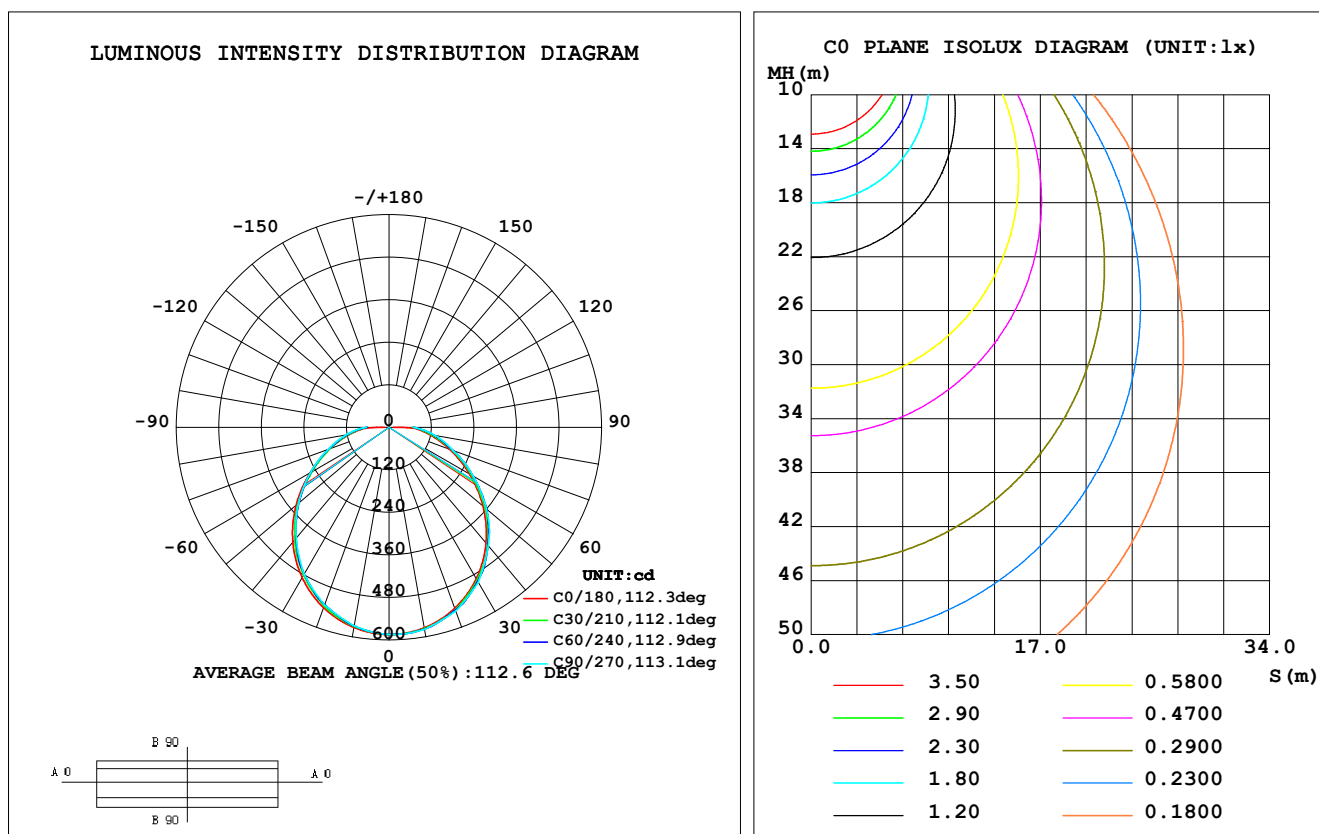


# LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm		
NAME: RB280W-ACEM-MS-AT-1H-LFP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2021111701
MFR.: JEWOO	SUR.:0.24	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.02 lm/W			
MODEL: RB280W-ACEM-MS-AT-1H-LFP		Imax(cd)	584.4	S/MH(C0/180)	1.25
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	0	TOTAL FLUX(lm)	1784.8	$\eta$ UP,DN(C0-180)	0.0,51.0
NOMINAL FLUX(lm)	1784.78	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,49.0
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	0	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:cgq  
Test Date:2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
Humidity:65.0%  
Test Distance:13.693m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
5	582.0	583.1	583.7	582.7	581.5	579.2	578.8	579.7	0- 5	13.93	13.93	0.78,0.78
10	574.2	576.9	578.7	576.1	573.2	569.2	568.9	570.0	5- 10	41.30	55.23	3.09,3.09
15	561.1	565.3	564.9	564.2	559.6	554.2	550.9	555.2	10- 15	67.17	122.4	6.86,6.86
20	543.0	546.9	551.2	545.4	541.0	532.6	532.9	533.8	15- 20	90.64	213.0	11.9,11.9
25	520.2	526.3	527.5	524.5	517.8	509.0	506.1	510.5	20- 25	111.0	324.1	18.2,18.2
30	492.8	499.9	503.9	497.9	490.0	480.3	479.3	481.7	25- 30	127.5	451.6	25.3,25.3
35	461.2	468.7	469.7	466.8	458.1	447.5	443.4	448.7	30- 35	139.7	591.3	33.1,33.1
40	425.9	435.4	435.5	433.5	422.6	412.8	407.6	413.7	35- 40	146.9	738.2	41.4,41.4
45	387.4	395.0	400.5	392.9	383.8	372.0	371.5	372.9	40- 45	149.4	887.6	49.7,49.7
50	346.3	354.9	358.7	352.4	342.5	331.6	333.3	332.4	45- 50	147.3	1035	58,58
55	303.9	314.9	316.0	312.0	299.8	291.9	294.8	292.7	50- 55	140.7	1175	65.9,65.9
60	261.7	272.0	273.3	268.4	257.6	253.1	256.2	253.5	55- 60	130.4	1306	73.2,73.2
65	221.0	230.8	233.1	226.3	216.9	216.0	219.0	215.9	60- 65	117.5	1423	79.8,79.8
70	182.6	192.1	192.9	186.7	178.6	180.5	181.7	180.3	65- 70	102.8	1526	85.5,85.5
75	147.1	155.8	161.9	149.3	143.5	146.5	152.2	146.5	70- 75	87.27	1613	90.4,90.4
80	115.2	125.5	130.8	118.8	111.7	117.4	122.8	117.5	75- 80	72.21	1686	94.4,94.4
85	87.19	96.61	99.72	89.88	83.86	89.27	93.33	89.63	80- 85	57.26	1743	97.7,97.7
90	12.19	68.05	68.65	61.46	11.96	61.51	63.87	62.03	85- 90	41.88	1785	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

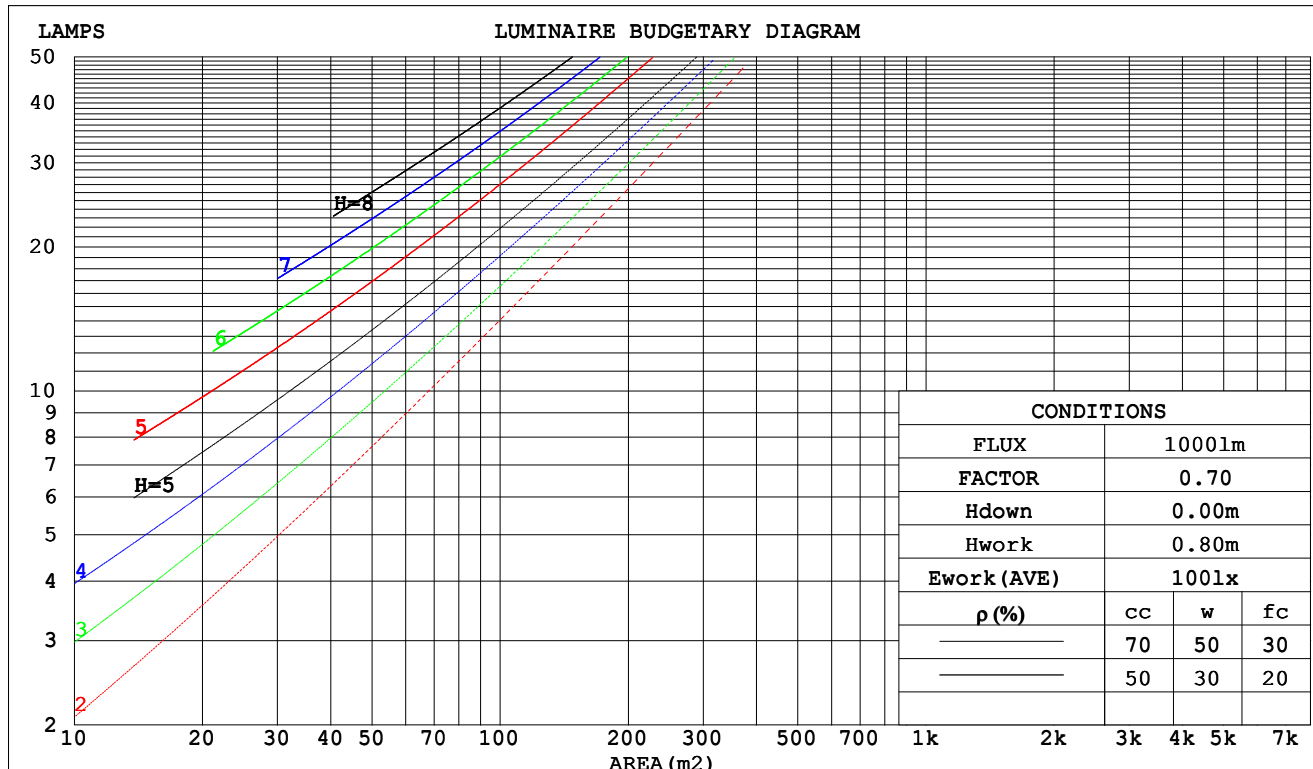
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:cgq  
 Test Date:2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
 Humidity:65.0%  
 Test Distance:13.693m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm		
NAME: RB280W-ACEM-MS-AT-1H-LFP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2021111701
MFR.: JEWOO	SUR.:0.24	PROTECTION 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	1.01	.96	.92	.99	.95	.90	.95	.91	.88	.91	.88	.85	.87	.85	.82	.80
2.0	.88	.80	.74	.86	.79	.73	.82	.76	.71	.79	.74	.69	.76	.72	.68	.66
3.0	.77	.68	.61	.75	.67	.60	.72	.65	.59	.69	.63	.58	.66	.61	.57	.55
4.0	.68	.58	.51	.66	.58	.51	.64	.56	.50	.61	.55	.49	.59	.53	.49	.46
5.0	.60	.51	.44	.59	.50	.44	.57	.49	.43	.55	.48	.43	.53	.47	.42	.40
6.0	.54	.45	.38	.53	.45	.38	.51	.44	.38	.50	.43	.37	.48	.42	.37	.35
7.0	.49	.40	.34	.48	.40	.34	.47	.39	.33	.45	.38	.33	.44	.38	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.30	.42	.35	.30	.40	.34	.29	.27
9.0	.41	.33	.27	.41	.33	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25
10.0	.38	.30	.25	.38	.30	.25	.36	.29	.24	.36	.29	.24	.35	.29	.24	.22



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:cgq  
 Test Date:2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
 Humidity:65.0%  
 Test Distance:13.693m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm		
NAME: RB280W-ACEM-MS-AT-1H-LFP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2021111701
MFR.: JEWOO	SUR.:0.24	PROTECTION 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 Coeffcients(WEC)										
0.0																	
1.0	.357	.203	.064	.350	.200	.063	.337	.193	.062	.324	.187	.060	.313	.181	.058		
2.0	.319	.175	.054	.313	.172	.053	.301	.167	.052	.290	.162	.051	.279	.158	.050		
3.0	.288	.153	.046	.282	.151	.045	.272	.147	.045	.262	.143	.044	.253	.140	.043		
4.0	.262	.136	.040	.257	.134	.040	.247	.131	.039	.239	.128	.039	.231	.125	.038		
5.0	.239	.122	.035	.235	.121	.035	.227	.118	.035	.219	.116	.034	.212	.113	.034		
6.0	.221	.111	.032	.217	.109	.031	.209	.107	.031	.202	.105	.031	.196	.103	.031		
7.0	.204	.101	.029	.201	.100	.029	.194	.098	.028	.188	.096	.028	.182	.095	.028		
8.0	.190	.093	.026	.187	.092	.026	.181	.090	.026	.176	.089	.026	.170	.087	.025		
9.0	.178	.086	.024	.175	.085	.024	.170	.084	.024	.165	.082	.024	.160	.081	.023		
10.0	.167	.080	.022	.164	.079	.022	.159	.078	.022	.155	.077	.022	.151	.076	.022		

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	.184	.156	.131	.157	.134	.112	.107	.092	.078	.062	.053	.045	.020	.017	.015	
2.0	.176	.132	.095	.151	.113	.082	.103	.078	.057	.060	.046	.033	.019	.015	.011	
3.0	.168	.114	.072	.144	.099	.062	.099	.069	.044	.057	.040	.026	.018	.013	.008	
4.0	.160	.101	.056	.137	.088	.049	.094	.061	.035	.055	.036	.020	.018	.012	.007	
5.0	.152	.091	.046	.131	.079	.040	.090	.055	.028	.052	.032	.017	.017	.011	.006	
6.0	.145	.083	.038	.124	.072	.033	.086	.050	.024	.050	.029	.014	.016	.010	.005	
7.0	.137	.076	.032	.118	.066	.028	.082	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.131	.070	.028	.113	.061	.025	.078	.043	.017	.045	.025	.010	.015	.008	.003	
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.119	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:cgq  
 Test Date:2021-11-17

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
 Humidity:65.0%  
 Test Distance:13.693m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm											
NAME: RB280W-ACEM-MS-AT-1H-LFP					TYPE:			WEIGHT:			
SPEC.:					DIM.:			SERIAL No.:2021111701			
MFR.: JEWOO					SUR.:0.24			PROTECTION 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	2H	20.7	22.3	21.0	22.5	22.7	20.9	22.4	21.1	22.6	22.9
	3H	22.5	23.9	22.8	24.2	24.4	22.7	24.2	23.0	24.4	24.6
	4H	23.3	24.7	23.7	25.0	25.3	23.7	25.1	24.0	25.3	25.6
	6H	24.2	25.5	24.6	25.8	26.1	24.7	26.0	25.0	26.3	26.5
	8H	24.7	26.0	25.0	26.2	26.5	25.2	26.5	25.5	26.7	27.0
	12H	25.2	26.4	25.5	26.7	27.0	25.7	27.0	26.1	27.3	27.6
4H	2H	21.4	22.8	21.7	23.1	23.3	21.5	22.9	21.8	23.2	23.4
	3H	23.4	24.6	23.8	24.9	25.2	23.6	24.8	24.0	25.1	25.4
	4H	24.4	25.6	24.8	25.9	26.2	24.7	25.9	25.1	26.2	26.5
	6H	25.5	26.5	25.9	26.9	27.3	25.9	26.9	26.3	27.3	27.7
	8H	26.1	27.0	26.5	27.4	27.8	26.5	27.5	27.0	27.9	28.3
	12H	26.7	27.6	27.1	28.0	28.4	27.2	28.1	27.7	28.5	28.9
8H	4H	24.9	25.9	25.3	26.2	26.6	25.2	26.1	25.6	26.5	26.9
	6H	26.2	27.1	26.7	27.5	27.9	26.6	27.4	27.1	27.8	28.3
	8H	27.0	27.7	27.4	28.1	28.6	27.4	28.1	27.9	28.6	29.0
	12H	27.8	28.4	28.3	28.9	29.4	28.3	29.0	28.8	29.4	29.9
12H	4H	25.0	25.9	25.4	26.3	26.7	25.2	26.1	25.7	26.5	26.9
	6H	26.5	27.2	26.9	27.6	28.1	26.8	27.5	27.2	27.9	28.4
	8H	27.3	27.9	27.8	28.4	28.8	27.7	28.3	28.2	28.8	29.3
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 1785 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.0)

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:cgq  
 Test Date:2021-11-17

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
 Humidity:65.0%  
 Test Distance:13.693m [K=1.0000]  
 Remarks:

## UTILIZATION FACTORS TABLE

Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm		
NAME: RB280W-ACEM-MS-AT-1H-LFP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2021111701
MFR.: JEWOO	SUR.:0.24	PROTECTION 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) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	43	37	30
0.80	66	54	46	65	53	46	63	52	45	38
1.00	74	62	54	72	61	54	70	63	54	46
1.25	81	69	62	79	69	61	76	67	61	53
1.50	86	75	67	84	74	67	81	72	66	58
2.00	92	83	76	91	82	75	87	80	74	65
2.50	97	88	81	94	87	80	90	84	78	70
3.00	100	92	86	98	91	85	94	88	83	74
4.00	104	98	92	102	96	91	97	92	88	79
5.00	107	101	97	104	99	95	100	96	92	82
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:cgq  
 Test Date:2021-11-17

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
 Humidity:65.0%  
 Test Distance:13.693m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm		
NAME: RB280W-ACEM-MS-AT-1H-LFP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2021111701
MFR.: JEWOO	SUR.:0.24	PROTECTION ANGLE:

Conical surface Flux(90deg):

887.56 lm

%lum = 49.7%

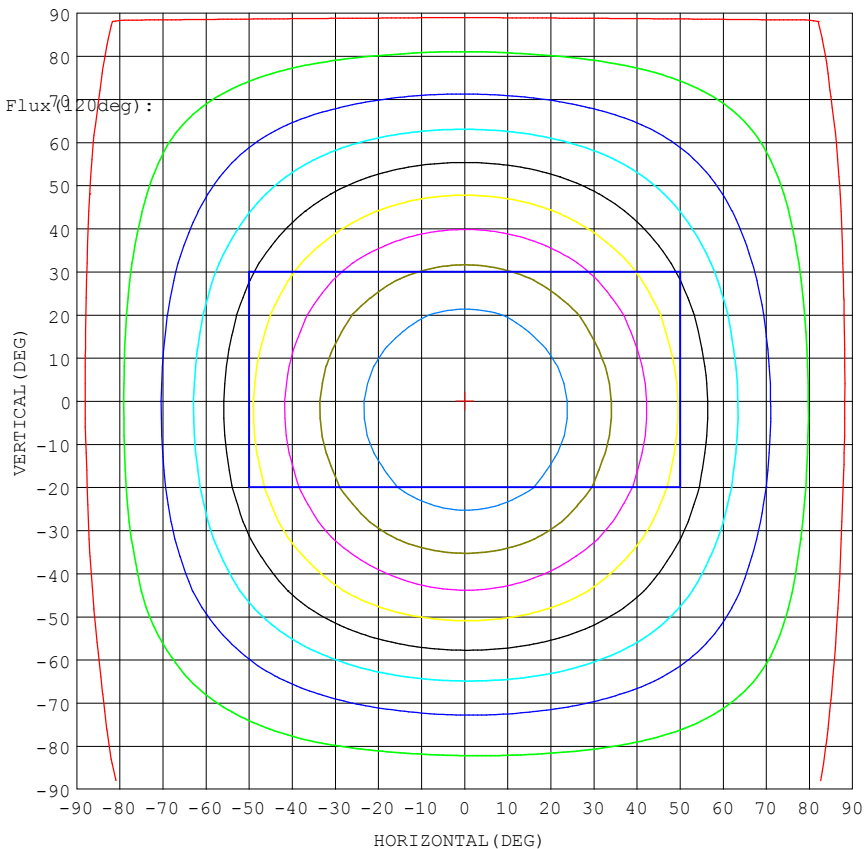
%lamp = 49.7%

Conical surface Flux(70deg):

1305.9 lm

%lum = 73.2%

%lamp = 73.2%



10% 58.44  
 20% 116.9  
 30% 175.3  
 40% 233.8  
 50% 292.2  
 60% 350.7  
 70% 409.1  
 80% 467.5  
 90% 526.0

MAX = 584.43  
 MIN = 285.26  
 AVG = 474.04  
 AVG/MAX = 0.81  
 MIN/MAX = 0.49

Imax:584.4 (H0.0,V0.0)  
 (At:C=0.0,Gamma=0.0)

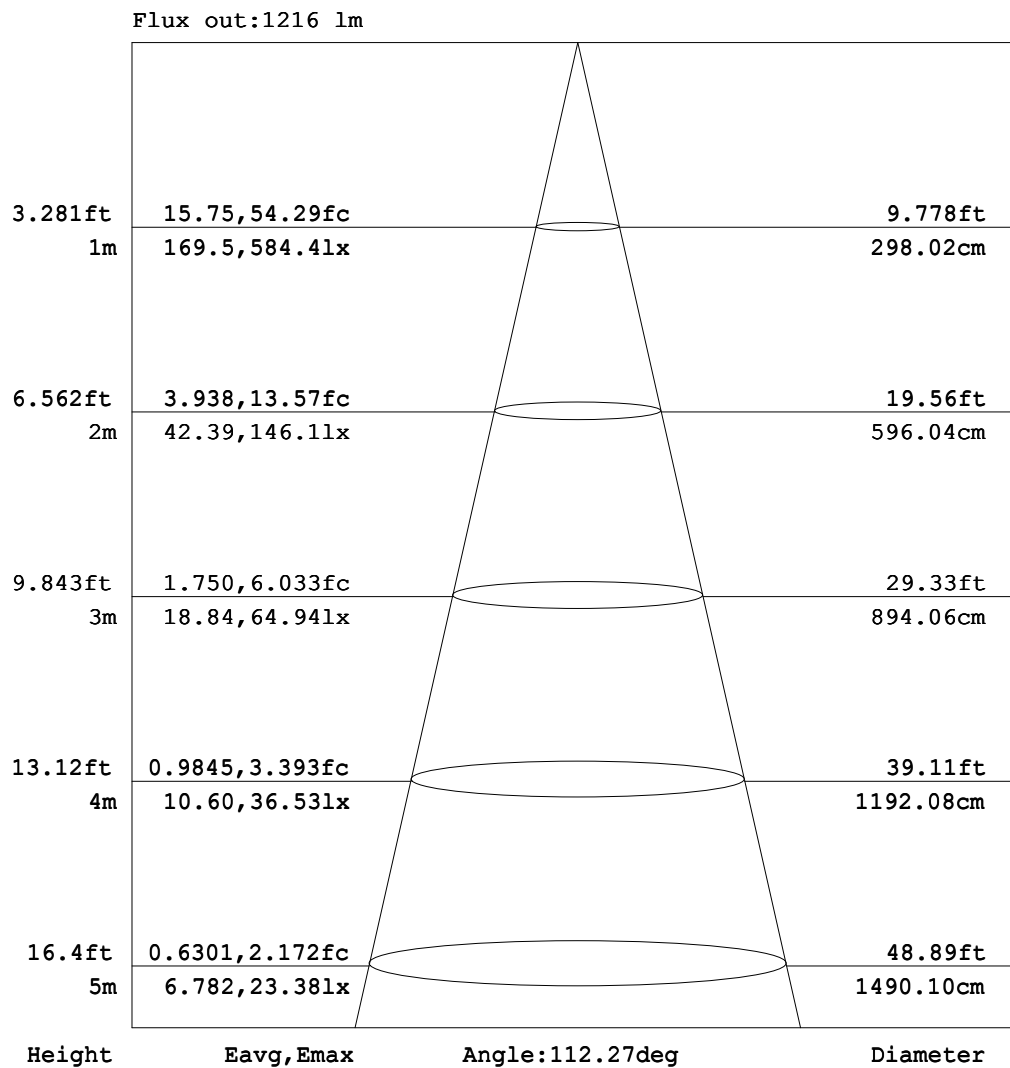
UNIT: cd

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:cgq  
 Test Date:2021-11-17

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
 Humidity:65.0%  
 Test Distance:13.693m [K=1.0000]  
 Remarks:

## AAI Figure

Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm		
NAME: RB280W-ACEM-MS-AT-1H-LFP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2021111701
MFR.: JEWOO	SUR.:0.24	PROTECTION ANGLE:



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

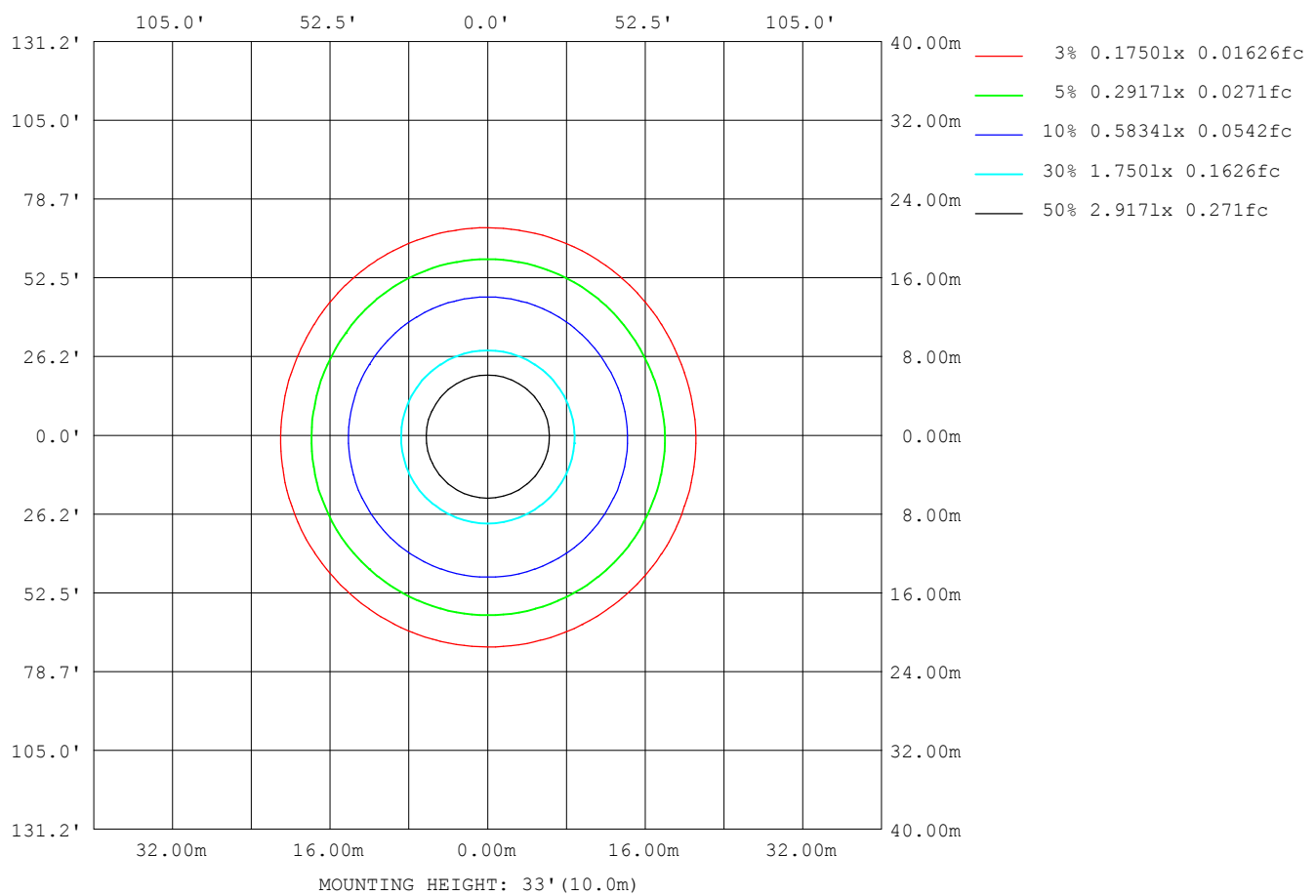
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: cgq  
Test Date: 2021-11-17

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
Humidity: 65.0%  
Test Distance: 13.693m [K=1.0000]  
Remarks:



## ISOLUX DIAGRAM

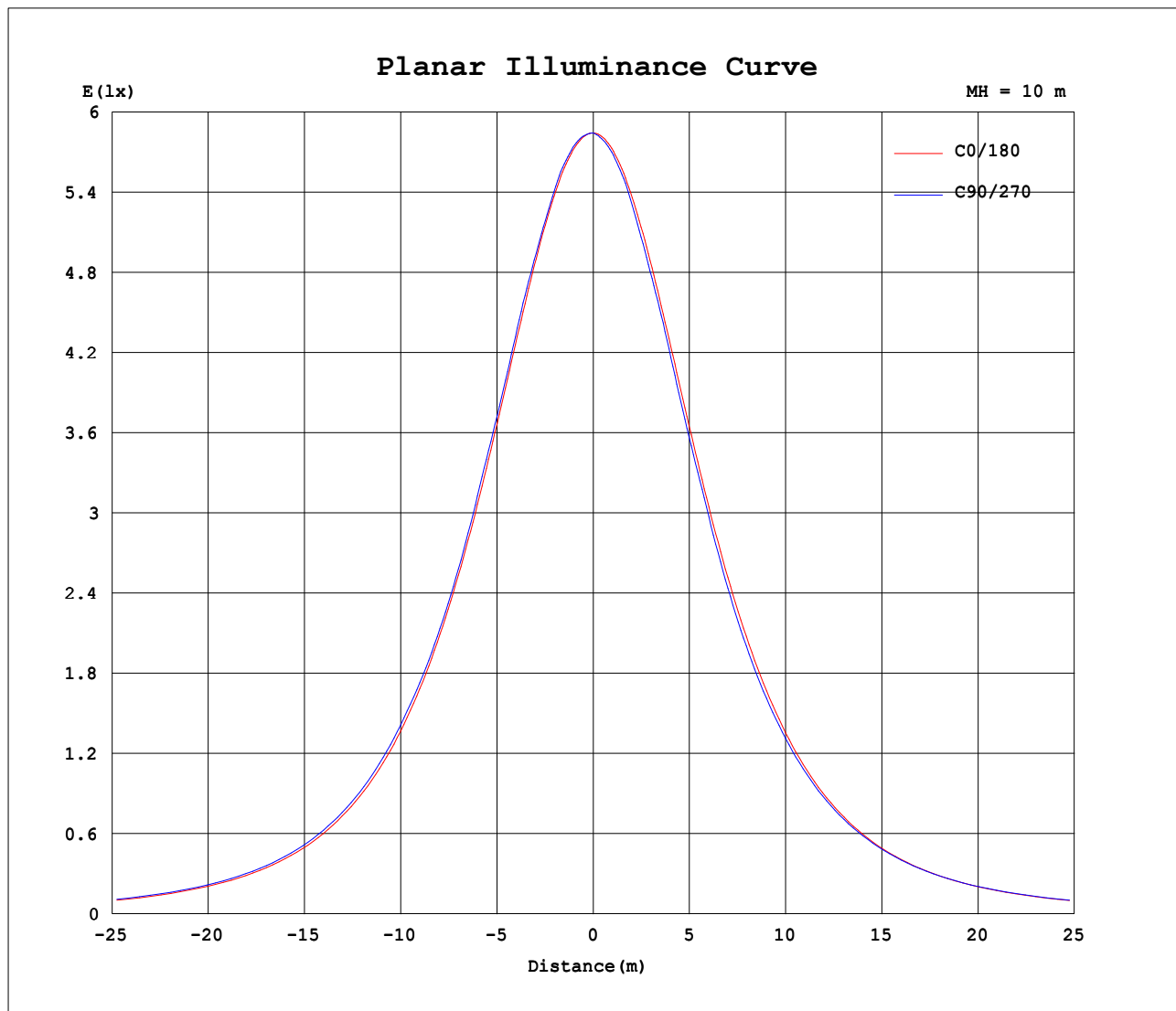
Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm		
NAME: RB280W-ACEM-MS-AT-1H-LFP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2021111701
MFR.: JEWOO	SUR.:0.24	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:cgq  
Test Date:2021-11-17

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
Humidity:65.0%  
Test Distance:13.693m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: cgq  
Test Date: 2021-11-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000H\_V1 SYSTEM V2.0.287  
Humidity: 65.0%  
Test Distance: 13.693m [K=1.0000]  
Remarks:

UNIT: cd

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.693m [K=1.0000]
Remarks:

```

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.6V I:0.0699A P:14.05W PF:0.9112 Lamp Flux:1784.78x1 lm		
NAME: RB280W-ACEM-MS-AT-1H-LFP	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:2021111701
MFR.: JEWOO	SUR.:0.24	PROTECTION ANGLE:

Table--2

UNIT: cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:cgq  
Test Date:2021-11-17

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.693m [K=1.0000]
Remarks:

```

UNIT: cd

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.693m [K=1.0000]
Remarks:

```

UNIT: cd

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:13.693m [K=1.0000]
Remarks:

```