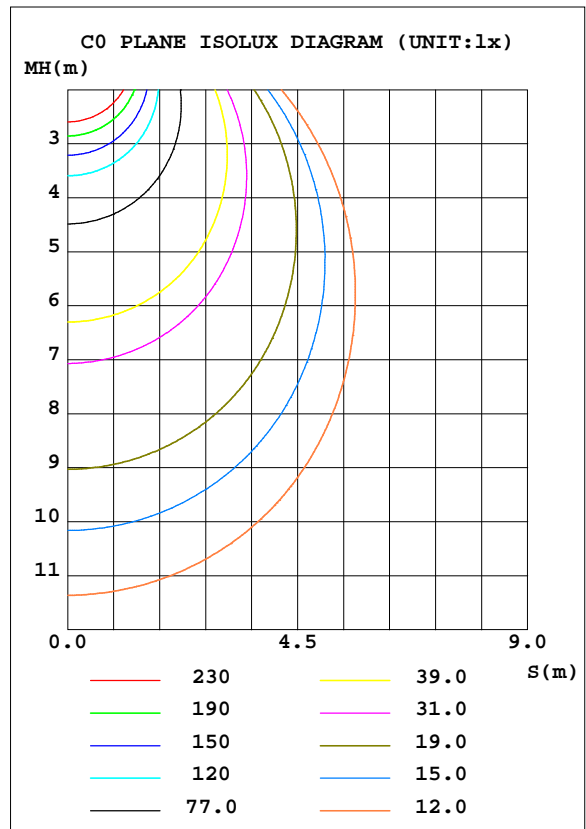
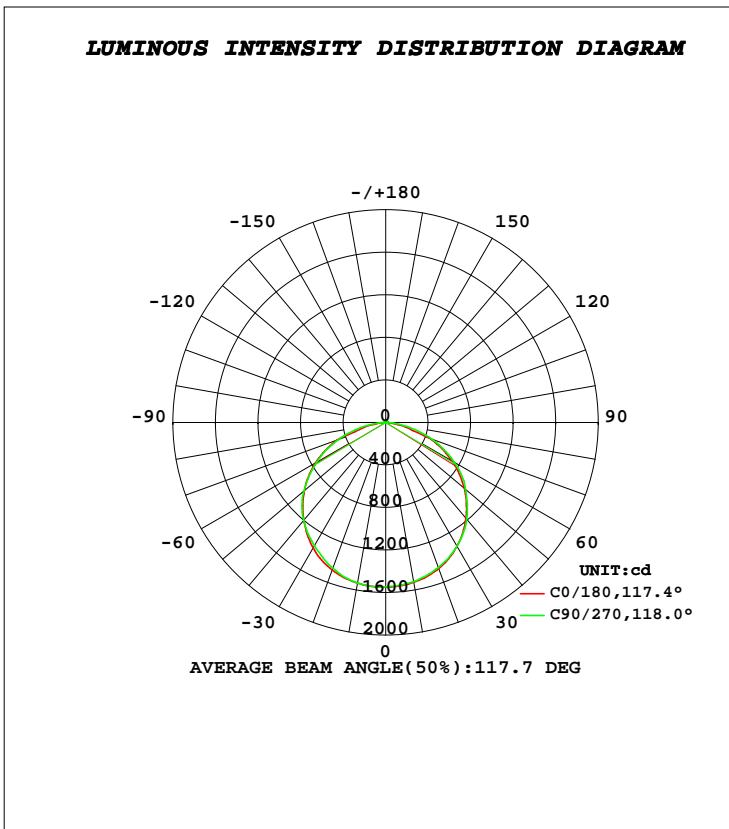


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm		
36W	TYPE:LED	
DIM.: 1200*120MM		
MFR.:		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 133.98 lm/W			
MODEL		I _{max} (cd)	1549	S/MH(C0/180)	1.29
NOMINAL POWER(W)	36	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	4676.1	η UP, DN(C0-180)	0.6, 48.6
NOMINAL FLUX(lm)	4676.07	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.8, 49.9
LAMPS INSIDE	1	η up(%)	1.4	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	220.9	η down(%)	98.6	CIBSE SHR MAX	1.50



