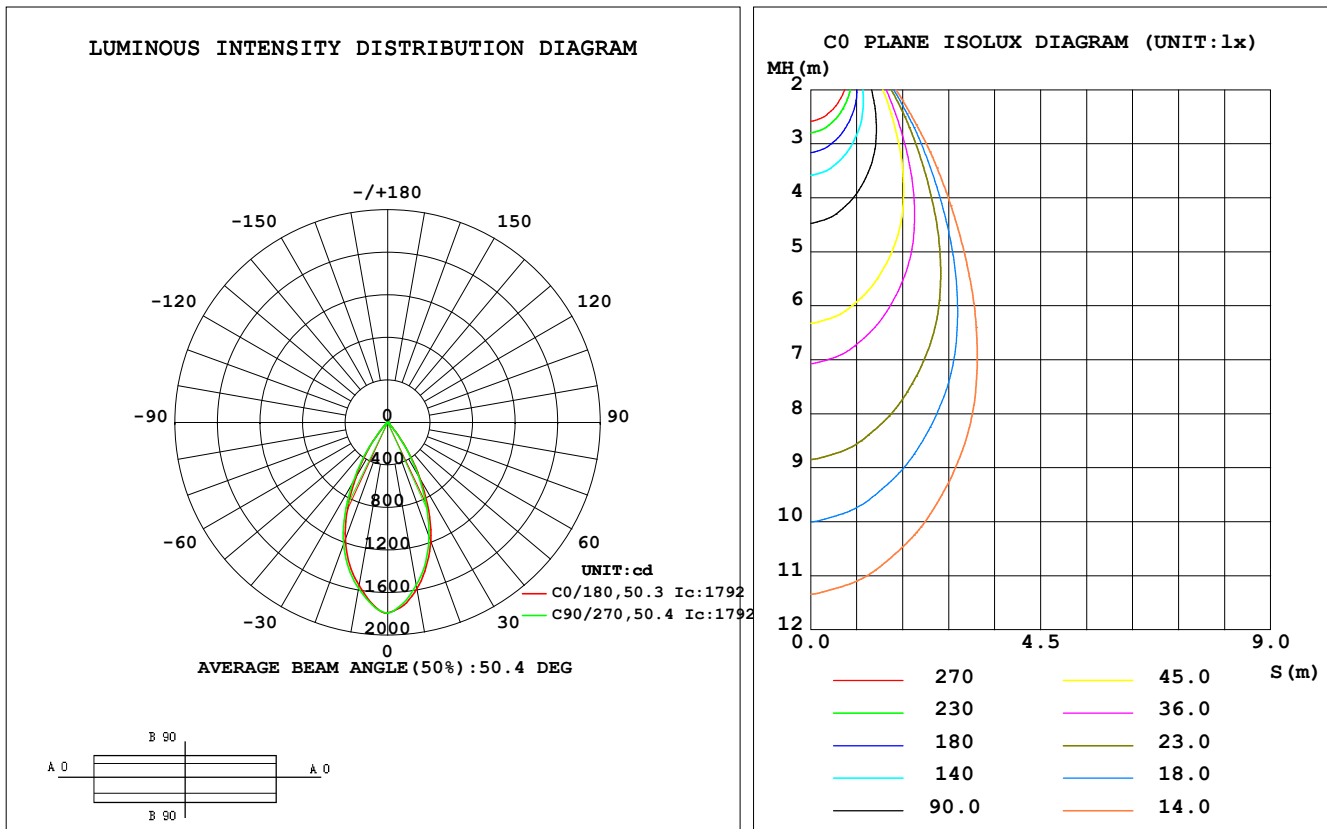


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:224.8V I:0.0690A P:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm					
NAME: DP090RW-WF01-14G30			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:80		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 84.04 lm/W
MODEL	3000K CRI90	I <sub>max</sub> (cd)	1792	S/MH(C0/180)	0.78	
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.81	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1252.2	η UP,DN(C0-180)	0.0,48.4	
NOMINAL FLUX(lm)	1252.21	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.6	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	36	η down(%)	100.0	CIBSE SHR MAX	0.85	



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	1588	1572	1552	1548	1556	1568	1584	1601	0- 10	159.0	159.0	12.7,12.7
20	1188	1160	1141	1139	1168	1193	1213	1229	10- 20	388.0	547.0	43.7,43.7
30	611.5	601.3	578.5	572.6	606.7	630.4	661.8	662.3	20- 30	409.7	956.7	76.4,76.4
40	117.0	117.8	120.2	118.1	141.5	143.4	151.0	153.2	30- 40	219.0	1176	93.9,93.9
50	17.49	18.49	19.48	18.80	28.82	27.89	27.93	27.91	40- 50	41.58	1217	97.2,97.2
60	8.011	8.144	8.318	8.405	15.60	15.51	15.47	15.41	50- 60	14.23	1232	98.3,98.3
70	5.524	5.617	5.805	5.876	10.64	10.53	10.52	10.51	60- 70	9.805	1241	99.1,99.1
80	3.358	3.396	3.500	3.550	6.550	6.494	6.495	6.493	70- 80	6.855	1248	99.7,99.7
90	1.840	1.847	1.867	1.866	3.298	3.310	3.334	3.341	80- 90	4.019	1252	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): 1204.7 lm

%lum = 96.2%

%lamp = 96.2%

Conical surface Flux(120deg): 1231.5 lm

%lum = 98.3%

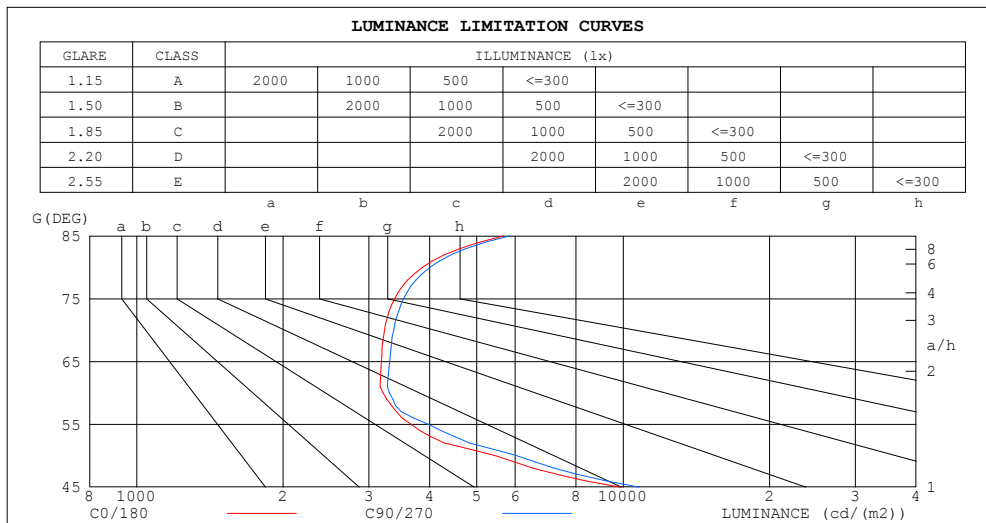
%lamp = 98.3%

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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm		
NAME: DP090RW-WF01-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	5686	5842
80	3869	4008
75	3390	3536
70	3231	3375
65	3183	3312
60	3205	3308
55	3657	3965
50	5442	6026
45	9876	10779

