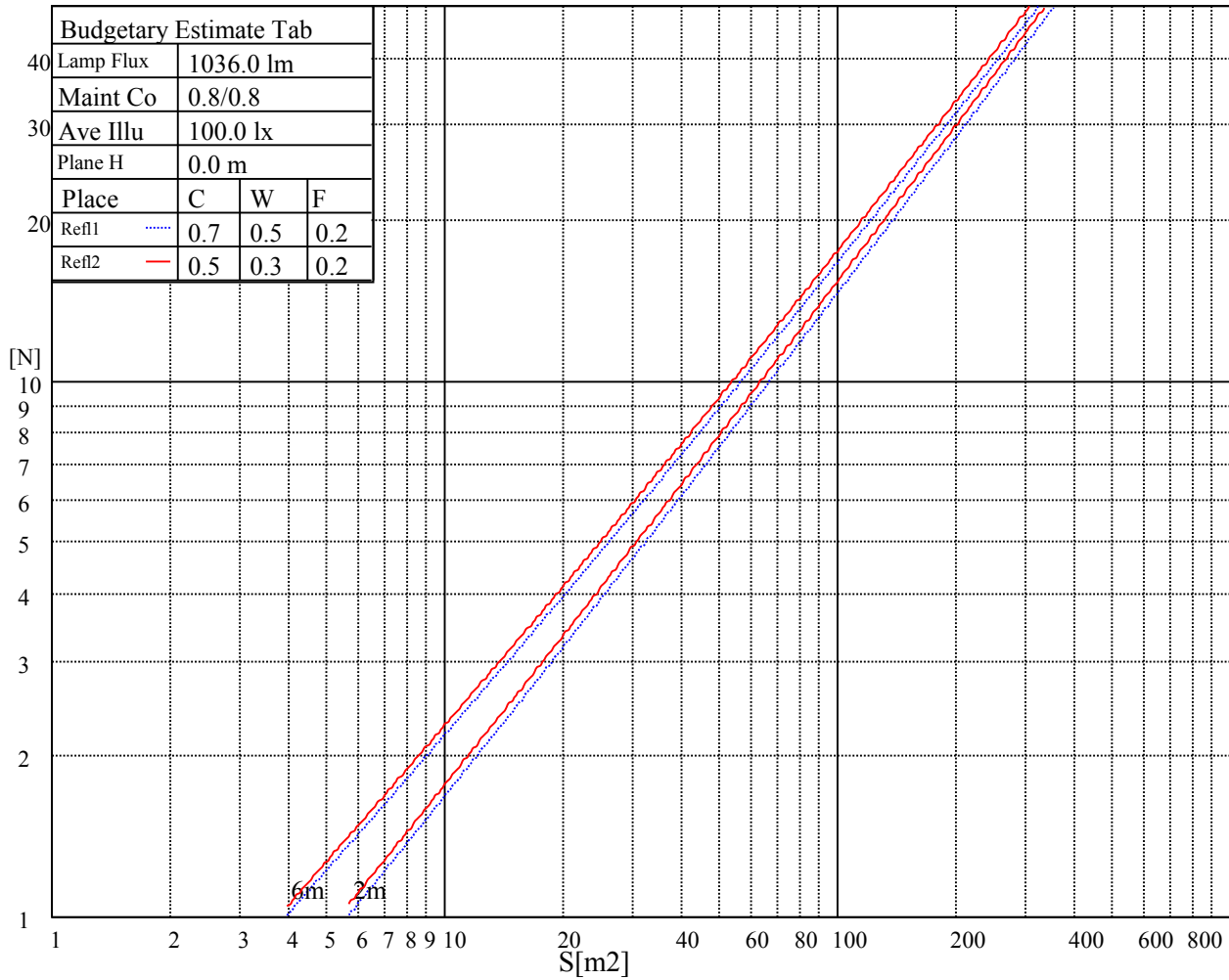
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