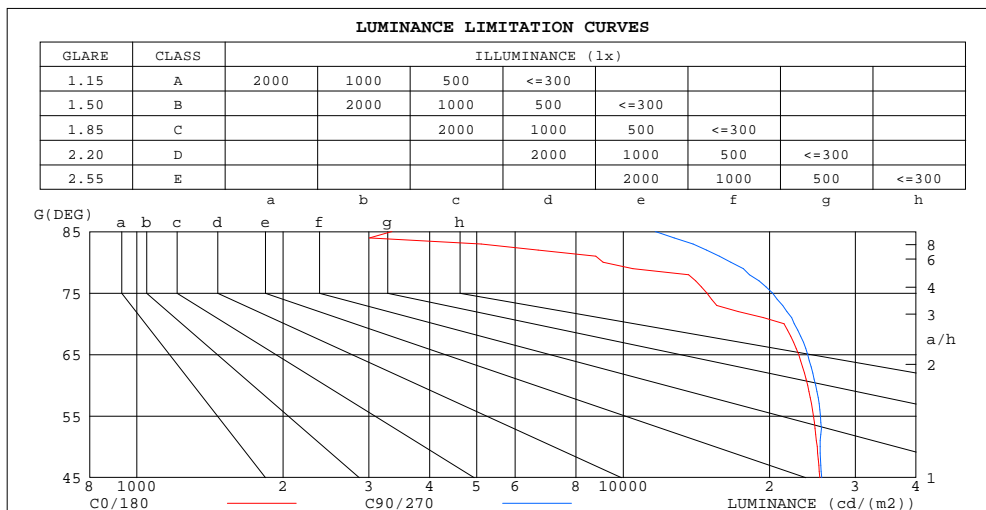
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZHANG
Test Date: 2016-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7125]
Remarks:

ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum,lamp	
10	1527	1519	1534	1533				0- 10	146.8	146.8	3.14,3.14	
20	1462	1451	1477	1458				10- 20	424.0	570.8	12.2,12.2	
30	1344	1342	1364	1339				20- 30	650.4	1221	26.1,26.1	
40	1175	1188	1199	1201				30- 40	797.6	2019	43.2,43.2	
50	966.3	979.8	997.7	1005				40- 50	844.0	2863	61.2,61.2	
60	718.5	745.9	762.9	751.4				50- 60	778.5	3641	77.9,77.9	
70	439.4	461.5	487.1	469.5				60- 70	601.5	4243	90.7,90.7	
80	94.79	173.5	110.7	187.4				70- 80	306.5	4549	97.3,97.3	
90	6.682	7.489	8.558	10.43				80- 90	60.27	4609	98.6,98.6	
100	7.507	8.340	9.437	10.56				90-100	9.138	4619	98.8,98.8	
110	8.296	8.970	10.53	11.36				100-110	9.938	4629	99,99	
120	8.935	9.445	11.45	11.25				110-120	9.960	4639	99.2,99.2	
130	9.630	9.642	12.15	11.97				120-130	9.441	4648	99.4,99.4	
140	10.62	10.66	12.84	12.82				130-140	8.725	4657	99.6,99.6	
150	11.91	12.01	13.65	13.69				140-150	7.688	4664	99.7,99.7	
160	13.52	13.32	14.63	14.49				150-160	6.188	4671	99.9,99.9	
170	14.77	14.45	15.40	15.03				160-170	4.094	4675	100,100	
180	14.79	14.72	14.80	14.71				170-180	1.425	4676	100,100	
DEG	LUMINOUS INTENSITY:cd							UNIT:lm				



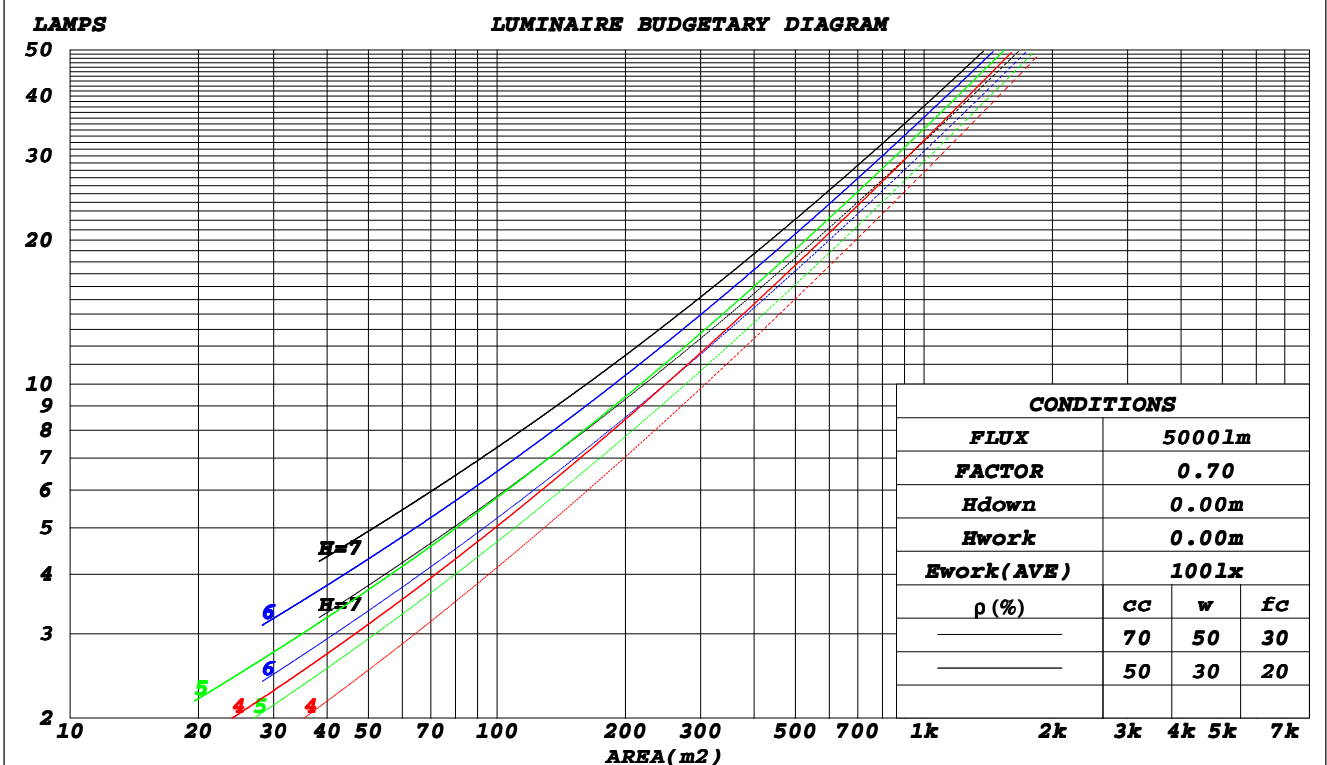
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZHANG
Test Date: 2016-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7125]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm		
	TYPE:LED	
DIM.: 1200*120MM		
MFR.:		

ρ _{cc}	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ _w	20%			20%			20%			20%			20%			0
ρ _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99
1.0	1.04	.90	.96	1.01	.98	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.90	.84	.78	.88	.82	.77	.85	.79	.75	.81	.77	.73	.78	.74	.71	.69
3.0	.79	.71	.64	.77	.70	.64	.74	.68	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.54	.66	.59	.53	.63	.57	.52	.61	.56	.51	.49
5.0	.62	.53	.47	.61	.53	.46	.59	.51	.46	.57	.50	.45	.55	.49	.44	.42
6.0	.56	.47	.41	.55	.46	.40	.53	.45	.40	.51	.44	.39	.49	.44	.39	.37
7.0	.51	.42	.36	.50	.41	.35	.48	.41	.35	.47	.40	.35	.45	.39	.34	.32
8.0	.46	.38	.32	.45	.37	.32	.44	.37	.31	.43	.36	.31	.41	.35	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.38	.31	.26	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: ZHANG
 Test Date: 2016-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7125]
 Remarks:

WEC AND CCEC

Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm		
	TYPE:LED	
DIM.: 1200*120MM		
MFR.:		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.304	.173	.055	.297	.169	.054	.283	.162	.052	.270	.156	.050	.258	.150	.048	
2.0	.290	.159	.049	.283	.156	.048	.271	.150	.047	.259	.145	.045	.248	.141	.044	
3.0	.269	.143	.043	.263	.141	.042	.252	.137	.042	.242	.133	.041	.233	.129	.040	
4.0	.249	.129	.038	.244	.128	.038	.234	.124	.037	.225	.121	.036	.216	.118	.036	
5.0	.231	.118	.034	.226	.116	.034	.217	.113	.033	.209	.110	.033	.201	.108	.032	
6.0	.214	.107	.031	.210	.106	.031	.202	.104	.030	.195	.101	.030	.188	.099	.029	
7.0	.199	.099	.028	.196	.097	.028	.189	.095	.027	.182	.093	.027	.176	.091	.027	
8.0	.186	.091	.026	.183	.090	.025	.176	.088	.025	.171	.086	.025	.165	.085	.025	
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.160	.080	.023	.155	.079	.023	
10.0	.164	.079	.022	.161	.078	.022	.156	.076	.022	.151	.075	.021	.147	.074	.021	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.201	.201	.201	.172	.172	.172	.117	.117	.117	.067	.067	.067	.022	.022	.022	
1.0	.191	.167	.146	.163	.143	.125	.112	.099	.087	.064	.057	.050	.021	.018	.016	
2.0	.183	.143	.109	.157	.123	.094	.107	.085	.066	.062	.050	.039	.020	.016	.013	
3.0	.175	.125	.085	.150	.108	.074	.103	.075	.052	.060	.044	.031	.019	.014	.010	
4.0	.168	.112	.069	.144	.097	.060	.099	.068	.042	.057	.040	.025	.018	.013	.008	
5.0	.161	.102	.058	.138	.088	.051	.095	.062	.036	.055	.036	.021	.018	.012	.007	
6.0	.154	.093	.050	.132	.081	.044	.091	.057	.031	.053	.033	.018	.017	.011	.006	
7.0	.147	.087	.044	.126	.075	.039	.087	.053	.027	.051	.031	.016	.016	.010	.005	
8.0	.140	.081	.040	.121	.070	.035	.084	.049	.025	.049	.029	.015	.016	.010	.005	
9.0	.134	.076	.036	.116	.066	.032	.080	.046	.023	.047	.027	.013	.015	.009	.004	
10.0	.129	.072	.034	.111	.062	.029	.077	.044	.021	.045	.026	.012	.015	.008	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ZHANG
 Test Date:2016-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7125]
 Remarks:

