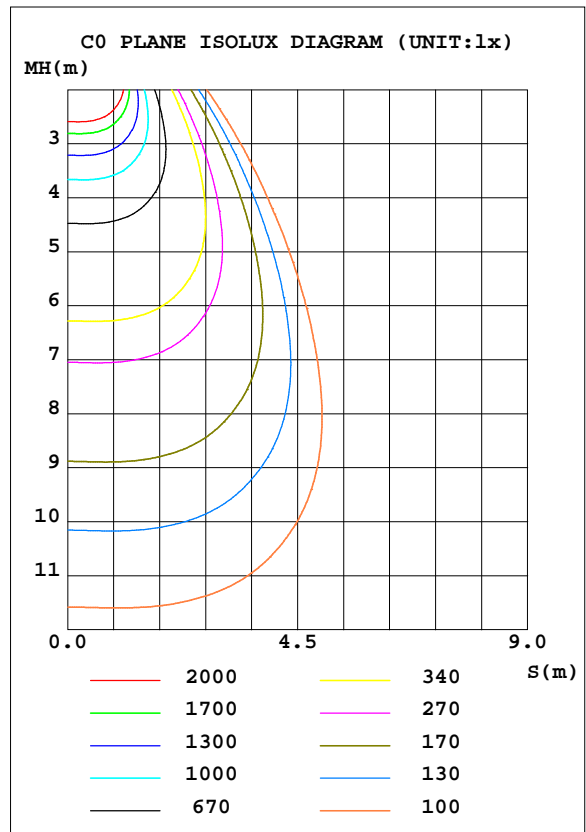
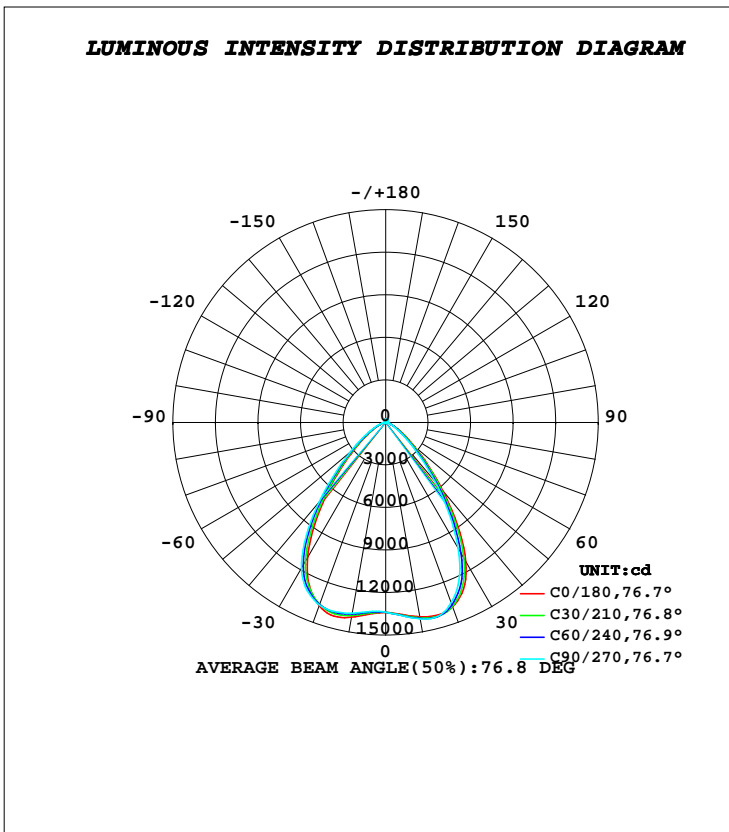


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 151.28 lm/W			
MODEL	XY-GK150WW-90A	I _{max} (cd)	14216	S/MH(C0/180)	1.12
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	1.08
RATED VOLTAGE(V)	220.2	TOTAL FLUX(lm)	23176	η UP, DN(C0-180)	1.5,45.4
NOMINAL FLUX(lm)	23176.2	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.5,51.7
LAMPS INSIDE	1	η up(%)	2.9	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220.2	η down(%)	97.1	CIBSE SHR MAX	1.15