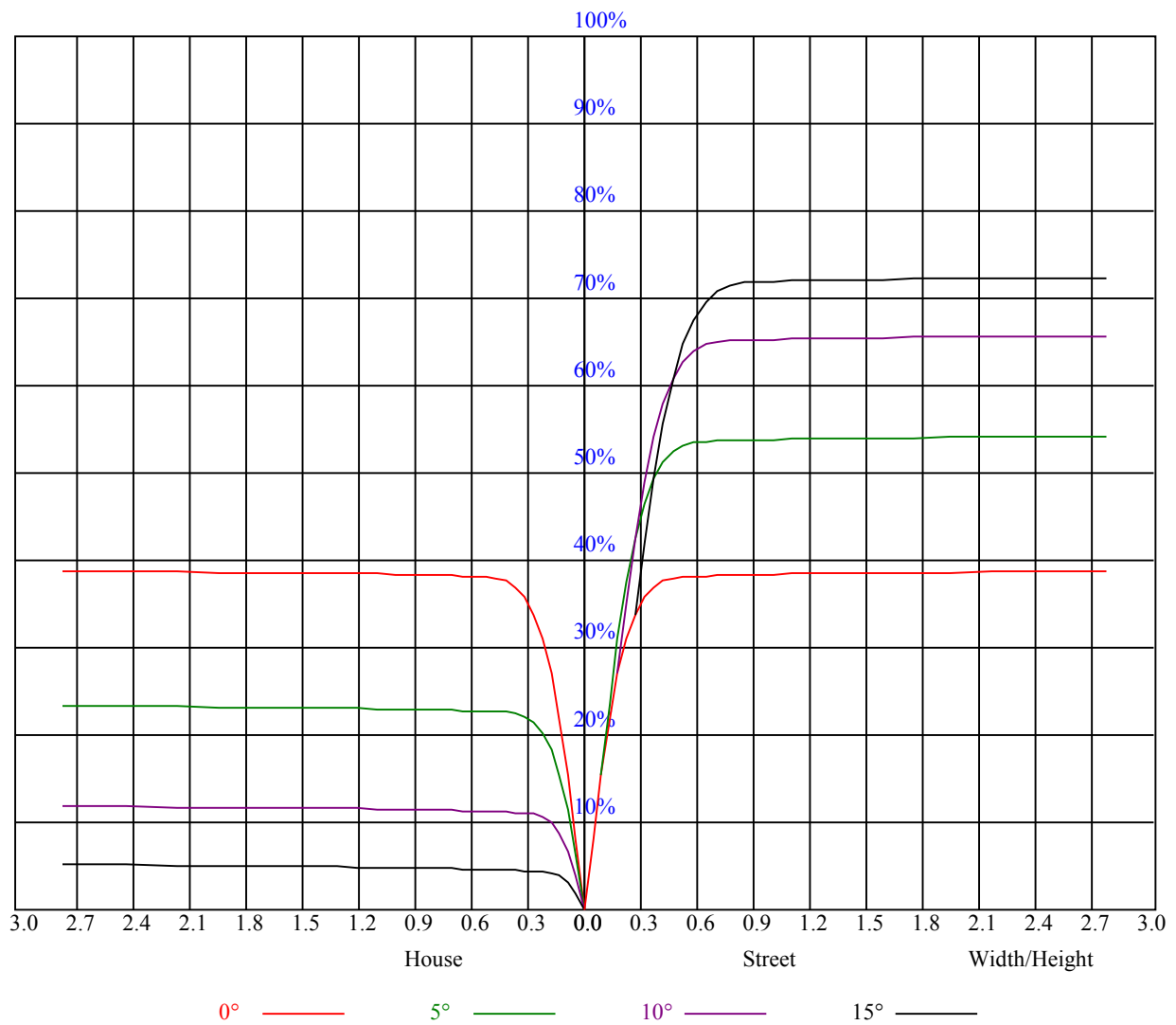
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

