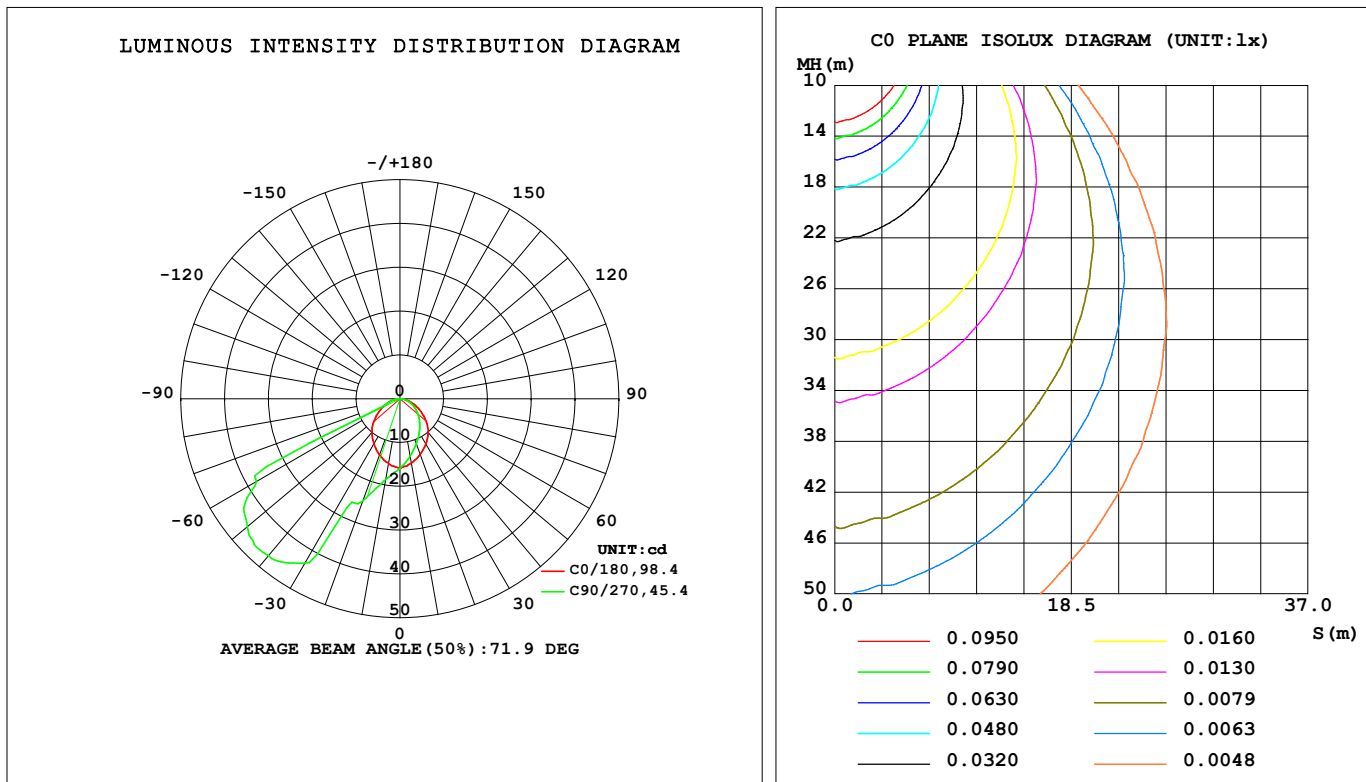


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	1x DAR3030 24V 840	Imax (cd)	47.09	S/MH (C0/180)	1.14
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	2.65
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	55.310	η UP,DN (C0-180)	0.0,28.5
NOMINAL FLUX (lm)	55.3102	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,71.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	220.0	η down (%)	100.0	CIBSE SHR MAX	1.05



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Ky
 Test Date: 04 September 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 7.220m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	14.95	13.73	13.37	13.81	15.10	17.14	18.73	17.10	0- 10	1.490	1.490	2.69,2.69
20	13.53	11.49	10.95	11.59	13.73	18.62	24.73	18.54	10- 20	4.357	5.847	10.6,10.6
30	11.88	9.584	8.904	9.555	11.88	20.15	43.32	19.86	20- 30	7.226	13.07	23.6,23.6
40	10.04	7.702	7.060	7.668	9.986	24.49	46.77	24.07	30- 40	10.80	23.87	43.2,43.2
50	7.763	5.924	5.396	5.900	7.667	18.07	45.48	17.72	40- 50	12.00	35.87	64.8,64.8
60	5.257	4.202	3.782	4.185	5.272	8.896	37.82	8.984	50- 60	10.58	46.44	84,84
70	3.073	2.547	2.290	2.581	3.141	4.407	2.969	4.310	60- 70	5.979	52.42	94.8,94.8
80	1.231	1.054	0.9811	1.116	1.321	1.672	1.424	1.558	70- 80	2.301	54.72	98.9,98.9
90	0	0	0	0	0	0	0	0	80- 90	0.5873	55.31	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 29.895 lm

%lum = 54.0%

%lamp = 54.0%

Conical surface Flux(120deg): 46.443 lm

%lum = 84.0%

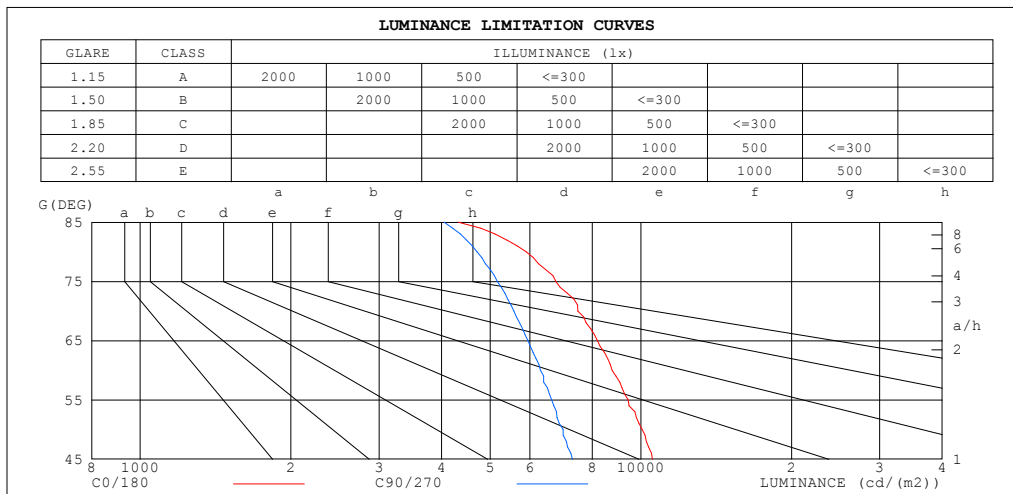
%lamp = 84.0%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:04 September 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	4319	4049
80	5907	4708
75	6762	5169
70	7489	5579
65	8196	5952
60	8761	6303
55	9439	6632
50	10064	6996
45	10558	7298

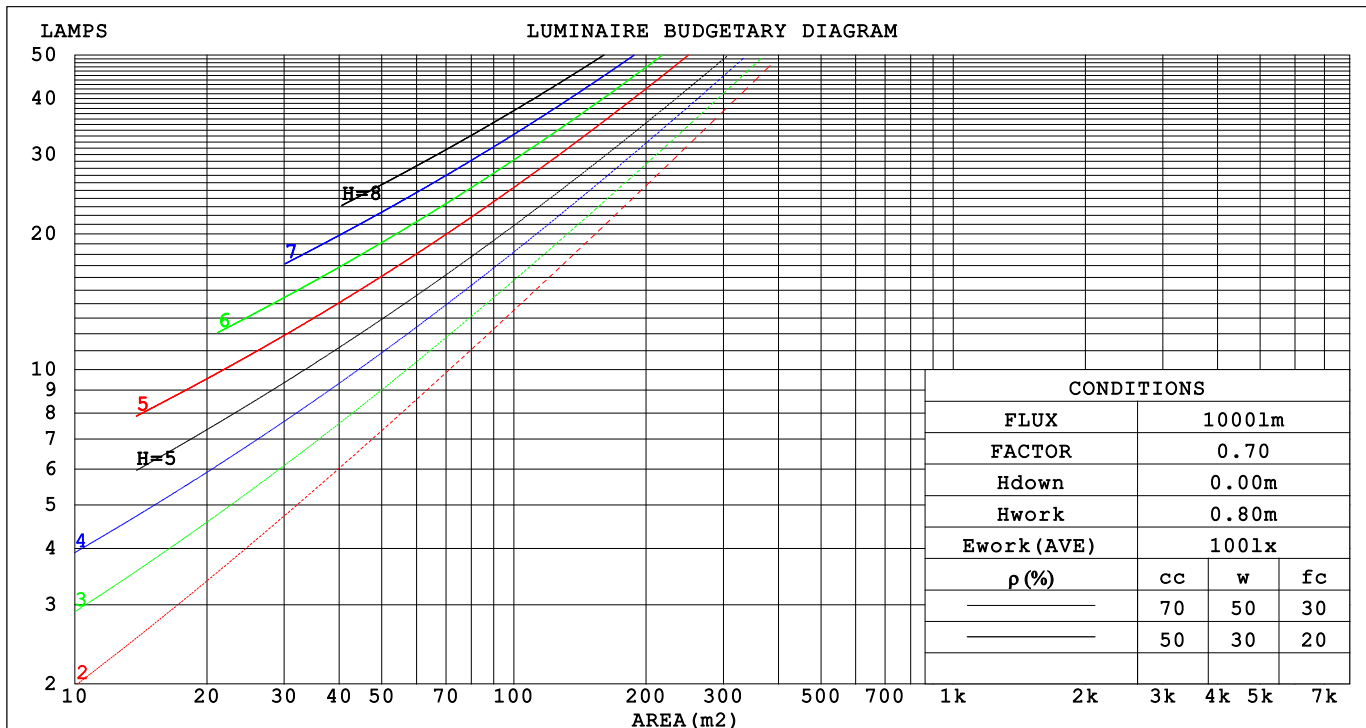
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:04 September 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:04 September 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.291	.165	.052	.283	.162	.051	.270	.155	.050	.258	.149	.048	.247	.143	.046	
2.0	.280	.154	.047	.274	.151	.046	.262	.146	.045	.252	.141	.044	.242	.137	.043	
3.0	.263	.140	.042	.258	.138	.042	.248	.134	.041	.238	.131	.040	.229	.127	.039	
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.224	.120	.036	.216	.117	.036	
5.0	.229	.117	.034	.225	.116	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.214	.107	.031	.210	.106	.031	.203	.104	.030	.196	.102	.030	.190	.100	.030	
7.0	.200	.099	.028	.196	.098	.028	.190	.096	.028	.184	.094	.027	.178	.093	.027	
8.0	.187	.092	.026	.184	.091	.026	.178	.089	.025	.173	.088	.025	.168	.086	.025	
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.024	.163	.082	.023	.158	.080	.023	
10.0	.166	.079	.022	.163	.079	.022	.158	.078	.022	.154	.076	.022	.150	.075	.022	

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)										
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015		
2.0	.171	.132	.099	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011		
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.055	.040	.027	.018	.013	.009		
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007		
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006		
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005		
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004		
8.0	.130	.070	.028	.112	.060	.025	.077	.042	.018	.045	.025	.011	.015	.008	.003		
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003		
10.0	.118	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:04 September 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm											
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.: Darkon					SUR.:			Shielding Angle:			
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		28.5	30.0	28.7	30.2	30.4	27.0	28.6	27.3	28.8	29.0
3H		29.9	31.3	30.2	31.5	31.8	28.4	29.8	28.7	30.0	30.2
4H		30.4	31.8	30.8	32.0	32.3	28.9	30.2	29.2	30.5	30.7
6H		30.8	32.1	31.2	32.3	32.6	29.3	30.5	29.6	30.8	31.1
8H		30.9	32.1	31.3	32.4	32.7	29.4	30.6	29.8	30.9	31.2
12H		31.0	32.1	31.3	32.4	32.7	29.5	30.7	29.9	30.9	31.3
4H	2H	28.8	30.2	29.2	30.4	30.7	27.7	29.0	28.0	29.3	29.6
	3H	30.4	31.6	30.8	31.9	32.2	29.2	30.4	29.6	30.7	31.0
	4H	31.1	32.2	31.5	32.5	32.8	29.9	30.9	30.3	31.3	31.6
	6H	31.7	32.6	32.1	32.9	33.3	30.4	31.3	30.8	31.7	32.0
	8H	31.8	32.7	32.2	33.1	33.4	30.6	31.4	31.0	31.8	32.2
8H	12H	31.9	32.7	32.3	33.1	33.5	30.7	31.5	31.1	31.9	32.3
	4H	31.3	32.2	31.7	32.5	32.9	30.2	31.1	30.6	31.4	31.8
	6H	32.0	32.7	32.4	33.1	33.5	30.8	31.6	31.3	32.0	32.4
	8H	32.2	32.8	32.7	33.3	33.7	31.1	31.7	31.6	32.1	32.6
	12H	32.4	32.9	32.8	33.3	33.8	31.3	31.8	31.7	32.3	32.7
12H	4H	31.3	32.1	31.7	32.5	32.9	30.2	31.0	30.6	31.4	31.8
	6H	32.0	32.6	32.5	33.0	33.5	30.9	31.5	31.4	32.0	32.4
	8H	32.3	32.8	32.7	33.2	33.7	31.2	31.7	31.7	32.2	32.7
Variations with the observer position at spacings:											
S = 1.0H		+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H		+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H		+ 0.4 / - 0.5					+ 0.2 / - 0.3				

CIE Pub.117, 55.31 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -10.1$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:04 September 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

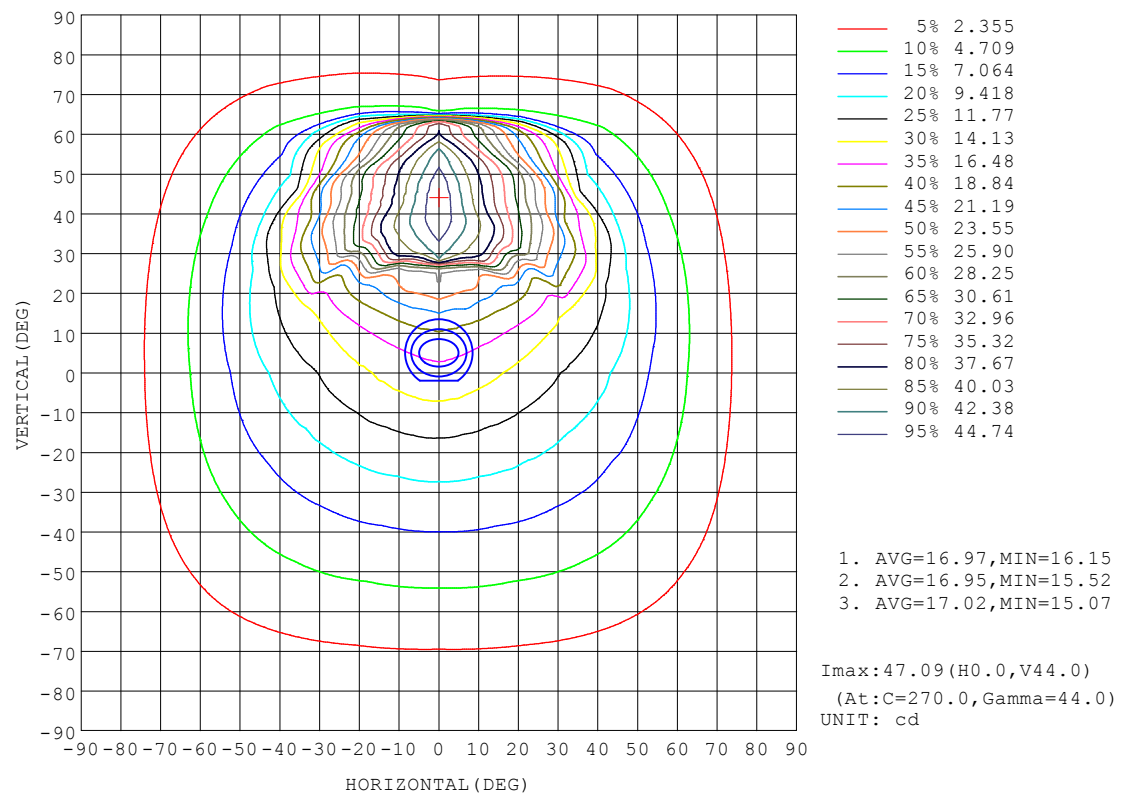
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	43	36	30
0.80	67	55	47	66	54	47	64	54	47	40
1.00	76	65	58	75	64	58	73	66	57	50
1.25	84	73	66	82	73	66	80	71	65	58
1.50	89	79	72	87	78	72	84	77	71	63
2.00	96	88	82	94	87	81	91	84	79	72
2.50	100	92	86	98	91	86	94	88	84	76
3.00	103	97	91	101	95	90	97	92	88	80
4.00	107	101	97	105	100	96	100	96	93	84
5.00	109	104	101	107	103	99	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:04 September 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN_STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

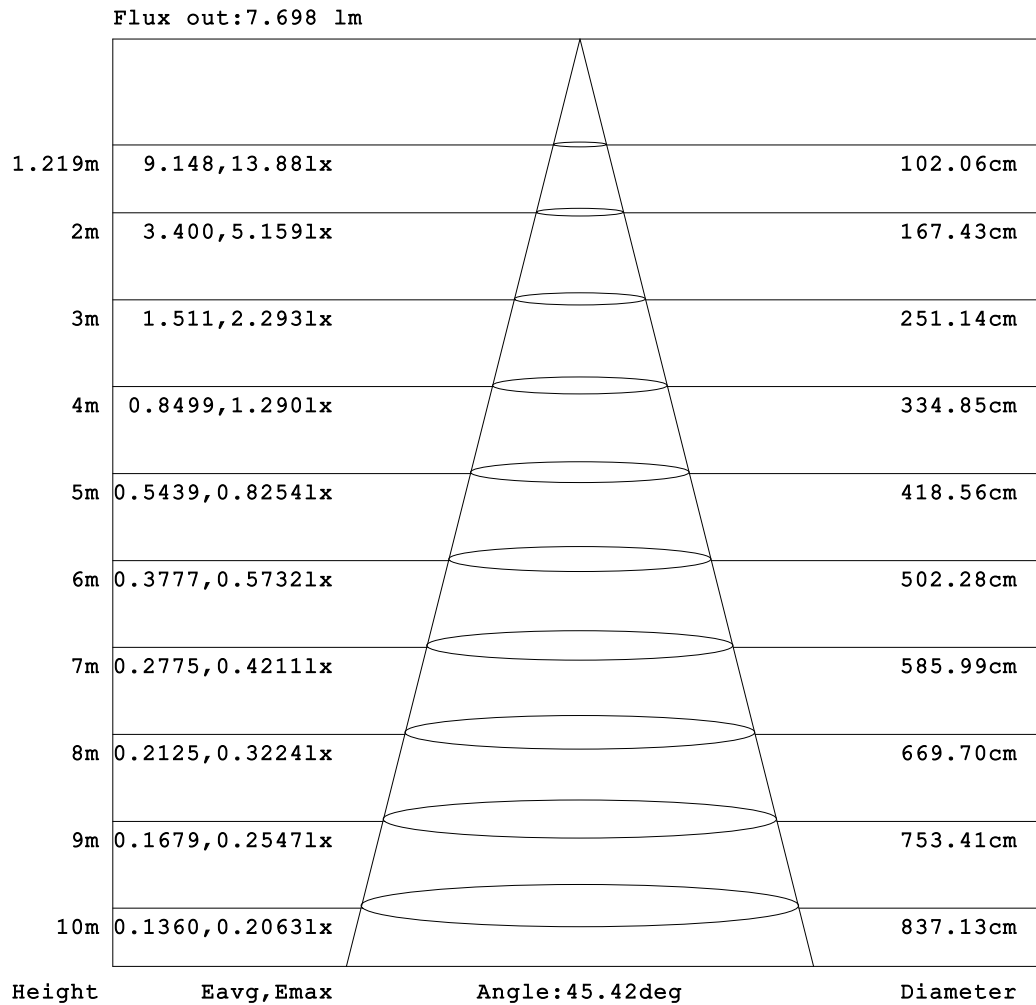


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Ky
 Test Date: 04 September 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 7.220m [K=1.0000]
 Remarks:

AAI Figure

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



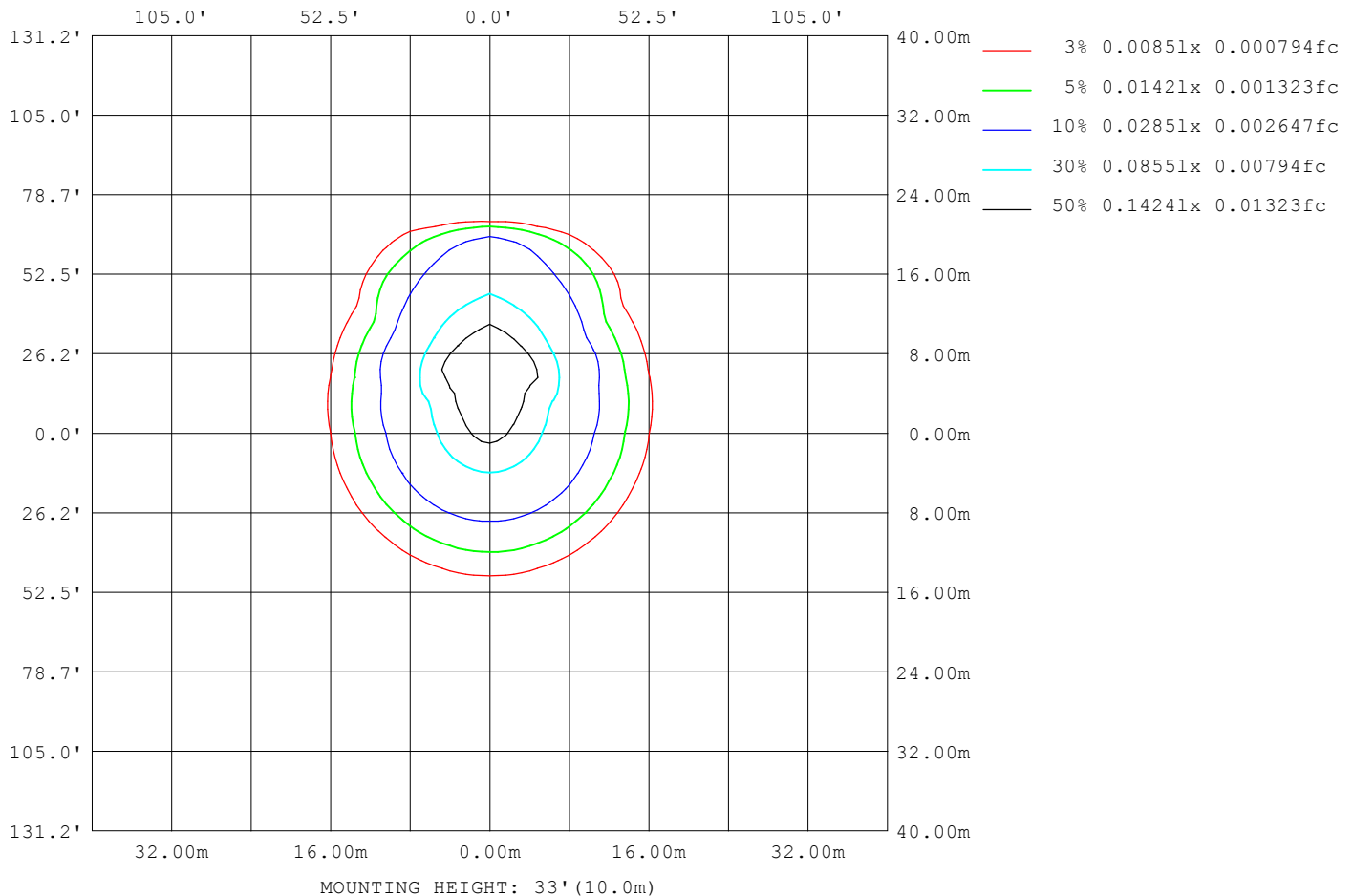
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:04 September 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Ky
 Test Date: 04 September 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 65.0%
 Test Distance: 7.220m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:24.118V I:0.0474A P:1.1418W PF:0.9998 Freq:0Hz Lamp Flux:55.3102x1 lm		
NAME: WYN STEP_30_REC_WHT_DAR3030_24V_4K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Darkon	SUR.:	Shielding Angle:

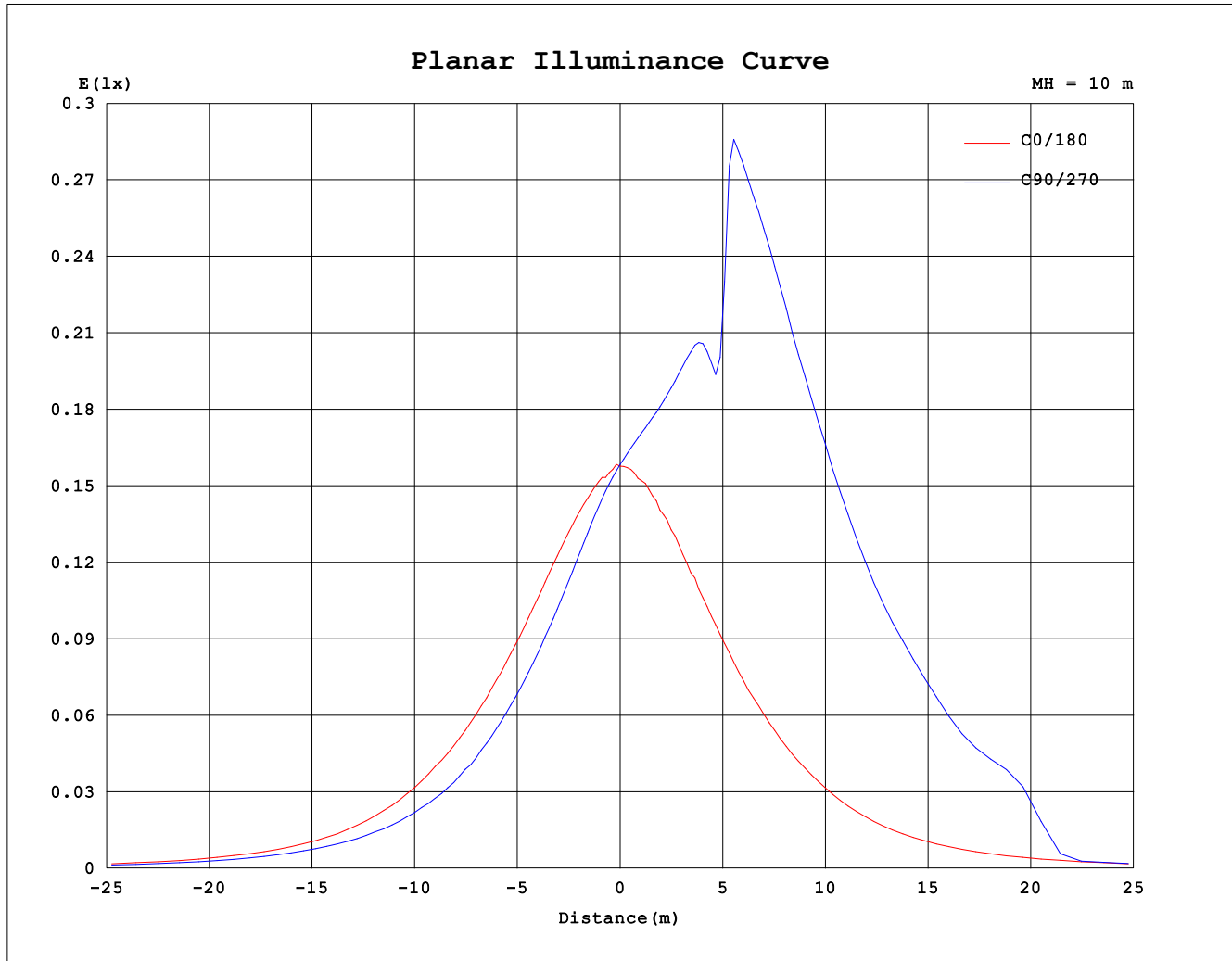
AvgL	cd/m2
L_0~180 (65) av	8209
L_0~180 (75) av	6893
L_0~180 (85) av	4831
L_90~270 (65) av	10511
L_90~270 (75) av	6120
L_90~270 (85) av	4859
L_45 (65) av	9686
L_45 (75) av	7447
L_45 (85) av	4916

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
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Test Date:04 September 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Ky
Test Date: 04 September 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 7.220m [K=1.0000]
Remarks:

