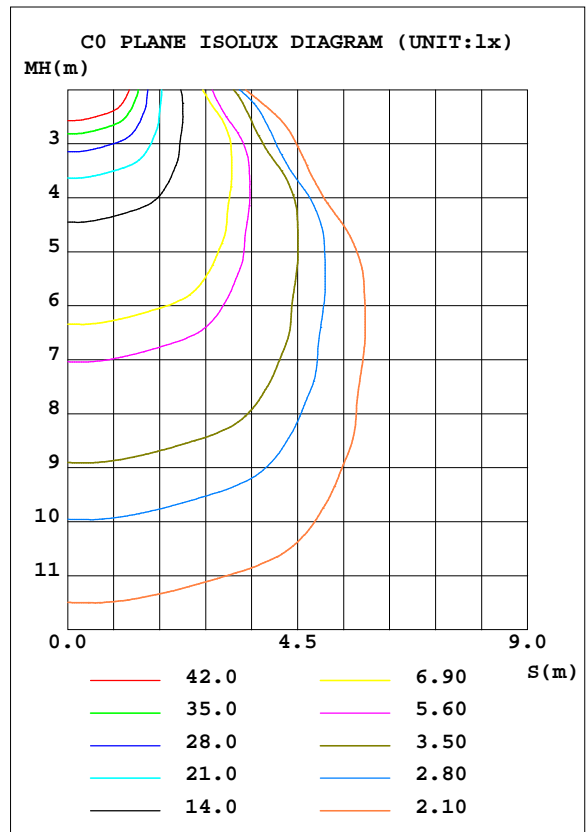
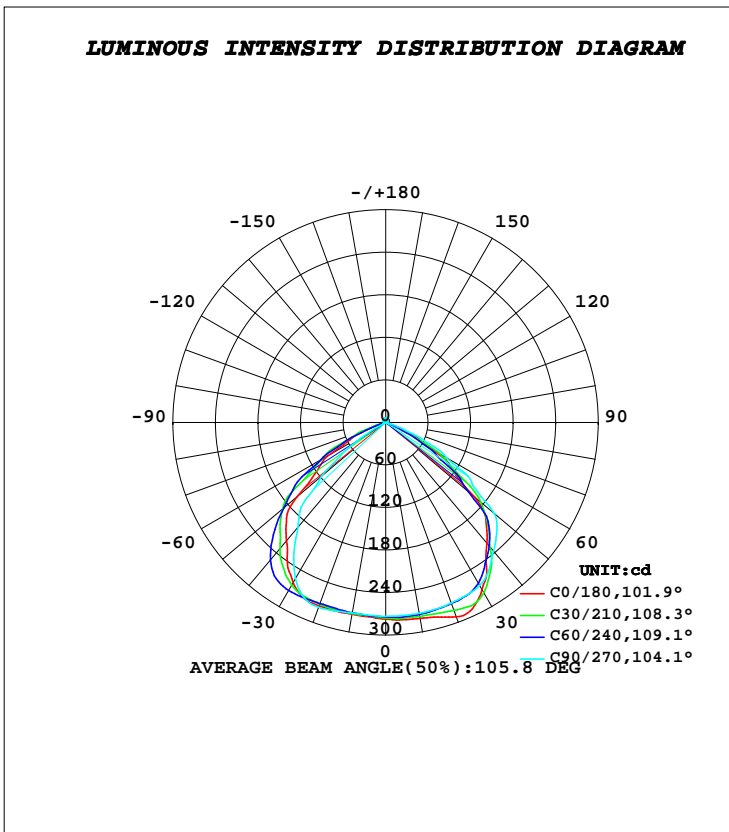


