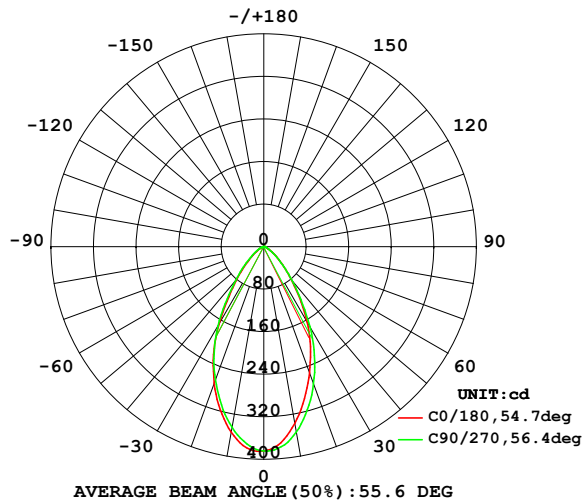


LUMINAIRE PHOTOMETRIC TEST REPORT

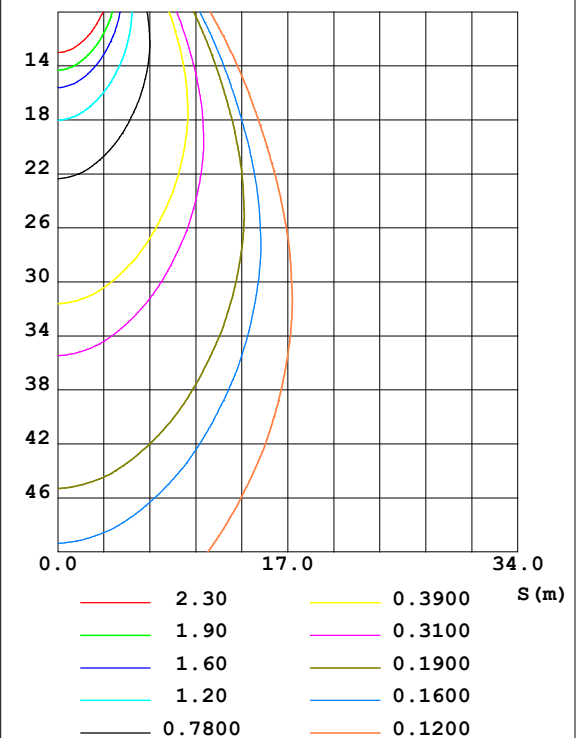
NAME: MR16 4W 2700K 60Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		I _{max} (cd)	387.7	S/MH (C0/180)	0.79
NOMINAL POWER(W)	0	LOR(%)	100.0	S/MH (C90/270)	0.85
RATED VOLTAGE(V)	0	TOTAL FLUX(lm)	366.50	η UP,DN(C0-180)	0.0,48.6
NOMINAL FLUX(lm)	366.496	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	0.0	η down (%)	100.0	CIBSE SHR MAX	0.90

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: 2020-06-15

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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	337.2	330.7	353.6	342.5	353.9	363.6	345.0	350.4	0- 10	34.89	34.89	9.52,9.52
20	252.5	244.0	274.3	260.4	273.2	284.3	266.5	271.4	10- 20	86.08	121.0	33,33
30	163.0	155.9	173.5	157.5	169.1	180.8	173.0	179.5	20- 30	99.83	220.8	60.2,60.2
40	80.06	75.84	82.67	72.37	76.91	82.00	81.90	87.86	30- 40	74.71	295.5	80.6,80.6
50	34.91	32.12	34.27	29.26	31.38	31.56	34.81	36.75	40- 50	41.07	336.6	91.8,91.8
60	13.20	12.26	12.47	10.89	11.50	11.66	13.44	14.24	50- 60	18.96	355.5	97,97
70	4.434	4.429	3.901	4.040	4.132	4.097	4.924	4.832	60- 70	7.567	363.1	99.1,99.1
80	1.614	1.381	1.198	1.182	1.327	1.298	1.551	1.752	70- 80	2.871	366.0	99.9,99.9
90	0.0320	0.0236	0.0220	0.0218	0.0128	0.0107	0.0110	0.0131	80- 90	0.5282	366.5	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		

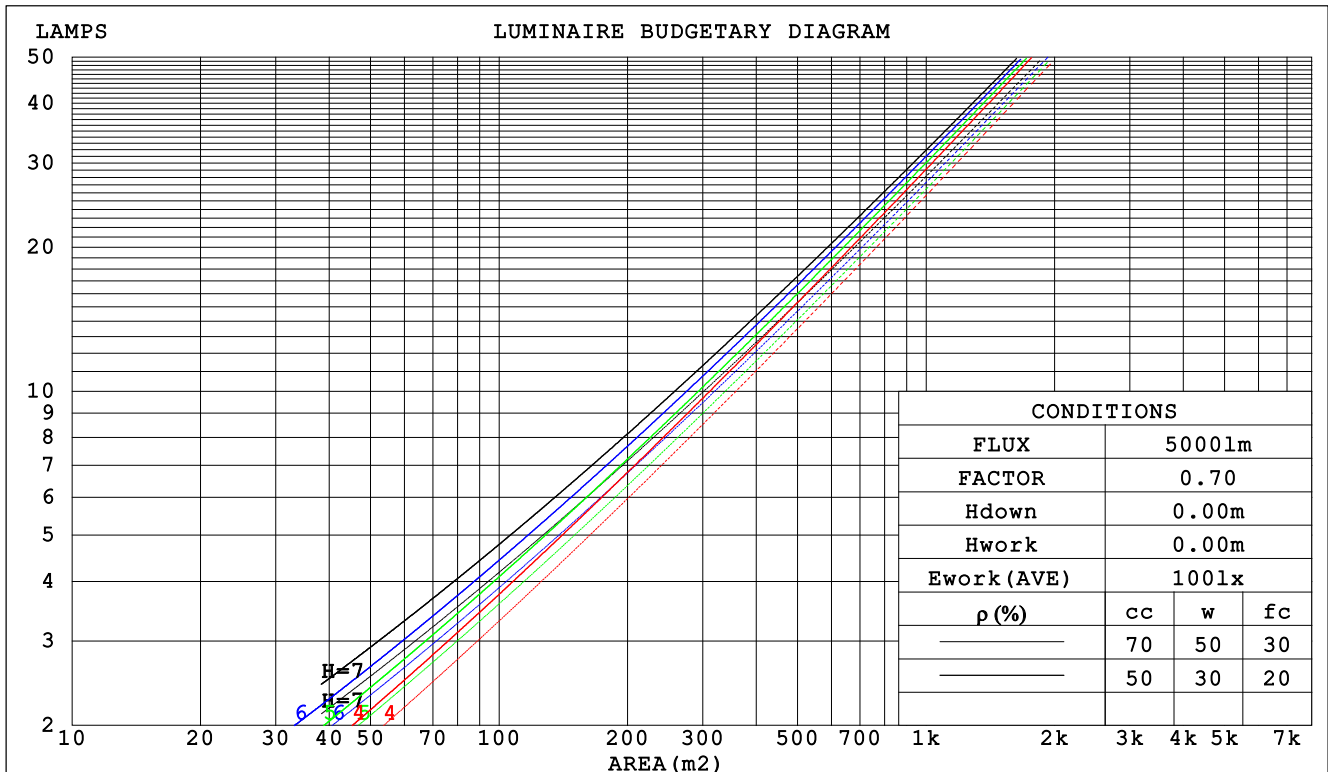
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Zhu
Test Date:2020-06-15

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: MR16 4W 2700K 60Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{fc}	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	1.10	1.07	1.04	1.07	1.05	1.03	1.03	1.01	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.96	.92	.99	.95	.91	.96	.92	.89	.93	.90	.87	.90	.88	.86	.84
3.0	.93	.87	.83	.91	.86	.82	.89	.84	.81	.86	.83	.80	.84	.81	.78	.77
4.0	.86	.80	.75	.85	.79	.75	.82	.78	.74	.80	.76	.73	.79	.75	.72	.70
5.0	.80	.73	.68	.79	.73	.68	.77	.72	.67	.75	.70	.67	.73	.69	.66	.65
6.0	.74	.68	.63	.73	.67	.63	.72	.66	.62	.70	.65	.62	.69	.65	.61	.60
7.0	.69	.63	.58	.69	.62	.58	.67	.62	.58	.66	.61	.57	.65	.60	.57	.55
8.0	.65	.58	.54	.64	.58	.54	.63	.57	.53	.62	.57	.53	.61	.56	.53	.51
9.0	.61	.54	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.58	.53	.50	.48
10.0	.57	.51	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.54	.50	.46	.45



