
Light Blue USA-Rayhil

Client:

LumCAT: INF-RD-CCT-BK

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.020

LampCAT:

Current(A): 0.095

Lamp flux(lm): 844.0

Power (W): 11.220

Number of Lamps: 1

PF: 0.980

Length(mm): -50

Width(mm): -50

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 843.97, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 75.22

Central intensity(cd): 2403.267, Maximum intensity(cd): 2403.268

Angle of maximum intensity: C=60.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=31.0

[C90/270]Total=31.6

Field angle(10%Imax): [C0/180]Total=57.4

[C90/270]Total=57.8

Maximum s/h(1/2): C0_180=0.50 C90_270=0.51

Maximum s/h(1/4): C0_180=0.57 C90_270=0.58

Up flux rate of lamp(%): 0.28%

Down flux rate of lamp(%): 99.72%

Up flux rate of LUM(%): 0.28%

Down flux rate of LUM(%): 99.72%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.668%

Light Blue USA-Rayhil INF-RD-CCT-BK

Zonal flux distribution table

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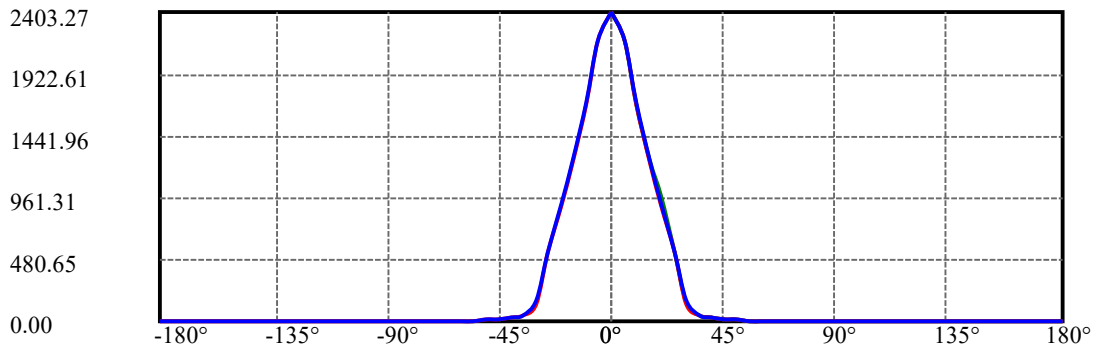
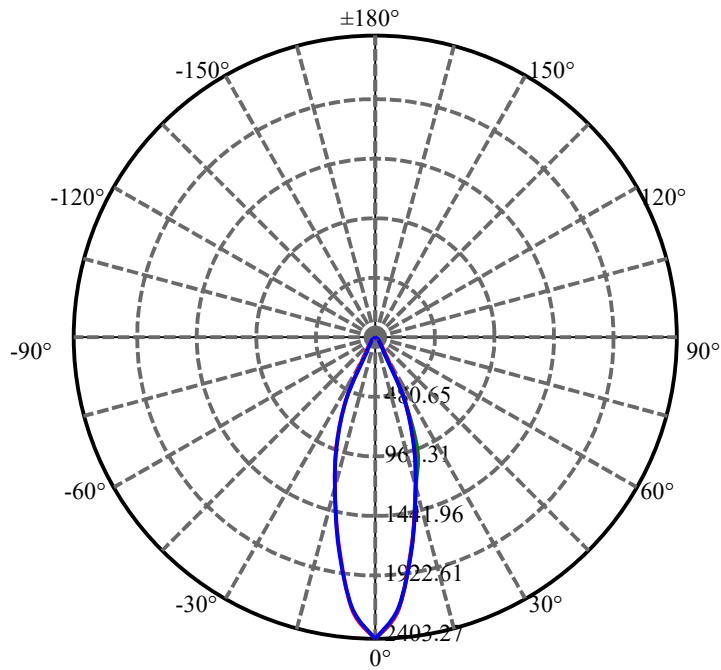
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2403.267	0.000	0	0.00%	0.00%
5.0	2173.361	54.712	54.712	6.48%	6.48%
10.0	1698.936	138.524	193.237	16.41%	22.90%
15.0	1252.909	175.101	368.338	20.75%	43.64%
20.0	906.477	177.964	546.302	21.09%	64.73%
25.0	536.444	151.336	697.638	17.93%	82.66%
30.0	151.370	87.043	784.681	10.31%	92.98%
35.0	42.710	28.580	813.261	3.39%	96.36%
40.0	26.224	11.501	824.762	1.36%	97.72%
45.0	15.028	7.638	832.4	0.91%	98.63%
50.0	8.243	4.702	837.102	0.56%	99.19%
55.0	4.103	2.684	839.787	0.32%	99.50%
60.0	1.878	1.382	841.169	0.16%	99.67%
65.0	0.000	0.457	841.626	0.05%	99.72%
70.0	0.000	0.000	841.626	0.00%	99.72%
75.0	0.000	0.000	841.626	0.00%	99.72%
80.0	0.000	0.000	841.626	0.00%	99.72%
85.0	0.000	0.000	841.626	0.00%	99.72%
90.0	0.000	0.000	841.626	0.00%	99.72%
95.0	0.000	0.000	841.626	0.00%	99.72%
100.0	0.000	0.000	841.626	0.00%	99.72%
105.0	0.000	0.000	841.626	0.00%	99.72%
110.0	0.000	0.000	841.626	0.00%	99.72%
115.0	0.000	0.000	841.626	0.00%	99.72%
120.0	0.000	0.000	841.626	0.00%	99.72%
125.0	0.000	0.000	841.626	0.00%	99.72%
130.0	0.000	0.000	841.626	0.00%	99.72%
135.0	0.000	0.000	841.626	0.00%	99.72%
140.0	0.000	0.000	841.626	0.00%	99.72%
145.0	0.000	0.000	841.626	0.00%	99.72%
150.0	0.460	0.068	841.693	0.01%	99.73%
155.0	1.840	0.291	841.984	0.03%	99.77%
160.0	3.146	0.523	842.507	0.06%	99.83%
165.0	4.103	0.597	843.105	0.07%	99.90%
170.0	4.141	0.489	843.594	0.06%	99.96%
175.0	4.141	0.296	843.89	0.04%	99.99%
180.0	2.263	0.077	843.967	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	784.68	92.97%	92.98%
0-40	824.76	97.72%	97.72%
0-60	841.17	99.67%	99.67%
0-90	841.63	99.72%	99.72%
0-120	841.63	99.72%	99.72%
0-180	843.97	100.00%	100.00%
60-90	0.46	0.05%	0.05%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.07	0.01%	0.01%
90-180	2.26	0.27%	0.27%
0-24.26	675.17	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	193.24
10-20	353.07
20-30	238.38
30-40	40.08
40-50	12.34
50-60	4.07
60-70	0.46
70-80	0.00
80-90	0.00
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.07
150-160	0.81
160-170	1.09
170-180	0.30



C60(Max): —————

C0/C180: —————

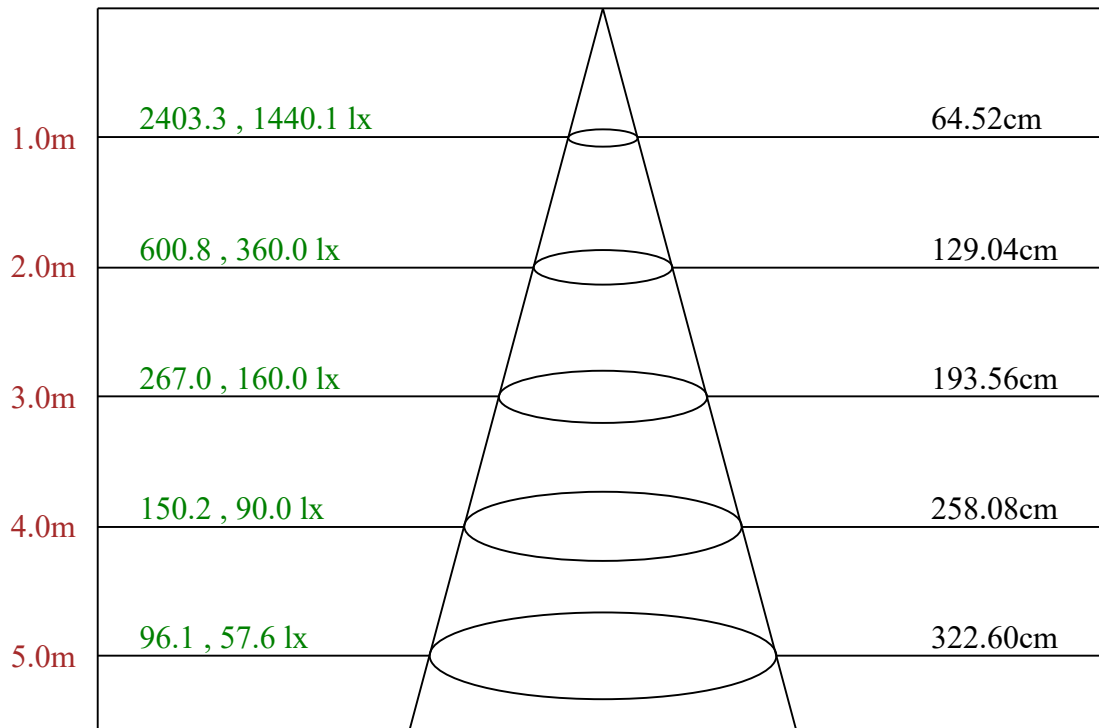
C90/C270: —————

Field angle(10%Imax):C0/180Left:28.7 Right:28.7

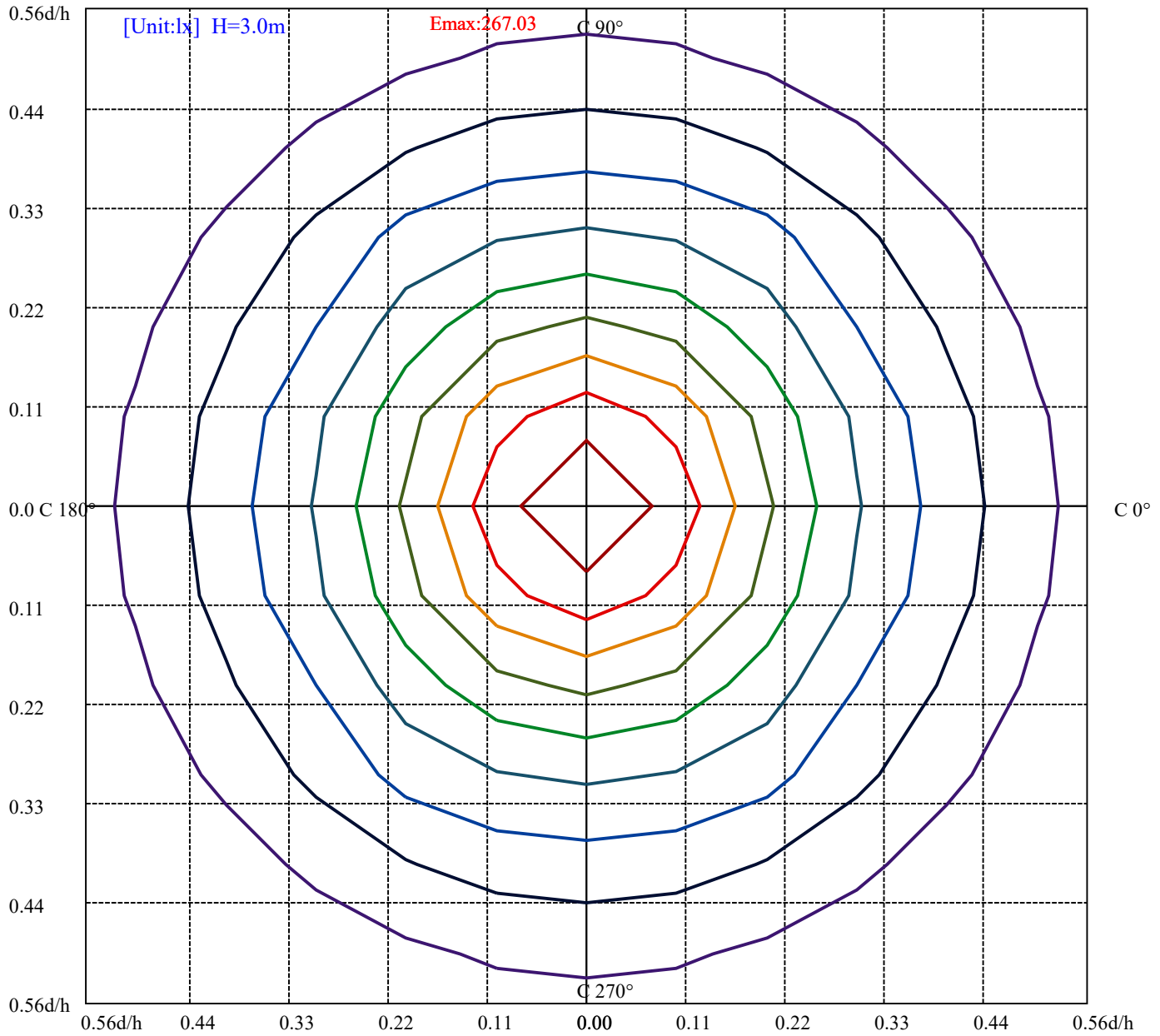
:C90/270Left:28.9 Right:28.9

Beam Angle(50%Imax):C0/180Left:15.5 Right:15.5

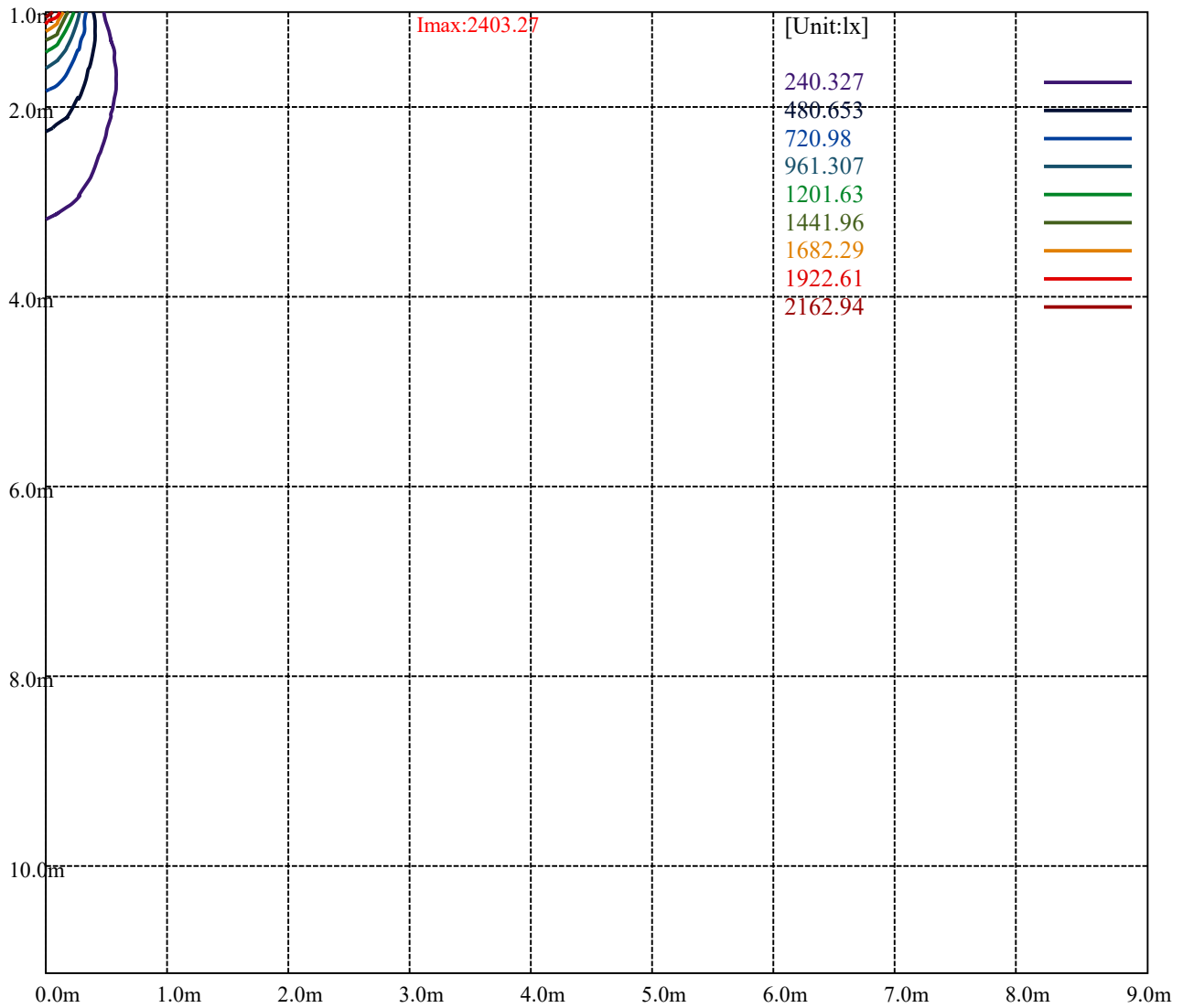
:C90/270Left:15.8 Right:15.8



Max , Ave Beam angle of C60 plane 35.76



(10%Emax)	26.70289	
(20%Emax)	53.40578	
(30%Emax)	80.10867	
(40%Emax)	106.8116	
(50%Emax)	133.5145	
(60%Emax)	160.2178	
(70%Emax)	186.92	
(80%Emax)	213.6233	
(90%Emax)	240.3255	



Light Blue USA-Rayhil INF-RD-CCT-BK

Luminance Limiting Curve(no luminous side)

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Luminance Table

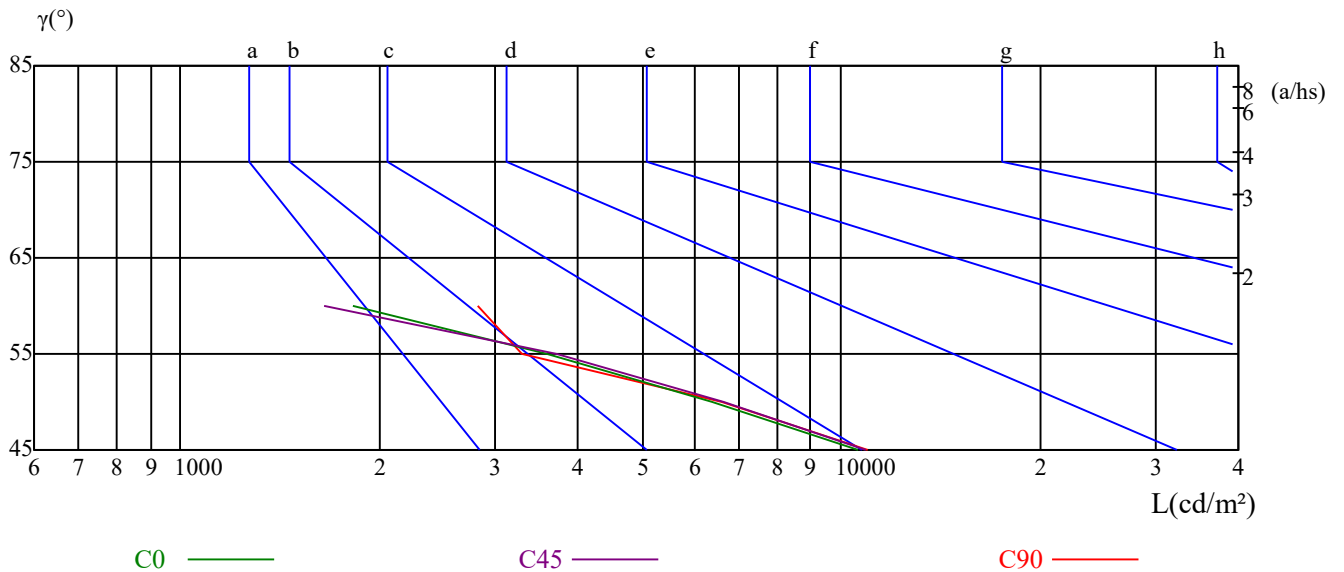
γ	45	50	55	60	65	70	75	80	85
C0	10645	6387	3579	1825	0	0	0	0	0
C45	10877	6629	3714	1652	0	0	0	0	0
C90	10993	6596	3286	2827	0	0	0	0	0

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



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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.95
2	1.06	1.03	1.00	1.04	1.01	0.99	1.01	0.99	0.97	0.98	0.96	0.95	0.96	0.94	0.93	0.91
3	1.01	0.97	0.94	0.99	0.96	0.93	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.89	0.87
4	0.96	0.92	0.88	0.95	0.91	0.88	0.93	0.89	0.87	0.91	0.88	0.86	0.89	0.87	0.85	0.83
5	0.92	0.87	0.84	0.91	0.86	0.83	0.89	0.85	0.83	0.88	0.84	0.82	0.86	0.83	0.81	0.80
6	0.88	0.83	0.80	0.87	0.83	0.79	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.78	0.77
7	0.84	0.79	0.76	0.84	0.79	0.76	0.82	0.78	0.75	0.81	0.78	0.75	0.80	0.77	0.75	0.74
8	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.71
9	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.76	0.72	0.69	0.75	0.72	0.69	0.68
10	0.75	0.70	0.67	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.66

Light Blue USA-Rayhil INF-RD-CCT-BK

Intensity data(cd)										Appendix Page: 10 Total:12	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	2403.27	2257.26	1750.27	1282.70	936.94	592.98	193.48	46.58	27.77		
15.0	2403.27	2256.83	1756.41	1300.01	946.93	616.31	190.46	47.62	30.55		
30.0	2403.27	2266.25	1796.59	1314.32	950.13	618.40	219.05	47.78	28.85		
45.0	2403.27	2301.46	1817.90	1330.70	964.40	625.36	229.96	48.17	30.90		
60.0	2403.27	2319.76	1829.75	1365.43	990.12	640.50	217.48	50.47	29.36		
75.0	2403.27	2332.15	1855.56	1385.43	1028.92	647.46	237.37	51.72	31.40		
90.0	2403.27	2332.96	1881.54	1392.19	1021.25	649.38	247.91	49.03	29.60		
105.0	2403.27	2334.47	1906.81	1415.93	1032.89	681.47	249.16	51.13	29.75		
120.0	2403.27	2343.05	1880.74	1424.91	1025.60	678.18	249.22	49.10	28.72		
135.0	2403.27	2364.31	1940.48	1447.28	1058.62	693.71	254.68	50.37	29.46		
150.0	2403.27	2314.64	1883.62	1391.02	759.42	670.79	234.17	48.51	27.99		
165.0	2403.27	2299.75	1852.11	1415.66	1010.92	677.99	235.94	47.56	27.04		
180.0	2403.27	2092.45	1615.02	1184.17	855.43	473.85	86.89	35.83	22.39		
195.0	2403.27	2068.16	1598.29	1171.54	838.22	459.99	77.26	37.73	20.66		
210.0	2403.27	2028.26	1578.44	1169.18	837.45	437.20	74.82	36.06	22.54		
225.0	2403.27	2009.69	1569.76	1150.73	835.33	434.48	74.53	36.36	20.91		
240.0	2403.27	2037.13	1540.70	1143.36	831.37	432.20	74.33	35.79	22.94		
255.0	2403.27	2017.19	1571.08	1126.82	827.57	433.18	72.97	36.94	23.09		
270.0	2403.27	2014.75	1535.57	1119.30	802.01	421.82	71.23	36.08	23.13		
285.0	2403.27	2015.58	1542.37	1111.92	803.26	398.84	71.59	37.19	32.54		
300.0	2403.27	2025.27	1514.78	1100.65	1020.97	390.97	64.85	35.21	23.16		
315.0	2403.27	2080.17	1525.21	1129.89	814.39	408.62	67.47	37.06	21.86		
330.0	2403.27	2027.29	1514.17	1095.28	776.21	400.23	68.11	36.38	21.46		
345.0	2403.27	2021.84	1517.31	1101.38	787.10	390.75	69.94	36.37	23.31		
360.0	2403.27	2257.26	1750.27	1282.70	936.94	592.98	193.48	46.58	27.77		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	17.02	8.96	4.48	2.69	0.00	0.00	0.00	0.00	0.00		
15.0	17.07	8.98	4.49	2.70	0.00	0.00	0.00	0.00	0.00		
30.0	17.13	9.01	4.51	2.70	0.00	0.00	0.00	0.00	0.00		
45.0	17.27	9.09	4.54	2.73	0.00	0.00	0.00	0.00	0.00		
60.0	17.43	9.18	4.59	2.75	0.00	0.00	0.00	0.00	0.00		
75.0	17.55	9.24	4.62	2.77	0.00	0.00	0.00	0.00	0.00		
90.0	17.58	9.25	4.63	2.78	0.00	0.00	0.00	0.00	0.00		
105.0	17.66	9.30	4.65	2.79	0.00	0.00	0.00	0.00	0.00		
120.0	16.68	9.26	4.63	2.78	0.00	0.00	0.00	0.00	0.00		
135.0	17.11	9.50	4.75	2.85	0.00	0.00	0.00	0.00	0.00		
150.0	16.79	9.33	4.66	2.80	0.00	0.00	0.00	0.00	0.00		
165.0	16.79	8.39	4.66	2.80	0.00	0.00	0.00	0.00	0.00		
180.0	12.54	7.17	3.58	0.90	0.00	0.00	0.00	0.00	0.00		
195.0	12.58	7.19	3.59	0.90	0.00	0.00	0.00	0.00	0.00		
210.0	12.62	7.21	3.61	0.90	0.00	0.00	0.00	0.00	0.00		
225.0	12.73	7.27	3.64	0.91	0.00	0.00	0.00	0.00	0.00		
240.0	12.85	7.34	3.67	0.92	0.00	0.00	0.00	0.00	0.00		
255.0	12.93	7.39	3.69	0.92	0.00	0.00	0.00	0.00	0.00		
270.0	12.95	7.40	2.78	2.78	0.00	0.00	0.00	0.00	0.00		
285.0	13.02	7.44	3.72	0.93	0.00	0.00	0.00	0.00	0.00		
300.0	12.97	7.41	3.71	0.93	0.00	0.00	0.00	0.00	0.00		
315.0	13.30	7.60	3.80	0.00	0.00	0.00	0.00	0.00	0.00		
330.0	13.06	7.46	3.73	0.93	0.00	0.00	0.00	0.00	0.00		
345.0	13.06	7.46	3.73	0.93	0.00	0.00	0.00	0.00	0.00		
360.0	17.02	8.96	4.48	2.69	0.00	0.00	0.00	0.00	0.00		

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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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
60.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
75.0	0.00	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		
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
120.0	0.00	0.00	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		
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
165.0	0.00	0.00	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		
195.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
210.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
240.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
255.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
285.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
300.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
330.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
345.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
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	0.90	2.69	3.58	4.48	4.48	4.48		
15.0	0.00	0.00	0.00	0.90	2.70	3.59	4.49	4.49	4.49		
30.0	0.00	0.00	0.00	0.90	2.70	3.61	4.51	4.51	4.51		
45.0	0.00	0.00	0.00	0.91	2.73	3.64	4.54	4.54	4.54		
60.0	0.00	0.00	0.00	0.92	2.75	3.67	4.59	4.59	4.59		
75.0	0.00	0.00	0.00	0.92	2.77	3.69	4.62	4.62	4.62		
90.0	0.00	0.00	0.00	0.93	2.78	3.70	4.63	4.63	4.63		
105.0	0.00	0.00	0.00	0.93	2.79	3.72	4.65	4.65	4.65		
120.0	0.00	0.00	0.00	0.93	2.78	3.71	4.63	4.63	4.63		
135.0	0.00	0.00	0.00	0.95	2.85	3.80	4.75	4.75	4.75		
150.0	0.00	0.00	0.00	0.93	2.80	3.73	4.66	4.66	4.66		
165.0	0.00	0.00	0.00	0.93	2.80	3.73	4.66	4.66	4.66		
180.0	0.00	0.00	0.00	0.00	0.90	2.69	3.58	3.58	3.58		
195.0	0.00	0.00	0.00	0.00	0.90	0.90	3.59	3.59	3.59		
210.0	0.00	0.00	0.00	0.00	0.90	2.70	3.61	3.61	3.61		
225.0	0.00	0.00	0.00	0.00	0.91	2.73	3.64	3.64	3.64		
240.0	0.00	0.00	0.00	0.00	0.92	2.75	3.67	3.67	3.67		
255.0	0.00	0.00	0.00	0.00	0.92	2.77	3.69	3.69	3.69		
270.0	0.00	0.00	0.00	0.00	0.93	2.78	3.70	3.70	3.70		
285.0	0.00	0.00	0.00	0.00	0.93	2.79	3.72	3.72	3.72		
300.0	0.00	0.00	0.00	0.00	0.93	2.78	3.71	3.71	3.71		
315.0	0.00	0.00	0.00	0.00	0.95	2.85	3.80	3.80	3.80		
330.0	0.00	0.00	0.00	0.00	0.93	2.80	3.73	3.73	3.73		
345.0	0.00	0.00	0.00	0.00	0.93	2.80	3.73	3.73	3.73		
360.0	0.00	0.00	0.00	0.90	2.69	3.58	4.48	4.48	4.48		

Light Blue USA-Rayhil INF-RD-CCT-BK

Intensity data(cd)

Appendix Page: 12 Total:12

C/γ(°)	180.0
0.0	3.58
15.0	4.49
30.0	4.51
45.0	4.54
60.0	4.59
75.0	4.62
90.0	4.63
105.0	4.65
120.0	4.63
135.0	4.75
150.0	4.66
165.0	4.66
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	3.58