
Client:

LumCAT: 0017440227 KAI 8.5W 3000K 1000lm

Luminaire:

Report No:

Voltage(V): 230.0000

Test No: KYZ-A250930027-01-006

Current(A): 0.0420

LampCAT: LED

Power (W): 8.5000

Lamp flux(lm)

PF: 0.8756

Number of Lamps: 1

Ballast type:

Length(mm): -192

Width(mm): -192

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1000.00

Lumens(lm)/Power(W): 117.65

Central intensity(cd): 480.627

Maximum intensity(cd): 505.783

Angle of maximum intensity: $C=315.0$ $\gamma=10.0$

Beam Angle(50%Imax): [C0/180]Total=85.4

[C90/270]Total=85.3

Field angle(10%Imax): [C0/180]Total=150.6

[C90/270]Total=138.3

Maximum s/h(1/2): C0_180=1.14 C90_270=1.17

Maximum s/h(1/4): C0_180=1.18 C90_270=1.21

Up flux rate of LUM(%): 0.63%

Down flux rate of LUM(%): 99.37%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 87.074%

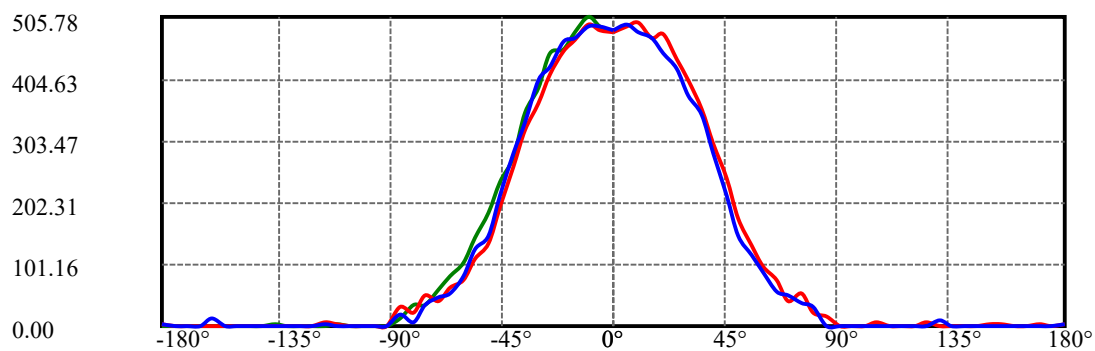
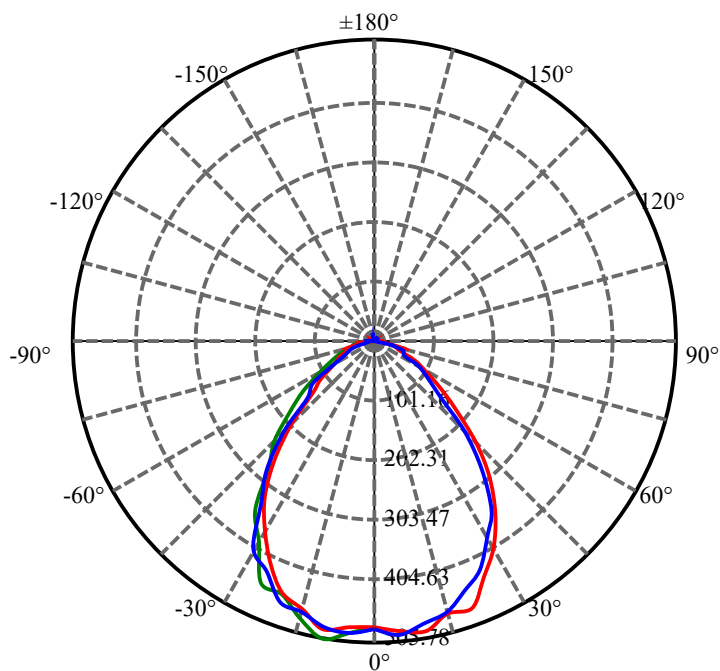
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	511.447	0.000	0	.000%	.000%
5.0	513.934	11.623	11.623	1.162%	1.162%
10.0	512.603	34.821	46.444	3.482%	4.644%
15.0	502.654	57.106	103.55	5.711%	10.355%
20.0	484.515	77.144	180.694	7.714%	18.069%
25.0	449.168	92.855	273.549	9.286%	27.355%
30.0	407.188	102.761	376.31	10.276%	37.631%
35.0	355.762	106.532	482.842	10.653%	48.284%
40.0	294.940	102.943	585.785	10.294%	58.578%
45.0	235.877	93.196	678.98	9.320%	67.898%
50.0	175.256	78.773	757.754	7.877%	75.775%
55.0	130.588	63.057	820.811	6.306%	82.081%
60.0	97.200	49.926	870.737	4.993%	87.074%
65.0	71.047	38.783	909.52	3.878%	90.952%
70.0	52.682	29.707	939.226	2.971%	93.923%
75.0	41.854	23.431	962.657	2.343%	96.266%
80.0	28.640	17.886	980.543	1.789%	98.054%
85.0	11.004	10.214	990.757	1.021%	99.076%
90.0	0.327	2.942	993.699	.294%	99.370%
95.0	1.432	0.457	994.155	.046%	99.415%
100.0	0.779	0.570	994.725	.057%	99.472%
105.0	1.181	0.497	995.222	.050%	99.522%
110.0	0.653	0.455	995.677	.045%	99.568%
115.0	1.306	0.470	996.147	.047%	99.615%
120.0	0.804	0.486	996.634	.049%	99.663%
125.0	1.281	0.457	997.091	.046%	99.709%
130.0	1.583	0.590	997.681	.059%	99.768%
135.0	1.131	0.520	998.201	.052%	99.820%
140.0	0.804	0.340	998.541	.034%	99.854%
145.0	1.482	0.362	998.902	.036%	99.890%
150.0	1.030	0.351	999.253	.035%	99.925%
155.0	0.578	0.193	999.446	.019%	99.945%
160.0	1.256	0.182	999.628	.018%	99.963%
165.0	0.603	0.145	999.774	.015%	99.977%
170.0	1.357	0.110	999.884	.011%	99.988%
175.0	0.754	0.072	999.955	.007%	99.996%
180.0	3.216	0.045	1000	.004%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	376.31	37.63%
0-40	585.78	58.58%
0-60	870.74	87.07%
0-90	993.70	99.37%
0-120	996.63	99.66%
0-180	1000.00	100.00%
60-90	172.89	17.29%
90-120	5.88	0.59%
90-130	6.92	0.69%
90-150	8.50	0.85%
90-180	9.20	0.92%
0-53.35	800.00	80.00%

ZONAL LUMEN SUMMARY

0-10	46.44
10-20	134.25
20-30	195.62
30-40	209.47
40-50	171.97
50-60	112.98
60-70	68.49
70-80	41.32
80-90	13.16
90-100	1.03
100-110	0.95
110-120	0.96
120-130	1.05
130-140	0.86
140-150	0.71
150-160	0.38
160-170	0.26
170-180	0.07



C315(Max): —————

C0/C180: —————

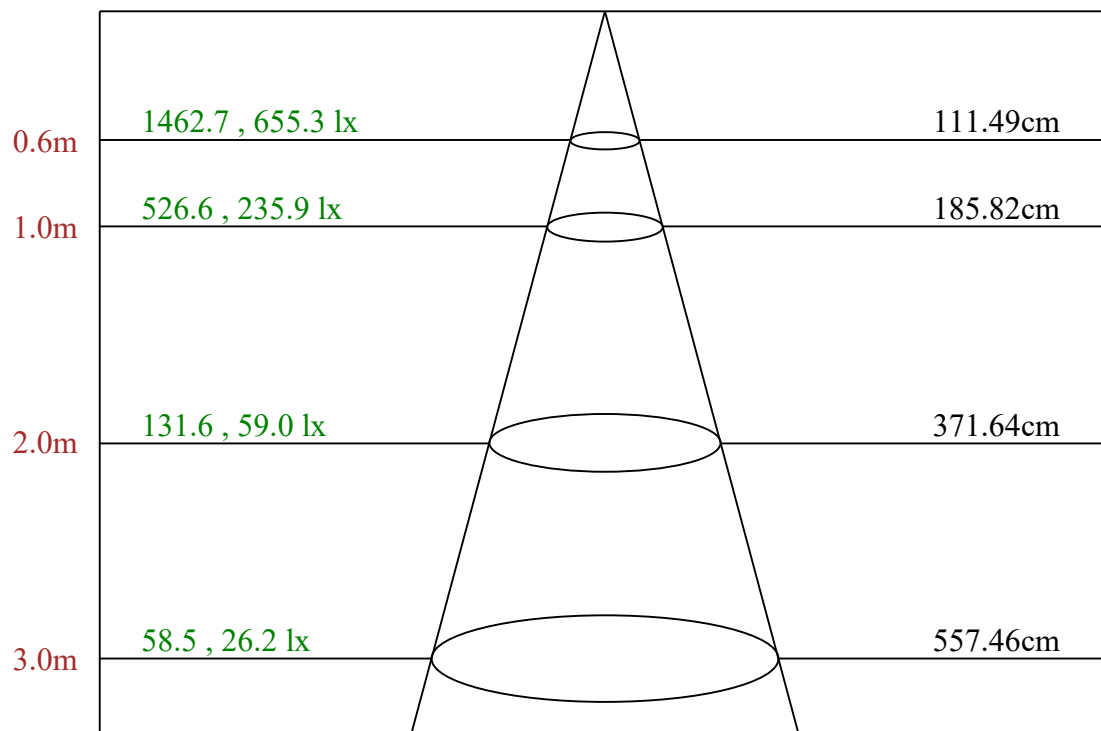
C90/C270: —————

Field angle(10%I_{max}):C0/180Left:85.1 Right:65.5

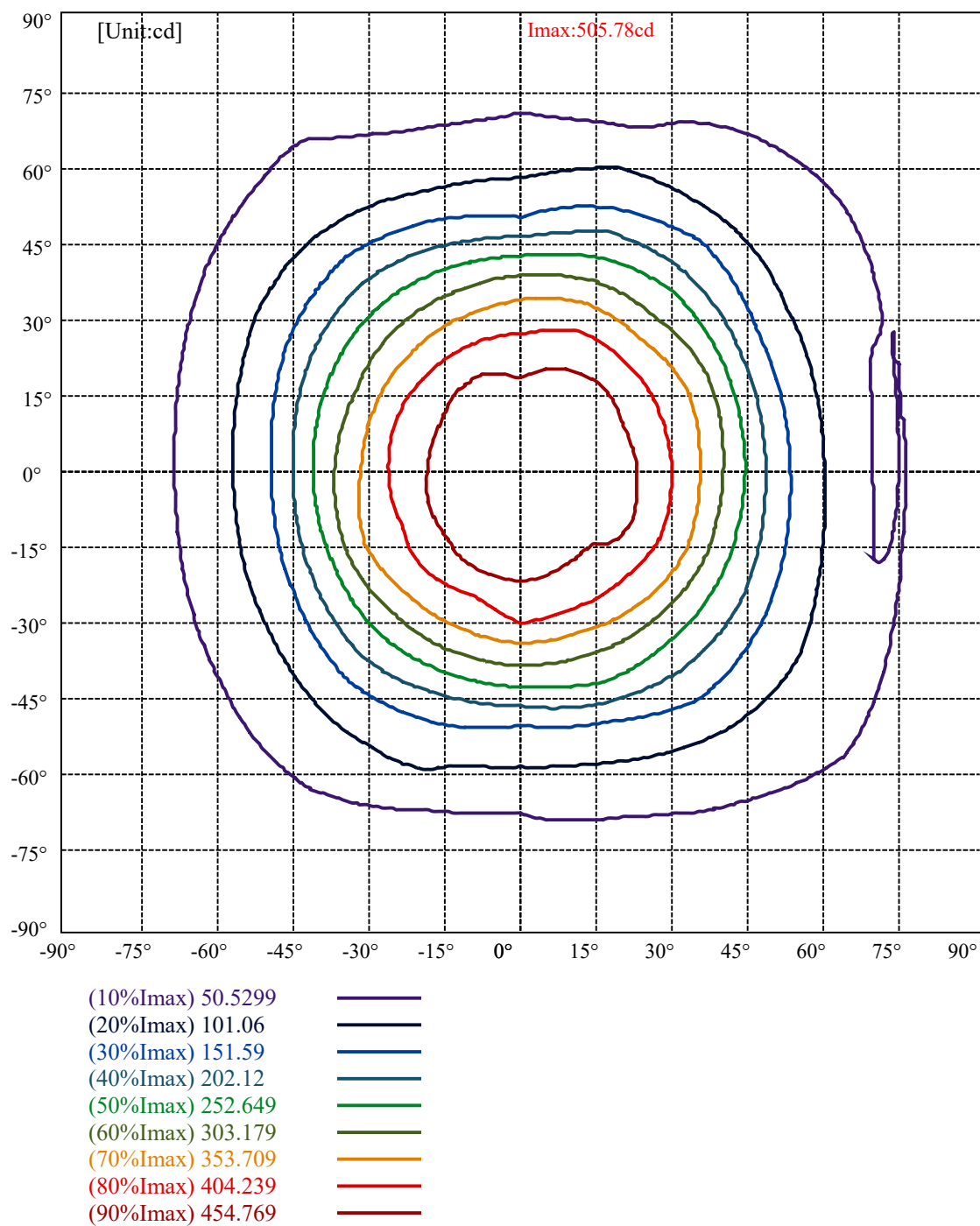
:C90/270Left:72.7 Right:65.6

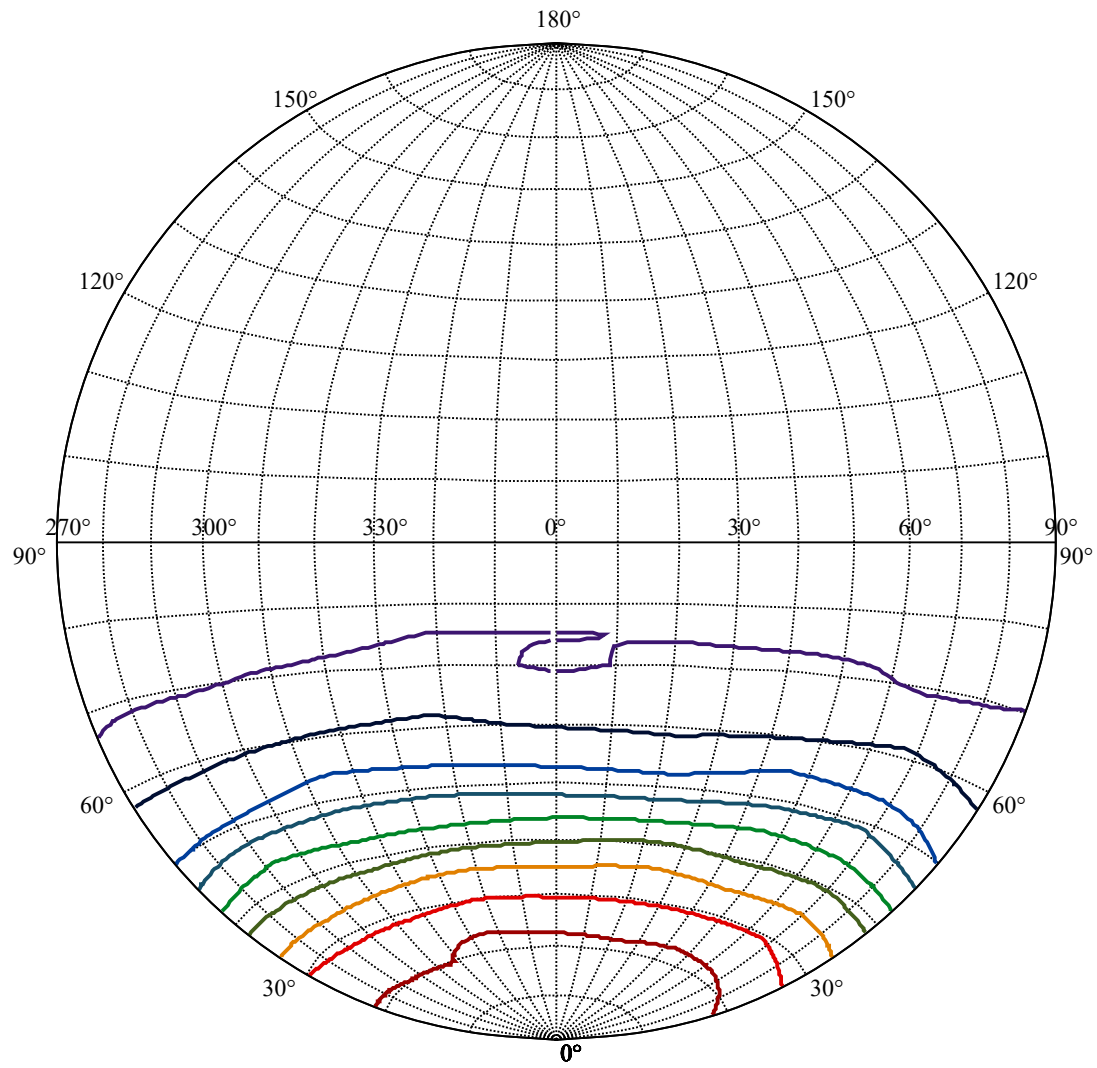
Beam Angle(50%I_{max}):C0/180Left:51.0 Right:34.4

:C90/270Left:47.6 Right:37.7



Max , Ave Beam angle of C315 plane 85.79



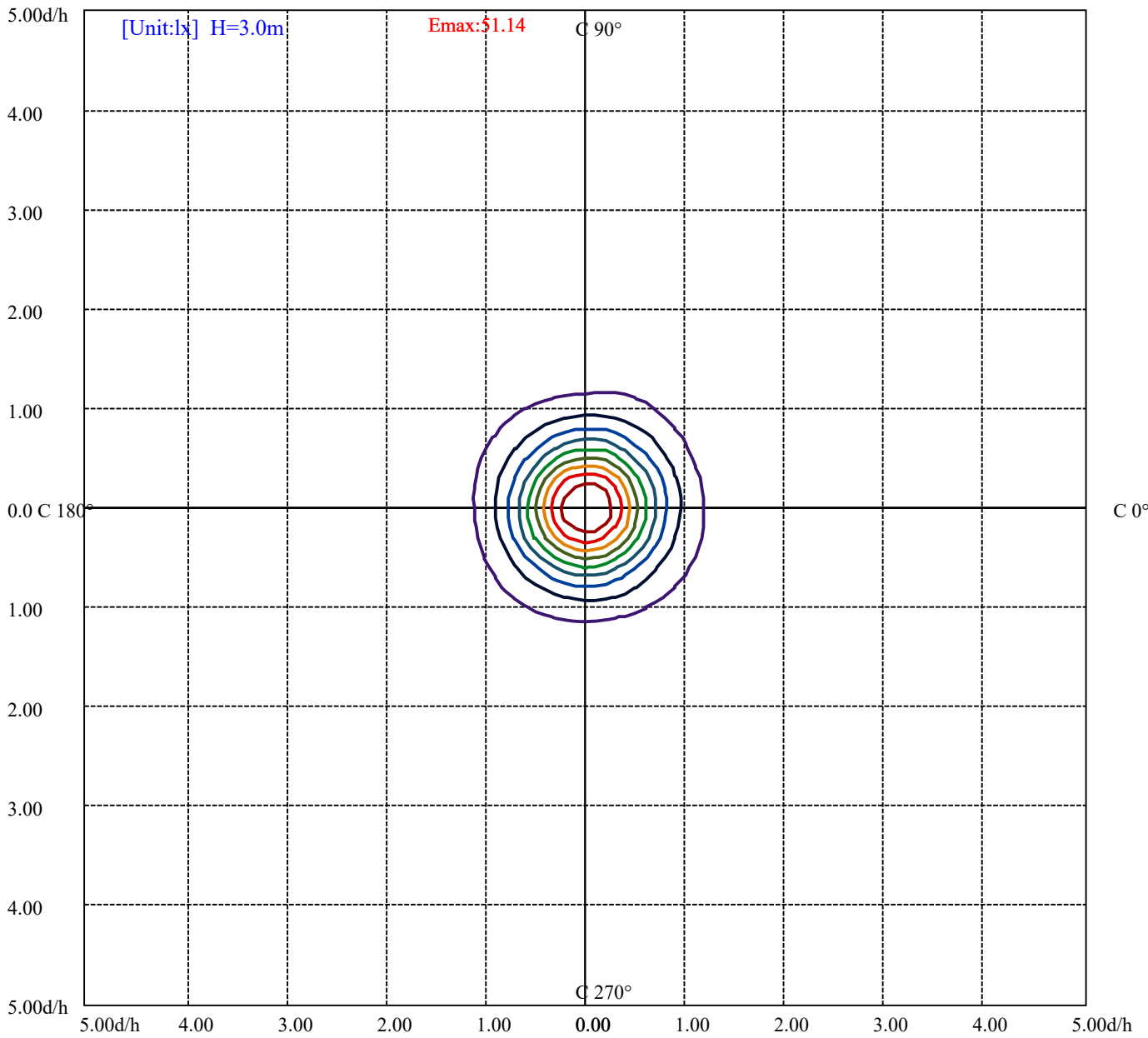


House

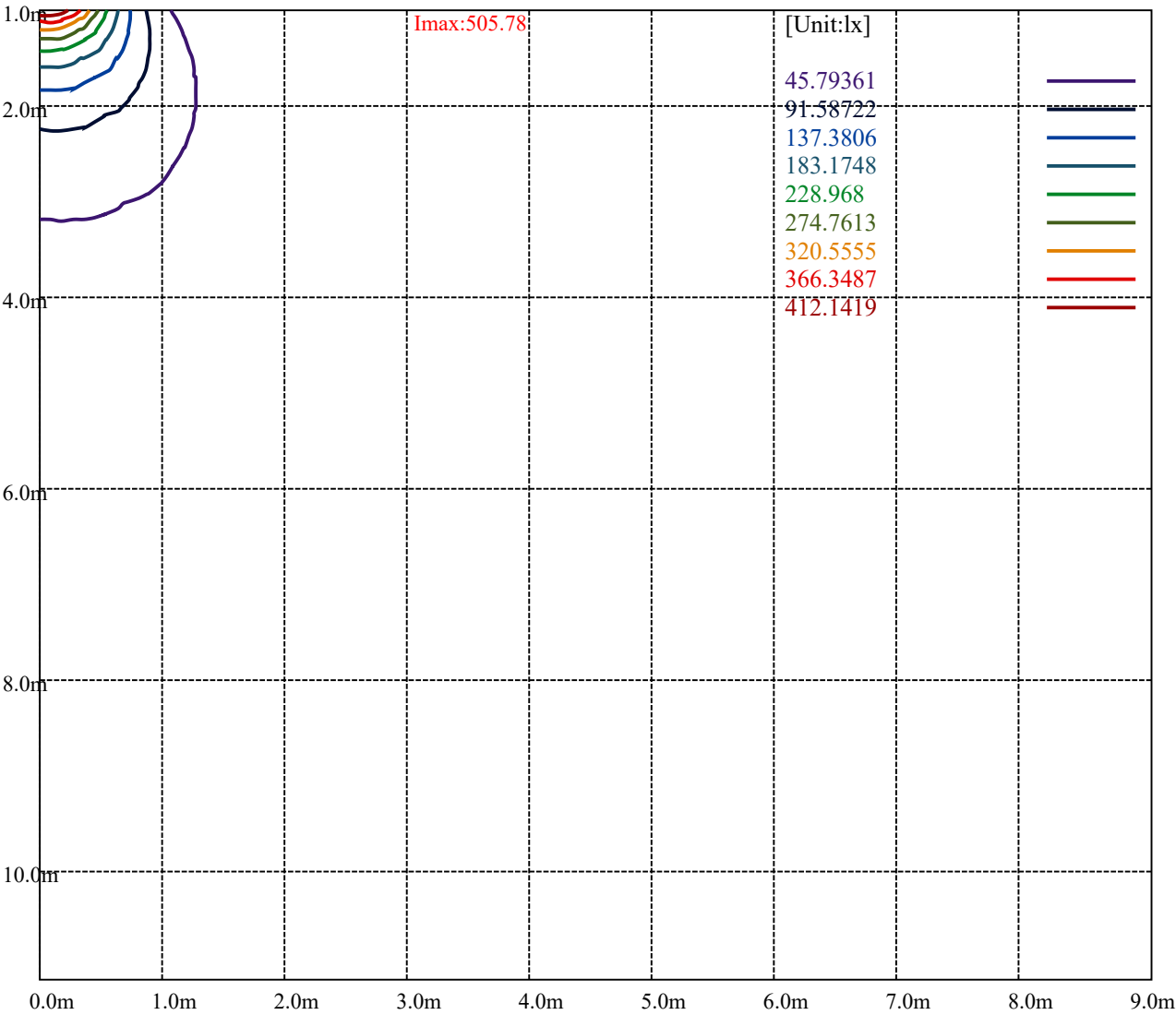
[Unit:cd]

Road

Imax:505.78	
(10%Imax) 47.95924	
(20%Imax) 95.91887	
(30%Imax) 143.8778	
(40%Imax) 191.8368	
(50%Imax) 239.7967	
(60%Imax) 287.7556	
(70%Imax) 335.7146	
(80%Imax) 383.6745	
(90%Imax) 431.6335	



(10%E _{max}) 5.113518	
(20%E _{max}) 10.22704	
(30%E _{max}) 15.34058	
(40%E _{max}) 20.45411	
(50%E _{max}) 25.56753	
(60%E _{max}) 30.68106	
(70%E _{max}) 35.79459	
(80%E _{max}) 40.90812	
(90%E _{max}) 46.02164	



Luminance Table

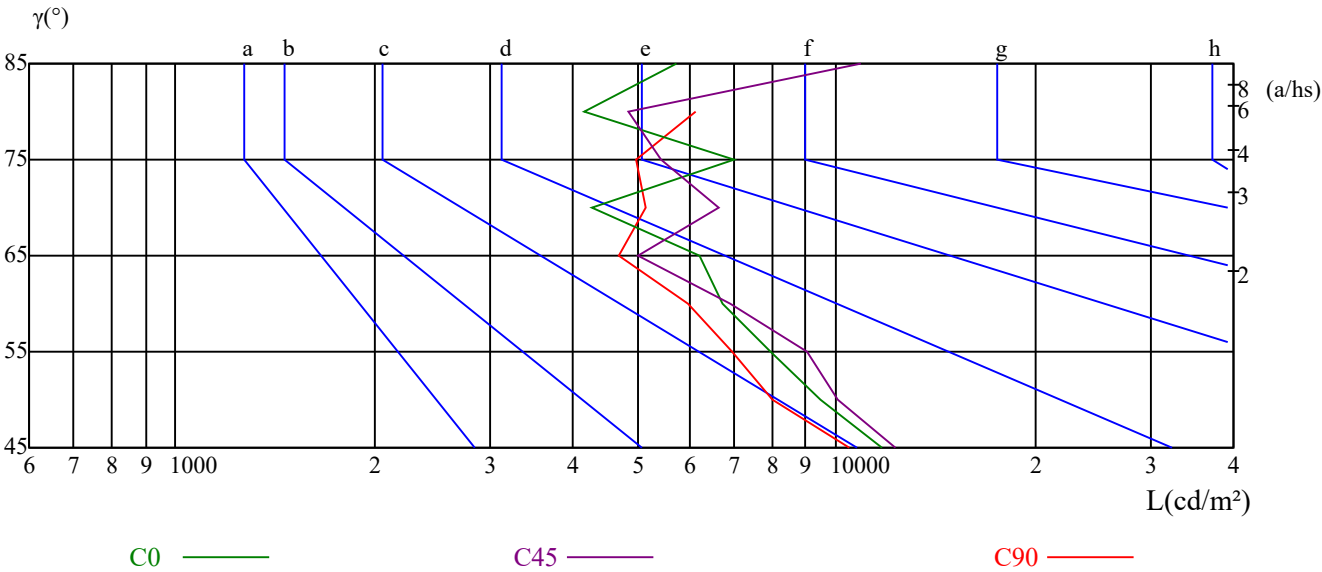
γ	45	50	55	60	65	70	75	80	85
C0	11747	9462	7964	6740	6230	4272	7019	4170	5740
C45	12325	10097	9066	6924	5015	6659	5442	4852	10875
C90	10482	8008	6954	5977	4704	5158	4985	6141	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5669	4517	5685	6841	4705	4921	8836	3474	4116

Glare Table

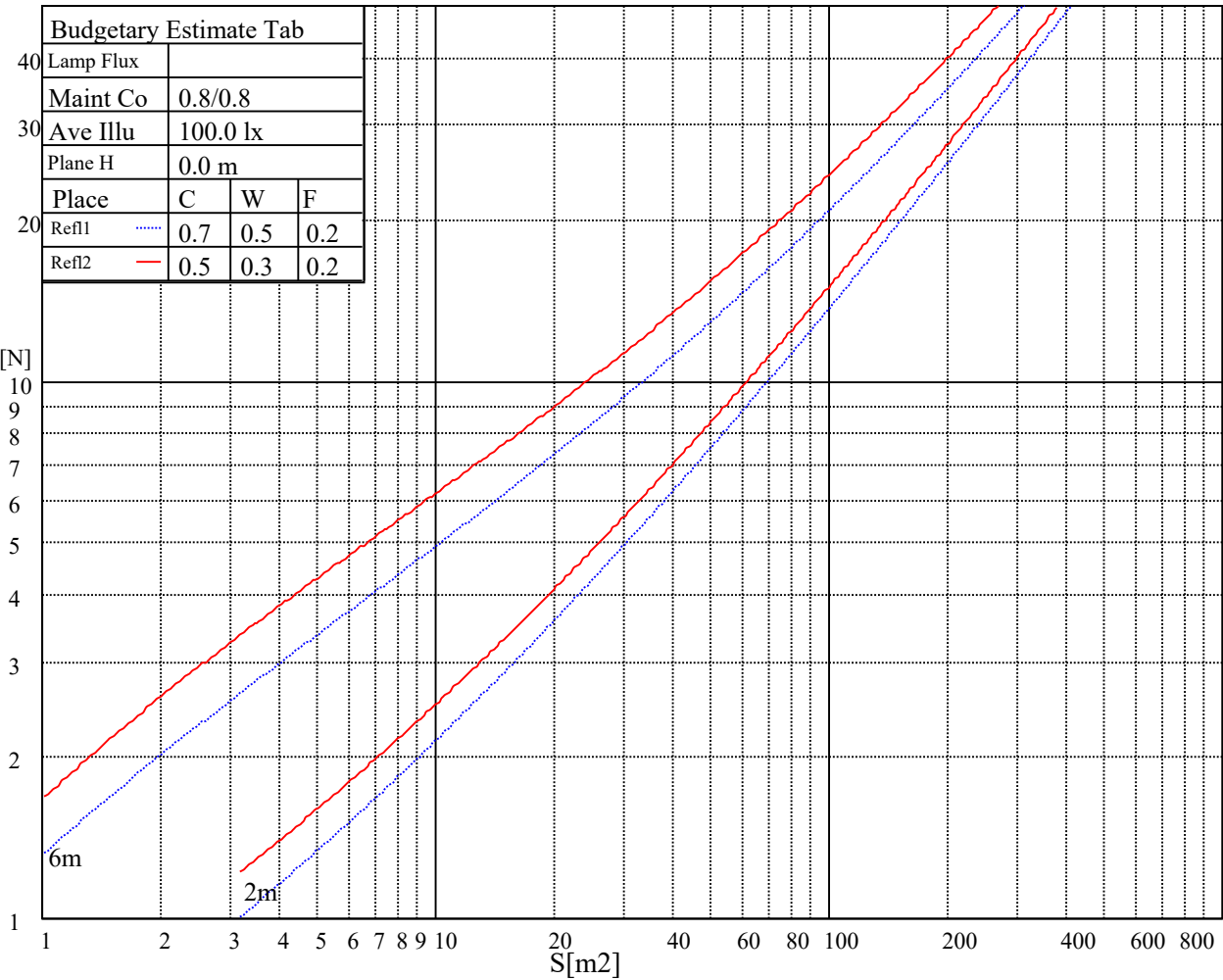
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

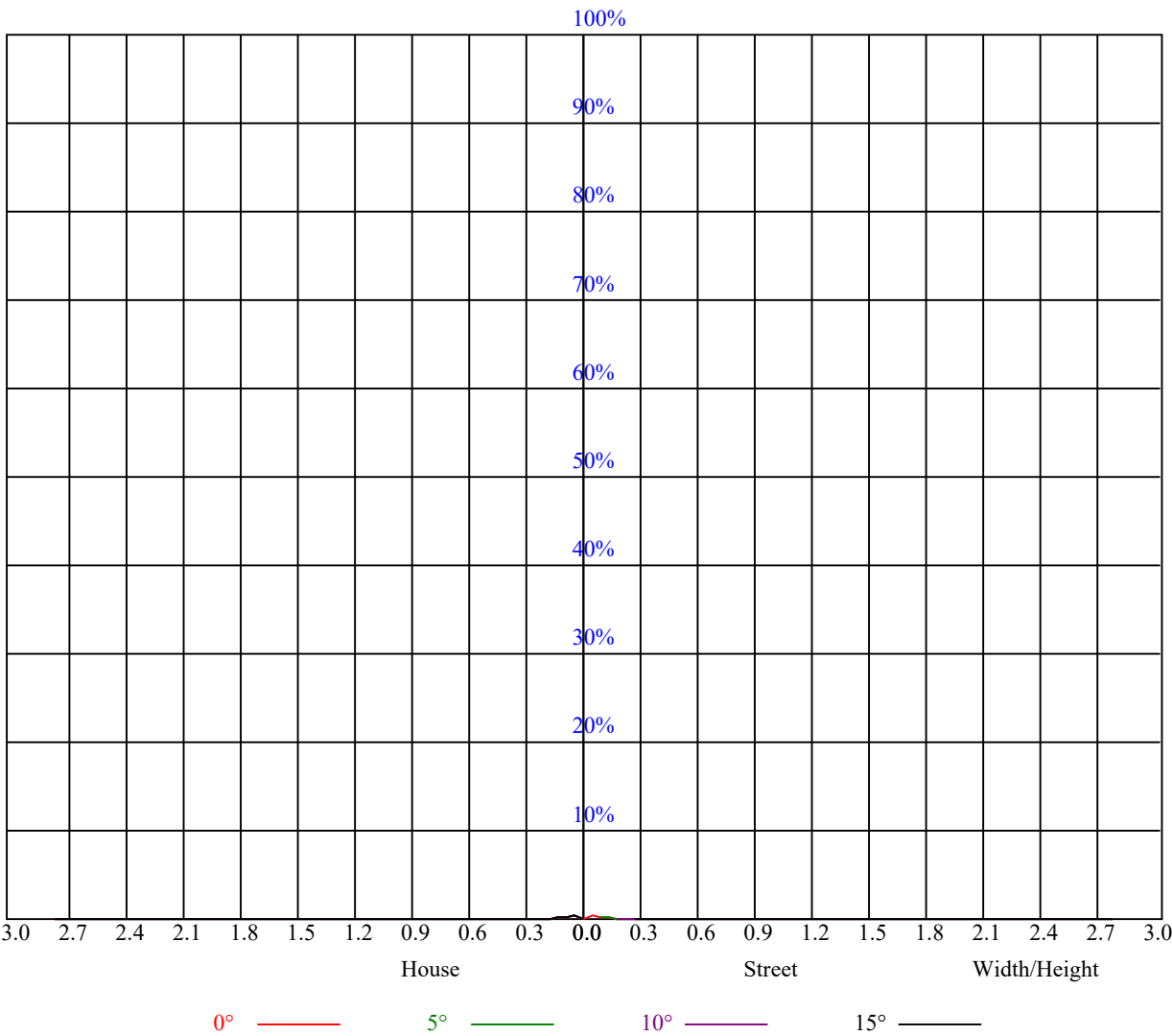


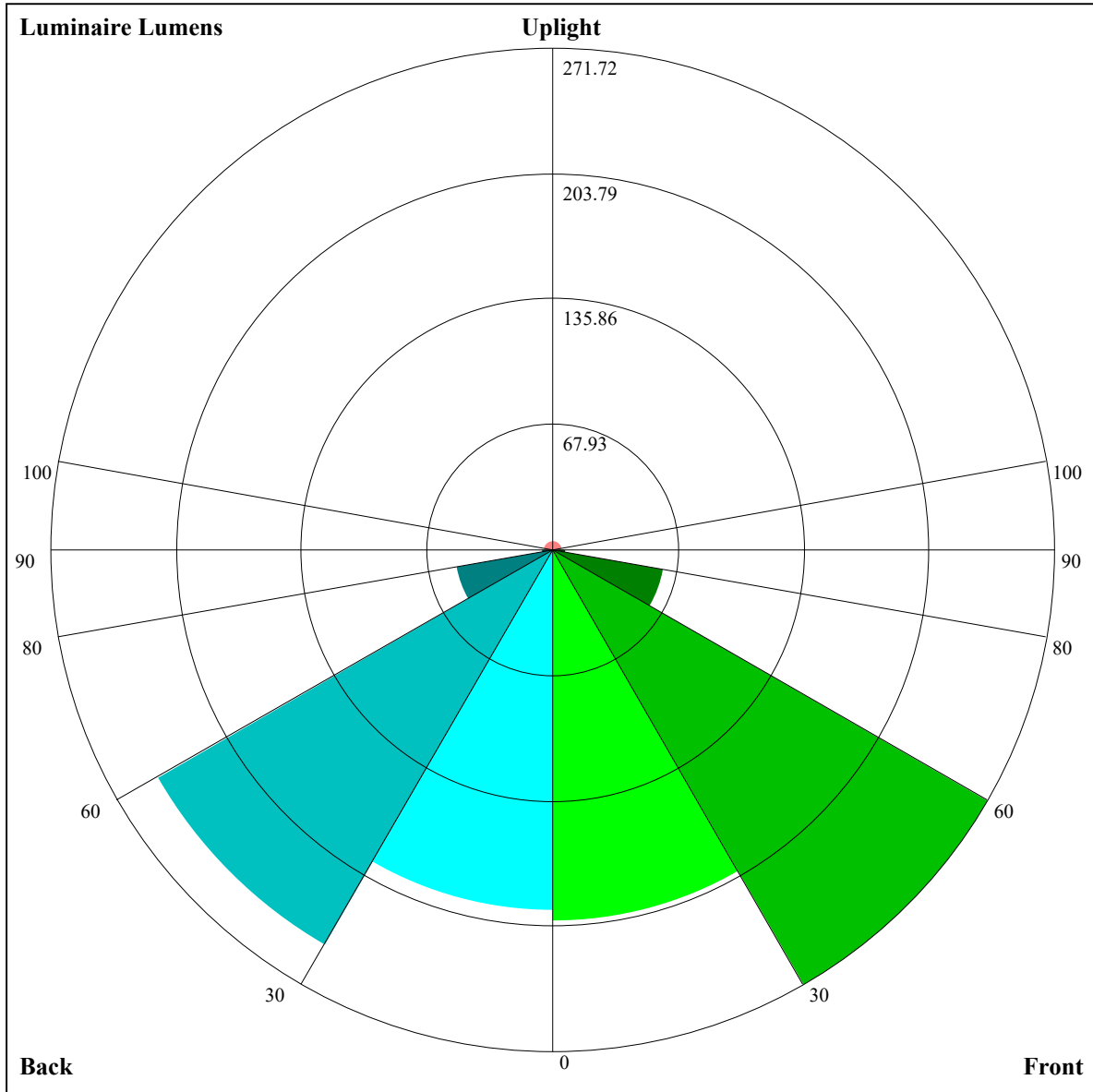
Illumination assessment according UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	14.81	16.25	15.18	16.58	16.91	14.93	16.37	15.30	16.70	17.03
	3H	15.71	17.01	16.11	17.36	17.72	15.69	16.99	16.09	17.34	17.70
	4H	16.33	17.54	16.73	17.90	18.28	16.10	17.31	16.51	17.68	18.06
	6H	16.79	17.91	17.20	18.29	18.70	16.59	17.71	17.01	18.09	18.50
	8H	16.89	17.96	17.31	18.36	18.77	16.70	17.78	17.12	18.17	18.59
	12H	16.98	18.01	17.41	18.41	18.84	16.68	17.71	17.10	18.11	18.53
4H	2H	15.19	16.40	15.59	16.76	17.14	15.29	16.50	15.70	16.87	17.25
	3H	16.39	17.41	16.81	17.81	18.23	16.26	17.28	16.69	17.68	18.11
	4H	17.21	18.11	17.65	18.54	18.99	16.88	17.78	17.33	18.21	18.67
	6H	17.82	18.62	18.29	19.08	19.53	17.49	18.29	17.97	18.75	19.21
	8H	18.02	18.76	18.50	19.22	19.70	17.68	18.43	18.16	18.89	19.36
	12H	18.17	18.87	18.66	19.32	19.84	17.69	18.39	18.18	18.84	19.36
8H	4H	17.41	18.16	17.90	18.62	19.10	17.12	17.87	17.61	18.33	18.81
	6H	18.22	18.84	18.72	19.32	19.84	17.87	18.50	18.37	18.98	19.49
	8H	18.57	19.12	19.10	19.64	20.14	18.18	18.72	18.70	19.24	19.75
	12H	18.79	19.25	19.33	19.77	20.30	18.22	18.67	18.75	19.19	19.72
12H	4H	17.43	18.12	17.92	18.58	19.10	17.17	17.86	17.66	18.31	18.83
	6H	18.33	18.88	18.86	19.40	19.90	18.01	18.55	18.53	19.07	19.58
	8H	18.72	19.17	19.25	19.69	20.22	18.33	18.79	18.87	19.31	19.84
Variation with the observer position at spacings:											
S = 1.0H		0.4/-0.9					0.3/-0.7				
S = 1.5H		0.7/-1.3					0.8/-1.1				
S = 2.0H		1.6/-1.4					1.4/-1.2				
Standard tables:		BK3					BK4				
Uncorrected UGR		3.9					4.6				

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	1.02	0.99	1.04	1.00	0.97	0.99	0.97	0.94	0.96	0.93	0.91	0.92	0.90	0.88	0.86
2	0.95	0.89	0.84	0.93	0.87	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	0.77	0.72	0.83	0.76	0.71	0.80	0.74	0.70	0.77	0.73	0.69	0.75	0.71	0.67	0.65
4	0.76	0.68	0.63	0.75	0.68	0.62	0.72	0.66	0.61	0.70	0.65	0.60	0.68	0.63	0.59	0.57
5	0.69	0.61	0.55	0.68	0.60	0.55	0.66	0.59	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	0.54	0.49	0.60	0.53	0.48	0.59	0.53	0.48	0.57	0.52	0.48	0.46
7	0.58	0.50	0.44	0.57	0.49	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	0.52	0.45	0.40	0.51	0.44	0.39	0.50	0.44	0.39	0.49	0.43	0.39	0.37
9	0.49	0.41	0.36	0.48	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	0.37	0.33	0.43	0.37	0.33	0.42	0.37	0.33	0.31





Luminaire Lumens:

FL=201.36,FM=271.72,FH=61.07,FVH=7.61

BL=194.94,BM=247.25,BH=53.07,BVH=5.89

UL=1.08,UH=5.55

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	480.63	489.39	495.11	472.62	476.43	437.18	400.97	354.47	298.82
22.5	487.87	493.21	487.49	495.49	466.14	437.56	399.82	364.38	311.02
45.0	470.72	477.20	486.73	484.06	481.39	434.51	399.06	348.37	295.39
67.5	497.02	486.34	497.02	479.86	464.62	434.89	401.35	354.47	298.82
90.0	483.68	493.21	481.77	471.48	446.71	421.93	376.96	345.32	282.81
112.5	479.10	477.58	473.39	470.72	458.52	417.74	375.05	323.98	274.05
135.0	481.39	495.11	468.05	468.43	452.80	414.31	364.00	316.73	267.57
157.5	499.30	487.49	469.57	473.39	442.51	416.98	364.76	306.44	263.37
180.0	480.63	482.53	491.68	466.53	448.23	412.02	364.38	319.40	260.32
202.5	487.87	478.34	485.58	483.30	448.23	405.16	387.63	335.79	254.99
225.0	470.72	487.49	483.30	466.53	452.80	415.45	378.86	320.55	263.37
247.5	497.02	489.39	488.63	457.00	464.62	409.35	376.96	331.22	270.23
270.0	483.68	491.30	489.01	471.86	465.76	425.36	403.25	333.50	282.05
292.5	479.10	485.58	484.06	490.16	455.85	435.65	391.06	335.41	281.29
315.0	481.39	490.92	505.78	481.01	452.80	447.47	389.15	347.99	277.09
337.5	499.30	492.06	489.78	493.59	473.39	448.99	404.40	359.42	293.48
360.0	480.63	489.39	495.11	472.62	476.43	437.18	400.97	354.47	298.82
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	240.50	176.09	132.26	97.57	76.23	42.31	52.60	20.96	14.48
22.5	238.98	172.28	124.64	92.24	60.98	62.89	46.88	36.21	10.67
45.0	252.32	187.91	150.55	100.24	61.36	65.94	40.78	24.39	27.44
67.5	243.17	194.39	137.59	110.15	76.99	44.59	42.69	29.35	6.48
90.0	214.59	149.03	115.49	86.52	57.55	51.07	37.35	30.87	0.00
112.5	214.21	164.66	112.82	83.09	68.23	42.31	20.20	20.96	9.53
135.0	219.92	168.09	127.30	80.80	64.41	54.89	42.31	32.40	0.00
157.5	209.25	157.41	113.96	91.09	65.94	44.59	44.98	29.73	5.34
180.0	195.91	136.07	109.77	73.94	62.51	40.40	49.93	22.49	30.11
202.5	199.34	140.26	107.86	72.42	59.46	35.83	26.68	19.82	3.05
225.0	215.35	161.99	111.68	95.29	70.13	47.26	30.49	26.30	0.00
247.5	208.49	165.80	108.63	103.29	54.50	46.88	44.59	31.64	8.39
270.0	213.44	147.88	125.40	80.80	52.98	46.12	33.16	7.62	17.53
292.5	242.79	160.84	120.06	94.52	72.80	45.36	36.59	30.49	6.48
315.0	237.07	185.62	145.60	104.43	82.33	58.70	33.92	35.07	14.10
337.5	233.26	190.57	137.59	108.25	91.48	70.13	51.84	36.21	13.34
360.0	240.50	176.09	132.26	97.57	76.23	42.31	52.60	20.96	14.48
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	6.86	0.00	0.00	0.00	4.96	0.00
22.5	0.00	0.00	0.00	0.00	0.00	2.29	5.34	0.00	0.00
45.0	0.00	0.00	0.00	0.00	2.67	8.00	0.00	0.00	0.76
67.5	0.00	0.00	0.00	0.00	0.76	1.14	0.38	3.05	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	8.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.81
135.0	0.00	6.86	3.43	0.00	0.00	0.00	1.14	0.00	0.00
157.5	0.00	0.00	5.34	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	2.67	5.34	0.00	0.00	0.00
202.5	0.00	0.00	3.05	0.00	0.00	0.00	4.19	0.00	0.00
225.0	0.00	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	6.86
270.0	0.00	0.00	0.00	0.38	0.00	3.05	0.00	0.00	0.00
292.5	4.96	0.00	0.00	1.91	0.00	0.00	0.00	0.00	4.57
315.0	0.00	0.00	0.00	0.00	3.81	0.00	0.00	0.00	0.00
337.5	0.00	11.05	0.00	8.39	0.00	0.00	1.14	10.67	0.00
360.0	0.00	0.00	0.00	6.86	0.00	0.00	0.00	4.96	0.00

Intensity data(cd)

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C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	1.14	0.00	1.91	3.05	0.00	0.00	3.43	0.00
22.5	0.00	0.00	12.96	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.76	0.00	6.86	0.00	0.00	0.00	2.29	0.00	6.86
67.5	5.72	0.00	0.00	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	0.00
112.5	6.86	0.00	0.00	0.00	0.00	0.00	1.14	14.87	0.00
135.0	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.38	0.00
157.5	0.00	7.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	3.43	0.00	8.00	0.00	0.00	0.00	0.00	3.05
247.5	0.00	0.00	0.00	0.00	1.52	0.38	0.00	1.91	0.00
270.0	0.00	0.00	0.00	1.14	0.00	14.10	0.00	0.00	1.52
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	2.67	4.57	3.81	4.57	5.72	0.00	0.00
360.0	0.00	1.14	0.00	1.91	3.05	0.00	0.00	3.43	0.00

C/γ(°)	180.0
0.0	2.67
22.5	9.53
45.0	2.29
67.5	0.00
90.0	4.19
112.5	0.00
135.0	0.00
157.5	5.72
180.0	2.67
202.5	9.53
225.0	2.29
247.5	0.00
270.0	4.19
292.5	0.00
315.0	0.00
337.5	5.72
360.0	2.67