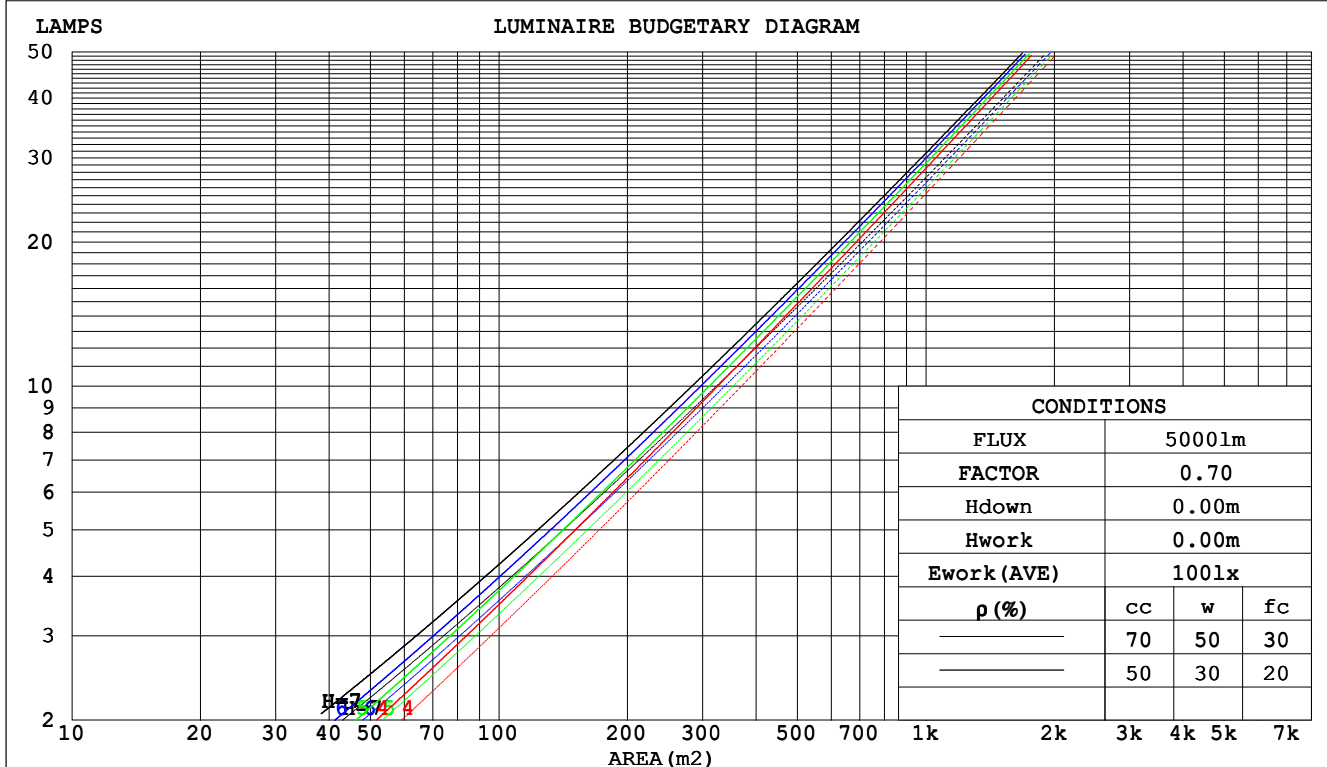
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

$\gamma$  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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm		
NAME: DP090RW-WF01-14G30	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	.00
1.0	1.11	1.08	1.06	1.09	1.06	1.04	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.94
2.0	1.03	.99	.96	1.02	.98	.95	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.84	.88	.85	.83	.82
4.0	.91	.85	.81	.90	.85	.81	.87	.83	.80	.85	.82	.79	.84	.81	.78	.76
5.0	.85	.80	.75	.84	.79	.75	.83	.78	.74	.81	.77	.74	.79	.76	.73	.72
6.0	.80	.75	.71	.80	.74	.70	.78	.73	.70	.77	.73	.69	.75	.72	.69	.67
7.0	.76	.70	.66	.75	.70	.66	.74	.69	.66	.73	.69	.65	.72	.68	.65	.64
8.0	.72	.66	.62	.71	.66	.62	.70	.65	.62	.69	.65	.62	.68	.64	.61	.60
9.0	.68	.63	.59	.68	.62	.59	.67	.62	.58	.66	.61	.58	.65	.61	.58	.57
10.0	.65	.59	.56	.64	.59	.55	.64	.59	.55	.63	.58	.55	.62	.58	.55	.54



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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm					
NAME: DP090RW-WF01-14G30			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	.178	.101	.032	.171	.098	.031	.159	.091	.029	.147	.085	.027	.136	.079	.026	
2.0	.168	.092	.028	.163	.090	.028	.152	.085	.026	.142	.080	.025	.133	.075	.024	
3.0	.159	.085	.025	.154	.083	.025	.145	.079	.024	.137	.075	.023	.129	.072	.022	
4.0	.151	.078	.023	.147	.077	.023	.139	.074	.022	.132	.071	.021	.125	.068	.021	
5.0	.143	.073	.021	.140	.072	.021	.133	.069	.020	.127	.067	.020	.121	.065	.019	
6.0	.137	.068	.020	.133	.067	.019	.128	.065	.019	.122	.063	.019	.117	.061	.018	
7.0	.130	.064	.018	.128	.064	.018	.122	.062	.018	.117	.060	.018	.113	.059	.017	
8.0	.125	.061	.017	.122	.060	.017	.118	.059	.017	.113	.057	.017	.109	.056	.016	
9.0	.119	.058	.016	.117	.057	.016	.113	.056	.016	.109	.055	.016	.105	.054	.015	
10.0	.115	.055	.015	.113	.054	.015	.109	.053	.015	.105	.052	.015	.102	.051	.015	

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	.156	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.073	.114	.085	.063	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.089	.055	.032	.062	.039	.023	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.032	.085	.051	.028	.059	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.094	.054	.028	.081	.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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm											
NAME: DP090RW-WF01-14G30					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	17.1	18.1	17.4	18.2	18.4	17.0	17.9	17.2	18.1	18.3	
	3H	17.1	17.9	17.3	18.1	18.3	16.9	17.8	17.2	18.0	18.2
	4H	17.0	17.8	17.3	18.0	18.3	16.9	17.7	17.2	17.9	18.2
	6H	17.0	17.8	17.3	18.0	18.3	16.9	17.7	17.2	17.9	18.2
	8H	17.0	17.7	17.3	18.0	18.3	16.9	17.6	17.2	17.9	18.2
	12H	17.0	17.7	17.4	18.0	18.3	16.9	17.6	17.3	17.9	18.2
4H	2H	16.9	17.7	17.2	17.9	18.2	16.8	17.6	17.1	17.8	18.0
	3H	16.9	17.6	17.2	17.8	18.1	16.8	17.4	17.1	17.7	18.0
	4H	16.9	17.5	17.2	17.8	18.1	16.8	17.4	17.1	17.7	18.0
	6H	16.9	17.5	17.3	17.8	18.1	16.8	17.4	17.2	17.7	18.1
	8H	16.9	17.5	17.3	17.8	18.2	16.9	17.4	17.3	17.7	18.1
	12H	17.0	17.5	17.4	17.8	18.2	16.9	17.4	17.3	17.8	18.2
8H	4H	16.8	17.3	17.2	17.7	18.0	16.7	17.2	17.1	17.6	17.9
	6H	16.9	17.3	17.3	17.7	18.1	16.8	17.2	17.2	17.6	18.0
	8H	17.0	17.3	17.4	17.8	18.2	16.9	17.3	17.3	17.7	18.1
	12H	17.1	17.4	17.5	17.8	18.3	17.0	17.3	17.5	17.8	18.2
12H	4H	16.8	17.2	17.2	17.6	18.0	16.7	17.1	17.1	17.5	17.9
	6H	16.9	17.2	17.3	17.7	18.1	16.8	17.2	17.2	17.6	18.0
	8H	17.0	17.3	17.4	17.7	18.2	16.9	17.2	17.4	17.7	18.1
Variations with the observer position at spacings:											
S = 1.0H	+ 3.4 / - 4.6					+ 3.2 / - 4.3					
1.5H	+ 5.9 / - 4.4					+ 5.6 / - 4.1					
2.0H	+ 2.0 / - 0.6					+ 2.2 / - 0.7					

CIE Pub.117, 1252 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 0.8$ )

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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm		
NAME: DP090RW-WF01-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

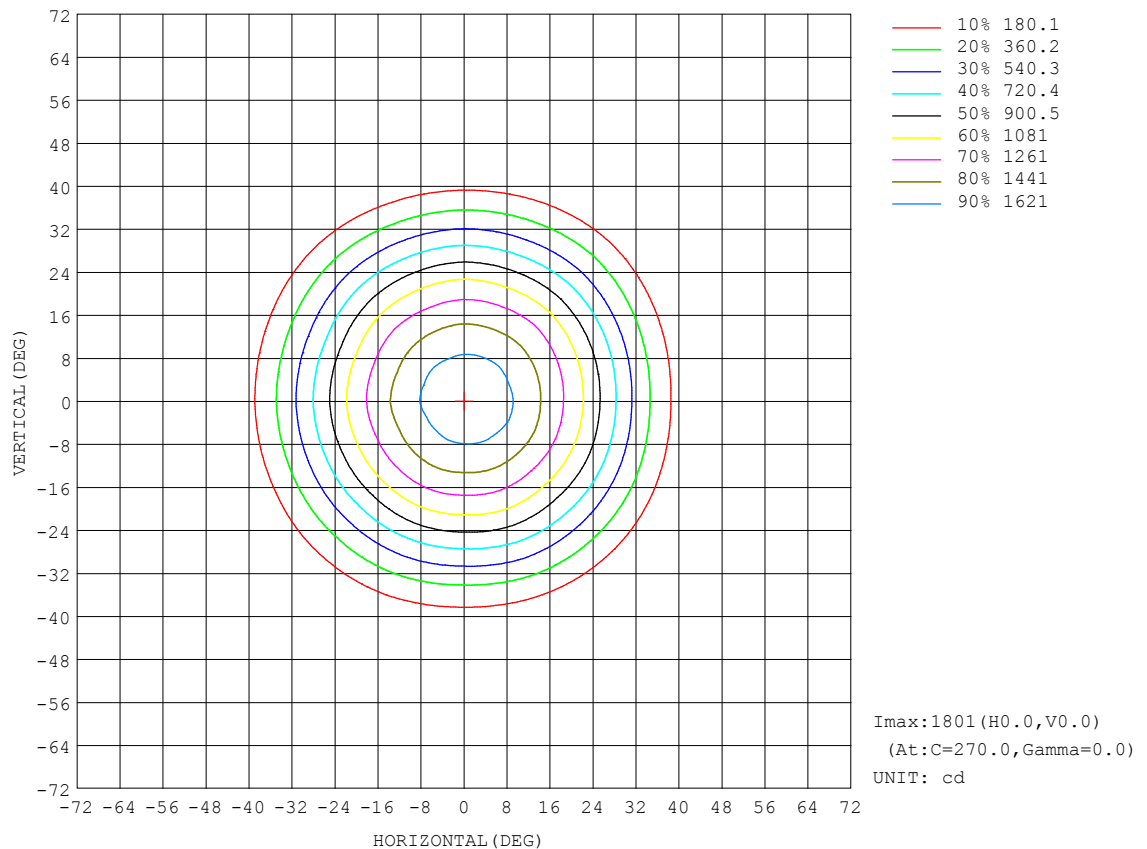
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	82	78	87	81	78	87	81	78	74
0.80	95	89	86	94	89	86	93	88	85	81
1.00	99	94	90	99	93	90	97	93	89	86
1.25	103	98	95	102	98	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	108	104	101	107	103	100	104	101	99	94
2.50	110	106	103	109	105	102	105	103	101	95
3.00	112	108	106	110	107	104	107	104	102	96
4.00	114	111	109	112	109	107	108	106	105	98
5.00	115	113	111	113	111	109	109	107	106	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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm		
NAME: DP090RW-WF01-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



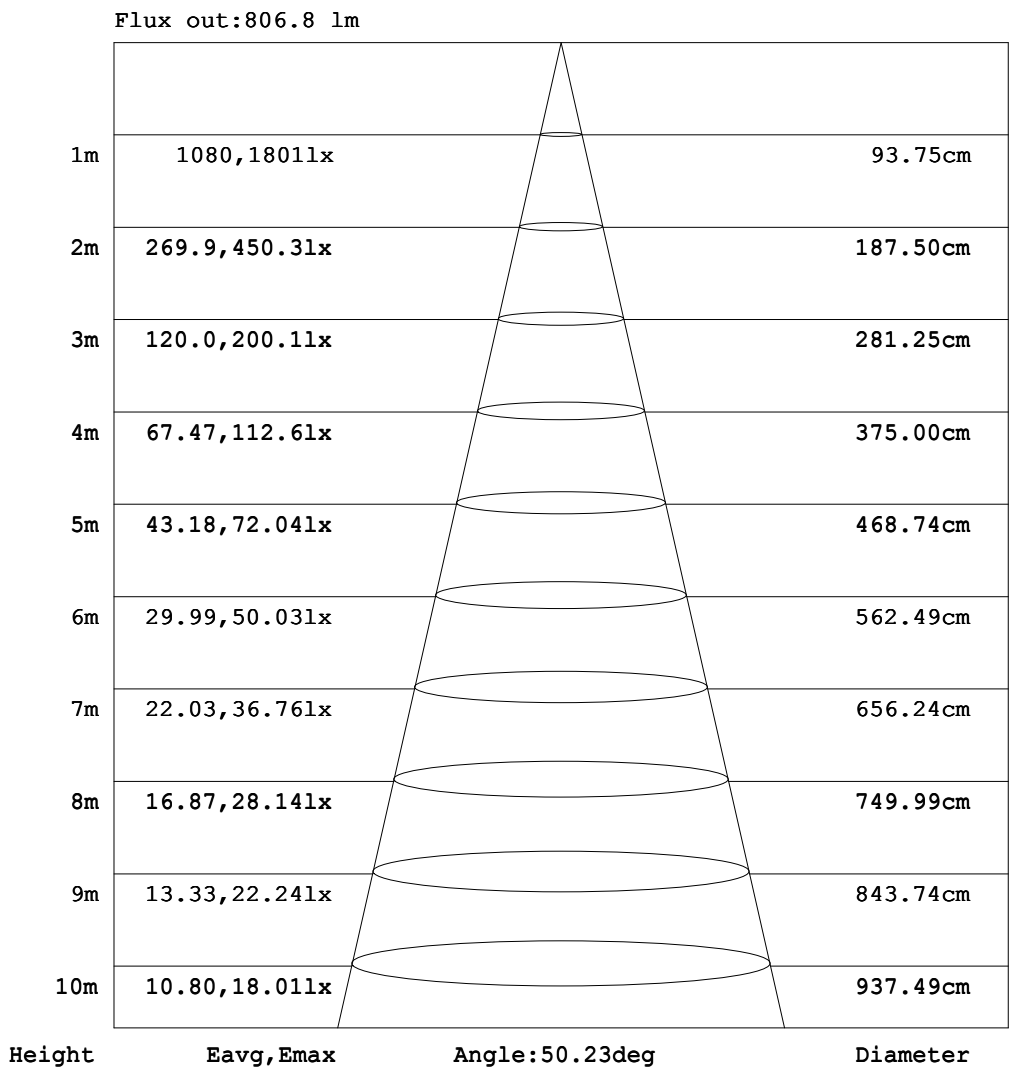
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

$\gamma$  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:



### AAI Figure

Test:U:224.8V I:0.0690A P:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm		
NAME: DP090RW-WF01-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



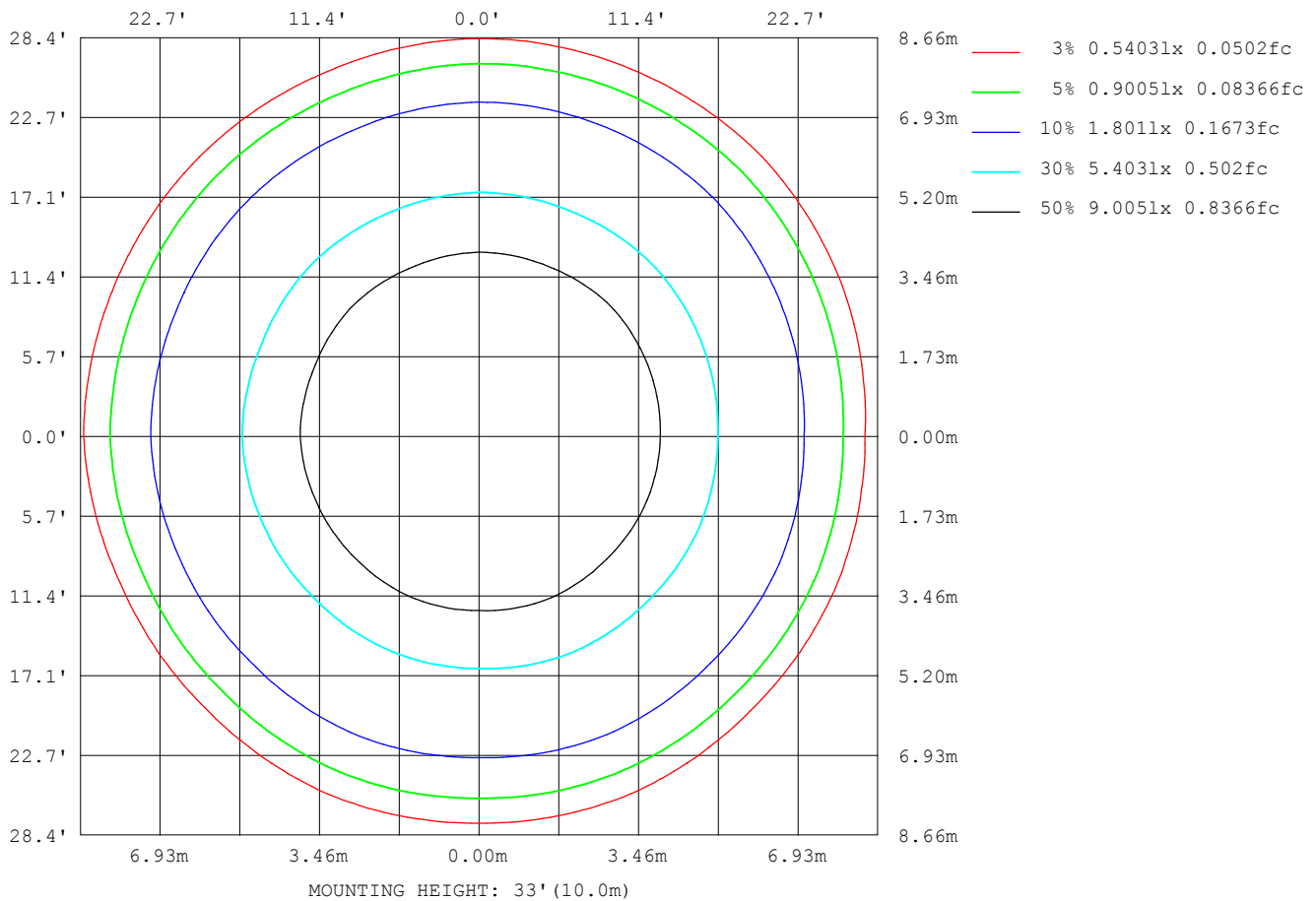
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm		
NAME: DP090RW-WF01-14G30	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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1252.21x1 lm		
NAME: DP090RW-WF01-14G30	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

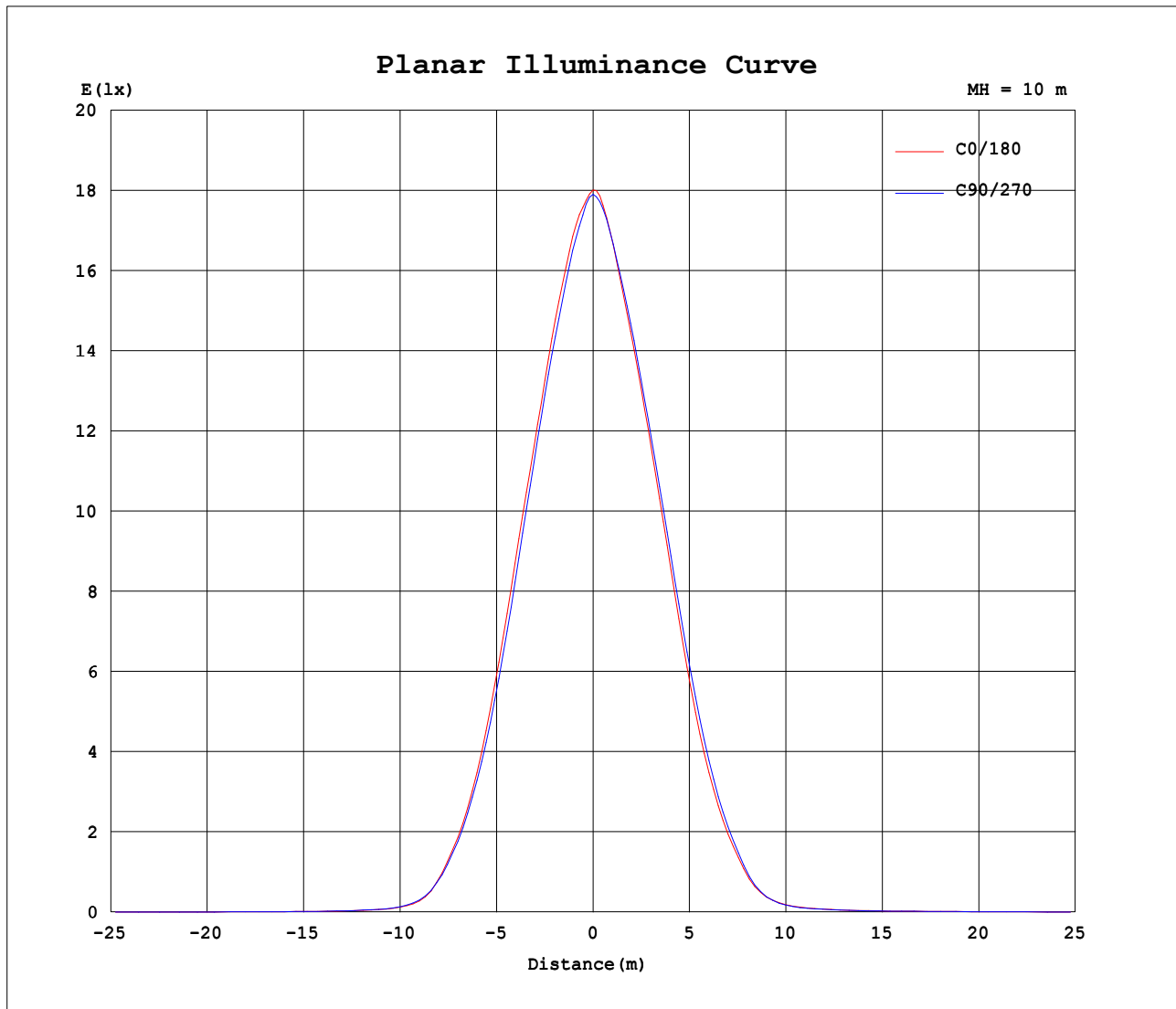
AvgL	cd/m2
L_0~180 (65) av	4642
L_0~180 (75) av	4951
L_0~180 (85) av	8260
L_90~270 (65) av	4689
L_90~270 (75) av	4994
L_90~270 (85) av	8383
L_45 (65) av	4672
L_45 (75) av	4981
L_45 (85) av	8333

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:

```