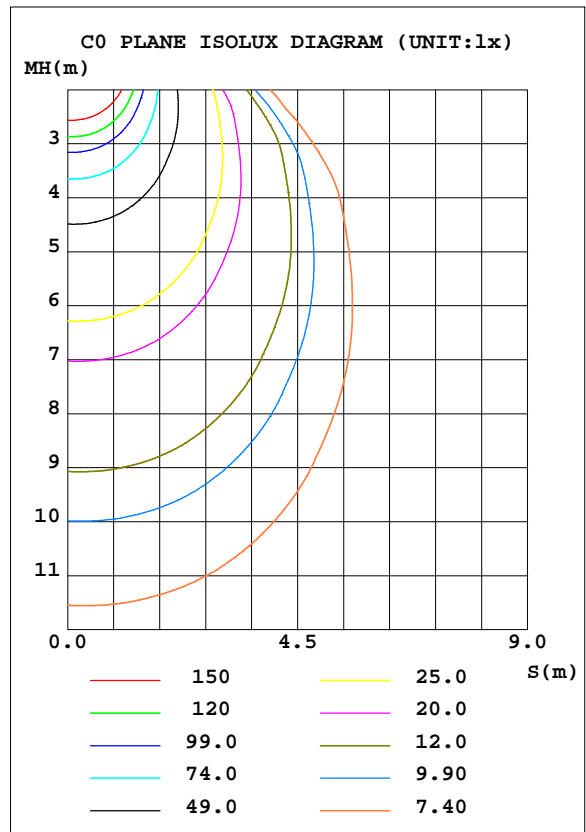
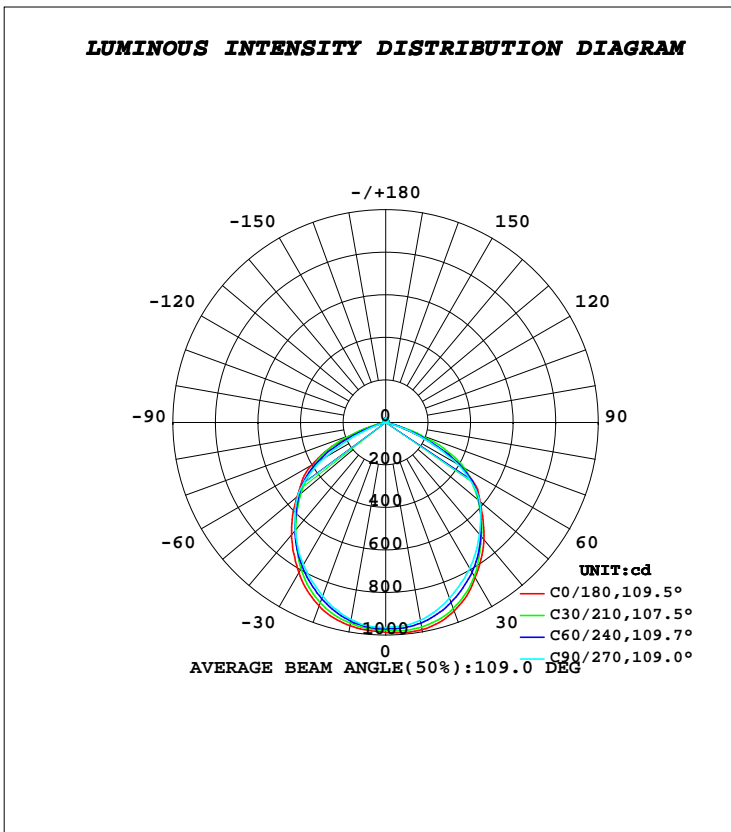


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.4V I:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
MFR.: SYNERJI		

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	IMSYLF030WBKSLMDL	Imax(cd)	992.4	S/MH(C0/180)	1.26
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	2502.5	η UP, DN(C0-180)	1.3, 49.4
NOMINAL FLUX(lm)	2502.52	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.5, 47.8
LAMPS INSIDE	1	η up(%)	2.8	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.4	η down(%)	97.2	CIBSE SHR MAX	1.35