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	IMSYLF010WBKSLMDL	Imax(cd)	293.5	S/MH(C0/180)	1.39
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.43
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	723.74	η UP, DN(C0-180)	1.3, 50.9
NOMINAL FLUX(lm)	723.739	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.6, 46.2
LAMPS INSIDE	1	η up(%)	2.9	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	220.4	η down(%)	97.1	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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=0.7100]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	280.5	276.3	273.5	269.5	274.7	273.0	272.7	273.4	0- 10	26.15	26.15	3.61,3.61
20	291.4	276.9	270.9	268.1	275.1	272.2	277.5	278.5	10- 20	77.87	104.0	14.4,14.4
30	272.1	269.3	265.5	263.4	261.0	269.5	254.5	267.1	20- 30	126.3	230.3	31.8,31.8
40	222.4	228.2	236.7	239.0	218.1	242.4	192.7	210.9	30- 40	155.3	385.6	53.3,53.3
50	164.1	164.1	200.8	200.1	163.3	188.8	119.4	136.4	40- 50	154.7	540.3	74.7,74.7
60	69.87	74.39	97.97	124.0	94.84	105.3	22.10	34.77	50- 60	110.9	651.2	90,90
70	2.519	5.333	20.07	44.64	20.26	25.72	2.561	2.419	60- 70	44.35	695.5	96.1,96.1
80	0.8704	0.9283	1.820	1.786	2.090	2.186	1.579	1.515	70- 80	5.891	701.4	96.9,96.9
90	0.8342	0.8768	0.7131	0.8626	1.618	1.581	1.720	1.755	80- 90	1.461	702.9	97.1,97.1
100	1.356	1.432	0.9810	1.013	2.075	1.970	2.345	2.365	90-100	1.566	704.4	97.3,97.3
110	2.096	2.206	1.610	1.635	2.803	2.668	3.112	3.102	100-110	2.151	706.6	97.6,97.6
120	2.947	3.080	2.449	2.455	3.650	3.468	3.905	3.855	110-120	2.783	709.4	98,98
130	3.769	3.882	3.374	3.329	4.423	4.212	4.539	4.445	120-130	3.237	712.6	98.5,98.5
140	4.440	4.522	4.141	4.039	4.992	4.777	4.946	4.863	130-140	3.320	715.9	98.9,98.9
150	5.061	5.139	4.780	4.680	5.436	5.239	5.359	5.284	140-150	3.034	719.0	99.3,99.3
160	5.708	5.781	5.451	5.357	5.934	5.753	5.883	5.754	150-160	2.490	721.4	99.7,99.7
170	6.337	6.354	6.133	6.021	6.433	6.276	6.330	6.162	160-170	1.684	723.1	99.9,99.9
180	6.618	6.588	6.507	6.300	6.657	6.587	6.484	6.298	170-180	0.6072	723.7	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

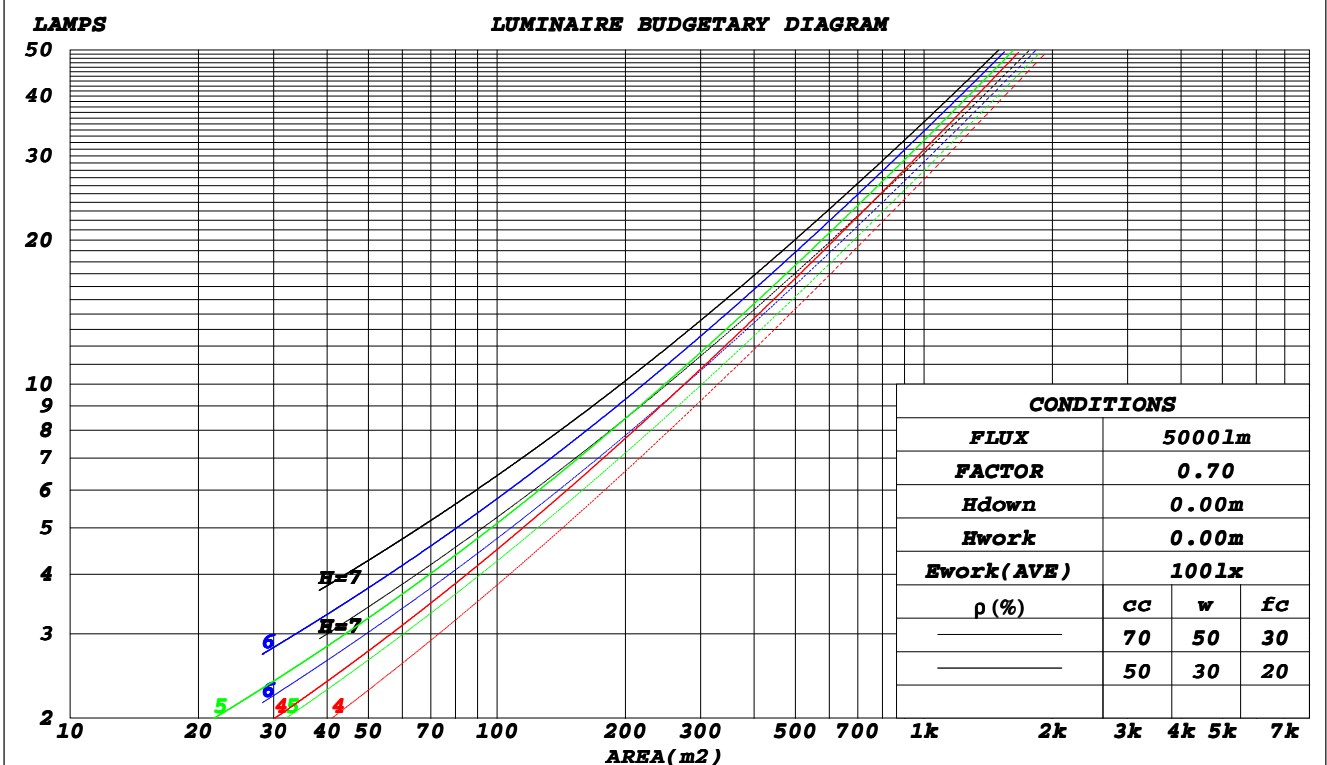
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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=0.7100]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		

