
Light Blue USA-Rayhil

Client:

LumCAT: LB72271

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.227

Lamp flux(lm): 1793.9

Power (W): 25.550

Number of Lamps: 1

PF: 0.936

Length(mm): -350

Width(mm): -350

Phm Type: C

Height(mm): 80

Photometric Results

Lumens(lm): 1793.85, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 70.21

Central intensity(cd): 400.218, Maximum intensity(cd): 400.667

Angle of maximum intensity: C=30.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=132.4

[C90/270]Total=131.6

Field angle(10%Imax): [C0/180]Total=263.4

[C90/270]Total=262.0

Maximum s/h(1/2): C0_180=1.33 C90_270=1.33

Maximum s/h(1/4): C0_180=1.47 C90_270=1.47

Up flux rate of lamp(%): 17.92%

Down flux rate of lamp(%): 82.08%

Up flux rate of LUM(%): 17.92%

Down flux rate of LUM(%): 82.08%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 55.802%

Light Blue USA-Rayhil LB72271

Zonal flux distribution table

Appendix Page: 2 Total:12

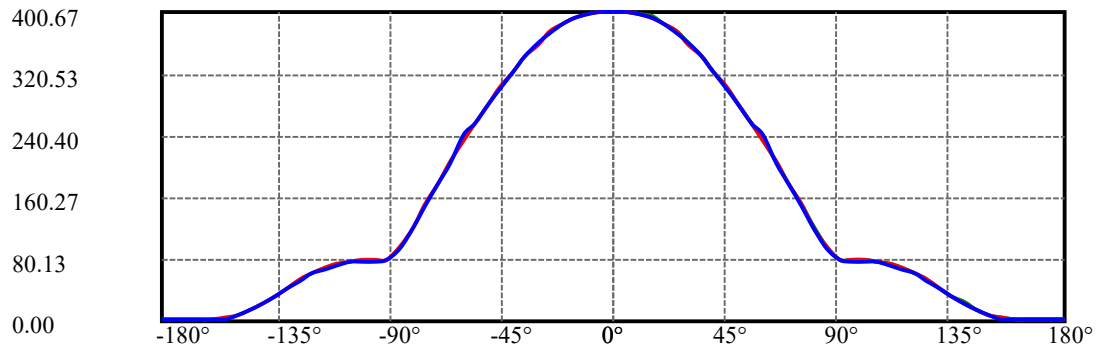
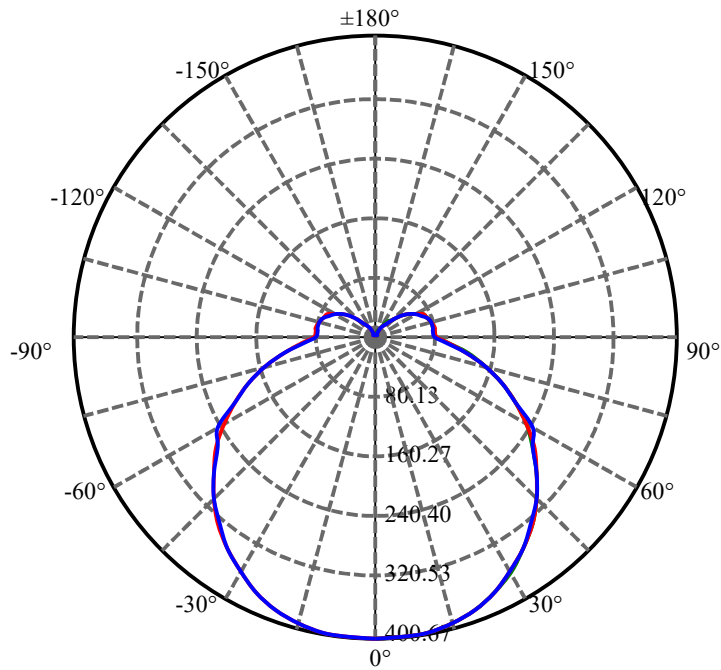
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	400.218	0.000	0	0.00%	0.00%
5.0	400.368	9.571	9.571	0.53%	0.53%
10.0	398.723	28.586	38.157	1.59%	2.13%
15.0	394.162	47.033	85.19	2.62%	4.75%
20.0	386.011	64.297	149.487	3.58%	8.33%
25.0	374.834	79.799	229.286	4.45%	12.78%
30.0	360.180	93.017	322.302	5.19%	17.97%
35.0	342.871	103.529	425.832	5.77%	23.74%
40.0	324.443	111.336	537.168	6.21%	29.95%
45.0	302.758	116.131	653.299	6.47%	36.42%
50.0	280.477	117.851	771.15	6.57%	42.99%
55.0	256.476	116.751	887.902	6.51%	49.50%
60.0	232.851	113.107	1001.008	6.31%	55.80%
65.0	206.007	106.687	1107.696	5.95%	61.75%
70.0	178.606	97.387	1205.082	5.43%	67.18%
75.0	150.794	86.100	1291.182	4.80%	71.98%
80.0	123.431	73.375	1364.557	4.09%	76.07%
85.0	95.767	59.561	1424.118	3.32%	79.39%
90.0	80.404	48.237	1472.355	2.69%	82.08%
95.0	78.758	43.580	1515.935	2.43%	84.51%
100.0	78.421	42.710	1558.645	2.38%	86.89%
105.0	76.889	41.557	1600.202	2.32%	89.20%
110.0	73.712	39.365	1639.567	2.19%	91.40%
115.0	68.926	36.117	1675.684	2.01%	93.41%
120.0	62.759	32.013	1707.696	1.78%	95.20%
125.0	53.151	26.792	1734.489	1.49%	96.69%
130.0	42.685	20.838	1755.327	1.16%	97.85%
135.0	32.966	15.287	1770.613	0.85%	98.70%
140.0	23.471	10.450	1781.063	0.58%	99.29%
145.0	14.241	6.292	1787.355	0.35%	99.64%
150.0	7.252	3.165	1790.52	0.18%	99.81%
155.0	3.962	1.419	1791.939	0.08%	99.89%
160.0	3.289	0.761	1792.7	0.04%	99.94%
165.0	3.140	0.530	1793.23	0.03%	99.97%
170.0	3.028	0.366	1793.595	0.02%	99.99%
175.0	2.692	0.205	1793.8	0.01%	100.00%
180.0	1.346	0.048	1793.848	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	322.30	17.97%	17.97%
0-40	537.17	29.94%	29.95%
0-60	1001.01	55.80%	55.80%
0-90	1472.36	82.08%	82.08%
0-120	1707.70	95.20%	95.20%
0-180	1793.85	100.00%	100.00%
60-90	471.35	26.28%	26.28%
90-120	235.34	13.12%	13.12%
90-130	282.97	15.77%	15.77%
90-150	318.16	17.74%	17.74%
90-180	321.44	17.92%	17.92%
0-86.14	1435.08	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	38.16
10-20	111.33
20-30	172.82
30-40	214.87
40-50	233.98
50-60	229.86
60-70	204.07
70-80	159.47
80-90	107.80
90-100	86.29
100-110	80.92
110-120	68.13
120-130	47.63
130-140	25.74
140-150	9.46
150-160	2.18
160-170	0.90
170-180	0.20



C30(Max): —————

C0/C180: —————

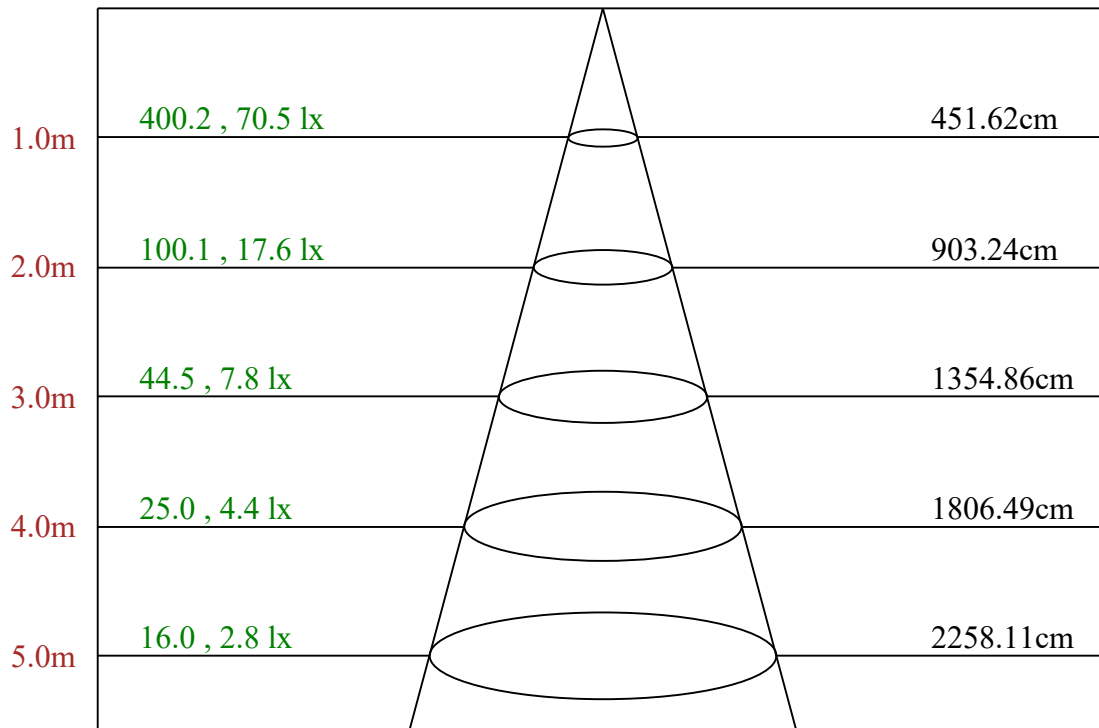
C90/C270: —————

Field angle(10%Imax):C0/180Left:131.7 Right:131.7

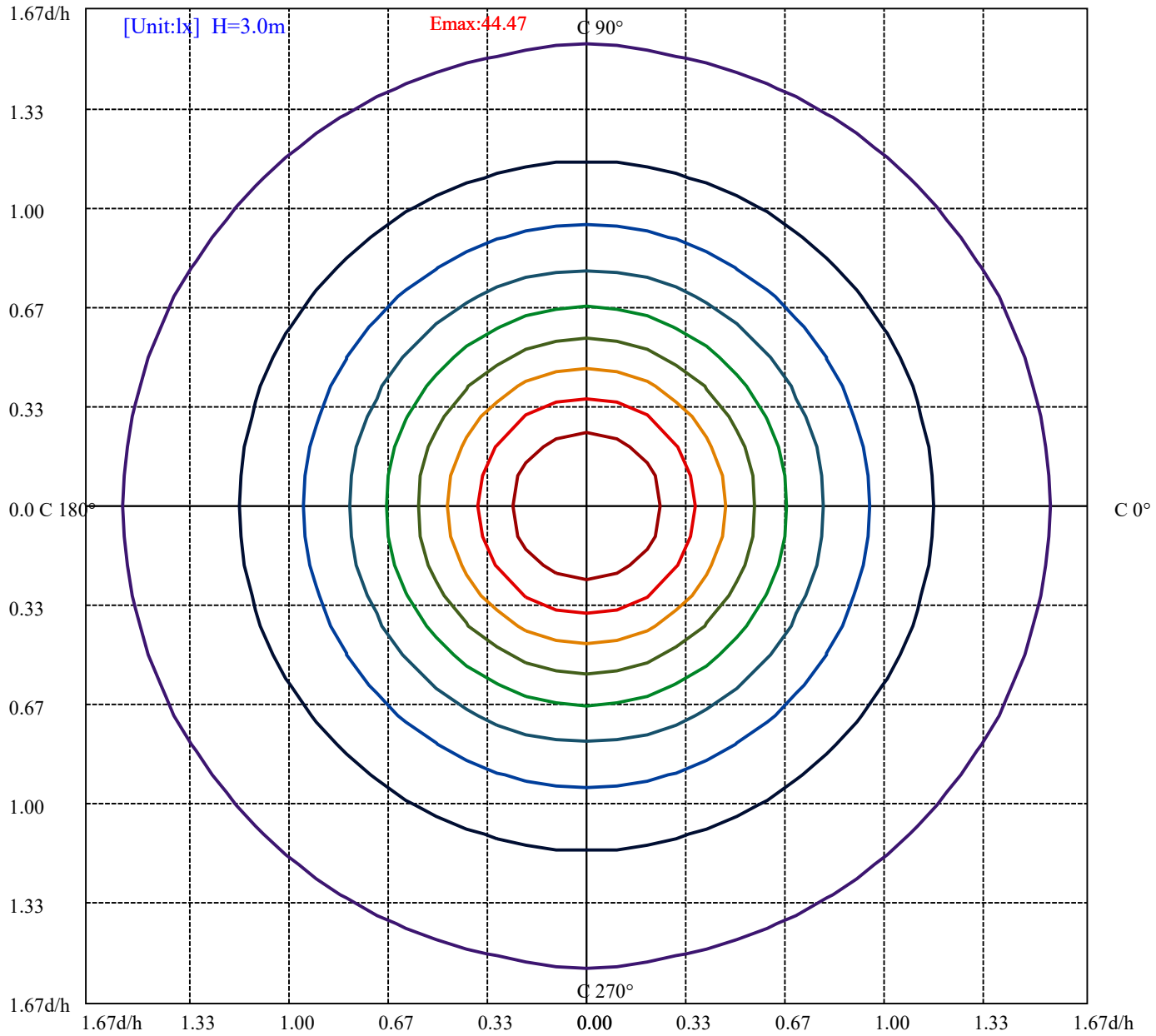
:C90/270Left:136.0 Right:126.0

Beam Angle(50%Imax):C0/180Left:66.2 Right:66.2

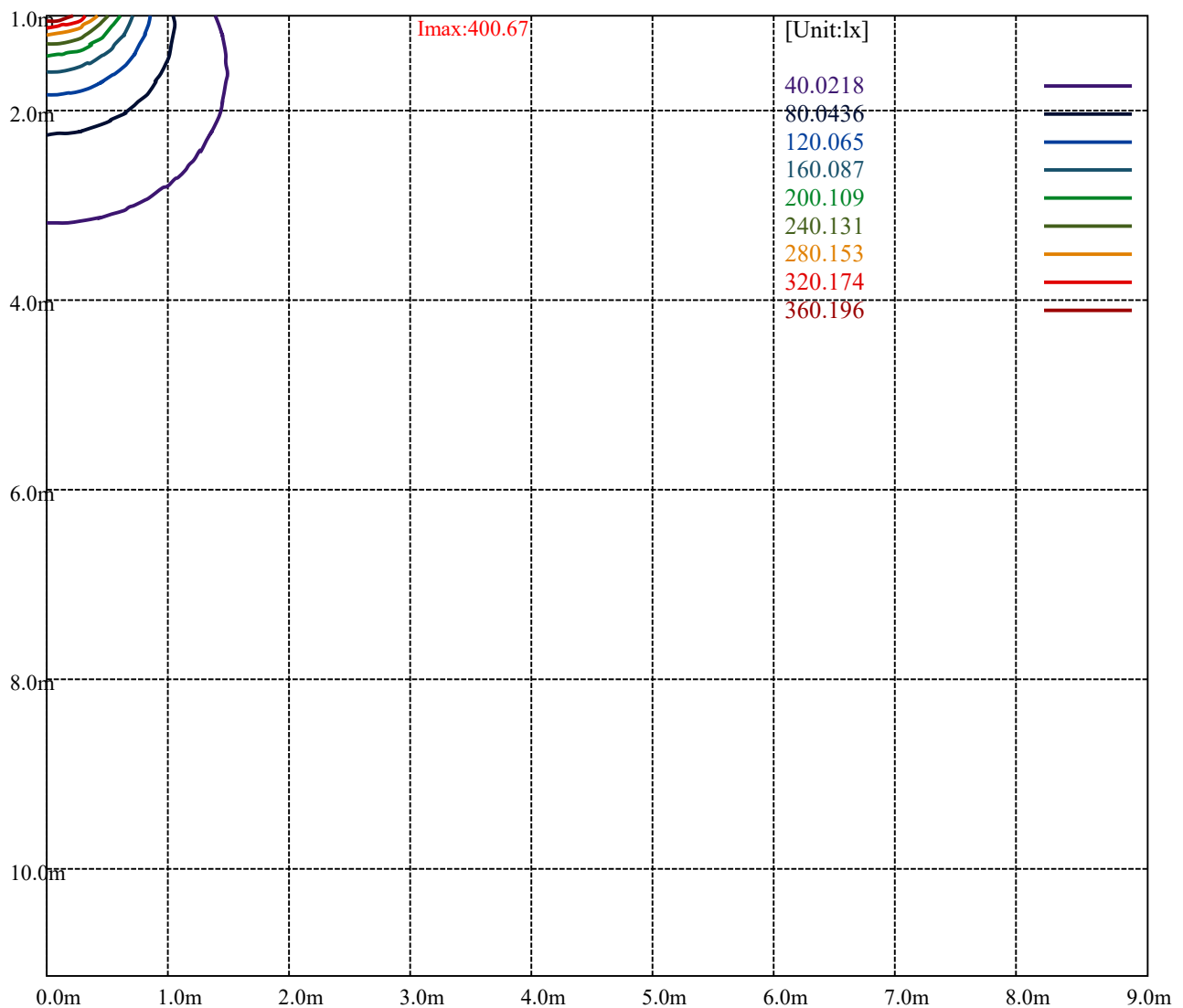
:C90/270Left:70.8 Right:60.8



Max , Ave Beam angle of C30 plane 132.23



(10%Emax) 4.446867	—
(20%Emax) 8.893734	—
(30%Emax) 13.34056	—
(40%Emax) 17.78745	—
(50%Emax) 22.23433	—
(60%Emax) 26.68122	—
(70%Emax) 31.12811	—
(80%Emax) 35.57489	—
(90%Emax) 40.02178	—



Light Blue USA-Rayhil LB72271

Luminance Limiting Curve(no luminous side)

Appendix Page: 8 Total:12

Luminance Table

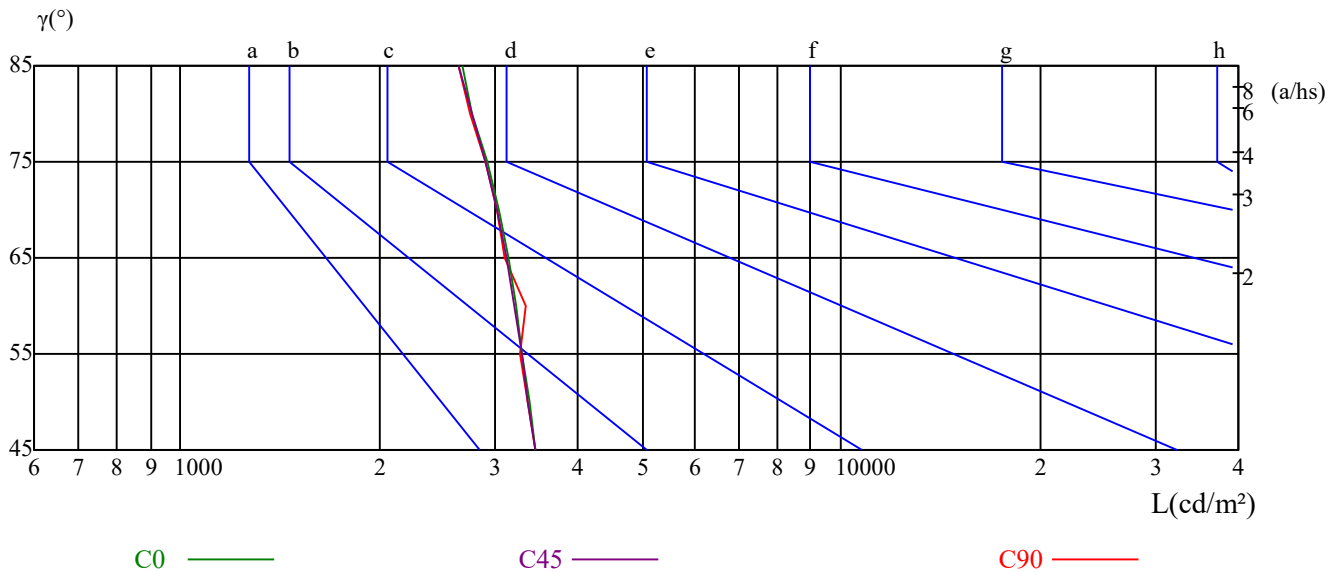
γ	45	50	55	60	65	70	75	80	85
C0	3455	3378	3297	3217	3131	3029	2917	2763	2667
C45	3447	3365	3280	3203	3119	3019	2897	2764	2643
C90	3435	3363	3270	3337	3098	3007	2891	2742	2628

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5084	5032	5065	6085	6032	6042	11537	11369	11436

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



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	1.15	1.15	1.15	1.10	1.10	1.10	1.01	1.01	1.01	0.93	0.93	0.93	0.86	0.86	0.86	0.82
1	0.97	0.91	0.87	0.93	0.88	0.84	0.85	0.81	0.78	0.78	0.75	0.72	0.71	0.69	0.67	0.64
2	0.83	0.75	0.69	0.79	0.72	0.67	0.73	0.67	0.62	0.67	0.62	0.58	0.61	0.58	0.54	0.51
3	0.72	0.63	0.56	0.69	0.61	0.54	0.63	0.57	0.51	0.58	0.53	0.48	0.53	0.49	0.45	0.42
4	0.63	0.54	0.47	0.61	0.52	0.46	0.56	0.49	0.43	0.51	0.45	0.40	0.47	0.42	0.38	0.35
5	0.56	0.47	0.40	0.54	0.45	0.39	0.50	0.42	0.37	0.46	0.40	0.35	0.42	0.37	0.33	0.30
6	0.50	0.41	0.34	0.48	0.40	0.33	0.45	0.37	0.32	0.41	0.35	0.30	0.38	0.33	0.28	0.26
7	0.45	0.36	0.30	0.44	0.35	0.29	0.40	0.33	0.28	0.37	0.31	0.26	0.35	0.29	0.25	0.23
8	0.41	0.33	0.27	0.40	0.32	0.26	0.37	0.30	0.25	0.34	0.28	0.24	0.32	0.26	0.22	0.20
9	0.38	0.29	0.24	0.36	0.29	0.23	0.34	0.27	0.22	0.32	0.25	0.21	0.29	0.24	0.20	0.18
10	0.35	0.27	0.21	0.33	0.26	0.21	0.31	0.25	0.20	0.29	0.23	0.19	0.27	0.22	0.18	0.16

Light Blue USA-Rayhil LB72271

Appendix Page: 10 Total:12

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	400.22	399.33	398.45	394.03	386.97	376.36	361.34	344.56	326.89
15.0	400.22	400.22	399.33	394.88	387.77	377.09	363.75	346.86	328.18
30.0	400.22	400.22	399.32	395.75	388.60	377.88	364.48	347.51	328.75
45.0	400.22	400.22	399.32	395.74	388.58	378.73	366.20	349.18	330.38
60.0	400.22	400.22	399.32	396.63	389.45	379.58	366.12	349.07	331.12
75.0	400.22	400.22	399.32	395.73	388.55	378.68	365.22	349.97	331.12
90.0	400.22	400.22	399.32	396.62	389.43	379.53	366.94	349.85	330.97
105.0	400.22	401.12	400.22	397.51	390.30	380.39	367.77	349.74	332.61
120.0	400.22	401.12	400.22	396.61	390.30	380.39	366.87	350.64	331.71
135.0	400.22	401.12	400.22	397.51	390.30	380.39	366.87	350.64	332.61
150.0	400.22	401.12	401.12	397.51	383.96	381.25	367.69	351.43	332.46
165.0	400.22	401.12	401.12	397.51	391.18	381.25	367.69	350.53	329.75
180.0	400.22	400.22	398.45	394.03	385.20	373.71	357.81	341.02	321.59
195.0	400.22	401.11	399.33	393.99	385.10	373.54	358.42	340.63	321.06
210.0	400.22	401.11	398.43	393.96	385.03	373.42	358.23	339.47	320.71
225.0	400.22	400.22	398.43	393.06	384.10	372.46	356.35	338.44	318.74
240.0	400.22	400.22	398.42	392.14	383.17	370.61	355.35	337.40	318.56
255.0	400.22	400.22	396.63	391.24	382.27	369.71	353.56	335.61	315.87
270.0	400.22	400.22	396.62	391.22	381.33	368.74	352.55	335.46	315.68
285.0	400.22	400.22	397.51	391.20	381.29	368.67	353.35	334.42	329.91
300.0	400.22	399.32	396.61	390.30	388.50	368.67	351.54	333.51	314.59
315.0	400.22	399.32	396.61	390.30	380.39	366.87	351.54	333.51	313.68
330.0	400.22	400.22	397.51	391.18	381.25	368.60	352.34	334.27	314.39
345.0	400.22	400.22	397.51	391.18	381.25	369.50	352.34	335.17	315.30
360.0	400.22	399.33	398.45	394.03	386.97	376.36	361.34	344.56	326.89
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	305.69	284.48	260.63	235.89	210.27	182.88	155.49	125.45	99.83
15.0	307.72	285.49	263.25	239.24	213.45	184.10	157.42	128.96	100.50
30.0	309.10	287.66	263.54	240.31	214.40	186.71	159.02	131.32	103.63
45.0	309.79	288.30	264.13	241.74	215.78	188.92	160.27	131.62	103.86
60.0	310.48	288.95	264.72	241.39	216.26	189.34	160.63	132.81	103.20
75.0	310.48	288.95	264.72	240.49	215.36	189.34	160.63	131.91	103.20
90.0	311.18	289.60	264.41	241.93	215.85	188.87	160.09	131.31	104.33
105.0	311.88	289.35	265.91	240.67	215.43	187.49	160.45	131.60	102.76
120.0	311.88	288.45	265.91	241.57	215.43	188.39	159.55	132.50	101.86
135.0	311.88	289.35	265.01	240.67	214.53	188.39	158.64	131.60	102.76
150.0	311.68	290.90	265.61	242.12	215.92	188.82	159.91	131.90	102.99
165.0	310.78	290.00	266.51	241.21	215.92	187.91	161.71	132.80	103.89
180.0	301.27	278.30	254.44	229.71	203.20	175.81	147.54	119.27	93.65
195.0	299.72	277.48	253.47	228.57	203.67	176.10	148.53	120.07	93.38
210.0	298.38	276.94	252.82	228.70	201.90	175.10	146.51	120.60	92.91
225.0	297.25	274.87	251.59	226.52	201.45	173.70	145.94	118.19	92.22
240.0	297.02	273.69	249.46	225.23	199.21	171.39	145.37	115.76	91.53
255.0	294.33	271.00	246.77	222.54	197.42	169.60	141.78	135.50	88.84
270.0	292.29	270.71	246.43	241.03	193.36	167.28	140.30	111.52	86.34
285.0	292.95	269.52	245.18	219.94	192.90	164.95	137.91	110.87	85.63
300.0	291.15	267.71	245.18	219.04	192.90	164.95	137.01	109.07	83.83
315.0	292.05	268.61	244.28	218.14	192.00	164.05	137.01	108.17	84.73
330.0	292.71	270.12	244.83	220.44	193.33	166.23	137.32	109.31	85.83
345.0	294.52	271.03	246.64	221.34	194.24	166.23	140.03	110.22	86.73
360.0	305.69	284.48	260.63	235.89	210.27	182.88	155.49	125.45	99.83

Light Blue USA-Rayhil LB72271

Intensity data(cd)									Appendix Page: 11 Total:12		
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0		
0.0	78.63	76.86	76.86	75.98	72.45	68.91	62.73	54.78	44.17		
15.0	80.04	77.38	77.38	76.49	73.82	69.37	64.03	56.03	45.36		
30.0	81.29	77.72	77.72	76.83	74.15	69.68	64.32	56.28	45.56		
45.0	81.48	77.89	77.89	76.10	74.31	69.84	64.46	56.41	46.56		
60.0	81.66	77.17	77.17	76.27	73.58	69.99	64.61	55.64	45.76		
75.0	81.66	77.17	77.17	76.27	73.58	69.10	63.71	55.64	45.76		
90.0	80.94	76.45	76.45	75.55	72.85	69.25	62.96	55.76	44.97		
105.0	80.22	76.62	76.62	75.72	73.01	68.51	63.10	55.89	45.07		
120.0	80.22	76.62	76.62	75.72	73.01	68.51	63.10	54.98	44.17		
135.0	80.22	77.52	76.62	75.72	73.01	69.41	64.00	55.89	45.07		
150.0	80.40	78.60	77.69	76.79	74.08	70.47	65.05	56.01	45.17		
165.0	82.21	79.50	79.50	78.60	75.89	71.37	65.95	56.92	46.07		
180.0	82.16	82.16	82.16	79.51	75.98	71.56	63.61	53.89	42.41		
195.0	83.60	83.60	82.71	80.93	77.38	72.04	64.92	54.25	42.69		
210.0	83.97	83.97	83.08	81.29	77.72	72.36	65.21	54.49	43.77		
225.0	84.16	84.16	83.27	80.58	77.00	71.63	69.84	53.72	42.98		
240.0	82.56	82.56	82.56	79.86	75.38	69.99	62.81	52.05	41.28		
255.0	80.76	80.76	79.86	78.07	74.48	68.20	61.02	50.25	39.48		
270.0	79.14	79.14	79.14	76.45	72.85	66.55	59.36	48.57	38.67		
285.0	77.52	77.52	77.52	75.72	71.21	65.80	58.59	47.77	37.86		
300.0	76.62	76.62	76.62	74.82	70.31	64.90	57.69	46.87	36.96		
315.0	76.62	76.62	75.72	73.91	71.21	64.90	57.69	46.87	37.86		
330.0	76.79	76.79	75.89	74.08	70.47	65.95	57.82	47.88	37.94		
345.0	76.79	76.79	75.89	74.08	71.37	65.95	59.63	48.79	38.85		
360.0	78.63	76.86	76.86	75.98	72.45	68.91	62.73	54.78	44.17		
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	35.34	25.62	16.79	8.83	4.42	3.53	3.53	3.53	2.65		
15.0	35.57	25.79	16.90	8.89	4.45	4.45	3.56	3.56	2.67		
30.0	36.63	26.80	17.87	9.83	4.47	4.47	3.57	3.57	2.68		
45.0	36.71	26.86	18.80	9.85	4.48	4.48	3.58	2.69	2.69		
60.0	36.79	27.82	18.84	10.77	4.49	3.59	3.59	3.59	2.69		
75.0	36.79	26.92	17.95	10.77	4.49	3.59	3.59	3.59	2.69		
90.0	35.97	26.98	17.99	9.89	4.50	3.60	3.60	3.60	2.70		
105.0	35.15	26.14	17.13	9.92	4.51	3.61	3.61	3.61	2.70		
120.0	35.15	26.14	16.23	9.01	4.51	3.61	3.61	2.70	2.70		
135.0	35.15	25.24	16.23	8.11	4.51	3.61	3.61	3.61	2.70		
150.0	35.23	25.30	16.26	9.03	4.52	3.61	3.61	2.71	2.71		
165.0	36.14	26.20	16.26	9.03	4.52	3.61	3.61	3.61	2.71		
180.0	31.81	21.20	11.49	5.30	3.53	2.65	2.65	2.65	2.65		
195.0	32.91	22.23	12.45	5.34	3.56	3.56	2.67	2.67	2.67		
210.0	32.16	29.48	11.61	5.36	3.57	2.68	2.68	2.68	2.68		
225.0	32.23	21.49	11.64	5.37	3.58	2.69	2.69	2.69	2.69		
240.0	31.41	20.64	11.67	5.38	3.59	2.69	2.69	2.69	2.69		
255.0	29.61	19.74	10.77	4.49	3.59	2.69	2.69	2.69	2.69		
270.0	28.78	18.89	10.79	4.50	2.70	2.70	2.70	2.70	2.70		
285.0	27.94	18.03	10.82	4.51	3.61	2.70	2.70	2.70	2.70		
300.0	27.94	18.03	9.92	4.51	3.61	2.70	2.70	2.70	2.70		
315.0	27.94	18.93	10.82	4.51	3.61	2.70	2.70	2.70	2.70		
330.0	28.91	18.97	10.84	5.42	2.71	2.71	2.71	2.71	2.71		
345.0	28.91	19.88	11.74	5.42	3.61	2.71	2.71	2.71	2.71		
360.0	35.34	25.62	16.79	8.83	4.42	3.53	3.53	3.53	2.65		

Intensity data(cd)

C/γ(°)	180.0
0.0	2.65
15.0	2.67
30.0	2.68
45.0	2.69
60.0	2.69
75.0	2.69
90.0	2.70
105.0	2.70
120.0	2.70
135.0	2.70
150.0	2.71
165.0	2.71
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	2.65