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	988.5	966.9	944.2	938.6	969.9	953.1	939.2	948.8	0- 10	91.92	91.92	3.67,3.67
20	942.7	915.1	878.4	881.4	917.9	891.7	867.7	898.3	10- 20	262.9	354.8	14.2,14.2
30	841.9	823.9	791.6	786.2	815.9	790.1	773.2	803.8	20- 30	393.5	748.3	29.9,29.9
40	718.6	698.3	686.7	661.7	688.7	661.4	662.5	674.8	30- 40	464.6	1213	48.5,48.5
50	580.0	570.4	577.0	531.9	544.3	526.7	540.4	544.6	40- 50	474.2	1687	67.4,67.4
60	399.9	416.0	387.1	393.7	402.8	373.7	334.0	388.3	50- 60	424.8	2112	84.4,84.4
70	119.0	156.6	121.7	164.5	171.6	143.3	74.35	130.4	60- 70	264.3	2376	95,95
80	3.988	4.533	4.303	4.431	7.824	7.554	7.080	7.002	70- 80	51.36	2428	97,97
90	3.366	3.157	2.906	3.099	6.249	6.217	5.986	6.099	80- 90	5.389	2433	97.2,97.2
100	5.131	4.821	4.483	4.763	7.679	7.700	7.516	7.483	90-100	5.835	2439	97.5,97.5
110	7.472	7.106	6.802	7.072	9.992	9.927	9.767	9.593	100-110	7.709	2446	97.8,97.8
120	9.861	9.556	9.380	9.511	12.38	12.28	12.14	11.80	110-120	9.563	2456	98.1,98.1
130	12.03	11.88	11.75	11.73	14.38	14.28	14.15	13.68	120-130	10.69	2467	98.6,98.6
140	14.09	13.98	13.81	13.75	16.01	15.84	15.56	15.21	130-140	10.71	2477	99,99
150	16.21	16.13	15.96	15.80	17.61	17.34	16.98	16.67	140-150	9.812	2487	99.4,99.4
160	18.16	18.14	17.91	17.59	19.20	18.69	18.38	18.07	150-160	8.030	2495	99.7,99.7
170	20.12	19.96	19.52	19.22	20.60	19.96	19.55	19.37	160-170	5.361	2501	99.9,99.9
180	21.37	20.86	20.35	20.13	21.54	20.85	20.26	20.13	170-180	1.921	2503	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

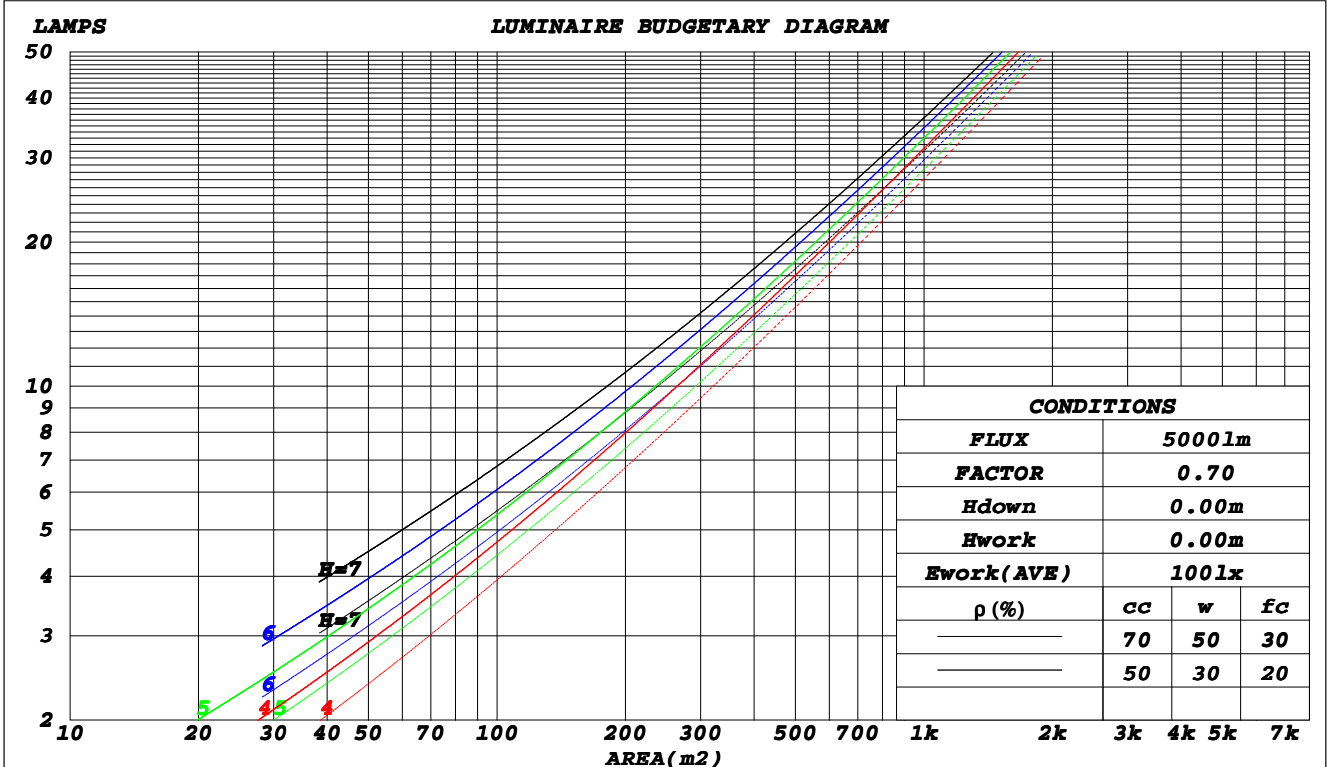
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
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	1.06	1.02	.99	1.03	.90	.97	.98	.96	.93	.94	.92	.90	.90	.88	.87	.85														
2.0	.93	.87	.82	.91	.86	.81	.87	.83	.79	.84	.80	.76	.80	.77	.74	.72														
3.0	.82	.75	.69	.81	.74	.68	.77	.72	.67	.74	.69	.65	.72	.67	.64	.62														
4.0	.73	.65	.59	.72	.64	.58	.69	.63	.57	.67	.61	.56	.64	.59	.55	.53														
5.0	.66	.57	.51	.64	.57	.51	.62	.55	.50	.60	.54	.49	.58	.52	.48	.46														
6.0	.59	.51	.45	.58	.50	.44	.56	.49	.44	.54	.48	.43	.52	.47	.43	.41														
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.49	.43	.38	.48	.42	.38	.36														
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.45	.39	.34	.44	.38	.34	.32														
9.0	.45	.37	.32	.44	.37	.32	.43	.36	.31	.42	.35	.31	.41	.35	.31	.29														
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26														