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-07-13

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=0.7063]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1391	1401	1406	1409	1395	1377	1365	1359	0- 10	1304	1304	5.63,5.63
20	1383	1374	1352	1336	1374	1365	1368	1375	10- 20	3945	5250	22.7,22.7
30	1132	1083	1022	980.8	1104	1150	1190	1213	20- 30	5797	11046	47.7,47.7
40	624.1	584.4	540.0	506.1	629.7	681.6	727.8	750.7	30- 40	5428	16474	71.1,71.1
50	269.3	243.0	218.8	207.7	276.2	303.5	329.3	343.7	40- 50	3318	19792	85.4,85.4
60	110.8	99.00	88.38	83.00	106.6	120.0	135.2	143.1	50- 60	1601	21393	92.3,92.3
70	40.40	37.38	34.41	32.19	41.16	44.47	48.41	52.75	60- 70	708.9	22101	95.4,95.4
80	15.60	14.68	13.60	12.12	18.05	18.95	20.08	21.66	70- 80	291.8	22393	96.6,96.6
90	2.399	2.514	2.630	2.672	4.531	4.517	5.032	5.366	80- 90	99.31	22493	97.1,97.1
100	3.875	4.082	4.284	4.380	5.907	5.699	5.484	5.387	90-100	44.92	22537	97.2,97.2
110	6.145	6.447	6.783	6.891	7.871	7.599	7.316	7.208	100-110	62.45	22600	97.5,97.5
120	9.127	9.488	9.864	10.07	10.45	10.13	9.802	9.628	110-120	82.90	22683	97.9,97.9
130	12.57	12.90	13.31	13.57	13.45	13.07	12.69	12.48	120-130	102.0	22785	98.3,98.3
140	15.81	16.04	16.44	16.66	16.18	15.85	15.52	15.34	130-140	112.2	22897	98.8,98.8
150	18.44	18.49	18.87	19.03	18.24	17.94	17.79	17.66	140-150	107.7	23005	99.3,99.3
160	20.58	20.64	20.94	21.06	20.04	19.75	19.67	19.58	150-160	88.93	23094	99.6,99.6
170	22.84	23.06	23.32	23.22	22.51	22.22	21.96	22.00	160-170	60.45	23154	99.9,99.9
180	23.65	23.91	23.61	23.70	23.69	23.91	23.58	23.70	170-180	22.13	23176	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

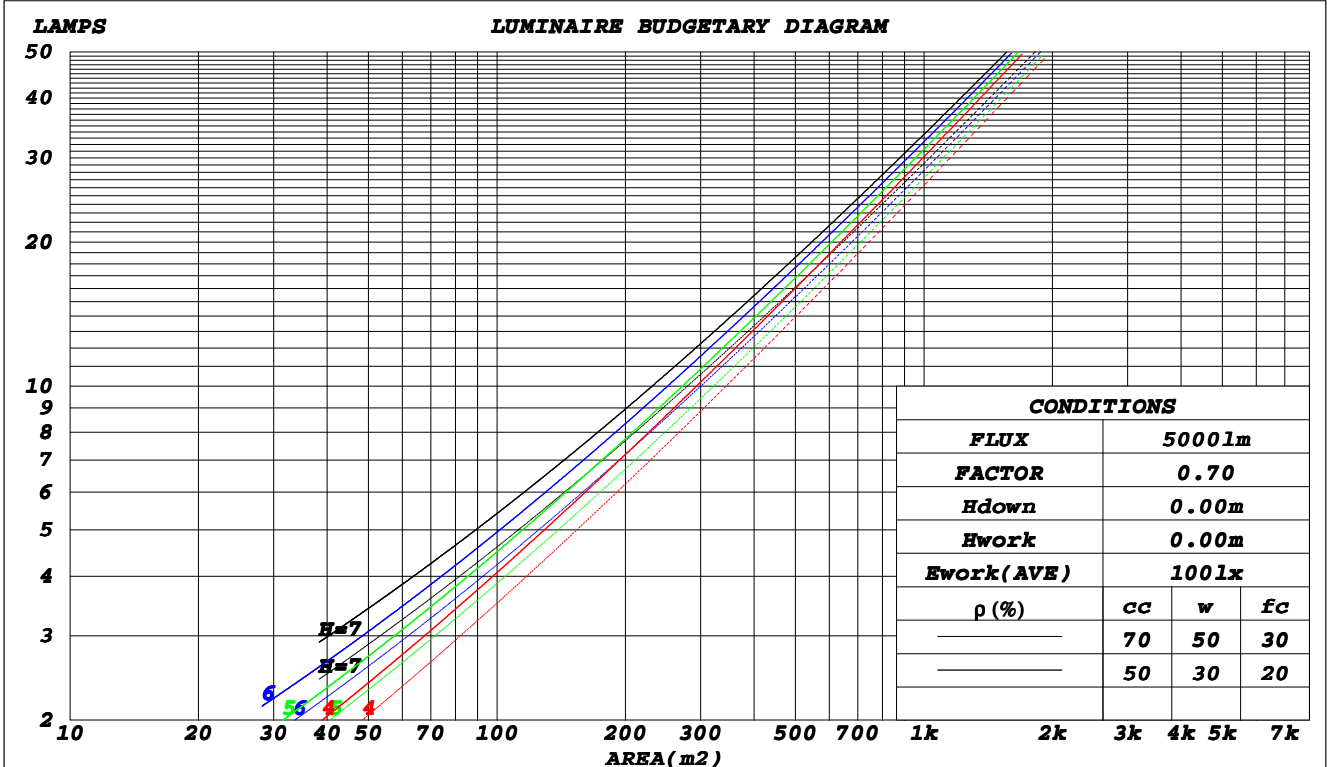
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-07-13