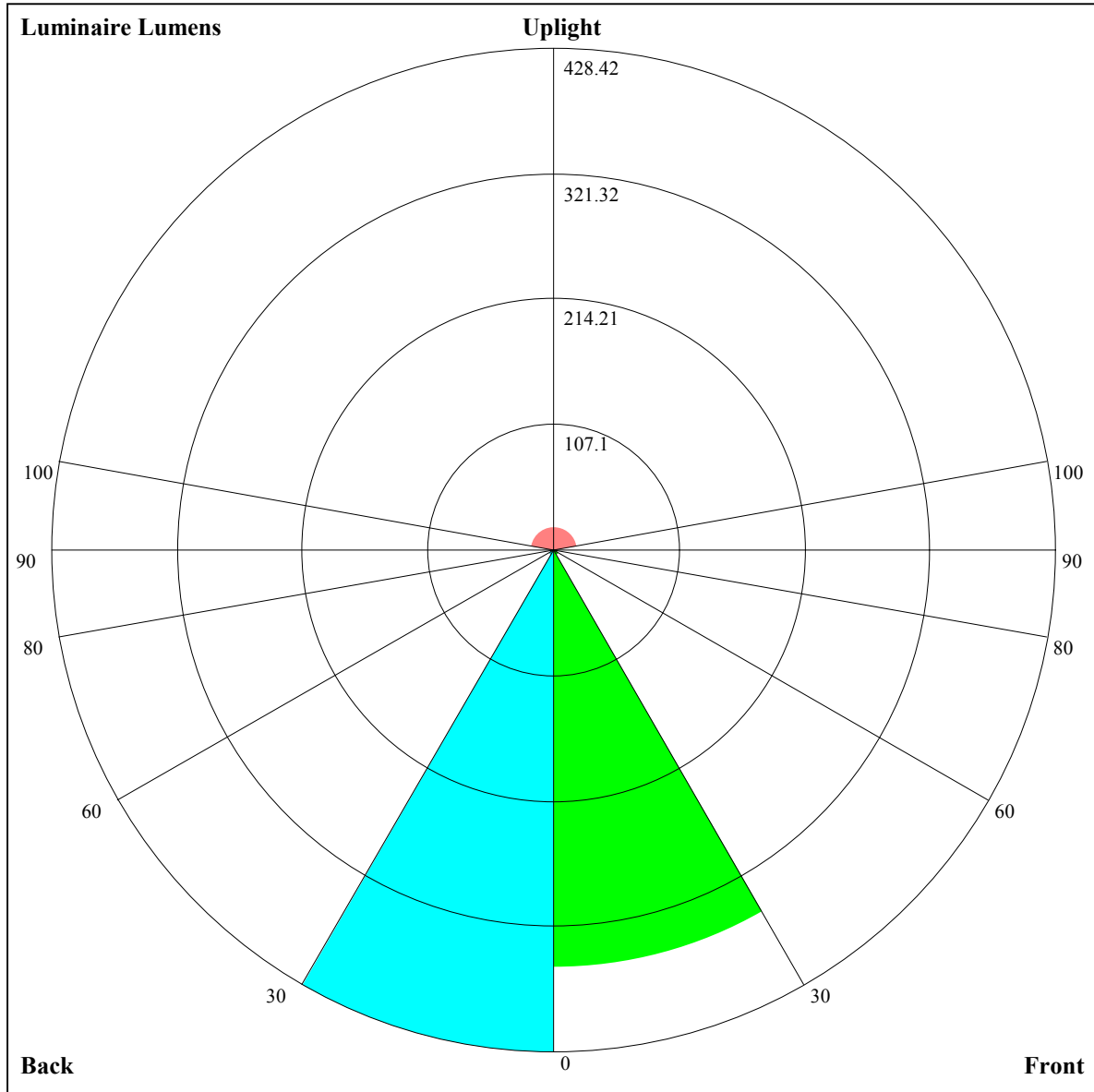
Luminance Limiting Curve





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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.88	0.87	0.85	0.87	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.78	0.77	0.77	0.75
2	0.84	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.78	0.78	0.77	0.76	0.76	0.75	0.74	0.73
3	0.81	0.78	0.76	0.80	0.78	0.76	0.78	0.76	0.74	0.76	0.75	0.73	0.75	0.73	0.72	0.71
4	0.78	0.75	0.73	0.77	0.75	0.73	0.76	0.74	0.72	0.75	0.73	0.71	0.73	0.72	0.70	0.69
5	0.76	0.73	0.71	0.75	0.72	0.70	0.74	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.69	0.68
6	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.71	0.69	0.67	0.70	0.68	0.67	0.66
7	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.68	0.66	0.70	0.67	0.66	0.69	0.67	0.65	0.65
8	0.70	0.67	0.65	0.69	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.67	0.65	0.64	0.63
9	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.63	0.66	0.64	0.63	0.62
10	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.62	0.65	0.63	0.62	0.65	0.63	0.61	0.61





Luminaire Lumens:

FL=357.12,FM=5.41,FH=4.01,FVH=2.11

BL=428.42,BM=5.66,BH=4.02,BVH=2.11

UL=4.17,UH=19.86

BUG Rating:B1-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	4974.75	4911.19	4776.19	4495.50	4219.88	3907.69	3486.94	3147.19	2827.13
45.0	4998.38	4928.63	4777.88	4561.88	4259.81	3960.00	3591.00	3199.50	2873.25
90.0	4971.38	4917.94	4809.94	4576.50	4323.38	4038.75	3640.50	3302.44	2972.81
135.0	4963.50	4977.00	4950.00	4869.00	4734.56	4532.63	4241.25	3904.31	3586.50
180.0	4974.75	5005.69	4987.13	4937.06	4804.88	4639.50	4357.69	3990.38	3708.00
225.0	4998.38	5021.44	5006.81	4938.75	4822.88	4623.75	4296.94	4005.00	3686.63
270.0	4971.38	4986.56	4957.31	4877.44	4698.56	4465.69	4158.56	3814.88	3486.38
315.0	4963.50	4901.63	4773.94	4545.00	4258.69	3961.69	3594.38	3215.25	2889.00
360.0	4974.75	4911.19	4776.19	4495.50	4219.88	3907.69	3486.94	3147.19	2827.13
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2491.31	2177.44	1919.81	1660.50	1428.19	1243.13	1056.94	910.13	761.63
45.0	2536.88	2220.19	1956.94	1720.13	1458.56	1272.38	1104.19	936.56	784.13
90.0	2631.38	2314.13	2054.25	1788.75	1573.88	1356.75	1118.81	1004.96	849.66
135.0	3219.75	2859.75	2558.25	2279.81	1960.88	1728.56	1519.31	1308.94	1113.75
180.0	3328.31	2913.19	2646.56	2363.06	2036.81	1797.19	1579.50	1362.38	1121.06
225.0	3258.56	2923.88	2612.81	2255.63	2023.31	1752.19	1488.94	1322.44	1103.74
270.0	3107.81	2747.81	2448.56	2205.00	1850.63	1622.25	1442.25	1212.75	1030.50
315.0	2581.31	2220.19	1954.13	1715.63	1473.75	1112.68	1092.88	925.82	776.59
360.0	2491.31	2177.44	1919.81	1660.50	1428.19	1243.13	1056.94	910.13	761.63
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	628.88	521.44	420.75	306.00	294.75	148.44	82.01	45.28	23.23
45.0	666.00	537.75	426.94	326.81	288.00	165.88	96.36	50.79	24.92
90.0	723.32	592.59	486.68	376.31	278.94	200.36	136.01	72.68	39.15
135.0	969.19	815.63	676.13	556.31	446.63	350.44	295.31	165.83	103.89
180.0	1002.83	860.34	701.49	585.84	479.19	367.76	267.81	189.62	117.68
225.0	952.54	819.73	695.36	567.00	449.66	354.21	247.73	173.87	111.60
270.0	903.94	745.31	615.38	522.00	398.81	309.94	288.56	137.70	84.21
315.0	657.56	534.71	434.31	329.79	235.35	163.46	97.59	50.57	26.10
360.0	628.88	521.44	420.75	306.00	294.75	148.44	82.01	45.28	23.23
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	13.28	10.01	8.83	7.93	7.31	6.69	6.24	5.85	5.57
45.0	13.84	9.96	8.72	7.93	7.20	6.64	6.24	5.85	5.57
90.0	19.24	11.64	9.51	8.44	7.65	6.98	6.53	6.13	5.79
135.0	58.95	25.26	15.02	10.69	8.83	7.93	7.31	6.69	6.24
180.0	69.64	34.26	16.93	11.53	9.11	8.16	7.43	6.86	6.30
225.0	63.39	27.23	16.20	11.59	9.68	8.61	7.82	7.20	6.64
270.0	45.39	19.13	12.66	10.18	8.83	8.10	7.43	6.86	6.36
315.0	15.24	10.41	9.11	8.27	7.48	6.86	6.41	5.96	5.68
360.0	13.28	10.01	8.83	7.93	7.31	6.69	6.24	5.85	5.57
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	5.23	5.06	4.89	4.73	4.61	4.50	4.44	4.33	4.28
45.0	5.34	5.12	4.95	4.84	4.67	4.61	4.50	4.44	4.39
90.0	5.51	5.29	5.06	4.95	4.78	4.67	4.61	4.56	4.50
135.0	5.91	5.57	5.34	5.12	4.95	4.84	4.73	4.61	4.56
180.0	5.96	5.68	5.40	5.12	4.95	4.78	4.67	4.56	4.44
225.0	6.19	5.85	5.51	5.29	5.06	4.95	4.78	4.67	4.56
270.0	6.02	5.68	5.40	5.23	5.01	4.89	4.73	4.67	4.56
315.0	5.40	5.18	5.01	4.84	4.67	4.56	4.50	4.44	4.39
360.0	5.23	5.06	4.89	4.73	4.61	4.50	4.44	4.33	4.28

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	4.22	4.22	4.16	4.11	4.11	4.05	4.05	4.05	3.99
45.0	4.33	4.33	4.28	4.22	4.16	4.16	4.16	4.11	4.05
90.0	4.44	4.33	4.33	4.28	4.22	4.22	4.16	4.16	4.11
135.0	4.44	4.33	4.33	4.28	4.22	4.22	4.16	4.11	4.11
180.0	4.39	4.33	4.22	4.22	4.16	4.16	4.11	4.05	3.99
225.0	4.50	4.39	4.33	4.33	4.28	4.22	4.16	4.16	4.11
270.0	4.50	4.44	4.39	4.33	4.28	4.28	4.22	4.16	4.16
315.0	4.33	4.22	4.22	4.22	4.11	4.11	4.11	4.05	4.05
360.0	4.22	4.22	4.16	4.11	4.11	4.05	4.05	4.05	3.99
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	3.99	3.94	3.94	3.94	3.94	3.88	3.88	3.88	3.88
45.0	4.05	3.99	4.05	3.99	4.05	3.99	3.99	3.94	3.94
90.0	4.11	4.11	4.05	4.05	4.05	4.05	3.99	3.99	3.99
135.0	4.11	4.05	4.05	4.05	3.99	3.99	3.99	3.99	3.99
180.0	3.99	3.99	3.94	3.99	3.94	3.94	3.94	3.88	3.88
225.0	4.11	4.11	4.05	4.05	3.99	3.99	3.94	3.99	3.99
270.0	4.16	4.11	4.11	4.05	4.05	4.05	4.05	3.99	3.99
315.0	4.05	3.99	3.99	3.99	3.94	3.99	3.94	3.94	3.94
360.0	3.99	3.94	3.94	3.94	3.94	3.88	3.88	3.88	3.88
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.88	3.88	3.83	3.83	3.83	3.83	3.83	3.83	3.83
45.0	3.94	3.94	3.88	3.94	3.88	3.94	3.88	3.94	3.88
90.0	3.99	3.99	3.99	3.99	3.94	3.99	3.99	3.94	3.94
135.0	3.99	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
180.0	3.88	3.88	3.88	3.88	3.88	3.83	3.83	3.83	3.83
225.0	3.94	3.94	3.94	3.88	3.88	3.88	3.94	3.88	3.88
270.0	3.99	3.99	3.99	3.99	3.99	3.94	3.94	3.99	3.99
315.0	3.94	3.94	3.88	3.88	3.88	3.88	3.88	3.83	3.88
360.0	3.88	3.88	3.83	3.83	3.83	3.83	3.83	3.83	3.83
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.77	3.83	3.83	3.83	3.77	3.83	3.83	3.83	3.83
45.0	3.88	3.88	3.88	3.88	3.88	3.83	3.88	3.83	3.83
90.0	3.94	3.99	3.94	3.94	3.94	3.94	3.94	3.99	3.94
135.0	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.83
180.0	3.83	3.83	3.83	3.83	3.77	3.77	3.77	3.77	3.77
225.0	3.88	3.88	3.88	3.88	3.83	3.83	3.88	3.88	3.88
270.0	3.94	3.94	3.94	3.94	3.99	3.94	3.94	3.99	3.99
315.0	3.88	3.88	3.88	3.83	3.83	3.83	3.88	3.88	3.83
360.0	3.77	3.83	3.83	3.83	3.77	3.83	3.83	3.83	3.83
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.83	3.83	3.83	3.83	3.83	3.77	3.77	3.77	3.77
45.0	3.88	3.88	3.88	3.83	3.88	3.83	3.88	3.83	3.83
90.0	3.99	3.94	3.99	4.05	3.99	3.88	3.88	3.88	3.83
135.0	3.88	3.88	3.88	3.88	3.88	3.88	3.83	3.83	3.88
180.0	3.77	3.77	3.77	3.77	3.83	3.77	3.77	3.77	3.77
225.0	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
270.0	3.99	3.99	3.94	3.99	4.05	3.94	3.88	3.83	3.88
315.0	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
360.0	3.83	3.83	3.83	3.83	3.83	3.77	3.77	3.77	3.77

Intensity data(cd)

Appendix Page: 19 Total:19

C/ γ (°)	90.0
0.0	3.77
45.0	3.83
90.0	3.88
135.0	3.83
180.0	3.77
225.0	3.83
270.0	3.88
315.0	3.83
360.0	3.77