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:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
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	.264	.150	.048	.256	.146	.046	.242	.139	.044	.228	.132	.042	.216	.125	.040	
2.0	.259	.142	.043	.252	.139	.043	.239	.133	.041	.227	.127	.040	.216	.122	.039	
3.0	.246	.131	.039	.240	.128	.039	.228	.124	.038	.218	.119	.037	.208	.115	.036	
4.0	.231	.120	.035	.225	.118	.035	.215	.114	.034	.206	.111	.033	.197	.107	.033	
5.0	.216	.110	.032	.211	.109	.032	.202	.105	.031	.194	.102	.030	.186	.099	.030	
6.0	.202	.101	.029	.198	.100	.029	.190	.097	.028	.182	.095	.028	.175	.092	.027	
7.0	.190	.094	.027	.186	.093	.026	.179	.090	.026	.172	.088	.026	.165	.086	.025	
8.0	.178	.087	.024	.175	.086	.024	.168	.084	.024	.162	.082	.024	.156	.080	.023	
9.0	.168	.081	.023	.165	.080	.023	.159	.078	.022	.153	.077	.022	.148	.075	.022	
10.0	.158	.076	.021	.155	.075	.021	.150	.073	.021	.145	.072	.020	.140	.070	.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	.181	.181	.181	.123	.123	.123	.071	.071	.071	.023	.023	.023	
2.0	.189	.154	.124	.162	.132	.107	.111	.091	.074	.064	.053	.044	.021	.017	.014	
3.0	.181	.136	.099	.156	.117	.086	.107	.081	.060	.062	.048	.036	.020	.015	.012	
4.0	.174	.122	.083	.149	.106	.072	.103	.074	.051	.059	.043	.030	.019	.014	.010	
5.0	.167	.112	.071	.143	.097	.062	.099	.068	.044	.057	.040	.026	.018	.013	.009	
6.0	.160	.103	.063	.138	.090	.055	.095	.063	.039	.055	.037	.023	.018	.012	.008	
7.0	.154	.097	.056	.132	.084	.049	.091	.059	.035	.053	.035	.021	.017	.011	.007	
8.0	.148	.091	.052	.127	.079	.045	.088	.055	.032	.051	.033	.019	.017	.011	.006	
9.0	.142	.086	.048	.122	.075	.042	.085	.052	.030	.049	.031	.018	.016	.010	.006	
10.0	.137	.082	.045	.118	.071	.039	.082	.050	.028	.048	.029	.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:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
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	27.2	28.6	27.5	28.8	29.1	27.0	28.4	27.3	28.6	28.9
3H	27.8	29.1	28.1	29.4	29.7	27.5	28.8	27.8	29.1	29.4
4H	27.7	29.0	28.1	29.3	29.6	27.5	28.7	27.8	29.0	29.3
6H	27.6	28.8	28.0	29.1	29.4	27.3	28.5	27.7	28.8	29.1
8H	27.6	28.7	28.0	29.0	29.3	27.3	28.4	27.7	28.7	29.1
12H	27.5	28.6	27.9	28.9	29.3	27.2	28.3	27.6	28.6	29.0
4H 2H	27.6	28.9	28.0	29.2	29.5	27.4	28.7	27.8	28.9	29.3
3H	28.4	29.4	28.8	29.8	30.1	28.0	29.1	28.4	29.4	29.8
4H	28.3	29.3	28.8	29.7	30.0	28.0	28.9	28.4	29.3	29.7
6H	28.2	29.1	28.7	29.5	29.9	27.9	28.7	28.3	29.1	29.5
8H	28.2	29.0	28.6	29.4	29.8	27.8	28.6	28.3	29.0	29.5
12H	28.2	28.9	28.6	29.3	29.7	27.8	28.5	28.3	28.9	29.4
8H 4H	28.3	29.0	28.7	29.4	29.9	27.9	28.7	28.4	29.1	29.5
6H	28.2	28.8	28.6	29.2	29.7	27.8	28.5	28.3	28.9	29.4
8H	28.1	28.7	28.6	29.1	29.7	27.8	28.3	28.3	28.8	29.3
12H	28.1	28.6	28.6	29.0	29.6	27.7	28.2	28.3	28.7	29.2
12H 4H	28.2	28.9	28.7	29.3	29.8	27.9	28.6	28.3	29.0	29.5
6H	28.1	28.7	28.6	29.1	29.7	27.8	28.3	28.3	28.8	29.3
8H	28.1	28.6	28.6	29.0	29.6	27.7	28.2	28.3	28.7	29.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.5				
1.5H	+ 0.4 / - 0.5					+ 0.6 / - 1.0				
2.0H	+ 0.4 / - 0.8					+ 0.6 / - 0.9				