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=0.7063]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	

ρcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρw	0															
ρfc	0															
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.08	1.05	1.02	1.05	1.02	.99	1.01	.98	.96	.96	.95	.93	.92	.91	.90	.88
2.0	.98	.93	.89	.96	.91	.87	.92	.88	.85	.88	.85	.83	.85	.83	.80	.79
3.0	.89	.83	.78	.87	.82	.77	.84	.79	.75	.81	.77	.74	.79	.75	.72	.70
4.0	.81	.75	.69	.80	.74	.69	.77	.72	.68	.75	.70	.66	.73	.69	.65	.63
5.0	.75	.67	.62	.73	.67	.62	.71	.65	.61	.69	.64	.60	.67	.63	.59	.57
6.0	.69	.61	.56	.68	.61	.56	.66	.60	.55	.64	.59	.55	.62	.58	.54	.52
7.0	.63	.56	.51	.62	.56	.51	.61	.55	.50	.59	.54	.50	.58	.53	.49	.48
8.0	.59	.52	.47	.58	.51	.46	.56	.50	.46	.55	.50	.46	.54	.49	.45	.44
9.0	.55	.48	.43	.54	.47	.43	.53	.47	.42	.51	.46	.42	.50	.45	.42	.40
10.0	.51	.44	.40	.50	.44	.39	.49	.43	.39	.48	.43	.39	.47	.42	.39	.37



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017-07-13

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=0.7063]
 Remarks:

WEC AND CCEC

Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	

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	.222	.126	.040	.214	.122	.039	.200	.115	.037	.186	.107	.034	.174	.101	.033	
2.0	.214	.117	.036	.207	.114	.035	.194	.108	.034	.183	.103	.032	.172	.097	.031	
3.0	.203	.108	.032	.197	.106	.032	.186	.101	.031	.176	.096	.030	.167	.092	.029	
4.0	.192	.100	.029	.187	.098	.029	.177	.094	.028	.168	.090	.027	.160	.087	.026	
5.0	.182	.093	.027	.177	.091	.027	.169	.088	.026	.161	.085	.025	.153	.082	.025	
6.0	.172	.086	.025	.168	.085	.024	.160	.082	.024	.153	.080	.023	.146	.077	.023	
7.0	.163	.081	.023	.160	.079	.023	.153	.077	.022	.146	.075	.022	.140	.073	.021	
8.0	.155	.076	.021	.152	.075	.021	.145	.073	.021	.139	.071	.020	.134	.069	.020	
9.0	.147	.071	.020	.144	.070	.020	.139	.069	.019	.133	.067	.019	.128	.065	.019	
10.0	.140	.067	.019	.137	.066	.019	.132	.065	.018	.127	.063	.018	.123	.062	.018	

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	.213	.213	.213	.182	.182	.182	.124	.124	.124	.071	.071	.071	.023	.023	.023	
1.0	.197	.180	.164	.168	.154	.141	.115	.106	.098	.066	.061	.057	.021	.020	.018	
2.0	.185	.155	.130	.158	.134	.113	.108	.092	.079	.062	.054	.046	.020	.017	.015	
3.0	.175	.137	.107	.150	.118	.093	.103	.082	.065	.059	.048	.038	.019	.016	.013	
4.0	.166	.123	.090	.142	.106	.078	.098	.074	.055	.057	.043	.033	.018	.014	.011	
5.0	.158	.112	.077	.136	.097	.067	.094	.068	.048	.054	.040	.028	.017	.013	.009	
6.0	.151	.103	.068	.130	.089	.059	.090	.062	.042	.052	.037	.025	.017	.012	.008	
7.0	.145	.096	.061	.125	.083	.053	.086	.058	.038	.050	.034	.023	.016	.011	.007	
8.0	.140	.090	.056	.120	.078	.049	.083	.055	.035	.048	.032	.021	.016	.011	.007	
9.0	.134	.085	.052	.116	.074	.045	.080	.052	.032	.047	.031	.019	.015	.010	.006	
10.0	.130	.081	.048	.112	.070	.042	.077	.049	.030	.045	.029	.018	.015	.010	.006	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017-07-13

