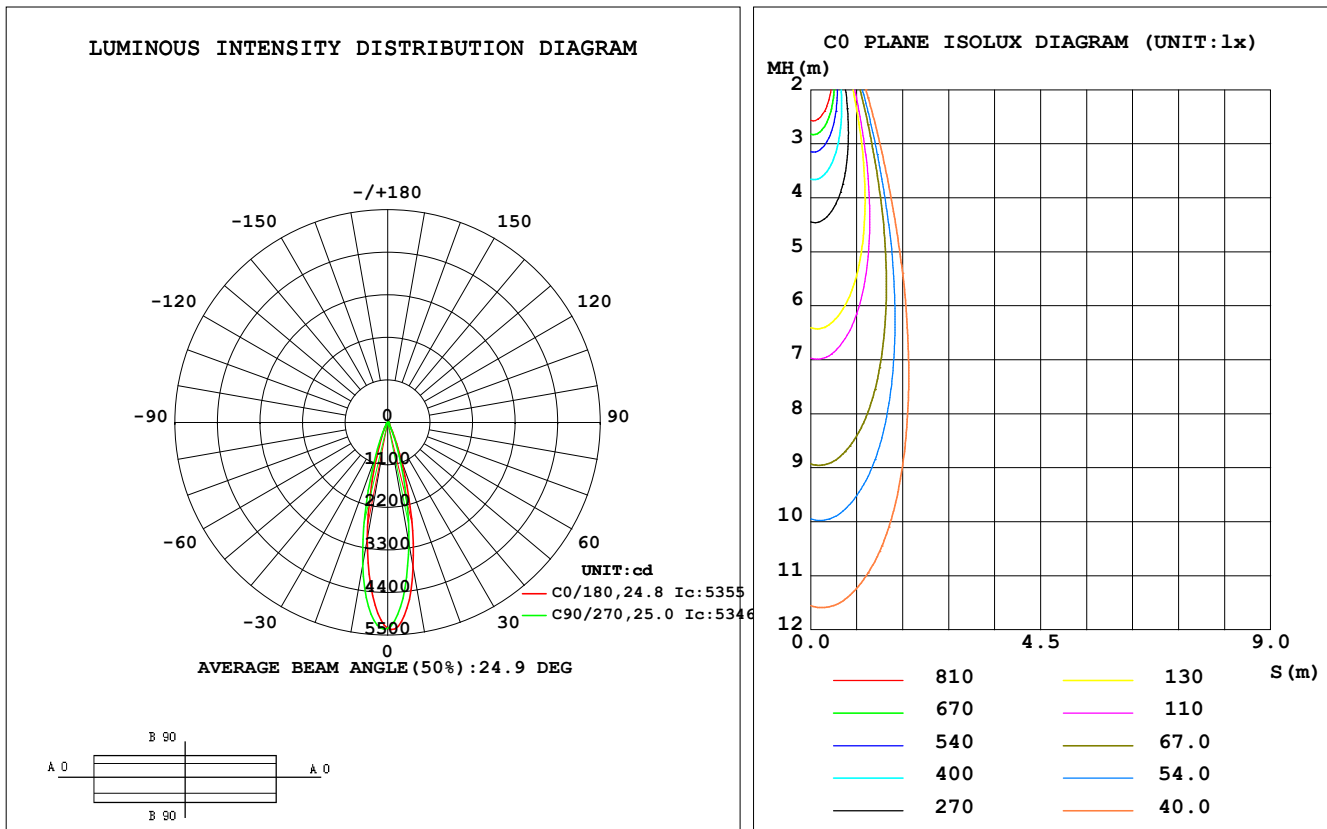


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm					
NAME: DP090RW-M04-14G40		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:80		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 81.22 lm/W
MODEL	3000K CRI90	I _{max} (cd)	5386	S/MH(C0/180)	0.39	
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.44	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1210.1	η UP,DN(C0-180)	0.0,48.2	
NOMINAL FLUX(lm)	1210.1	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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	3810	3518	3171	2947	3059	3346	3729	3950	0- 10	411.4	411.4	34,34
20	1032	891.5	781.6	671.2	652.8	704.7	899.4	1081	10- 20	524.9	936.3	77.4,77.4
30	176.9	161.5	150.9	134.3	135.4	136.6	168.0	201.8	20- 30	175.5	1112	91.9,91.9
40	49.27	46.76	42.88	39.15	50.38	50.15	57.59	65.31	30- 40	55.84	1168	96.5,96.5
50	14.22	13.07	10.80	9.136	17.94	19.08	22.00	24.40	40- 50	23.24	1191	98.4,98.4
60	3.096	3.225	2.495	1.998	8.327	8.898	9.631	10.32	50- 60	8.604	1200	99.1,99.1
70	1.622	1.629	1.664	1.700	5.458	5.558	5.801	5.996	60- 70	4.436	1204	99.5,99.5
80	1.607	1.613	1.632	1.647	3.836	3.878	4.017	4.149	70- 80	3.401	1207	99.8,99.8
90	1.617	1.629	1.674	1.668	2.746	2.778	2.862	2.952	80- 90	2.732	1210	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): 1181.8 lm

%lum = 97.7%

%lamp = 97.7%

Conical surface Flux(120deg): 1199.5 lm

%lum = 99.1%

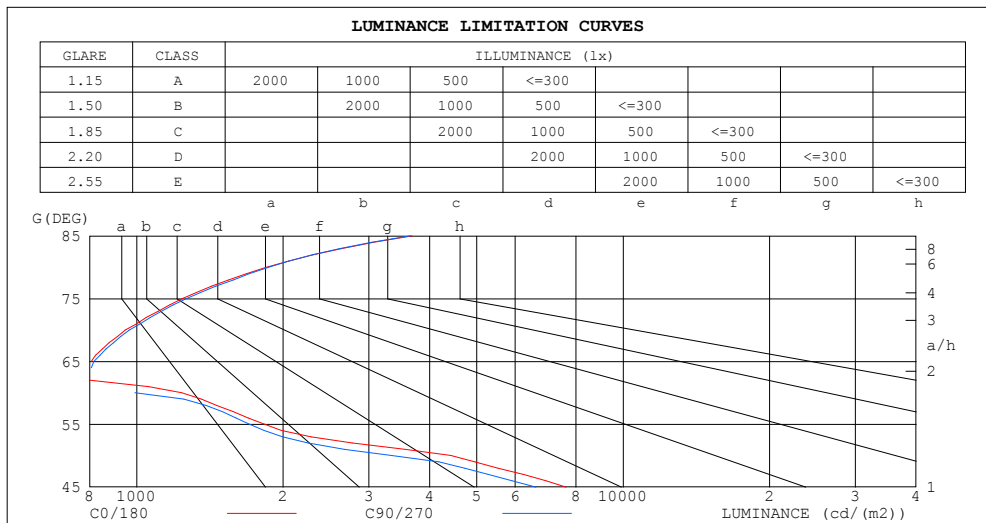
%lamp = 99.1%

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:

LUMINANCE LIMITATION CURVES

Test:U:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm		
NAME: DP090RW-M04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3683	3647
80	1848	1867
75	1240	1265
70	948	966
65	807	817
60	1237	991
55	1829	1703
50	4421	3336
45	7625	6620

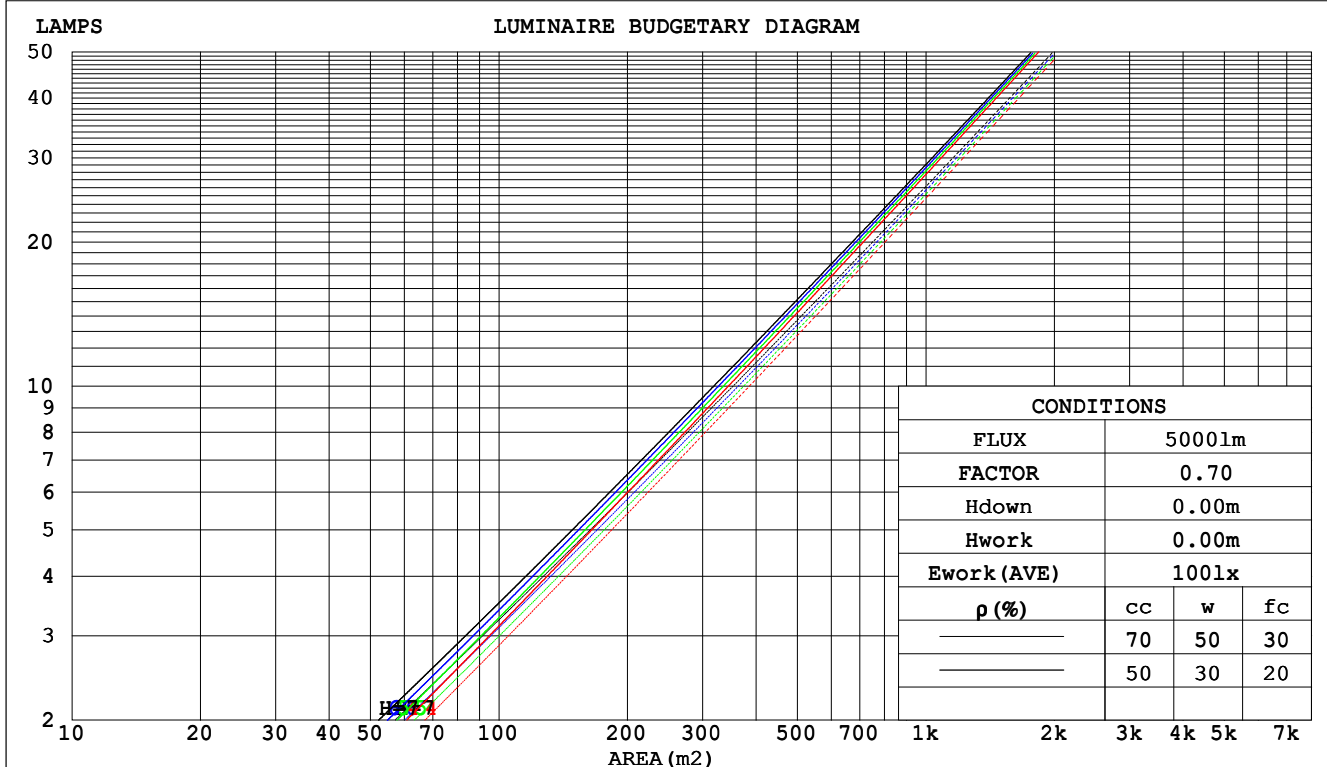
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZR
Test Date:2021-07-16

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm		
NAME: DP090RW-M04-14G40	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	1.10	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	1.02	1.00	1.02	.00	.98	.99	.97	.96	.97	.95	.94	.92
3.0	1.02	.98	.95	1.01	.97	.95	.98	.95	.93	.96	.94	.92	.94	.92	.90	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.90	.88	.91	.89	.87	.86
5.0	.94	.90	.87	.93	.89	.86	.92	.88	.86	.90	.87	.85	.89	.86	.84	.83
6.0	.91	.86	.83	.90	.86	.83	.89	.85	.82	.87	.84	.82	.86	.84	.81	.80
7.0	.88	.83	.80	.87	.83	.80	.86	.82	.80	.85	.82	.79	.84	.81	.79	.78
8.0	.85	.81	.78	.84	.80	.77	.83	.80	.77	.83	.79	.77	.82	.79	.77	.76
9.0	.82	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.75	.80	.77	.74	.73
10.0	.80	.76	.73	.80	.76	.73	.79	.75	.73	.78	.75	.73	.78	.75	.72	.71



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:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm								
NAME: DP090RW-M04-14G40				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	.144	.082	.026	.138	.079	.025	.125	.072	.023	.114	.066	.021	.103	.060	.019	
2.0	.133	.073	.022	.128	.070	.022	.118	.065	.020	.108	.061	.019	.099	.056	.018	
3.0	.124	.066	.020	.120	.064	.019	.111	.060	.018	.103	.056	.017	.096	.053	.016	
4.0	.116	.060	.018	.112	.059	.017	.105	.056	.017	.098	.053	.016	.092	.050	.015	
5.0	.109	.056	.016	.106	.054	.016	.100	.052	.015	.094	.050	.015	.089	.047	.014	
6.0	.103	.052	.015	.100	.051	.015	.095	.049	.014	.090	.047	.014	.085	.045	.013	
7.0	.098	.048	.014	.096	.048	.014	.091	.046	.013	.087	.044	.013	.082	.043	.013	
8.0	.093	.046	.013	.091	.045	.013	.087	.043	.012	.083	.042	.012	.080	.041	.012	
9.0	.089	.043	.012	.087	.042	.012	.084	.041	.012	.080	.040	.011	.077	.039	.011	
10.0	.085	.041	.011	.084	.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	.147	.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	.013	
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	.114	.086	.065	.098	.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	.084	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.091	.061	.040	.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:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm										
NAME: DP090RW-M04-14G40					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	9.0	9.7	9.2	9.9	10.0	8.5	9.2	8.8	9.4	9.5
3H	9.0	9.6	9.2	9.8	10.0	8.5	9.1	8.7	9.3	9.5
4H	9.0	9.6	9.2	9.8	10.0	8.5	9.1	8.8	9.3	9.5
6H	9.0	9.6	9.3	9.9	10.1	8.6	9.2	8.9	9.4	9.7
8H	9.1	9.7	9.4	9.9	10.2	8.7	9.3	9.0	9.5	9.8
12H	9.3	9.9	9.6	10.1	10.4	8.9	9.5	9.2	9.7	10.0
4H 2H	8.8	9.5	9.1	9.7	9.9	8.4	9.0	8.6	9.2	9.4
3H	8.8	9.3	9.1	9.6	9.8	8.3	8.9	8.6	9.1	9.4
4H	8.8	9.3	9.2	9.6	9.9	8.4	8.9	8.7	9.2	9.5
6H	9.0	9.5	9.4	9.8	10.1	8.6	9.1	9.0	9.4	9.7
8H	9.2	9.6	9.6	10.0	10.3	8.9	9.3	9.2	9.6	10.0
12H	9.6	9.9	10.0	10.3	10.7	9.2	9.6	9.6	10.0	10.3
8H 4H	8.8	9.2	9.2	9.5	9.9	8.4	8.8	8.7	9.1	9.5
6H	9.1	9.4	9.5	9.8	10.2	8.7	9.1	9.1	9.5	9.9
8H	9.4	9.7	9.9	10.1	10.6	9.1	9.4	9.5	9.8	10.2
12H	10.0	10.2	10.4	10.7	11.1	9.7	9.9	10.1	10.4	10.8
12H 4H	8.8	9.1	9.2	9.5	9.9	8.3	8.7	8.7	9.1	9.5
6H	9.1	9.4	9.6	9.8	10.3	8.8	9.1	9.2	9.5	9.9
8H	9.5	9.8	10.0	10.2	10.7	9.2	9.5	9.7	9.9	10.4
Variations with the observer position at spacings:										
S = 1.0H	+ 2.0 / - 3.2					+ 1.8 / - 3.0				
1.5H	+ 3.5 / - 3.3					+ 3.3 / - 3.0				
2.0H	+ 3.9 / - 1.7					+ 3.3 / - 1.6				

CIE Pub.117, 1210 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:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm		
NAME: DP090RW-M04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

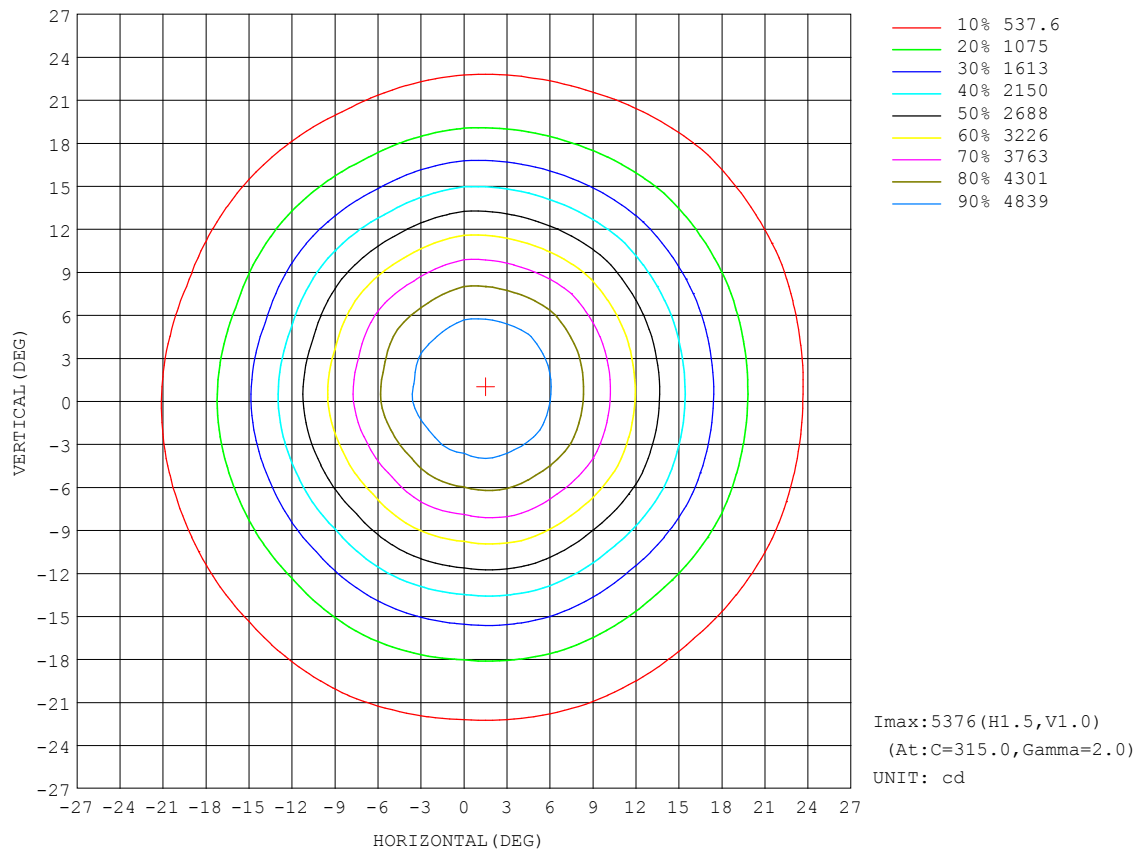
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	87	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	103	100	98	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	96
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

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:

ISOCANDELA DIAGRAM

Test:U:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm		
NAME: DP090RW-M04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

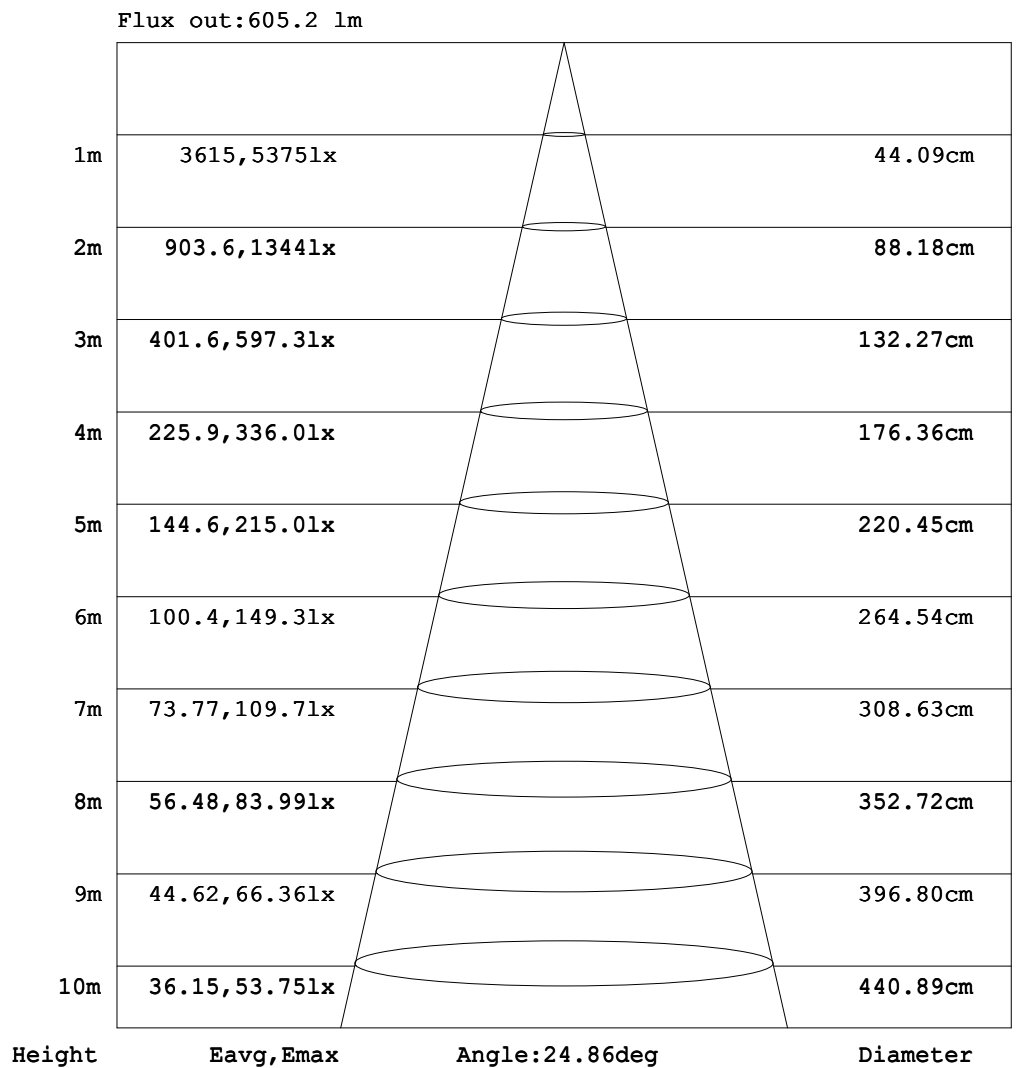


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZR
Test Date:2021-07-16

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:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm		
NAME: DP090RW-M04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



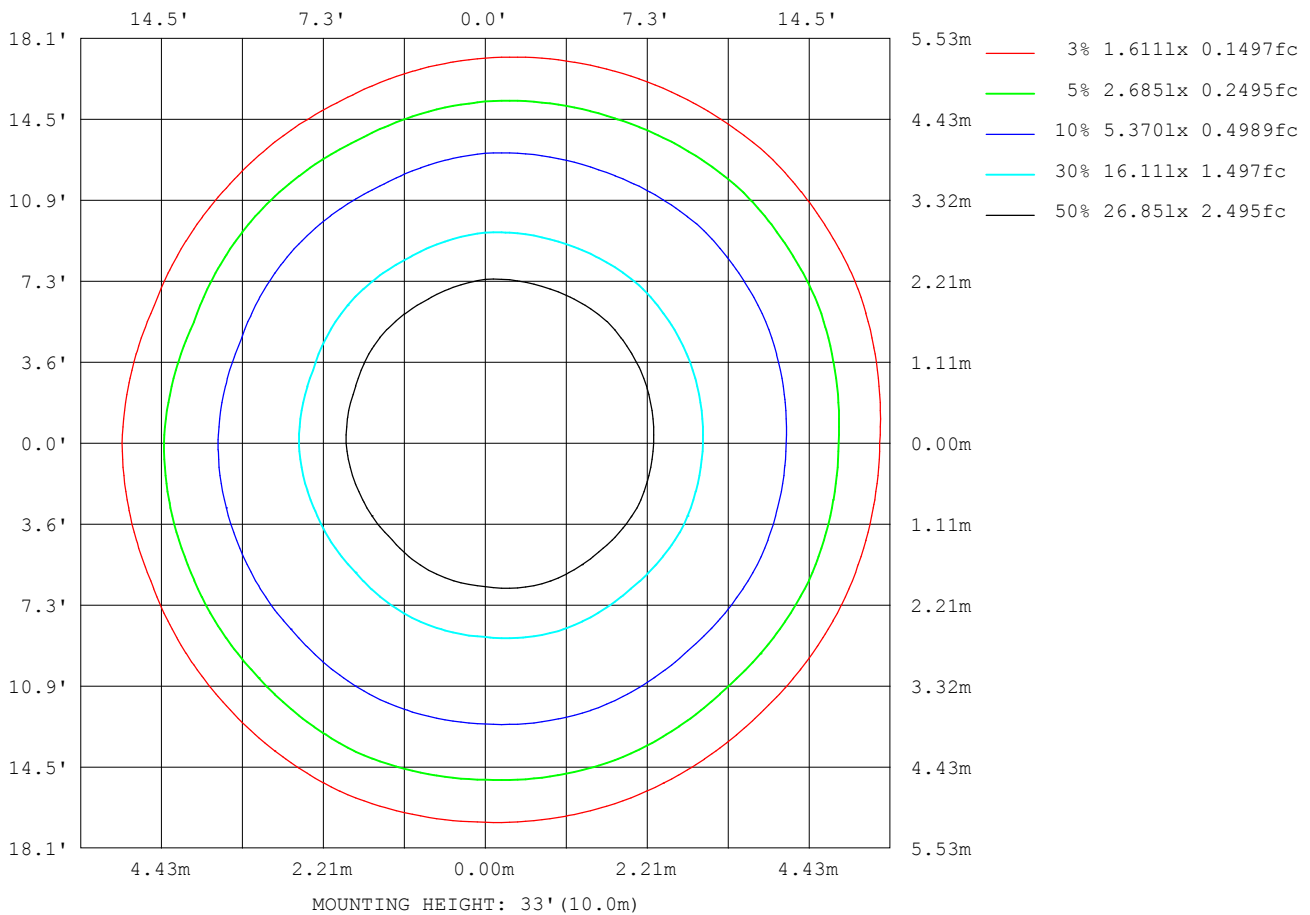
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm		
NAME: DP090RW-M04-14G40	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:224.9V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1210.1x1 lm		
NAME: DP090RW-M04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

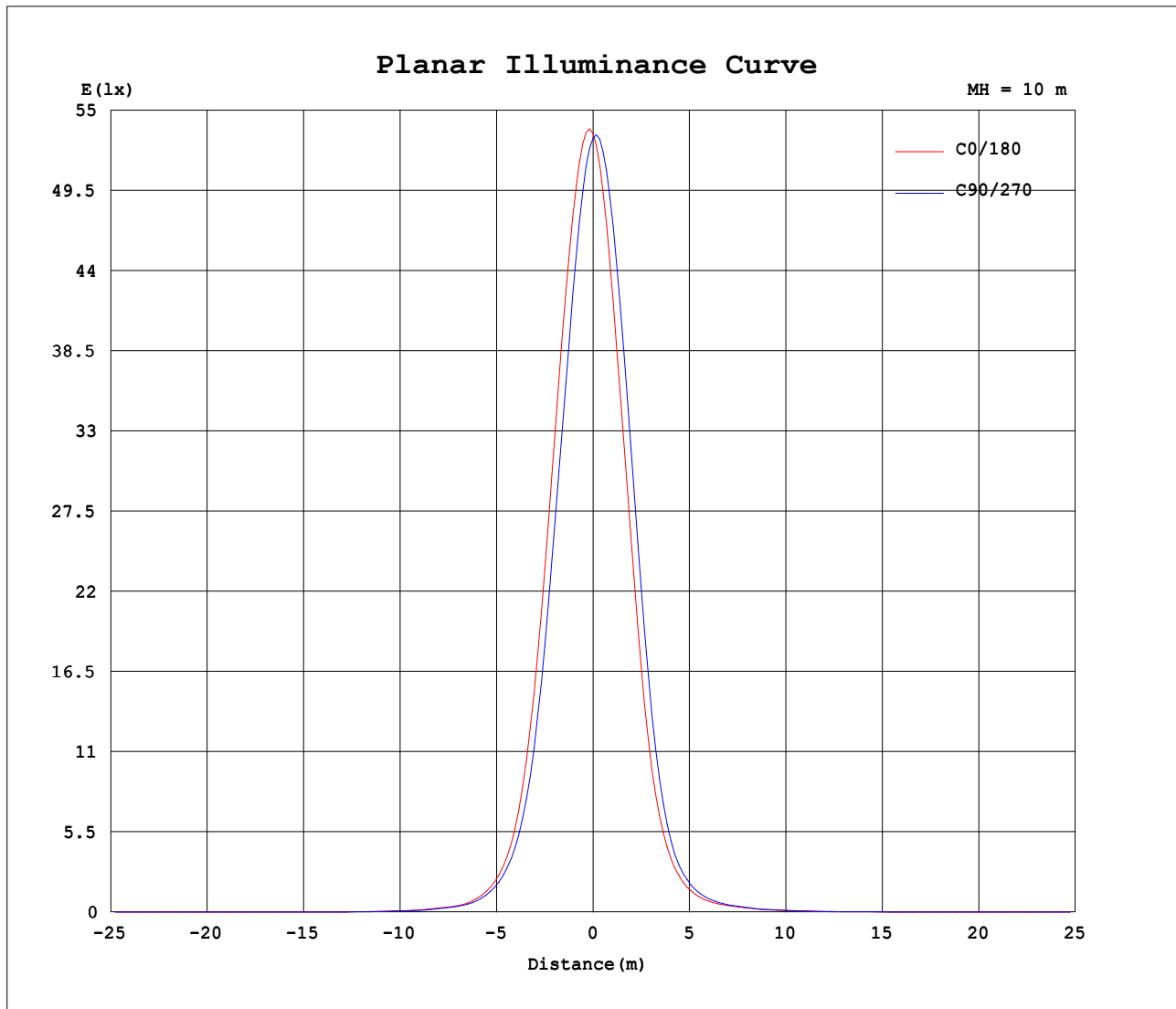
AvgL	cd/m2
L_0~180 (65) av	1974
L_0~180 (75) av	2367
L_0~180 (85) av	5496
L_90~270 (65) av	2092
L_90~270 (75) av	2485
L_90~270 (85) av	5643
L_45 (65) av	2083
L_45 (75) av	2473
L_45 (85) av	5685

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

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:

```

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:

```