CIE Pub.117 Corrected 2503 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.2)

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:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
MFR.: SYNERJI		

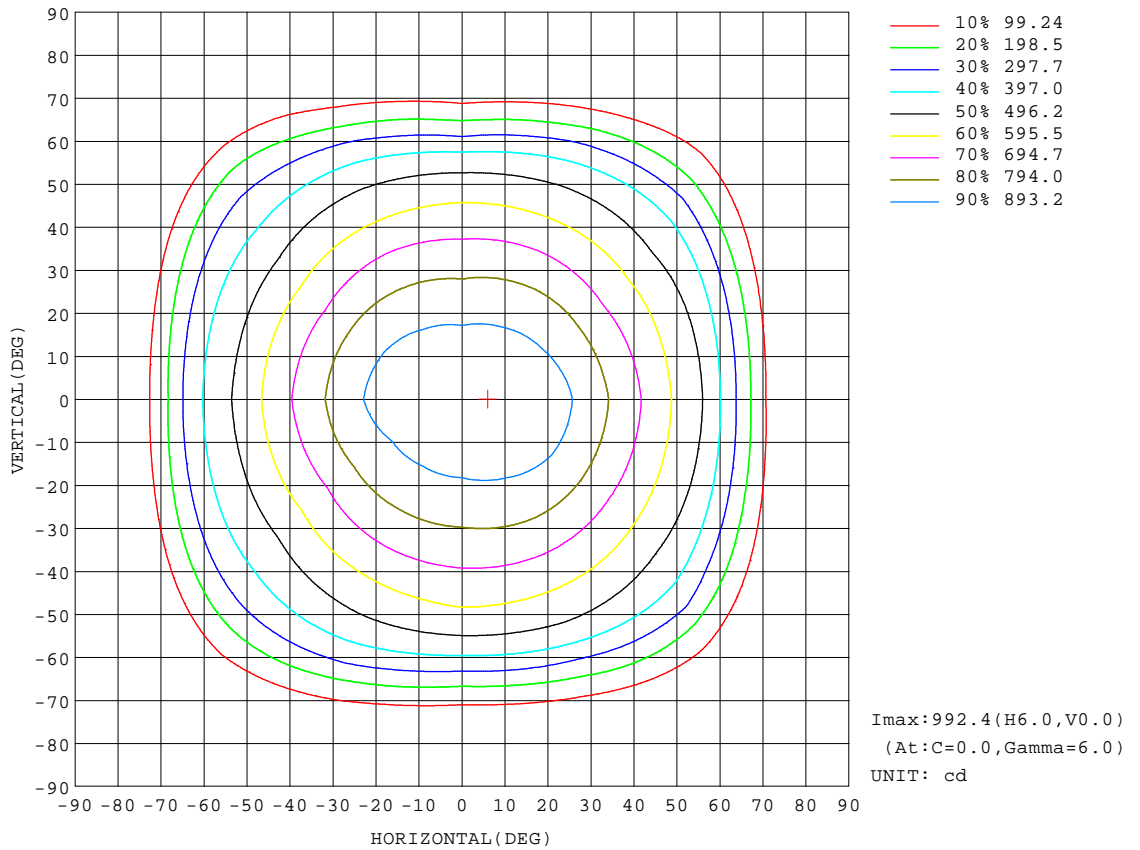
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	48	41	58	48	41	57	47	41	35
0.80	70	59	52	69	58	51	67	57	51	44
1.00	78	68	61	77	67	61	75	68	60	53
1.25	86	76	69	84	75	69	81	73	68	61
