
Jen Lighting

Client:

LumCAT: JEN-B2-S60-3065

Luminaire: 2x2 Luminaires for Ambient Lighting of Interior Commercial Spaces

Report No:

Ballast type:

Test No: LCZP23090162

Voltage(V): 120.030

LampCAT:

Current(A): 0.334

Lamp flux(lm): 5461.2

Power (W): 39.760

Number of Lamps: 1

PF: 0.993

Length(mm): 550

Width(mm): 550

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 5461.15, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 137.35

Central intensity(cd): 1308.042, Maximum intensity(cd): 2062.380

Angle of maximum intensity: C=45.0 γ =30.0

Beam Angle(50%Imax): [C0/180]Total=109.0

[C90/270]Total=111.0

Field angle(10%Imax): [C0/180]Total=142.2

[C90/270]Total=143.8

Maximum s/h(1/2): C0_180=1.97 C90_270=1.97

Maximum s/h(1/4): C0_180=1.72 C90_270=1.76

Up flux rate of lamp(%): 0.21%

Down flux rate of lamp(%): 99.79%

Up flux rate of LUM(%): 0.21%

Down flux rate of LUM(%): 99.79%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 89.201%

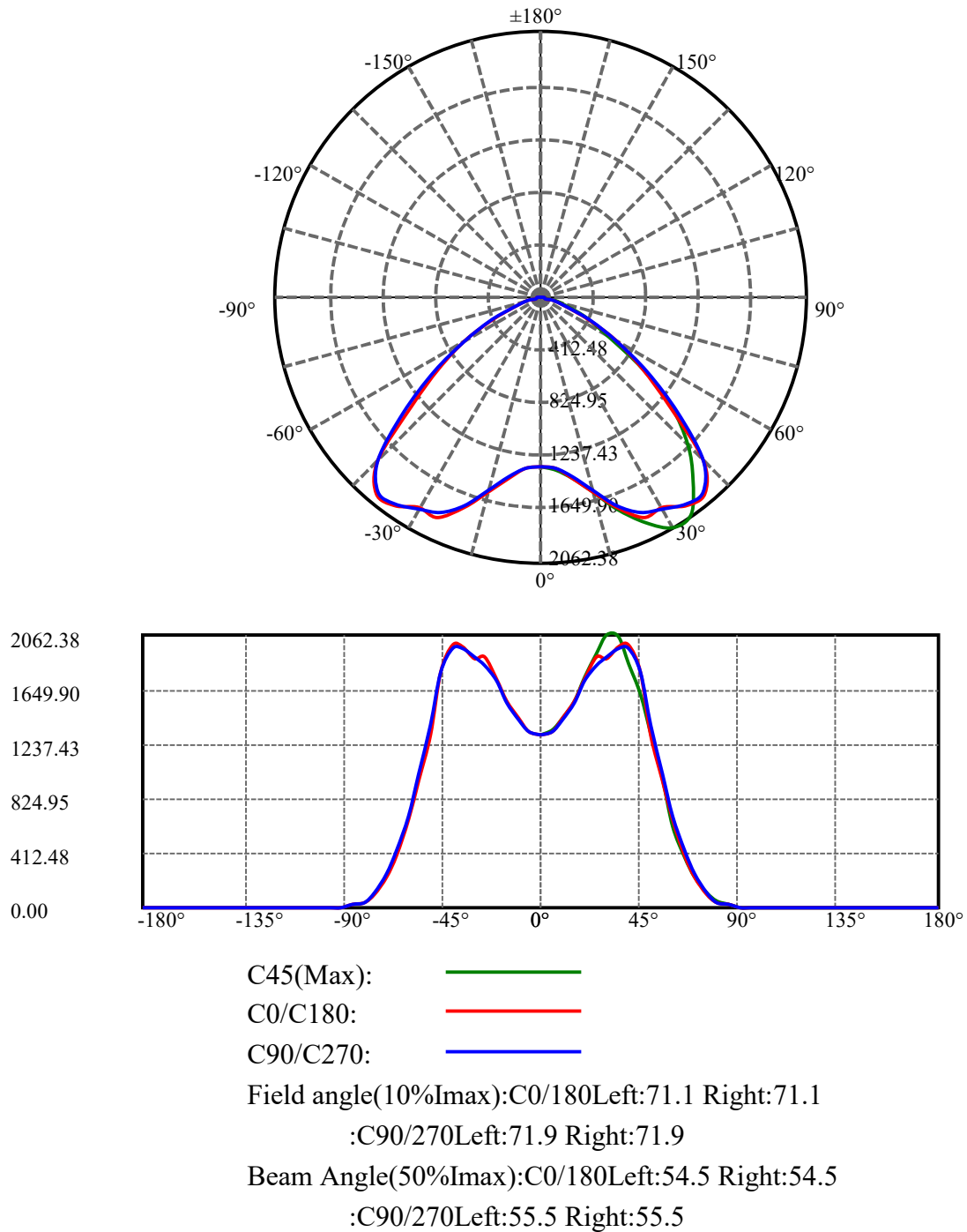
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1308.043	0.000	0	0.00%	0.00%
5.0	1337.909	31.632	31.632	0.58%	0.58%
10.0	1428.216	98.953	130.585	1.81%	2.39%
15.0	1565.646	177.594	308.178	3.25%	5.64%
20.0	1732.305	271.797	579.976	4.98%	10.62%
25.0	1889.965	379.909	959.885	6.96%	17.58%
30.0	1967.139	488.120	1448.005	8.94%	26.51%
35.0	1992.140	583.032	2031.036	10.68%	37.19%
40.0	1947.526	657.303	2688.34	12.04%	49.23%
45.0	1746.681	684.012	3372.352	12.53%	61.75%
50.0	1348.676	625.462	3997.814	11.45%	73.20%
55.0	958.389	501.633	4499.447	9.19%	82.39%
60.0	650.803	371.960	4871.407	6.81%	89.20%
65.0	407.184	257.199	5128.605	4.71%	93.91%
70.0	235.821	162.813	5291.418	2.98%	96.89%
75.0	112.952	91.164	5382.582	1.67%	98.56%
80.0	45.174	42.310	5424.892	0.77%	99.34%
85.0	21.260	18.052	5442.944	0.33%	99.67%
90.0	2.431	6.487	5449.43	0.12%	99.79%
95.0	0.935	0.922	5450.352	0.02%	99.80%
100.0	0.898	0.498	5450.85	0.01%	99.81%
105.0	1.122	0.540	5451.39	0.01%	99.82%
110.0	1.010	0.557	5451.948	0.01%	99.83%
115.0	1.347	0.597	5452.544	0.01%	99.84%
120.0	1.384	0.664	5453.208	0.01%	99.85%
125.0	1.796	0.735	5453.944	0.01%	99.87%
130.0	1.834	0.789	5454.733	0.01%	99.88%
135.0	1.834	0.741	5455.474	0.01%	99.90%
140.0	2.170	0.741	5456.215	0.01%	99.91%
145.0	2.283	0.743	5456.958	0.01%	99.92%
150.0	2.694	0.733	5457.691	0.01%	99.94%
155.0	3.144	0.739	5458.43	0.01%	99.95%
160.0	4.265	0.777	5459.207	0.01%	99.96%
165.0	4.791	0.746	5459.953	0.01%	99.98%
170.0	5.614	0.617	5460.571	0.01%	99.99%
175.0	6.288	0.426	5460.996	0.01%	100.00%
180.0	6.288	0.150	5461.147	0.00%	100.00%

