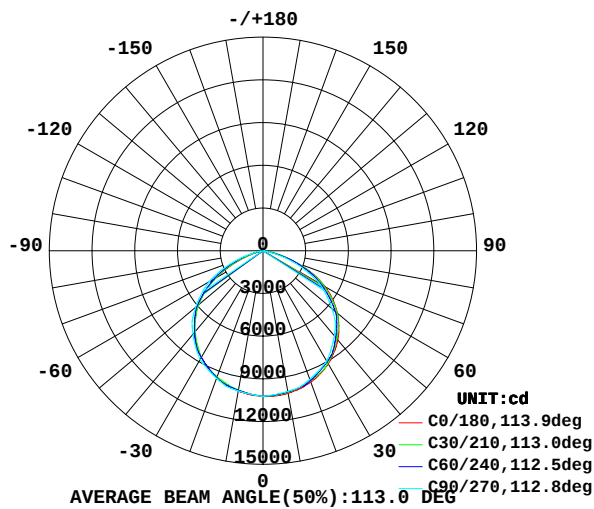


LUMINAIRE PHOTOMETRIC TEST REPORT

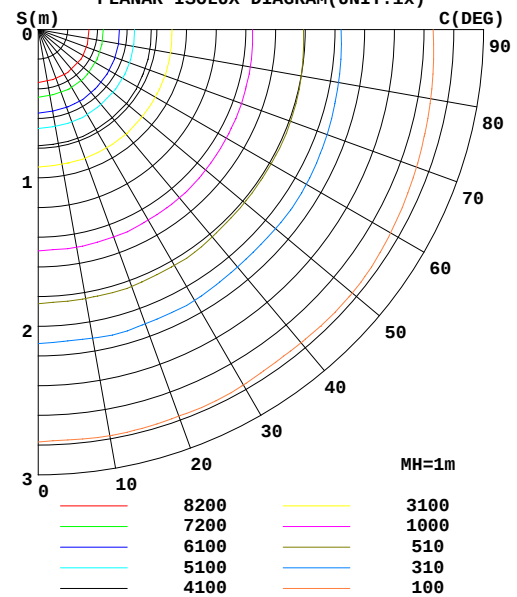
Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm		
NAME: GLM-MXHB200(AH) 120°	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 144.45 lm/W			
MODEL		I _{max} (cd)	10240	S/MH(C0/180)	1.26
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	27819	η UP, DN(C0-180)	0.0, 50.6
NOMINAL FLUX(lm)	27819.4	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM(UNIT:lx)



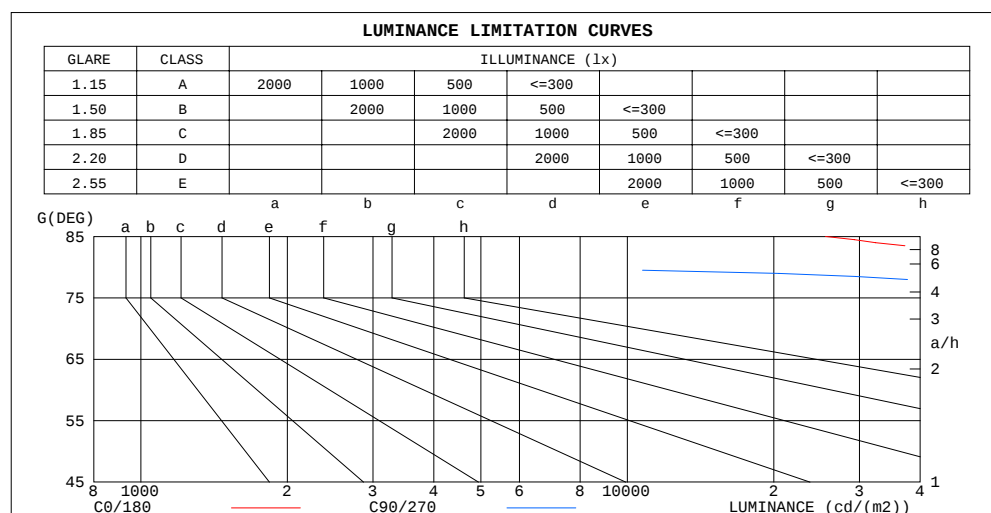
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:7.500m [K=1.1133]
Remarks:

ZONAL FLUX DIAGRAM AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	ϕ zone	ϕ total	%lum,lamp
5	1023	1017	1013	1011	1015	1010	1011	1016	0- 5	243.2	243.2	0.87,0.87
10	1017	1007	1003	996.5	1001	993.5	999.7	1005	5- 10	721.0	964.3	3.47,3.47
15	1003	994.5	993.6	978.2	978.0	973.8	988.3	990.3	10- 15	1179	2144	7.71,7.71
20	981.5	977.5	961.0	956.1	948.3	949.8	953.5	972.9	15- 20	1604	3748	13.5,13.5
25	953.0	943.2	928.3	915.5	911.5	908.3	918.7	936.8	20- 25	1977	5725	20.6,20.6
30	917.5	903.0	895.7	868.3	864.6	859.5	883.9	895.2	25- 30	2291	8015	28.8,28.8
35	870.5	859.7	837.8	818.2	810.4	807.5	824.4	850.2	30- 35	2534	10549	37.9,37.9
40	816.4	809.2	779.8	761.8	746.3	748.5	764.9	798.9	35- 40	2685	13235	47.6,47.6
45	753.9	739.3	721.9	683.3	673.8	671.8	705.4	727.1	40- 45	2747	15982	57.4,57.4
50	681.7	665.3	633.2	603.3	590.9	590.4	616.4	652.3	45- 50	2707	18689	67.2,67.2
55	598.9	587.9	544.4	519.6	496.2	505.8	527.4	573.0	50- 55	2543	21231	76.3,76.3
60	504.1	479.9	455.7	399.6	384.0	385.5	438.4	465.4	55- 60	2263	23495	84.5,84.5
65	389.0	368.3	334.8	278.4	251.1	264.6	319.4	355.4	60- 65	1855	25349	91.1,91.1
70	262.1	255.0	213.9	171.2	132.7	158.3	200.5	244.1	65- 70	1330	26680	95.9,95.9
75	141.9	145.3	93.01	87.34	47.32	76.12	81.50	135.9	70- 75	783.9	27463	98.7,98.7
80	54.35	44.13	0	17.56	4.700	9.567	0	37.31	75- 80	307.7	27771	99.8,99.8
85	10.57	0	0	0	0	0	0	0	80- 85	45.75	27817	100,100
90	3.166	0	0	0	1.044	0	0	0	85- 90	2.482	27819	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:×10cd									UNIT:lm		



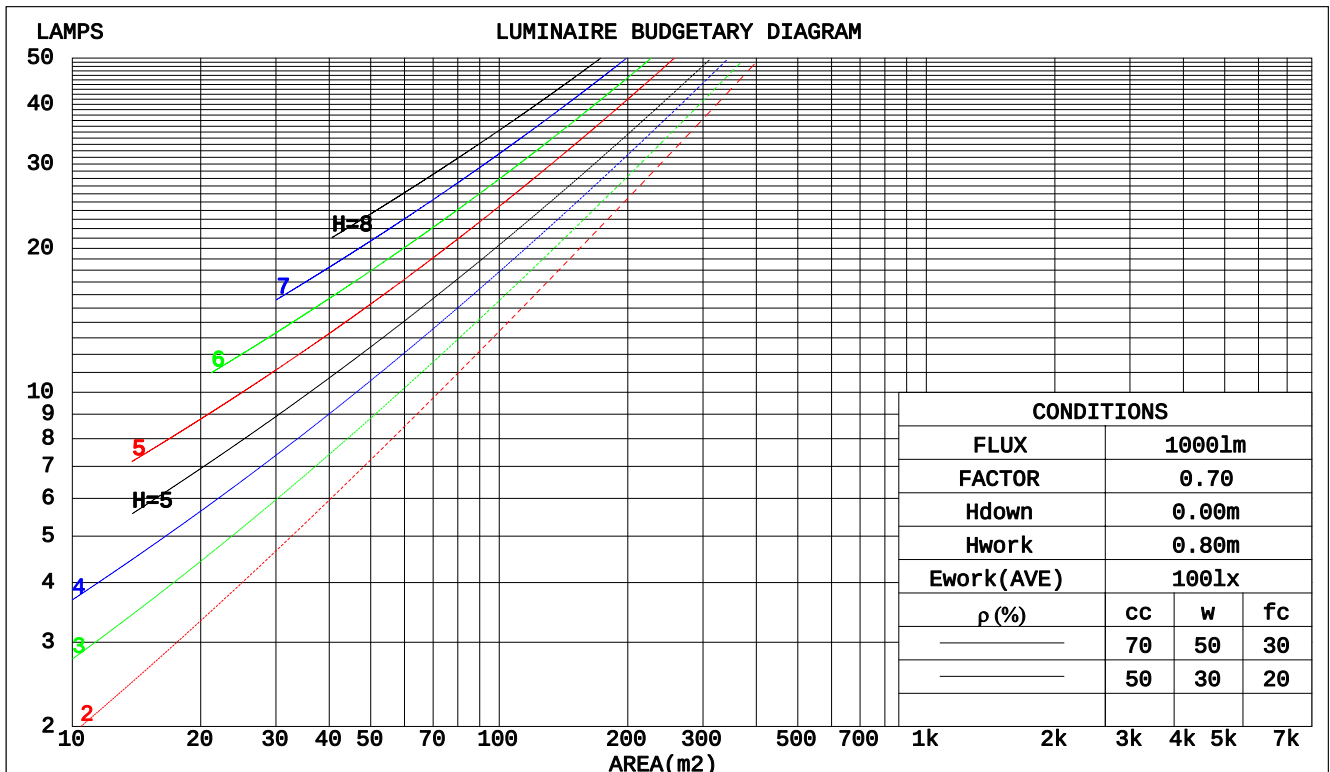
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2020-03-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 7.500m [K=1.1133]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm		
NAME: GLM-MXHB200(AH) 120°	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION 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	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	1.06	1.02	.98	1.03	.99	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.86	.81	.91	.85	.80	.87	.83	.78	.84	.80	.77	.81	.78	.75	.73
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.75	.69	.65	.72	.68	.64	.62
4.0	.73	.64	.58	.71	.63	.57	.69	.62	.57	.67	.61	.56	.64	.59	.55	.53
5.0	.65	.56	.50	.64	.56	.49	.62	.54	.49	.60	.53	.48	.58	.52	.48	.46
6.0	.58	.50	.43	.57	.49	.43	.56	.48	.43	.54	.47	.42	.52	.47	.42	.40
7.0	.53	.44	.38	.52	.44	.38	.51	.43	.38	.49	.43	.38	.48	.42	.37	.35
8.0	.48	.40	.34	.48	.40	.34	.46	.39	.34	.45	.38	.34	.44	.38	.33	.32
9.0	.44	.36	.31	.44	.36	.31	.43	.35	.30	.41	.35	.30	.40	.34	.30	.28
10.0	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.37	.32	.27	.26



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:7.500m [K=1.1133]
Remarks:

WEC AND CCEC

Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm									
NAME: GLM-MXHB200(AH) 120°					TYPE:LED			WEIGHT:	
SPEC.:					DIM.:			SERIAL No.:1	
MFR.:					SUR.:			PROTECTION 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	.275	.157	.050	.268	.153	.049	.255	.146	.047	.243	.140	.045	.232	.135	.043	
2.0	.269	.147	.045	.263	.145	.045	.251	.140	.043	.241	.135	.042	.231	.131	.041	
3.0	.254	.135	.041	.249	.133	.040	.239	.129	.039	.229	.126	.039	.220	.122	.038	
4.0	.238	.124	.036	.233	.122	.036	.224	.119	.035	.216	.116	.035	.208	.113	.034	
5.0	.222	.113	.033	.218	.112	.033	.210	.109	.032	.202	.107	.032	.195	.104	.031	
6.0	.207	.104	.030	.204	.103	.030	.196	.101	.029	.190	.099	.029	.183	.097	.029	
7.0	.194	.096	.027	.191	.095	.027	.184	.093	.027	.178	.091	.027	.173	.090	.026	
8.0	.182	.089	.025	.179	.088	.025	.173	.086	.025	.168	.085	.025	.163	.084	.024	
9.0	.171	.083	.023	.168	.082	.023	.163	.081	.023	.158	.079	.023	.154	.078	.023	
10.0	.161	.077	.021	.159	.077	.021	.154	.075	.021	.150	.074	.021	.146	.073	.021	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.099	.066	.095	.068	.047	.055	.040	.027	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.030	.079	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.127	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.026	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:7.500m [K=1.1133]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm											
NAME: GLM-MXHB200(AH) 120°						TYPE:LED			WEIGHT:		
SPEC.:						DIM.:			SERIAL No.:1		
MFR.:						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	3H	33.3	34.6	33.6	34.9	35.1	32.7	34.1	33.0	34.3	34.6
	4H	33.6	34.9	33.9	35.1	35.4	32.9	34.2	33.2	34.4	34.7
	6H	33.6	34.8	34.0	35.1	35.4	32.8	34.1	33.2	34.3	34.6
	8H	33.6	34.8	34.0	35.1	35.4	32.8	34.0	33.1	34.2	34.5
	12H	33.6	34.7	33.9	35.0	35.3	32.7	33.9	33.1	34.1	34.4
4H	2H	32.6	33.8	32.9	34.1	34.4	32.3	33.6	32.6	33.8	34.1
	3H	33.9	35.0	34.3	35.3	35.6	33.5	34.6	33.8	34.9	35.2
	4H	34.3	35.3	34.7	35.6	35.9	33.7	34.7	34.1	35.0	35.4
	6H	34.4	35.3	34.8	35.7	36.0	33.7	34.6	34.1	34.9	35.3
	8H	34.4	35.2	34.8	35.6	36.0	33.6	34.5	34.0	34.8	35.2
8H	12H	34.4	35.2	34.8	35.5	35.9	33.6	34.4	34.0	34.7	35.1
	4H	34.4	35.2	34.8	35.6	35.9	33.8	34.7	34.2	35.0	35.4
	6H	34.6	35.2	35.0	35.7	36.1	33.8	34.5	34.3	34.9	35.3
	8H	34.6	35.2	35.1	35.6	36.1	33.8	34.4	34.2	34.8	35.3
	12H	34.6	35.1	35.1	35.5	36.0	33.8	34.3	34.2	34.7	35.2
12H	4H	34.3	35.1	34.8	35.5	35.9	33.8	34.6	34.2	34.9	35.3
	6H	34.5	35.1	35.0	35.6	36.0	33.8	34.4	34.3	34.8	35.3
	8H	34.6	35.1	35.0	35.5	36.0	33.8	34.3	34.2	34.7	35.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4					
1.5H	+ 0.3 / - 0.5					+ 0.3 / - 0.6					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.5					

CIE Pub.117 Corrected 27819 lm Total Lamp Luminous Flux.(8log(F/F0) = 11.6)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:7.500m [K=1.1133]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm		
NAME: GLM-MXHB200(AH) 120°	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	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) $k(RI) \times RCR = 5$									
$k = 0.60$	59	47	41	58	47	40	57	47	40	34
0.80	69	58	51	68	58	51	67	57	50	44
1.00	78	67	60	77	67	60	75	68	60	53
1.25	85	75	69	84	75	68	81	73	67	61
1.50	90	81	75	89	80	74	86	78	73	66
2.00	97	89	83	95	88	83	92	86	81	74
2.50	101	94	88	99	92	87	95	90	85	77
3.00	104	98	93	102	96	92	98	93	90	81
4.00	108	103	98	105	101	97	101	98	94	86
5.00	110	106	102	108	104	100	103	100	97	89
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:
Test Date:2020-03-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:7.500m [K=1.1133]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm		
NAME: GLM-MXHB200(AH) 120°	TYPE: LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

15982 lm

%lum = 57.4%

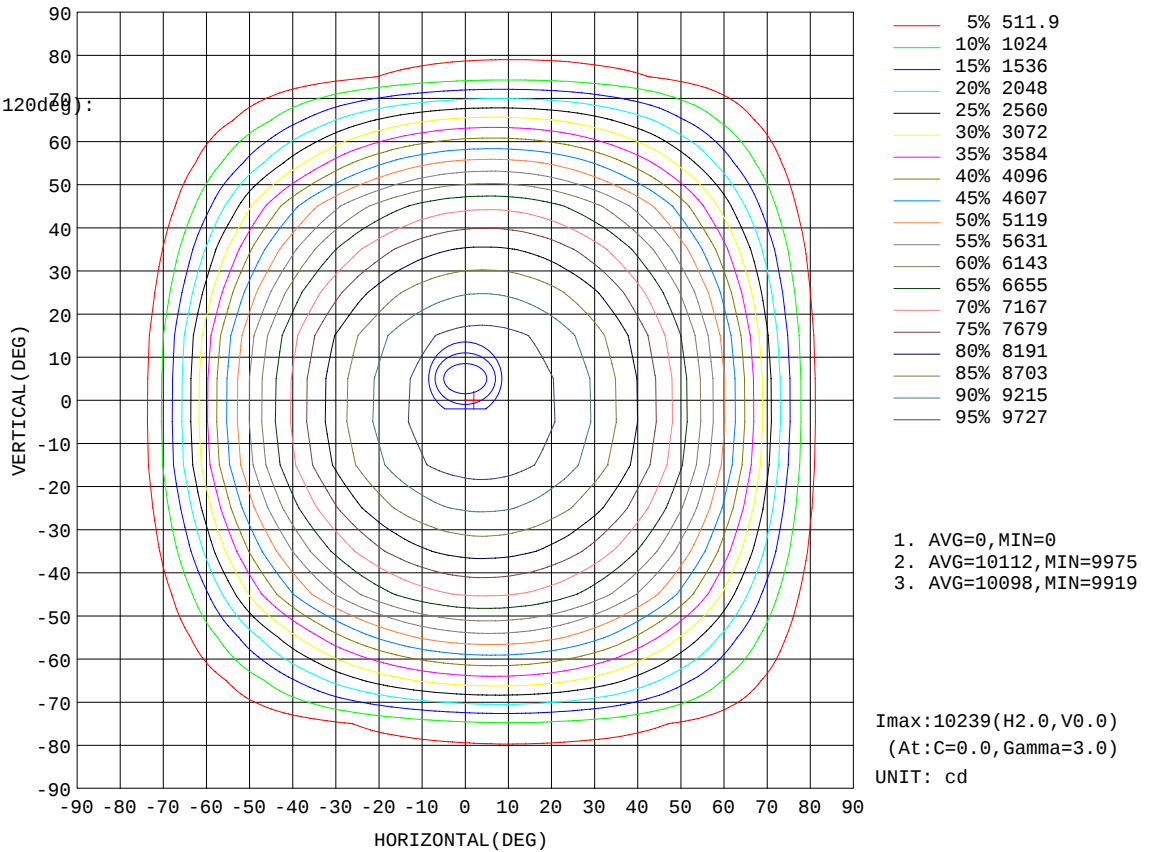
%lamp = 57.4%

Conical surface Flux(120deg):

23495 lm

%lum = 84.5%

%lamp = 84.5%

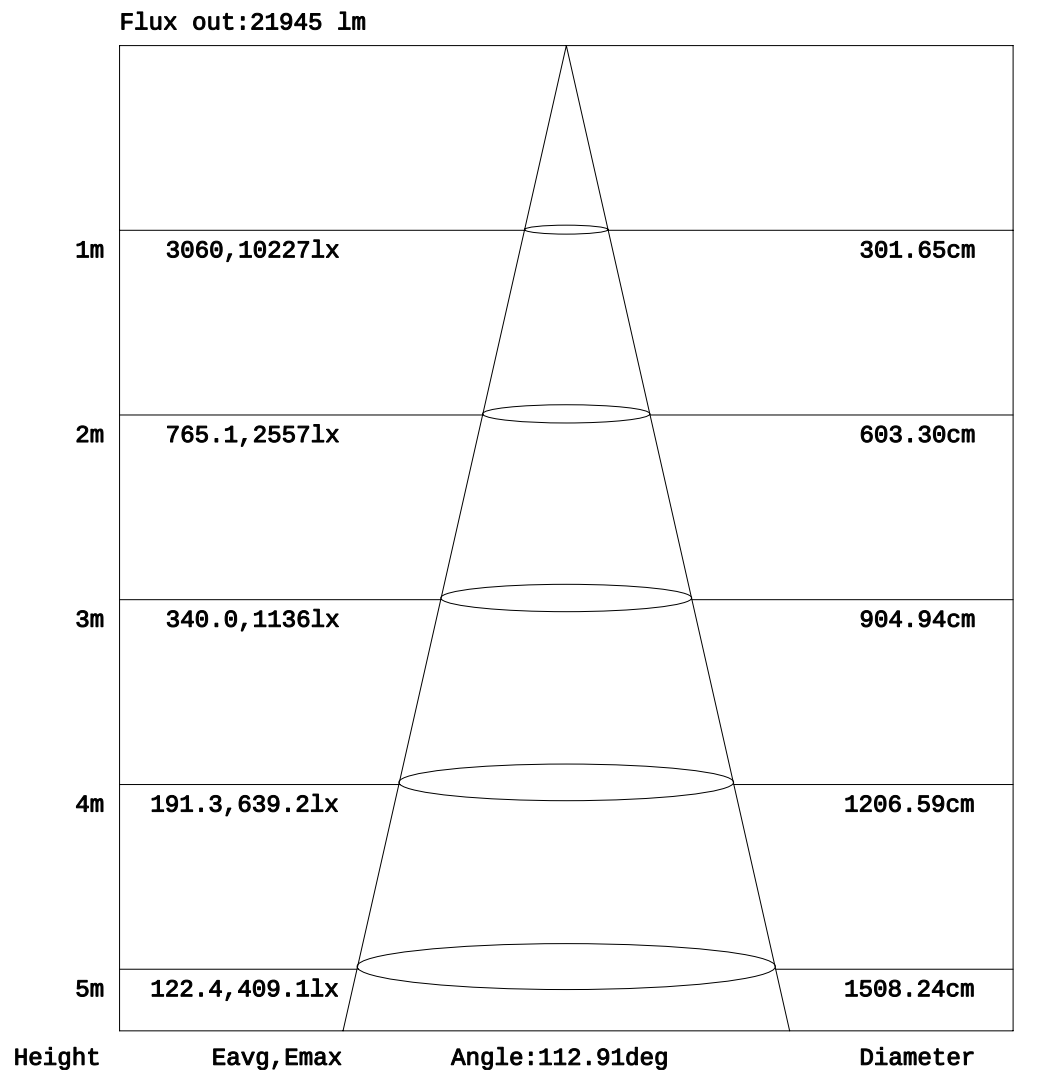


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:7.500m [K=1.1133]
Remarks:

AAI Figure

Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm		
NAME: GLM-MXHB200(AH) 120°	TYPE: LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:



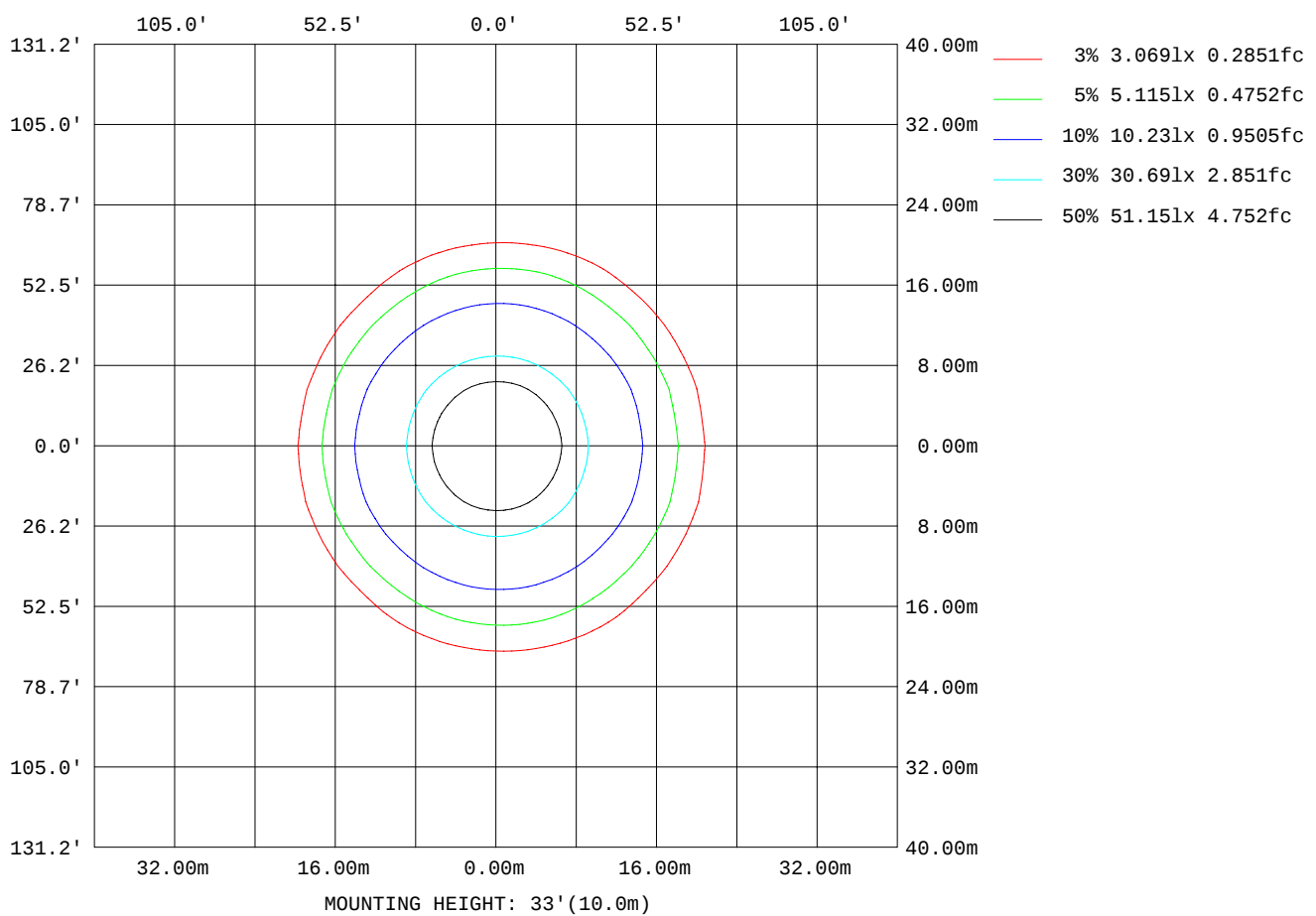
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2020-03-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 7.500m [K=1.1133]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm		
NAME: GLM-MXHB200(AH) 120°	TYPE: LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:7.500m [K=1.1133]
Remarks:

LED Avg.L Report

Test:U:220.1V I:0.8974A P:192.6W PF:0.9748 Lamp Flux:27819.4x1 lm		
NAME: GLM-MXHB200(AH) 120°	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

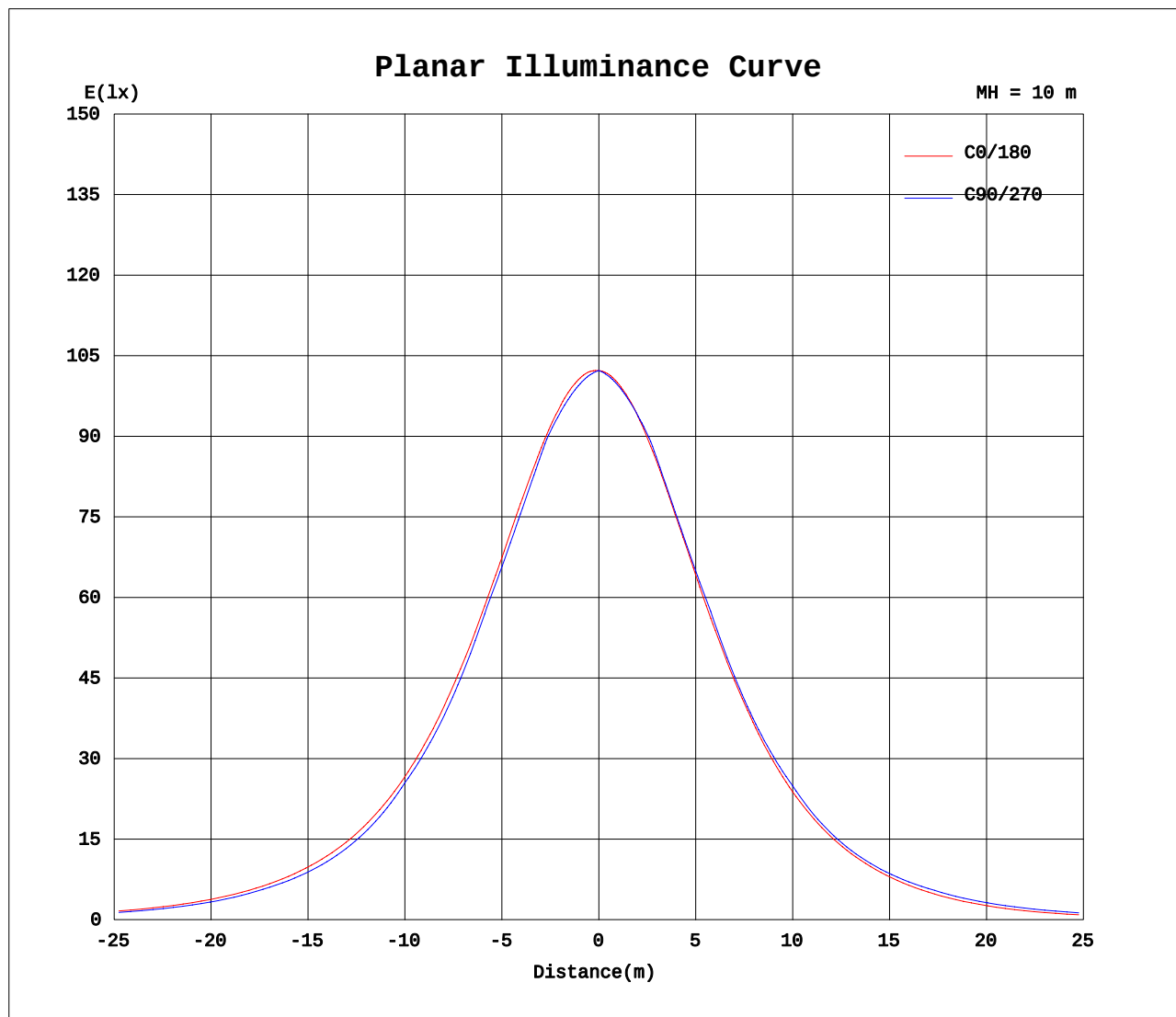
AvgL	cd/m2
L_0~180(65)av	159423
L_0~180(75)av	76946
L_0~180(85)av	12772
L_90~270(65)av	162951
L_90~270(75)av	70975
L_90~270(85)av	0
L_45(65)av	157753
L_45(75)av	90413
L_45(85)av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2020-03-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:7.500m [K=1.1133]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2020-03-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.290
Humidity: 65.0%
Test Distance: 7.500m [K=1.1133]
Remarks:

