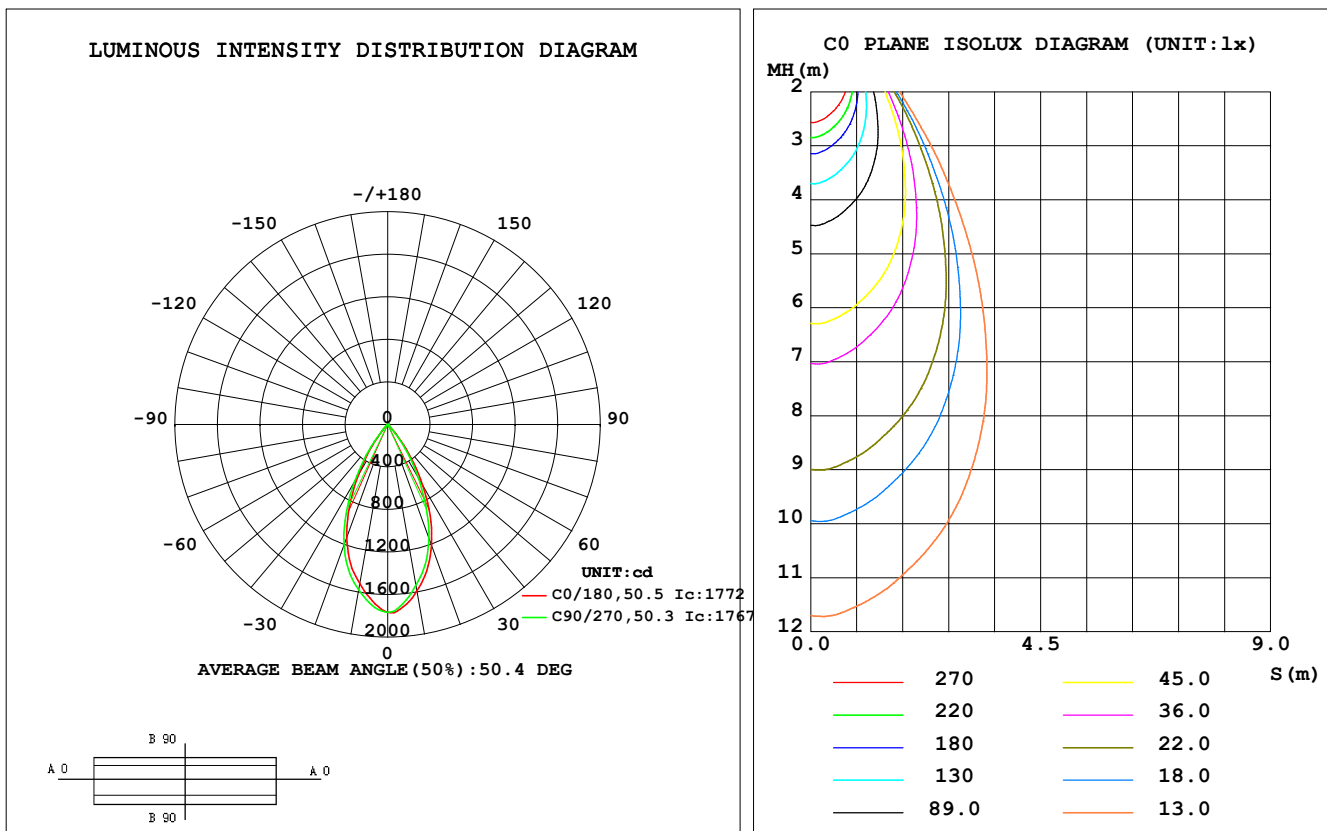


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm					
NAME: DP090RW-WF02-14G30			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:80		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 81.83 lm/W
MODEL	3000K CRI90	I <sub>max</sub> (cd)	1774	S/MH(C0/180)	0.77	
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.80	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1211.1	η UP,DN(C0-180)	0.0,49.0	
NOMINAL FLUX(lm)	1211.15	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.0	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	36	η down(%)	100.0	CIBSE SHR MAX	0.80	



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: ZR  
 Test Date: 2021-07-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
 Humidity: 65.0%  
 Test Distance: 8.402m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1589	1566	1534	1509	1521	1543	1577	1606	0- 10	157.4	157.4	13,13
20	1206	1177	1135	1104	1129	1156	1202	1230	10- 20	385.4	542.8	44.8,44.8
30	660.7	615.5	573.2	527.8	556.8	582.8	626.7	672.2	20- 30	404.6	947.4	78.2,78.2
40	159.1	150.4	115.8	91.80	97.99	109.2	126.1	156.8	30- 40	212.2	1160	95.7,95.7
50	13.34	13.22	11.37	8.401	15.80	16.73	18.51	20.83	40- 50	34.83	1194	98.6,98.6
60	1.155	1.164	1.025	0.8595	7.597	7.712	8.002	8.378	50- 60	7.023	1201	99.2,99.2
70	0.9825	1.003	1.003	0.9815	5.479	5.547	5.724	5.844	60- 70	3.800	1205	99.5,99.5
80	1.161	1.177	1.208	1.244	4.021	4.061	4.204	4.251	70- 80	3.155	1208	99.8,99.8
90	1.642	1.687	1.689	1.732	3.007	3.032	3.108	3.140	80- 90	2.734	1211	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): 1185.3 lm

%lum = 97.9%

%lamp = 97.9%

Conical surface Flux(120deg): 1201.5 lm

%lum = 99.2%

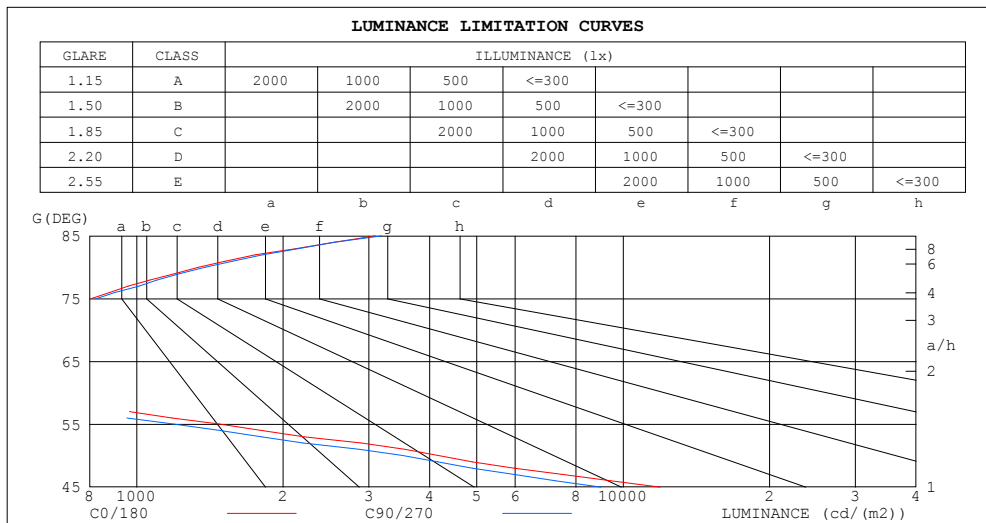
%lamp = 99.2%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZR  
 Test Date:2021-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
 Humidity:65.0%  
 Test Distance:8.402m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm		
NAME: DP090RW-WF02-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3093	3188
80	1341	1383
75	806	827
70	576	583
65	395	424
60	463	408
55	1482	1192
50	4162	3516
45	11908	9000

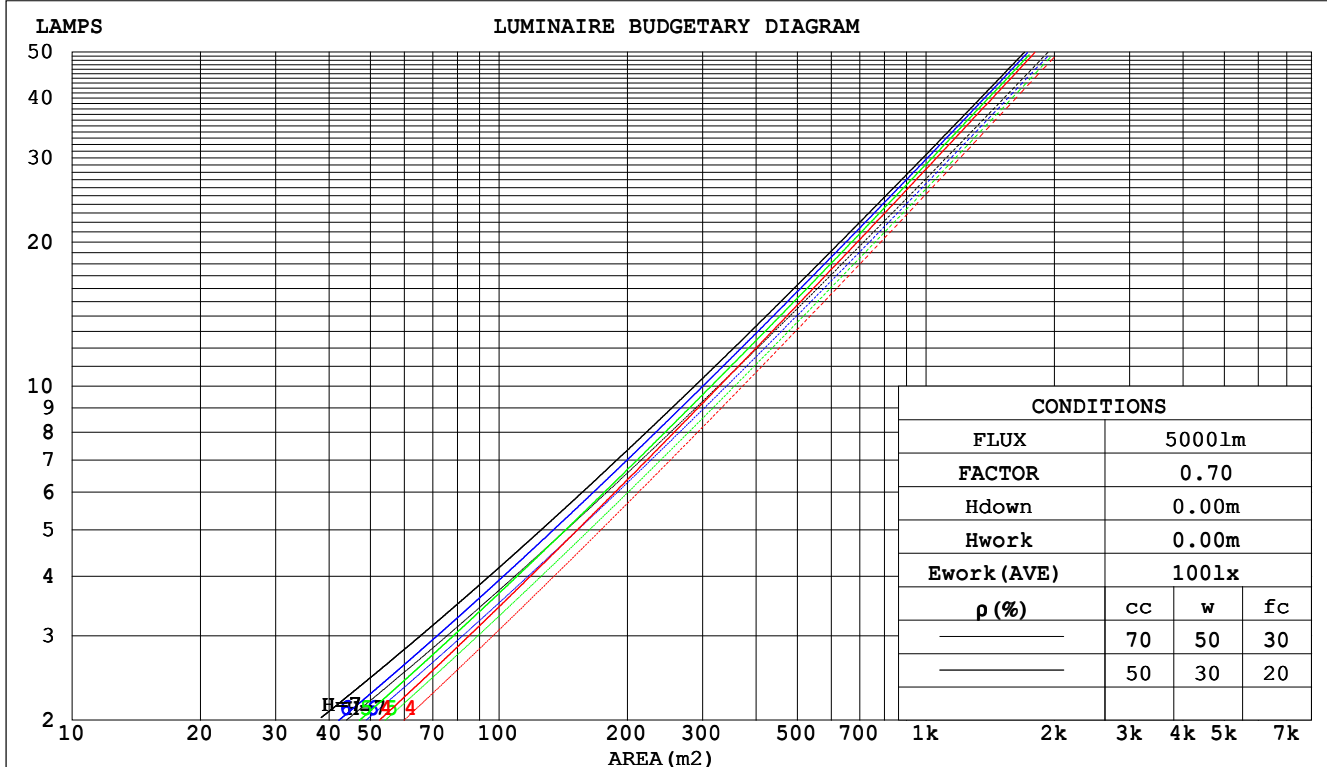
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm		
NAME: DP090RW-WF02-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	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						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.11	1.09	1.06	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.85	.89	.86	.84	.83
4.0	.91	.86	.82	.90	.86	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.78
5.0	.86	.81	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.80	.77	.74	.73
6.0	.81	.76	.72	.81	.75	.71	.79	.74	.71	.78	.74	.70	.76	.73	.70	.69
7.0	.77	.71	.67	.76	.71	.67	.75	.70	.67	.74	.70	.66	.73	.69	.66	.65
8.0	.73	.67	.63	.72	.67	.63	.71	.66	.63	.70	.66	.63	.69	.65	.62	.61
9.0	.69	.64	.60	.69	.63	.60	.68	.63	.60	.67	.62	.59	.66	.62	.59	.58
10.0	.66	.60	.57	.65	.60	.57	.65	.60	.56	.64	.59	.56	.63	.59	.56	.55



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZR  
 Test Date:2021-07-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
 Humidity:65.0%  
 Test Distance:8.402m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm					
NAME: DP090RW-WF02-14G30			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:80		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	.173	.098	.031	.166	.095	.030	.153	.088	.028	.142	.082	.026	.131	.076	.024	
2.0	.163	.090	.027	.158	.087	.027	.147	.082	.025	.138	.077	.024	.129	.073	.023	
3.0	.155	.082	.025	.150	.080	.024	.141	.076	.023	.133	.073	.022	.125	.069	.021	
4.0	.147	.076	.022	.143	.075	.022	.135	.072	.021	.128	.069	.021	.121	.066	.020	
5.0	.140	.071	.021	.137	.070	.020	.130	.068	.020	.124	.065	.019	.118	.063	.019	
6.0	.134	.067	.019	.131	.066	.019	.125	.064	.019	.119	.062	.018	.114	.060	.018	
7.0	.128	.063	.018	.125	.062	.018	.120	.061	.017	.115	.059	.017	.110	.057	.017	
8.0	.122	.060	.017	.120	.059	.017	.115	.058	.016	.111	.056	.016	.107	.055	.016	
9.0	.117	.057	.016	.115	.056	.016	.111	.055	.016	.107	.054	.015	.103	.053	.015	
10.0	.113	.054	.015	.111	.054	.015	.107	.052	.015	.104	.051	.015	.100	.050	.014	

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.032	.016	.013	.011	
4.0	.132	.099	.074	.113	.085	.064	.078	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.123	.087	.061	.105	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.040	.028	.019	.013	.009	.006	
7.0	.109	.070	.043	.093	.061	.037	.065	.043	.026	.037	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.089	.055	.032	.061	.039	.023	.036	.023	.014	.012	.007	.004	
9.0	.098	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.093	.054	.028	.080	.047	.024	.056	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm										
NAME: DP090RW-WF02-14G30					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:80			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	18.1	19.0	18.3	19.1	19.3	17.3	18.2	17.5	18.3	18.5
3H	17.9	18.7	18.1	18.9	19.1	17.1	17.9	17.4	18.1	18.3
4H	17.8	18.6	18.1	18.8	19.0	17.0	17.8	17.3	18.0	18.2
6H	17.7	18.5	18.0	18.7	18.9	16.9	17.7	17.2	17.9	18.2
8H	17.7	18.4	18.0	18.6	18.9	16.9	17.6	17.2	17.9	18.1
12H	17.7	18.3	18.0	18.6	18.9	16.9	17.5	17.2	17.8	18.1
4H 2H	17.8	18.6	18.1	18.8	19.0	17.0	17.8	17.3	18.0	18.2
3H	17.6	18.3	17.9	18.6	18.8	16.8	17.5	17.2	17.8	18.1
4H	17.5	18.2	17.9	18.4	18.8	16.7	17.4	17.1	17.7	18.0
6H	17.5	18.0	17.8	18.3	18.7	16.7	17.2	17.0	17.5	17.9
8H	17.4	17.9	17.8	18.3	18.6	16.6	17.1	17.0	17.5	17.9
12H	17.4	17.8	17.8	18.2	18.6	16.6	17.1	17.0	17.4	17.8
8H 4H	17.4	17.9	17.8	18.2	18.6	16.6	17.1	17.0	17.5	17.8
6H	17.3	17.7	17.7	18.1	18.5	16.5	16.9	17.0	17.3	17.7
8H	17.3	17.6	17.7	18.1	18.5	16.5	16.9	16.9	17.3	17.7
12H	17.3	17.6	17.7	18.0	18.5	16.5	16.8	17.0	17.3	17.7
12H 4H	17.3	17.8	17.8	18.2	18.6	16.6	17.0	17.0	17.4	17.8
6H	17.3	17.6	17.7	18.0	18.5	16.5	16.8	16.9	17.3	17.7
8H	17.2	17.5	17.7	18.0	18.5	16.5	16.8	16.9	17.2	17.7
Variations with the observer position at spacings:										
S = 1.0H	+ 3.9 / -12.9					+ 3.6 / -11.8				
1.5H	+ 6.5 / -12.1					+ 6.2 / -11.2				
2.0H	+ 6.5 / - 3.9					+ 5.6 / - 2.9				

CIE Pub.117, 1211 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 0.7$ )

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm		
NAME: DP090RW-WF02-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

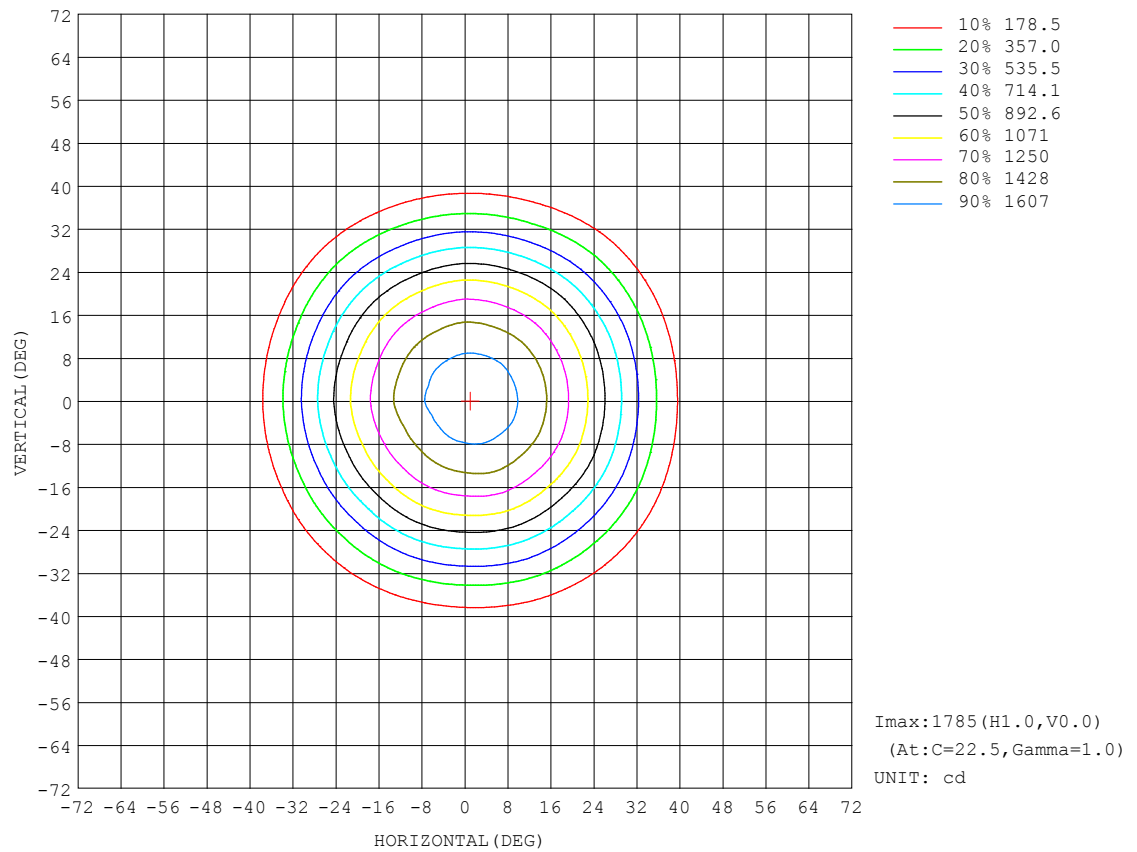
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	88	83	79	88	82	79	76
0.80	96	91	87	95	90	87	94	90	87	83
1.00	100	95	91	99	94	91	98	94	91	87
1.25	104	99	96	103	99	95	101	97	95	91
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
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:ZR  
Test Date:2021-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm		
NAME: DP090RW-WF02-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



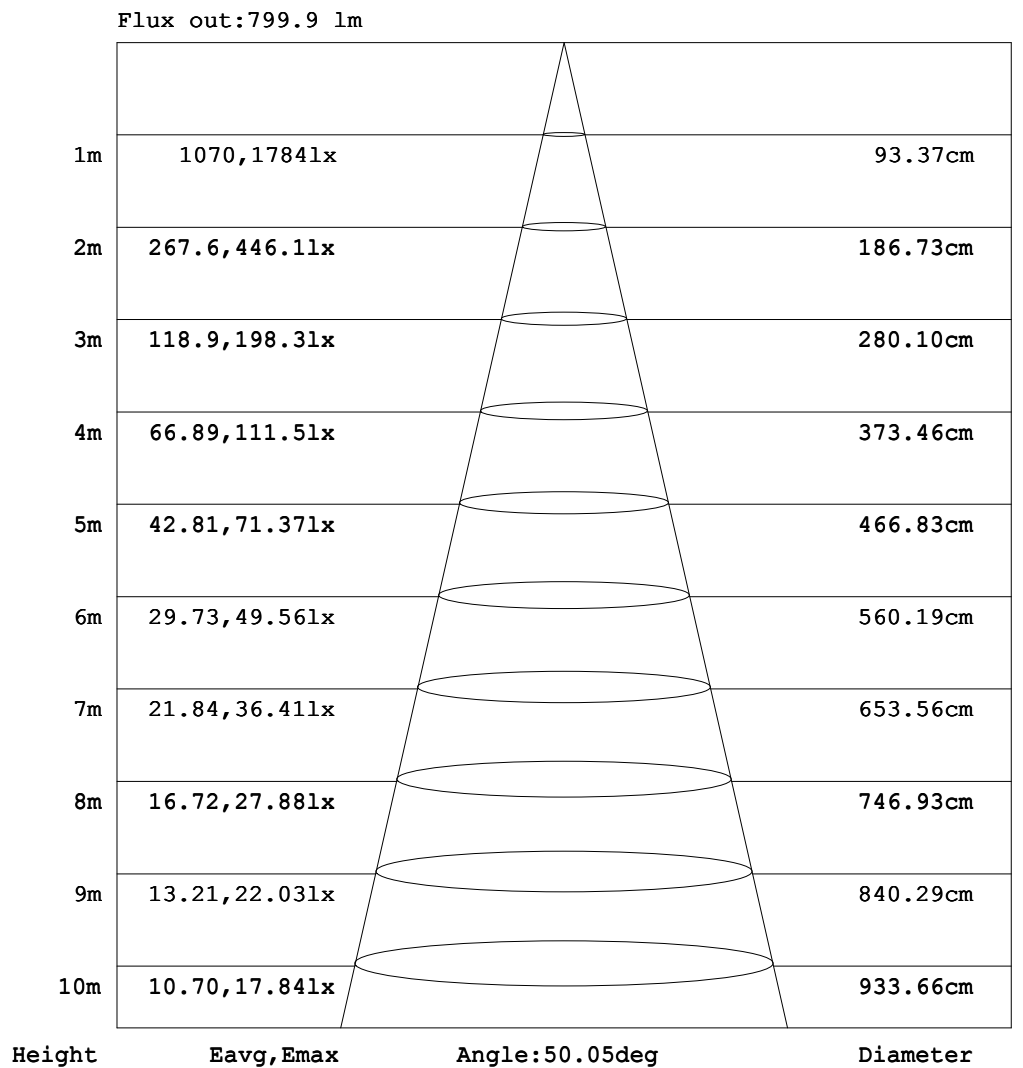
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm		
NAME: DP090RW-WF02-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



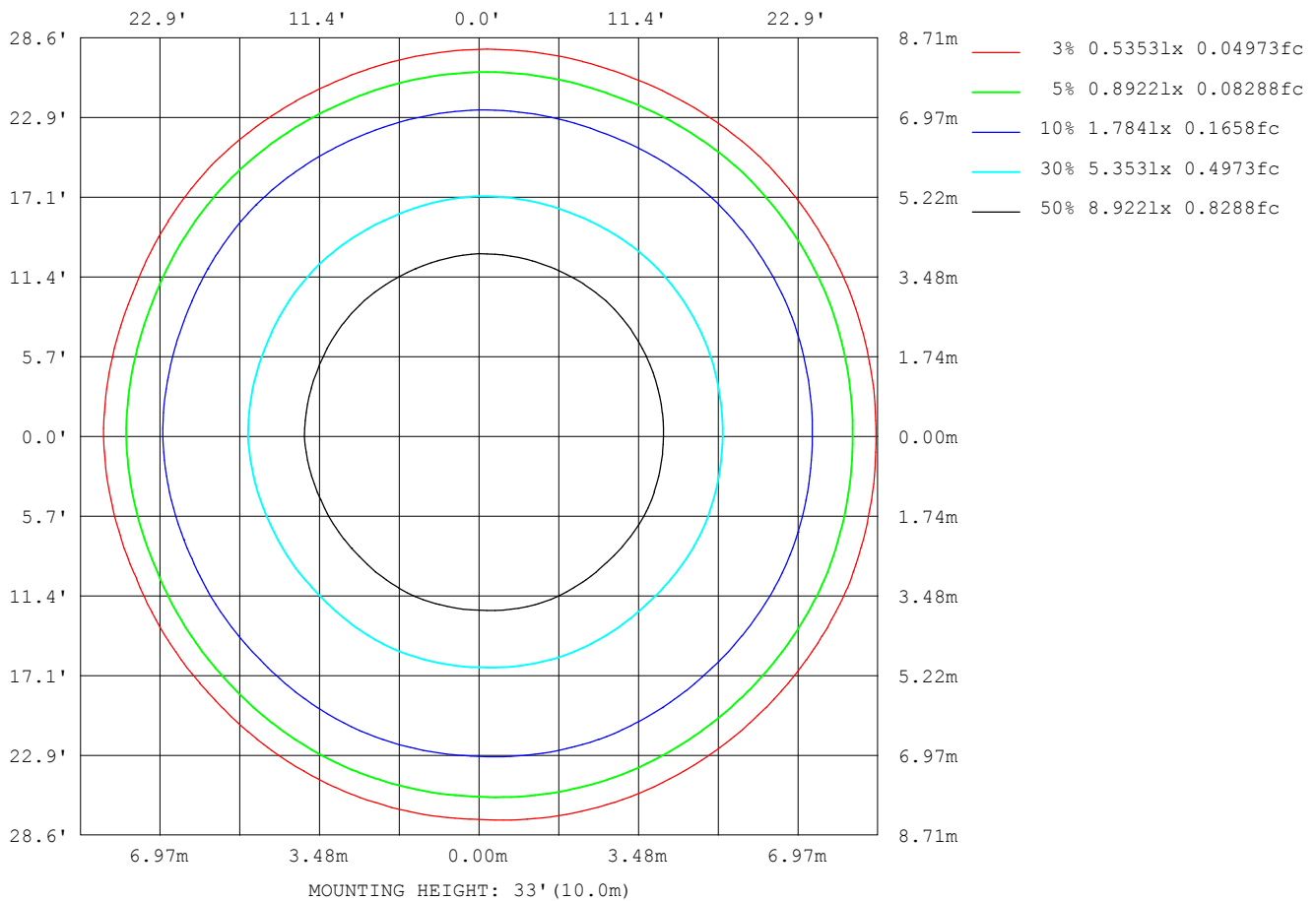
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

# ISOLUX DIAGRAM

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm		
NAME: DP090RW-WF02-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity:65.0%  
Test Distance:8.402m [K=1.0000]  
Remarks:

## LED Avg.L Report

Test:U:224.8V I:0.0690A P:14.80W PF:0.9570 Freq:50.00Hz Lamp Flux:1211.15x1 lm		
NAME: DP090RW-WF02-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

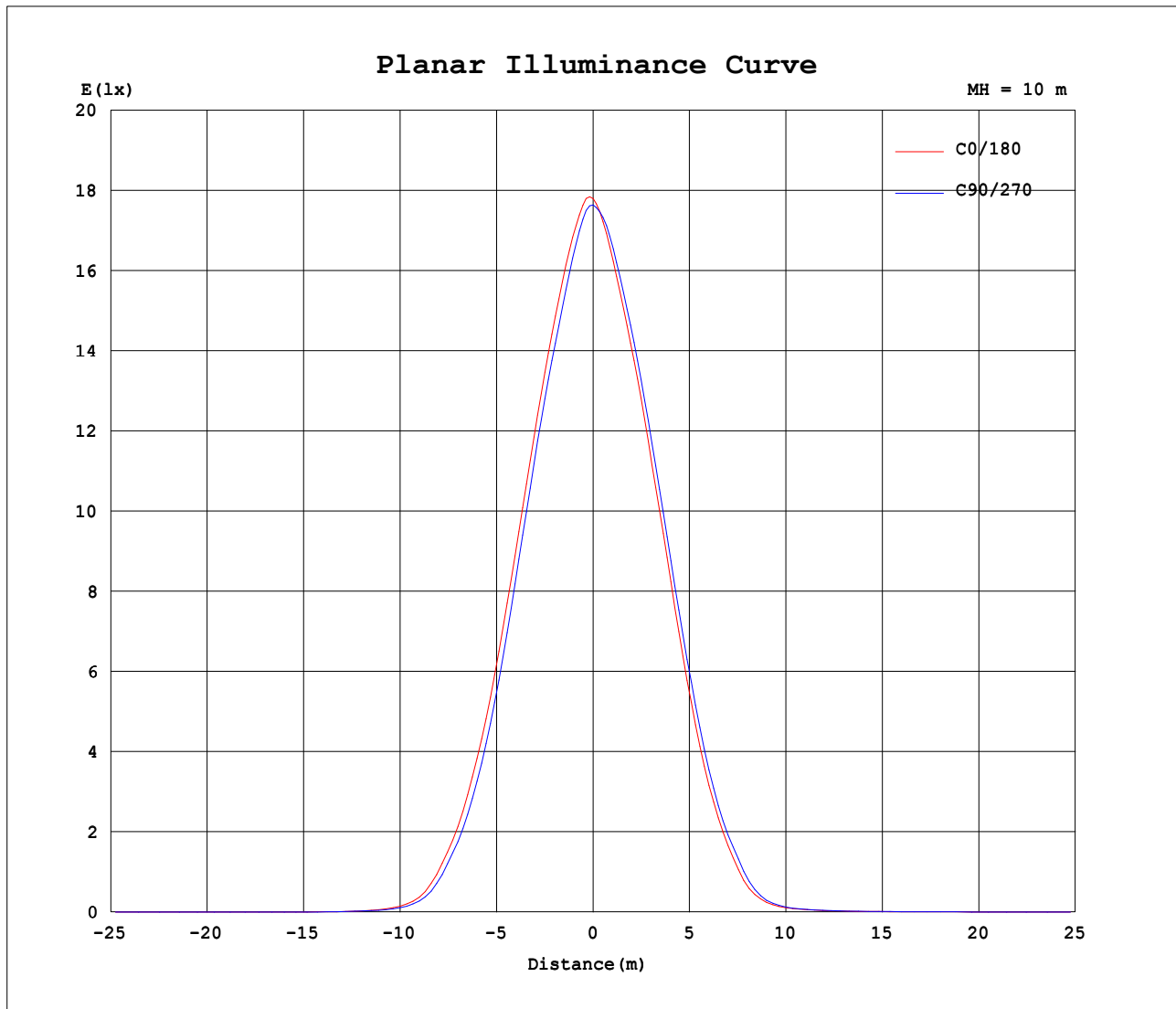
AvgL	cd/m2
L_0~180 (65) av	1721
L_0~180 (75) av	2193
L_0~180 (85) av	5463
L_90~270 (65) av	1803
L_90~270 (75) av	2286
L_90~270 (85) av	5644
L_45 (65) av	1802
L_45 (75) av	2275
L_45 (85) av	5664

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZR  
 Test Date:2021-07-16

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
 Humidity:65.0%  
 Test Distance:8.402m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: ZR  
Test Date: 2021-07-16

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.354  
Humidity: 65.0%  
Test Distance: 8.402m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.354
Humidity:65.0%
Test Distance:8.402m [K=1.0000]
Remarks:

```