



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440225 KAI 8.3W 4000K 1000lm

Luminaire:

Report No:

Voltage(V): 230.0000

Test No: KYZ-A250930027-03-004

Current(A): 0.0390

LampCAT: LED

Power (W): 8.3000

Lamp flux(lm)

PF: 0.9241

Number of Lamps: 1

Ballast type:

Length(mm): -126

Width(mm): -126

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1000.00

Lumens(lm)/Power(W): 120.48

Central intensity(cd): 495.832

Maximum intensity(cd): 506.970

Angle of maximum intensity: $C=315.0$ $\gamma=5.0$

Beam Angle(50%Imax): [C0/180]Total=86.2

[C90/270]Total=88.9

Field angle(10%Imax): [C0/180]Total=141.2

[C90/270]Total=136.6

Maximum s/h(1/2): C0_180=1.10 C90_270=1.20

Maximum s/h(1/4): C0_180=1.16 C90_270=1.24

Up flux rate of LUM(%): 0.87%

Down flux rate of LUM(%): 99.13%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 87.596%

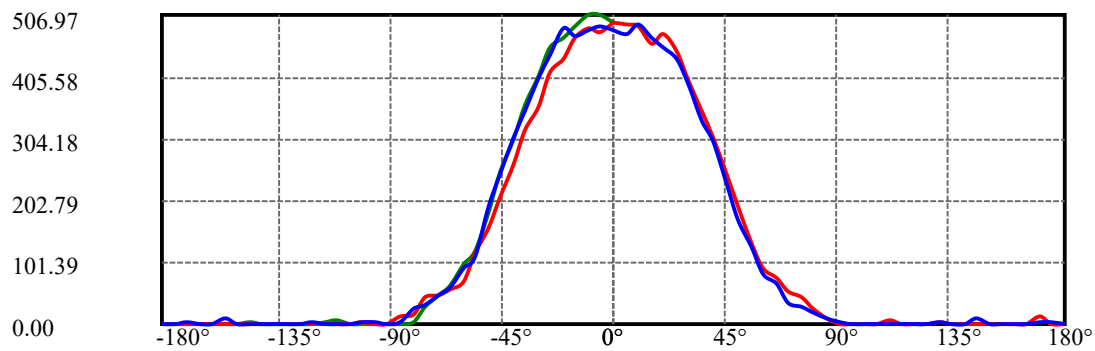
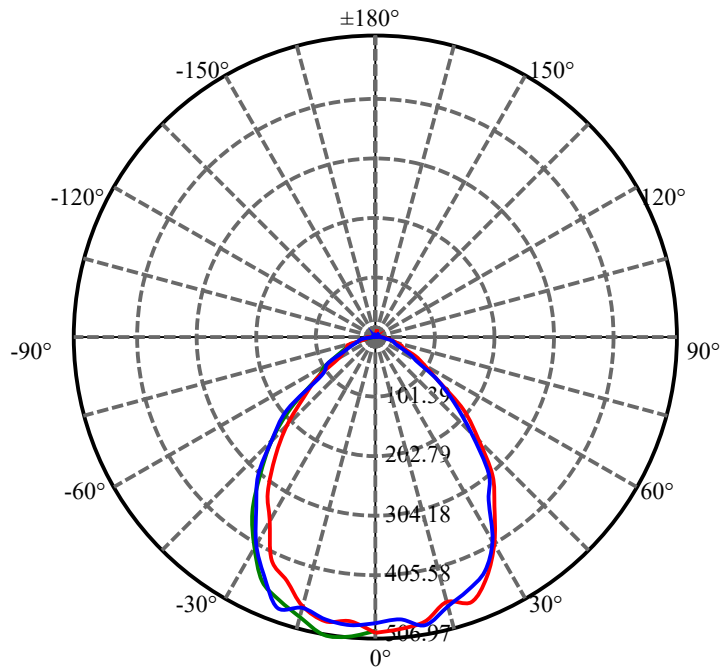
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	513.004	0.000	0	.000%	.000%
5.0	510.392	11.690	11.69	1.169%	1.169%
10.0	510.366	34.890	46.58	3.489%	4.658%
15.0	493.786	56.914	103.494	5.691%	10.349%
20.0	480.445	76.716	180.21	7.672%	18.021%
25.0	450.977	93.340	273.55	9.334%	27.355%
30.0	407.942	103.858	377.408	10.386%	37.741%
35.0	356.315	107.532	484.941	10.753%	48.494%
40.0	299.839	104.601	589.541	10.460%	58.954%
45.0	235.776	94.759	684.3	9.476%	68.430%
50.0	177.039	79.702	764.002	7.970%	76.400%
55.0	127.146	63.196	827.198	6.320%	82.720%
60.0	93.632	48.760	875.958	4.876%	87.596%
65.0	69.916	37.989	913.947	3.799%	91.395%
70.0	50.270	29.077	943.024	2.908%	94.303%
75.0	39.216	22.349	965.374	2.235%	96.538%
80.0	20.626	15.299	980.673	1.530%	98.068%
85.0	9.471	7.814	988.487	.781%	98.849%
90.0	1.181	2.787	991.274	.279%	99.128%
95.0	1.859	0.795	992.069	.080%	99.207%
100.0	2.311	1.083	993.152	.108%	99.316%
105.0	2.286	1.175	994.327	.118%	99.433%
110.0	1.834	1.029	995.356	.103%	99.536%
115.0	1.281	0.754	996.11	.075%	99.611%
120.0	0.854	0.496	996.606	.050%	99.661%
125.0	0.377	0.272	996.878	.027%	99.688%
130.0	1.507	0.391	997.269	.039%	99.727%
135.0	0.754	0.437	997.706	.044%	99.771%
140.0	0.904	0.293	997.999	.029%	99.800%
145.0	2.387	0.525	998.524	.052%	99.853%
150.0	1.030	0.481	999.005	.048%	99.901%
155.0	0.879	0.231	999.235	.023%	99.924%
160.0	1.206	0.209	999.444	.021%	99.945%
165.0	1.708	0.229	999.674	.023%	99.968%
170.0	2.060	0.214	999.887	.021%	99.989%
175.0	0.804	0.098	999.985	.010%	99.999%
180.0	0.151	0.011	999.996	.001%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	377.41	37.74%
0-40	589.54	58.95%
0-60	875.96	87.60%
0-90	991.27	99.13%
0-120	996.61	99.66%
0-180	1000.00	100.00%
60-90	164.08	16.41%
90-120	8.12	0.81%
90-130	8.78	0.88%
90-150	10.52	1.05%
90-180	11.50	1.15%
0-52.85	800.00	80.00%

ZONAL LUMEN SUMMARY

0-10	46.58
10-20	133.63
20-30	197.20
30-40	212.13
40-50	174.46
50-60	111.96
60-70	67.07
70-80	37.65
80-90	10.60
90-100	1.88
100-110	2.20
110-120	1.25
120-130	0.66
130-140	0.73
140-150	1.01
150-160	0.44
160-170	0.44
170-180	0.10



C315(Max): —————

C0/C180: —————

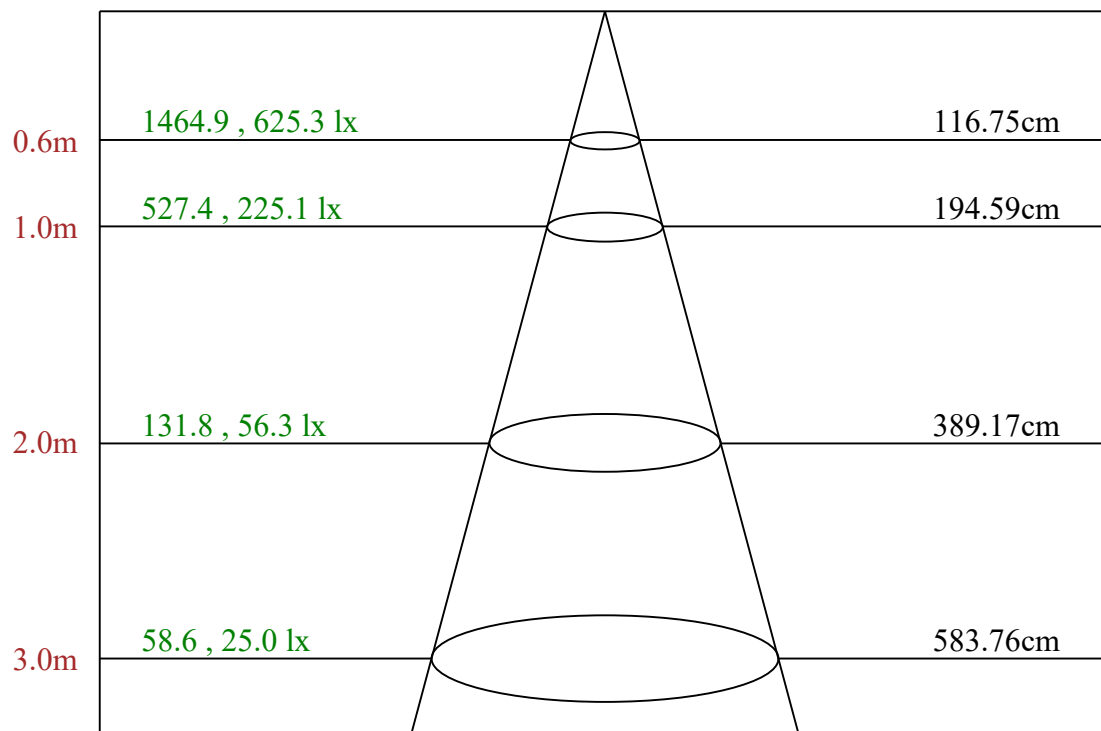