Uncorrected UGR Table

Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm										
					TYPE:LED					
DIM.: 1200*120MM										
MFR.:										
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	24.0	25.5	24.3	25.7	26.0	24.1	25.6	24.4	25.9	26.1
3H	25.5	26.9	25.8	27.1	27.4	25.7	27.0	26.0	27.3	27.6
4H	25.8	27.1	26.1	27.4	27.7	26.2	27.5	26.5	27.8	28.1
6H	26.0	27.2	26.3	27.5	27.8	26.6	27.8	26.9	28.1	28.4
8H	25.9	27.1	26.3	27.5	27.8	26.6	27.8	27.0	28.1	28.5
12H	25.9	27.0	26.3	27.4	27.7	26.7	27.8	27.0	28.1	28.5
4H 2H	24.6	25.9	25.0	26.2	26.5	24.7	26.0	25.1	26.3	26.6
3H	26.2	27.4	26.6	27.7	28.0	26.4	27.6	26.8	27.9	28.2
4H	26.6	27.7	27.0	28.0	28.4	27.1	28.1	27.5	28.5	28.8
6H	26.9	27.8	27.3	28.2	28.6	27.5	28.4	27.9	28.8	29.2
8H	26.9	27.8	27.3	28.2	28.6	27.6	28.5	28.1	28.9	29.3
12H	26.9	27.7	27.3	28.1	28.5	27.7	28.5	28.1	28.9	29.3
8H 4H	26.9	27.7	27.3	28.1	28.5	27.2	28.1	27.7	28.5	28.9
6H	27.2	27.9	27.7	28.3	28.8	27.8	28.5	28.2	28.9	29.4
8H	27.2	27.9	27.7	28.3	28.8	27.9	28.6	28.4	29.0	29.5
12H	27.2	27.8	27.7	28.2	28.7	28.0	28.6	28.5	29.1	29.6
12H 4H	26.8	27.6	27.3	28.1	28.5	27.2	28.0	27.7	28.4	28.8
6H	27.2	27.8	27.7	28.3	28.8	27.8	28.4	28.3	28.9	29.3
8H	27.3	27.8	27.8	28.3	28.8	28.0	28.5	28.5	29.0	29.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.3 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 4676 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.4)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ZHANG
 Test Date:2016-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7125]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm		
	TYPE:LED	
DIM.: 1200*120MM		
MFR.:		