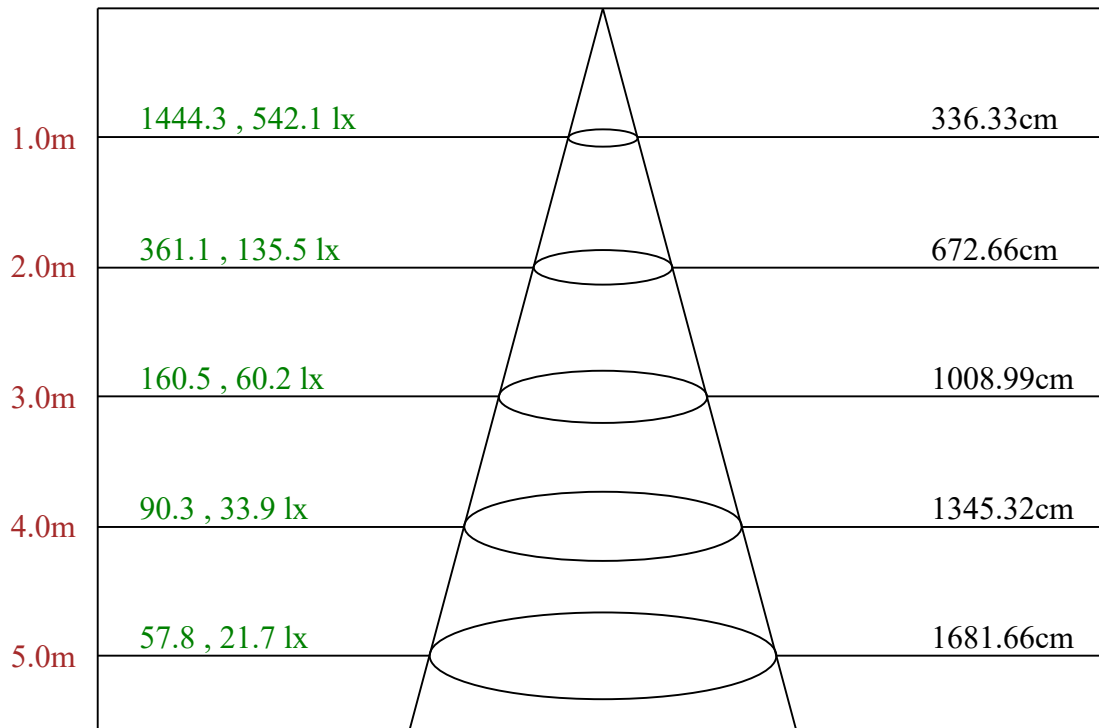
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1448.00	26.51%	26.51%
0-40	2688.34	49.23%	49.23%
0-60	4871.41	89.20%	89.20%
0-90	5449.43	99.79%	99.79%
0-120	5453.21	99.85%	99.85%
0-180	5461.15	100.00%	100.00%
60-90	578.02	10.58%	10.58%
90-120	3.78	0.07%	0.07%
90-130	5.30	0.10%	0.10%
90-150	8.26	0.15%	0.15%
90-180	11.57	0.21%	0.21%
0-53.70	4368.92	80.00%	80.00%