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															
	Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.07	1.03	1.00	1.04	1.01	.98	.99	.97	.95	.95	.93	.91	.91	.89	.88	.86
2.0	.95	.89	.84	.93	.88	.83	.89	.85	.81	.85	.82	.79	.82	.79	.77	.74
3.0	.85	.78	.72	.83	.76	.71	.80	.74	.70	.77	.72	.68	.74	.70	.67	.65
4.0	.76	.68	.62	.74	.67	.62	.72	.65	.60	.69	.64	.59	.67	.62	.58	.56
5.0	.68	.60	.54	.67	.59	.54	.65	.58	.53	.62	.57	.52	.60	.55	.51	.49
6.0	.62	.53	.48	.61	.53	.47	.59	.52	.47	.57	.51	.46	.55	.50	.45	.43
7.0	.56	.48	.42	.55	.47	.42	.53	.46	.41	.52	.46	.41	.50	.45	.40	.39
8.0	.51	.43	.38	.50	.43	.37	.49	.42	.37	.47	.41	.37	.46	.40	.36	.34
9.0	.47	.39	.34	.46	.39	.34	.45	.38	.33	.44	.38	.33	.42	.37	.33	.31
10.0	.43	.36	.31	.43	.35	.31	.41	.35	.30	.40	.34	.30	.39	.34	.30	.28



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017-09-19

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=0.7100]
 Remarks:

WEC AND CCEC

Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		

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	.246	.140	.044	.238	.136	.043	.224	.128	.041	.210	.121	.039	.198	.115	.037	
2.0	.242	.132	.041	.235	.129	.040	.222	.124	.038	.210	.118	.037	.200	.113	.036	
3.0	.231	.123	.037	.225	.121	.036	.214	.116	.035	.204	.112	.034	.194	.107	.033	
4.0	.219	.114	.033	.214	.112	.033	.204	.108	.032	.194	.104	.031	.186	.101	.031	
5.0	.207	.105	.031	.202	.104	.030	.193	.100	.030	.185	.097	.029	.177	.094	.028	
6.0	.195	.098	.028	.191	.096	.028	.182	.094	.027	.175	.091	.027	.168	.088	.026	
7.0	.184	.091	.026	.180	.090	.026	.172	.087	.025	.166	.085	.025	.159	.083	.024	
8.0	.173	.085	.024	.170	.084	.024	.163	.082	.023	.157	.080	.023	.151	.078	.023	
9.0	.164	.079	.022	.161	.078	.022	.155	.076	.022	.149	.075	.021	.144	.073	.021	
10.0	.155	.074	.021	.152	.074	.021	.147	.072	.020	.142	.070	.020	.137	.069	.020	

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																
1.0	.212	.212	.212	.182	.182	.182	.124	.124	.124	.071	.071	.071	.023	.023	.023	
2.0	.188	.154	.126	.161	.133	.109	.110	.092	.076	.064	.054	.045	.020	.017	.015	
3.0	.179	.136	.102	.154	.118	.089	.106	.082	.062	.061	.048	.037	.020	.016	.012	
4.0	.172	.123	.085	.148	.106	.074	.101	.074	.052	.059	.043	.031	.019	.014	.010	
5.0	.165	.112	.073	.142	.097	.064	.098	.068	.045	.057	.040	.027	.018	.013	.009	
6.0	.159	.104	.065	.136	.090	.056	.094	.063	.040	.055	.037	.024	.018	.012	.008	
7.0	.152	.097	.058	.131	.084	.051	.091	.059	.036	.053	.035	.021	.017	.011	.007	
8.0	.147	.091	.053	.126	.079	.046	.087	.056	.033	.051	.033	.020	.016	.011	.006	
9.0	.141	.086	.049	.122	.075	.043	.084	.053	.030	.049	.031	.018	.016	.010	.006	
10.0	.136	.082	.046	.117	.071	.040	.081	.050	.029	.047	.030	.017	.015	.010	.006	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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=0.7100]
Remarks:

Uncorrected UGR Table

Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		

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	27.3	28.6	27.6	28.8	29.1	27.5	28.8	27.8	29.0	29.3
3H	27.2	28.4	27.5	28.7	29.0	27.5	28.7	27.8	29.0	29.3
4H	27.1	28.2	27.4	28.5	28.8	27.4	28.5	27.7	28.8	29.1
6H	27.0	28.1	27.4	28.4	28.7	27.3	28.4	27.7	28.7	29.0
8H	26.9	28.0	27.3	28.3	28.6	27.2	28.3	27.6	28.6	28.9
12H	26.9	27.9	27.3	28.2	28.6	27.2	28.2	27.6	28.5	28.9
4H 2H	27.2	28.4	27.6	28.7	29.0	27.4	28.6	27.8	28.9	29.2
3H	27.2	28.2	27.6	28.5	28.9	27.5	28.4	27.8	28.8	29.1
4H	27.1	28.0	27.5	28.3	28.7	27.4	28.2	27.8	28.6	29.0
6H	27.0	27.8	27.4	28.2	28.6	27.3	28.0	27.7	28.4	28.9
8H	26.9	27.7	27.4	28.1	28.5	27.2	27.9	27.7	28.3	28.8
12H	26.9	27.5	27.4	28.0	28.4	27.2	27.8	27.6	28.3	28.7
8H 4H	26.9	27.7	27.4	28.1	28.5	27.2	27.9	27.7	28.3	28.8
6H	26.8	27.4	27.3	27.9	28.4	27.1	27.7	27.6	28.2	28.6
8H	26.8	27.3	27.3	27.8	28.3	27.1	27.6	27.6	28.1	28.6
12H	26.8	27.2	27.3	27.7	28.2	27.0	27.5	27.6	28.0	28.5
12H 4H	26.9	27.5	27.4	28.0	28.4	27.2	27.8	27.6	28.2	28.7
6H	26.8	27.3	27.3	27.8	28.3	27.1	27.6	27.6	28.1	28.6
8H	26.8	27.2	27.3	27.7	28.2	27.0	27.5	27.6	28.0	28.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.9 / - 0.8					+ 0.7 / - 0.9				
1.5H	+ 0.6 / - 1.1					+ 0.7 / - 1.3				
2.0H	+ 1.7 / - 4.1					+ 1.9 / - 6.8				

CIE Pub.117 Corrected 723.7 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.1)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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=0.7100]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		

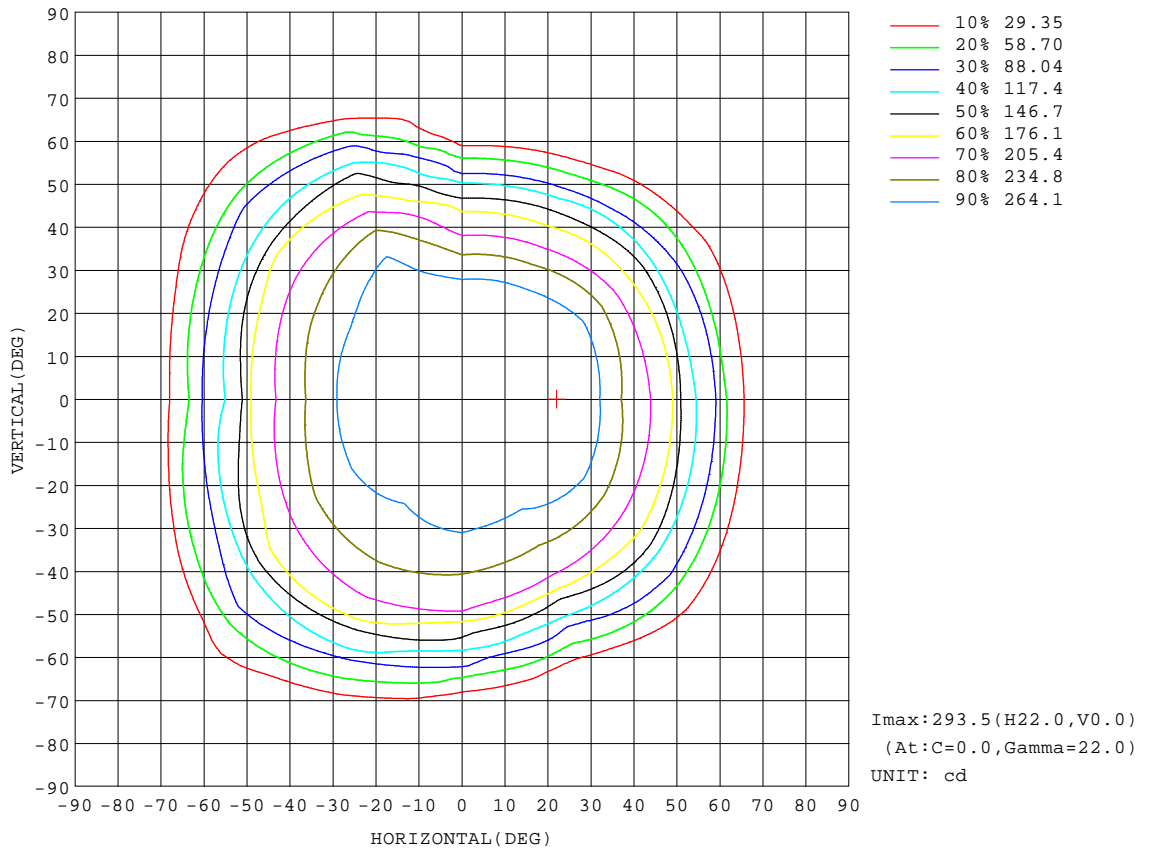
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	62	51	44	61	51	44	59	50	44	38
0.80	72	62	55	71	61	55	69	61	55	48
1.00	81	72	65	80	71	65	78	72	64	58
1.25	88	79	73	87	79	73	84	77	72	65
1.50	93	85	79	91	84	78	88	82	77	70
2.00	99	92	87	97	91	86	94	88	84	77
2.50	102	96	91	100	94	90	96	92	88	80
3.00	105	100	95	103	98	94	99	95	91	83
4.00	108	104	100	106	102	98	101	98	95	86
5.00	110	106	103	108	104	101	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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=0.7100]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		

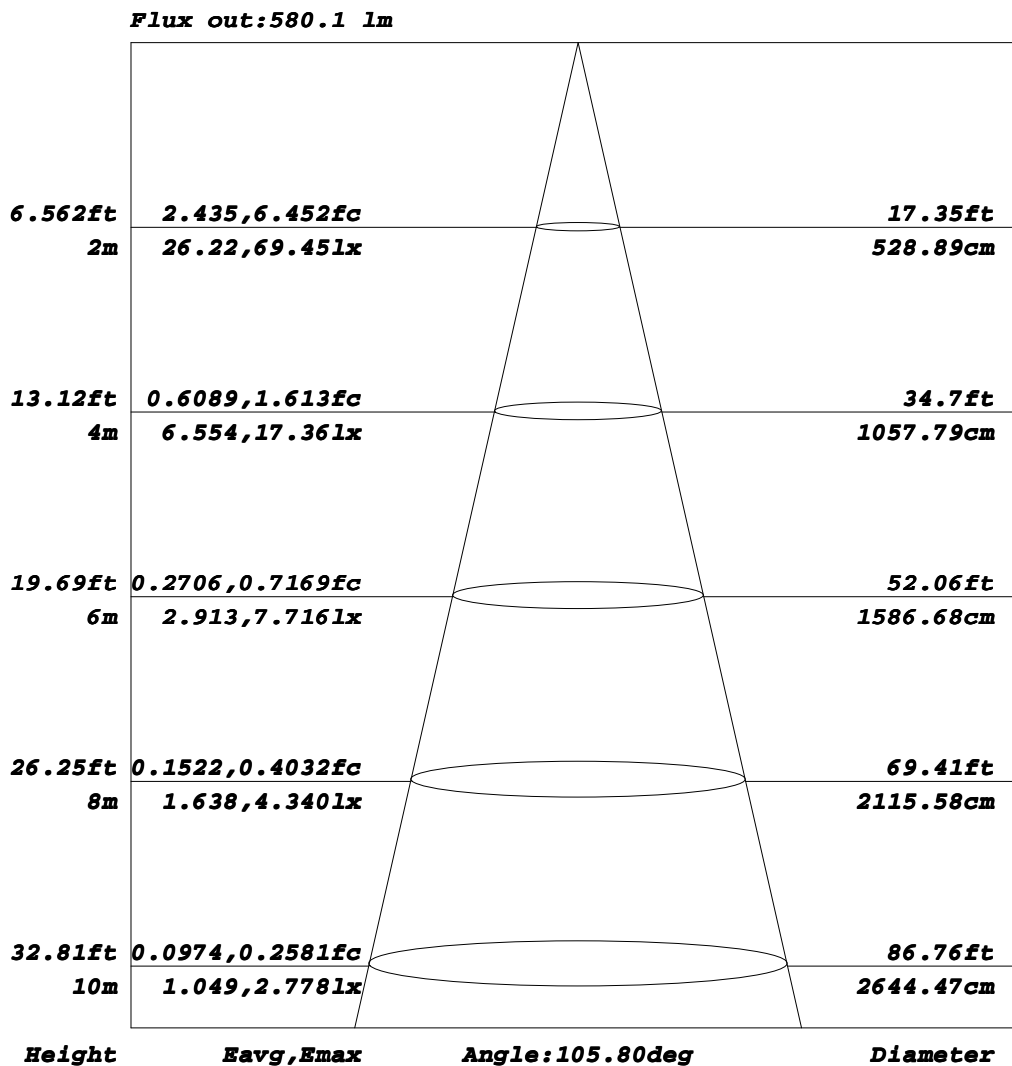


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-09-19

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=0.7100]
Remarks:

AAI Figure

Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		



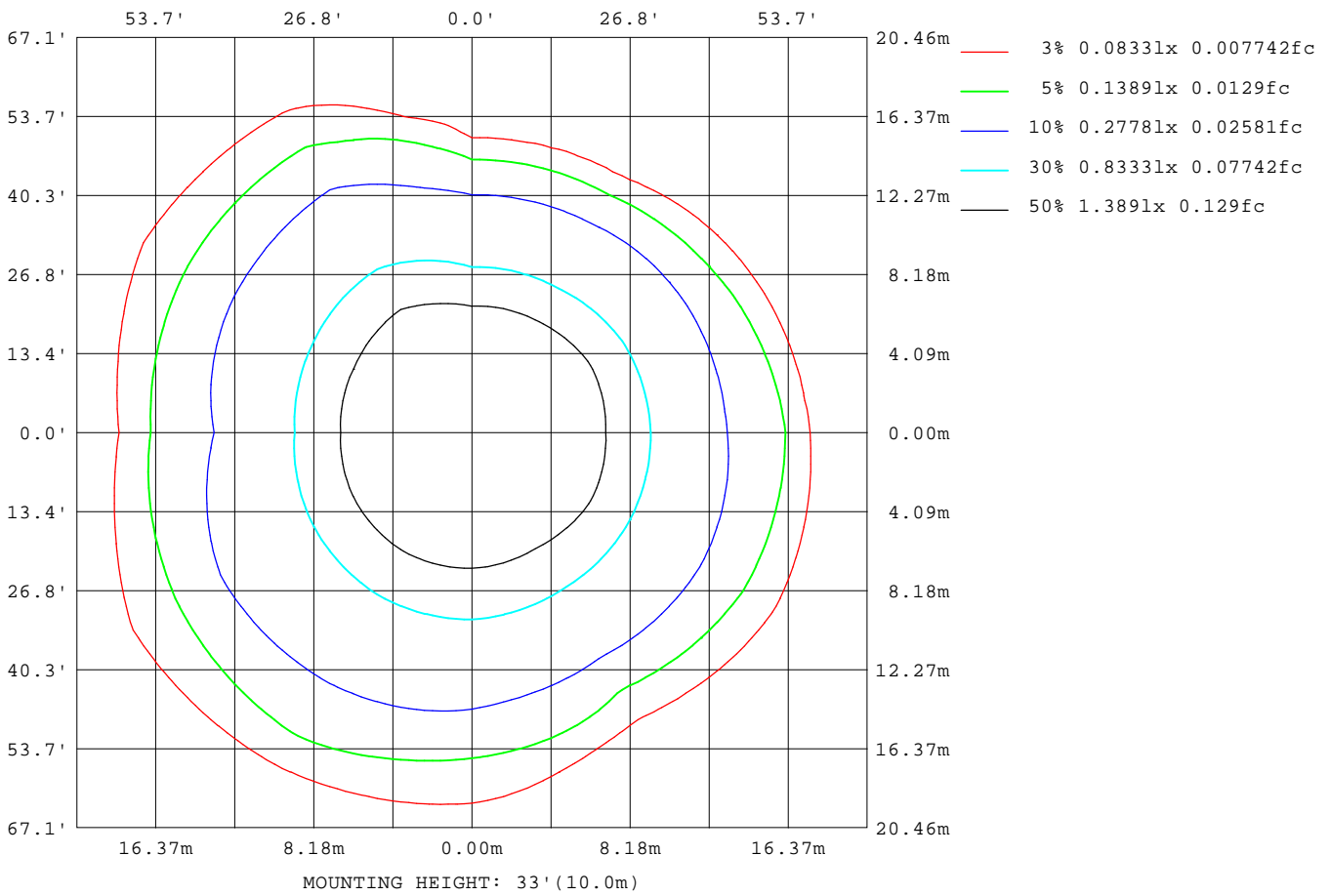
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017-09-19

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=0.7100]
 Remarks:

ISOLUX DIAGRAM

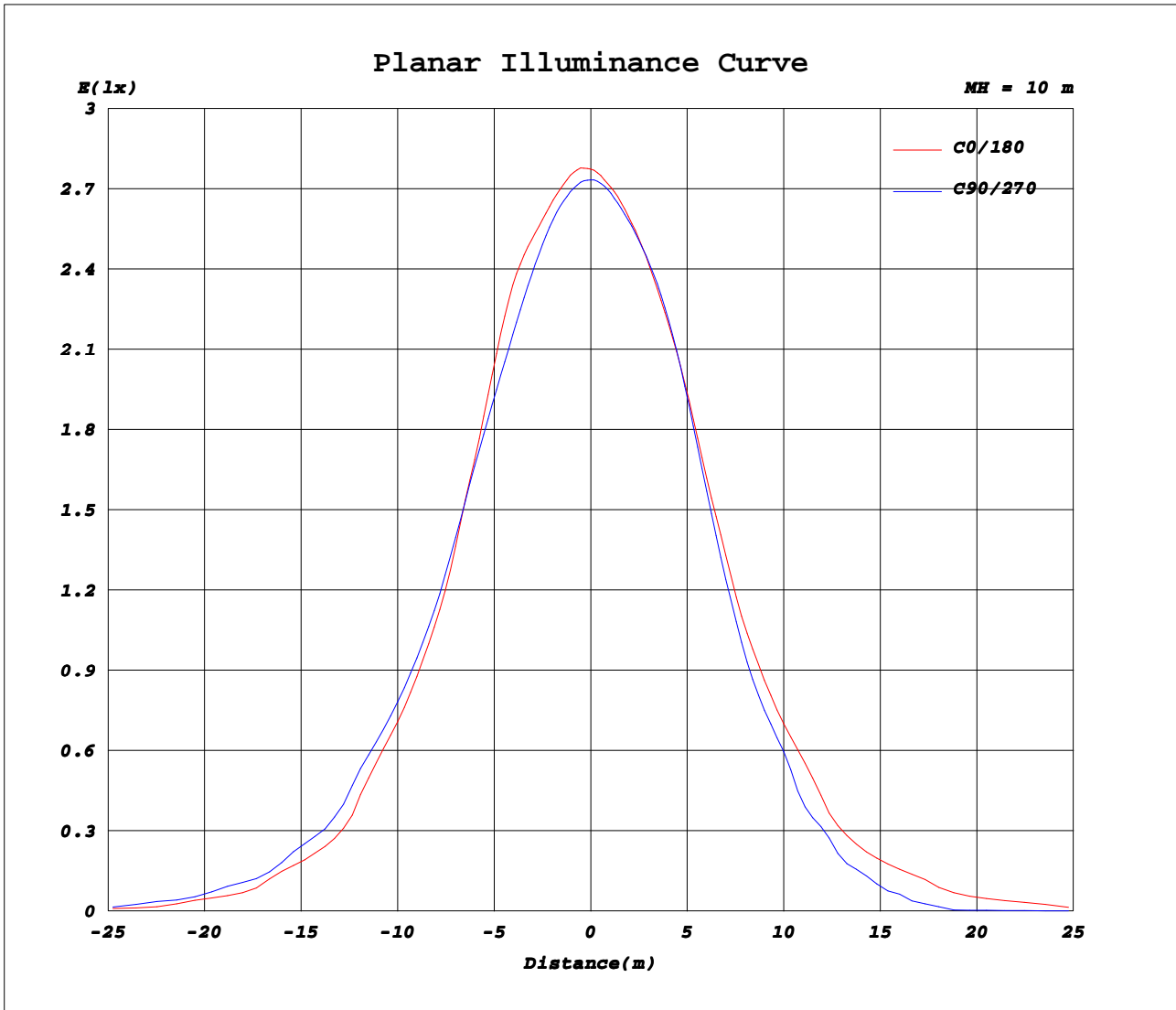
Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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=0.7100]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-09-19

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=0.7100]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.4V I:0.0490A P:10.20W PF:0.9350 Lamp Flux:723.739x1 lm		
NAME: IMSYLF010WBKSLMDL	TYPE:LED	
DIM.: 135*115mm	SUR.:65*50mm	
MFR.: SYNERJI		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	277	276	274	273	272	271	277	276	274	273	272	271							
5	279	277	275	273	272	270	275	274	274	273	273	273							
10	280	278	275	273	270	269	275	274	272	273	274	273							
15	284	279	273	273	270	269	275	273	272	275	276	275							
20	291	282	272	271	267	269	275	273	272	277	279	278							
25	290	285	269	269	265	268	273	271	273	273	276	280							
30	272	277	262	265	263	264	261	265	274	254	261	273							
35	248	258	244	254	257	252	242	251	269	226	234	256							
40	222	229	227	237	242	236	218	232	253	193	200	222							
45	200	204	206	221	223	213	198	211	224	169	172	188							
50	164	175	153	201	205	195	163	190	188	119	122	151							
55	115	121	108	148	178	172	117	142	156	69.8	72.2	92.1							
60	69.9	87.3	61.5	98.0	129	119	94.8	105	105	22.1	23.1	46.5							
65	36.7	35.8	19.9	56.5	81.4	91.4	52.9	64.5	61.9	3.68	3.36	12.2							
70	2.52	7.99	2.68	20.1	44.3	45.0	20.3	37.3	14.1	2.56	2.39	2.45							
75	1.36	1.37	1.47	3.58	4.04	16.1	2.73	4.09	2.83	1.93	1.85	1.90							
80	0.87	0.90	0.96	1.82	2.01	1.56	2.09	2.21	2.16	1.58	1.50	1.53							
85	0.67	0.71	0.70	1.09	1.23	1.12	1.78	1.81	1.79	1.52	1.56	1.60							
90	0.83	0.89	0.86	0.71	0.85	0.88	1.62	1.61	1.55	1.72	1.75	1.76							
95	1.06	1.15	1.10	0.75	0.76	0.83	1.81	1.76	1.70	2.01	2.05	2.01							
100	1.36	1.45	1.41	0.98	0.97	1.06	2.08	2.00	1.94	2.35	2.39	2.34							
105	1.71	1.82	1.78	1.27	1.25	1.34	2.42	2.32	2.27	2.72	2.77	2.69							
110	2.10	2.23	2.18	1.61	1.58	1.69	2.80	2.69	2.64	3.11	3.16	3.05							
115	2.52	2.65	2.63	2.01	1.97	2.08	3.22	3.09	3.04	3.52	3.55	3.44							
120	2.95	3.09	3.07	2.45	2.41	2.50	3.65	3.49	3.44	3.91	3.92	3.79							
125	3.38	3.50	3.50	2.91	2.87	2.93	4.06	3.88	3.83	4.25	4.24	4.12							
130	3.77	3.88	3.89	3.37	3.31	3.35	4.42	4.24	4.18	4.54	4.51	4.38							
135	4.12	4.21	4.23	3.79	3.70	3.72	4.74	4.56	4.47	4.76	4.74	4.60							
140	4.44	4.52	4.53	4.14	4.05	4.03	4.99	4.82	4.73	4.95	4.93	4.80							
145	4.75	4.82	4.83	4.46	4.37	4.35	5.22	5.04	4.97	5.14	5.12	5.01							
150	5.06	5.14	5.14	4.78	4.69	4.67	5.44	5.27	5.21	5.36	5.34	5.23							
155	5.39	5.47	5.46	5.11	5.02	5.00	5.68	5.51	5.48	5.62	5.57	5.47							
160	5.71	5.80	5.76	5.45	5.37	5.35	5.93	5.76	5.75	5.88	5.81	5.70							
165	6.02	6.10	6.06	5.80	5.73	5.67	6.19	6.02	6.03	6.14	6.03	5.93							
170	6.34	6.37	6.34	6.13	6.06	5.98	6.43	6.28	6.27	6.33	6.21	6.12							
175	6.57	6.57	6.56	6.40	6.29	6.21	6.57	6.46	6.45	6.43	6.30	6.19							
180	6.62	6.61	6.57	6.51	6.35	6.25	6.66	6.58	6.59	6.48	6.36	6.23							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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=0.7100]
Remarks: