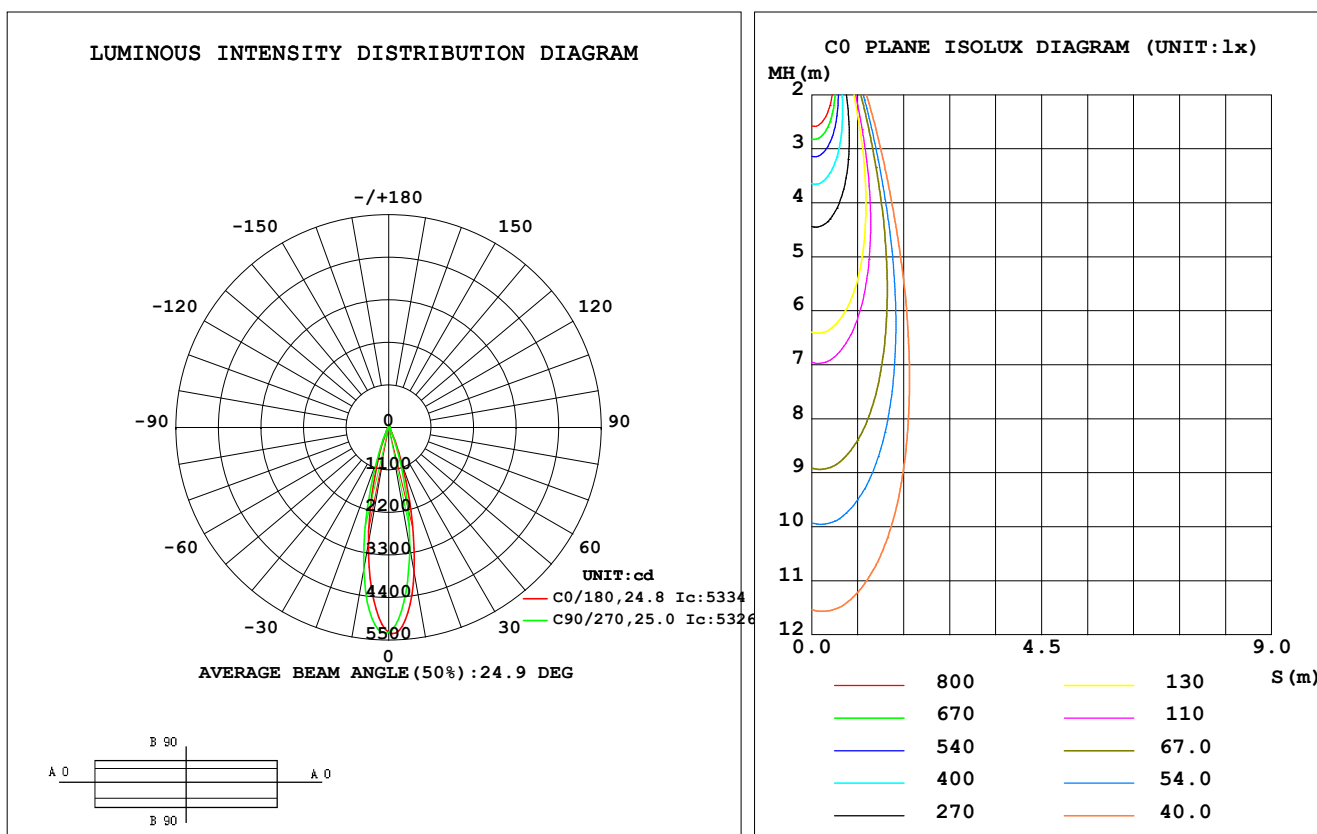


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:224.8V I:0.0690A P:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1193.51x1 lm					
NAME: DP090RW-M02-14G40		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:80		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 80.10 lm/W
MODEL	3000K CRI90	I <sub>max</sub> (cd)	5366	S/MH(C0/180)	0.38	
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.44	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1193.5	η UP,DN(C0-180)	0.0,48.2	
NOMINAL FLUX(lm)	1193.51	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.8	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	36	η down(%)	100.0	CIBSE SHR MAX	1.00	



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	3801	3501	3151	2932	3042	3331	3720	3939	0- 10	409.7	409.7	34.3, 34.3
20	1022	878.0	767.9	660.4	641.0	691.7	892.2	1071	10- 20	521.2	931.0	78, 78
30	171.3	155.3	141.8	129.1	129.7	130.6	162.5	195.7	20- 30	172.0	1103	92.4, 92.4
40	45.42	42.95	39.35	35.76	46.98	46.67	54.07	61.35	30- 40	52.98	1156	96.9, 96.9
50	11.74	10.55	8.462	7.018	15.71	16.86	19.71	21.85	40- 50	20.97	1177	98.6, 98.6
60	1.893	1.927	1.332	1.103	7.299	7.850	8.489	9.028	50- 60	7.019	1184	99.2, 99.2
70	1.249	1.249	1.283	1.325	5.080	5.183	5.386	5.564	60- 70	3.803	1188	99.5, 99.5
80	1.485	1.501	1.517	1.544	3.668	3.719	3.860	3.965	70- 80	3.147	1191	99.8, 99.8
90	1.580	1.592	1.611	1.648	2.672	2.698	2.810	2.889	80- 90	2.646	1194	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): 1168.8 lm

%lum = 97.9%

%lamp = 97.9%

Conical surface Flux(120deg): 1183.9 lm

%lum = 99.2%

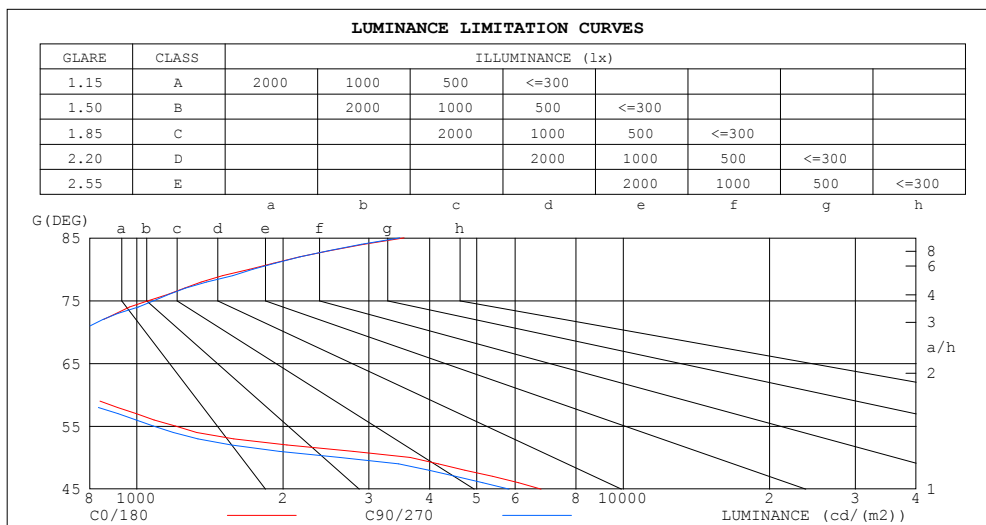
%lamp = 99.2%

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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1193.51x1 lm		
NAME: DP090RW-M02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3545	3478
80	1709	1735
75	1057	1086
70	730	745
65	509	541
60	756	529
55	1201	1082
50	3648	2614
45	6775	5830

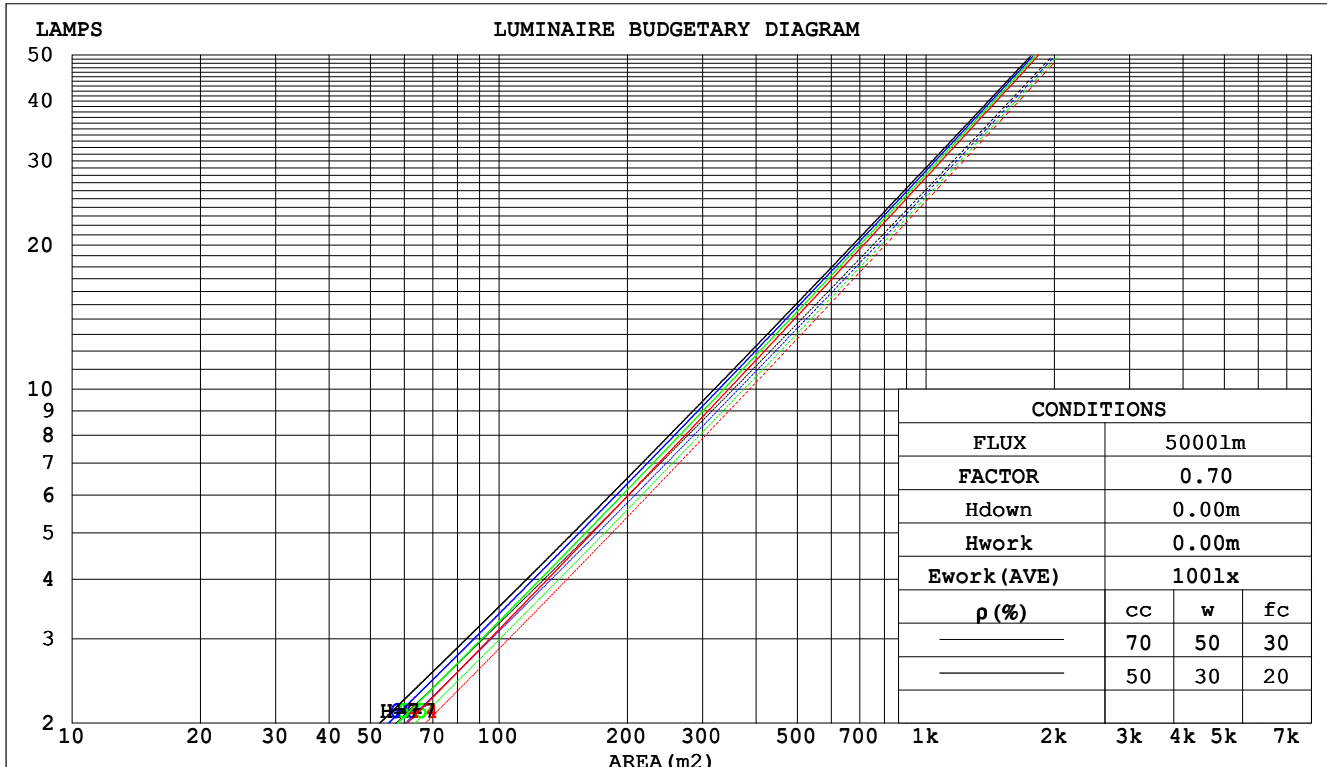
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

$\gamma$  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:1193.51x1 lm		
NAME: DP090RW-M02-14G40	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	1.13	1.11	1.09	1.10	1.09	1.07	1.06	1.05	1.04	1.03	1.02	1.01	.99	.99	.98	.96
2.0	1.07	1.04	1.01	1.05	1.03	1.00	1.02	.00	.98	.99	.98	.96	.97	.95	.94	.93
3.0	1.02	.99	.96	1.01	.98	.95	.98	.96	.93	.96	.94	.92	.94	.92	.91	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.91	.88	.91	.89	.87	.86
5.0	.94	.90	.87	.94	.90	.87	.92	.88	.86	.90	.87	.85	.89	.86	.84	.83
6.0	.91	.87	.84	.90	.86	.83	.89	.85	.83	.88	.85	.82	.87	.84	.82	.81
7.0	.88	.84	.81	.87	.83	.80	.86	.83	.80	.85	.82	.80	.84	.81	.79	.78
8.0	.85	.81	.78	.85	.81	.78	.84	.80	.78	.83	.80	.77	.82	.79	.77	.76
9.0	.83	.78	.76	.82	.78	.75	.81	.78	.75	.81	.77	.75	.80	.77	.75	.74
10.0	.80	.76	.73	.80	.76	.73	.79	.76	.73	.79	.75	.73	.78	.75	.73	.72



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:1193.51x1 lm					
NAME: DP090RW-M02-14G40			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	.143	.082	.026	.137	.078	.025	.124	.071	.023	.113	.065	.021	.102	.059	.019	
2.0	.132	.073	.022	.127	.070	.022	.117	.065	.020	.107	.060	.019	.098	.056	.018	
3.0	.123	.065	.020	.119	.063	.019	.110	.060	.018	.102	.056	.017	.095	.052	.016	
4.0	.115	.060	.018	.111	.058	.017	.104	.055	.016	.097	.052	.016	.091	.050	.015	
5.0	.108	.055	.016	.105	.054	.016	.099	.051	.015	.093	.049	.015	.088	.047	.014	
6.0	.102	.051	.015	.100	.050	.014	.094	.048	.014	.089	.046	.014	.085	.045	.013	
7.0	.097	.048	.014	.095	.047	.013	.090	.046	.013	.086	.044	.013	.082	.042	.012	
8.0	.092	.045	.013	.090	.044	.013	.086	.043	.012	.082	.042	.012	.079	.040	.012	
9.0	.088	.043	.012	.086	.042	.012	.083	.041	.012	.079	.040	.011	.076	.039	.011	
10.0	.085	.041	.011	.083	.040	.011	.080	.039	.011	.077	.038	.011	.074	.037	.011	

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	.169	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.151	.133	.117	.129	.114	.101	.089	.079	.071	.051	.046	.041	.016	.015	.014	
3.0	.136	.113	.095	.117	.098	.082	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.065	.097	.074	.057	.067	.052	.040	.039	.030	.024	.013	.010	.008	
6.0	.105	.076	.055	.090	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.097	.068	.047	.083	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.091	.061	.041	.078	.053	.035	.054	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.085	.055	.035	.073	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.080	.051	.031	.069	.044	.027	.048	.031	.019	.028	.018	.011	.009	.006	.004	

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:1193.51x1 lm										
NAME: DP090RW-M02-14G40					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	8.5	9.2	8.7	9.3	9.5	8.0	8.6	8.2	8.8	8.9
3H	8.4	9.0	8.6	9.2	9.4	7.9	8.5	8.1	8.7	8.9
4H	8.4	9.0	8.6	9.2	9.4	7.9	8.5	8.1	8.7	8.9
6H	8.5	9.0	8.7	9.3	9.5	8.0	8.6	8.3	8.8	9.0
8H	8.6	9.1	8.9	9.4	9.6	8.1	8.7	8.4	8.9	9.2
12H	8.8	9.3	9.1	9.6	9.8	8.4	8.9	8.7	9.2	9.4
4H 2H	8.3	8.9	8.5	9.1	9.3	7.8	8.4	8.0	8.6	8.8
3H	8.2	8.7	8.5	9.0	9.2	7.7	8.2	8.0	8.5	8.7
4H	8.2	8.7	8.6	9.0	9.3	7.8	8.2	8.1	8.5	8.8
6H	8.4	8.8	8.8	9.2	9.5	8.0	8.4	8.4	8.8	9.1
8H	8.6	9.0	9.0	9.4	9.7	8.2	8.6	8.6	9.0	9.4
12H	9.0	9.4	9.4	9.8	10.1	8.7	9.0	9.1	9.4	9.8
8H 4H	8.2	8.6	8.5	8.9	9.3	7.7	8.1	8.1	8.5	8.8
6H	8.5	8.8	8.9	9.2	9.6	8.1	8.4	8.5	8.8	9.2
8H	8.8	9.1	9.3	9.6	10.0	8.5	8.8	8.9	9.2	9.7
12H	9.5	9.7	9.9	10.2	10.6	9.2	9.4	9.6	9.9	10.3
12H 4H	8.1	8.5	8.5	8.9	9.3	7.7	8.1	8.1	8.4	8.8
6H	8.5	8.8	9.0	9.2	9.7	8.2	8.4	8.6	8.9	9.3
8H	9.0	9.2	9.4	9.7	10.1	8.6	8.9	9.1	9.3	9.8
Variations with the observer position at spacings:										
S = 1.0H	+ 2.1 / - 3.5					+ 1.9 / - 3.2				
1.5H	+ 3.8 / - 3.7					+ 3.5 / - 3.3				
2.0H	+ 4.0 / - 1.5					+ 3.4 / - 1.3				

CIE Pub.117, 1194 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.6)

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:1193.51x1 lm		
NAME: DP090RW-M02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

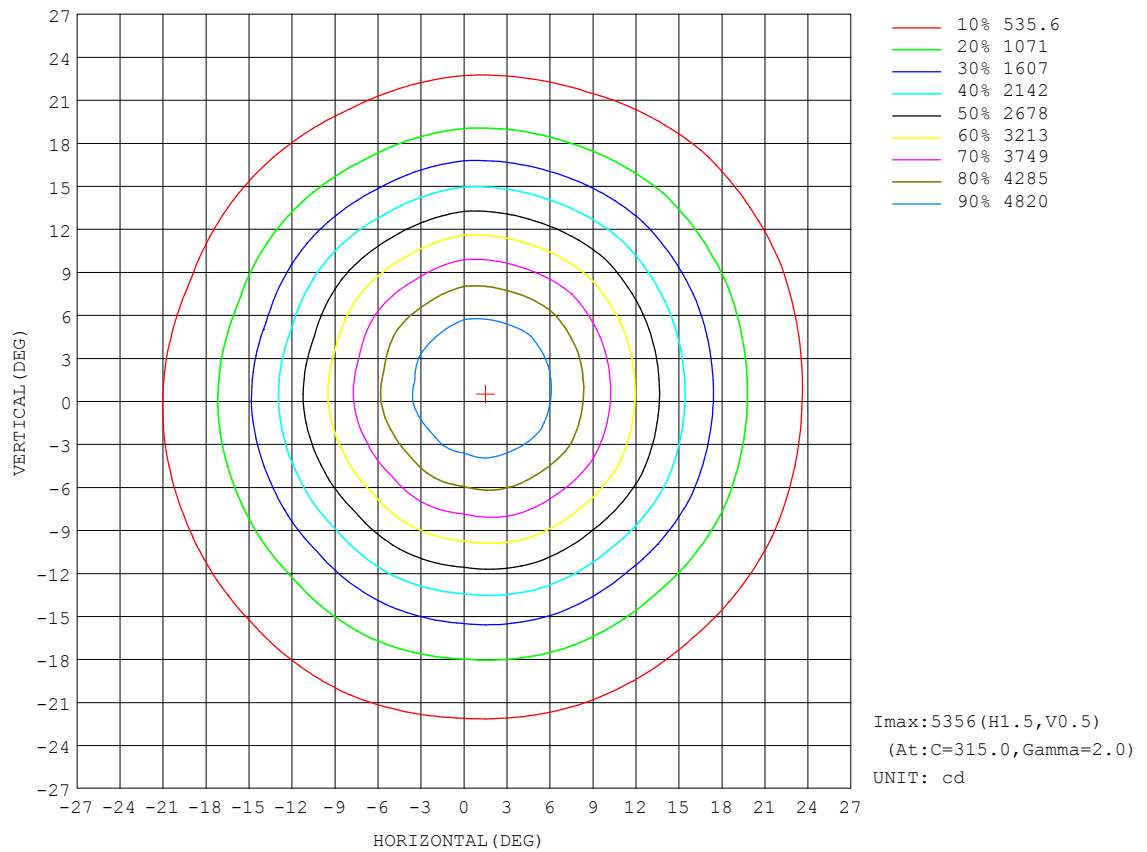
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	80	89	84	80	88	83	80	77
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	88
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	104	100	98	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	104	102	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	109	112	110	108	109	107	105	98
5.00	115	113	112	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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1193.51x1 lm		
NAME: DP090RW-M02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



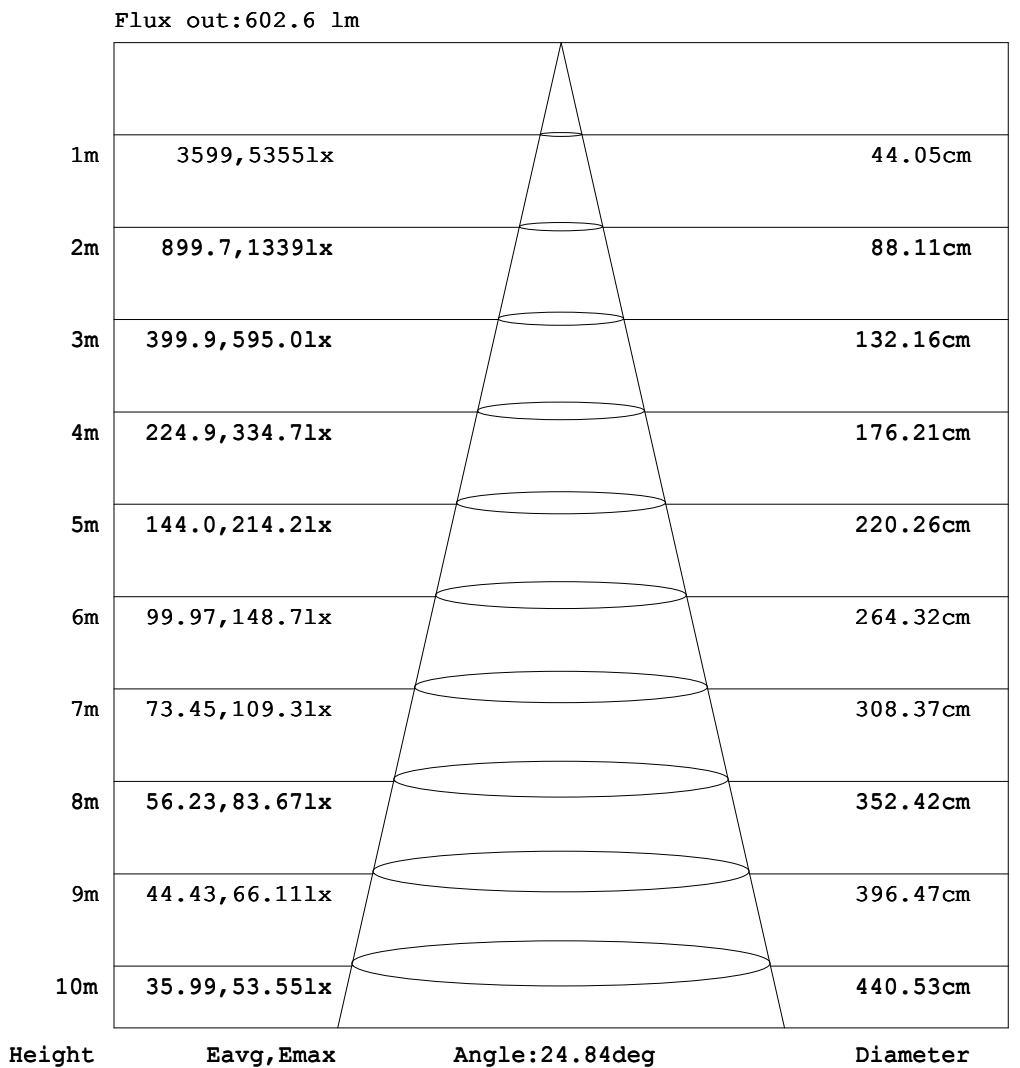
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZR  
Test Date:2021-07-16

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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1193.51x1 lm		
NAME: DP090RW-M02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



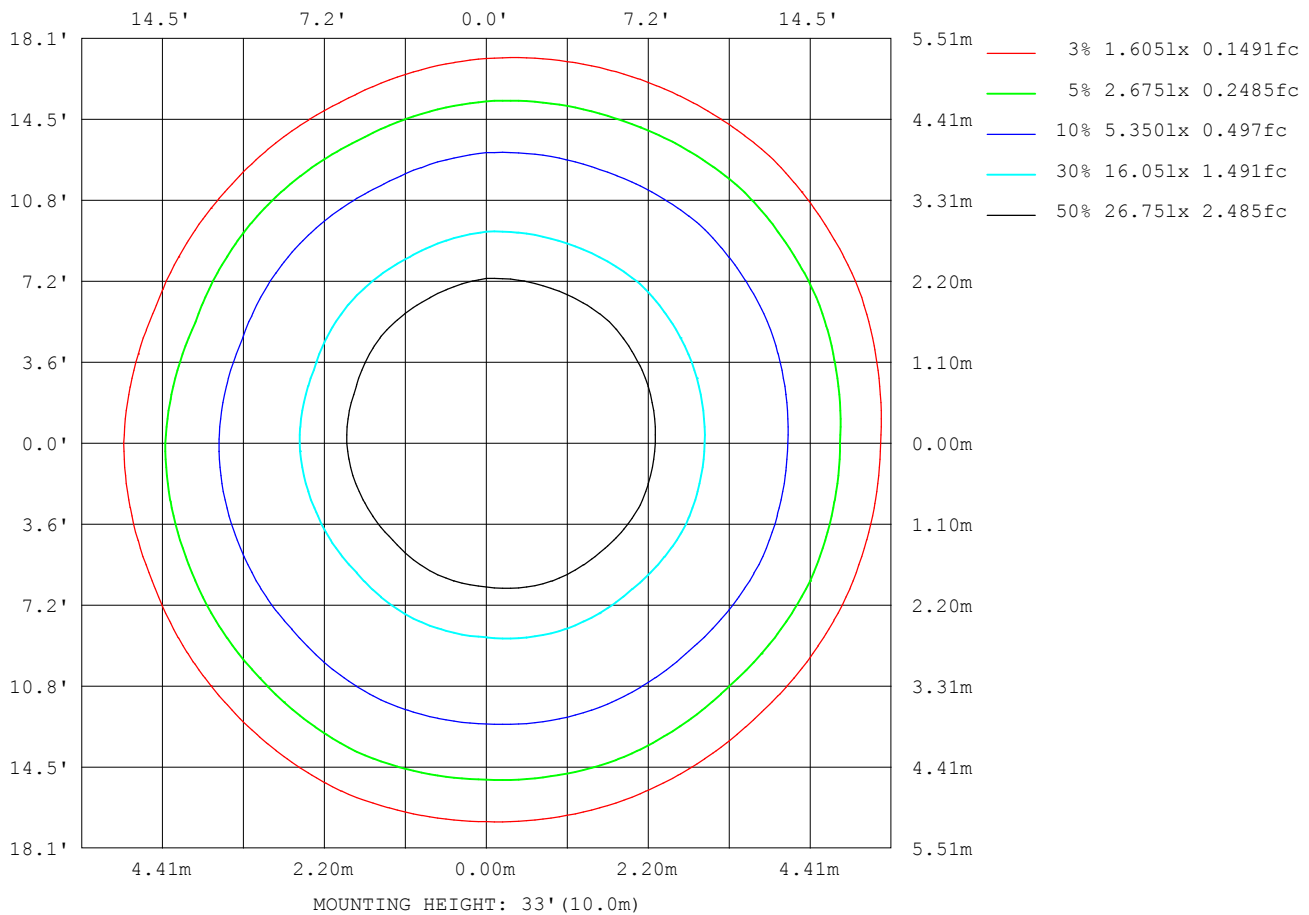
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:1193.51x1 lm		
NAME: DP090RW-M02-14G40	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:1193.51x1 lm		
NAME: DP090RW-M02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

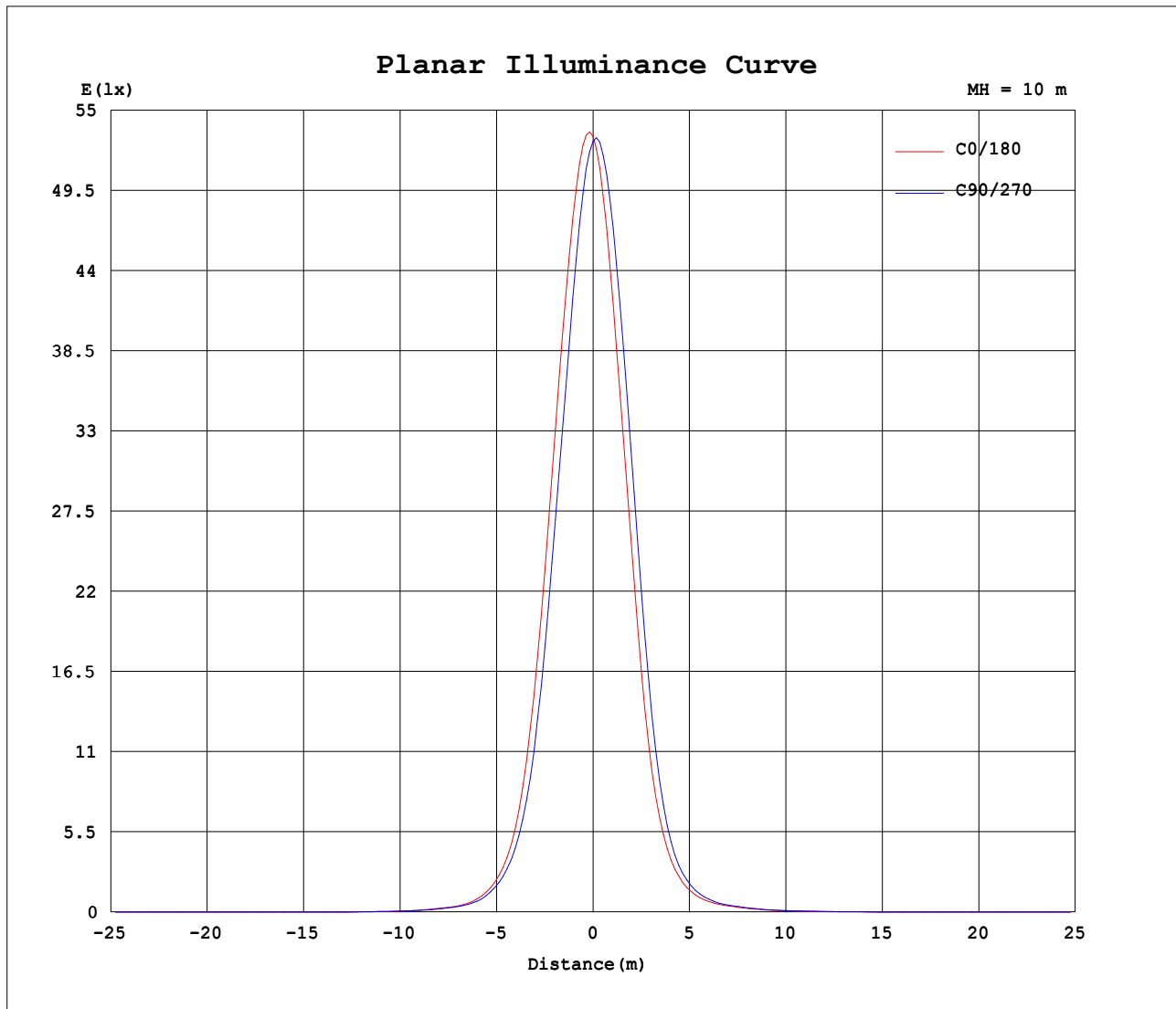
AvgL	cd/m2
L_0~180 (65) av	1677
L_0~180 (75) av	2181
L_0~180 (85) av	5307
L_90~270 (65) av	1795
L_90~270 (75) av	2292
L_90~270 (85) av	5493
L_45 (65) av	1783
L_45 (75) av	2284
L_45 (85) av	5508

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:

```