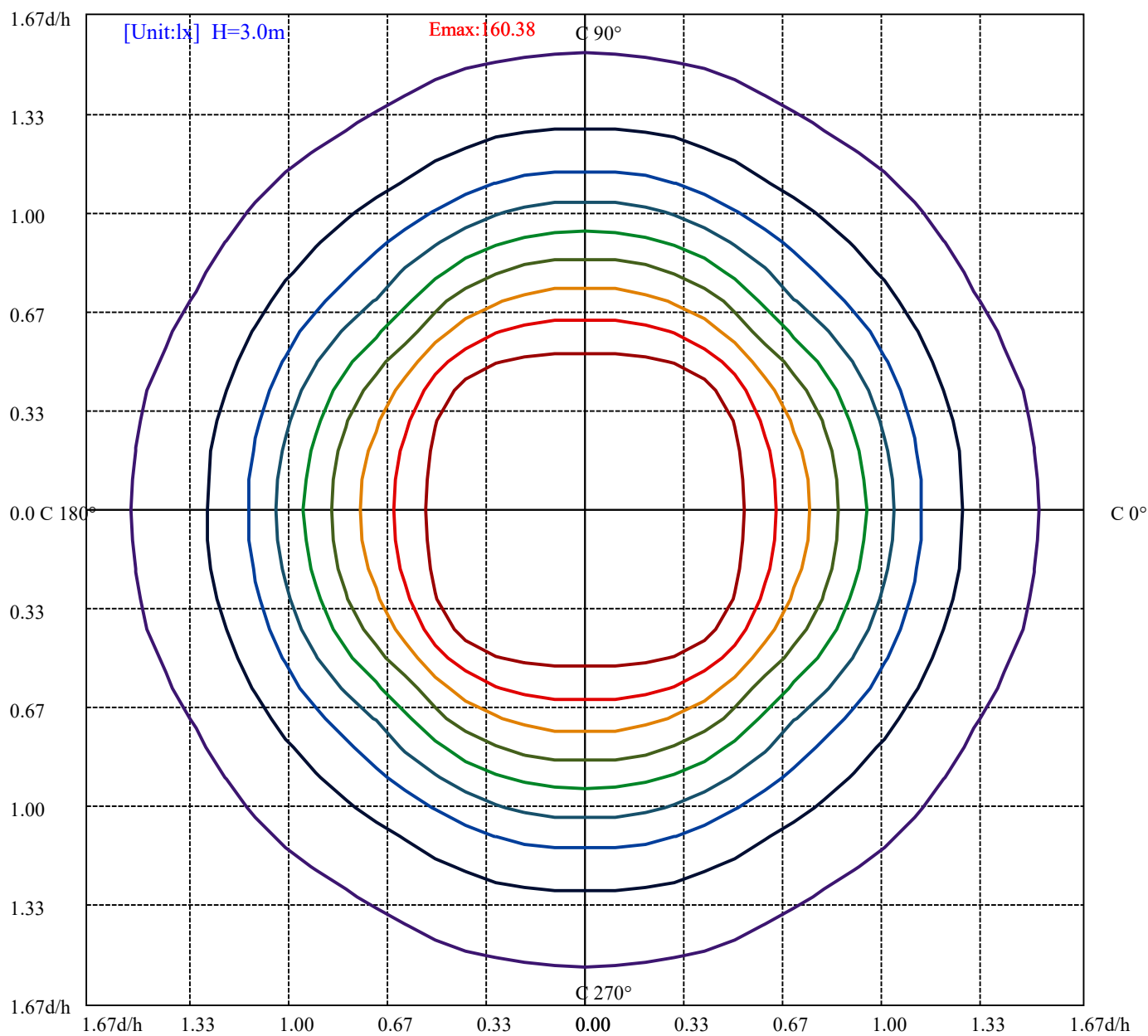
ZONAL LUMEN SUMMARY

0-10	130.58
10-20	449.39
20-30	868.03
30-40	1240.34
40-50	1309.47
50-60	873.59
60-70	420.01
70-80	133.47
80-90	24.54
90-100	1.42
100-110	1.10
110-120	1.26
120-130	1.52
130-140	1.48
140-150	1.48
150-160	1.52
160-170	1.36
170-180	0.43

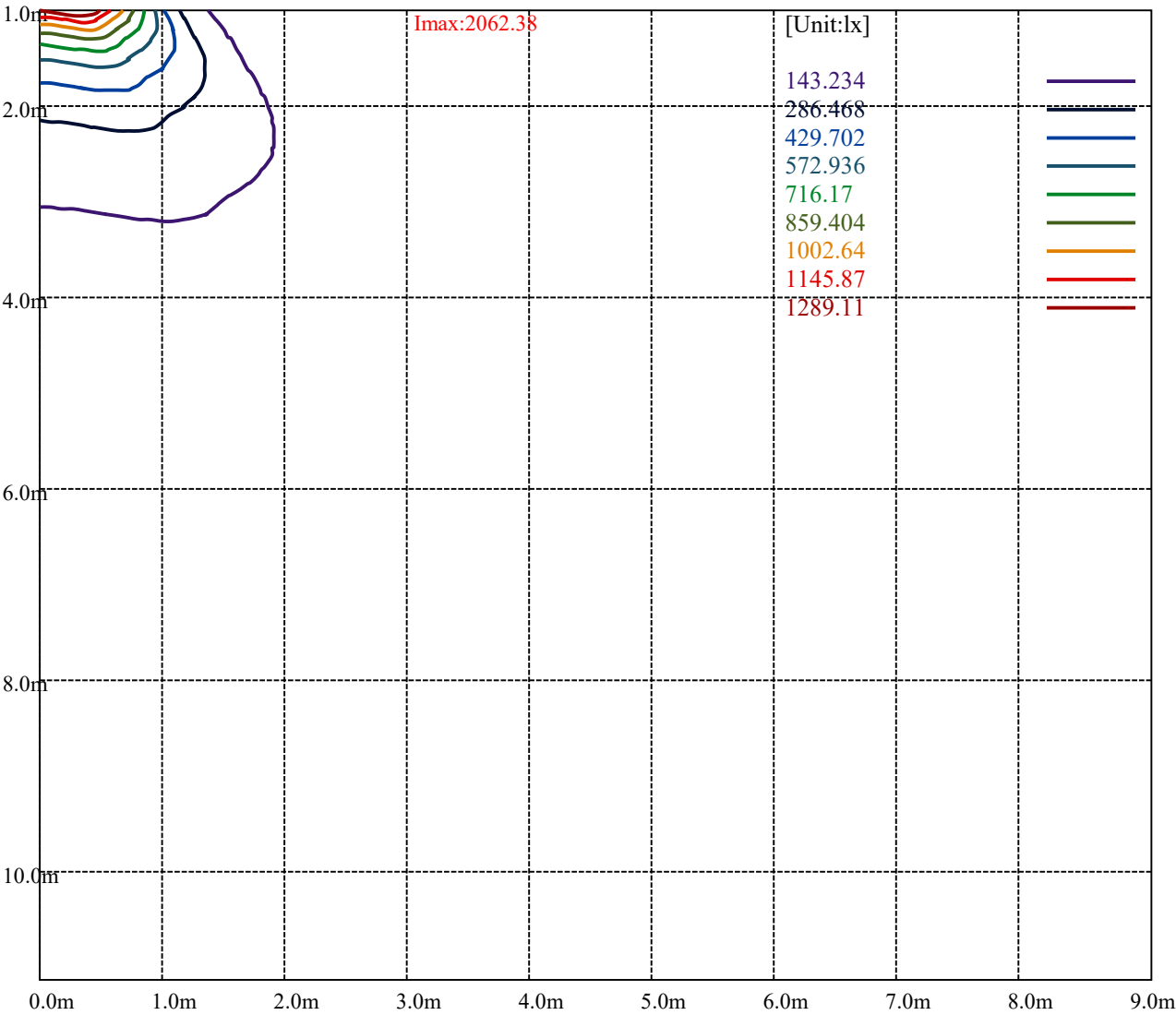




Max , Ave Beam angle of C45 plane 118.52



(10%Emax) 16.03833	—
(20%Emax) 32.07667	—
(30%Emax) 48.115	—
(40%Emax) 64.15334	—
(50%Emax) 80.19167	—
(60%Emax) 96.23	—
(70%Emax) 112.2678	—
(80%Emax) 128.3067	—
(90%Emax) 144.3444	—



Luminance Table

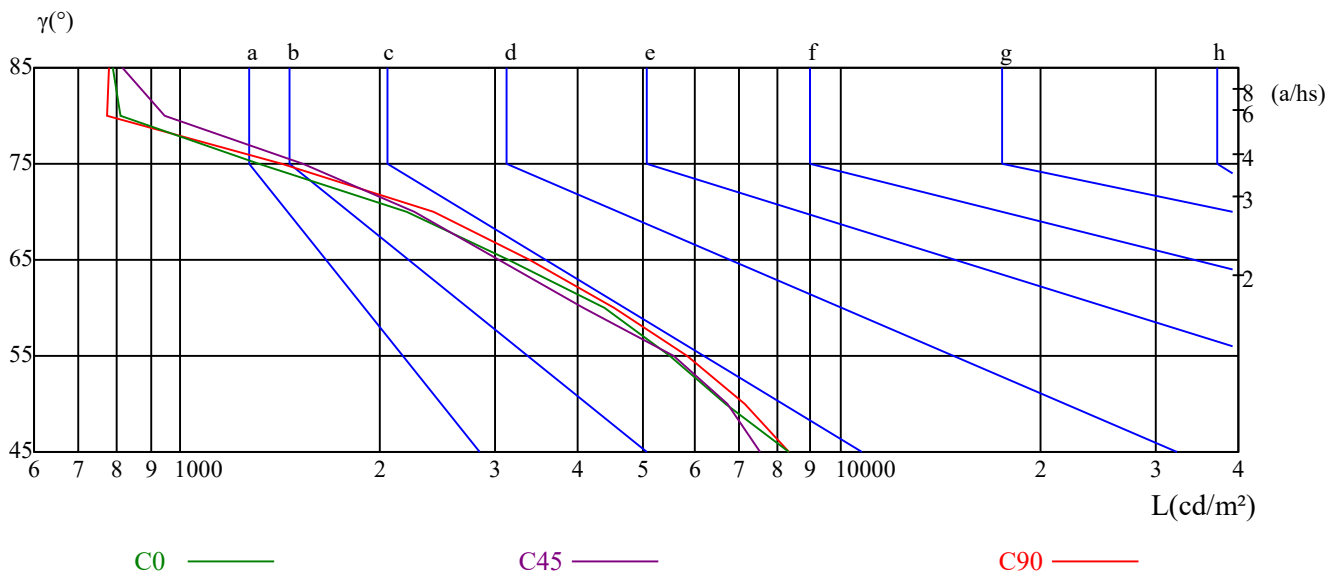
γ	45	50	55	60	65	70	75	80	85
C0	8334	6687	5515	4396	3139	2196	1310	812	792
C45	7570	6754	5588	4086	3038	2262	1527	944	817
C90	8339	7136	5837	4546	3369	2418	1426	774	779

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3139	3369	3038	1310	1426	1527	792	779	817

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	1.06	1.02	0.99	1.04	1.01	0.98	1.00	0.97	0.94	0.96	0.94	0.92	0.92	0.90	0.89	0.87
2	0.94	0.88	0.83	0.92	0.86	0.82	0.88	0.84	0.80	0.85	0.81	0.78	0.82	0.79	0.76	0.74
3	0.83	0.75	0.70	0.81	0.74	0.69	0.78	0.73	0.68	0.76	0.71	0.66	0.73	0.69	0.65	0.63
4	0.74	0.65	0.59	0.72	0.65	0.59	0.70	0.63	0.58	0.68	0.62	0.57	0.65	0.61	0.56	0.54
5	0.66	0.57	0.51	0.65	0.57	0.51	0.63	0.56	0.50	0.61	0.54	0.50	0.59	0.53	0.49	0.47
6	0.59	0.50	0.44	0.58	0.50	0.44	0.56	0.49	0.44	0.55	0.48	0.43	0.53	0.47	0.43	0.41
7	0.53	0.45	0.39	0.53	0.44	0.39	0.51	0.44	0.38	0.50	0.43	0.38	0.48	0.42	0.38	0.36
8	0.48	0.40	0.34	0.48	0.40	0.34	0.46	0.39	0.34	0.45	0.39	0.34	0.44	0.38	0.34	0.32
9	0.44	0.36	0.31	0.44	0.36	0.30	0.42	0.35	0.30	0.41	0.35	0.30	0.40	0.34	0.30	0.28
10	0.40	0.33	0.27	0.40	0.32	0.27	0.39	0.32	0.27	0.38	0.32	0.27	0.37	0.31	0.27	0.25

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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	1308.04	1327.00	1420.88	1558.10	1715.17	1867.73	1855.99	1948.07	1943.56		
15.0	1308.04	1298.16	1341.28	1441.90	1591.93	1768.01	1834.49	1867.73	1933.32		
30.0	1308.04	1278.46	1316.11	1412.04	1550.11	1720.45	1873.76	1855.82	1918.58		
45.0	1308.04	1272.25	1301.78	1381.41	1520.98	1692.76	1877.07	1991.59	1838.60		
60.0	1308.04	1264.20	1288.36	1364.41	1495.93	1662.34	1847.54	1922.70	1889.59		
75.0	1308.04	1258.04	1276.79	1354.47	1487.51	1641.97	1787.51	1839.30	1852.69		
90.0	1308.04	1266.05	1285.71	1358.08	1485.84	1642.20	1769.07	1808.39	1849.49		
105.0	1308.04	1272.23	1302.67	1388.62	1506.80	1673.33	1813.00	1848.81	1857.76		
120.0	1308.04	1276.62	1318.82	1406.80	1549.54	1720.12	1893.38	1954.43	1914.03		
135.0	1308.04	1296.34	1348.55	1452.08	1596.12	1773.46	1954.41	2060.64	1893.20		
150.0	1308.04	1308.95	1374.03	1494.26	1642.51	1816.98	1961.61	1935.40	1963.42		
165.0	1308.04	1323.43	1399.47	1535.25	1693.67	1872.90	1900.96	1950.75	1998.73		
180.0	1308.04	1348.12	1438.30	1575.85	1749.83	1913.79	1907.41	1997.59	2033.11		
195.0	1308.04	1386.20	1518.26	1679.97	1868.63	1983.63	1964.76	2048.31	2003.39		
210.0	1308.04	1401.28	1542.93	1731.21	1926.65	2106.85	2066.51	2087.13	1984.93		
225.0	1308.04	1406.46	1563.03	1752.71	1956.70	2147.27	2231.37	2018.43	1809.97		
240.0	1308.04	1410.93	1572.87	1768.81	1964.75	2116.85	2152.63	2112.37	2003.22		
255.0	1308.04	1406.26	1566.97	1764.29	1959.83	2050.90	2071.44	2113.40	2079.48		
270.0	1308.04	1406.32	1554.64	1747.63	1952.24	2028.18	2034.43	2109.49	2080.00		
285.0	1308.04	1410.11	1553.36	1744.06	1940.13	2026.08	2052.94	2106.66	2088.75		
300.0	1308.04	1396.02	1541.46	1732.69	1923.01	2072.04	2117.83	2098.97	2068.45		
315.0	1308.04	1383.66	1516.90	1685.24	1888.69	2082.25	2186.67	2112.85	1827.48		
330.0	1308.04	1364.84	1480.22	1640.69	1828.19	2024.72	2117.57	2024.72	1923.75		
345.0	1308.04	1347.87	1453.78	1604.95	1780.57	1954.37	1938.98	1997.82	1985.15		
360.0	1308.04	1327.00	1420.88	1558.10	1715.17	1867.73	1855.99	1948.07	1943.56		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	1704.34	1228.60	923.48	631.00	383.66	204.92	83.05	39.72	16.25		
15.0	1846.17	1494.01	1030.44	784.29	477.04	288.38	136.55	46.72	27.85		
30.0	1833.41	1493.62	1005.91	693.02	481.44	277.03	140.76	53.79	27.79		
45.0	1639.97	1362.62	1079.00	717.54	440.19	277.36	151.20	60.84	27.74		
60.0	1721.39	1396.62	1032.48	694.28	481.35	269.30	148.52	56.37	27.74		
75.0	1823.22	1552.69	1112.51	778.58	474.11	296.43	150.89	49.11	27.68		
90.0	1818.21	1518.01	1102.54	794.30	495.88	310.03	155.46	46.46	26.80		
105.0	1828.22	1556.94	1100.33	778.92	506.74	308.88	149.52	48.35	27.75		
120.0	1782.06	1445.40	1045.00	695.77	482.10	281.00	146.34	56.56	26.93		
135.0	1649.23	1364.76	1048.77	711.19	432.11	279.97	149.44	61.22	27.01		
150.0	1839.58	1471.66	978.09	658.09	462.83	267.57	140.12	56.95	26.22		
165.0	1858.42	1431.15	1002.08	716.93	435.41	275.19	132.16	47.07	26.25		
180.0	1860.95	1371.81	990.14	698.66	419.01	249.58	122.06	45.54	25.51		
195.0	1673.68	1164.30	847.17	545.32	341.38	180.57	75.46	40.43	14.37		
210.0	1652.31	1152.94	754.88	543.30	313.79	172.13	79.79	40.34	14.34		
225.0	1582.71	1235.57	824.01	484.03	325.67	174.47	84.10	39.37	15.21		
240.0	1630.13	1170.26	796.28	547.55	312.25	178.94	78.73	37.58	15.21		
255.0	1774.12	1255.36	896.43	564.29	329.47	177.68	74.11	35.71	15.18		
270.0	1749.42	1257.11	922.96	580.76	365.43	190.31	67.90	34.85	14.30		
285.0	1812.10	1310.73	956.19	627.61	371.55	191.60	75.21	35.81	15.22		
300.0	1814.38	1271.23	850.18	591.63	354.62	194.81	91.57	36.81	16.16		
315.0	1605.12	1290.04	926.34	559.05	355.59	204.35	93.62	36.91	16.20		
330.0	1659.62	1272.88	858.21	596.78	366.90	210.04	95.56	37.86	16.23		
345.0	1761.56	1299.90	917.89	626.41	363.90	199.15	88.71	39.83	16.29		
360.0	1704.34	1228.60	923.48	631.00	383.66	204.92	83.05	39.72	16.25		

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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	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81		
15.0	3.59	0.00	0.00	0.00	0.00	0.90	0.90	1.80	1.80		
30.0	3.59	0.00	0.00	0.00	0.00	0.90	0.90	1.79	1.79		
45.0	3.58	0.00	0.00	0.00	0.00	0.89	0.89	1.79	1.79		
60.0	3.58	0.00	0.00	0.00	0.89	0.89	0.89	1.79	1.79		
75.0	3.57	0.89	0.00	0.89	0.00	0.89	0.89	1.79	1.79		
90.0	3.57	0.00	0.00	0.89	0.00	0.89	1.79	1.79	2.68		
105.0	3.58	0.00	0.00	0.00	0.00	0.90	0.90	1.79	1.79		
120.0	3.59	0.00	0.00	0.00	0.00	0.90	0.90	1.80	1.80		
135.0	2.70	0.00	0.00	0.00	0.00	0.90	0.90	1.80	1.80		
150.0	1.81	0.00	0.00	0.00	0.00	0.90	0.90	1.81	1.81		
165.0	1.81	0.00	0.00	0.00	0.00	0.91	0.91	1.81	1.81		
180.0	1.82	0.00	0.00	0.00	0.00	0.91	0.91	1.82	1.82		
195.0	1.80	1.80	1.80	2.70	1.80	1.80	1.80	1.80	1.80		
210.0	1.79	1.79	1.79	2.69	1.79	1.79	1.79	1.79	1.79		
225.0	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79		
240.0	1.79	1.79	1.79	1.79	2.68	1.79	1.79	1.79	1.79		
255.0	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79		
270.0	1.79	1.79	1.79	1.79	2.68	1.79	1.79	1.79	1.79		
285.0	1.79	1.79	1.79	2.69	1.79	1.79	1.79	1.79	1.79		
300.0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80		
315.0	1.80	1.80	1.80	2.70	1.80	1.80	1.80	1.80	1.80		
330.0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80		
345.0	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81		
360.0	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81		
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	1.81	1.81	1.81	1.81	2.71	3.61	3.61	5.42	6.32		
15.0	1.80	2.70	2.70	3.59	3.59	3.59	5.39	5.39	6.29		
30.0	1.79	2.69	2.69	3.59	3.59	5.38	5.38	5.38	6.28		
45.0	1.79	2.68	2.68	3.58	3.58	5.37	5.37	5.37	6.26		
60.0	1.79	2.68	2.68	3.58	3.58	5.37	5.37	6.26	6.26		
75.0	1.79	2.68	2.68	3.57	3.57	5.36	5.36	6.25	6.25		
90.0	2.68	2.68	3.57	3.57	3.57	5.36	5.36	6.25	6.25		
105.0	1.79	2.69	2.69	3.58	3.58	5.37	5.37	6.27	6.27		
120.0	1.80	2.69	2.69	3.59	3.59	5.39	5.39	6.28	6.28		
135.0	1.80	2.70	2.70	3.60	3.60	5.40	5.40	5.40	6.30		
150.0	1.81	2.71	2.71	3.62	3.62	5.42	5.42	5.42	6.33		
165.0	1.81	1.81	2.72	2.72	3.62	3.62	5.43	5.43	6.34		
180.0	1.82	1.82	2.73	2.73	3.64	3.64	5.47	6.38	6.38		
195.0	1.80	1.80	1.80	2.70	2.70	3.59	3.59	5.39	6.29		
210.0	1.79	1.79	1.79	1.79	2.69	3.59	3.59	5.38	6.28		
225.0	1.79	1.79	1.79	1.79	2.68	3.58	3.58	5.37	6.26		
240.0	1.79	1.79	1.79	1.79	2.68	3.58	3.58	5.37	6.26		
255.0	1.79	1.79	1.79	1.79	2.68	3.57	5.36	5.36	6.25		
270.0	1.79	1.79	1.79	1.79	2.68	3.57	5.36	5.36	6.25		
285.0	1.79	1.79	1.79	2.69	2.69	3.58	5.37	5.37	6.27		
300.0	1.80	1.80	1.80	1.80	2.69	3.59	5.39	5.39	6.28		
315.0	1.80	1.80	1.80	1.80	2.70	3.60	3.60	5.40	6.30		
330.0	1.80	1.80	1.80	1.80	2.70	3.61	3.61	5.41	6.31		
345.0	1.81	1.81	1.81	1.81	2.72	3.62	5.43	5.43	6.34		
360.0	1.81	1.81	1.81	1.81	2.71	3.61	3.61	5.42	6.32		

Intensity data(cd)

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C/γ(°)	180.0
0.0	6.32
15.0	6.29
30.0	6.28
45.0	6.26
60.0	6.26
75.0	6.25
90.0	6.25
105.0	6.27
120.0	6.28
135.0	6.30
150.0	6.33
165.0	6.34
180.0	6.38
195.0	6.29
210.0	6.28
225.0	6.26
240.0	6.26
255.0	6.25
270.0	6.25
285.0	6.27
300.0	6.28
315.0	6.30
330.0	6.31
345.0	6.34
360.0	6.32