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=0.7063]
 Remarks:

Uncorrected UGR Table

Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	

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	27.5	28.6	27.8	28.9	29.1	26.8	27.9	27.1	28.2	28.4
3H	27.6	28.7	27.9	28.9	29.2	26.8	27.9	27.2	28.2	28.4
4H	27.6	28.6	27.9	28.9	29.2	26.9	27.9	27.2	28.1	28.4
6H	27.6	28.5	28.0	28.9	29.2	26.9	27.8	27.2	28.1	28.4
8H	27.6	28.5	28.0	28.8	29.2	26.8	27.7	27.2	28.1	28.4
12H	27.6	28.4	28.0	28.8	29.1	26.8	27.7	27.2	28.0	28.4
4H 2H	27.4	28.4	27.8	28.7	29.0	26.7	27.8	27.1	28.0	28.3
3H	27.6	28.5	28.0	28.8	29.1	26.9	27.8	27.3	28.1	28.5
4H	27.7	28.5	28.1	28.8	29.2	27.0	27.8	27.4	28.1	28.5
6H	27.7	28.4	28.2	28.8	29.2	27.0	27.7	27.5	28.1	28.5
8H	27.7	28.4	28.2	28.8	29.2	27.1	27.7	27.5	28.1	28.5
12H	27.8	28.3	28.2	28.8	29.2	27.0	27.6	27.5	28.1	28.5
8H 4H	27.6	28.2	28.1	28.7	29.1	26.9	27.6	27.4	28.0	28.4
6H	27.7	28.2	28.2	28.7	29.2	27.1	27.6	27.5	28.0	28.5
8H	27.8	28.2	28.3	28.7	29.2	27.1	27.6	27.6	28.0	28.5
12H	27.8	28.2	28.3	28.7	29.2	27.1	27.5	27.6	28.0	28.5
12H 4H	27.6	28.1	28.0	28.6	29.0	26.9	27.5	27.4	27.9	28.4
6H	27.7	28.2	28.2	28.6	29.1	27.0	27.5	27.5	28.0	28.5
8H	27.8	28.1	28.3	28.6	29.2	27.1	27.5	27.6	28.0	28.5
Variations with the observer position at spacings:										
S = 1.0H	+ 1.3 / - 2.1					+ 1.4 / - 2.3				
1.5H	+ 2.0 / - 1.8					+ 1.8 / - 1.7				
2.0H	+ 2.9 / - 2.1					+ 2.7 / - 2.0				

CIE Pub.117 Corrected 23176 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.9)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017-07-13

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=0.7063]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	

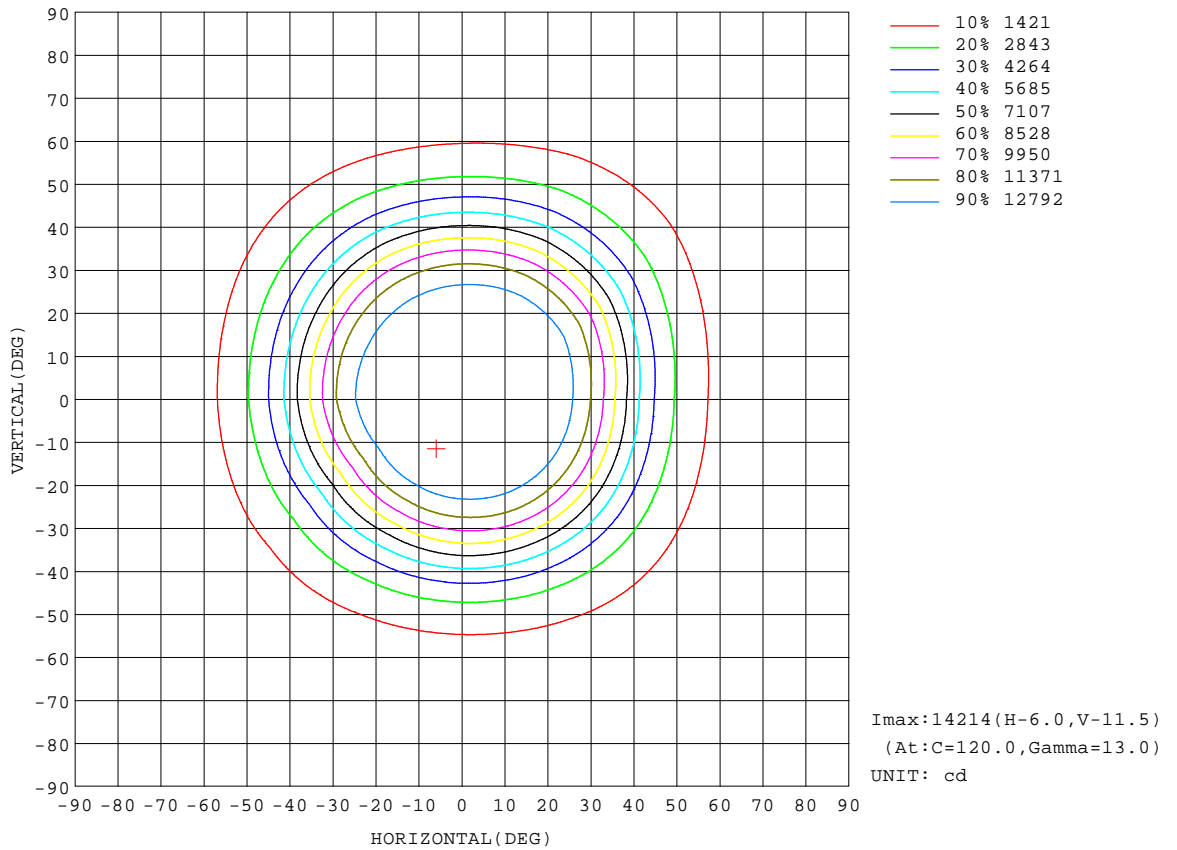
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	73	65	59	73	64	59	71	64	59	54
0.80	82	74	69	81	74	69	80	73	68	63
1.00	89	81	76	88	81	76	86	81	75	70
1.25	95	87	83	93	87	82	91	85	81	75
1.50	98	92	87	97	91	86	94	89	85	79
2.00	103	97	93	101	96	92	98	93	90	83
2.50	105	100	96	103	99	95	100	96	93	85
3.00	108	103	99	105	101	98	101	98	95	87
4.00	110	106	103	108	104	102	103	101	98	90
5.00	112	109	106	109	106	104	105	102	100	91
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:2017-07-13

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=0.7063]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	

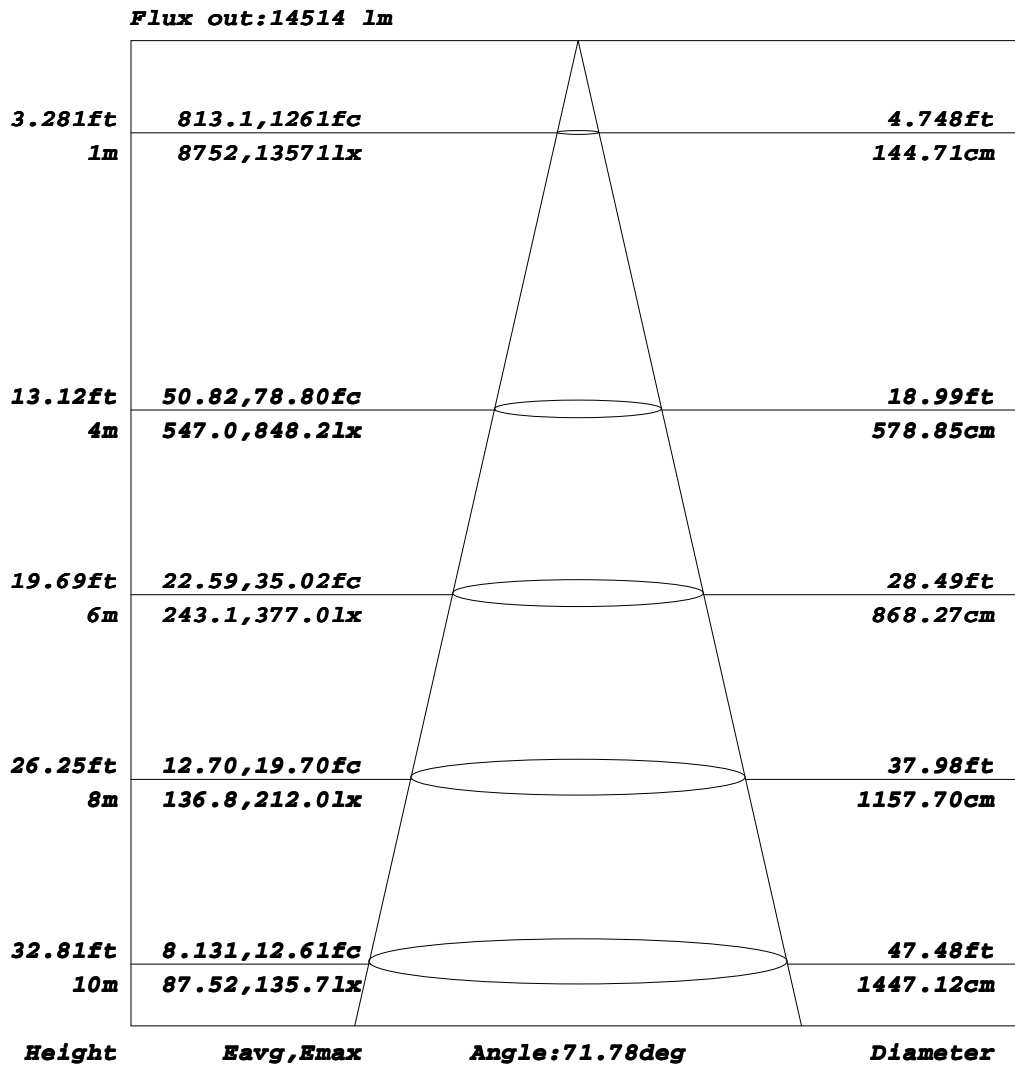


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-13

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=0.7063]
Remarks:

AAI Figure

Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	



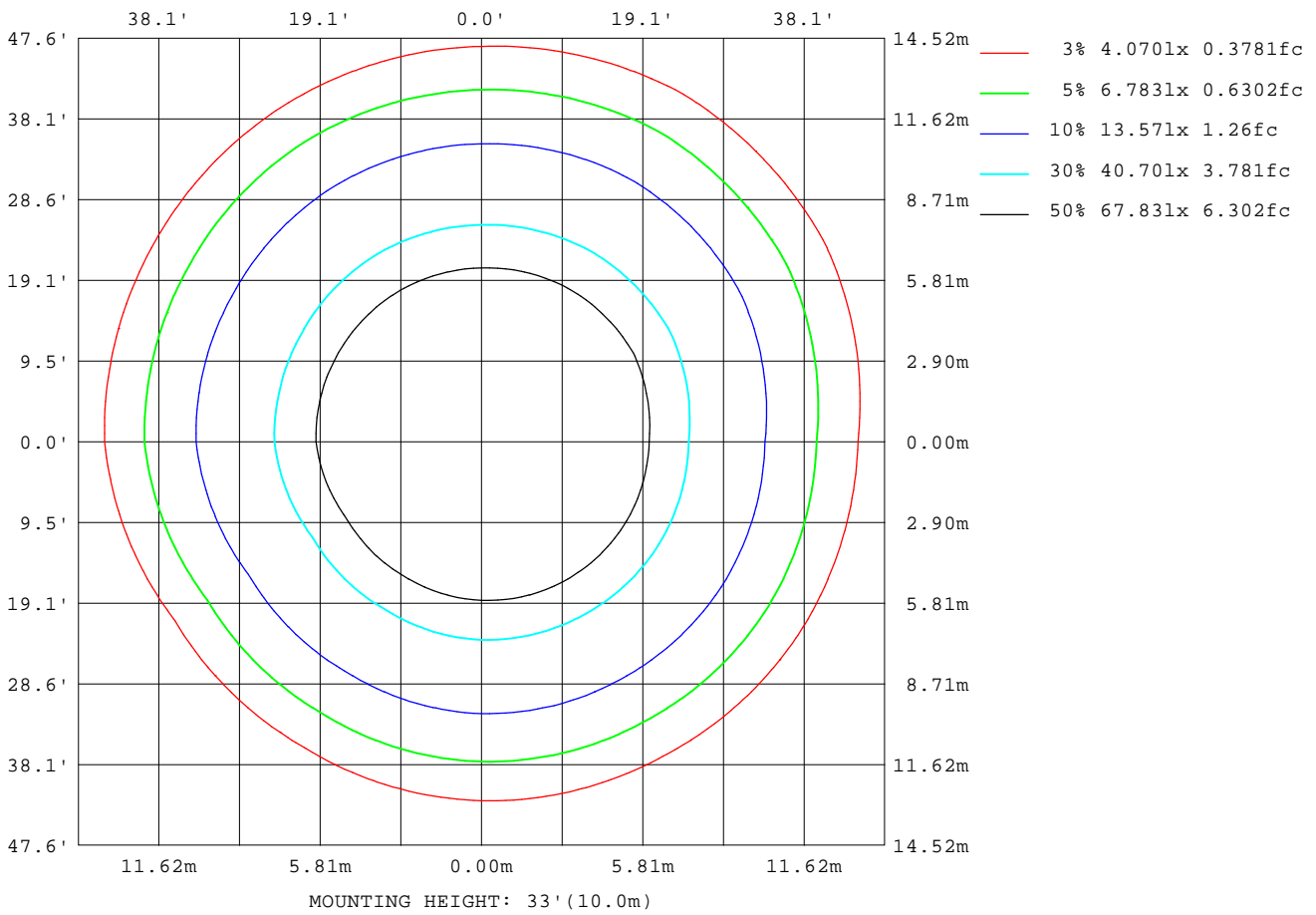
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017-07-13

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=0.7063]
 Remarks:

ISOLUX DIAGRAM

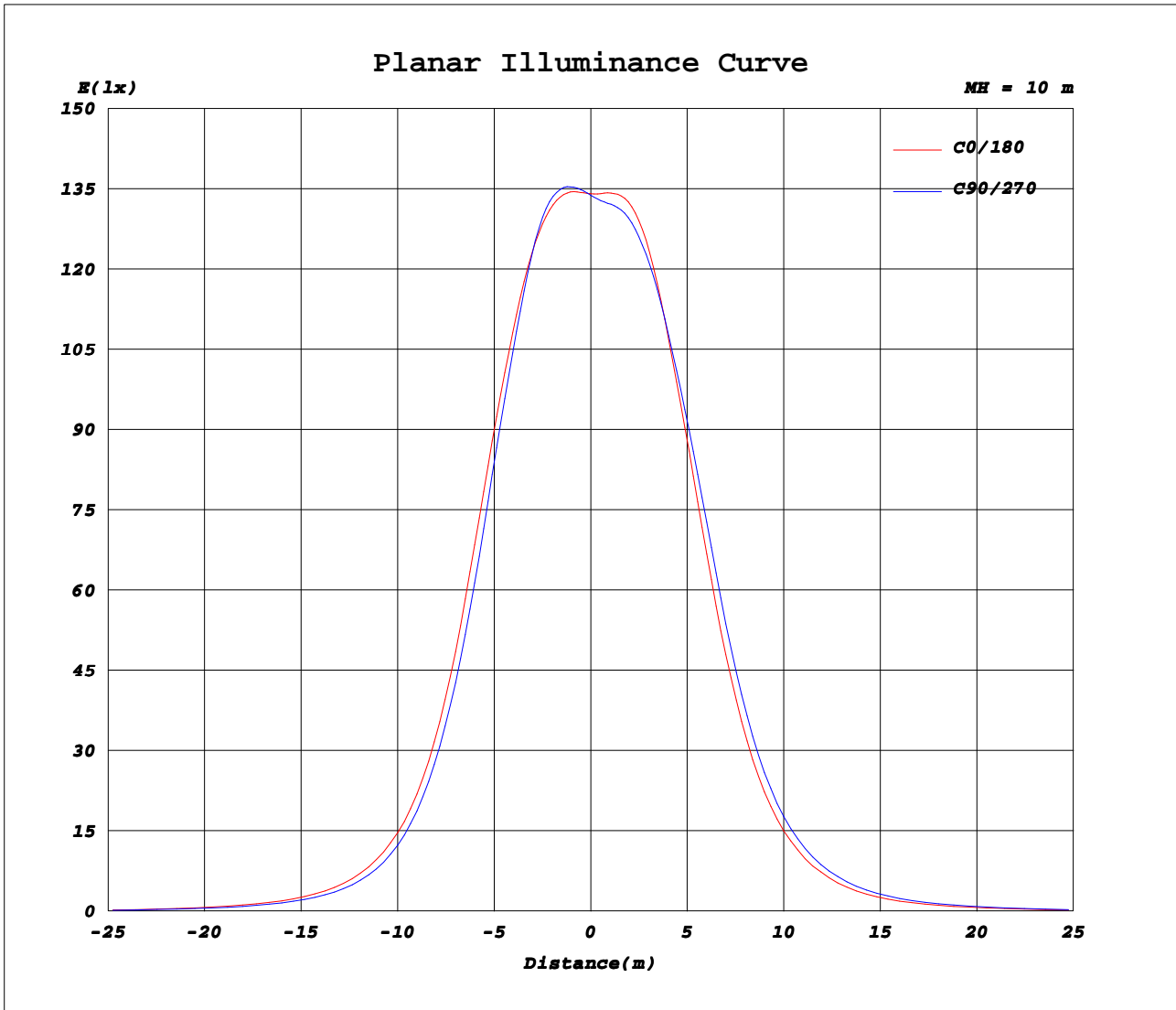
Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-13

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=0.7063]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-07-13

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=0.7063]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.2V I:0.7150A P:153.2W PF:0.9740 Lamp Flux:23176.2x1 lm		
NAME: XY-GK150WW-90A	TYPE:LED	
MFR.:	SUR.:	

Table--1

UNIT: x10cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	1341	1340	1340	1338	1338	1335	1341	1340	1340	1338	1338	1335							
5	1360	1364	1367	1369	1371	1368	1358	1351	1344	1338	1333	1335							
10	1391	1398	1404	1406	1411	1406	1395	1382	1371	1365	1358	1361							
15	1407	1416	1419	1417	1415	1409	1414	1397	1387	1381	1378	1382							
20	1383	1380	1369	1352	1339	1334	1374	1365	1366	1368	1372	1378							
25	1298	1280	1255	1226	1200	1195	1273	1280	1296	1310	1323	1330							
30	1132	1102	1064	1022	980	981	1104	1135	1166	1190	1213	1213							
35	883	856	812	778	729	736	873	906	951	977	1009	1002							
40	624	603	566	540	503	510	630	659	704	728	760	742							
45	416	399	369	350	327	333	425	448	483	501	526	508							
50	269	254	232	219	206	210	276	290	317	329	353	334							
55	172	161	146	138	130	131	170	183	199	212	228	216							
60	111	104	93.9	88.4	82.8	83.2	107	114	126	135	146	140							
65	69.0	65.4	59.5	55.5	50.7	50.4	67.6	71.0	80.4	85.9	94.0	90.2							
70	40.4	38.5	36.2	34.4	32.3	32.0	41.2	42.7	46.2	48.4	53.5	52.0							
75	26.0	25.2	23.8	22.9	21.2	21.2	28.0	28.3	30.2	30.9	33.0	33.0							
80	15.6	15.3	14.1	13.6	12.1	12.2	18.0	18.3	19.6	20.1	21.6	21.8							
85	7.35	7.05	6.50	5.93	4.97	4.93	9.97	10.0	10.8	11.3	12.4	12.5							
90	2.40	2.47	2.56	2.63	2.69	2.65	4.53	4.49	4.54	5.03	5.39	5.34							
95	3.04	3.14	3.26	3.36	3.44	3.40	5.14	5.01	4.89	4.77	4.65	4.68							
100	3.88	4.00	4.16	4.28	4.41	4.35	5.91	5.76	5.64	5.48	5.38	5.39							
105	4.92	5.11	5.26	5.46	5.57	5.55	6.81	6.65	6.52	6.34	6.24	6.23							
110	6.14	6.37	6.52	6.78	6.89	6.89	7.87	7.66	7.53	7.32	7.21	7.20							
115	7.53	7.80	7.95	8.25	8.38	8.40	9.09	8.83	8.69	8.44	8.34	8.31							
120	9.13	9.36	9.62	9.86	10.1	10.0	10.5	10.3	10.0	9.80	9.60	9.66							
125	10.8	11.0	11.3	11.6	11.8	11.8	11.9	11.7	11.4	11.2	11.0	11.1							
130	12.6	12.8	13.0	13.3	13.6	13.5	13.4	13.2	12.9	12.7	12.4	12.5							
135	14.3	14.4	14.6	14.9	15.2	15.2	14.8	14.7	14.4	14.1	13.9	14.0							
140	15.8	16.0	16.1	16.4	16.7	16.6	16.2	16.0	15.7	15.5	15.3	15.4							
145	17.2	17.3	17.4	17.7	18.0	17.9	17.3	17.1	16.9	16.7	16.6	16.6							
150	18.4	18.4	18.6	18.9	19.1	19.0	18.2	18.0	17.9	17.8	17.6	17.7							
155	19.5	19.5	19.6	19.9	20.1	19.9	19.1	18.9	18.8	18.7	18.6	18.6							
160	20.6	20.6	20.7	20.9	21.1	21.0	20.0	19.8	19.7	19.7	19.6	19.6							
165	21.8	21.8	22.0	22.1	22.3	22.2	21.2	21.0	20.8	20.8	20.7	20.7							
170	22.8	22.9	23.2	23.3	23.2	23.2	22.5	22.3	22.1	22.0	22.0	22.0							
175	23.4	23.7	23.9	23.8	23.6	23.8	23.4	23.5	23.2	22.9	23.0	23.3							
180	23.7	23.9	23.9	23.6	23.5	23.9	23.7	23.9	23.9	23.6	23.6	23.8							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-07-13

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=0.7063]
Remarks: