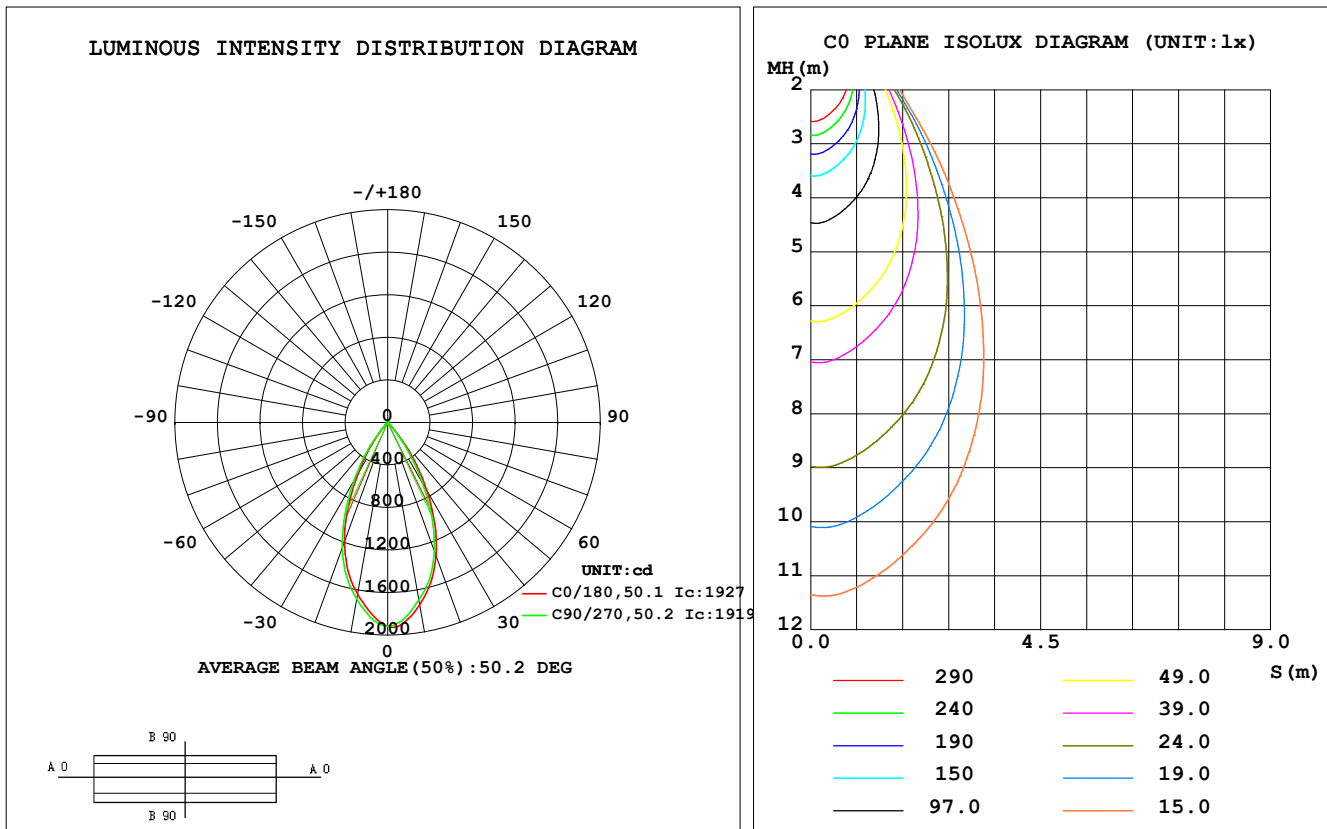


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:224.8V I:0.0690A P:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm					
NAME: DP090RW-WF02-14G40			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:80		Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 87.75 lm/W
MODEL	4000K CRI90	I _{max} (cd)	1930	S/MH(C0/180)	0.75	
NOMINAL POWER(W)	15	LOR(%)	100.0	S/MH(C90/270)	0.78	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1307.5	η UP,DN(C0-180)	0.0,50.3	
NOMINAL FLUX(lm)	1307.5	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	



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	1739	1729	1692	1646	1639	1645	1684	1733	0- 10	170.8	170.8	13.1,13.1
20	1330	1330	1284	1207	1193	1191	1251	1311	10- 20	417.3	588.2	45,45
30	738.7	712.0	651.0	565.2	562.7	581.4	640.2	714.8	20- 30	435.8	1024	78.3,78.3
40	172.1	163.1	124.3	93.72	98.05	112.9	137.6	175.7	30- 40	227.7	1252	95.7,95.7
50	14.73	14.52	12.37	9.054	17.07	18.21	19.90	22.30	40- 50	37.68	1289	98.6,98.6
60	1.270	1.274	1.132	1.003	8.167	8.242	8.599	9.062	50- 60	7.574	1297	99.2,99.2
70	1.056	1.071	1.092	1.192	5.888	5.937	6.126	6.367	60- 70	4.114	1301	99.5,99.5
80	1.312	1.323	1.346	1.419	4.324	4.342	4.469	4.630	70- 80	3.427	1305	99.8,99.8
90	1.747	1.854	1.853	1.939	3.253	3.277	3.352	3.434	80- 90	2.976	1308	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): 1279.5 lm

%lum = 97.9%

%lamp = 97.9%

Conical surface Flux(120deg): 1297 lm

%lum = 99.2%

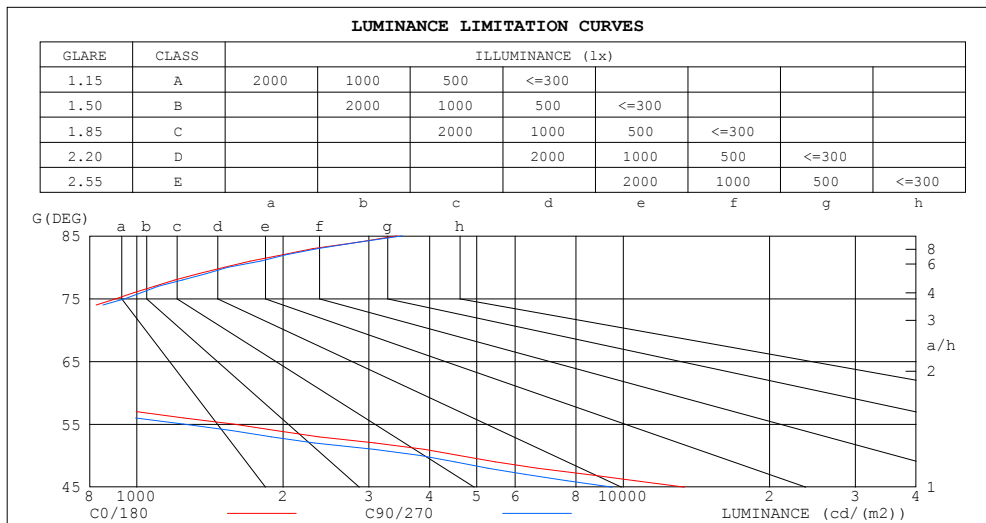
%lamp = 99.2%

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

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:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm		
NAME: DP090RW-WF02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3430	3513
80	1516	1540
75	908	948
70	619	635
65	472	483
60	509	450
55	1581	1248
50	4596	3825
45	13363	9490

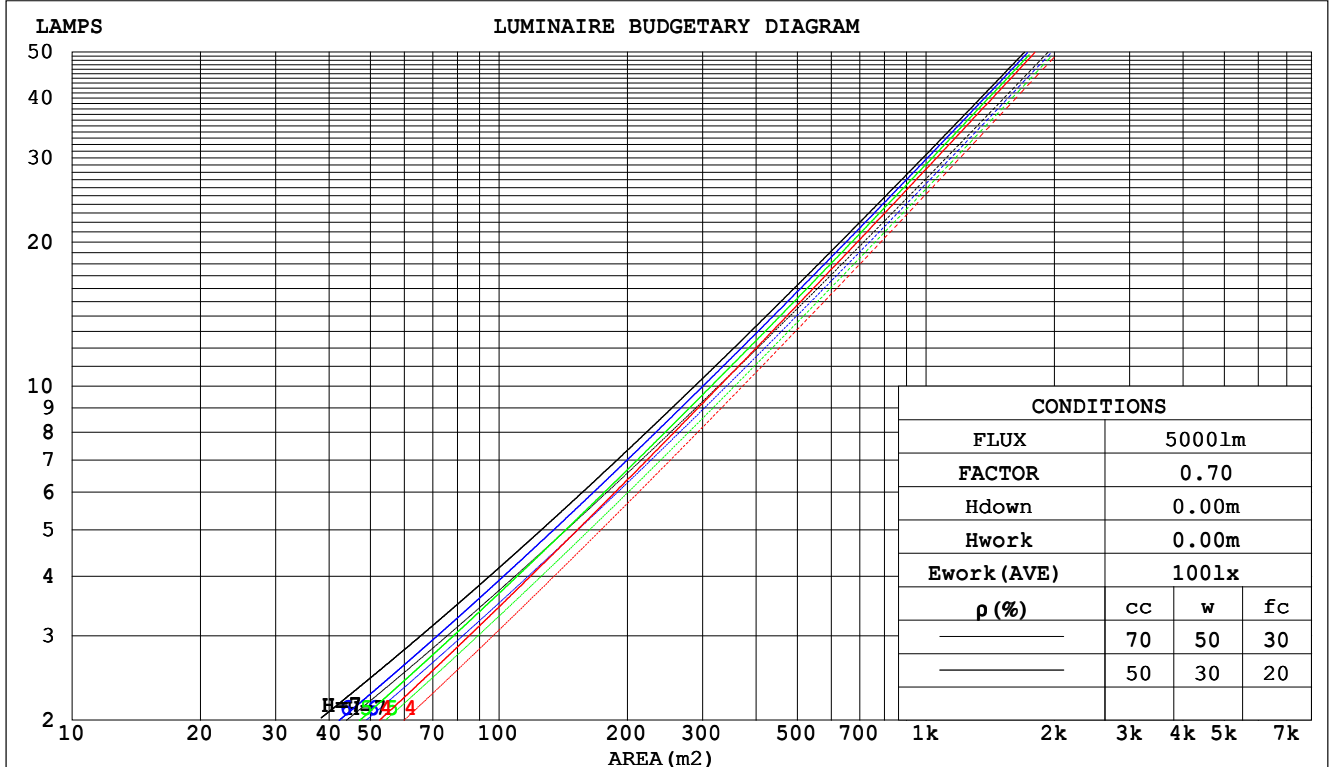
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZR
Test Date:2021-07-16

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:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm		
NAME: DP090RW-WF02-14G40	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	1.11	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	.84	.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	.63	.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:14.90W PF:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm					
NAME: DP090RW-WF02-14G40			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	.172	.098	.031	.166	.095	.030	.153	.088	.028	.142	.082	.026	.131	.076	.024	
2.0	.163	.089	.027	.158	.087	.027	.147	.082	.025	.137	.077	.024	.128	.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	.136	.070	.020	.130	.068	.020	.123	.065	.019	.118	.063	.019	
6.0	.133	.067	.019	.130	.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	.052	.015	
10.0	.113	.054	.015	.111	.053	.015	.107	.052	.015	.103	.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	.052	.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	.027	.037	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.088	.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	.032	.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:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm											
NAME: DP090RW-WF02-14G40						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	19.5	19.6	17.6	18.5	17.8	18.7	18.8	
	3H	18.2	19.1	18.5	19.3	19.5	17.4	18.2	17.7	18.4	
	4H	18.1	18.9	18.4	19.1	19.4	17.3	18.1	17.6	18.3	
	6H	18.1	18.8	18.4	19.0	19.3	17.3	18.0	17.6	18.2	
	8H	18.0	18.7	18.3	19.0	19.2	17.2	17.9	17.5	18.2	
	12H	18.0	18.7	18.3	18.9	19.2	17.2	17.9	17.5	18.1	
4H	2H	18.1	18.9	18.4	19.1	19.4	17.3	18.1	17.6	18.3	
	3H	18.0	18.6	18.3	18.9	19.2	17.2	17.8	17.5	18.1	
	4H	17.9	18.5	18.2	18.8	19.1	17.1	17.7	17.4	18.0	
	6H	17.8	18.3	18.2	18.7	19.0	17.0	17.5	17.4	17.9	
	8H	17.8	18.3	18.1	18.6	19.0	17.0	17.5	17.3	17.8	
	12H	17.7	18.2	18.1	18.6	18.9	16.9	17.4	17.3	17.8	
8H	4H	17.7	18.2	18.1	18.6	18.9	16.9	17.4	17.3	17.8	
	6H	17.6	18.1	18.1	18.5	18.9	16.8	17.3	17.3	17.7	
	8H	17.6	18.0	18.1	18.4	18.8	16.8	17.2	17.3	17.6	
	12H	17.6	17.9	18.1	18.4	18.8	16.8	17.1	17.3	17.6	
12H	4H	17.7	18.1	18.1	18.5	18.9	16.9	17.3	17.3	17.7	
	6H	17.6	18.0	18.0	18.4	18.8	16.8	17.2	17.2	17.6	
	8H	17.6	17.9	18.0	18.3	18.8	16.8	17.1	17.2	17.5	
Variations with the observer position at spacings:											
S = 1.0H	+ 3.9 / -13.0					+ 3.5 / -11.7					
1.5H	+ 6.6 / -12.4					+ 6.2 / -11.2					
2.0H	+ 6.6 / - 3.9					+ 5.4 / - 2.8					

CIE Pub.117, 1308 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:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm		
NAME: DP090RW-WF02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

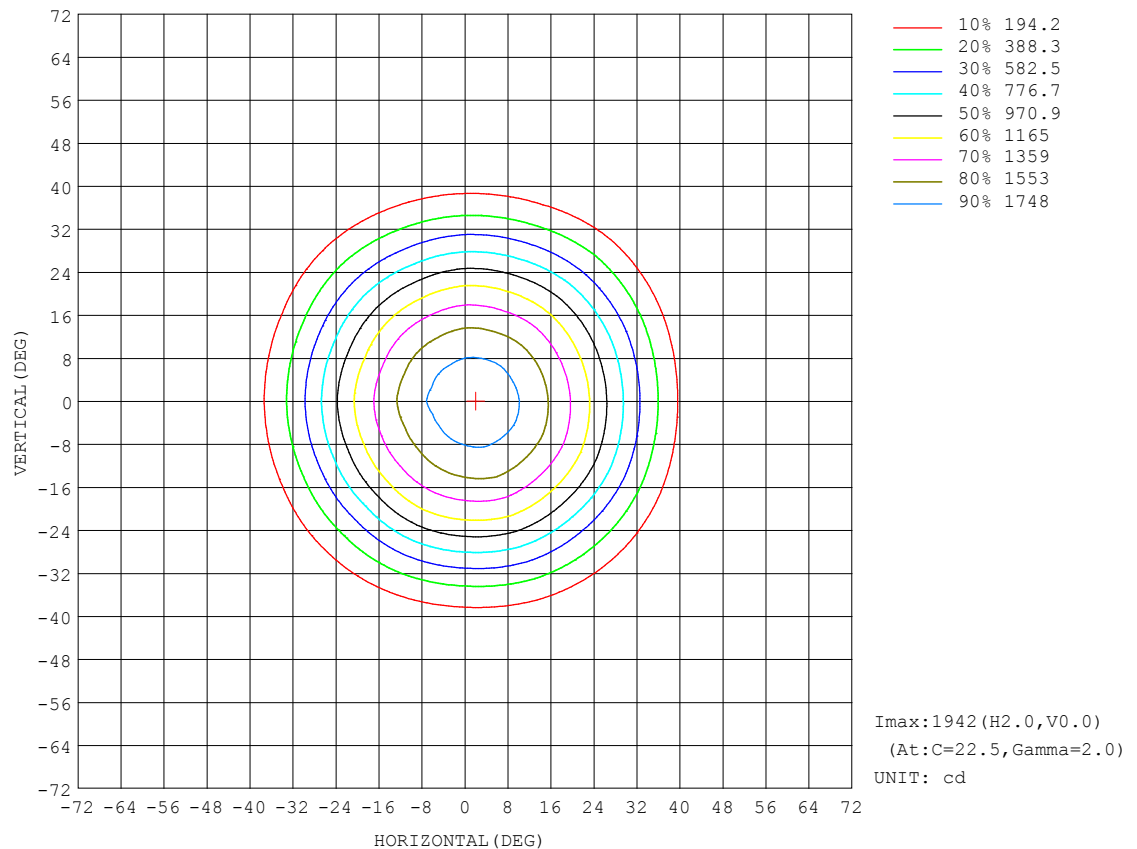
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	88	83	79	88	82	79	76
0.80	96	91	87	95	90	87	94	90	86	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

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:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm		
NAME: DP090RW-WF02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

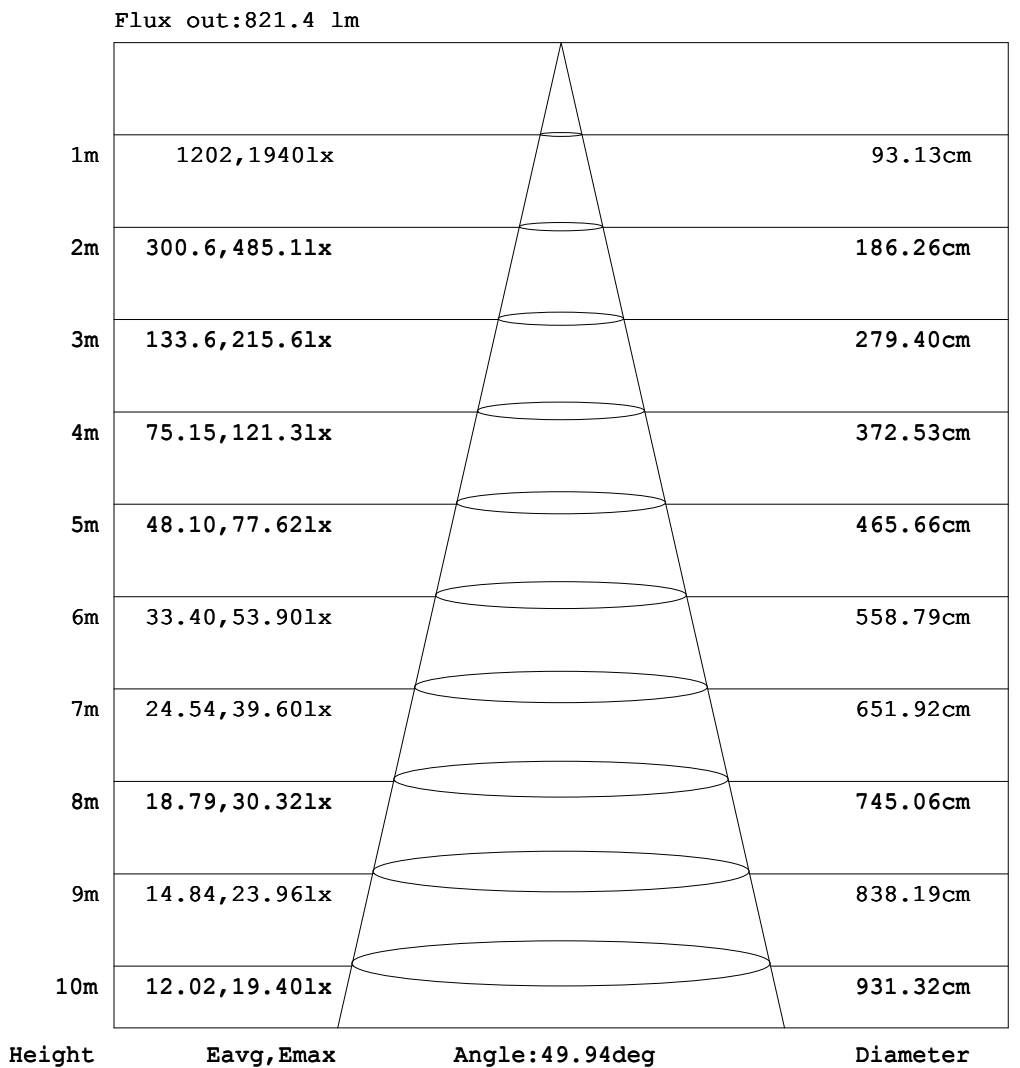


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZR
Test Date:2021-07-16

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:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm		
NAME: DP090RW-WF02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



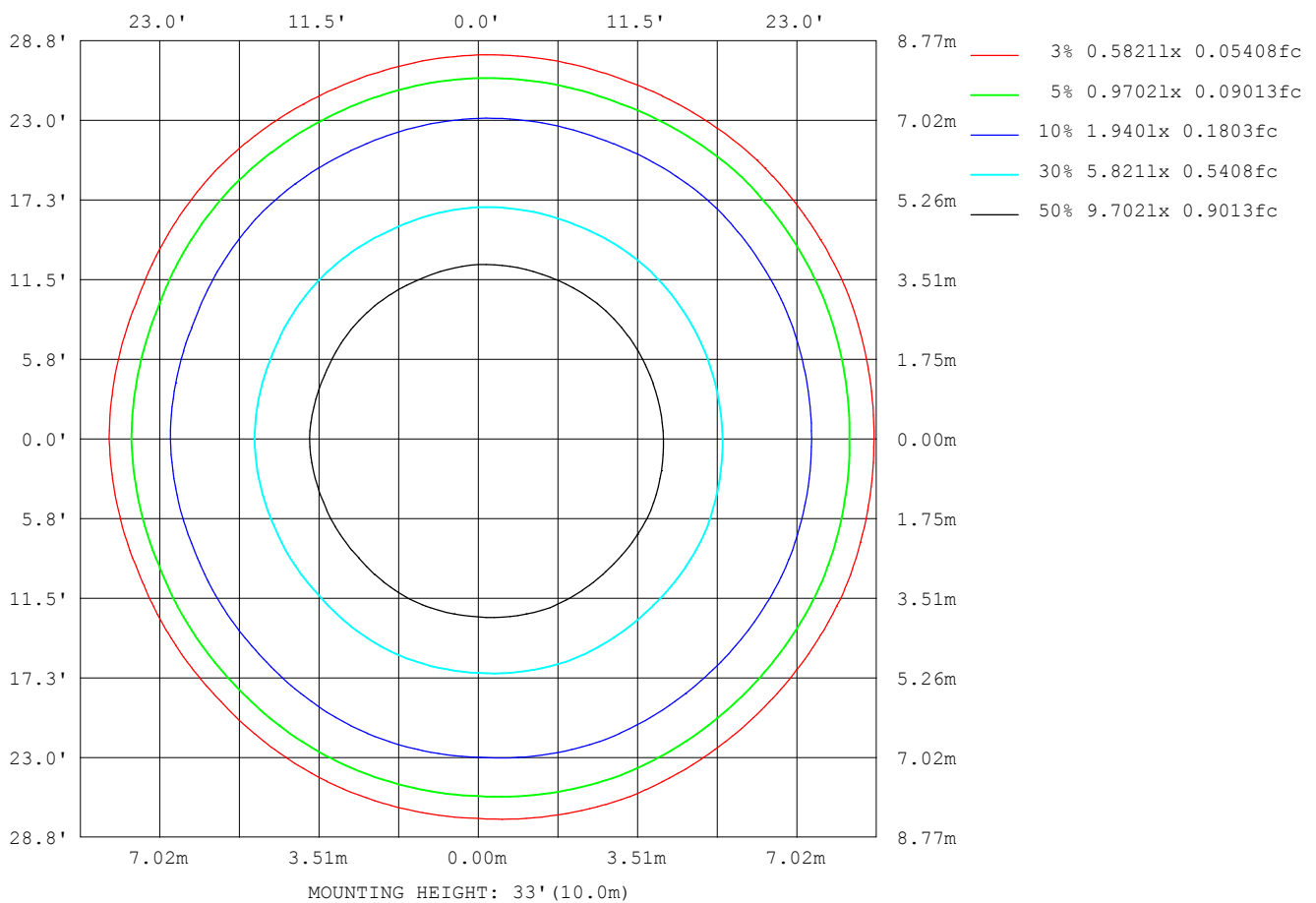
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm		
NAME: DP090RW-WF02-14G40	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:0.9580 Freq:50.00Hz Lamp Flux:1307.5x1 lm		
NAME: DP090RW-WF02-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

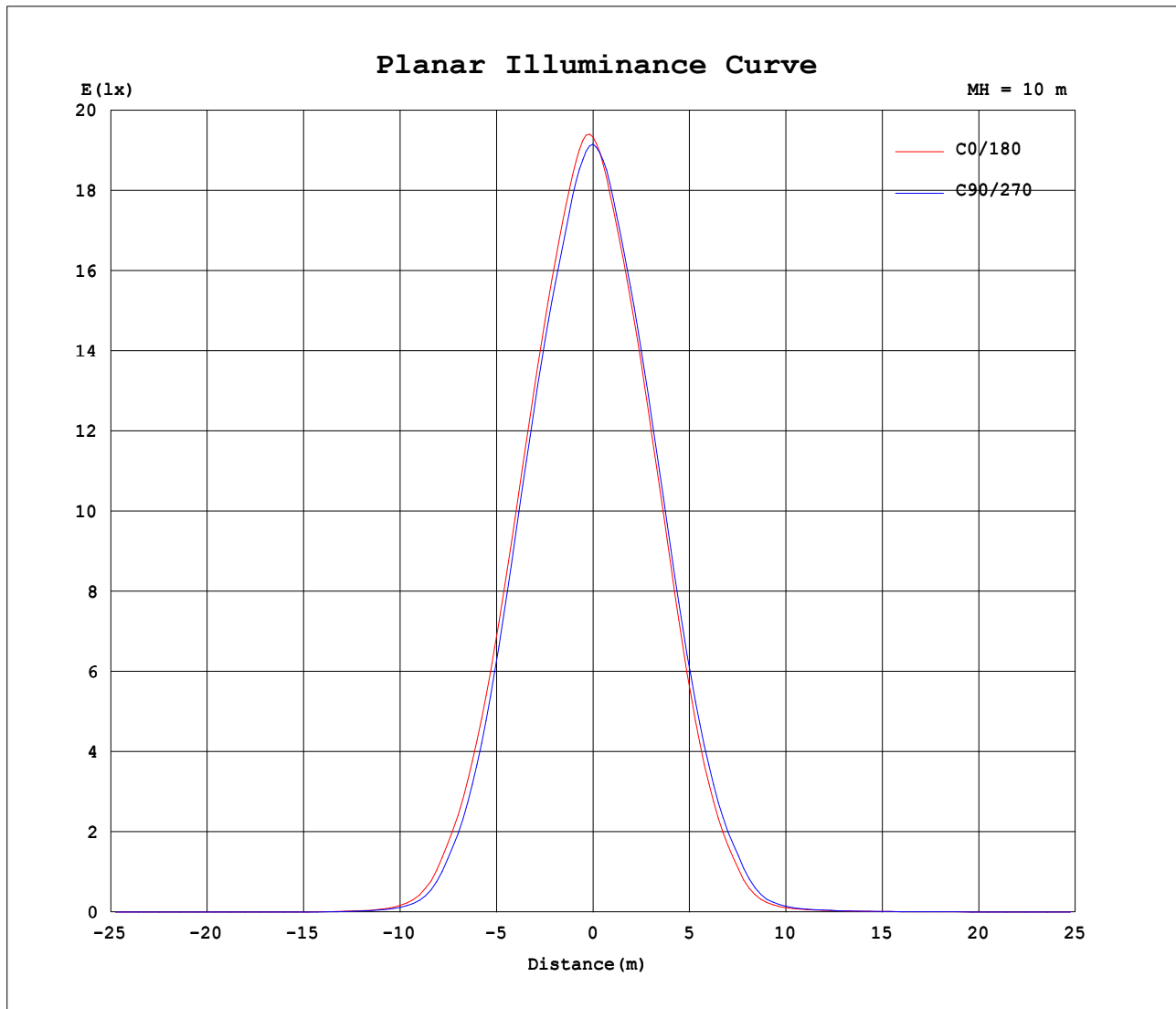
AvgL	cd/m2
L_0~180 (65) av	1874
L_0~180 (75) av	2391
L_0~180 (85) av	5959
L_90~270 (65) av	1948
L_90~270 (75) av	2479
L_90~270 (85) av	6187
L_45 (65) av	1955
L_45 (75) av	2479
L_45 (85) av	6149

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:

```