C90/C270: —————

Field angle(10%Imax):C0/180Left:69.5 Right:71.7

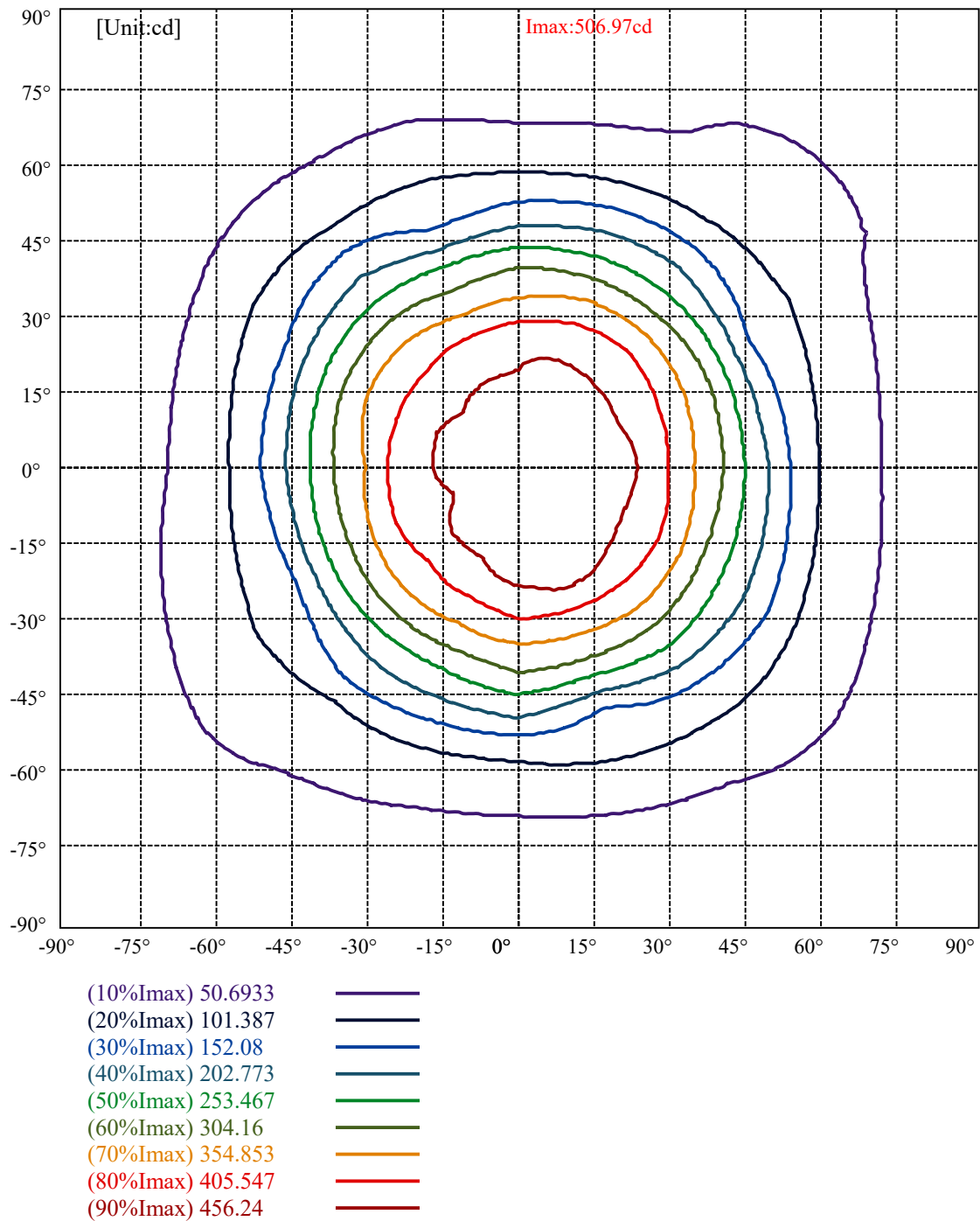
:C90/270Left:78.8 Right:57.8

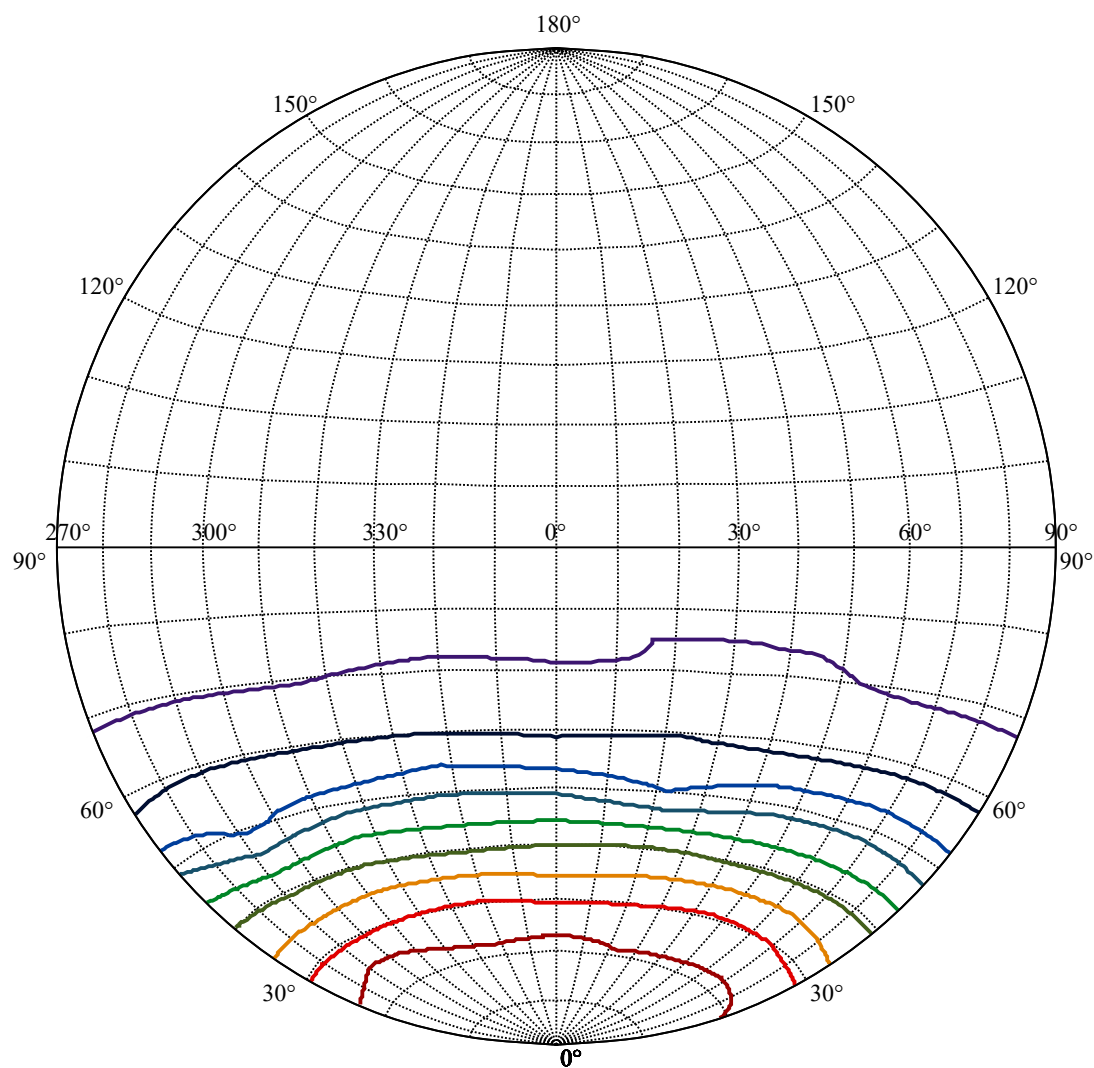
Beam Angle(50%Imax):C0/180Left:41.4 Right:44.8

:C90/270Left:55.1 Right:33.8



Max , Ave Beam angle of C315 plane 88.43





House

[Unit:cd]

Road

Imax:506.97

(10%Imax) 48.44017

(20%Imax) 96.88034

(30%Imax) 145.3205

(40%Imax) 193.7607

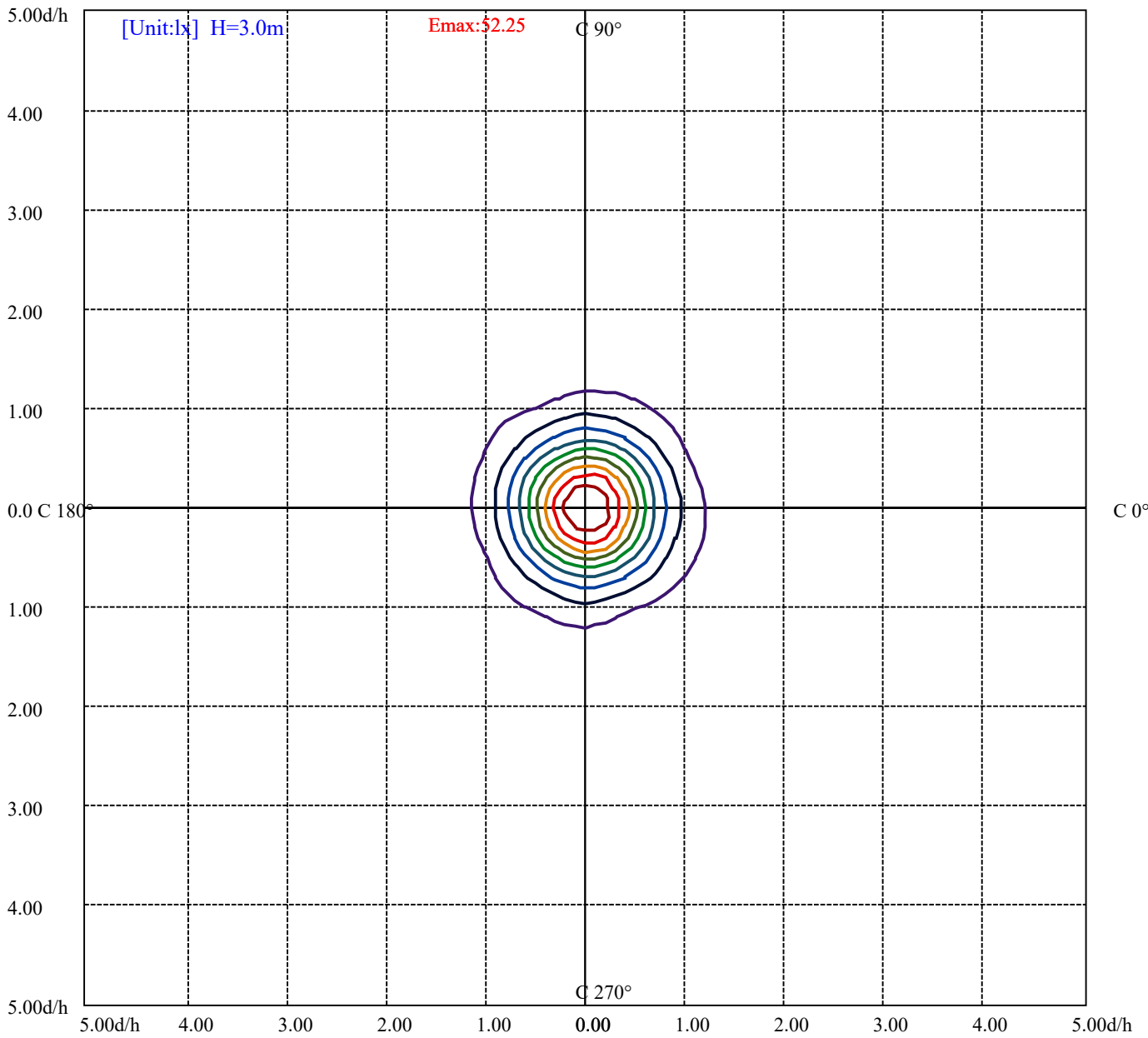
(50%Imax) 242.2009

(60%Imax) 290.641

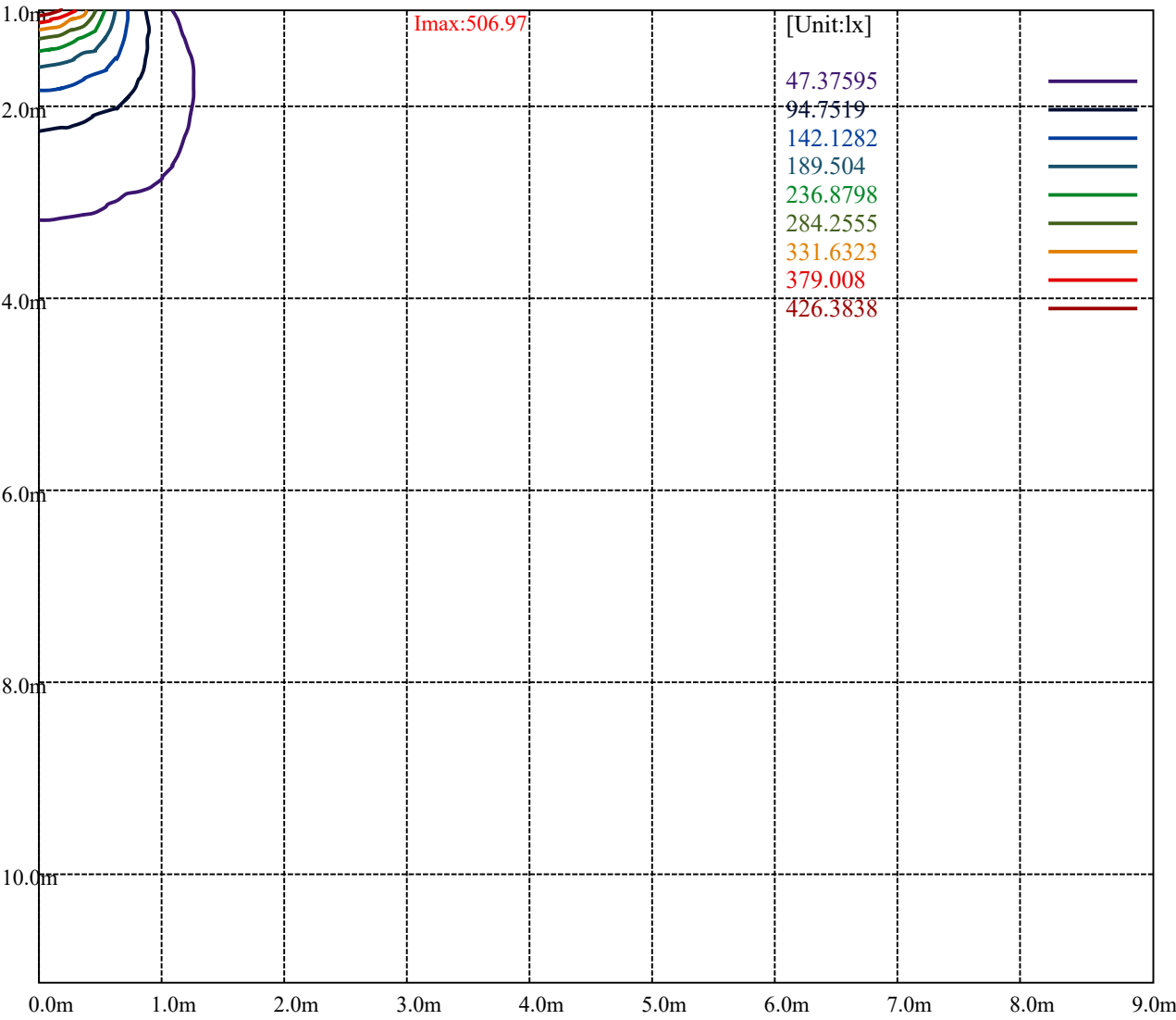
(70%Imax) 339.0812

(80%Imax) 387.5214

(90%Imax) 435.9615



(10%E _{max}) 5.224671	
(20%E _{max}) 10.44935	
(30%E _{max}) 15.67408	
(40%E _{max}) 20.89866	
(50%E _{max}) 26.12336	
(60%E _{max}) 31.34805	
(70%E _{max}) 36.57274	
(80%E _{max}) 41.79744	
(90%E _{max}) 47.02213	



Luminance Table

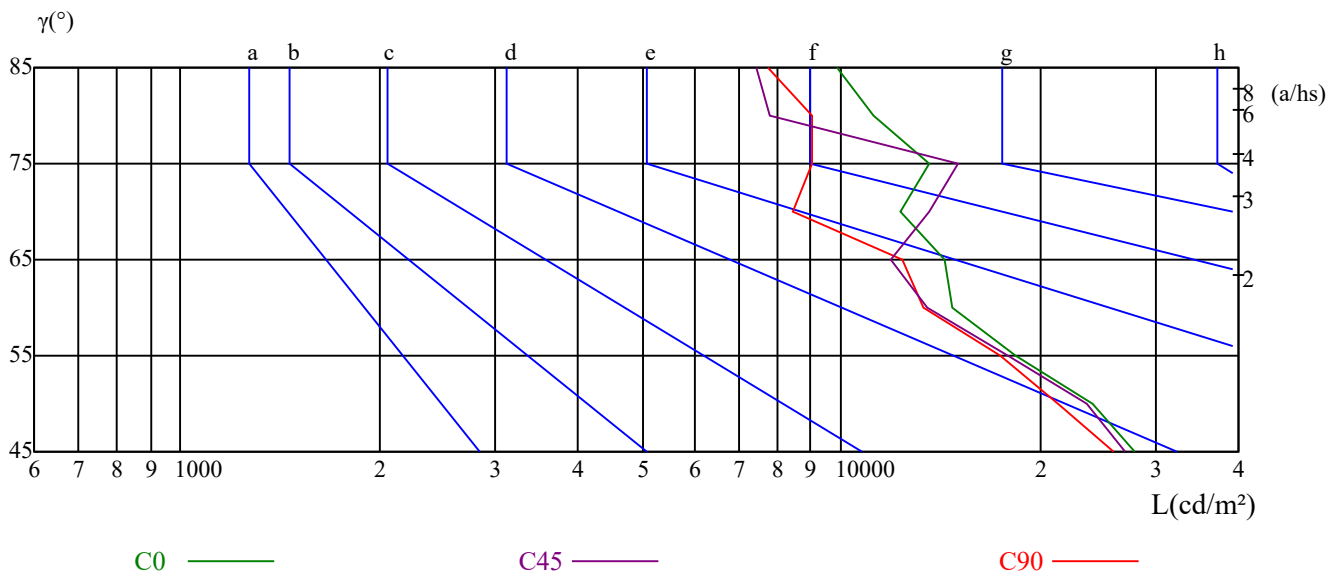
γ	45	50	55	60	65	70	75	80	85
C0	27835	24008	18366	14723	14358	12338	13567	11175	9896
C45	26877	23528	17936	13553	11880	13599	14995	7805	7421
C90	25962	21372	17399	13368	12390	8465	9045	9046	7775

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
12572	11880	12518	13805	9461	11782	10426	5831	4064

Glare Table

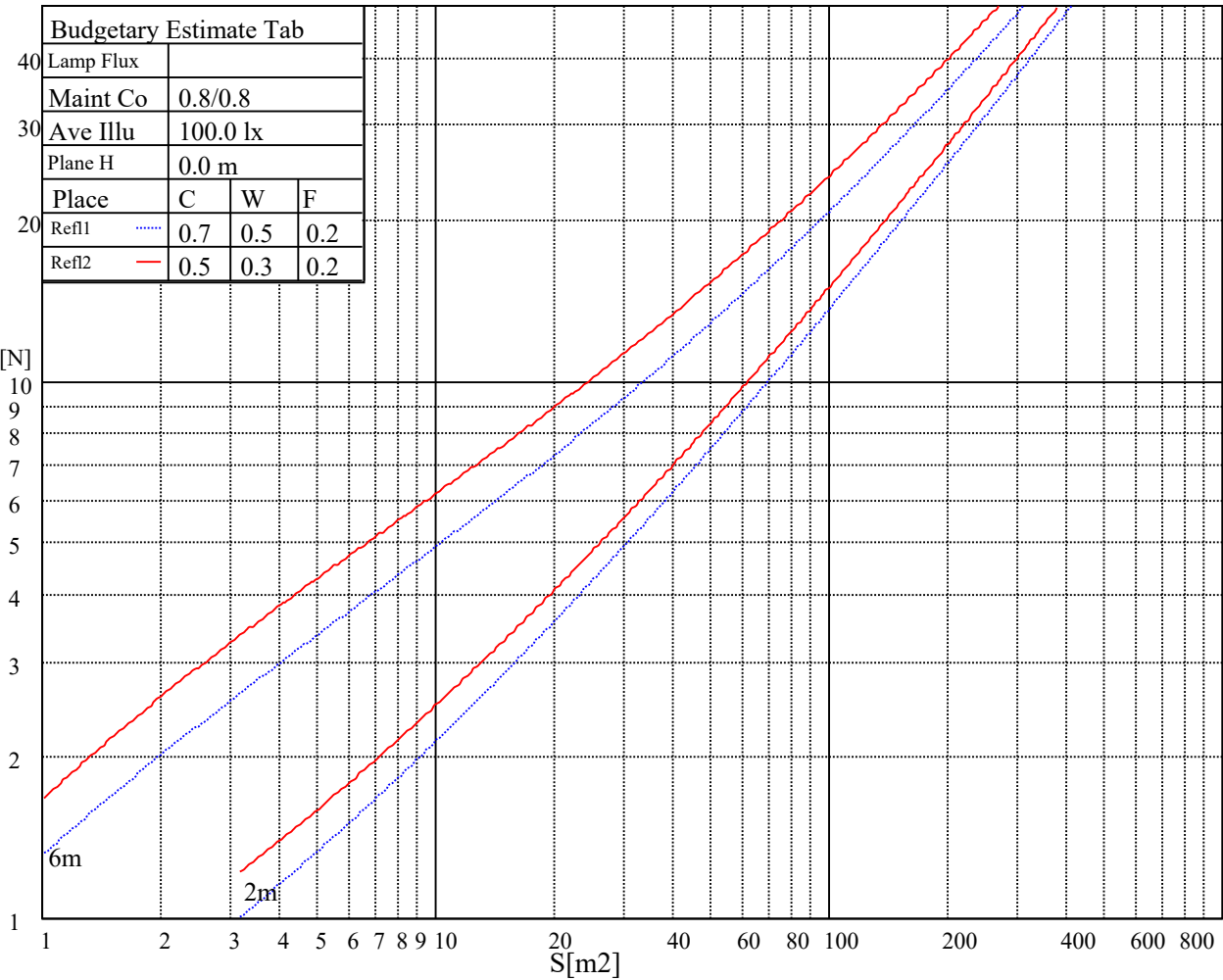
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

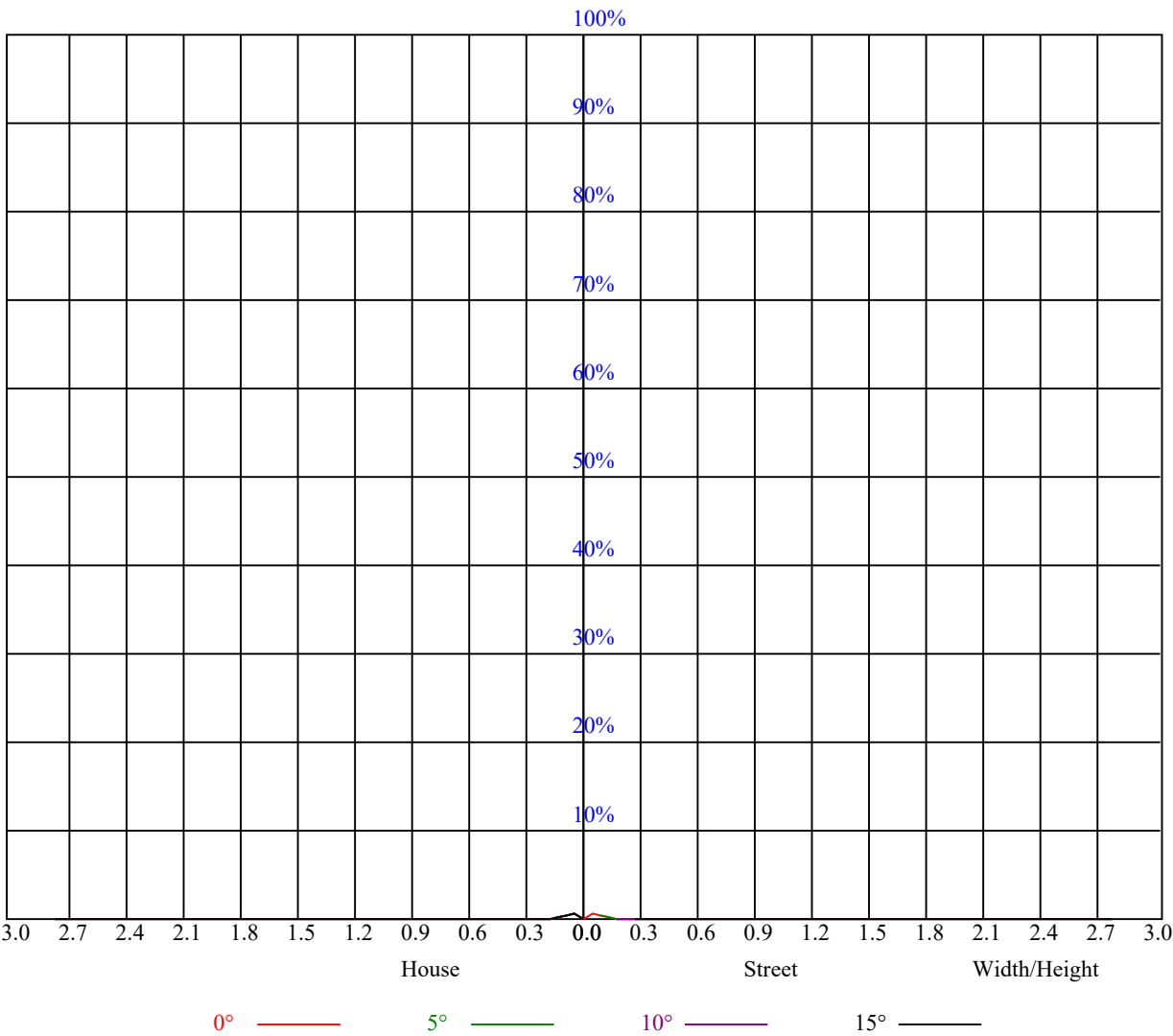


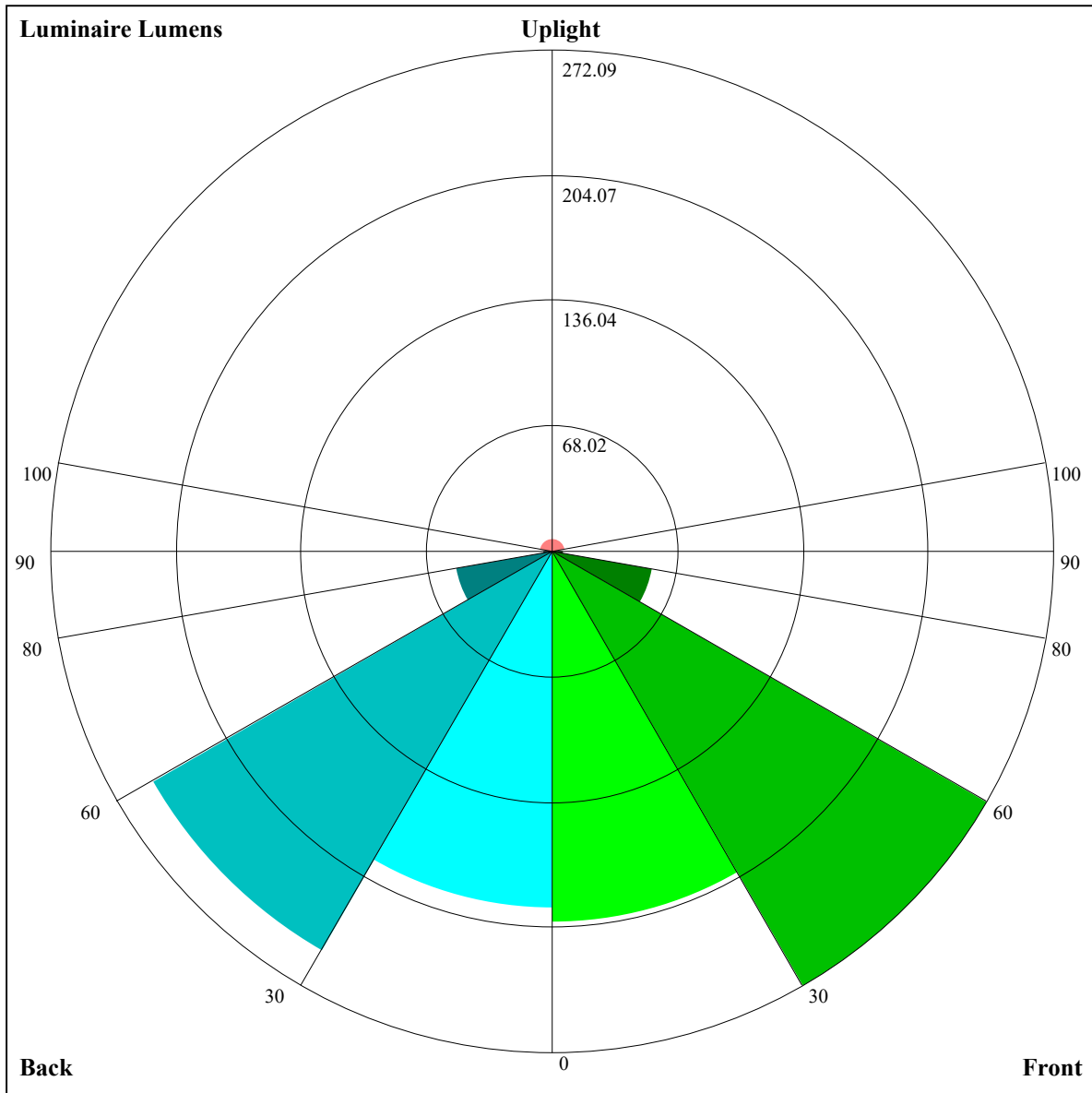
Illumination assessment according UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	17.62	19.04	17.99	19.38	19.71	17.51	18.94	17.89	19.27	19.61
	3H	18.61	19.89	19.00	20.24	20.61	18.19	19.47	18.59	19.83	20.19
	4H	19.16	20.36	19.57	20.73	21.11	18.45	19.65	18.86	20.02	20.41
	6H	19.52	20.63	19.95	21.02	21.43	18.74	19.84	19.16	20.23	20.65
	8H	19.61	20.67	20.04	21.07	21.49	18.82	19.89	19.25	20.28	20.71
	12H	19.68	20.70	20.11	21.10	21.54	18.87	19.89	19.31	20.30	20.73
4H	2H	17.94	19.14	18.35	19.51	19.89	17.84	19.04	18.25	19.41	19.79
	3H	19.17	20.17	19.60	20.58	21.01	18.71	19.72	19.15	20.13	20.56
	4H	19.99	20.88	20.44	21.31	21.77	19.17	20.05	19.62	20.49	20.95
	6H	20.39	21.17	20.86	21.63	22.10	19.56	20.35	20.04	20.81	21.27
	8H	20.54	21.27	21.03	21.74	22.22	19.75	20.48	20.24	20.95	21.43
	12H	20.70	21.38	21.20	21.84	22.37	19.89	20.57	20.39	21.03	21.56
8H	4H	20.19	20.92	20.68	21.39	21.87	19.46	20.19	19.95	20.66	21.14
	6H	20.62	21.24	21.13	21.72	22.24	19.97	20.58	20.48	21.07	21.59
	8H	20.90	21.43	21.43	21.96	22.47	20.32	20.85	20.85	21.38	21.89
	12H	21.23	21.68	21.77	22.20	22.74	20.61	21.05	21.15	21.58	22.11
12H	4H	20.19	20.87	20.68	21.33	21.86	19.46	20.14	19.95	20.60	21.12
	6H	20.68	21.21	21.21	21.74	22.25	20.03	20.56	20.56	21.09	21.60
	8H	20.95	21.40	21.49	21.92	22.45	20.38	20.83	20.92	21.35	21.88
Variation with the observer position at spacings:											
S = 1.0H		0.5/-0.9					0.4/-0.7				
S = 1.5H		1.0/-1.4					1.0/-0.9				
S = 2.0H		1.9/-1.5					1.7/-1.3				
Standard tables:		BK3					BK3				
Uncorrected UGR		6.5					6.8				

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



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 RHOF=20 CU															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.99
1	1.06	1.03	0.99	1.04	1.01	0.98	1.00	0.97	0.94	0.96	0.93	0.91	0.92	0.90	0.89	0.87
2	0.95	0.89	0.84	0.93	0.88	0.83	0.89	0.85	0.81	0.86	0.82	0.79	0.83	0.80	0.77	0.75
3	0.85	0.78	0.72	0.83	0.77	0.71	0.80	0.75	0.70	0.78	0.73	0.69	0.75	0.71	0.68	0.66
4	0.77	0.69	0.63	0.75	0.68	0.62	0.73	0.66	0.62	0.70	0.65	0.61	0.68	0.64	0.60	0.58
5	0.69	0.61	0.55	0.68	0.61	0.55	0.66	0.60	0.54	0.64	0.58	0.54	0.62	0.57	0.53	0.51
6	0.63	0.55	0.49	0.62	0.55	0.49	0.60	0.54	0.49	0.59	0.53	0.48	0.57	0.52	0.48	0.46
7	0.58	0.50	0.44	0.57	0.50	0.44	0.56	0.49	0.44	0.54	0.48	0.43	0.53	0.47	0.43	0.41
8	0.53	0.45	0.40	0.53	0.45	0.40	0.51	0.44	0.40	0.50	0.44	0.39	0.49	0.43	0.39	0.37
9	0.49	0.42	0.37	0.49	0.41	0.36	0.47	0.41	0.36	0.46	0.40	0.36	0.45	0.40	0.36	0.34
10	0.46	0.38	0.33	0.45	0.38	0.33	0.44	0.38	0.33	0.43	0.37	0.33	0.42	0.37	0.33	0.31





Luminaire Lumens:

FL=201.41,FM=272.09,FH=55.27,FVH=5.82

BL=193.59,BM=250.4,BH=53.13,BVH=5.19

UL=1.97,UH=7.17

BUG Rating:B1-U1-G0

Intensity data(cd)

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C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	495.83	491.22	486.61	459.73	475.48	445.90	399.82	348.35	304.57
22.5	485.46	483.54	494.68	482.39	459.35	445.52	403.27	356.03	308.79
45.0	478.55	492.38	487.00	474.32	467.03	435.53	413.64	359.87	296.89
67.5	499.67	485.85	481.24	484.69	482.01	428.24	406.73	355.26	296.50
90.0	480.85	476.24	490.84	468.56	453.97	435.92	394.05	333.37	298.04
112.5	483.93	485.08	491.22	471.64	445.14	431.31	371.01	319.55	274.99
135.0	493.14	483.16	474.71	458.19	438.22	409.80	379.84	330.68	276.91
157.5	503.90	497.75	482.77	462.80	449.36	410.57	377.16	334.14	271.92
180.0	495.83	478.55	484.31	468.56	434.77	412.11	355.26	318.01	262.32
202.5	485.46	490.07	477.78	448.21	438.99	417.10	368.32	313.40	262.70
225.0	478.55	478.55	483.93	473.56	446.29	405.96	377.92	324.92	261.93
247.5	499.67	495.45	477.40	477.40	450.90	426.32	372.93	336.83	267.70
270.0	480.85	486.61	480.85	470.87	483.93	440.53	402.12	349.12	304.95
292.5	483.93	487.38	498.52	478.55	478.93	460.50	399.05	349.89	295.73
315.0	493.14	506.97	506.97	487.00	469.33	452.05	405.58	359.10	303.03
337.5	503.90	483.93	503.51	482.39	471.25	437.07	409.80	358.72	296.89
360.0	495.83	491.22	486.61	459.73	475.48	445.90	399.82	348.35	304.57
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	245.42	192.42	131.35	91.79	75.66	52.62	43.78	24.20	10.75
22.5	234.28	153.24	115.60	100.24	74.51	51.08	53.39	14.21	22.28
45.0	236.97	188.58	128.28	84.50	62.60	57.99	48.39	16.90	8.07
67.5	234.67	188.19	130.20	84.50	72.20	39.56	34.18	24.58	18.05
90.0	228.91	171.29	124.44	83.34	65.29	36.10	29.19	19.59	8.45
112.5	200.10	138.65	118.68	91.41	76.05	47.62	29.57	9.60	5.76
135.0	217.00	183.20	112.53	83.34	62.60	38.41	38.79	12.67	1.54
157.5	215.85	153.24	125.21	91.02	65.68	41.48	31.11	21.89	6.91
180.0	209.32	156.70	117.91	70.28	56.84	48.78	45.32	15.36	11.91
202.5	192.42	124.05	110.23	97.17	65.29	61.45	42.25	21.12	4.61
225.0	208.93	172.45	103.31	88.72	75.28	44.17	36.87	40.33	8.07
247.5	224.68	168.22	117.52	77.97	57.61	46.09	42.63	29.57	10.37
270.0	246.57	192.03	111.38	91.79	59.91	45.70	31.88	24.20	4.23
292.5	217.77	141.72	130.20	96.02	67.60	47.24	26.50	21.89	1.92
315.0	247.72	183.58	119.45	98.71	63.37	48.39	28.04	4.23	0.00
337.5	243.88	198.95	147.48	100.63	68.36	61.84	37.64	14.98	21.89
360.0	245.42	192.42	131.35	91.79	75.66	52.62	43.78	24.20	10.75
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	0.00	0.00	0.00	5.76	0.00	0.00	0.00	3.07
22.5	8.07	0.00	11.52	1.54	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	6.53	5.38	3.84	0.38	0.00	0.77	0.00
67.5	0.00	8.45	9.22	6.14	5.38	0.00	0.00	0.00	0.00
90.0	3.84	1.54	0.00	0.00	0.00	0.00	0.00	0.00	2.30
112.5	0.00	8.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	6.14	0.00	1.15	0.00	4.99	0.00	0.00	0.00	0.00
180.0	0.00	0.00	1.92	0.00	1.15	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00
225.0	0.00	5.38	3.07	1.15	0.00	0.00	0.00	4.99	0.00
247.5	0.00	0.00	0.00	10.37	0.00	11.52	0.00	0.00	0.00
270.0	0.00	3.46	1.92	0.00	0.00	0.00	3.84	0.00	0.00
292.5	0.00	0.00	0.00	9.22	1.92	4.99	0.00	0.00	0.00
315.0	0.00	1.15	0.00	0.00	4.99	2.69	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	9.22	0.00	17.67
360.0	0.00	0.00	0.00	0.00	5.76	0.00	0.00	0.00	3.07

Intensity data(cd)								Appendix Page: 17 Total:17	
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.00	0.00	0.00	0.00	1.54	0.00	12.29	0.00
22.5	0.00	0.00	0.00	0.00	0.77	2.30	0.00	0.00	0.00
45.0	2.69	0.00	0.00	0.00	1.92	2.69	0.00	1.92	0.00
67.5	0.00	0.00	1.54	12.67	0.00	0.00	1.92	4.99	0.00
90.0	0.00	0.00	8.83	0.00	0.00	0.00	0.77	4.61	2.69
112.5	0.00	0.00	1.54	0.38	0.00	0.00	8.07	0.00	0.00
135.0	1.15	0.00	3.46	0.00	0.00	0.38	3.07	0.00	0.00
157.5	5.76	0.00	0.00	2.69	0.00	2.30	0.00	1.92	0.00
180.0	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	9.60	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	9.99	0.00	0.00	0.00	0.00	0.00	1.15	0.00
247.5	0.00	0.00	0.00	0.00	2.30	0.00	0.38	0.00	0.00
270.0	0.00	0.00	0.00	0.00	8.45	0.38	0.00	4.23	0.00
292.5	0.00	3.84	0.00	0.00	0.00	8.07	11.91	0.38	4.61
315.0	0.00	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.77	0.00	9.60	0.00	0.00	0.77	0.00	0.00	4.99
360.0	0.00	0.00	0.00	0.00	0.00	1.54	0.00	12.29	0.00
C/ γ (°)	180.0								
0.0	0.38								
22.5	0.00								
45.0	0.00								
67.5	0.00								
90.0	0.00								
112.5	0.00								
135.0	0.77								
157.5	0.00								
180.0	0.38								
202.5	0.00								
225.0	0.00								
247.5	0.00								
270.0	0.00								
292.5	0.00								
315.0	0.77								
337.5	0.00								
360.0	0.38								