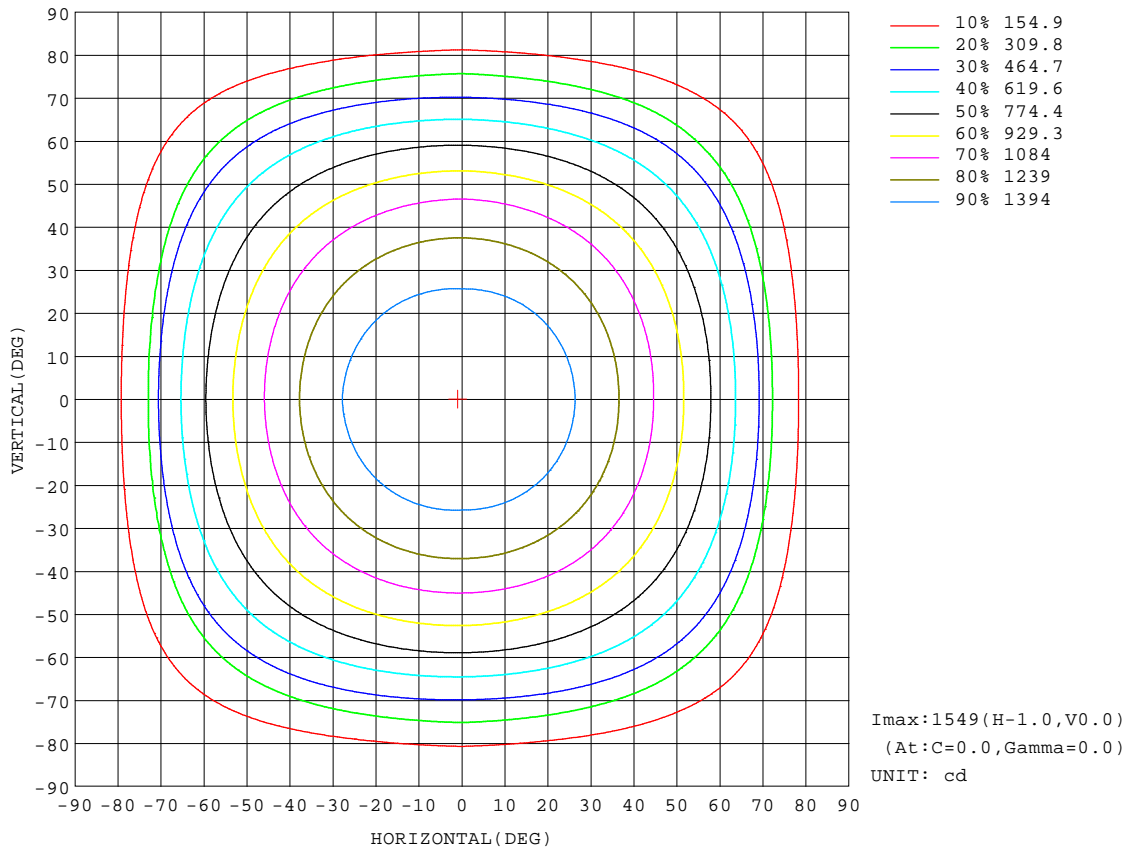
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	45	38	56	45	38	55	44	38	31
0.80	67	55	48	66	54	47	64	54	47	40
1.00	75	64	57	74	63	56	72	65	56	48
1.25	82	72	65	81	71	64	78	70	63	56
1.50	88	78	70	86	77	70	83	75	69	61
2.00	95	86	79	93	85	79	89	82	77	69
2.50	99	91	85	96	89	84	92	86	82	73
3.00	102	95	90	100	93	88	95	90	86	77
4.00	106	100	96	103	98	94	99	95	91	82
5.00	108	104	100	106	102	98	101	98	95	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZHANG
Test Date:2016-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7125]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm		
	TYPE:LED	
DIM.: 1200*120MM		
MFR.:		



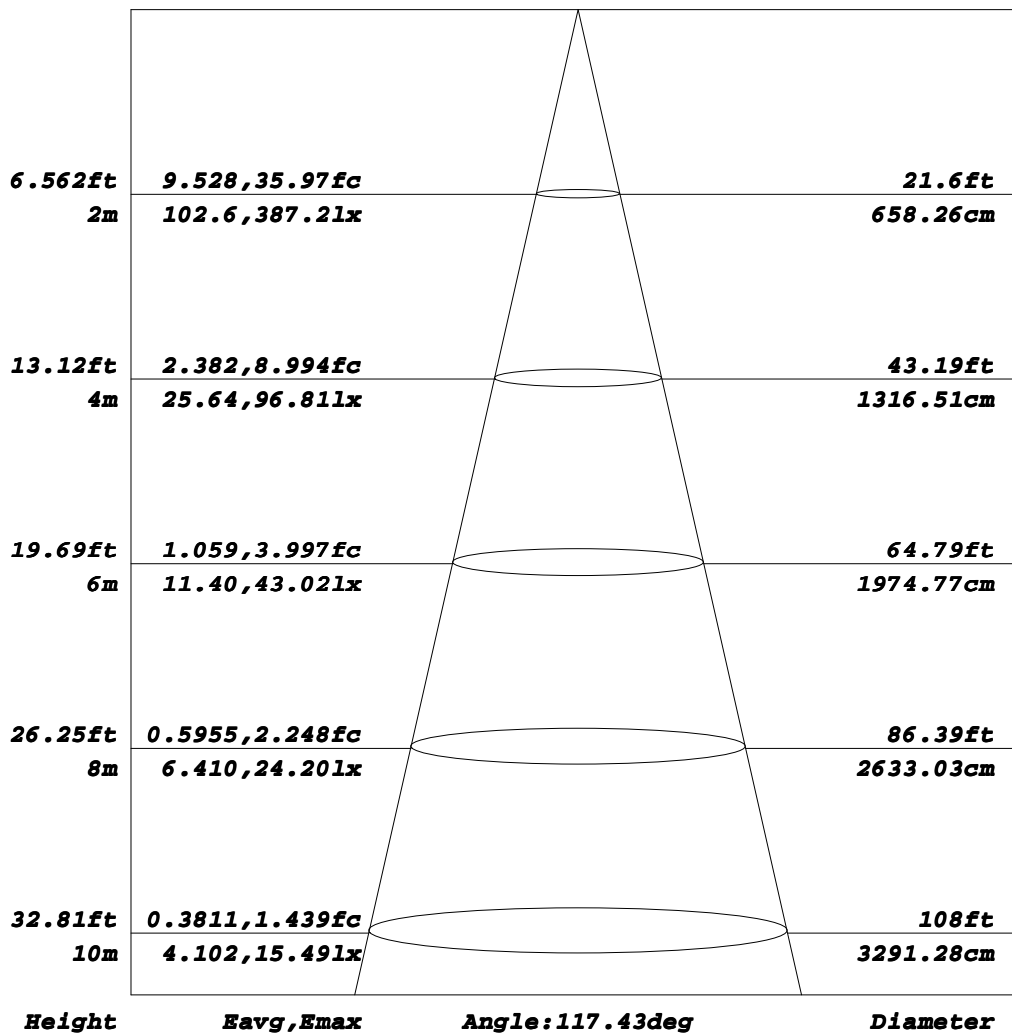
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZHANG
Test Date: 2016-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7125]
Remarks:

AAI Figure

Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm		
	TYPE:LED	
DIM.: 1200*120MM		
MFR.:		

Flux out:3570 lm



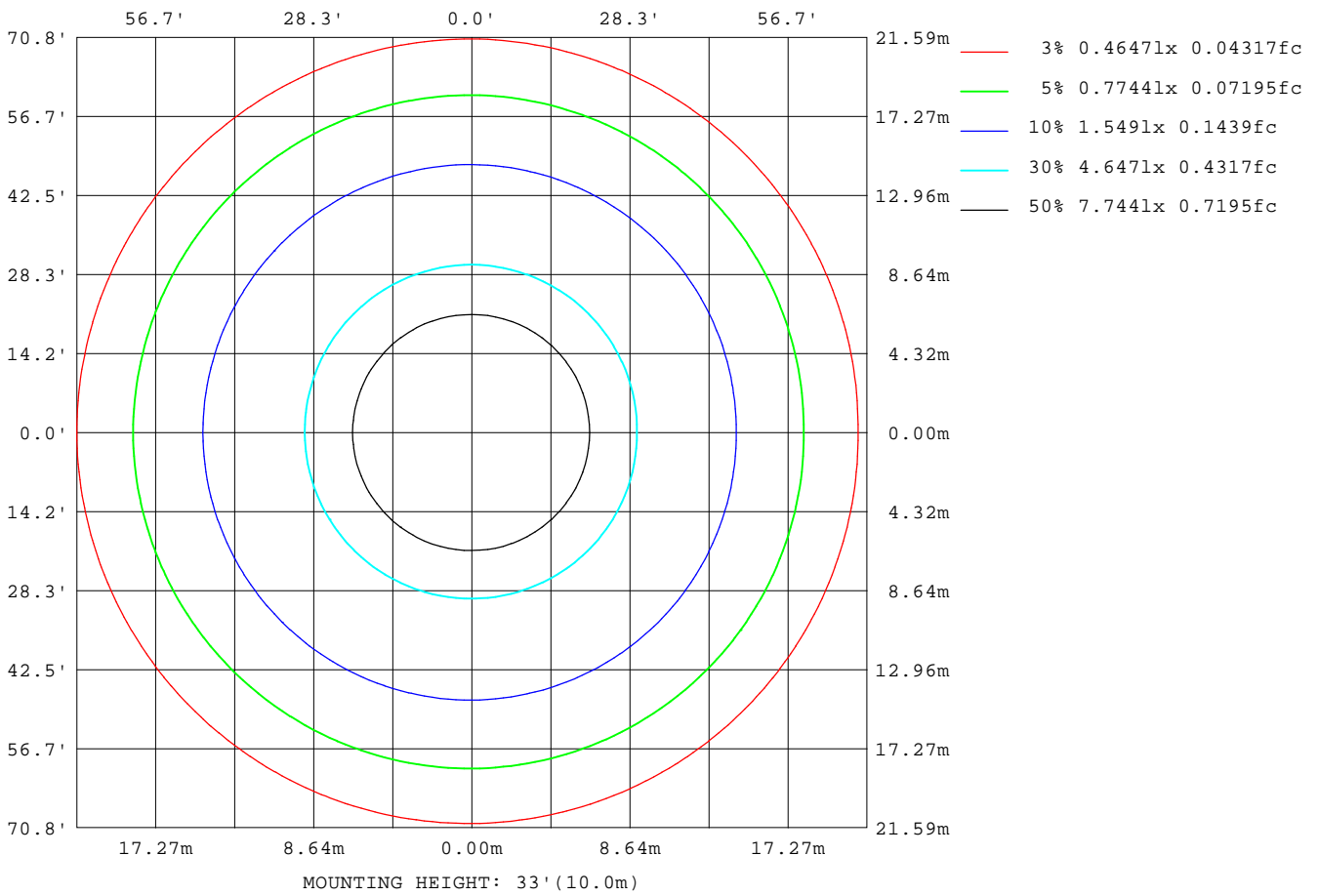
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: ZHANG
 Test Date: 2016-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7125]
 Remarks:

ISOLUX DIAGRAM

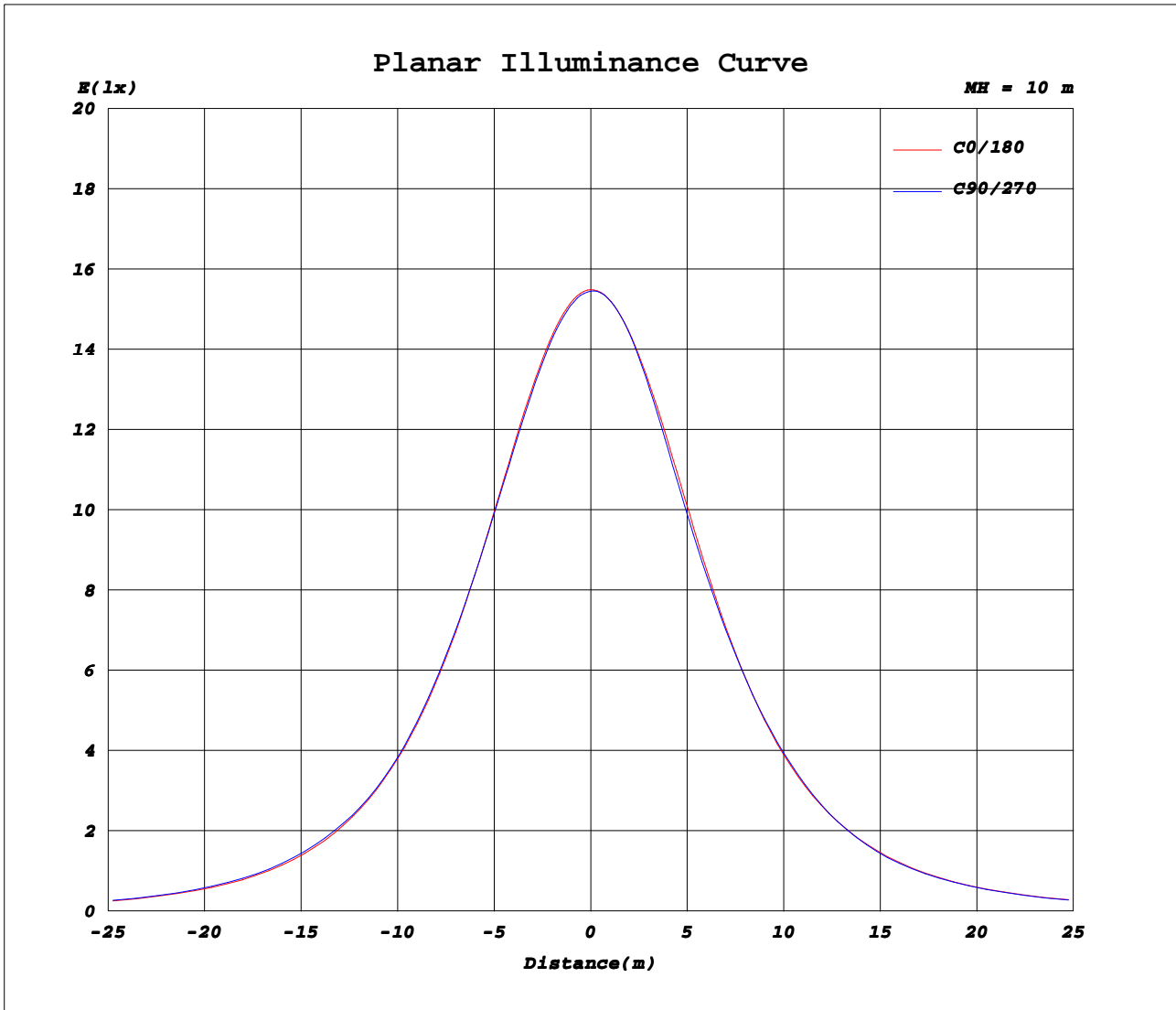
Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm		
	TYPE:LED	
DIM.: 1200*120MM		
MFR.:		



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZHANG
Test Date: 2016-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7125]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZHANG
Test Date: 2016-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7125]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.9V I:0.1730A P:34.90W PF:0.9100 Lamp Flux:4676.07x1 lm	
	TYPE:LED
DIM.: 1200*120MM	
MFR.:	

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270																
0	1549	1545	1549	1545																
5	1543	1536	1546	1546																
10	1527	1519	1534	1533																
15	1500	1490	1511	1504																
20	1462	1451	1477	1458																
25	1410	1402	1429	1402																
30	1344	1342	1364	1339																
35	1265	1273	1287	1275																
40	1175	1188	1199	1201																
45	1076	1085	1103	1115																
50	966	980	998	1005																
55	847	876	888	880																
60	718	746	763	751																
65	582	607	630	621																
70	439	461	487	470																
75	231	315	257	328																
80	94.8	173	111	187																
85	17.5	60.9	15.2	70.8																
90	6.68	7.49	8.56	10.4																
95	7.05	7.77	8.87	9.47																
100	7.51	8.34	9.44	10.6																
105	7.94	8.92	10.0	10.8																
110	8.30	8.97	10.5	11.4																
115	8.61	9.30	11.0	11.2																
120	8.93	9.44	11.4	11.3																
125	9.27	9.31	11.8	11.6																
130	9.63	9.64	12.2	12.0																
135	10.1	10.1	12.5	12.4																
140	10.6	10.7	12.8	12.8																
145	11.2	11.4	13.2	13.3																
150	11.9	12.0	13.7	13.7																
155	12.7	12.7	14.1	14.1																
160	13.5	13.3	14.6	14.5																
165	14.2	13.9	15.1	14.8																
170	14.8	14.4	15.4	15.0																
175	14.9	14.7	15.1	14.9																
180	14.8	14.7	14.8	14.7																

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZHANG
Test Date:2016-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7125]
Remarks:

Photometric Data Table [cd]

G/C	0.0	90.0	180.0	270.0
0.0	1549	1545	1549	1545
3.0	1546	1541	1548	1547
6.0	1540	1534	1545	1544
9.0	1531	1523	1537	1537
12.0	1518	1508	1526	1524
15.0	1500	1490	1511	1504
18.0	1479	1467	1492	1479
21.0	1452	1442	1469	1448
24.0	1422	1413	1440	1414
27.0	1385	1380	1405	1377
30.0	1344	1342	1364	1339
33.0	1298	1302	1319	1301
36.0	1248	1257	1270	1261
39.0	1194	1206	1218	1217
42.0	1136	1149	1162	1169
45.0	1076	1085	1103	1115
48.0	1011	1021	1041	1052
51.0	942.8	960.0	975.7	980.4
54.0	871.5	899.5	912.3	906.2
57.0	796.9	826.6	839.0	826.2
60.0	718.5	745.9	762.9	751.4
63.0	636.8	663.4	684.2	674.2
66.0	553.3	578.8	601.7	591.9
69.0	468.1	491.7	516.2	499.9
72.0	319.6	402.7	371.6	414.9
75.0	230.8	314.9	257.2	328.3
78.0	170.2	226.7	194.8	242.9
81.0	82.47	148.0	96.97	160.7
84.0	18.88	79.80	36.47	89.85
87.0	16.03	28.44	14.73	38.55
90.0	6.682	7.489	8.558	10.43
93.0	6.873	7.539	8.649	9.370
96.0	7.143	7.883	8.980	9.677
99.0	7.419	8.227	9.325	10.39
102.0	7.684	8.578	9.664	10.76
105.0	7.942	8.921	10.00	10.79
108.0	8.170	8.891	10.33	11.04
111.0	8.349	9.035	10.62	11.46
114.0	8.533	9.222	10.92	11.28
117.0	8.741	9.427	11.19	11.06
120.0	8.935	9.445	11.45	11.25
123.0	9.134	9.370	11.67	11.47
126.0	9.335	9.333	11.90	11.68
129.0	9.549	9.561	12.09	11.89
132.0	9.834	9.807	12.28	12.13
135.0	10.13	10.09	12.48	12.39
138.0	10.43	10.41	12.70	12.65
141.0	10.72	10.79	12.90	12.91
144.0	11.07	11.21	13.12	13.17
147.0	11.47	11.64	13.38	13.43
150.0	11.91	12.01	13.65	13.69
153.0	12.39	12.40	13.94	13.95
156.0	12.88	12.80	14.23	14.19
159.0	13.36	13.19	14.52	14.42
162.0	13.83	13.57	14.82	14.63
165.0	14.24	13.93	15.08	14.81
168.0	14.60	14.25	15.29	14.96
171.0	14.84	14.54	15.44	15.07
174.0	14.92	14.66	15.23	14.96
177.0	14.81	14.67	14.94	14.82
180.0	14.79	14.72	14.80	14.71

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZHANG
Test Date: 2016-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7125]
Remarks: