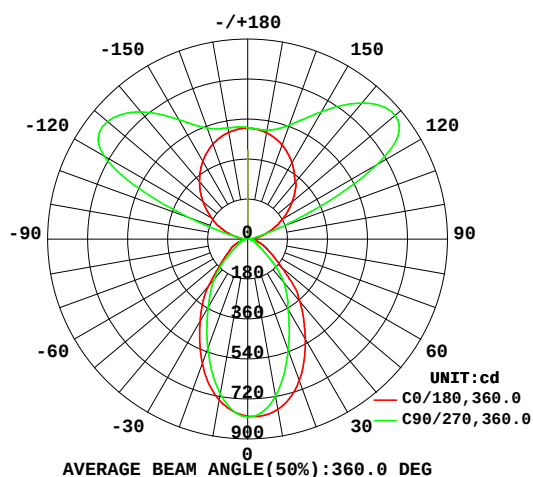


LUMINAIRE PHOTOMETRIC TEST REPORT

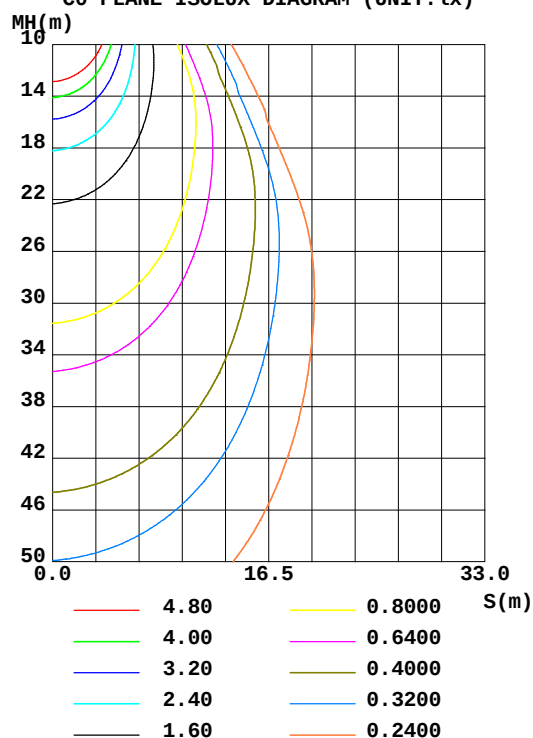
Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm		
NAME: 36W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 90.37 lm/W			
MODEL		I _{max} (cd)	866.5	S/MH(C0/180)	1.03
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	0.80
RATED VOLTAGE(V)		TOTAL FLUX(lm)	3343.6	η UP, DN(C0-180)	34.3,15.7
NOMINAL FLUX(lm)	3343.59	CIE CLASS	SEMI-IND.	η UP, DN(C180-360)	34.0,16.0
LAMPS INSIDE	1	η up(%)	68.3	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)		η down(%)	31.7	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.460m [K=1.0571]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zone	φ total	%lum, lamp
5	776.8	773.9	773.9	789.6	797.6	788.7	780.1	776.4	0- 5	18.90	18.90	0.57, 0.57
10	736.6	720.6	708.6	749.1	778.7	749.4	718.8	723.1	5- 10	54.26	73.16	2.19, 2.19
15	675.6	644.6	620.0	683.6	739.4	684.8	630.7	646.3	10- 15	82.97	156.1	4.67, 4.67
20	597.1	556.7	525.3	602.8	678.9	603.3	533.9	556.8	15- 20	102.5	258.6	7.73, 7.73
25	511.6	470.2	435.9	517.2	602.3	517.6	443.2	468.4	20- 25	112.5	371.1	11.1, 11.1
30	429.1	393.3	356.9	437.1	519.3	437.5	364.4	391.0	25- 30	114.7	485.7	14.5, 14.5
35	355.3	336.3	292.8	365.4	439.4	366.9	309.2	325.2	30- 35	111.9	597.6	17.9, 17.9
40	275.1	265.5	235.3	309.3	365.9	303.5	253.1	262.1	35- 40	105.5	703.1	21, 21
45	191.3	182.8	173.1	230.9	289.2	229.1	184.7	181.9	40- 45	90.86	793.9	23.7, 23.7
50	143.6	120.9	109.9	161.2	203.9	163.8	115.2	124.8	45- 50	69.93	863.8	25.8, 25.8
55	109.0	81.13	72.66	109.4	150.4	109.5	74.67	83.76	50- 55	51.41	915.3	27.4, 27.4
60	88.33	60.04	53.02	78.13	113.2	76.26	52.84	63.58	55- 60	38.78	954.0	28.5, 28.5
65	69.11	47.15	42.36	60.38	89.08	59.99	41.07	53.35	60- 65	31.27	985.3	29.5, 29.5
70	46.24	38.40	35.49	48.88	68.18	49.01	33.95	45.30	65- 70	25.99	1011	30.2, 30.2
75	29.70	26.37	26.18	39.69	48.69	39.33	25.63	31.99	70- 75	20.71	1032	30.9, 30.9
80	24.14	13.20	15.96	27.67	36.35	25.51	14.37	18.74	75- 80	14.70	1047	31.3, 31.3
85	8.718	4.694	10.77	15.53	31.04	11.82	7.101	9.081	80- 85	9.052	1056	31.6, 31.6
90	9.703	5.043	10.55	10.68	12.69	4.185	6.324	8.925	85- 90	5.301	1061	31.7, 31.7
95	18.09	19.51	6.471	23.42	17.64	9.480	5.529	9.218	90- 95	3.672	1065	31.8, 31.8
100	43.39	136.4	27.86	145.7	41.90	95.90	16.45	94.55	95-100	22.04	1087	32.5, 32.5
105	75.03	309.6	94.49	295.3	72.01	260.3	54.72	265.5	100-105	69.49	1156	34.6, 34.6
110	110.8	460.6	272.2	411.4	105.8	407.4	164.3	431.9	105-110	129.3	1286	38.4, 38.4
115	149.7	537.7	538.5	470.4	142.9	496.0	394.3	538.9	110-115	185.0	1471	44, 44
120	184.1	561.4	743.7	490.4	182.2	528.1	673.4	577.2	115-120	226.4	1697	50.8, 50.8
125	223.8	561.9	818.5	492.8	222.3	531.1	829.1	580.3	120-125	242.6	1940	58, 58
130	263.2	551.7	823.4	487.6	262.4	522.1	866.4	569.5	125-130	237.7	2177	65.1, 65.1
135	301.5	537.4	796.0	480.4	302.0	509.3	848.6	554.0	130-135	221.6	2399	71.7, 71.7
140	338.4	521.3	747.3	473.0	335.3	496.0	799.8	536.5	135-140	200.3	2599	77.7, 77.7
145	372.9	507.3	685.4	468.8	365.6	485.3	733.6	519.4	140-145	175.8	2775	83, 83
150	404.5	498.4	621.3	469.1	398.4	477.4	661.6	505.2	145-150	151.0	2926	87.5, 87.5
155	432.6	494.8	567.8	473.8	427.2	473.8	596.7	494.7	150-155	126.8	3053	91.3, 91.3
160	456.4	496.2	532.3	481.6	452.2	475.2	546.1	488.9	155-160	103.5	3156	94.4, 94.4
165	475.4	500.6	514.7	490.1	472.2	480.8	513.4	488.2	160-165	81.04	3237	96.8, 96.8
170	489.1	504.5	508.6	497.1	486.8	489.4	498.9	491.2	165-170	58.59	3296	98.6, 98.6
175	497.1	506.1	506.5	500.6	496.0	498.2	497.5	495.5	170-175	35.61	3332	99.6, 99.6
180	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5	175-180	11.97	3344	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT: lm		

Conical surface Flux(90deg): 793.92 lm

%lum = 23.7%

%lamp = 23.7%

Conical surface Flux(120deg): 954.04 lm

%lum = 28.5%

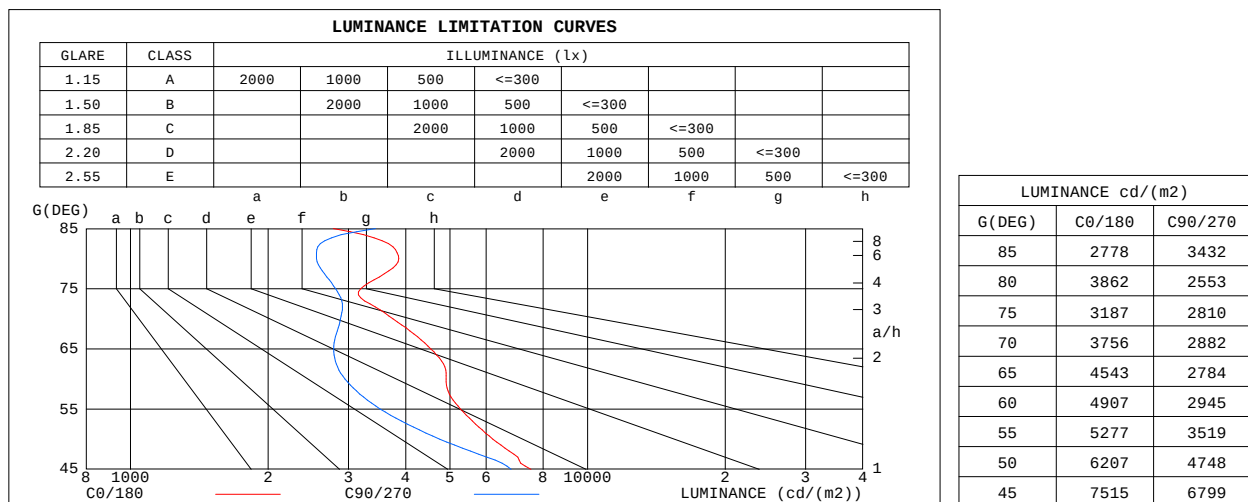
%lamp = 28.5%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.460m [K=1.0571]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm		
NAME: 36W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



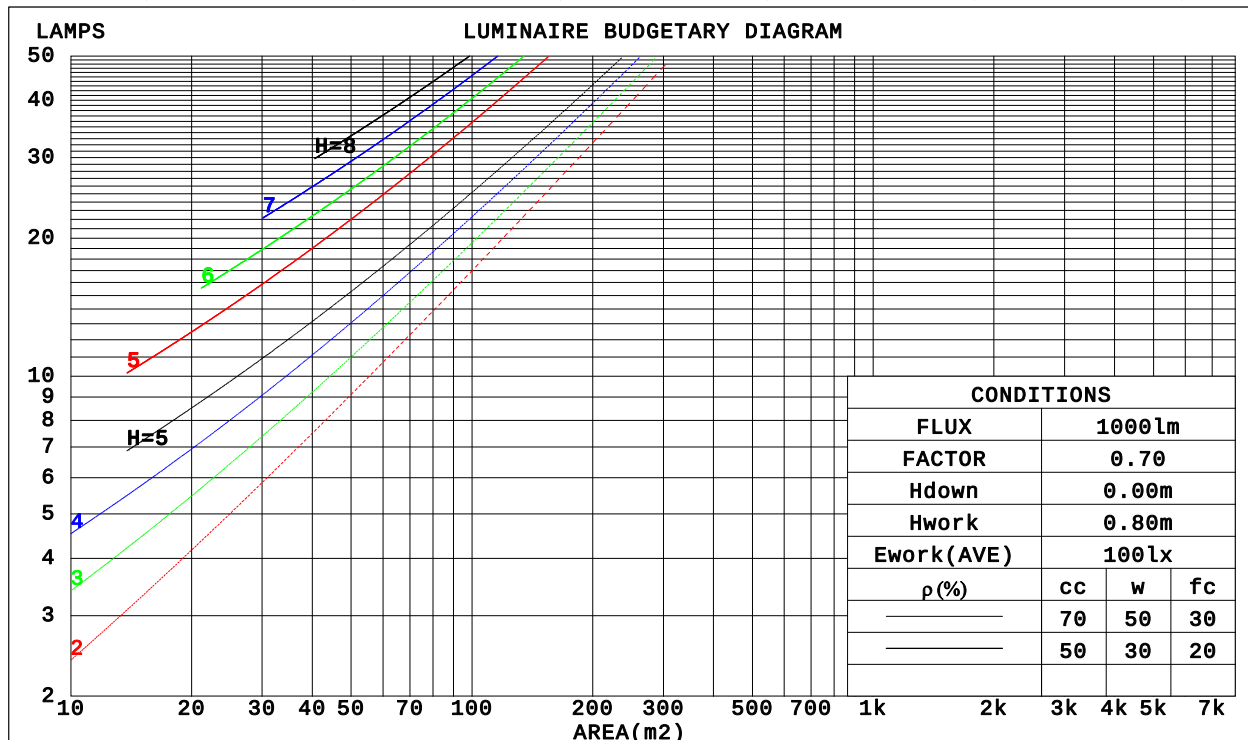
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.460m [K=1.0571]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm		
NAME: 36W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.03	1.03	1.03	.92	.92	.92	.73	.73	.73	.56	.56	.56	.39	.39	.39	.32
1.0	.90	.87	.84	.82	.79	.76	.65	.63	.61	.50	.49	.47	.36	.35	.34	.28
2.0	.80	.74	.70	.72	.68	.64	.58	.55	.52	.45	.43	.41	.32	.31	.30	.25
3.0	.71	.64	.59	.64	.59	.54	.52	.48	.45	.40	.38	.35	.29	.28	.27	.22
4.0	.63	.56	.51	.57	.51	.47	.47	.42	.39	.36	.33	.31	.27	.25	.24	.20
5.0	.57	.49	.44	.52	.45	.41	.42	.37	.34	.33	.30	.28	.25	.23	.21	.18
6.0	.51	.44	.38	.47	.40	.36	.38	.34	.30	.30	.27	.25	.23	.21	.19	.16
7.0	.46	.39	.34	.42	.36	.32	.35	.30	.27	.28	.25	.22	.21	.19	.17	.15
8.0	.42	.35	.30	.39	.33	.28	.32	.27	.24	.26	.22	.20	.20	.18	.16	.14
9.0	.39	.32	.27	.36	.29	.25	.29	.25	.22	.24	.20	.18	.18	.16	.15	.12
10.0	.36	.29	.24	.33	.27	.23	.27	.23	.20	.22	.19	.17	.17	.15	.14	.12



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000_V1 SYSTEM V2.0.295T
 Humidity: 65.0%
 Test Distance: 9.460m [K=1.0571]
 Remarks:

WEC AND CCEC

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm					
NAME: 36W			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:		Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)															
0.0																
1.0	.254	.145	.046	.227	.129	.041	.175	.100	.032	.128	.074	.024	.084	.049	.016	
2.0	.236	.129	.040	.210	.116	.036	.163	.091	.028	.120	.067	.021	.080	.045	.014	
3.0	.218	.116	.035	.195	.105	.032	.152	.083	.025	.112	.062	.019	.075	.042	.013	
4.0	.203	.105	.031	.182	.095	.028	.142	.075	.023	.105	.057	.017	.071	.039	.012	
5.0	.189	.096	.028	.170	.087	.025	.133	.069	.020	.099	.052	.016	.067	.036	.011	
6.0	.177	.089	.025	.159	.080	.023	.125	.064	.019	.093	.048	.014	.063	.033	.010	
7.0	.165	.082	.023	.149	.074	.021	.117	.059	.017	.088	.045	.013	.060	.031	.009	
8.0	.155	.076	.021	.140	.069	.019	.111	.055	.016	.083	.042	.012	.057	.029	.008	
9.0	.146	.071	.020	.132	.064	.018	.104	.052	.015	.078	.039	.011	.054	.027	.008	
10.0	.138	.066	.018	.125	.060	.017	.099	.048	.014	.074	.037	.011	.051	.026	.007	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.711	.711	.711	.607	.607	.607	.415	.415	.415	.238	.238	.238	.076	.076	.076	
1.0	.701	.681	.663	.600	.585	.571	.410	.402	.395	.236	.233	.230	.076	.075	.074	
2.0	.693	.660	.633	.593	.568	.547	.407	.393	.382	.234	.229	.224	.075	.074	.073	
3.0	.685	.645	.612	.588	.556	.531	.403	.386	.372	.233	.226	.220	.075	.073	.072	
4.0	.679	.633	.598	.582	.547	.520	.400	.381	.366	.232	.223	.217	.075	.073	.071	
5.0	.672	.624	.588	.577	.540	.512	.398	.377	.361	.230	.221	.214	.074	.072	.071	
6.0	.666	.617	.581	.573	.534	.506	.395	.374	.358	.229	.220	.213	.074	.072	.070	
7.0	.661	.611	.576	.568	.529	.502	.393	.371	.355	.228	.219	.212	.074	.072	.070	
8.0	.655	.606	.572	.564	.525	.498	.390	.369	.354	.227	.218	.211	.073	.071	.070	
9.0	.651	.601	.568	.560	.522	.496	.388	.367	.352	.226	.217	.210	.073	.071	.070	
10.0	.646	.598	.566	.557	.519	.494	.386	.365	.351	.225	.216	.209	.073	.071	.069	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.460m [K=1.0571]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm											
NAME: 36W					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:			
MFR.:					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	11.9	12.7	12.9	13.7	15.0	10.5	11.3	11.6	12.3	13.6	
	3H	12.7	13.3	13.7	14.3	15.7	11.1	11.8	12.2	12.8	14.2
	4H	12.9	13.5	13.9	14.5	15.9	11.4	12.1	12.5	13.1	14.5
	6H	13.2	13.7	14.2	14.8	16.2	11.6	12.2	12.7	13.3	14.7
	8H	13.3	13.8	14.4	14.9	16.3	11.7	12.2	12.8	13.3	14.7
	12H	13.3	13.8	14.4	14.9	16.3	11.8	12.3	12.9	13.3	14.8
4H	2H	11.8	12.4	12.8	13.4	14.8	10.6	11.2	11.6	12.2	13.6
	3H	12.7	13.2	13.8	14.3	15.7	11.4	11.9	12.5	13.0	14.4
	4H	13.0	13.5	14.1	14.6	16.1	11.8	12.3	12.9	13.4	14.8
	6H	13.4	13.8	14.6	14.9	16.4	12.1	12.5	13.2	13.6	15.1
	8H	13.6	14.0	14.7	15.1	16.6	12.2	12.5	13.3	13.6	15.2
	12H	13.6	14.0	14.8	15.1	16.6	12.3	12.6	13.4	13.7	15.3
8H	4H	13.0	13.3	14.1	14.4	15.9	11.8	12.2	13.0	13.3	14.8
	6H	13.4	13.7	14.6	14.9	16.4	12.2	12.5	13.3	13.6	15.1
	8H	13.6	13.9	14.8	15.0	16.6	12.3	12.6	13.5	13.7	15.3
	12H	13.7	13.9	14.9	15.1	16.6	12.5	12.7	13.7	13.9	15.4
12H	4H	12.9	13.2	14.0	14.3	15.9	11.8	12.1	12.9	13.2	14.7
	6H	13.4	13.6	14.5	14.8	16.3	12.2	12.4	13.3	13.5	15.1
	8H	13.6	13.8	14.7	14.9	16.5	12.3	12.5	13.4	13.7	15.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.5 / - 0.6					+ 0.7 / - 0.8					
1.5H	+ 0.8 / - 0.7					+ 0.8 / - 0.7					
2.0H	+ 1.1 / - 0.8					+ 1.6 / - 0.8					

CIE Pub.117 Corrected 3344 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.2)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.460m [K=1.0571]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm		
NAME: 36W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

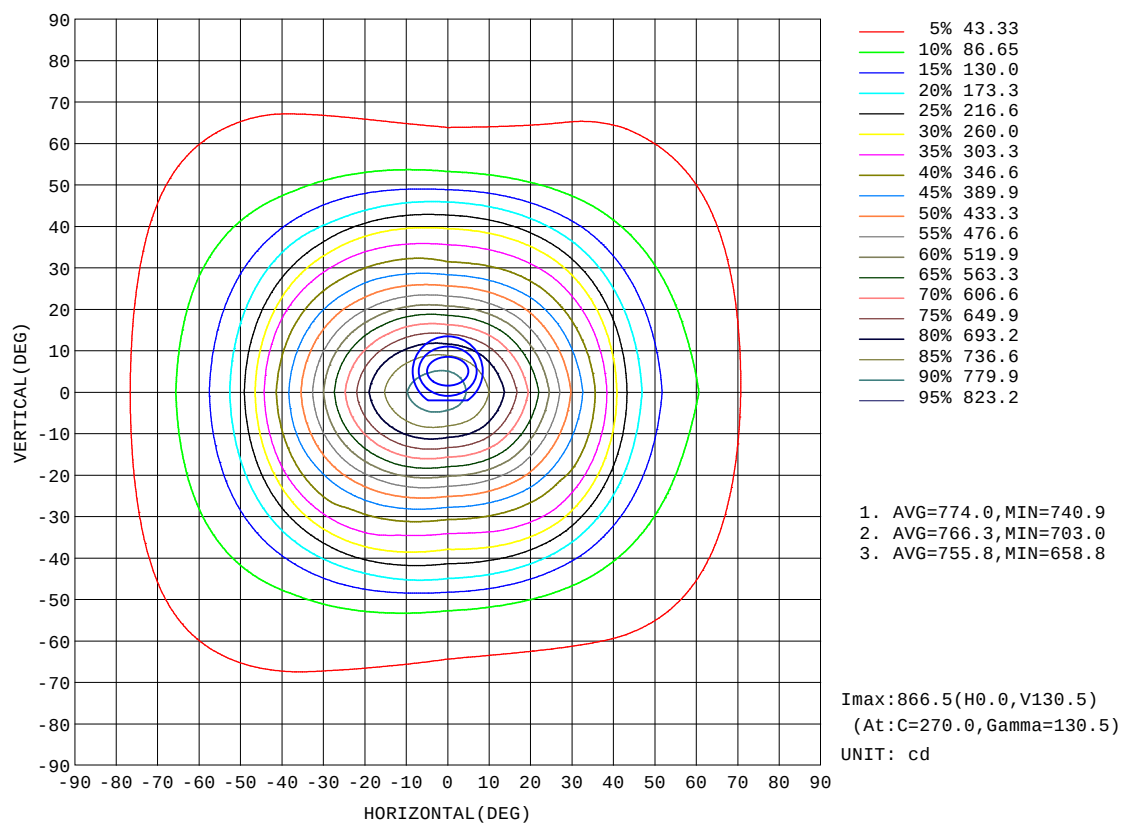
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	54	43	36	49	39	33	39	33	28	15
0.80	62	51	44	56	47	41	45	39	34	17
1.00	68	58	51	62	53	47	49	43	39	19
1.25	74	65	58	67	59	53	53	48	44	21
1.50	78	69	63	70	63	57	56	51	47	23
2.00	84	76	71	75	69	64	60	56	53	25
2.50	87	81	75	78	73	69	62	59	56	26
3.00	90	84	79	81	76	72	64	61	58	27
4.00	93	88	84	83	80	76	66	64	61	28
5.00	95	91	87	85	82	79	67	65	64	29
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Ceiling Mounted					SHRNOM = 1.00		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.460m [K=1.0571]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm		
NAME: 36W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

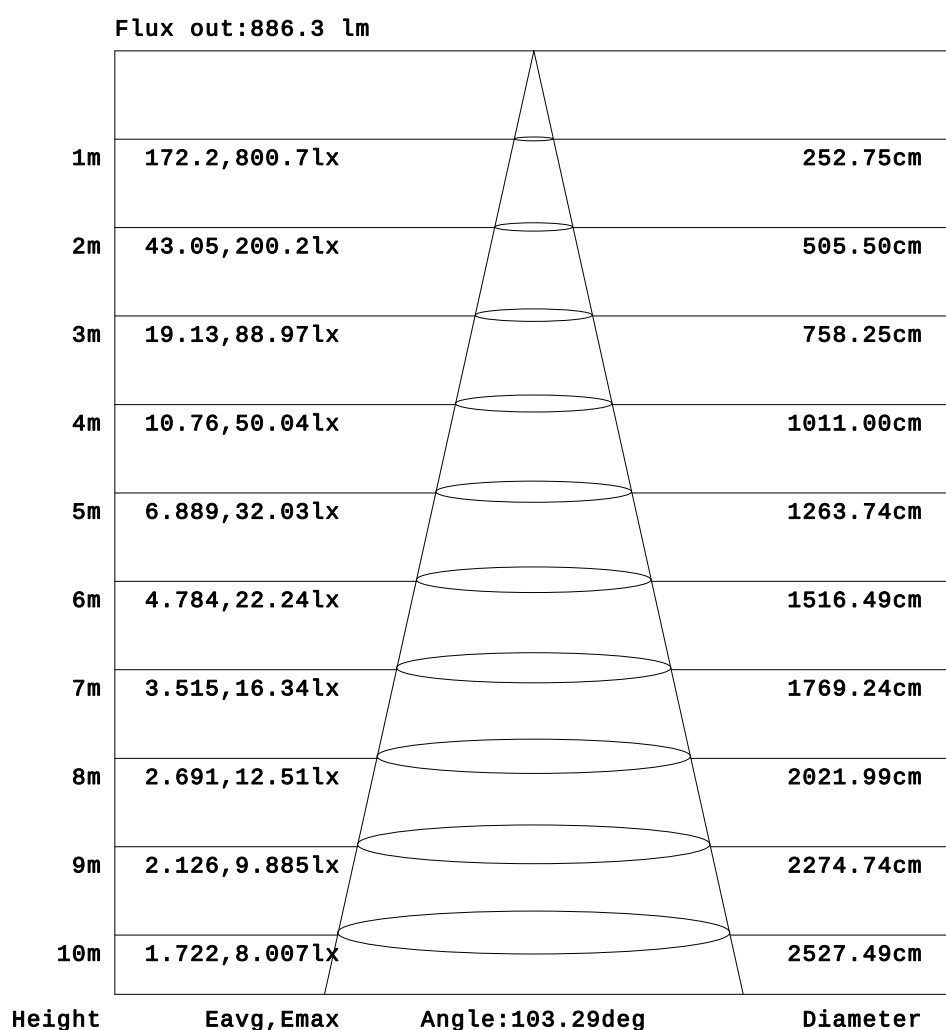


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.460m [K=1.0571]
Remarks:

AAI Figure

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm		
NAME: 36W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



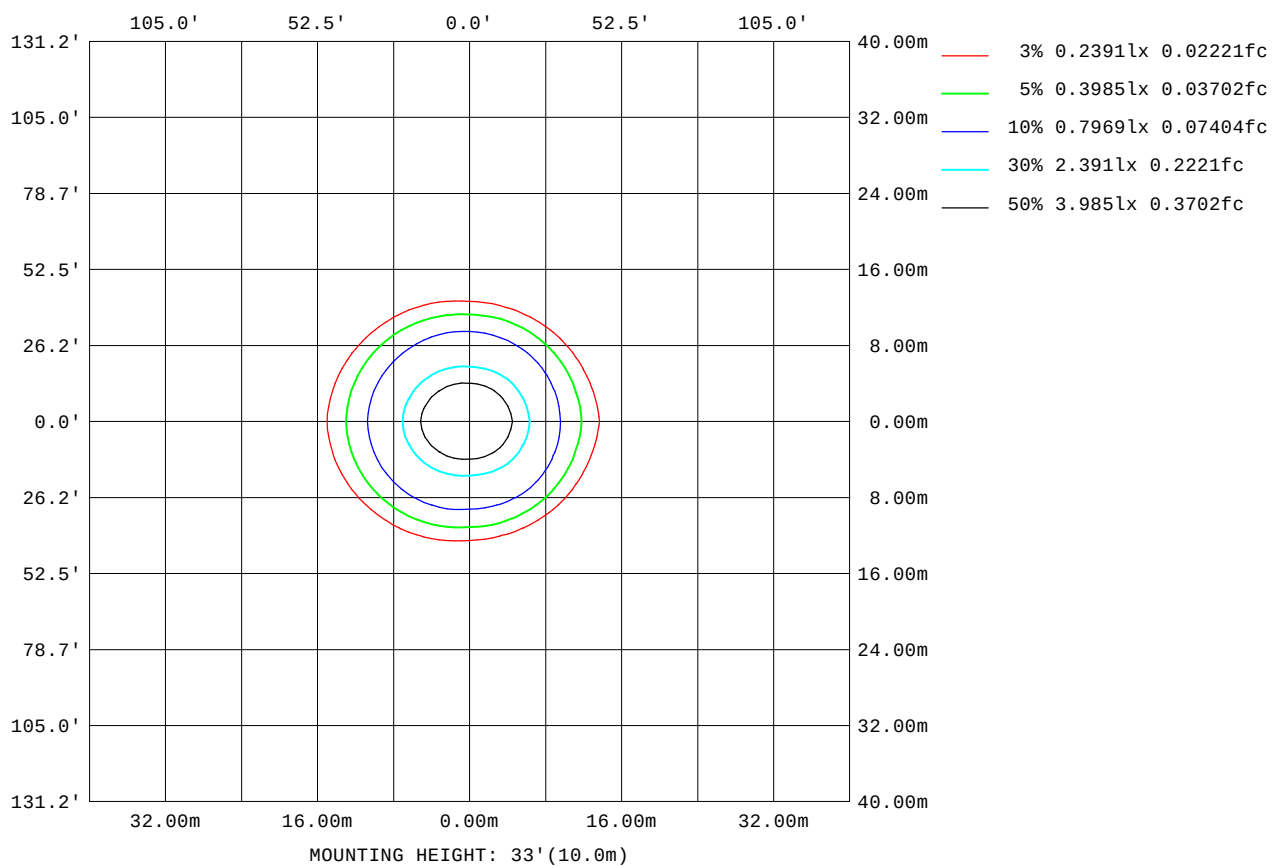
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:
 Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
 Humidity:65.0%
 Test Distance:9.460m [K=1.0571]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm		
NAME: 36W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.460m [K=1.0571]
Remarks:

LED Avg.L Report

Test:U:220.8V I:0.1730A P:37.00W PF:0.9700 Lamp Flux:3343.59x1 lm		
NAME: 36W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

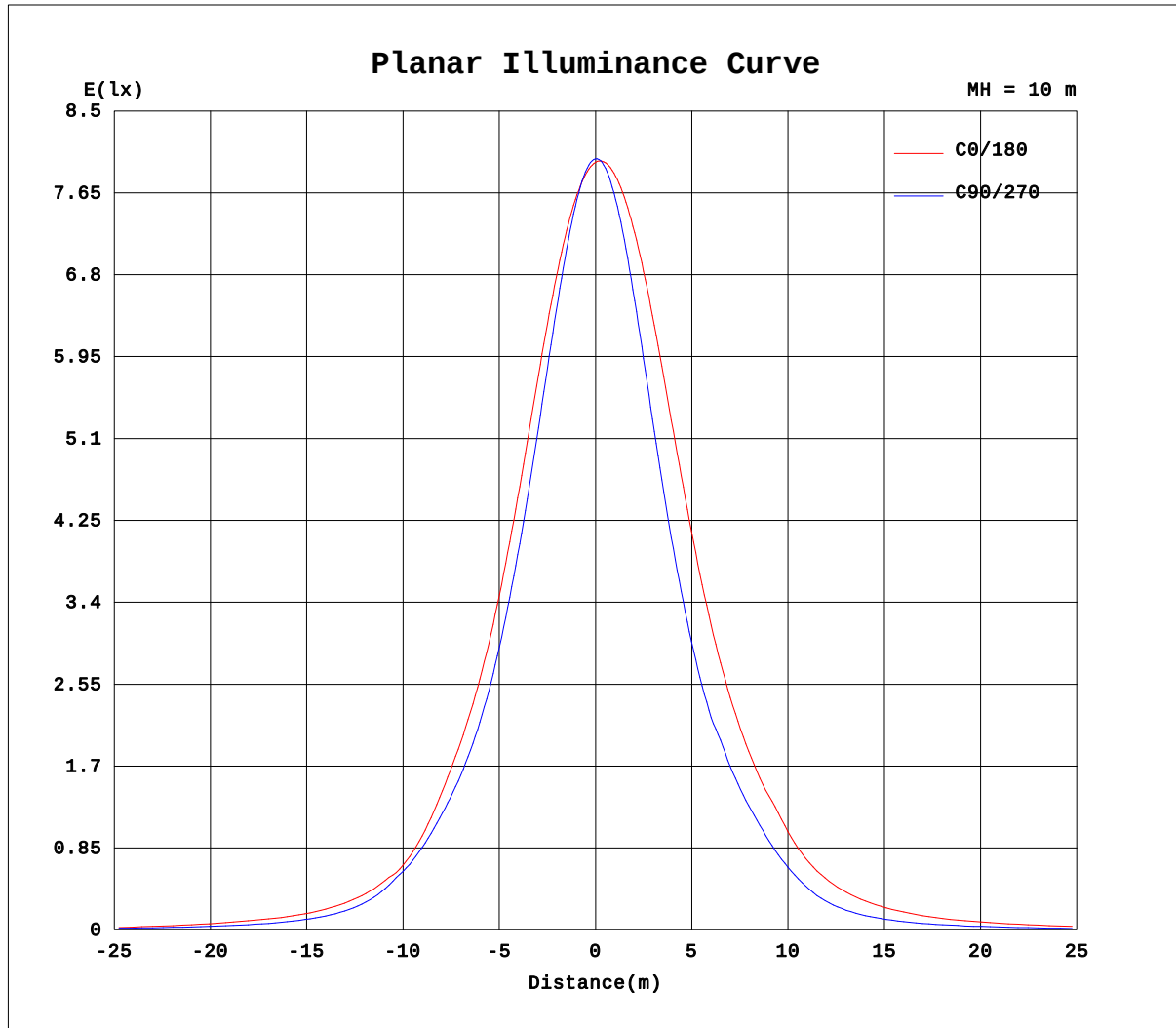
AvgL	cd/m2
L_0~180(65)av	5199
L_0~180(75)av	4206
L_0~180(85)av	6336
L_90~270(65)av	2742
L_90~270(75)av	2781
L_90~270(85)av	2847
L_45(65)av	3629
L_45(75)av	3686
L_45(85)av	3277

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity:65.0%
Test Distance:9.460m [K=1.0571]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators:
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE G0-2000_V1 SYSTEM V2.0.295T
Humidity: 65.0%
Test Distance: 9.460m [K=1.0571]
Remarks: