



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440225 KAI 8.3W 3000K 1000lm

Luminaire:

Report No:

Voltage(V): 230.0000

Test No: KYZ-A250930027-03-003

Current(A): 0.0390

LampCAT: LED

Power (W): 8.3000

Lamp flux(lm)

PF: 0.9217

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): 478.056

Maximum intensity(cd): 500.138

Angle of maximum intensity: $C=135.0$ $\gamma=10.0$

Beam Angle(50%Imax): [C0/180]Total=87.0

[C90/270]Total=88.0

Field angle(10%Imax): [C0/180]Total=140.2

[C90/270]Total=141.2

Maximum s/h(1/2): C0_180=1.21 C90_270=1.19

Maximum s/h(1/4): C0_180=1.26 C90_270=1.20

Up flux rate of LUM(%): 1.06%

Down flux rate of LUM(%): 98.94%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 87.524%

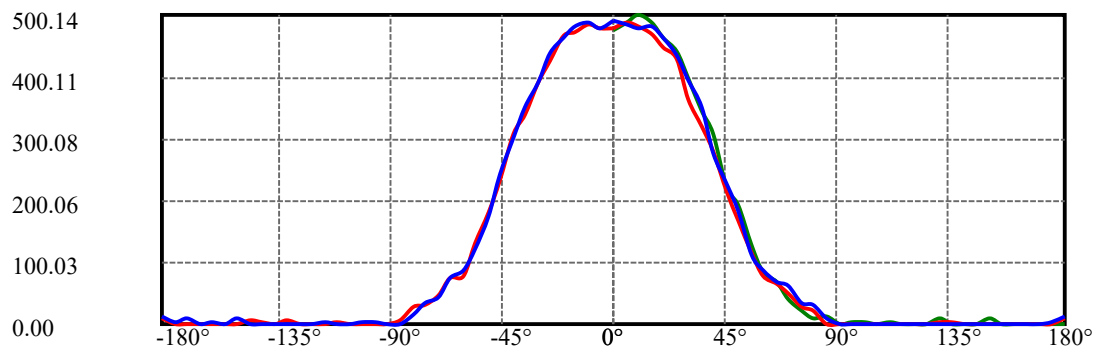
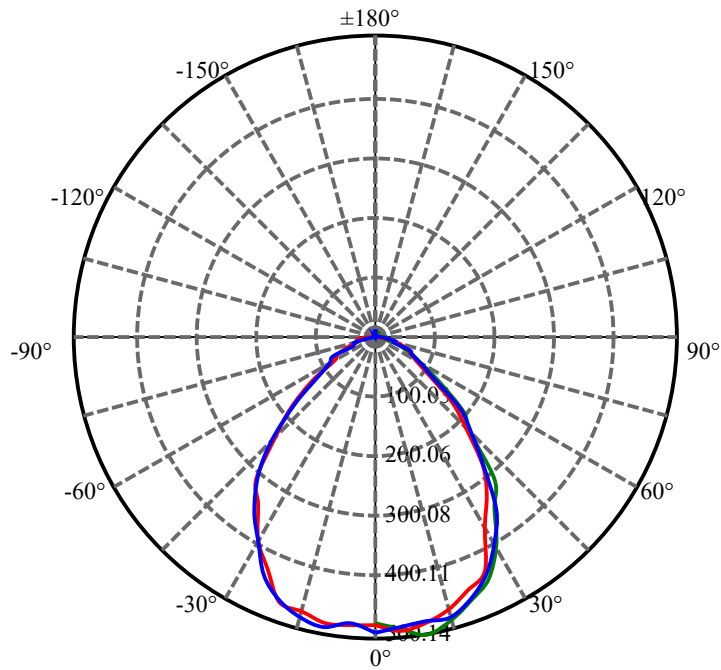
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	501.699	0.000	0	.000%	.000%
5.0	501.775	11.562	11.562	1.156%	1.156%
10.0	500.719	34.563	46.125	3.456%	4.613%
15.0	492.982	56.811	102.936	5.681%	10.294%
20.0	474.893	76.877	179.813	7.688%	17.981%
25.0	447.434	93.232	273.045	9.323%	27.304%
30.0	402.992	103.724	376.769	10.372%	37.677%
35.0	354.857	107.557	484.326	10.756%	48.432%
40.0	299.814	105.271	589.597	10.527%	58.959%
45.0	231.480	94.810	684.407	9.481%	68.440%
50.0	174.929	79.147	763.554	7.915%	76.355%
55.0	126.543	63.176	826.729	6.318%	82.673%
60.0	91.245	48.518	875.247	4.852%	87.524%
65.0	72.203	38.295	913.543	3.830%	91.354%
70.0	50.044	29.833	943.375	2.983%	94.337%
75.0	35.674	21.594	964.969	2.159%	96.497%
80.0	22.083	14.894	979.863	1.489%	97.986%
85.0	6.431	7.467	987.331	.747%	98.733%
90.0	1.457	2.082	989.413	.208%	98.941%
95.0	3.718	1.366	990.778	.137%	99.077%
100.0	1.256	1.303	992.081	.130%	99.208%
105.0	0.427	0.434	992.515	.043%	99.251%
110.0	2.563	0.753	993.268	.075%	99.326%
115.0	1.382	0.963	994.231	.096%	99.423%
120.0	0.578	0.459	994.69	.046%	99.469%
125.0	1.407	0.442	995.132	.044%	99.513%
130.0	1.708	0.653	995.785	.065%	99.578%
135.0	2.638	0.846	996.631	.085%	99.663%
140.0	2.010	0.829	997.461	.083%	99.746%
145.0	1.533	0.570	998.03	.057%	99.803%
150.0	2.362	0.553	998.583	.055%	99.858%
155.0	1.030	0.414	998.997	.041%	99.899%
160.0	2.035	0.310	999.307	.031%	99.930%
165.0	1.432	0.275	999.582	.028%	99.958%
170.0	2.060	0.200	999.782	.020%	99.978%
175.0	1.608	0.126	999.908	.013%	99.990%
180.0	6.733	0.096	1000.004	.010%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	376.77	37.68%
0-40	589.60	58.96%
0-60	875.25	87.52%
0-90	989.41	98.94%
0-120	994.69	99.47%
0-180	1000.00	100.00%
60-90	162.68	16.27%
90-120	7.36	0.74%
90-130	8.45	0.85%
90-150	11.25	1.13%
90-180	12.58	1.26%
0-52.88	800.00	80.00%

ZONAL LUMEN SUMMARY

0-10	46.13
10-20	133.69
20-30	196.96
30-40	212.83
40-50	173.96
50-60	111.69
60-70	68.13
70-80	36.49
80-90	9.55
90-100	2.67
100-110	1.19
110-120	1.42
120-130	1.09
130-140	1.68
140-150	1.12
150-160	0.72
160-170	0.48
170-180	0.13



C135(Max): —————

C0/C180: —————

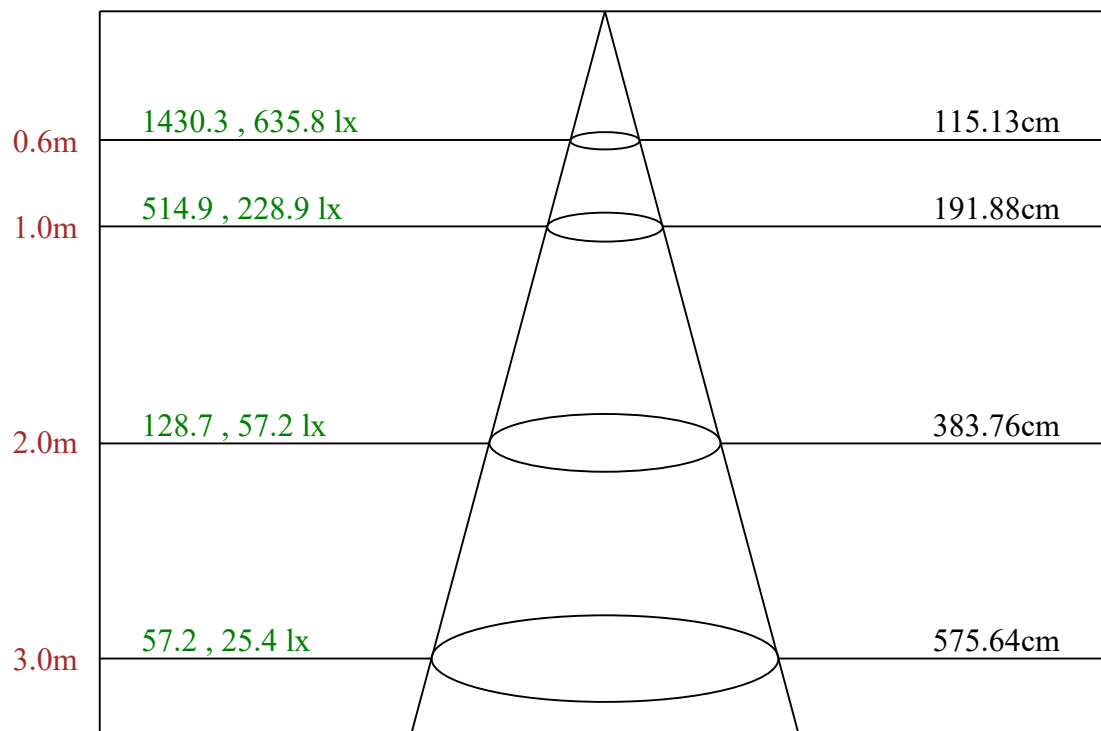
C90/C270: —————

Field angle(10%Imax):C0/180Left:74.7 Right:65.5

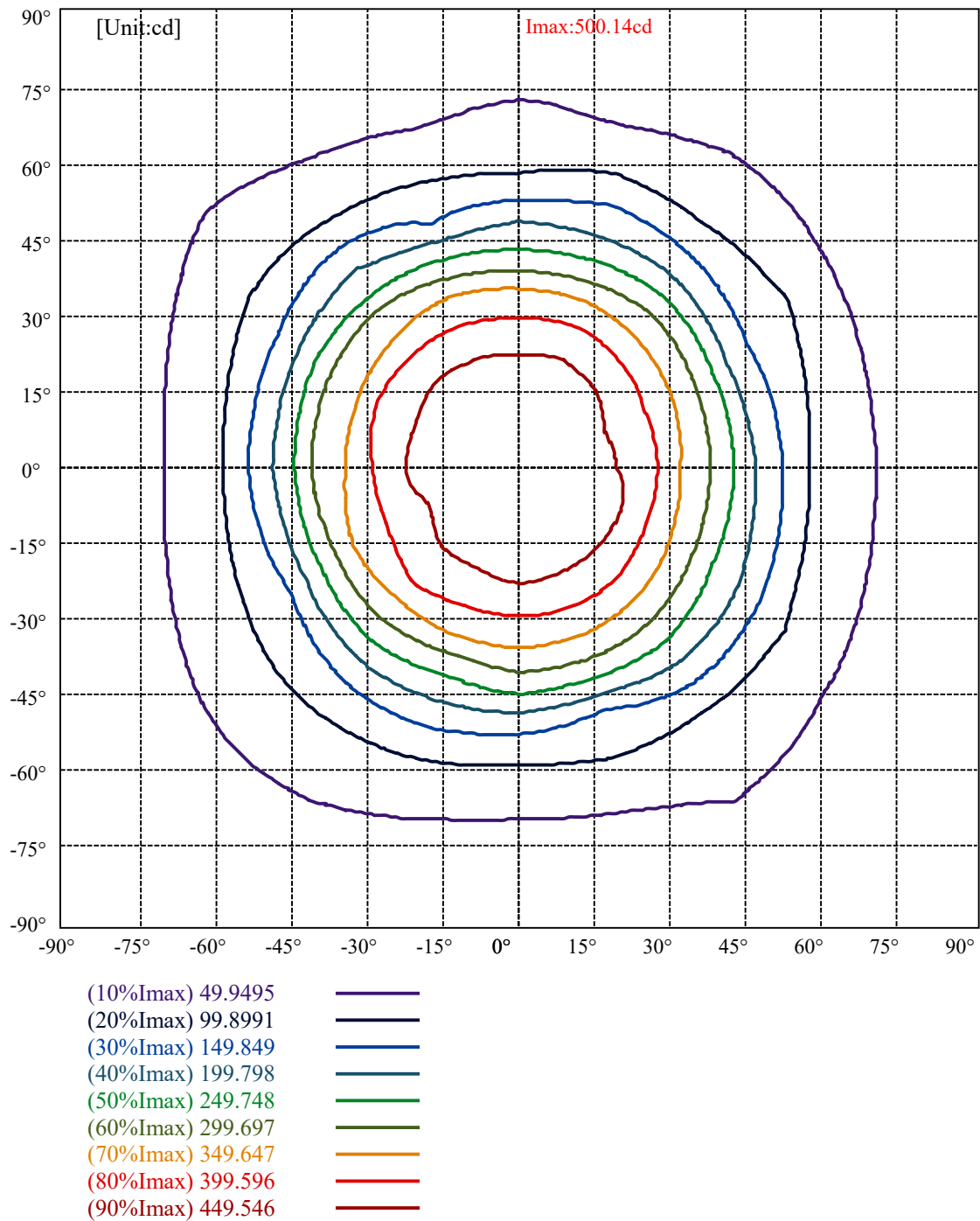
:C90/270Left:69.0 Right:72.2

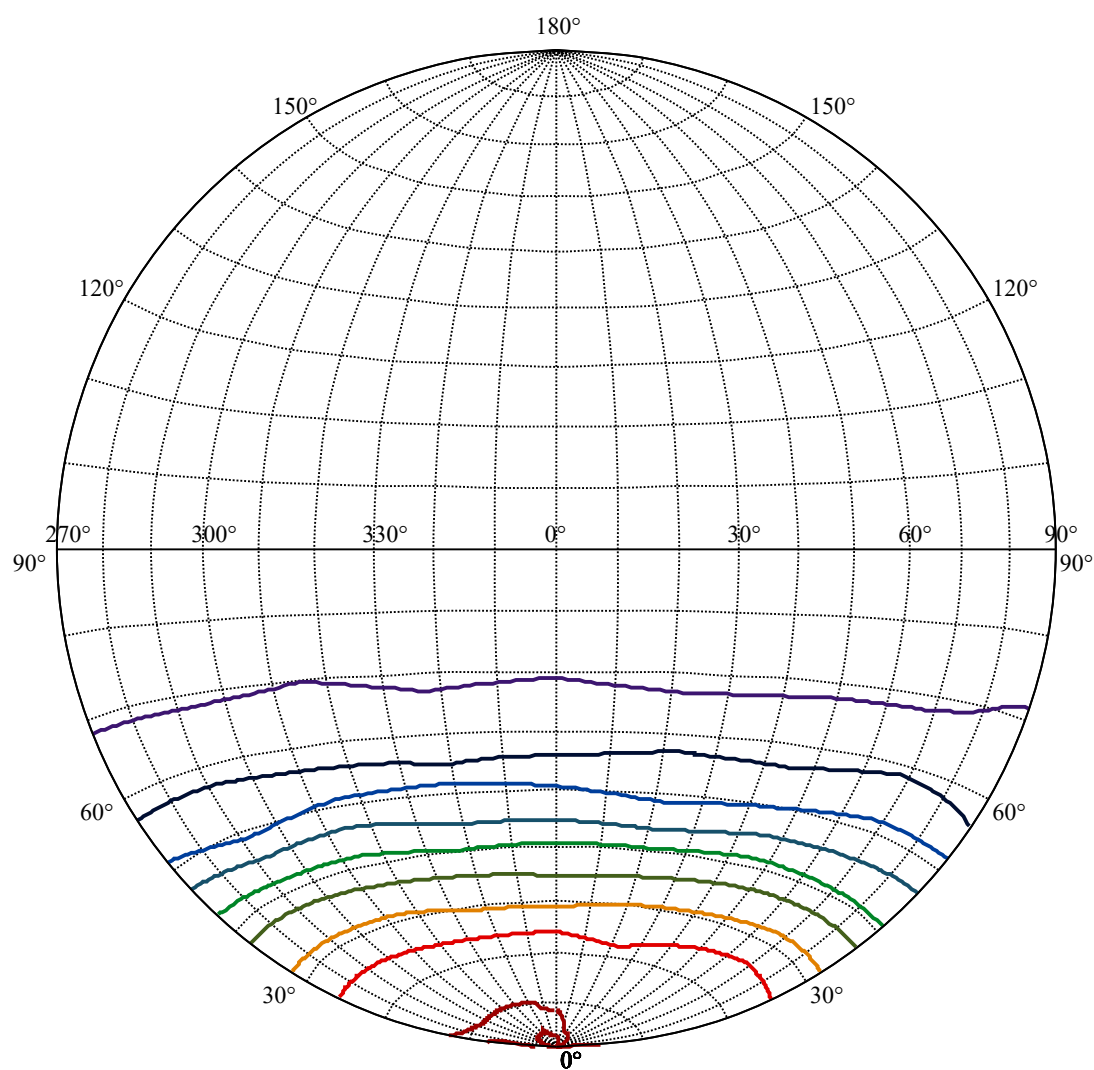
Beam Angle(50%Imax):C0/180Left:49.3 Right:37.7

:C90/270Left:44.8 Right:43.2



Max , Ave Beam angle of C135 plane 87.63





House

[Unit:cd]

Road

Imax:500.14

(10%Imax) 51.79052

(20%Imax) 103.5814

(30%Imax) 155.3712

(40%Imax) 207.1619

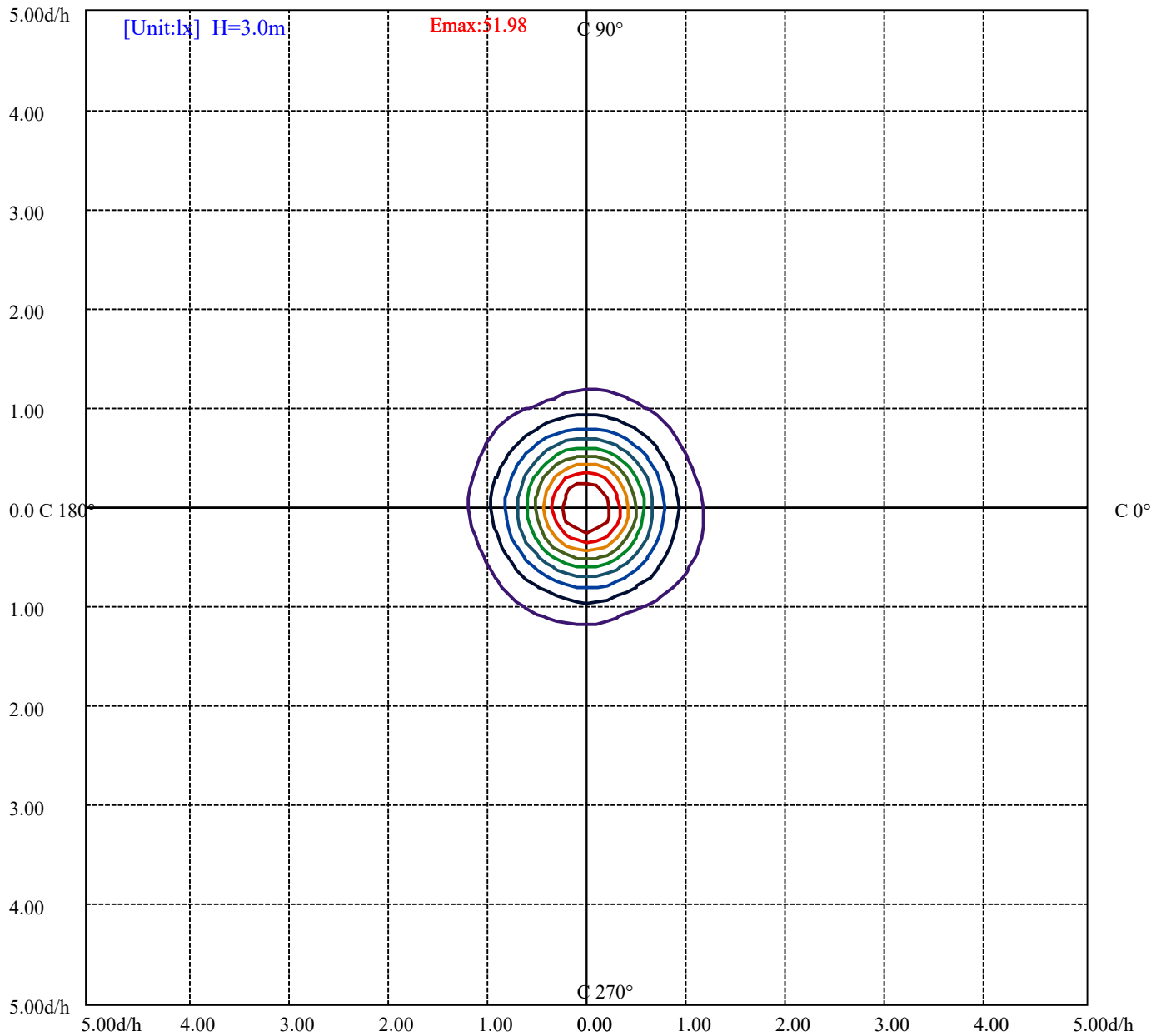
(50%Imax) 258.9525

(60%Imax) 310.7433

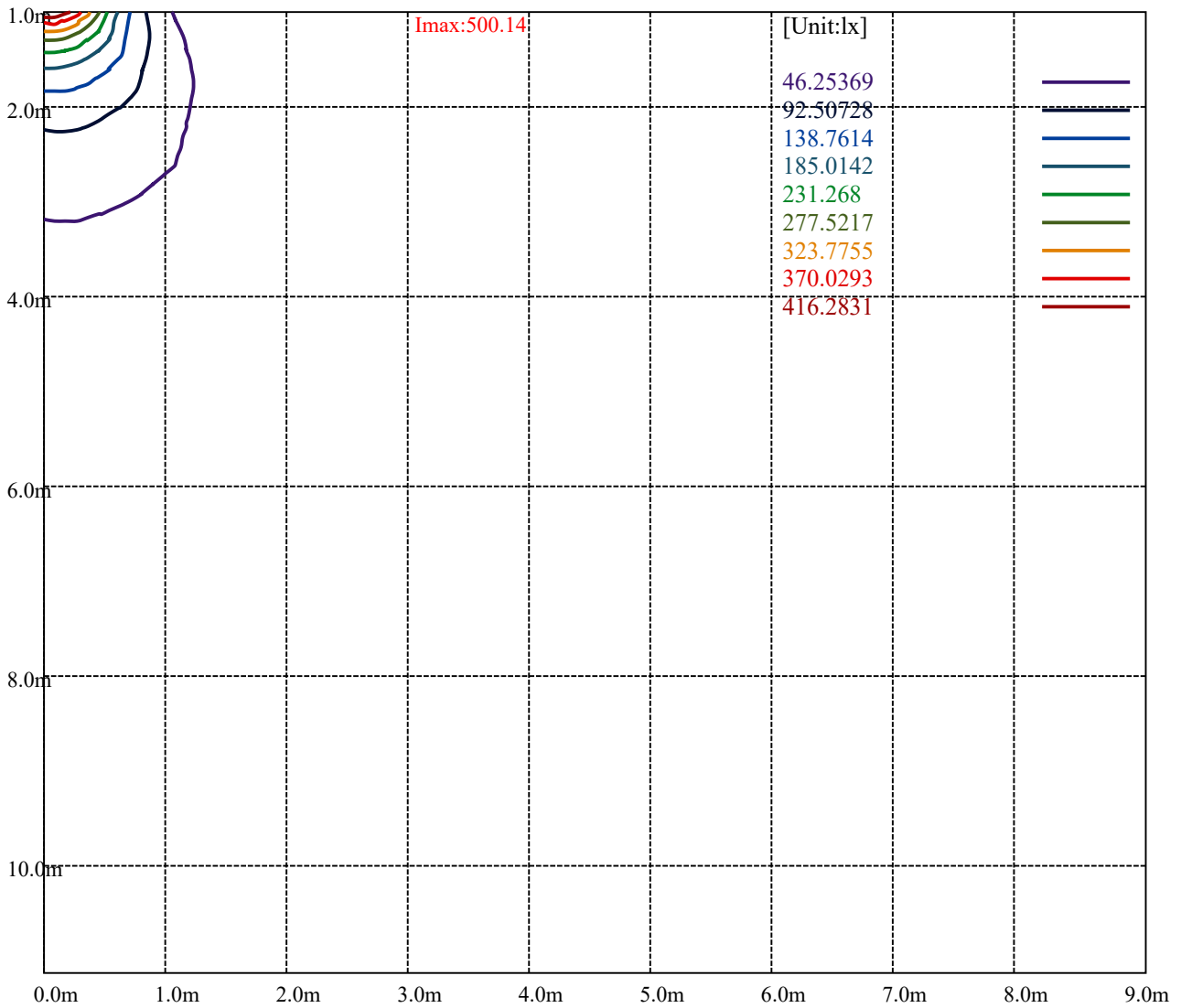
(70%Imax) 362.534

(80%Imax) 414.3237

(90%Imax) 466.1144



(10%Emax)	5.198164	
(20%Emax)	10.39633	
(30%Emax)	15.59451	
(40%Emax)	20.79261	
(50%Emax)	25.99082	
(60%Emax)	31.18903	
(70%Emax)	36.38713	
(80%Emax)	41.58534	
(90%Emax)	46.78354	



Luminance Table

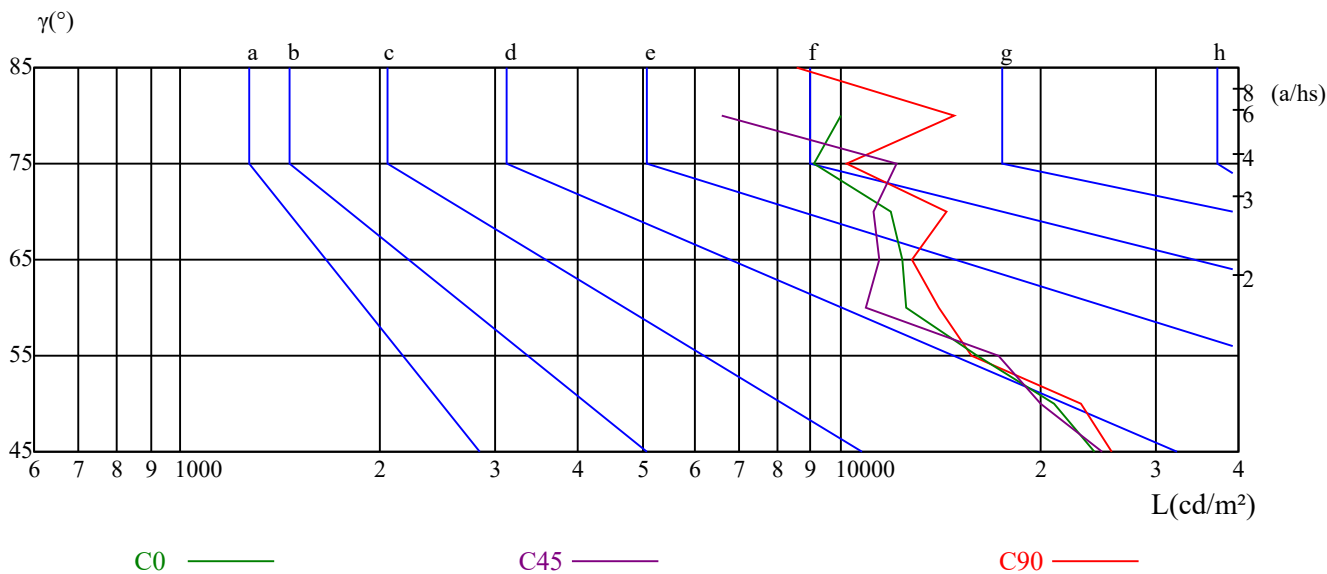
γ	45	50	55	60	65	70	75	80	85
C0	24210	20978	16034	12552	12424	11900	9123	10020	0
C45	24825	20059	17334	10874	11395	11173	12124	6620	0
C90	25792	23056	15817	14105	12792	14444	10204	14851	8555

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
13159	13601	13012	9543	10504	11344	2852	4456	7843

Glare Table

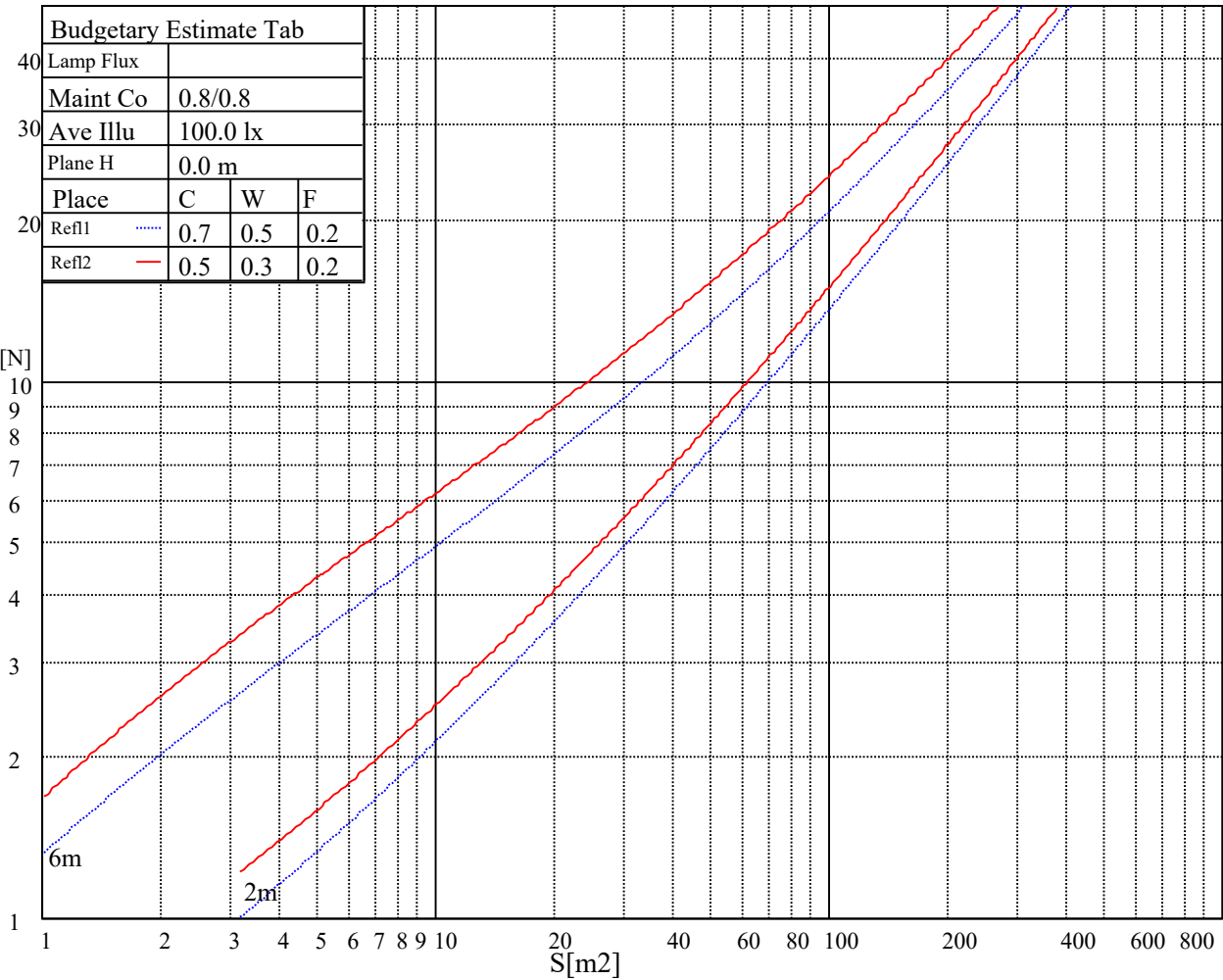
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

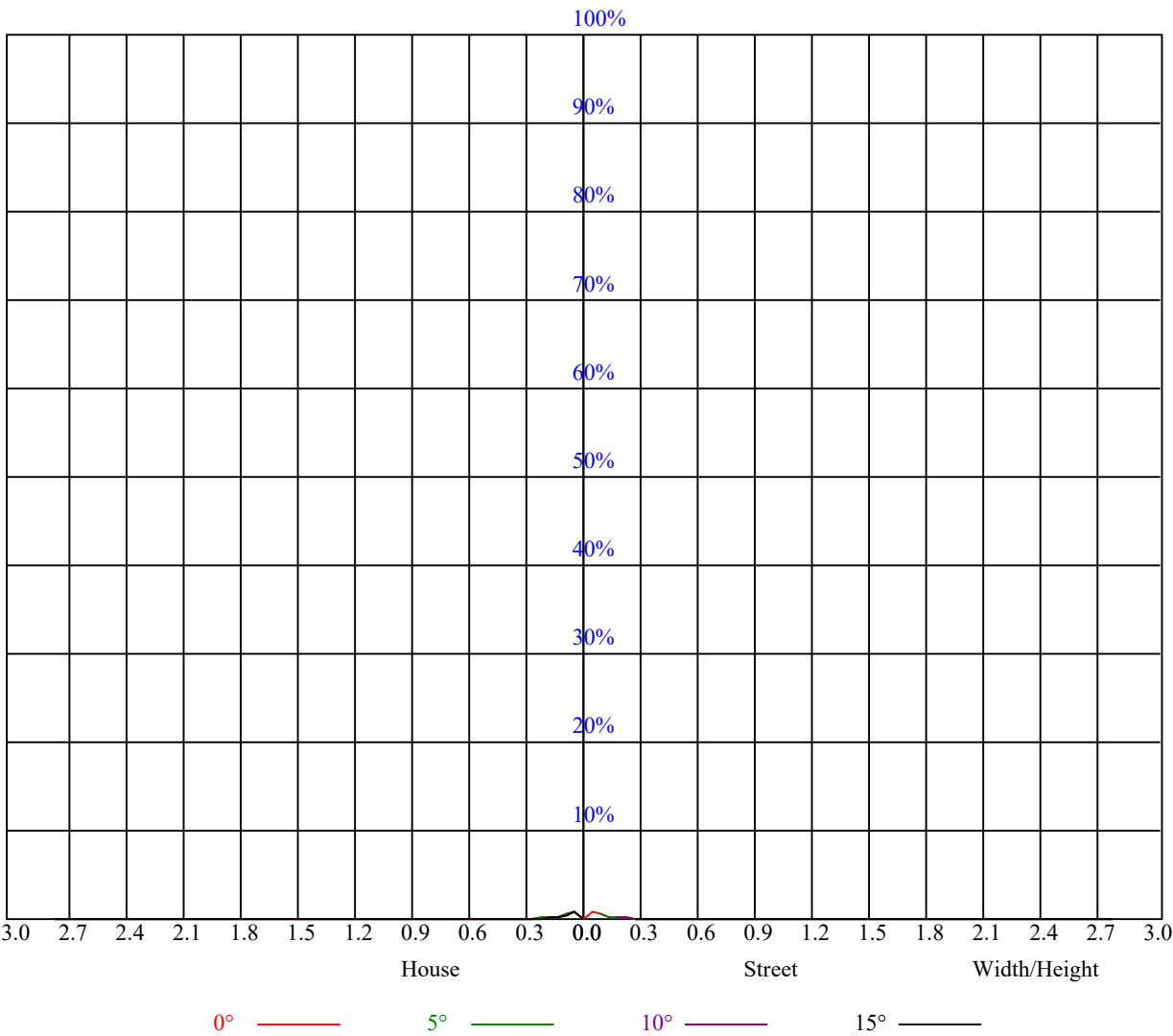


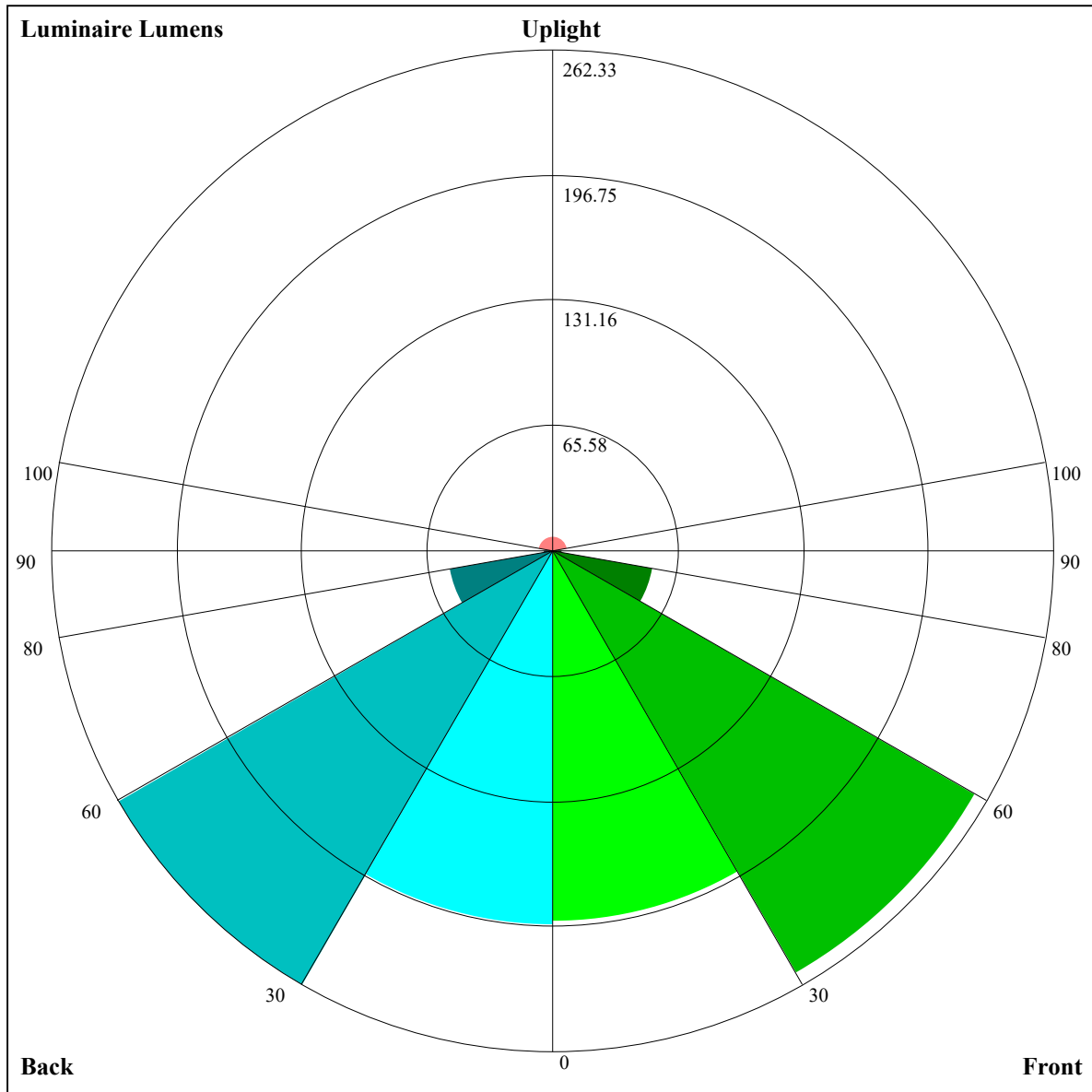
Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	16.91	18.33	17.29	18.67	19.01	17.40	18.82	17.77	19.15	19.50
	3H	17.78	19.05	18.18	19.41	19.78	18.33	19.61	18.74	19.97	20.34
	4H	18.09	19.28	18.50	19.66	20.05	18.74	19.93	19.15	20.31	20.69
	6H	18.42	19.52	18.84	19.91	20.33	19.21	20.31	19.63	20.70	21.12
	8H	18.47	19.53	18.90	19.93	20.36	19.37	20.42	19.80	20.82	21.25
	12H	18.43	19.44	18.87	19.85	20.29	19.41	20.42	19.84	20.83	21.27
4H	2H	17.24	18.44	17.66	18.81	19.20	17.66	18.85	18.07	19.22	19.61
	3H	18.25	19.25	18.69	19.66	20.10	18.74	19.75	19.18	20.16	20.59
	4H	18.73	19.61	19.18	20.04	20.51	19.38	20.26	19.84	20.70	21.17
	6H	19.16	19.94	19.64	20.40	20.87	19.95	20.73	20.43	21.20	21.67
	8H	19.28	20.01	19.77	20.48	20.97	20.17	20.90	20.66	21.37	21.86
	12H	19.27	19.95	19.77	20.41	20.94	20.26	20.93	20.75	21.39	21.93
8H	4H	18.92	19.65	19.41	20.12	20.61	19.53	20.26	20.02	20.72	21.21
	6H	19.45	20.06	19.96	20.55	21.07	20.16	20.77	20.67	21.26	21.78
	8H	19.66	20.19	20.19	20.72	21.23	20.45	20.98	20.99	21.51	22.02
	12H	19.65	20.09	20.20	20.62	21.16	20.54	20.98	21.08	21.51	22.04
12H	4H	18.93	19.60	19.42	20.06	20.60	19.52	20.20	20.02	20.66	21.19
	6H	19.50	20.03	20.04	20.56	21.08	20.20	20.73	20.74	21.26	21.78
	8H	19.68	20.12	20.22	20.65	21.18	20.45	20.90	21.00	21.42	21.96
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.9					0.6/-0.9				
S = 1.5H		0.8/-1.2					0.9/-1.4				
S = 2.0H		1.9/-1.5					2.0/-1.5				
Standard tables:		BK3					BK3				
Uncorrected UGR		6.6					5.9				

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	0.86
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	0.72	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	0.55	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=194.53,FM=255.05,FH=53.64,FVH=4.75

BL=196.34,BM=262.33,BH=55.19,BVH=5.11

UL=2.77,UH=8.2

BUG Rating:B1-U1-G0

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	478.06	488.13	481.16	467.98	446.29	427.31	364.55	320.00	279.32
22.5	496.26	477.67	479.22	462.56	442.42	413.36	377.72	325.81	276.22
45.0	485.42	474.57	475.34	470.70	455.97	428.86	385.47	335.88	289.78
67.5	481.54	475.34	481.93	481.93	459.46	442.03	397.09	347.89	279.71
90.0	489.29	483.87	477.67	481.54	461.79	433.50	393.21	350.21	276.22
112.5	480.77	481.16	491.62	482.70	465.27	436.22	398.64	359.51	288.23
135.0	474.96	487.35	500.14	486.19	463.72	441.25	398.64	345.56	308.37
157.5	481.93	485.03	462.17	475.34	459.46	433.50	403.67	335.88	306.82
180.0	478.06	478.44	483.09	471.08	467.21	424.59	390.12	338.98	308.37
202.5	496.26	484.64	485.42	479.99	441.25	435.44	375.39	355.64	288.23
225.0	485.42	486.97	485.42	474.57	457.91	427.31	402.51	341.69	291.33
247.5	481.54	490.07	479.22	469.53	453.65	435.44	388.95	349.05	276.61
270.0	489.29	477.67	487.35	479.99	463.33	437.38	391.28	352.54	300.24
292.5	480.77	494.33	483.09	464.88	460.62	434.28	390.89	347.89	294.43
315.0	474.96	488.52	483.87	479.99	460.24	427.31	387.79	337.04	288.23
337.5	481.93	483.87	484.64	473.02	464.50	421.88	368.42	328.52	271.18
360.0	478.06	488.13	481.16	467.98	446.29	427.31	364.55	320.00	279.32
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	213.46	168.13	114.67	78.26	65.47	50.75	29.44	21.69	0.00
22.5	195.25	146.05	115.45	98.40	61.60	40.29	29.44	23.63	0.39
45.0	218.88	160.77	123.97	67.80	60.05	47.65	39.13	14.33	0.00
67.5	222.37	172.39	141.40	94.91	74.38	39.52	42.61	22.47	0.00
90.0	227.41	184.79	113.12	87.94	67.41	61.60	32.93	32.15	9.30
112.5	220.43	148.38	125.52	81.35	64.31	39.52	26.73	14.72	2.32
135.0	220.05	192.93	127.07	83.68	68.18	39.52	22.08	8.91	13.95
157.5	237.48	168.91	128.62	98.40	75.16	58.11	38.35	16.66	14.72
180.0	234.38	180.92	129.00	78.26	73.22	47.26	32.15	27.51	6.20
202.5	215.01	145.66	112.35	94.53	75.54	56.17	27.12	24.79	7.36
225.0	229.73	166.97	123.58	92.98	80.97	53.85	40.29	26.34	5.42
247.5	224.31	178.98	131.72	94.14	77.48	49.97	43.00	17.43	10.07
270.0	242.51	172.78	121.64	87.94	75.93	42.23	34.87	16.27	0.39
292.5	223.92	144.89	118.93	93.75	70.12	44.55	33.70	29.44	3.87
315.0	233.22	174.72	117.77	77.09	65.08	53.46	44.94	12.78	14.72
337.5	211.13	190.21	106.54	97.63	58.50	47.26	33.32	31.38	10.46
360.0	213.46	168.13	114.67	78.26	65.47	50.75	29.44	21.69	0.00
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	0.39	0.00	0.00	0.00	0.00	0.00	3.87
22.5	0.00	9.69	0.00	0.00	4.26	0.00	0.00	0.00	0.00
45.0	0.00	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.39
67.5	8.52	6.20	0.00	0.00	12.78	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	11.23	0.00	0.00	0.00	8.14	0.00	0.00	0.00
135.0	0.39	4.26	4.26	0.00	3.87	0.00	0.00	0.00	8.91
157.5	0.00	0.00	0.00	0.00	0.00	0.00	3.49	0.00	5.04
180.0	0.00	0.00	0.00	0.00	4.26	0.00	0.00	0.00	5.42
202.5	0.00	7.75	1.55	6.59	5.04	0.00	0.00	8.14	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	4.65	13.17	0.00
247.5	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	3.87	2.71	0.00	1.16	4.26	0.00	0.00	0.00
292.5	0.00	3.10	0.00	0.00	5.04	1.55	0.77	0.39	0.00
315.0	0.00	0.00	6.20	0.00	0.00	0.00	0.00	0.00	0.00
337.5	12.01	11.23	1.16	0.00	3.10	7.36	0.00	0.00	2.71
360.0	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	3.87

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	4.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.5	0.00	0.00	2.71	0.00	5.42	0.00	1.16	0.00	8.91
45.0	11.62	7.36	2.32	0.00	3.49	1.55	0.00	0.00	0.00
67.5	0.00	0.00	4.65	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94
112.5	8.14	4.65	3.87	0.00	1.94	3.87	0.00	8.91	0.00
135.0	0.00	0.00	0.39	10.46	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.39	0.00	6.20	0.00	5.04	0.00	12.40	0.00
180.0	0.00	2.32	5.04	0.77	0.00	1.55	0.00	0.00	0.00
202.5	0.00	11.62	0.00	0.00	0.00	0.00	12.40	1.94	5.04
225.0	8.14	0.00	3.10	0.00	0.00	6.59	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	5.04	0.00	0.00	0.00
270.0	0.00	1.55	0.00	8.91	0.00	2.71	0.00	8.52	3.87
292.5	3.10	1.55	1.55	0.00	5.04	0.00	8.52	0.00	5.04
315.0	5.42	0.00	0.00	0.00	0.00	5.04	0.00	0.00	0.00
337.5	0.00	1.55	0.00	10.07	0.00	0.00	0.00	0.00	0.00
360.0	4.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C/γ(°)	180.0
0.0	9.69
22.5	6.97
45.0	0.00
67.5	14.72
90.0	11.23
112.5	8.52
135.0	0.00
157.5	0.77
180.0	9.69
202.5	6.97
225.0	0.00
247.5	14.72
270.0	11.23
292.5	8.52
315.0	0.00
337.5	0.77
360.0	9.69