1.50	91	82	75	89	81	75	86	79	73	66
2.00	97	90	84	95	88	83	92	86	81	73
2.50	101	94	88	99	92	87	94	89	85	77
3.00	104	98	93	102	96	92	97	93	89	80
4.00	107	102	98	105	101	97	100	97	94	85
5.00	110	105	102	107	103	100	102	99	97	87
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:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
MFR.: SYNERJI		



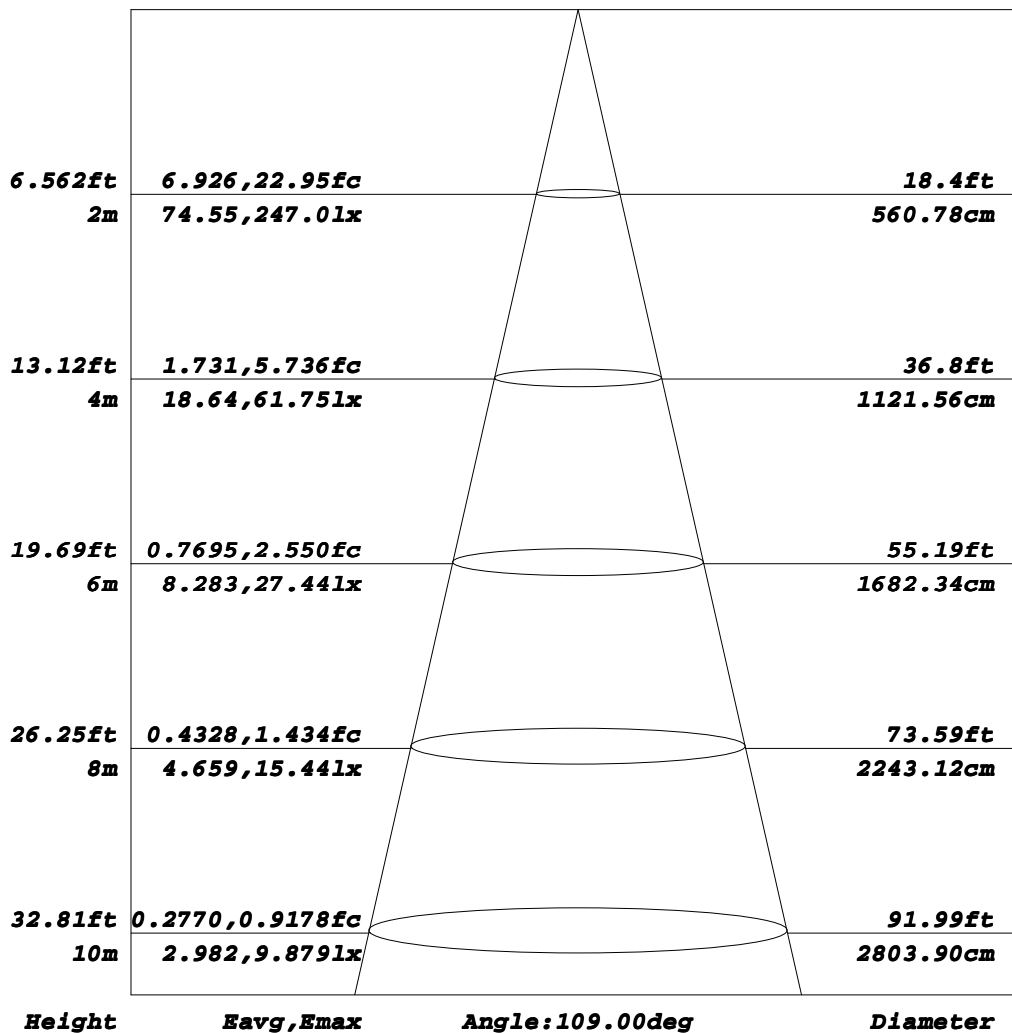
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-09-19

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:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
MFR.: SYNERJI		

Flux out:1911 lm



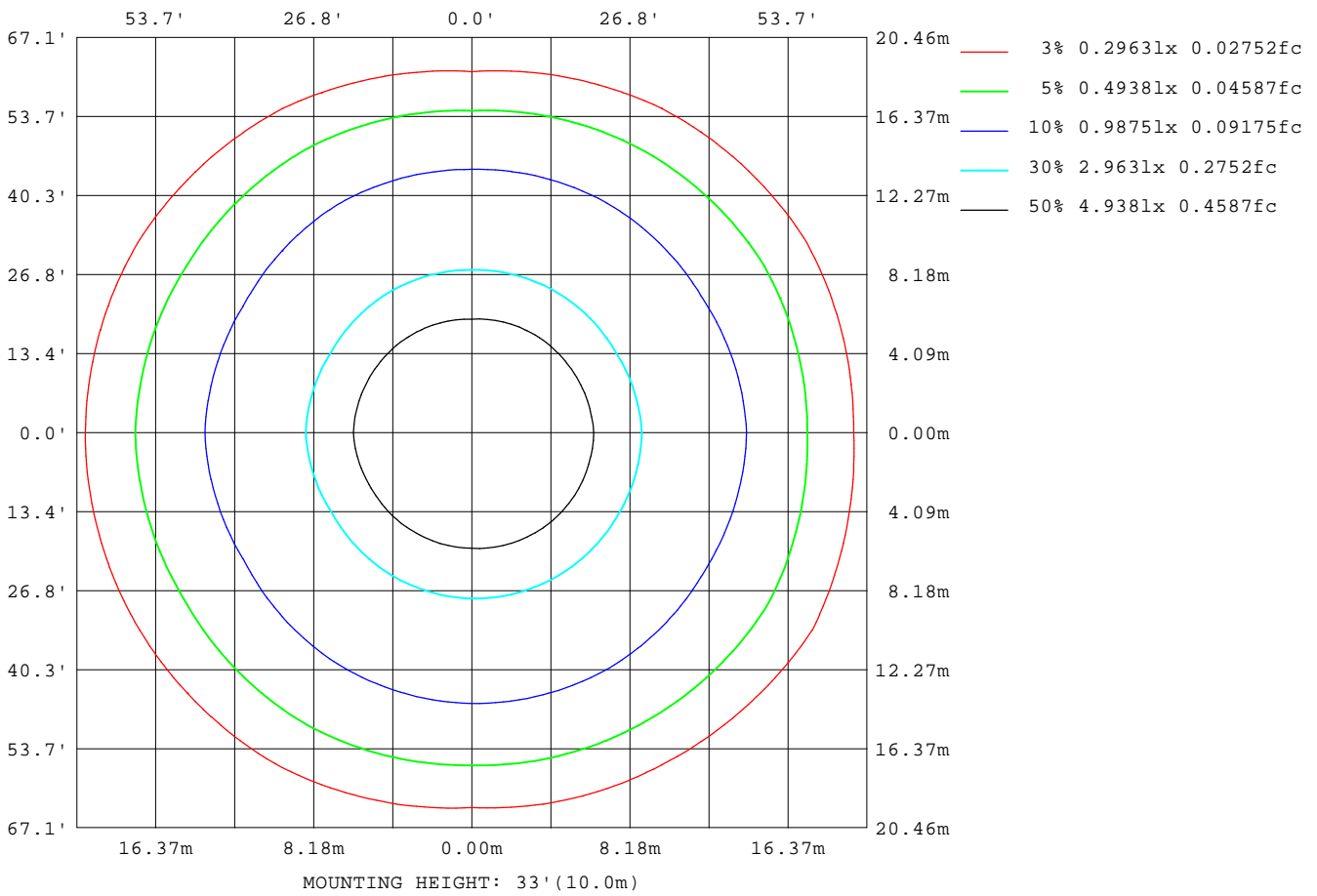
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 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

