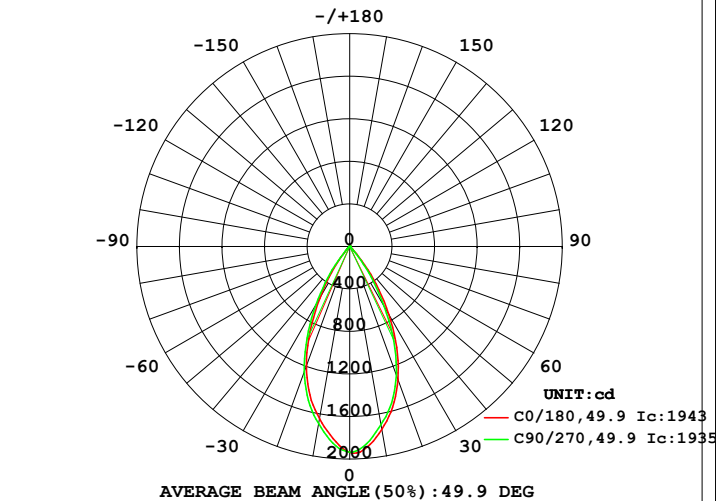


LUMINAIRE PHOTOMETRIC TEST REPORT

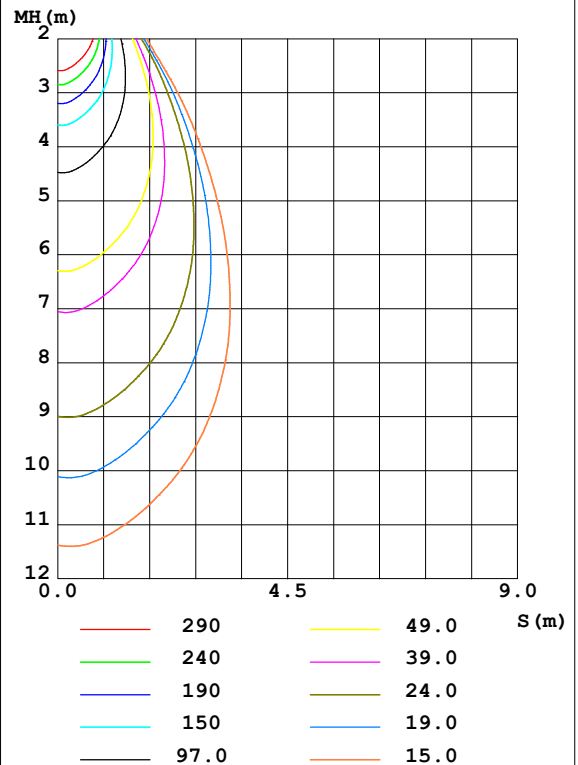
Test:U:224.8V I:0.0690A P:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1314.32x1 lm					
NAME: DP090RW-WF04-14G40			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:80		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 88.21 lm/W
MODEL	4000K CRI90	I _{max} (cd)	1947	S/MH(C0/180)	0.74	
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.77	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1314.3	η UP,DN(C0-180)	0.0,50.3	
NOMINAL FLUX(lm)	1314.32	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.7	
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	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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	1747	1738	1700	1652	1644	1651	1691	1741	0- 10	171.9	171.9	13.1,13.1
20	1329	1329	1285	1209	1195	1193	1251	1310	10- 20	418.0	589.9	44.9,44.9
30	737.3	712.5	653.3	568.2	565.1	583.1	639.3	712.7	20- 30	436.0	1026	78.1,78.1
40	174.6	167.7	128.6	97.32	100.7	113.7	137.8	175.3	30- 40	228.6	1255	95.4,95.4
50	16.39	16.39	14.32	10.97	18.86	19.80	21.48	23.96	40- 50	39.23	1294	98.4,98.4
60	2.322	2.351	2.233	2.031	9.184	9.254	9.653	10.17	50- 60	8.867	1303	99.1,99.1
70	1.565	1.600	1.661	1.701	6.427	6.445	6.641	6.884	60- 70	4.840	1307	99.5,99.5
80	1.547	1.570	1.550	1.655	4.521	4.551	4.685	4.872	70- 80	3.796	1311	99.8,99.8
90	1.781	1.847	1.882	1.975	3.288	3.289	3.396	3.459	80- 90	3.072	1314	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): 1283.1 lm

%lum = 97.6%

%lamp = 97.6%

Conical surface Flux(120deg): 1302.6 lm

%lum = 99.1%

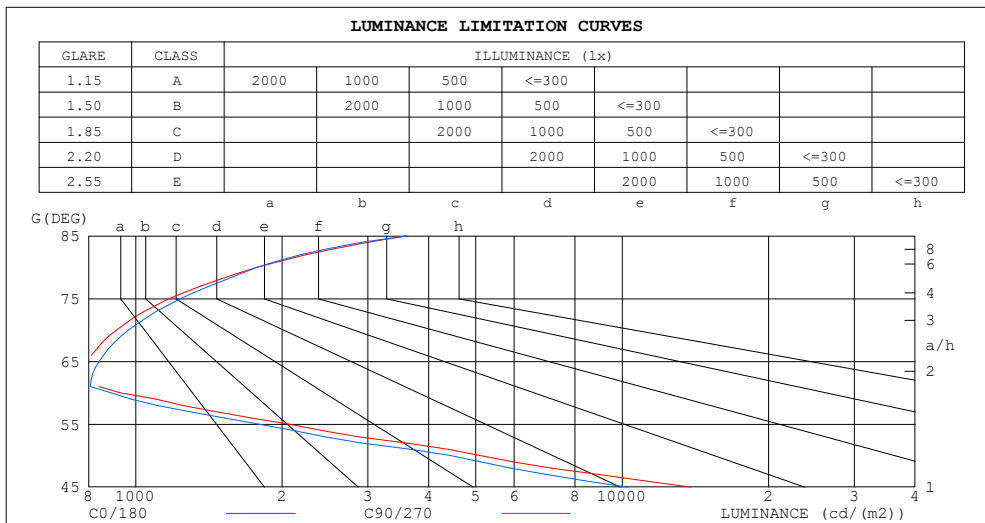
%lamp = 99.1%

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:224.8V I:0.0690A P:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1314.32x1 lm		
NAME: DP090RW-WF04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



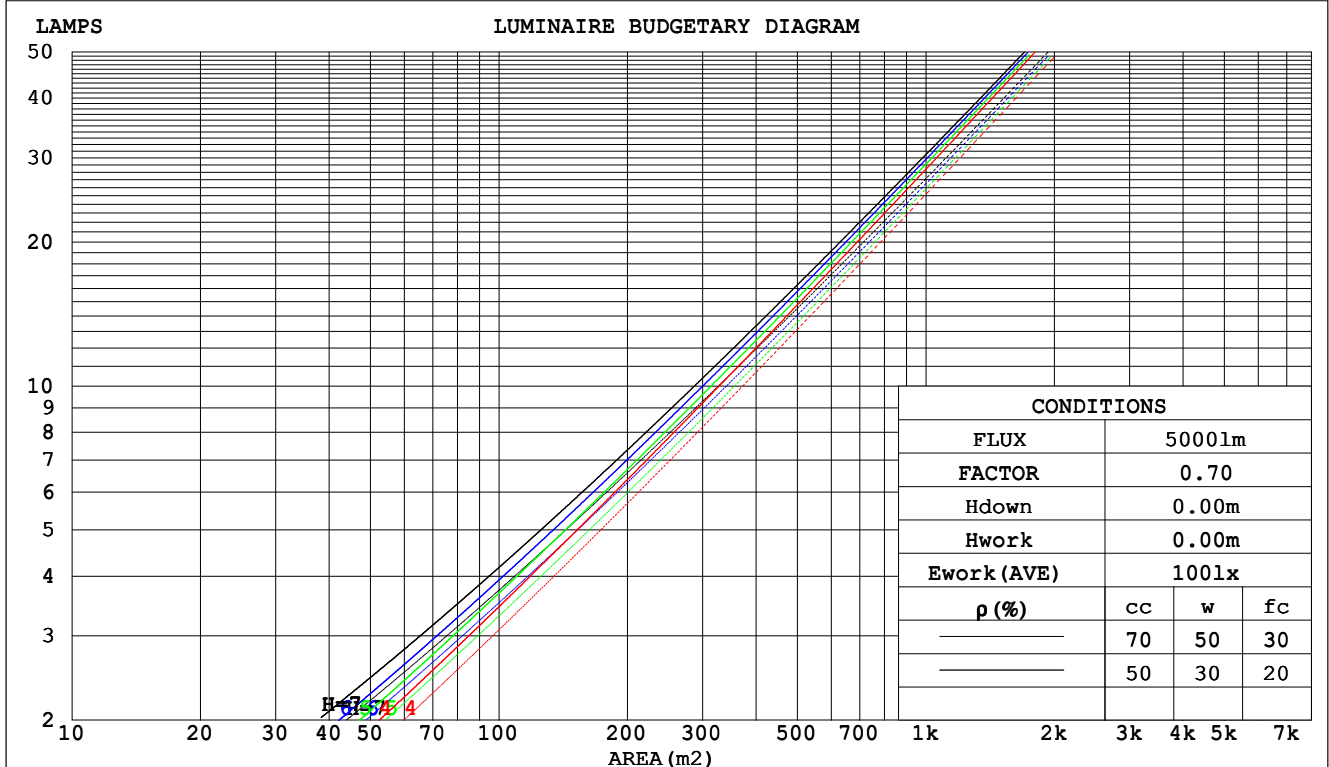
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZR
Test Date: 2021-07-16

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:224.8V I:0.0690A P:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1314.32x1 lm		
NAME: DP090RW-WF04-14G40	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	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	.98	.98	.97	.96	.94
2.0	1.04	.00	.97	1.02	.99	.96	.99	.96	.93	.96	.94	.91	.93	.91	.90	.88
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.85	.89	.86	.84	.82
4.0	.91	.86	.82	.90	.85	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.77
5.0	.86	.81	.77	.85	.80	.76	.83	.79	.75	.82	.78	.75	.80	.77	.74	.73
6.0	.81	.76	.72	.80	.75	.71	.79	.74	.71	.78	.74	.70	.76	.73	.70	.69
7.0	.77	.71	.67	.76	.71	.67	.75	.70	.67	.74	.69	.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	.59	.67	.62	.59	.66	.62	.59	.58
10.0	.66	.60	.57	.65	.60	.56	.64	.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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1314.32x1 lm					
NAME: DP090RW-WF04-14G40			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	.173	.098	.031	.166	.095	.030	.154	.088	.028	.142	.082	.026	.132	.076	.025		
2.0	.164	.090	.028	.158	.087	.027	.148	.082	.026	.138	.077	.024	.129	.073	.023		
3.0	.155	.083	.025	.150	.081	.024	.142	.077	.023	.133	.073	.022	.126	.070	.022		
4.0	.147	.077	.023	.143	.075	.022	.136	.072	.021	.128	.069	.021	.122	.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	.111	.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	.104	.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	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.078	.084	.068	.055	.048	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.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	.038	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.089	.055	.032	.061	.039	.023	.036	.023	.014	.012	.008	.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:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1314.32x1 lm											
NAME: DP090RW-WF04-14G40					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	18.4	19.3	18.6	19.4	19.6	17.6	18.5	17.8	18.7	18.8	
	3H	18.2	19.0	18.5	19.2	19.4	17.4	18.3	17.7	18.5	18.7
	4H	18.1	18.9	18.4	19.1	19.3	17.4	18.1	17.6	18.4	18.6
	6H	18.0	18.8	18.3	19.0	19.3	17.3	18.0	17.6	18.3	18.5
	8H	18.0	18.7	18.3	19.0	19.2	17.3	18.0	17.6	18.2	18.5
	12H	18.0	18.7	18.3	18.9	19.2	17.2	17.9	17.5	18.2	18.4
4H	2H	18.1	18.9	18.4	19.1	19.3	17.4	18.1	17.6	18.4	18.6
	3H	17.9	18.6	18.3	18.9	19.2	17.2	17.9	17.5	18.1	18.4
	4H	17.9	18.5	18.2	18.8	19.1	17.1	17.7	17.4	18.0	18.3
	6H	17.8	18.3	18.2	18.7	19.0	17.0	17.6	17.4	17.9	18.2
	8H	17.7	18.2	18.1	18.6	19.0	17.0	17.5	17.4	17.8	18.2
	12H	17.7	18.2	18.1	18.6	18.9	17.0	17.4	17.4	17.8	18.2
8H	4H	17.7	18.2	18.1	18.6	18.9	17.0	17.5	17.3	17.8	18.2
	6H	17.6	18.1	18.1	18.4	18.9	16.9	17.3	17.3	17.7	18.1
	8H	17.6	18.0	18.1	18.4	18.8	16.9	17.2	17.3	17.6	18.1
	12H	17.6	17.9	18.1	18.4	18.8	16.9	17.2	17.3	17.6	18.1
12H	4H	17.7	18.1	18.1	18.5	18.9	16.9	17.4	17.3	17.7	18.1
	6H	17.6	18.0	18.0	18.4	18.8	16.8	17.2	17.3	17.6	18.1
	8H	17.6	17.9	18.0	18.3	18.8	16.8	17.1	17.3	17.6	18.0
Variations with the observer position at spacings:											
S = 1.0H	+ 3.9 / -11.8					+ 3.5 / -10.7					
1.5H	+ 6.5 / -11.1					+ 6.1 / -10.1					
2.0H	+ 6.1 / - 3.4					+ 5.1 / - 2.6					

CIE Pub.117, 1314 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.9)

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:1314.32x1 lm		
NAME: DP090RW-WF04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

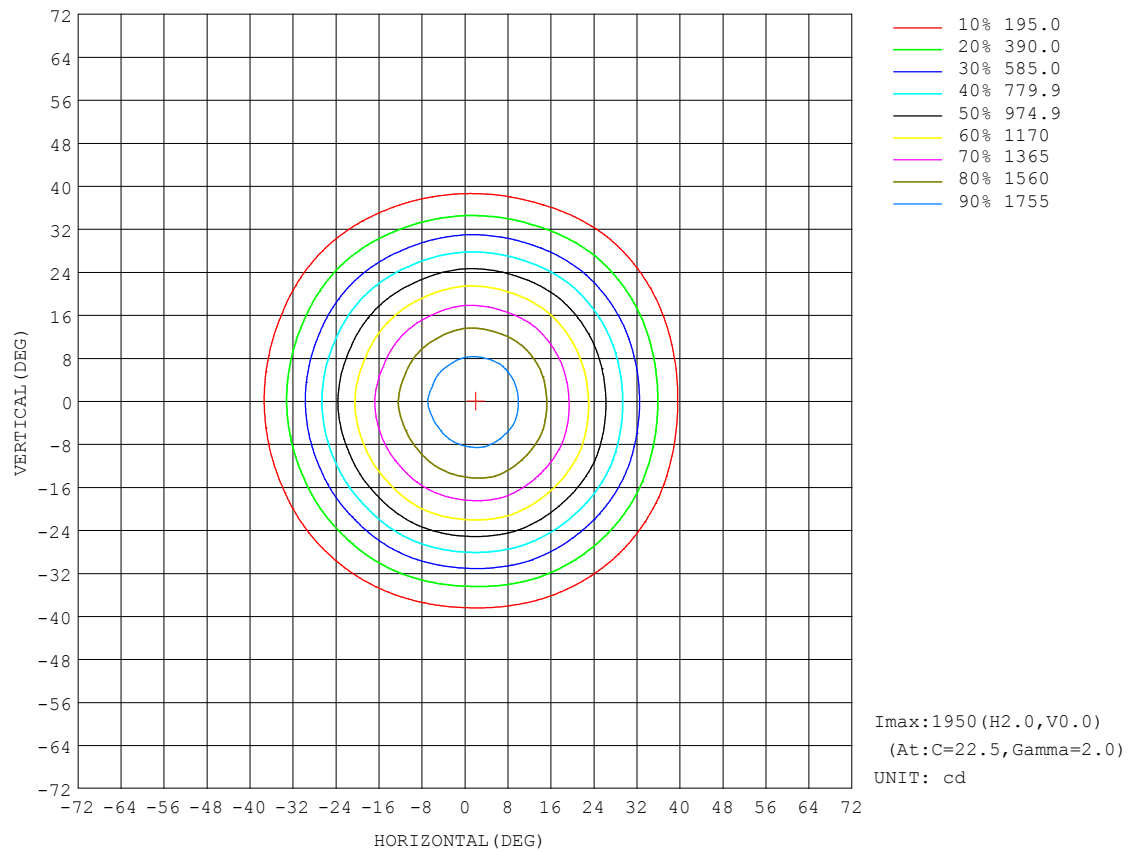
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	88	82	79	87	82	79	75
0.80	96	90	87	95	90	87	94	89	86	83
1.00	100	95	91	99	94	91	98	94	90	87
1.25	104	99	96	103	98	95	101	97	94	90
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	94
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
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:224.8V I:0.0690A P:14.90W PF:0.9570 Freq:50.00Hz Lamp Flux:1314.32x1 lm		
NAME: DP090RW-WF04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

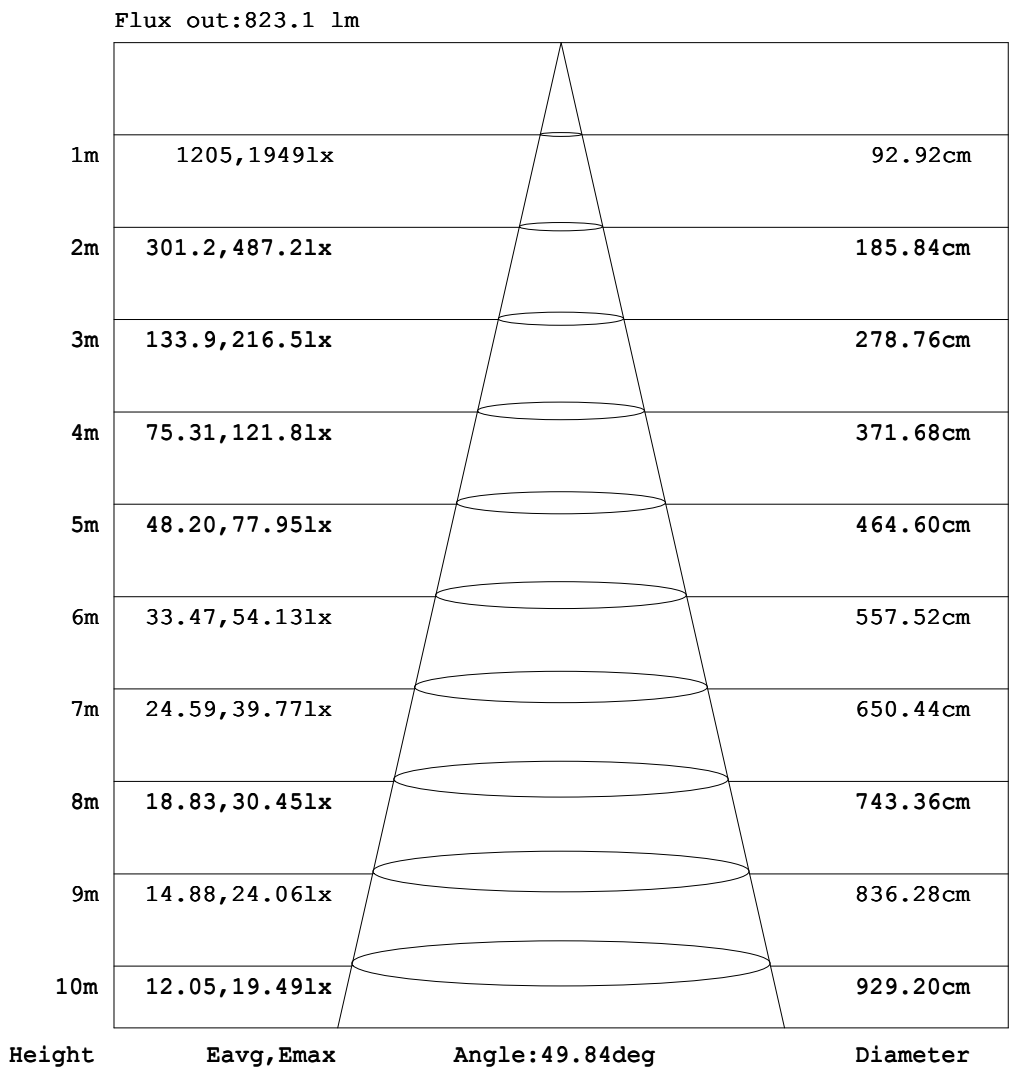


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZR
Test Date:2021-07-16

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:1314.32x1 lm		
NAME: DP090RW-WF04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



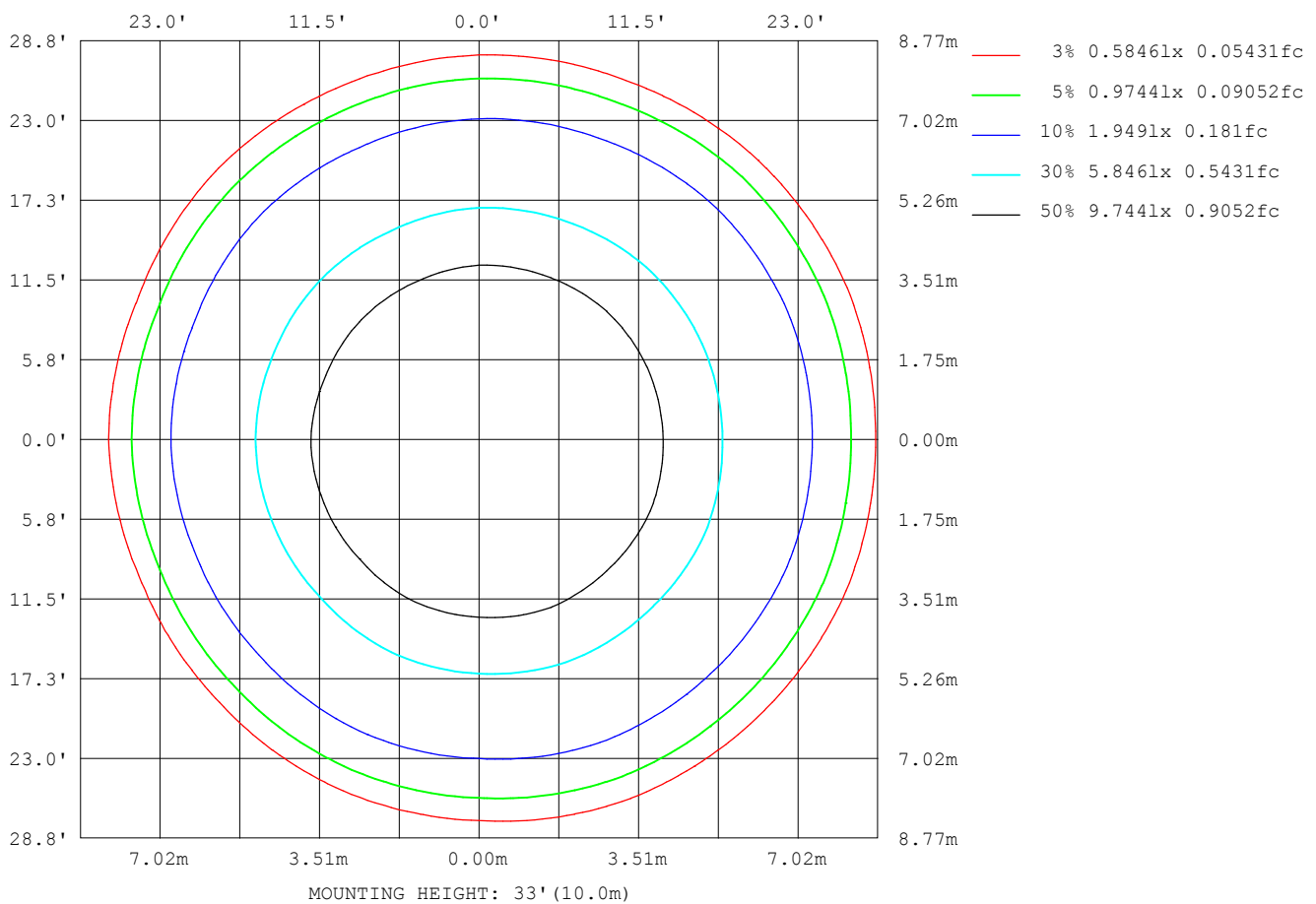
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:1314.32x1 lm		
NAME: DP090RW-WF04-14G40	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:1314.32x1 lm		
NAME: DP090RW-WF04-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

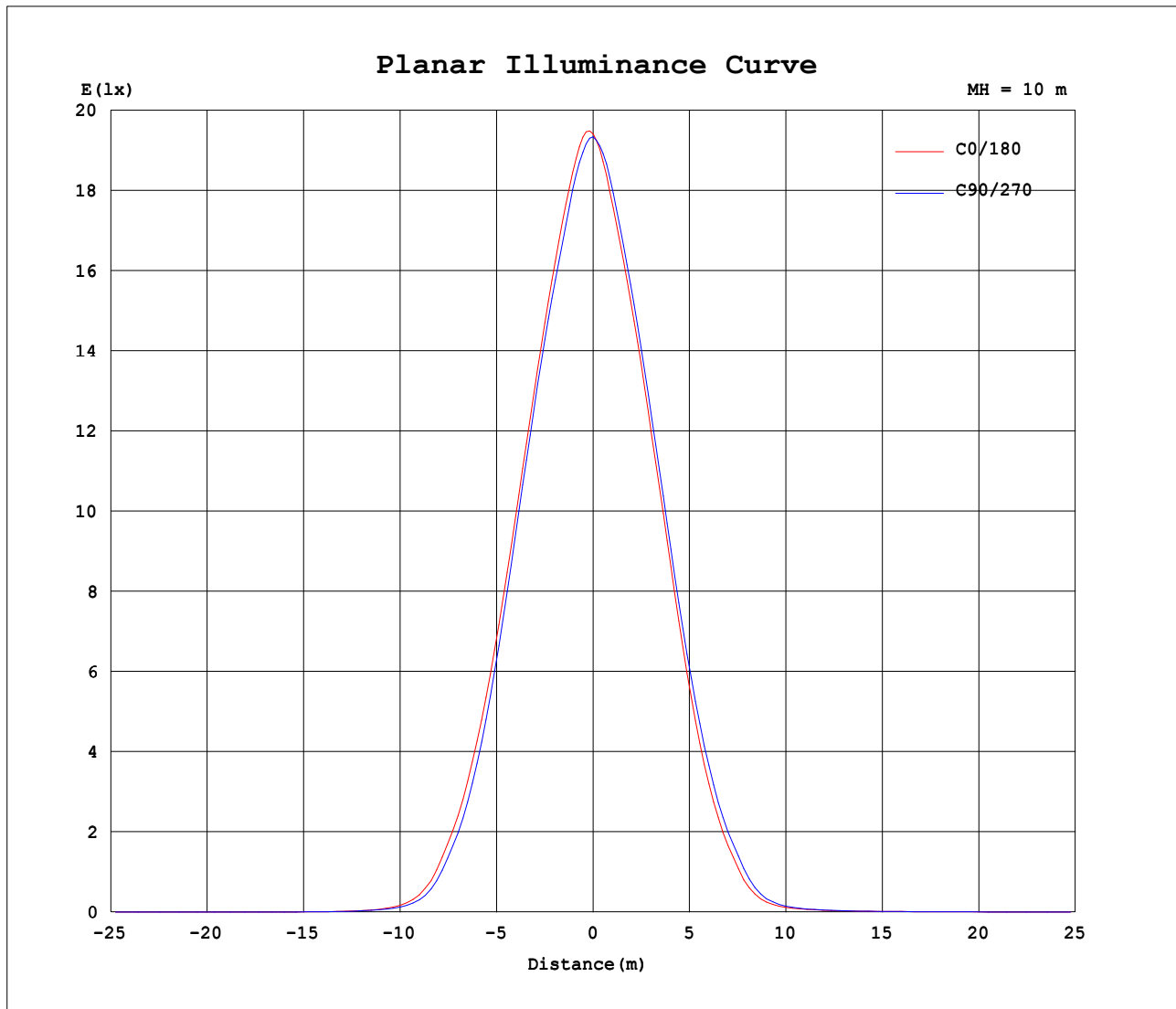
AvgL	cd/m2
L_0~180 (65) av	2211
L_0~180 (75) av	2651
L_0~180 (85) av	6140
L_90~270 (65) av	2298
L_90~270 (75) av	2755
L_90~270 (85) av	6217
L_45 (65) av	2298
L_45 (75) av	2755
L_45 (85) av	6334

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:

```