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Zhu
 Test Date: 2020-06-15

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 60Degree	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	.199	.113	.036	.193	.110	.035	.180	.103	.033	.168	.097	.031	.158	.091	.029		
2.0	.192	.105	.032	.187	.103	.032	.176	.098	.030	.166	.093	.029	.157	.089	.028		
3.0	.183	.098	.029	.178	.095	.029	.169	.092	.028	.160	.088	.027	.152	.084	.026		
4.0	.174	.090	.027	.170	.089	.026	.162	.086	.026	.154	.083	.025	.147	.080	.024		
5.0	.165	.084	.024	.161	.083	.024	.154	.080	.024	.148	.078	.023	.141	.076	.023		
6.0	.157	.079	.022	.153	.077	.022	.147	.075	.022	.141	.073	.022	.136	.071	.021		
7.0	.149	.074	.021	.146	.073	.021	.140	.071	.020	.135	.069	.020	.130	.068	.020		
8.0	.142	.069	.019	.139	.068	.019	.134	.067	.019	.129	.066	.019	.125	.064	.019		
9.0	.135	.065	.018	.133	.065	.018	.128	.063	.018	.124	.062	.018	.120	.061	.018		
10.0	.129	.062	.017	.127	.061	.017	.123	.060	.017	.119	.059	.017	.115	.058	.017		

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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.087	.127	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.138	.099	.070	.119	.086	.060	.082	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.130	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.123	.079	.047	.106	.068	.041	.073	.048	.029	.042	.028	.017	.014	.009	.006	
7.0	.117	.072	.040	.100	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.111	.065	.034	.095	.057	.030	.066	.040	.021	.038	.024	.013	.012	.008	.004	
9.0	.106	.060	.030	.091	.052	.026	.063	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.101	.056	.026	.087	.049	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Zhu
Test Date:2020-06-15

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 60Degree					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					7.7	8.7	7.9	8.9	9.1	7.6	8.6	7.8	8.8	9.0
3H					7.7	8.7	8.0	8.9	9.1	7.6	8.6	7.8	8.8	9.0
4H					7.7	8.6	8.0	8.9	9.1	7.5	8.5	7.8	8.7	8.9
6H					7.7	8.6	8.0	8.8	9.1	7.5	8.4	7.8	8.6	8.9
8H					7.7	8.5	8.0	8.8	9.0	7.5	8.3	7.8	8.6	8.8
12H					7.6	8.4	7.9	8.7	9.0	7.4	8.2	7.7	8.5	8.8
4H 2H					7.6	8.5	7.9	8.8	9.0	7.5	8.4	7.8	8.7	8.9
3H					7.7	8.5	8.0	8.8	9.1	7.6	8.4	7.9	8.7	8.9
4H					7.7	8.5	8.1	8.8	9.1	7.6	8.3	7.9	8.6	8.9
6H					7.8	8.4	8.1	8.7	9.1	7.6	8.2	7.9	8.5	8.9
8H					7.7	8.3	8.1	8.7	9.1	7.5	8.1	7.9	8.5	8.8
12H					7.7	8.2	8.1	8.6	9.0	7.5	8.0	7.9	8.4	8.8
8H 4H					7.7	8.3	8.1	8.6	9.0	7.5	8.1	7.9	8.5	8.8
6H					7.7	8.2	8.1	8.6	9.0	7.5	8.0	7.9	8.4	8.8
8H					7.7	8.1	8.2	8.6	9.0	7.5	7.9	7.9	8.3	8.8
12H					7.7	8.0	8.2	8.5	9.0	7.5	7.8	7.9	8.3	8.7
12H 4H					7.6	8.2	8.0	8.5	8.9	7.5	8.0	7.9	8.4	8.8
6H					7.7	8.1	8.1	8.5	9.0	7.5	7.9	7.9	8.3	8.8
8H					7.7	8.0	8.1	8.5	9.0	7.5	7.8	7.9	8.3	8.7
Variations with the observer position at spacings:														
S = 1.0H					+ 1.5 / - 2.4					+ 1.6 / - 2.7				
1.5H					+ 2.2 / - 1.9					+ 2.3 / - 2.0				
2.0H					+ 3.1 / - 3.0					+ 3.2 / - 3.1				

CIE Pub.117 Corrected 366.5 lm Total Lamp Luminous Flux.(8log(F/F0) = -3.5)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Zhu
Test Date:2020-06-15

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:

UTILIZATION FACTORS TABLE

NAME: MR16 4W 2700K 60Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:

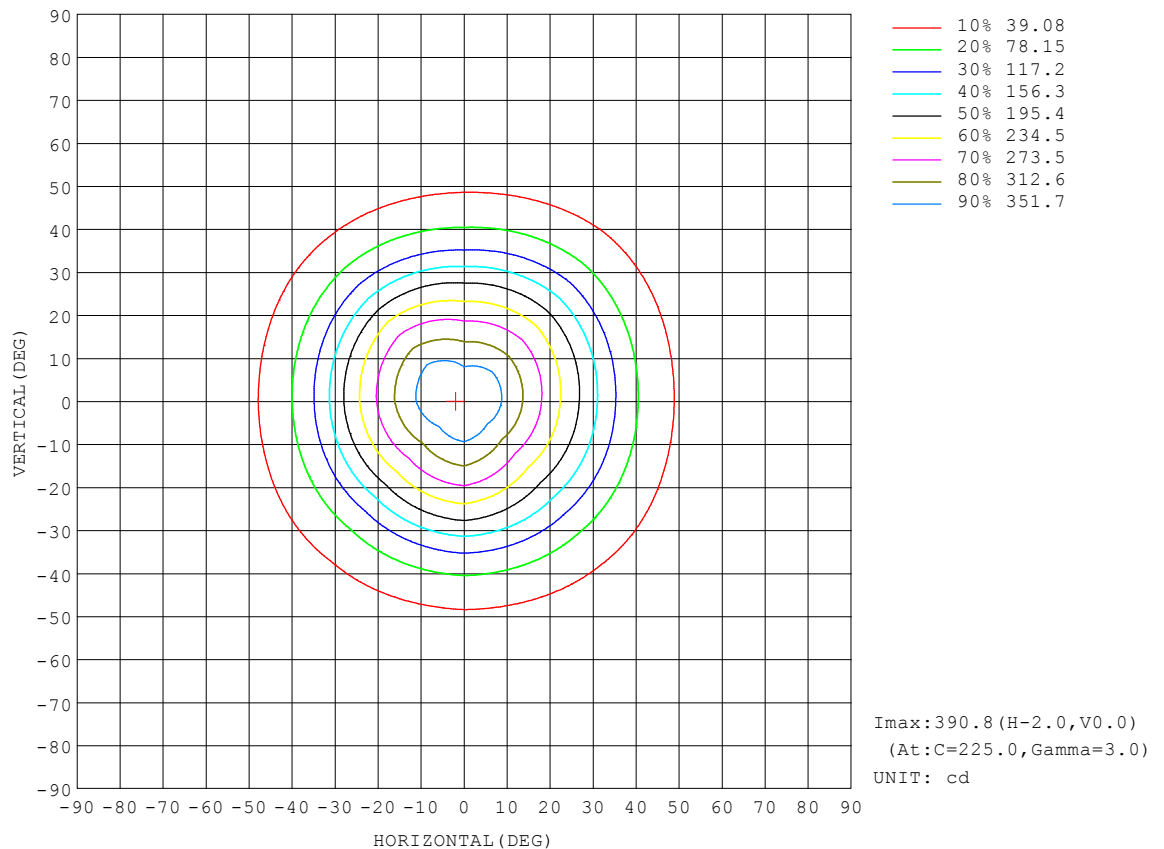
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	79	71	67	79	71	67	78	71	67	62
0.80	88	80	76	87	80	76	86	79	75	71
1.00	94	87	82	93	86	82	91	87	82	77
1.25	99	92	88	98	92	88	95	91	87	82
1.50	102	96	92	101	95	92	98	94	91	85
2.00	106	101	97	104	100	96	101	98	95	89
2.50	108	103	100	106	102	99	103	100	97	91
3.00	110	106	103	108	104	101	105	102	99	92
4.00	112	109	106	110	107	105	106	104	102	95
5.00	114	111	109	111	109	107	107	106	104	96
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Zhu
 Test Date: 2020-06-15

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 60Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:

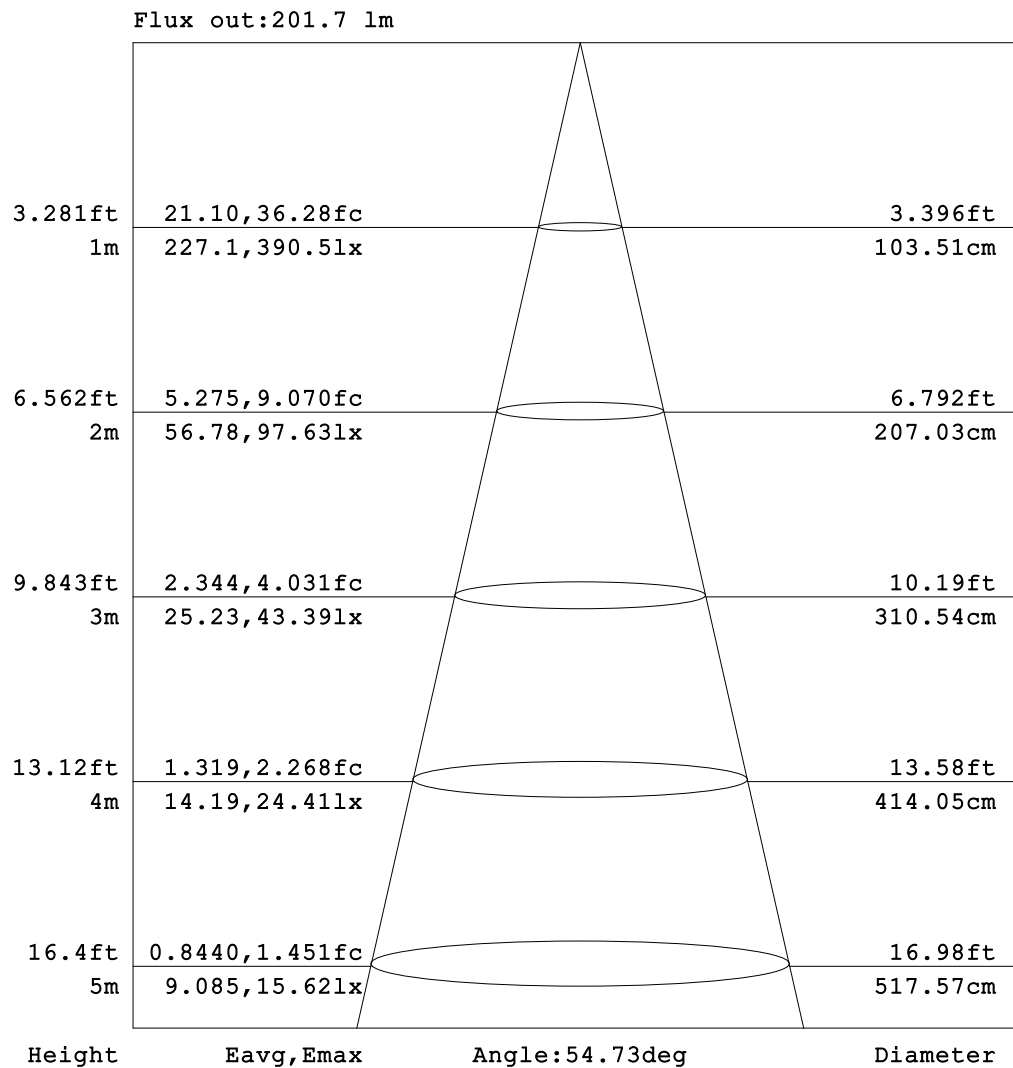


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Zhu
 Test Date:2020-06-15

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:

AAI Figure

NAME: MR16 4W 2700K 60Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:



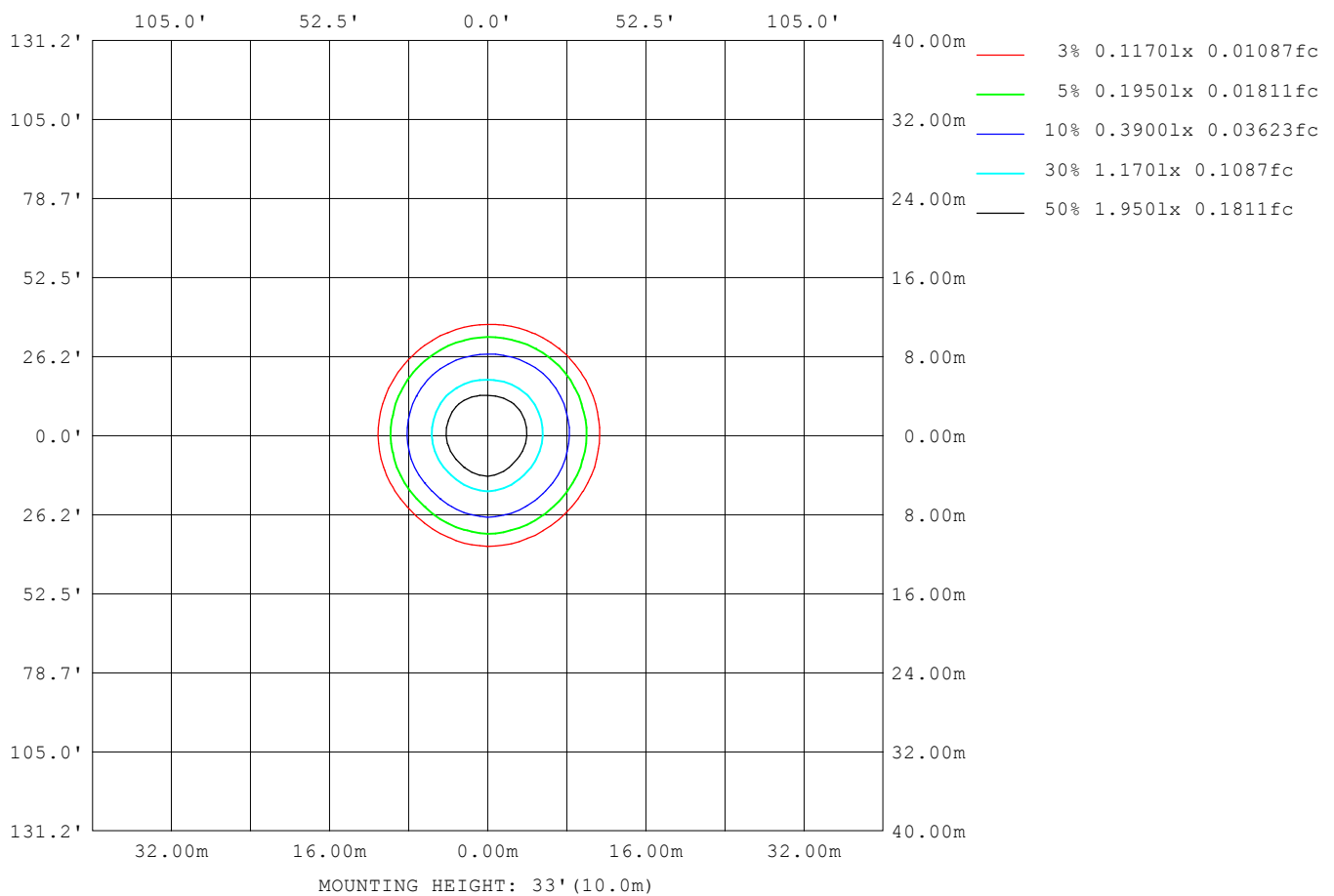
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Zhu
Test Date: 2020-06-15

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

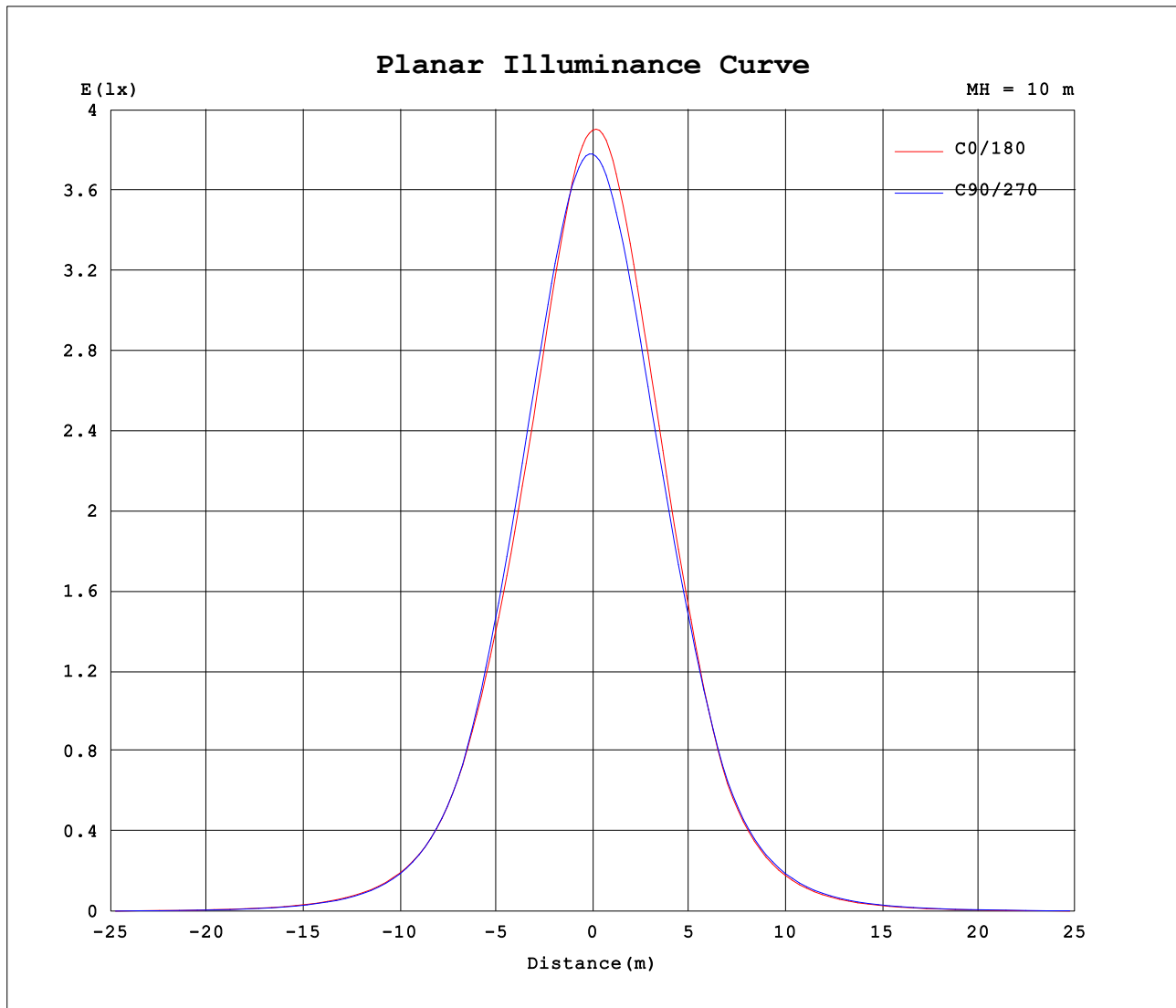
NAME: MR16 4W 2700K 60Degree	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Brilliance.led.llc	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Zhu
Test Date: 2020-06-15

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: 2020-06-15

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:

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