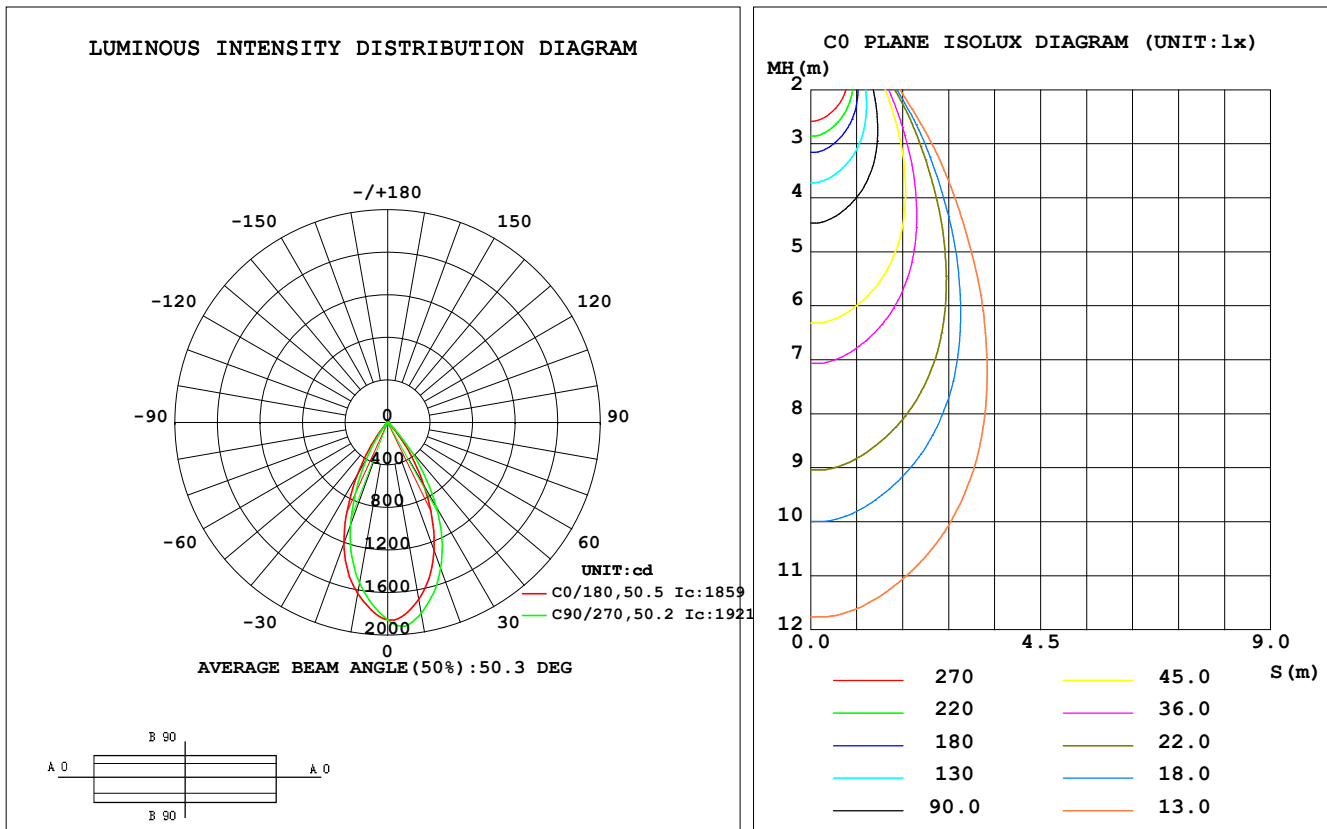


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:224.8V I:0.0690A P:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm					
NAME: DP090RW-WF01-14G40		TYPE:		WEIGHT:	
SPEC.:		DIM.:		SERIAL No.:	
MFR.:		SUR.:80		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 88.23 lm/W
MODEL	4000K CRI90	I _{max} (cd)	1933	S/MH (C0/180)	0.76	
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	0.68	
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	1323.4	η UP, DN (C0-180)	0.0, 55.9	
NOMINAL FLUX (lm)	1323.43	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 44.1	
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	1687	1819	1822	1625	1631	1542	1533	1641	0- 10	167.1	167.1	12.6,12.6
20	1279	1442	1460	1200	1208	1035	1023	1233	10- 20	408.6	575.7	43.5,43.5
30	684.3	883.9	911.2	592.2	574.6	412.9	407.7	657.2	20- 30	426.7	1002	75.7,75.7
40	170.7	316.0	322.8	112.8	108.4	62.46	58.89	170.1	30- 40	233.3	1236	93.4,93.4
50	20.79	32.25	35.57	18.57	27.23	21.91	21.23	29.63	40- 50	52.04	1288	97.3,97.3
60	8.853	10.27	10.63	7.915	15.34	14.13	14.12	16.12	50- 60	15.24	1303	98.5,98.5
70	6.112	6.629	6.652	5.506	10.50	9.354	9.323	11.09	60- 70	9.913	1313	99.2,99.2
80	3.781	4.258	3.210	3.341	6.394	5.445	5.396	6.892	70- 80	6.859	1320	99.7,99.7
90	1.813	1.793	1.844	1.936	3.376	3.170	3.152	3.400	80- 90	3.629	1323	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): 1272.6 lm

%lum = 96.2%

%lamp = 96.2%

Conical surface Flux(120deg): 1303 lm

%lum = 98.5%

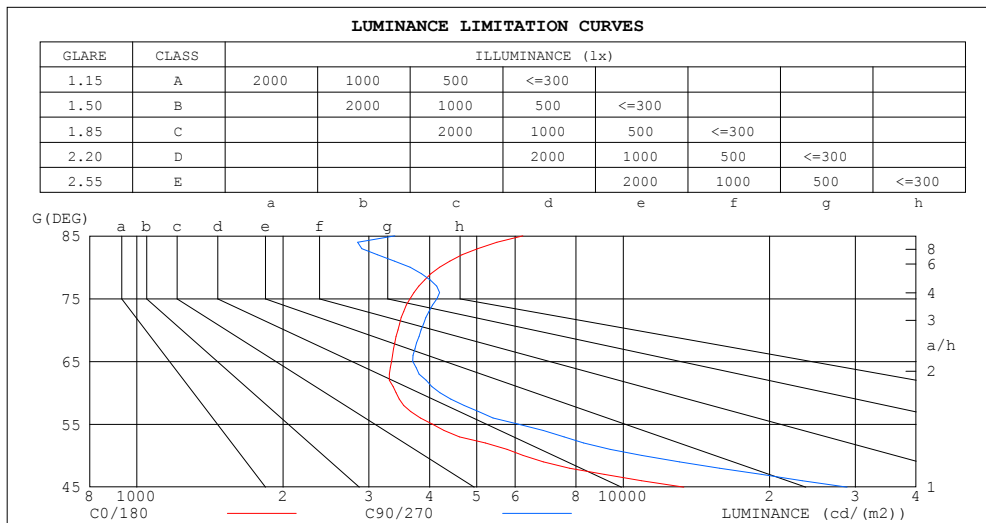
%lamp = 98.5%

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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm		
NAME: DP090RW-WF01-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6215	3394
80	4195	3649
75	3650	4144
70	3443	3838
65	3340	3691
60	3411	4197
55	4049	6079
50	6230	10923
45	13326	28859

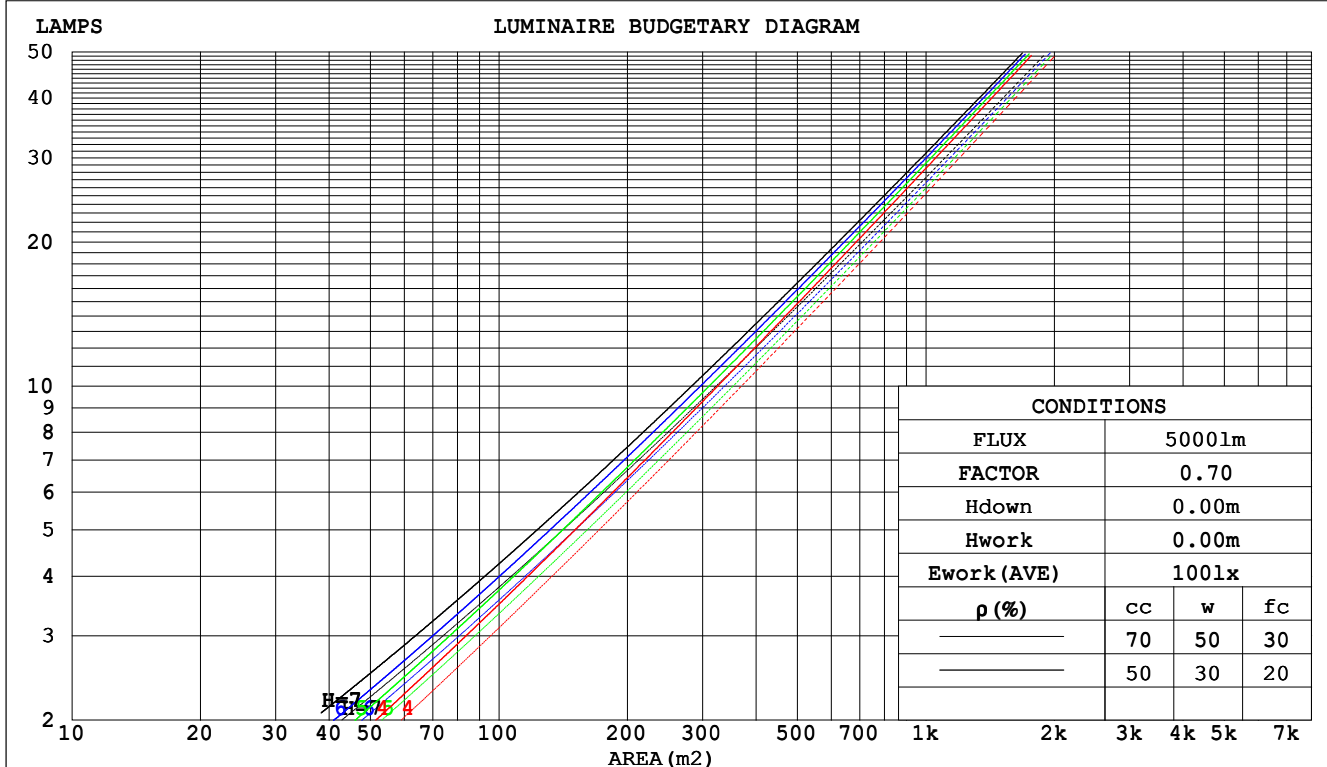
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZR
Test Date:2021-07-16

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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm		
NAME: DP090RW-WF01-14G40	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	1.08	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	.89	.84	.81	.87	.83	.80	.85	.82	.79	.83	.80	.78	.76
5.0	.85	.80	.75	.84	.79	.75	.82	.78	.74	.81	.77	.74	.79	.76	.73	.72
6.0	.80	.74	.70	.79	.74	.70	.78	.73	.70	.77	.72	.69	.75	.72	.69	.67
7.0	.76	.70	.66	.75	.70	.66	.74	.69	.65	.73	.68	.65	.72	.68	.65	.63
8.0	.72	.66	.62	.71	.66	.62	.70	.65	.62	.69	.65	.61	.68	.64	.61	.60
9.0	.68	.62	.58	.68	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.58	.56
10.0	.65	.59	.55	.64	.59	.55	.63	.58	.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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm					
NAME: DP090RW-WF01-14G40			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	.178	.101	.032	.171	.098	.031	.159	.091	.029	.147	.085	.027	.136	.079	.025		
2.0	.169	.092	.028	.163	.090	.028	.152	.085	.026	.143	.080	.025	.134	.076	.024		
3.0	.160	.085	.025	.155	.083	.025	.146	.079	.024	.137	.075	.023	.130	.072	.022		
4.0	.151	.079	.023	.147	.077	.023	.139	.074	.022	.132	.071	.021	.126	.068	.021		
5.0	.144	.073	.021	.140	.072	.021	.134	.070	.020	.127	.067	.020	.121	.065	.019		
6.0	.137	.069	.020	.134	.068	.019	.128	.066	.019	.122	.064	.019	.117	.062	.018		
7.0	.131	.065	.018	.128	.064	.018	.123	.062	.018	.118	.060	.018	.113	.059	.017		
8.0	.125	.061	.017	.123	.060	.017	.118	.059	.017	.114	.058	.017	.109	.056	.016		
9.0	.120	.058	.016	.118	.057	.016	.113	.056	.016	.109	.055	.016	.106	.054	.016		
10.0	.115	.055	.015	.113	.055	.015	.109	.053	.015	.106	.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	.042	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.090	.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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm											
NAME: DP090RW-WF01-14G40					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		19.2	20.1	19.4	20.2	20.4	21.0	21.9	21.2	22.1	22.3
	3H	19.0	19.9	19.3	20.1	20.3	20.9	21.7	21.1	21.9	22.1
	4H	19.0	19.8	19.3	20.0	20.2	20.8	21.6	21.1	21.8	22.1
	6H	19.0	19.7	19.2	19.9	20.2	20.8	21.5	21.1	21.8	22.0
	8H	18.9	19.7	19.2	19.9	20.2	20.7	21.5	21.0	21.7	22.0
	12H	18.9	19.6	19.2	19.9	20.2	20.7	21.4	21.0	21.7	21.9
4H	2H	18.9	19.7	19.2	20.0	20.2	20.8	21.6	21.1	21.8	22.0
	3H	18.8	19.5	19.1	19.8	20.1	20.7	21.3	21.0	21.6	21.9
	4H	18.8	19.4	19.1	19.7	20.0	20.6	21.2	20.9	21.5	21.8
	6H	18.8	19.3	19.2	19.7	20.0	20.6	21.1	20.9	21.4	21.8
	8H	18.8	19.3	19.2	19.7	20.0	20.5	21.0	20.9	21.4	21.8
	12H	18.8	19.3	19.2	19.7	20.0	20.5	21.0	20.9	21.3	21.7
8H	4H	18.7	19.2	19.1	19.6	19.9	20.5	21.0	20.9	21.4	21.7
	6H	18.7	19.2	19.2	19.5	20.0	20.5	20.9	20.9	21.3	21.7
	8H	18.8	19.1	19.2	19.6	20.0	20.4	20.8	20.9	21.2	21.7
	12H	18.8	19.2	19.3	19.6	20.1	20.4	20.7	20.9	21.2	21.6
12H	4H	18.7	19.1	19.1	19.5	19.9	20.4	20.9	20.8	21.3	21.7
	6H	18.7	19.1	19.1	19.5	19.9	20.4	20.8	20.9	21.2	21.6
	8H	18.7	19.1	19.2	19.5	20.0	20.4	20.7	20.9	21.2	21.6
Variations with the observer position at spacings:											
S = 1.0H	+ 2.6 / - 6.4					+ 2.9 / - 8.5					
1.5H	+ 5.0 / - 6.1					+ 5.3 / - 8.0					
2.0H	+ 3.0 / - 1.2					+ 5.4 / - 2.6					

CIE Pub.117, 1323 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.0)

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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm		
NAME: DP090RW-WF01-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

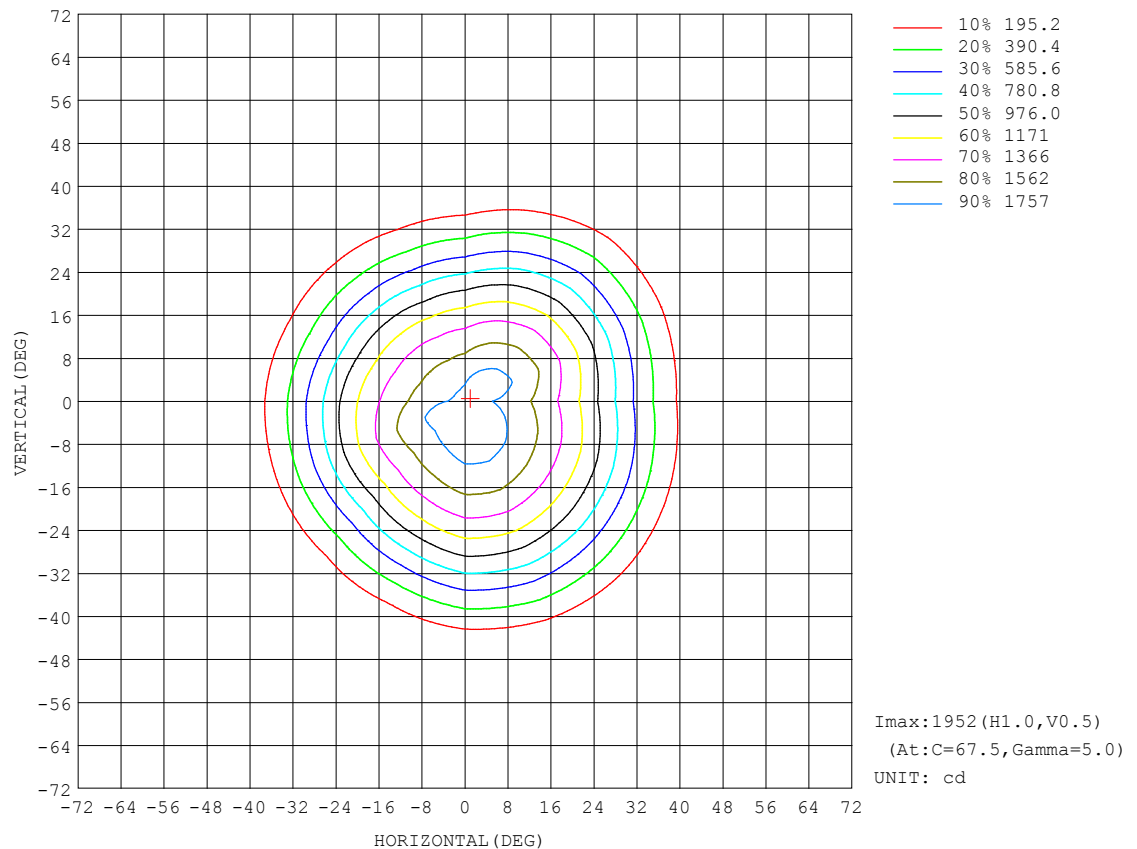
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	81	77	87	81	77	86	81	77	74
0.80	95	89	85	94	89	85	93	88	85	81
1.00	99	94	90	98	93	90	97	93	89	85
1.25	103	98	94	102	97	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	100	95
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	105	97
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

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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm		
NAME: DP090RW-WF01-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

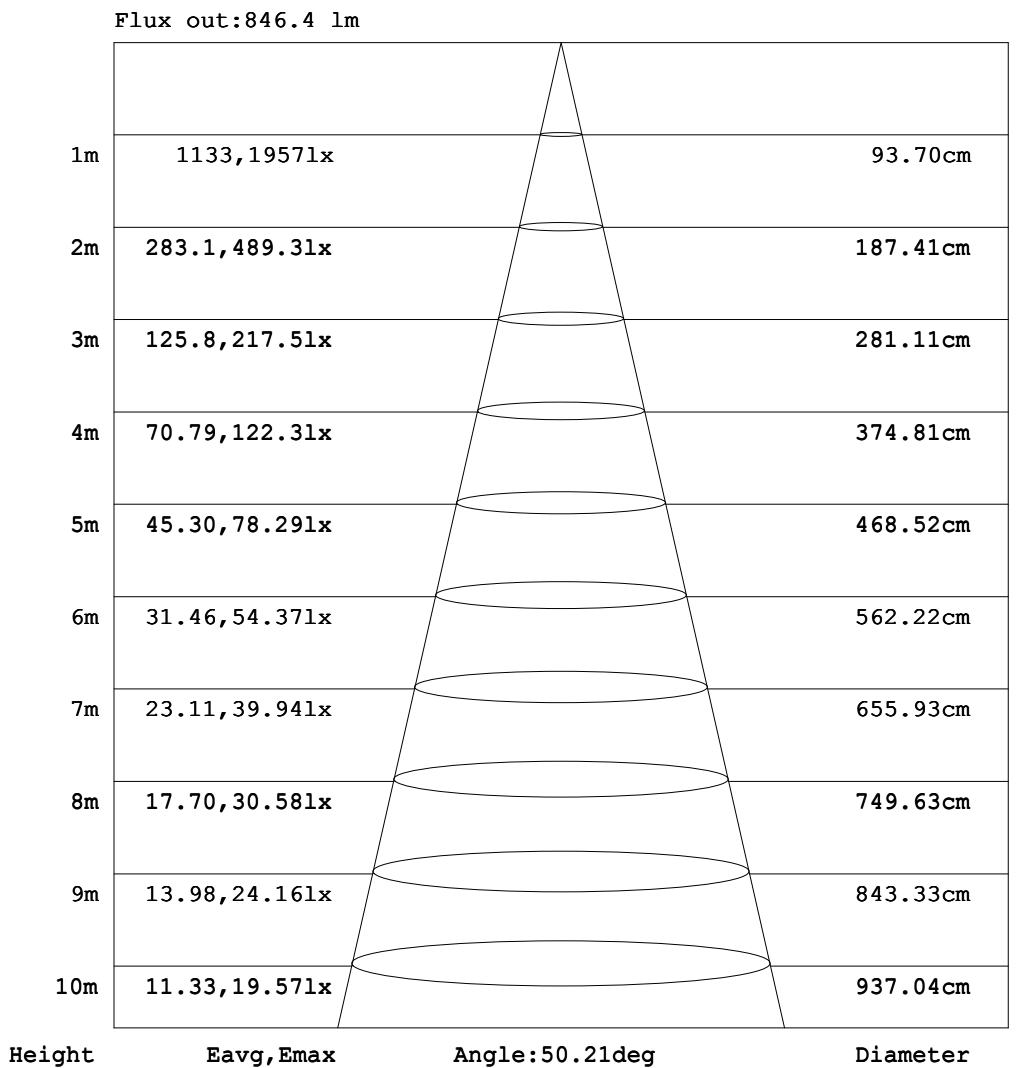


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZR
Test Date:2021-07-16

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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm		
NAME: DP090RW-WF01-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:



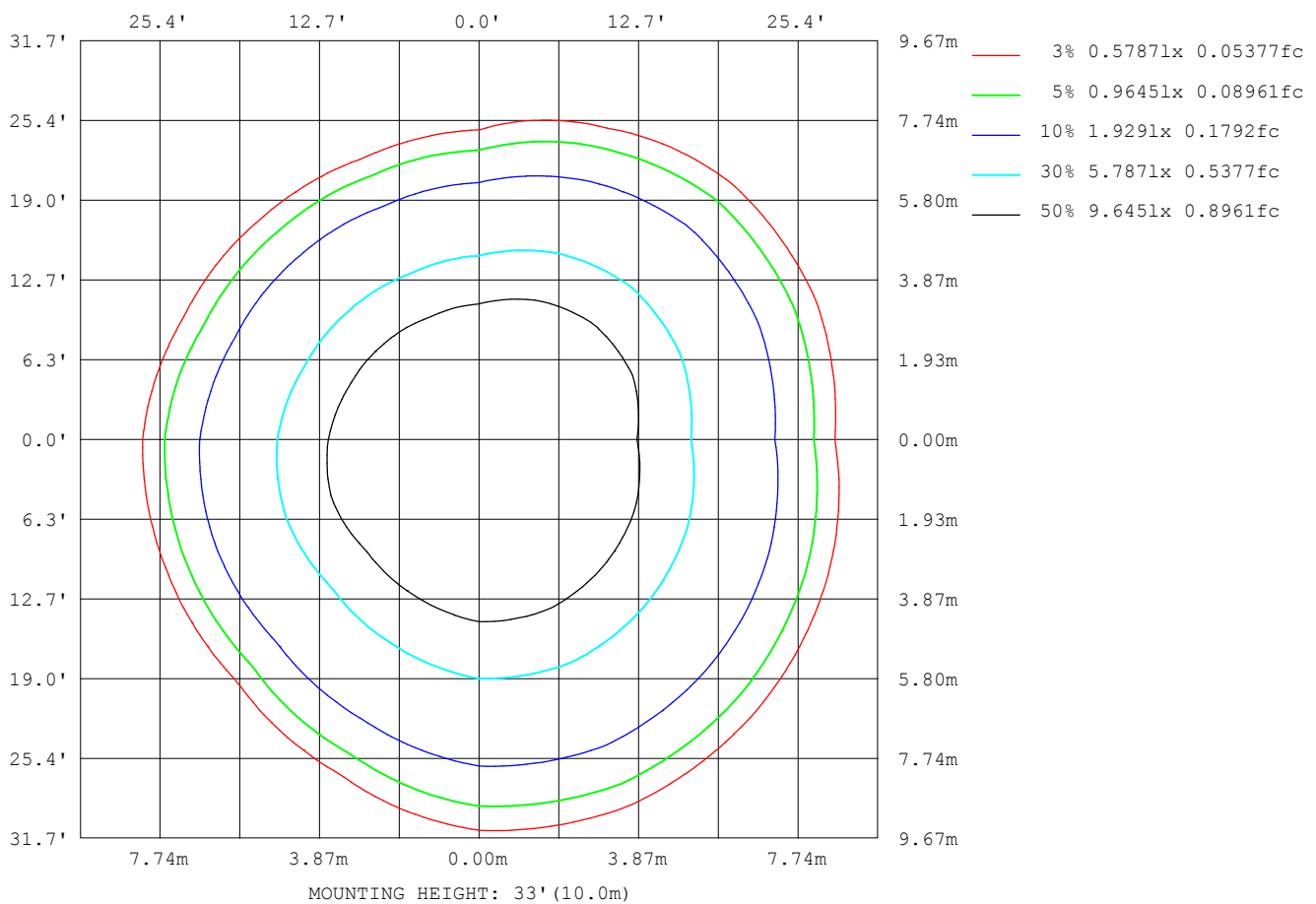
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm		
NAME: DP090RW-WF01-14G40	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:15.00W PF:0.9570 Freq:50.00Hz Lamp Flux:1323.43x1 lm		
NAME: DP090RW-WF01-14G40	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:80	Shielding Angle:

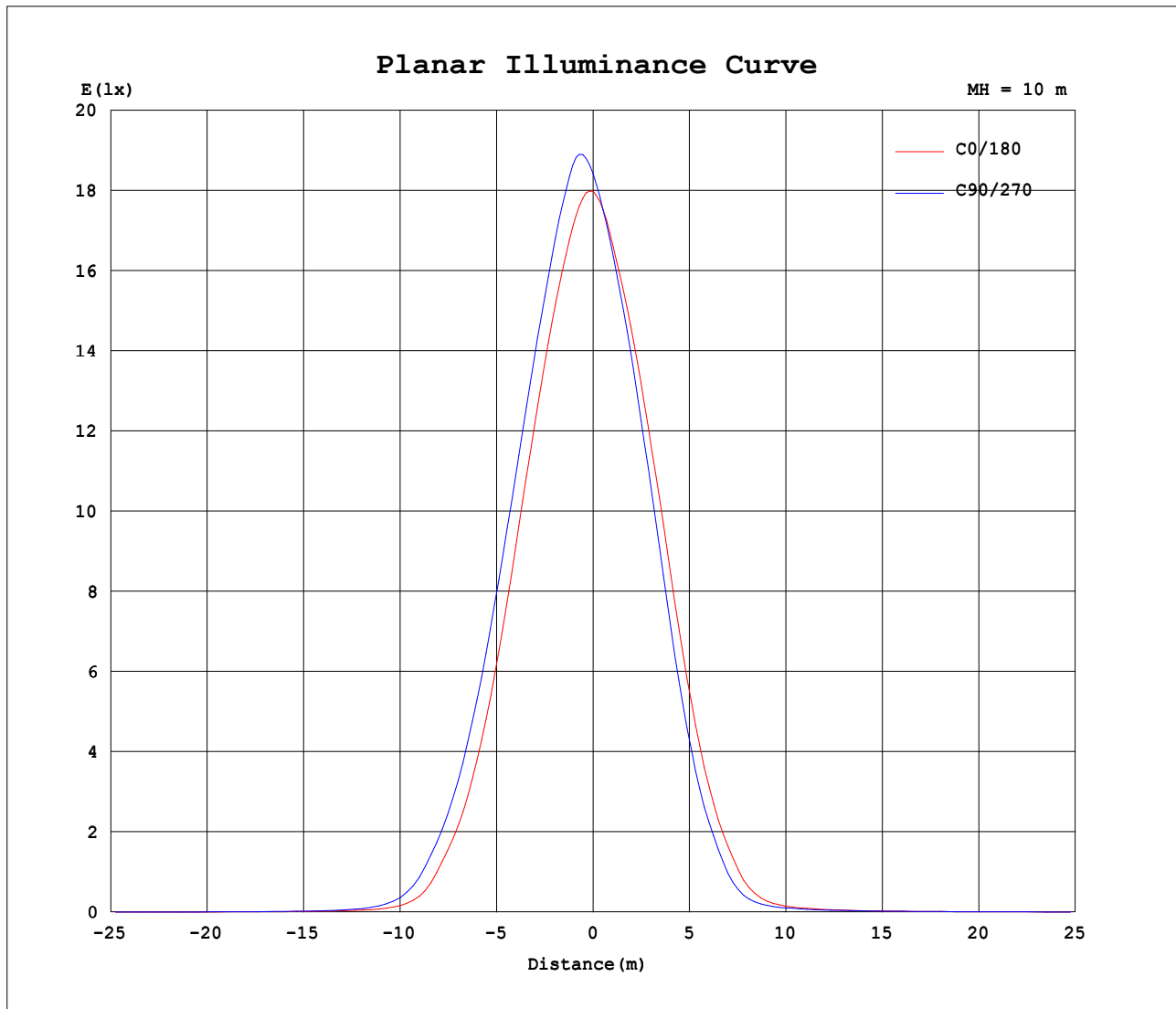
AvgL	cd/m2
L_0~180 (65) av	4758
L_0~180 (75) av	5100
L_0~180 (85) av	8479
L_90~270 (65) av	4602
L_90~270 (75) av	4886
L_90~270 (85) av	5825
L_45 (65) av	4675
L_45 (75) av	4996
L_45 (85) av	6667

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:

```