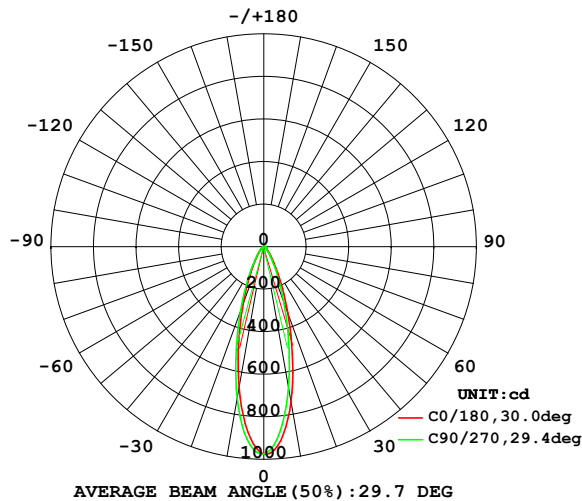


## LUMINAIRE PHOTOMETRIC TEST REPORT

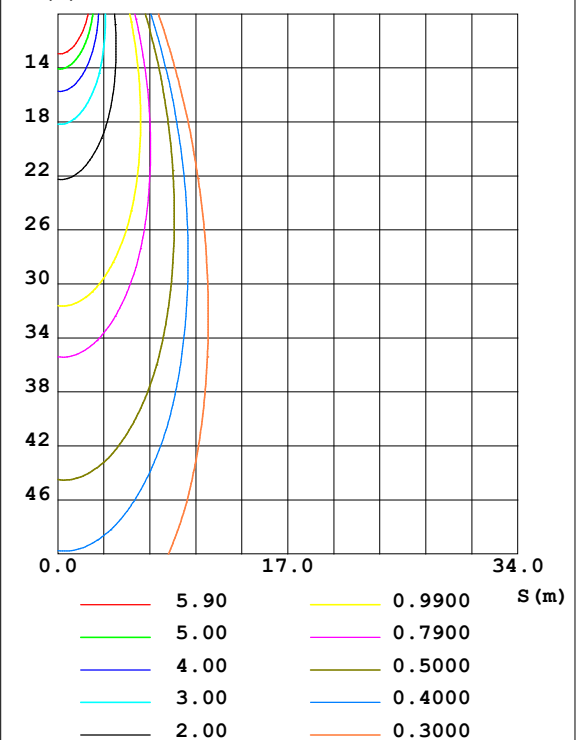
NAME: MR16 4W 2700K 30Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		I <sub>max</sub> (cd)	978.4	S/MH (C0/180)	0.52
NOMINAL POWER(W)	12	LOR(%)	108.7	S/MH (C90/270)	0.47
RATED VOLTAGE(V)	0	TOTAL FLUX(lm)	378.20	η UP,DN(C0-180)	0.0,52.9
NOMINAL FLUX(lm)	347.813	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,55.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	0.0	η down (%)	108.7	CIBSE SHR MAX	0.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Zhu  
 Test Date: 2020-06-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
 Humidity: 65.0%  
 Test Distance: 5.833m [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
10	739.5	703.2	670.9	656.7	671.9	683.2	724.5	767.6	0- 10	79.01	79.01	20.9,22.7
20	331.1	293.5	274.6	277.5	284.5	291.1	320.8	355.9	10- 20	132.9	211.9	56,60.9
30	113.1	98.76	89.77	91.01	96.29	102.3	111.8	126.8	20- 30	84.25	296.1	78.3,85.1
40	41.33	35.68	33.94	33.59	35.45	37.76	42.24	46.55	30- 40	39.85	336.0	88.8,96.6
50	18.02	15.81	15.55	15.29	15.53	16.80	18.69	20.24	40- 50	19.80	355.8	94.1,102
60	9.141	8.442	8.292	8.167	8.080	8.442	9.282	9.864	50- 60	10.93	366.7	97,105
70	5.905	5.438	5.968	5.528	5.077	5.356	5.235	5.904	60- 70	6.868	373.6	98.8,107
80	1.930	2.327	1.691	1.569	1.857	1.548	2.181	2.389	70- 80	4.038	377.6	99.8,109
90	0.0192	0.0086	0.0109	0.0110	0.0043	0.0021	0.0022	0.0044	80- 90	0.6007	378.2	100,109
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		

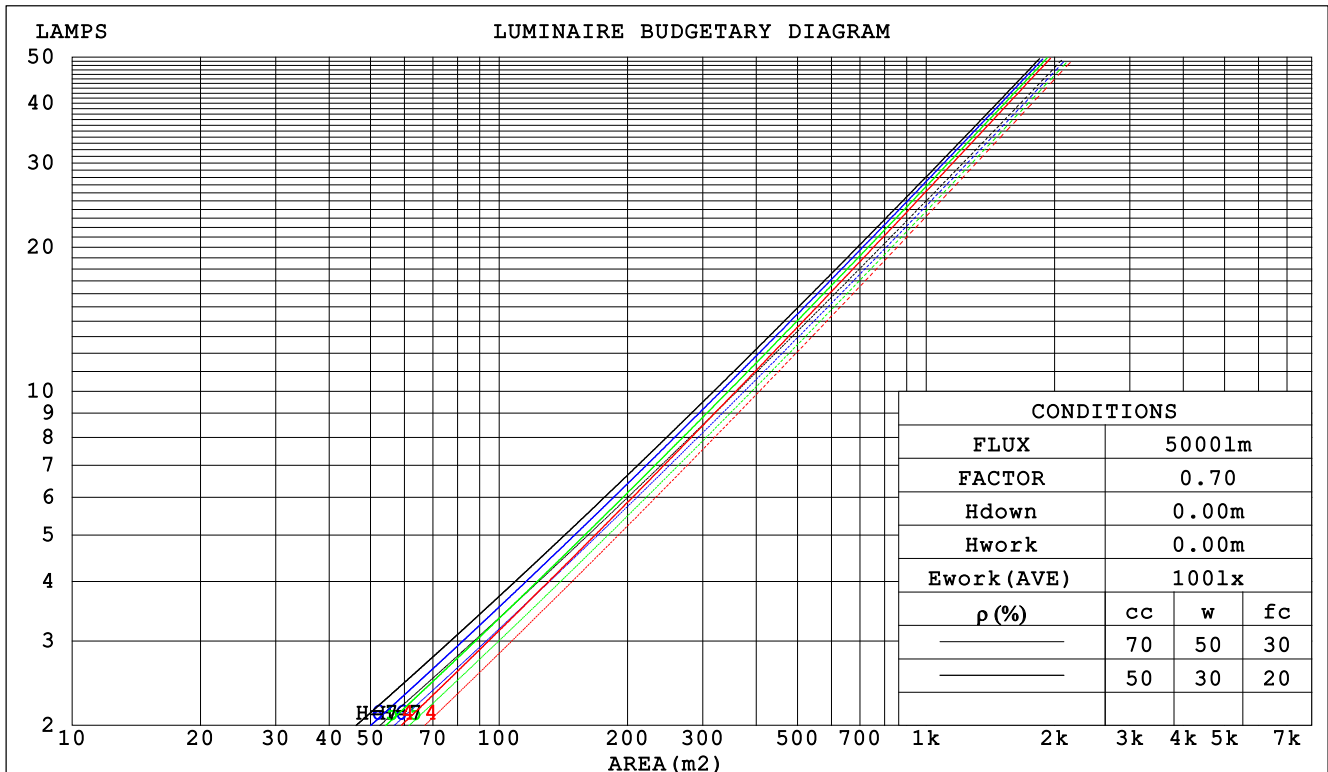
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Zhu  
Test Date:2020-06-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
Humidity:65.0%  
Test Distance:5.833m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: MR16 4W 2700K 30Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
p <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.29	1.29	1.29	1.26	1.26	1.26	1.21	1.21	1.21	1.16	1.16	1.16	1.11	1.11	1.11	1.09
1.0	1.21	1.18	1.16	1.18	1.16	1.14	1.14	1.12	1.10	1.10	1.08	1.07	1.06	1.05	1.04	1.02
2.0	1.13	1.08	1.05	1.11	1.07	1.04	1.07	1.04	1.02	1.04	1.02	.99	1.01	.99	.97	.96
3.0	1.06	1.01	.97	1.04	.99	.96	1.02	.98	.94	.99	.96	.93	.96	.94	.91	.90
4.0	.99	.94	.90	.99	.93	.89	.96	.92	.88	.94	.90	.87	.92	.89	.86	.85
5.0	.94	.89	.84	.93	.88	.84	.92	.87	.83	.90	.86	.82	.88	.85	.82	.80
6.0	.90	.84	.79	.89	.83	.79	.87	.82	.79	.86	.81	.78	.84	.81	.78	.76
7.0	.85	.79	.75	.85	.79	.75	.83	.78	.75	.82	.78	.74	.81	.77	.74	.73
8.0	.82	.76	.72	.81	.75	.71	.80	.75	.71	.79	.74	.71	.78	.74	.71	.69
9.0	.78	.72	.68	.77	.72	.68	.77	.72	.68	.76	.71	.68	.75	.71	.68	.66
10.0	.75	.69	.65	.74	.69	.65	.74	.69	.65	.73	.68	.65	.72	.68	.65	.64



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Zhu  
 Test Date: 2020-06-11

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
 Humidity: 65.0%  
 Test Distance: 5.833m [K=1.0000]  
 Remarks:

### WEC AND CCEC

NAME: MR16 4W 2700K 30Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	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 Coefficients (WEC)									
0.0																
1.0	.190	.108	.034	.182	.104	.033	.169	.097	.031	.156	.090	.029	.145	.084	.027	
2.0	.179	.098	.030	.173	.095	.029	.162	.090	.028	.151	.085	.027	.141	.080	.025	
3.0	.168	.090	.027	.163	.087	.026	.154	.083	.025	.145	.079	.024	.136	.075	.023	
4.0	.158	.082	.024	.154	.081	.024	.146	.077	.023	.138	.074	.022	.131	.071	.022	
5.0	.149	.076	.022	.146	.075	.022	.138	.072	.021	.132	.069	.021	.125	.067	.020	
6.0	.141	.071	.020	.138	.070	.020	.132	.067	.020	.126	.065	.019	.120	.063	.019	
7.0	.134	.066	.019	.131	.065	.019	.126	.063	.018	.120	.062	.018	.115	.060	.018	
8.0	.127	.062	.018	.125	.061	.017	.120	.060	.017	.115	.058	.017	.111	.057	.017	
9.0	.122	.059	.016	.119	.058	.016	.115	.057	.016	.111	.055	.016	.107	.054	.016	
10.0	.116	.056	.015	.114	.055	.015	.110	.054	.015	.106	.053	.015	.103	.052	.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	.207	.207	.207	.177	.177	.177	.121	.121	.121	.069	.069	.069	.022	.022	.022	
1.0	.186	.171	.158	.159	.147	.136	.109	.101	.094	.063	.058	.055	.020	.019	.018	
2.0	.169	.144	.123	.145	.124	.107	.099	.086	.074	.057	.050	.044	.018	.016	.014	
3.0	.155	.123	.098	.133	.106	.085	.091	.074	.060	.053	.043	.035	.017	.014	.012	
4.0	.143	.107	.080	.123	.093	.070	.084	.065	.049	.049	.038	.029	.016	.012	.010	
5.0	.133	.094	.066	.114	.082	.058	.078	.057	.041	.045	.034	.024	.015	.011	.008	
6.0	.124	.084	.056	.106	.073	.048	.073	.051	.034	.043	.030	.020	.014	.010	.007	
7.0	.116	.076	.047	.100	.066	.041	.069	.046	.029	.040	.027	.017	.013	.009	.006	
8.0	.110	.069	.041	.094	.060	.035	.065	.042	.025	.038	.025	.015	.012	.008	.005	
9.0	.104	.063	.035	.089	.055	.031	.062	.038	.022	.036	.023	.013	.012	.007	.004	
10.0	.098	.058	.031	.085	.050	.027	.059	.035	.019	.034	.021	.011	.011	.007	.004	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Zhu  
Test Date:2020-06-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
Humidity:65.0%  
Test Distance:5.833m [K=1.0000]  
Remarks:

### Uncorrected UGR Table

NAME: MR16 4W 2700K 30Degree					TYPE:					WEIGHT:				
SPEC.:					DIM.:					SERIAL No.:				
MFR.: Brilliance.led.llc					SUR.:					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					3.5	4.4	3.8	4.6	4.7	2.8	3.6	3.0	3.8	4.0
3H					4.3	5.1	4.5	5.3	5.5	3.6	4.5	3.9	4.6	4.8
4H					4.7	5.4	4.9	5.6	5.9	4.1	4.8	4.4	5.1	5.3
6H					4.9	5.6	5.2	5.9	6.1	4.2	5.0	4.5	5.2	5.5
8H					4.9	5.6	5.2	5.9	6.1	4.3	5.0	4.6	5.2	5.5
12H					4.9	5.6	5.2	5.8	6.1	4.2	4.9	4.6	5.2	5.4
4H 2H					3.7	4.5	4.0	4.7	4.9	3.0	3.8	3.3	4.0	4.2
3H					4.6	5.3	5.0	5.6	5.9	4.1	4.8	4.5	5.1	5.4
4H					5.2	5.8	5.5	6.1	6.4	4.7	5.3	5.0	5.6	5.9
6H					5.5	6.0	5.9	6.4	6.7	5.0	5.5	5.3	5.8	6.2
8H					5.6	6.1	6.0	6.4	6.8	5.0	5.5	5.4	5.9	6.2
12H					5.5	6.0	6.0	6.4	6.8	5.0	5.4	5.4	5.8	6.2
8H 4H					5.3	5.8	5.7	6.2	6.5	4.9	5.4	5.3	5.7	6.1
6H					5.7	6.2	6.2	6.6	7.0	5.2	5.7	5.7	6.0	6.5
8H					5.8	6.2	6.3	6.6	7.1	5.3	5.7	5.8	6.1	6.5
12H					5.8	6.1	6.3	6.6	7.0	5.3	5.6	5.7	6.0	6.5
12H 4H					5.3	5.8	5.7	6.1	6.5	4.9	5.3	5.3	5.7	6.1
6H					5.7	6.1	6.2	6.5	7.0	5.2	5.6	5.7	6.0	6.5
8H					5.8	6.1	6.3	6.6	7.1	5.3	5.6	5.8	6.1	6.6
Variations with the observer position at spacings:														
S = 1.0H					+ 0.8 / - 0.8					+ 0.6 / - 0.8				
1.5H					+ 1.5 / - 0.7					+ 1.0 / - 0.6				
2.0H					+ 1.5 / - 0.7					+ 1.1 / - 0.9				

CIE Pub.117 Corrected 347.8 lm Total Lamp Luminous Flux.(8log(F/F0) = -3.7)

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Zhu  
Test Date:2020-06-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
Humidity:65.0%  
Test Distance:5.833m [K=1.0000]  
Remarks:

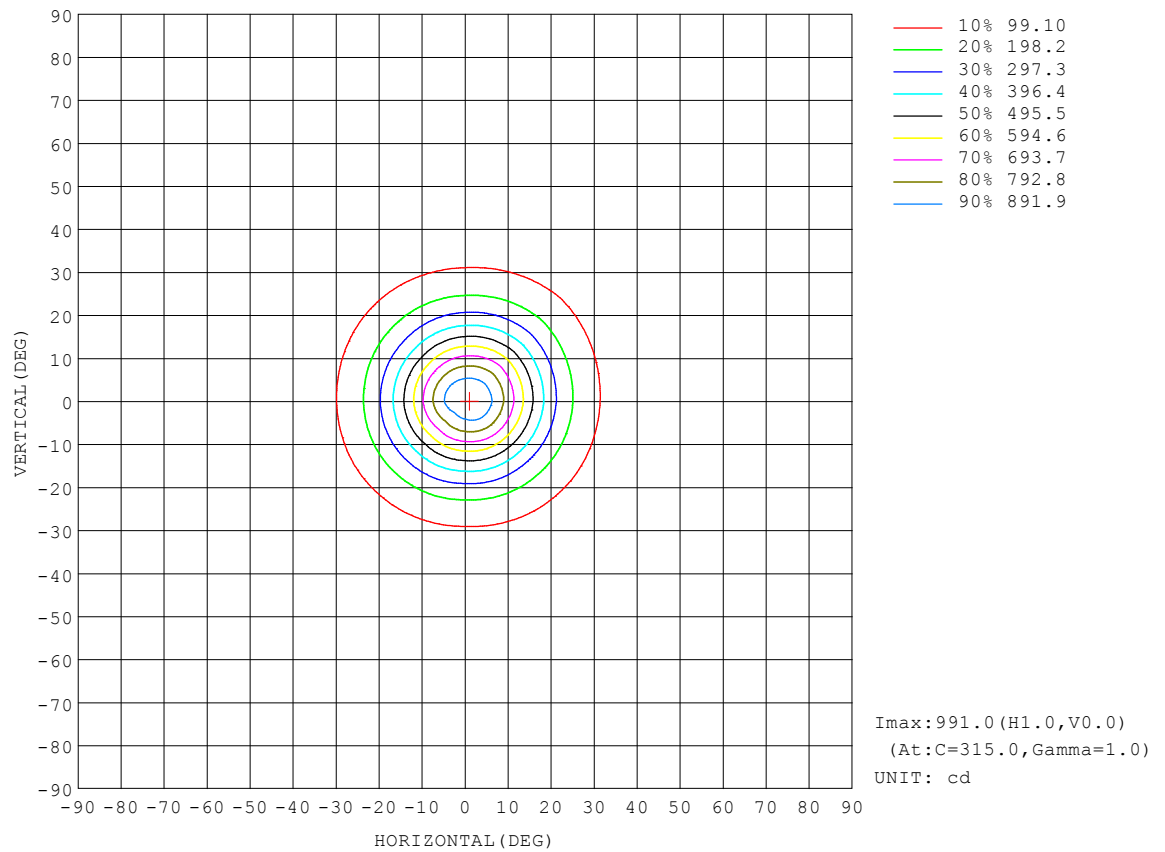
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γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.280
Humidity:65.0%
Test Distance:5.833m [K=1.0000]
Remarks:

```

## ISOCANDELA DIAGRAM

NAME: MR16 4W 2700K 30Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:

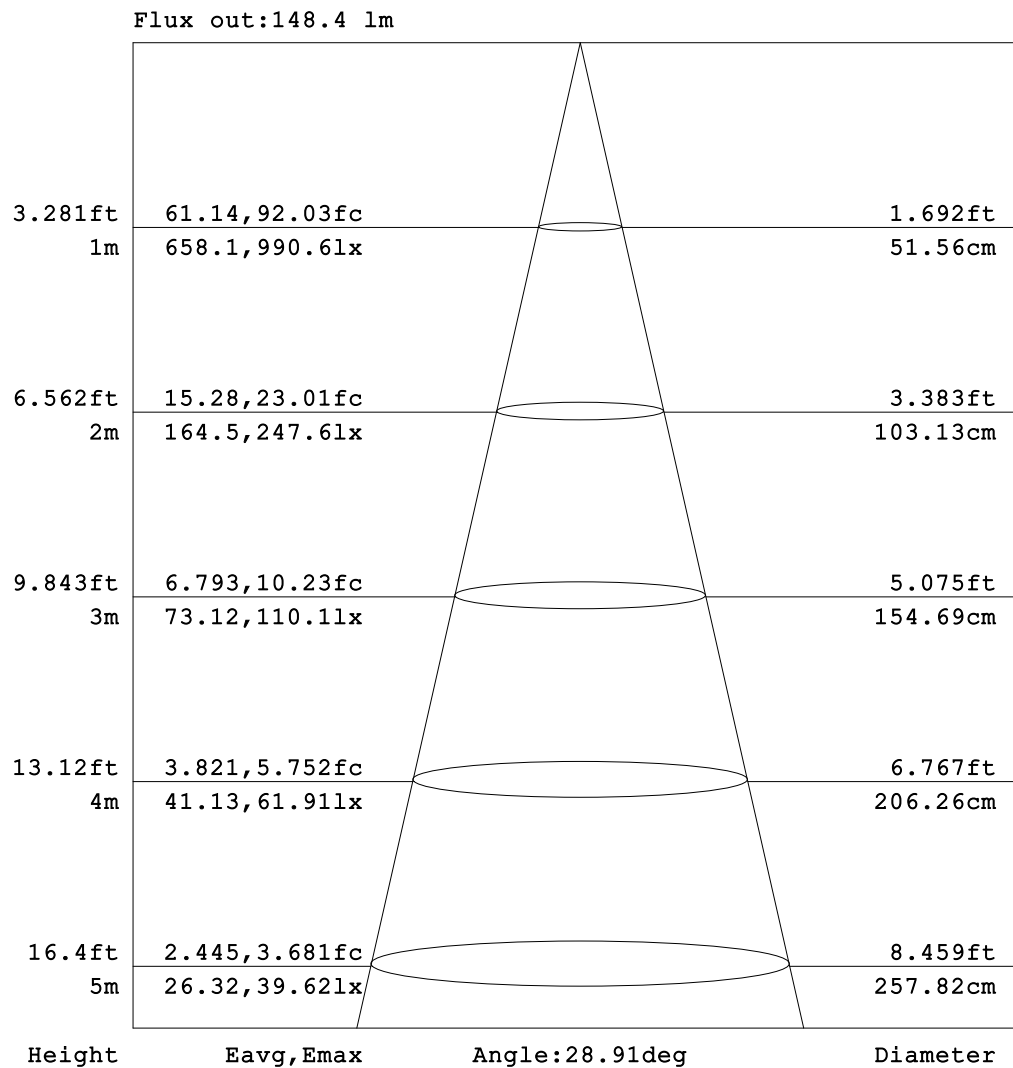


C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Zhu  
Test Date:2020-06-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
Humidity:65.0%  
Test Distance:5.833m [K=1.0000]  
Remarks:

### AAI Figure

NAME: MR16 4W 2700K 30Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:



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

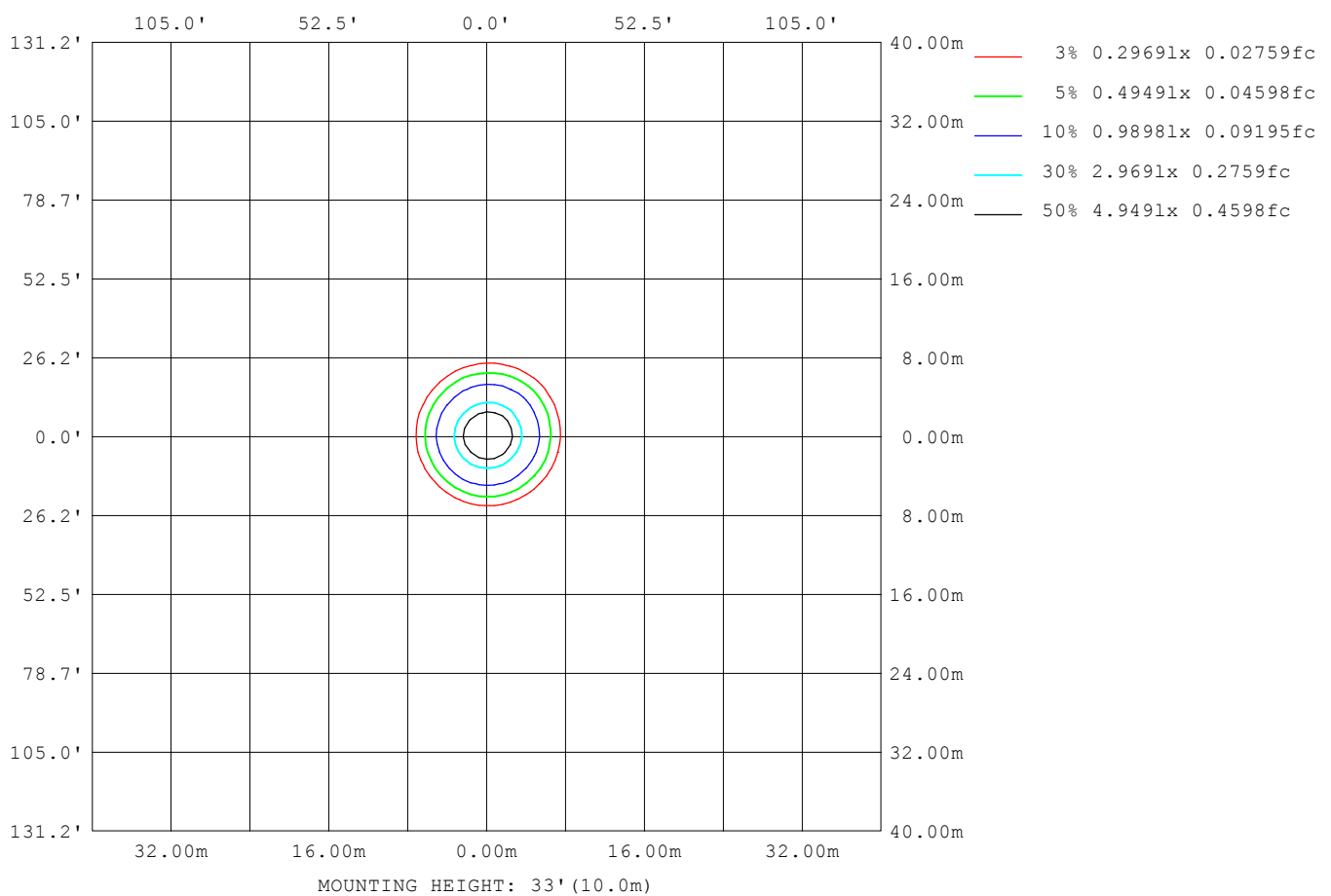
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Zhu  
Test Date: 2020-06-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
Humidity: 65.0%  
Test Distance: 5.833m [K=1.0000]  
Remarks:



# ISOLUX DIAGRAM

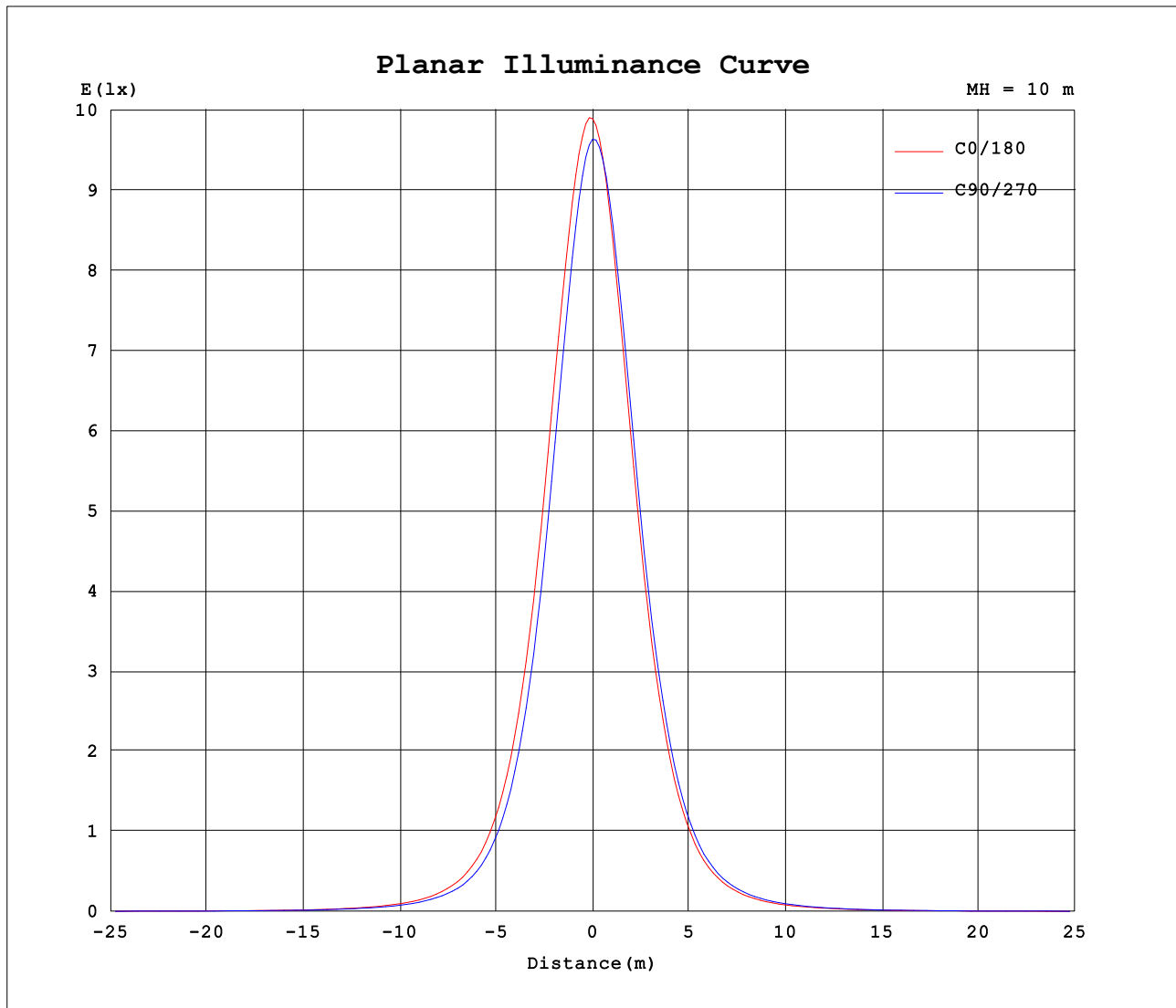
NAME: MR16 4W 2700K 30Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Zhu  
Test Date:2020-06-11

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
Humidity:65.0%  
Test Distance:5.833m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Zhu  
Test Date: 2020-06-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.280  
Humidity: 65.0%  
Test Distance: 5.833m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.280
Humidity:65.0%
Test Distance:5.833m [K=1.0000]
Remarks:

```