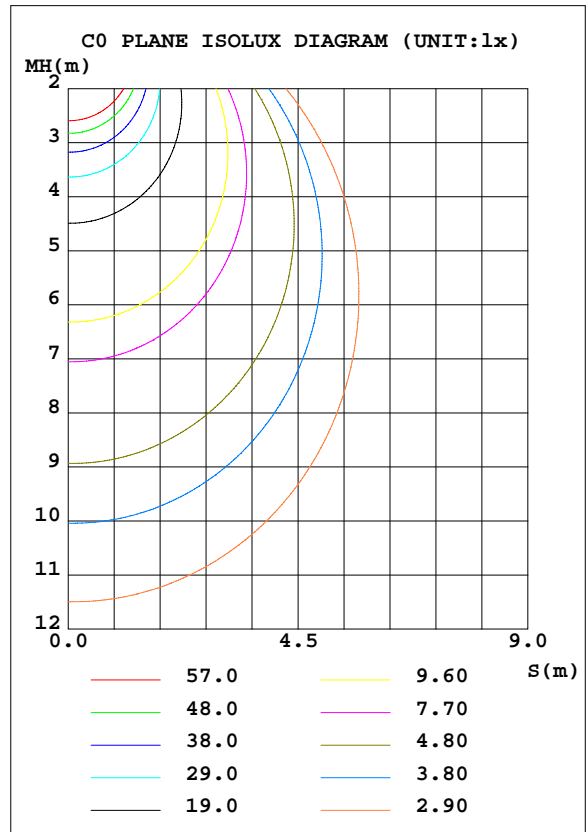
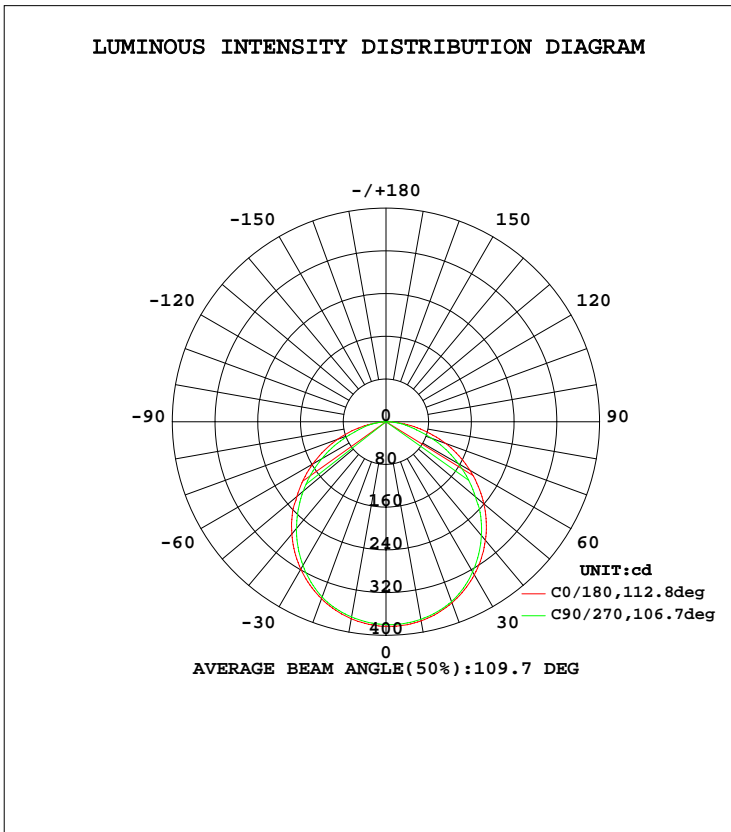


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 87.44 lm/W			
MODEL	ASD-MNPR-7D1240-W	I _{max} (cd)	383.3	S/MH(C0/180)	1.24
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1058.0	η UP, DN(C0-180)	0.0,52.3
NOMINAL FLUX(lm)	1058	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,47.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.600m [K=1.0000]
 Remarks: led panel light

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	Φ lum,lamp
10	378.7	375.8	374.7	371.2				0- 10	36.11	36.11	3.41,3.41
20	360.9	358.5	352.9	349.3				10- 20	103.5	139.7	13.2,13.2
30	330.9	324.6	318.9	310.9				20- 30	156.6	296.3	28,28
40	289.6	278.1	274.3	260.9				30- 40	187.5	483.8	45.7,45.7
50	239.3	218.7	217.9	202.5				40- 50	192.0	675.8	63.9,63.9
60	181.3	156.5	158.5	139.3				50- 60	169.6	845.4	79.9,79.9
70	118.9	91.45	96.34	73.54				60- 70	125.7	971.1	91.8,91.8
80	53.44	37.61	35.46	28.70				70- 80	69.03	1040	98.3,98.3
90	0.6695	0.4704	0	0.0000				80- 90	17.71	1058	100,100
100	0.1272	0	0	0				90-100	0.0649	1058	100,100
110	0.0397	0	0.0239	0				100-110	0.0222	1058	100,100
120	0	0	0.0438	0				110-120	0.0107	1058	100,100
130	0	0	0.0119	0				120-130	0.0080	1058	100,100
140	0	0	0	0				130-140	0.0010	1058	100,100
150	0	0	0	0				140-150	0	1058	100,100
160	0	0	0.0278	0				150-160	0.0017	1058	100,100
170	0.0079	0	0.0477	0				160-170	0.0030	1058	100,100
180	0.0437	0	0.0477	0				170-180	0.0018	1058	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

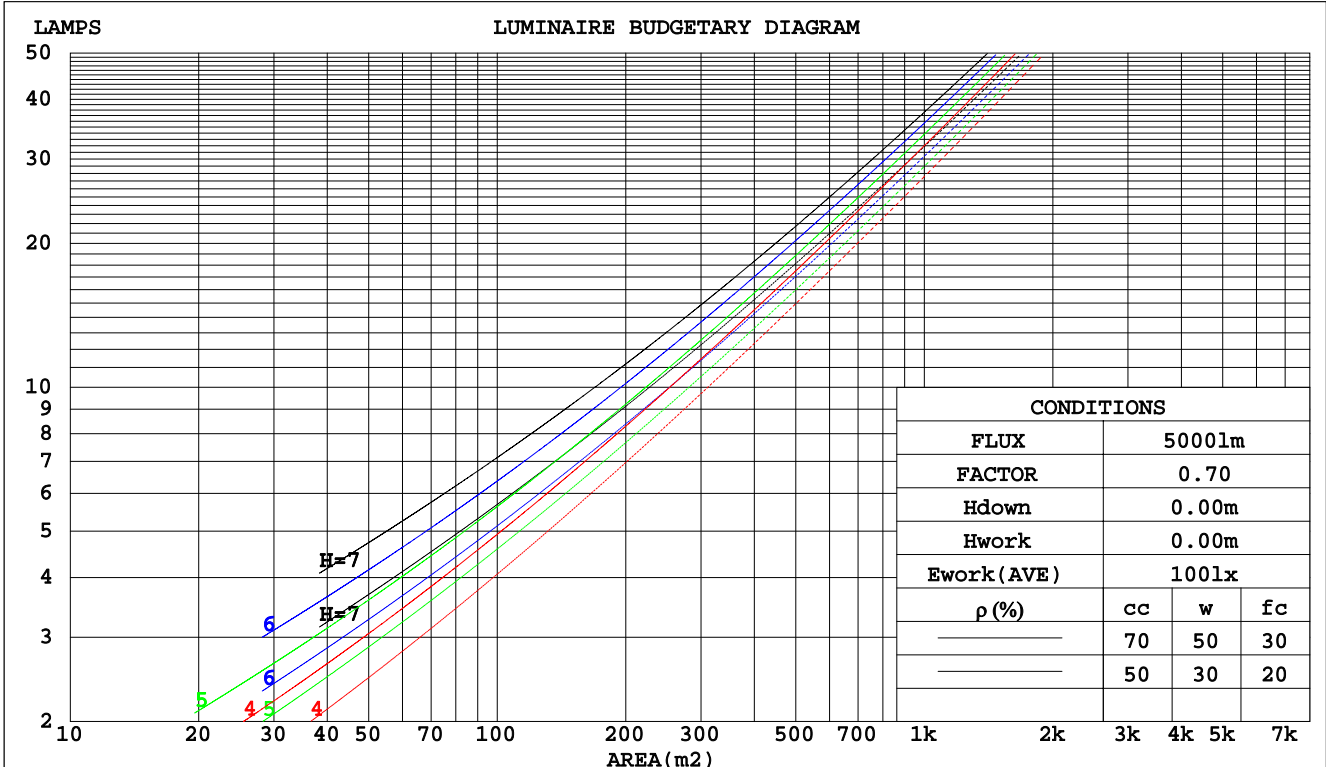
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks: led panel light

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																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	1.04	.00	.96	1.02	.98	.95	.98	.95	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.83	.78	.85	.80	.76	.82	.78	.74	.79	.76	.72	.70
3.0	.80	.72	.65	.78	.71	.65	.75	.69	.64	.73	.67	.62	.70	.65	.61	.59
4.0	.71	.62	.55	.70	.61	.55	.67	.60	.54	.65	.59	.54	.63	.57	.53	.51
5.0	.63	.54	.48	.62	.54	.47	.60	.53	.47	.58	.52	.46	.56	.51	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.53	.46	.41	.51	.45	.40	.38
7.0	.52	.43	.37	.51	.43	.37	.49	.42	.36	.48	.41	.36	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.30	.43	.35	.30	.42	.34	.29	.41	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.27	.38	.31	.27	.37	.31	.26	.25



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 8.600m [K=1.0000]
 Remarks: led panel light

WEC AND CCEC

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.304	.173	.055	.297	.169	.054	.283	.163	.052	.271	.156	.050	.260	.151	.049	
2.0	.287	.157	.048	.281	.155	.048	.269	.150	.046	.258	.145	.045	.248	.141	.044	
3.0	.266	.142	.042	.261	.140	.042	.251	.136	.041	.241	.132	.041	.232	.129	.040	
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.224	.120	.036	.216	.117	.036	
5.0	.228	.116	.034	.224	.115	.033	.216	.112	.033	.208	.110	.033	.201	.107	.032	
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029	
7.0	.197	.098	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.176	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.156	.079	.023	
10.0	.163	.078	.022	.160	.077	.022	.156	.076	.021	.151	.075	.021	.147	.074	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.099	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.075	.140	.099	.065	.096	.069	.046	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.149	.091	.048	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.069	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.122	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.023	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.600m [K=1.0000]
 Remarks: led panel light

UGR(Unified Glare Rating) Table

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm										
NAME: led panel light					TYPE:LED			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: ASD Lighting Corp					SUR.:			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	17.6	19.1	17.9	19.3	19.5	17.1	18.6	17.4	18.8	19.0
3H	19.3	20.6	19.6	20.9	21.1	18.5	19.9	18.8	20.1	20.3
4H	19.9	21.3	20.2	21.5	21.8	18.9	20.3	19.3	20.5	20.8
6H	20.5	21.7	20.8	22.0	22.3	19.3	20.5	19.6	20.8	21.1
8H	20.6	21.8	21.0	22.1	22.4	19.4	20.6	19.8	20.9	21.2
12H	20.7	21.9	21.1	22.2	22.5	19.5	20.7	19.9	21.0	21.3
4H 2H	18.2	19.5	18.5	19.7	20.0	17.8	19.1	18.1	19.3	19.6
3H	20.0	21.2	20.3	21.4	21.7	19.3	20.5	19.7	20.8	21.1
4H	20.8	21.9	21.2	22.2	22.5	19.9	21.0	20.3	21.3	21.6
6H	21.4	22.4	21.8	22.7	23.1	20.4	21.3	20.8	21.7	22.1
8H	21.7	22.6	22.1	22.9	23.3	20.6	21.5	21.0	21.8	22.2
12H	21.9	22.7	22.3	23.0	23.4	20.7	21.5	21.1	21.9	22.3
8H 4H	21.0	21.9	21.4	22.3	22.6	20.2	21.1	20.7	21.5	21.9
6H	21.8	22.5	22.3	23.0	23.4	20.9	21.6	21.3	22.0	22.4
8H	22.2	22.8	22.6	23.2	23.7	21.2	21.8	21.6	22.2	22.7
12H	22.4	23.0	22.9	23.4	23.9	21.4	21.9	21.9	22.4	22.9
12H 4H	21.0	21.8	21.4	22.2	22.6	20.3	21.1	20.7	21.5	21.9
6H	21.9	22.5	22.3	22.9	23.4	21.0	21.6	21.4	22.0	22.5
8H	22.2	22.8	22.7	23.2	23.7	21.3	21.8	21.8	22.3	22.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 1058 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.2)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.600m [K=1.0000]
 Remarks: led panel light

UTILIZATION FACTORS TABLE

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

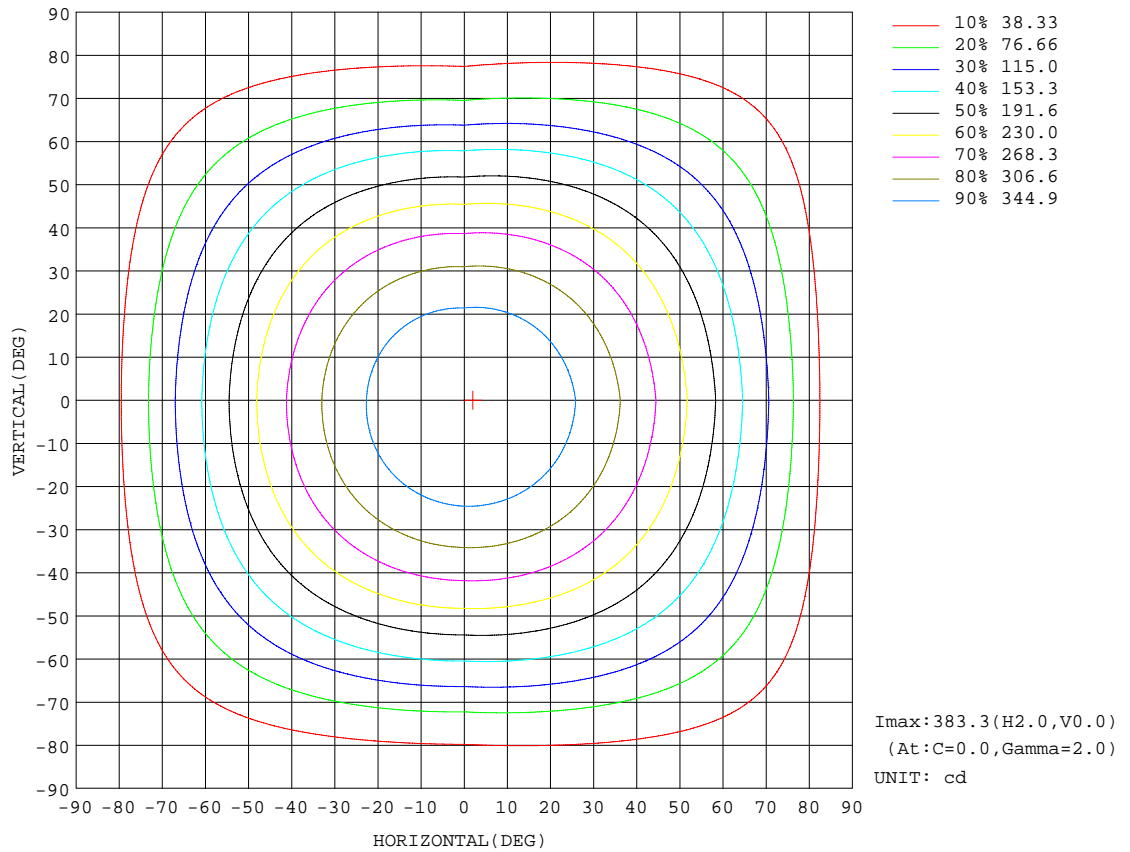
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	47	40	57	46	40	56	46	39	33
0.80	68	57	49	67	56	49	65	55	49	42
1.00	77	66	58	75	65	58	73	66	58	51
1.25	84	73	66	82	73	66	80	71	65	58
1.50	89	79	72	87	78	72	84	76	70	63
2.00	95	87	81	94	86	80	90	84	78	71
2.50	99	92	86	97	90	85	93	88	83	75
3.00	103	96	90	100	94	89	96	91	87	79
4.00	107	101	96	104	99	95	100	96	92	84
5.00	109	104	100	106	102	99	102	99	96	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.600m [K=1.0000]
 Remarks: led panel light

ISOCANDELA DIAGRAM

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

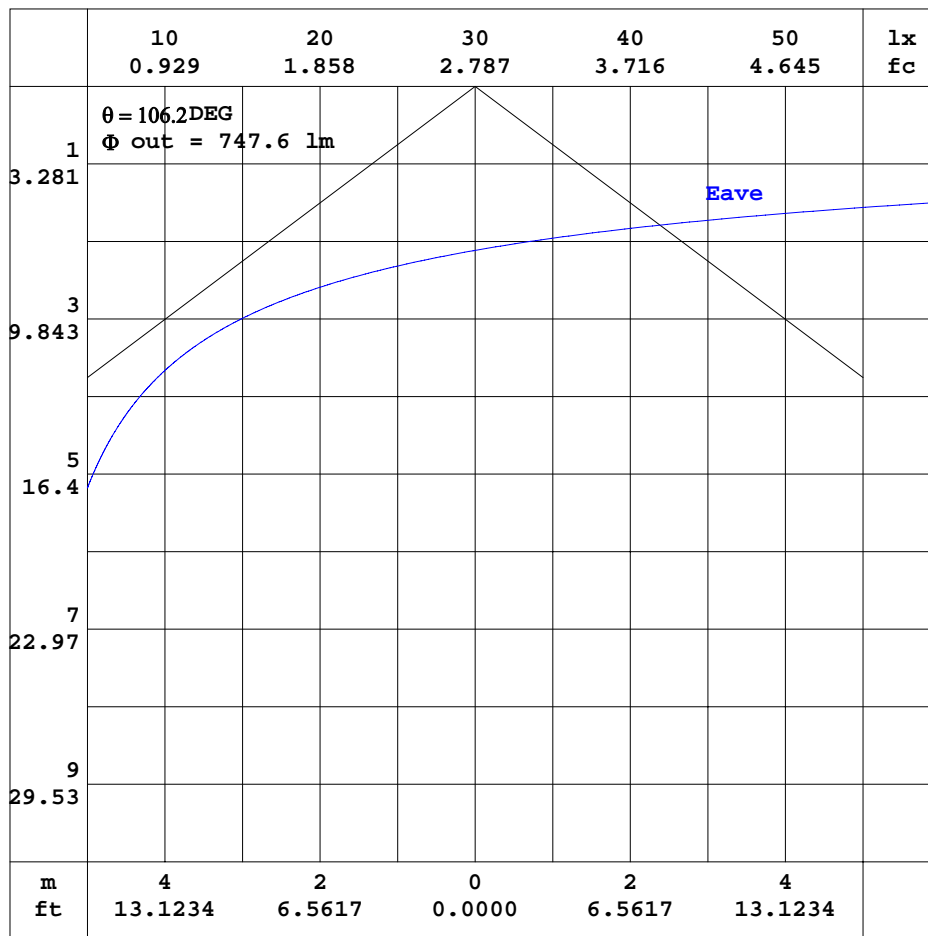


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 8.600m [K=1.0000]
 Remarks: led panel light

AAI CURVES

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



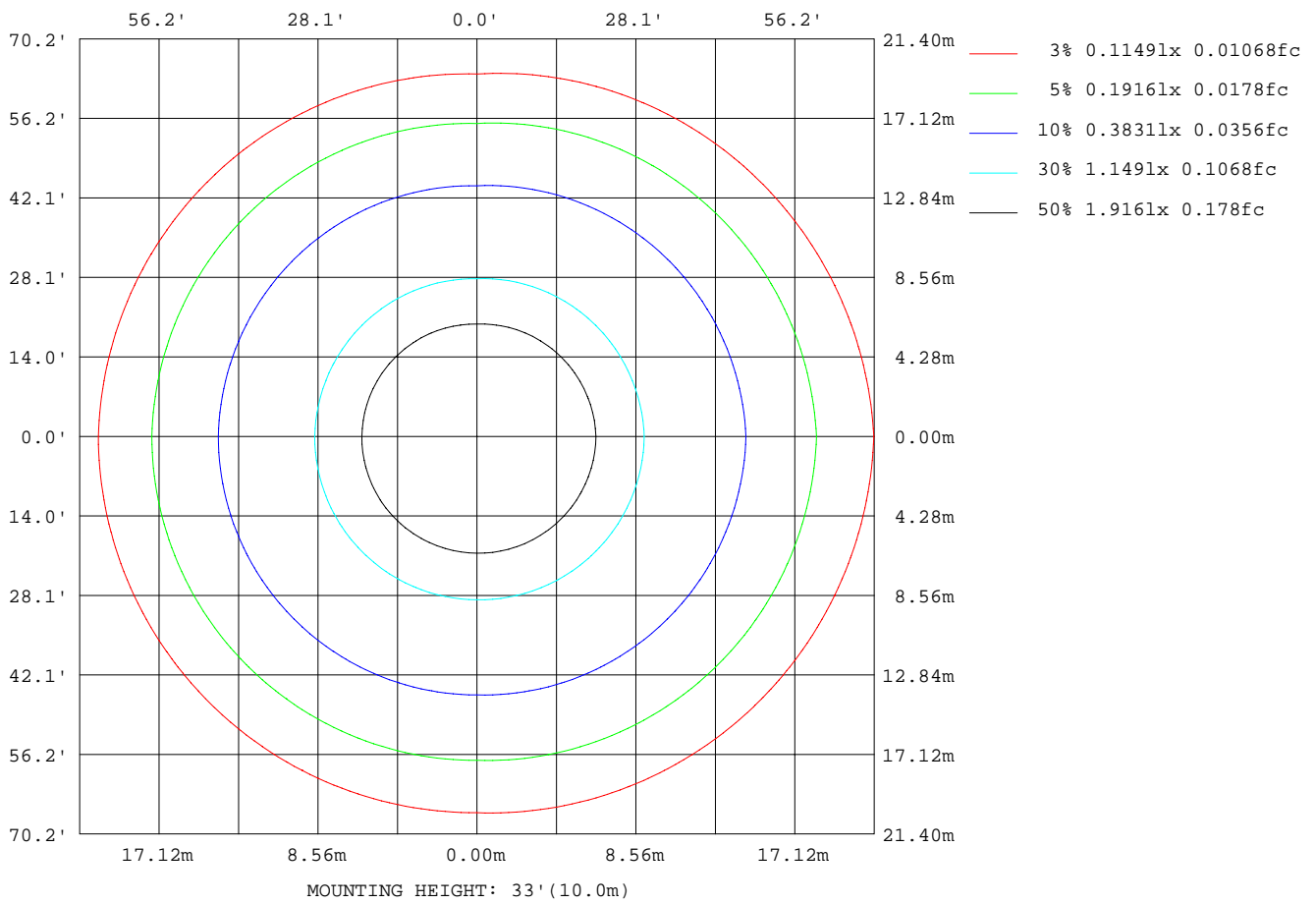
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 8.600m [K=1.0000]
 Remarks: led panel light

ISOLUX DIAGRAM

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.600m [K=1.0000]
 Remarks: led panel light

LED Avg.L Report

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

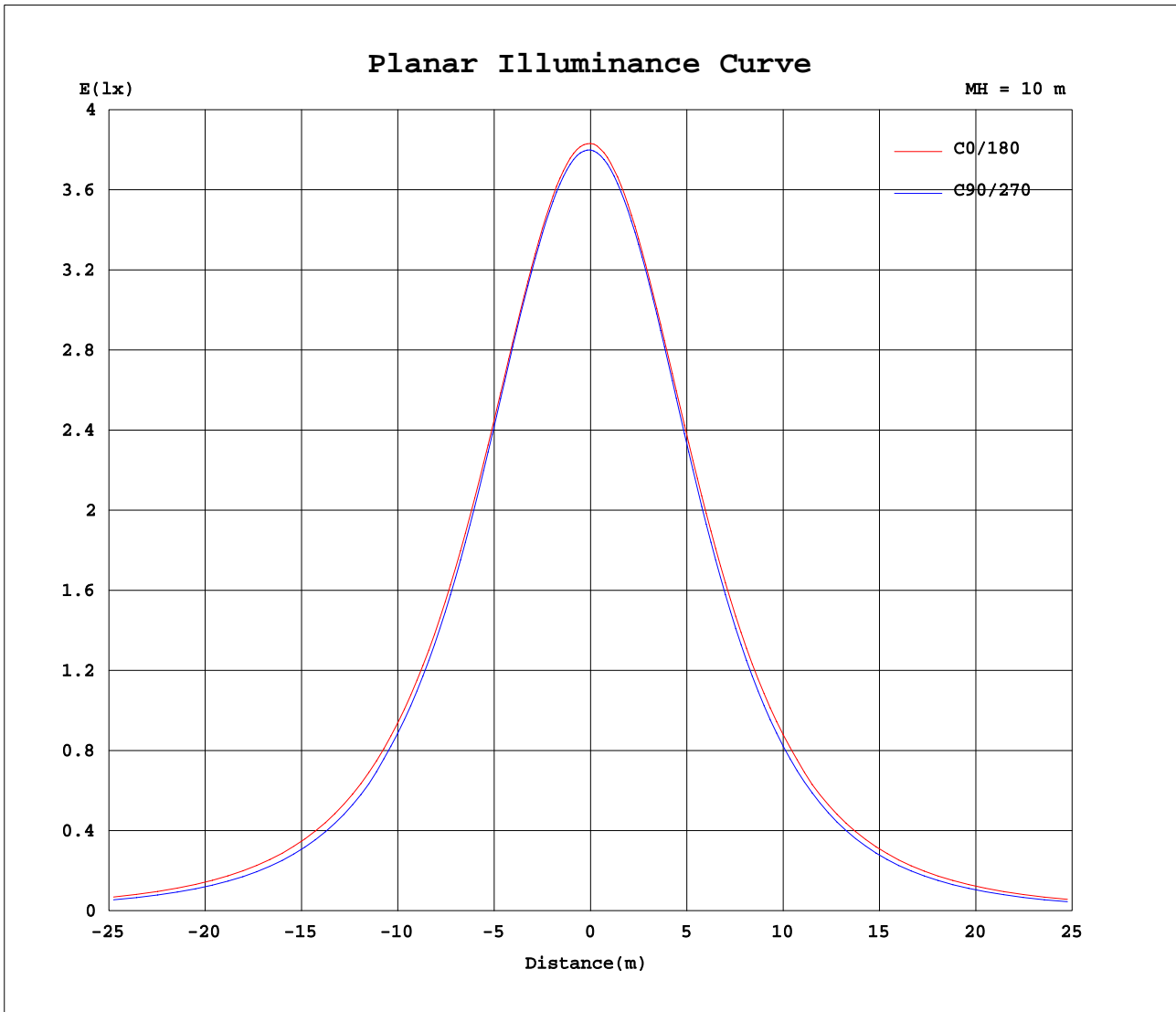
AvgL	cd/m2
L_0~180(65)av	3289
L_0~180(75)av	2917
L_0~180(85)av	1769
L_90~270(65)av	2734
L_90~270(75)av	2069
L_90~270(85)av	1628
L_45(65)av	2925
L_45(75)av	2364
L_45(85)av	1624

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks: led panel light

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 8.600m [K=1.0000]
 Remarks: led panel light

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:122.3V I:0.1030A P:12.10W PF:0.9550 Lamp Flux:1058x1 lm		
NAME: led panel light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	383	380	383	380															
5	383	379	381	377															
10	379	376	375	371															
15	371	369	365	362															
20	361	359	353	349															
25	347	344	337	332															
30	331	325	319	311															
35	311	303	298	287															
40	290	278	274	261															
45	266	251	249	232															
50	239	219	218	203															
55	211	188	189	171															
60	181	156	159	139															
65	150	124	127	107															
70	119	91.5	96.3	73.5															
75	85.1	59.5	65.9	47.6															
80	53.4	37.6	35.5	28.7															
85	23.4	18.3	7.46	10.0															
90	0.67	0.47	0.00	0.00															
95	0.16	0.00	0.00	0.00															
100	0.13	0.00	0.00	0.00															
105	0.08	0.00	0.00	0.00															
110	0.04	0.00	0.02	0.00															
115	0.00	0.00	0.04	0.00															
120	0.00	0.00	0.04	0.00															
125	0.00	0.00	0.04	0.00															
130	0.00	0.00	0.01	0.00															
135	0.00	0.00	0.00	0.00															
140	0.00	0.00	0.00	0.00															
145	0.00	0.00	0.00	0.00															
150	0.00	0.00	0.00	0.00															
155	0.00	0.00	0.02	0.00															
160	0.00	0.00	0.03	0.00															
165	0.00	0.00	0.05	0.00															
170	0.01	0.00	0.05	0.00															
175	0.03	0.00	0.06	0.00															
180	0.04	0.00	0.05	0.00															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:8.600m [K=1.0000]
 Remarks: led panel light