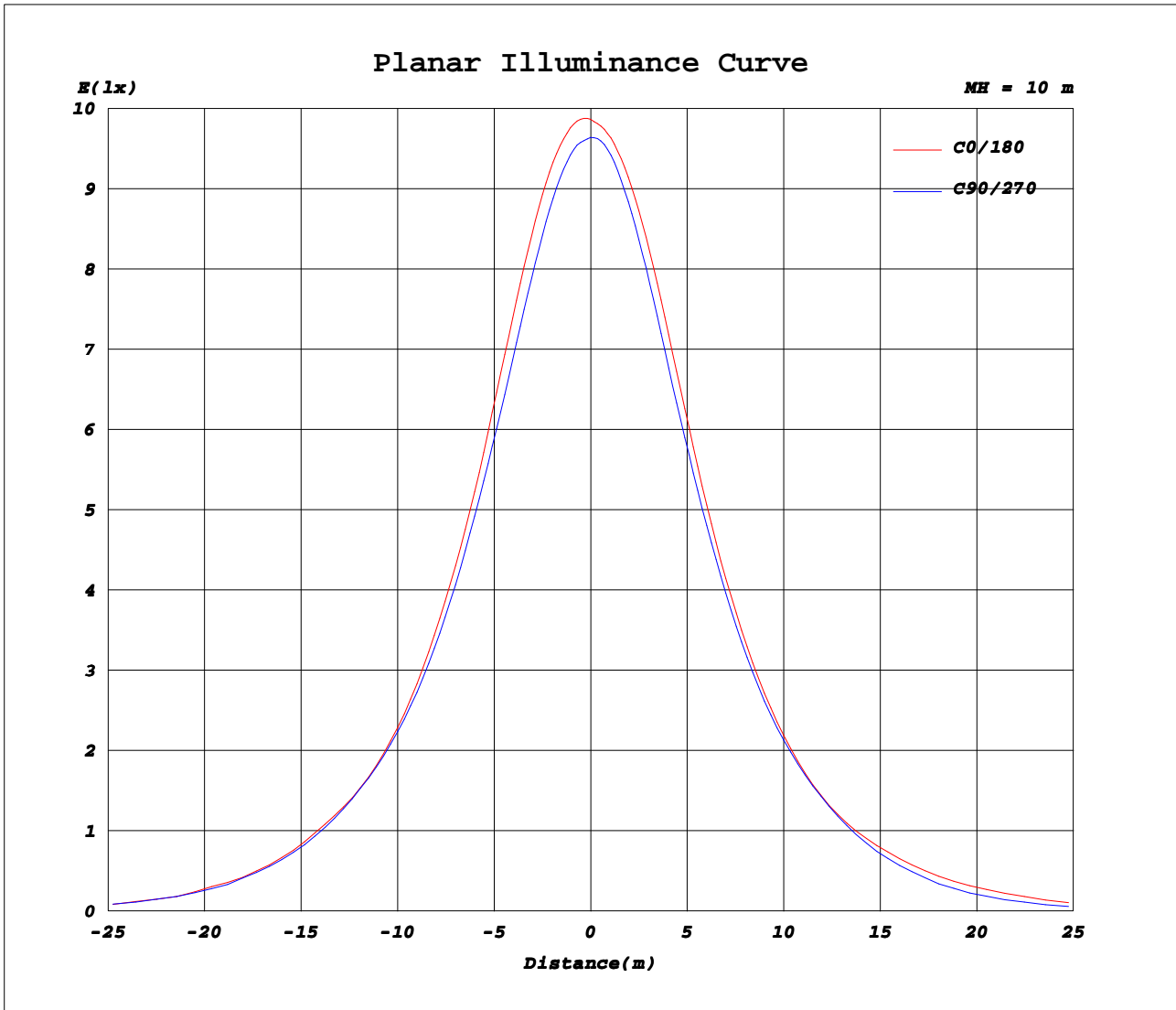
Test:U:220.4V I:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
MFR.: SYNERJI		



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:0.1470A P:30.70W PF:0.9470 Lamp Flux:2502.52x1 lm		
NAME: IMSYLF030WBKSLMDL	TYPE:LED	
DIM.: 235*190mm	SUR.:140*110mm	
MFR.: SYNERJI		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	987	977	970	964	959	957	987	977	970	964	959	957							
5	992	982	970	960	953	951	980	972	966	960	959	960							
10	988	976	958	944	939	939	970	958	949	939	945	953							
15	974	960	934	916	913	918	951	936	920	909	921	939							
20	943	930	900	878	879	884	918	901	882	868	887	910							
25	901	888	858	836	835	839	873	855	835	822	842	867							
30	842	835	813	792	786	786	816	796	784	773	794	814							
35	784	767	758	741	732	720	754	726	728	721	735	746							
40	719	701	696	687	670	653	689	659	664	663	672	678							
45	647	636	634	633	607	586	619	590	596	603	606	613							
50	580	567	574	577	545	519	544	521	533	540	543	547							
55	517	497	506	495	482	451	480	448	464	450	473	479							
60	400	426	406	387	400	388	403	380	368	334	374	403							
65	245	316	271	243	292	301	295	295	244	189	242	290							
70	119	178	135	122	156	173	172	168	118	74.4	112	149							
75	7.85	48.7	30.8	18.9	55.7	64.2	53.6	63.2	21.3	8.74	13.6	35.3							
80	3.99	4.61	4.46	4.30	4.48	4.39	7.82	7.56	7.55	7.08	6.93	7.07							
85	3.07	3.31	3.27	3.27	3.46	3.55	6.82	6.59	6.45	6.09	5.95	6.05							
90	3.37	3.25	3.06	2.91	3.03	3.17	6.25	6.29	6.15	5.99	6.09	6.11							
95	4.15	4.01	3.78	3.61	3.75	3.93	6.85	6.94	6.77	6.61	6.69	6.68							
100	5.13	4.95	4.69	4.48	4.66	4.87	7.68	7.78	7.62	7.52	7.51	7.46							
105	6.27	6.05	5.79	5.58	5.75	5.98	8.77	8.83	8.71	8.62	8.57	8.45							
110	7.47	7.23	6.98	6.80	6.95	7.20	9.99	9.99	9.87	9.77	9.67	9.51							
115	8.68	8.43	8.21	8.09	8.18	8.41	11.2	11.2	11.1	11.0	10.8	10.6							
120	9.86	9.63	9.48	9.38	9.41	9.61	12.4	12.3	12.3	12.1	11.9	11.6							
125	11.0	10.8	10.7	10.6	10.6	10.7	13.5	13.4	13.3	13.2	13.0	12.6							
130	12.0	11.9	11.9	11.7	11.7	11.8	14.4	14.3	14.2	14.2	13.9	13.4							
135	13.0	13.0	12.9	12.8	12.7	12.8	15.2	15.1	15.0	14.9	14.7	14.3							
140	14.1	14.1	13.9	13.8	13.7	13.8	16.0	15.9	15.8	15.6	15.4	15.1							
145	15.2	15.2	15.0	14.9	14.8	14.8	16.8	16.7	16.5	16.2	16.1	15.8							
150	16.2	16.2	16.1	16.0	15.8	15.8	17.6	17.4	17.3	17.0	16.8	16.6							
155	17.2	17.2	17.1	17.0	16.8	16.7	18.4	18.1	17.9	17.7	17.5	17.3							
160	18.2	18.2	18.1	17.9	17.6	17.5	19.2	18.8	18.6	18.4	18.2	17.9							
165	19.1	19.2	19.0	18.7	18.5	18.4	19.9	19.4	19.3	19.0	18.9	18.6							
170	20.1	20.1	19.8	19.5	19.2	19.2	20.6	20.1	19.9	19.5	19.5	19.3							
175	21.0	20.9	20.4	20.1	19.8	19.8	21.2	20.7	20.4	20.0	19.9	19.8							
180	21.4	21.1	20.6	20.4	20.1	20.2	21.5	21.0	20.7	20.3	20.1	20.1							

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: