

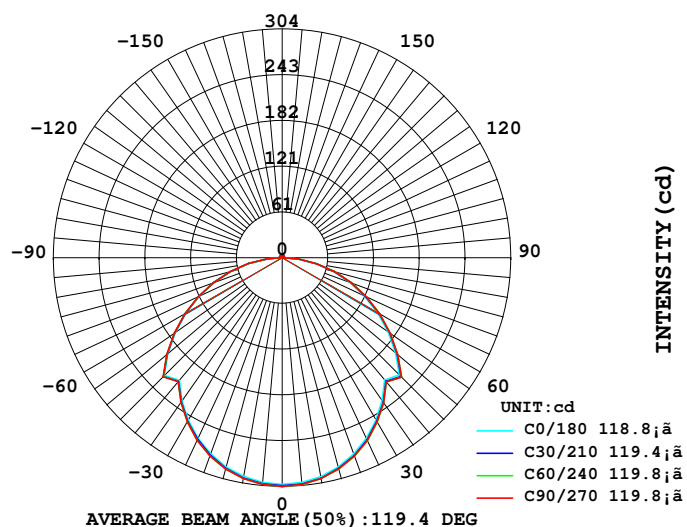
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number: GO2018-056

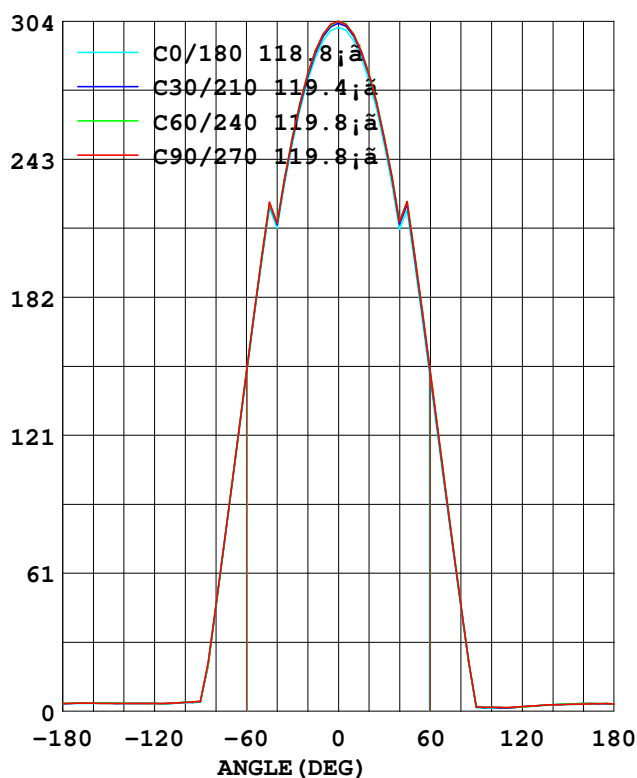
MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:

DATA OF LAMP		Imax(cd)	304.6	S/MH(C0/180)	1.24
MODEL	MAGIC CLOUD_14W_500x500m	Imax(cd)	100.0	S/MH(C90/270)	1.24
NOMINAL POWER(W)	12.9	TOTAL FLUX(lm)	941.30	Voltage(V)	24.00
RATED VOLTAGE(V)	24.0	EFFICIENCY(lm/W)	73.0	Current(A)	0.540
NOMINAL FLUX(lm)	941.3	η up(%)	2.0	Power(W)	12.90
LAMPS QUANTITY	1	η down(%)	98.0	Power Factor(PF)	1.000
TEST VOLTAGE(V)	24.0	Effective Flux(lm)	913.1	EEL	0.208

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System: LSG-1800
 Temperature: 25.3 DEG
 Operators: G
 Test Date: 03-06-2018

Test Set: 5.0 deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 10.000 m
 Remarks:

ZONAL FLUX DIAGRAM

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	294.8	295.7	297.7	297.7	295.1	298.3	297.7	299.1	0- 10	28.69	28.69
20.0	277.3	277.3	280.2	279.3	277.2	281.8	280.2	282.2	10- 20	81.87	110.5
30.0	249.4	248.3	252.0	250.0	249.0	254.9	252.0	254.6	20- 30	123.0	233.6
40.0	212.5	210.7	214.8	211.7	211.9	218.6	215.3	218.0	30- 40	146.4	380.1
50.0	198.0	194.5	200.3	195.6	196.6	205.0	200.5	203.8	40- 50	164.5	544.7
60.0	148.0	143.3	149.3	144.3	146.3	154.7	149.8	153.6	50- 60	156.2	700.9
70.0	96.30	91.50	97.09	92.40	95.09	102.3	97.69	101.1	60- 70	121.7	822.6
80.0	45.59	41.20	45.89	42.39	45.69	50.50	46.79	49.00	70- 80	75.30	898.0
90.0	4.200	2.000	4.400	1.800	1.600	4.200	2.100	3.700	80- 90	24.88	922.8
100.0	3.800	2.400	3.900	2.300	1.400	3.300	1.700	3.300	90-100	3.124	926.0
110.0	3.400	2.200	3.600	2.100	1.500	2.900	1.600	2.900	100-110	2.830	928.8
120.0	3.400	2.200	3.500	2.200	2.000	2.900	2.100	2.800	110-120	2.555	931.4
130.0	3.400	2.500	3.500	2.500	2.400	3.300	2.500	3.200	120-130	2.545	933.9
140.0	3.400	2.800	3.400	2.800	2.800	3.500	2.900	3.500	130-140	2.389	936.3
150.0	3.400	3.000	3.500	3.100	3.000	3.800	3.000	3.800	140-150	2.052	938.3
160.0	3.500	3.200	3.600	3.300	3.200	3.800	3.200	3.800	150-160	1.589	939.9
170.0	3.500	3.300	3.600	3.300	3.300	3.800	3.300	3.800	160-170	0.994	940.9
180.0	3.300	3.200	3.400	3.200	3.200	3.300	3.200	3.400	170-180	0.326	941.3
DEG	LUMINOUS INTENSITY: cd									UNIT: lm	

Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

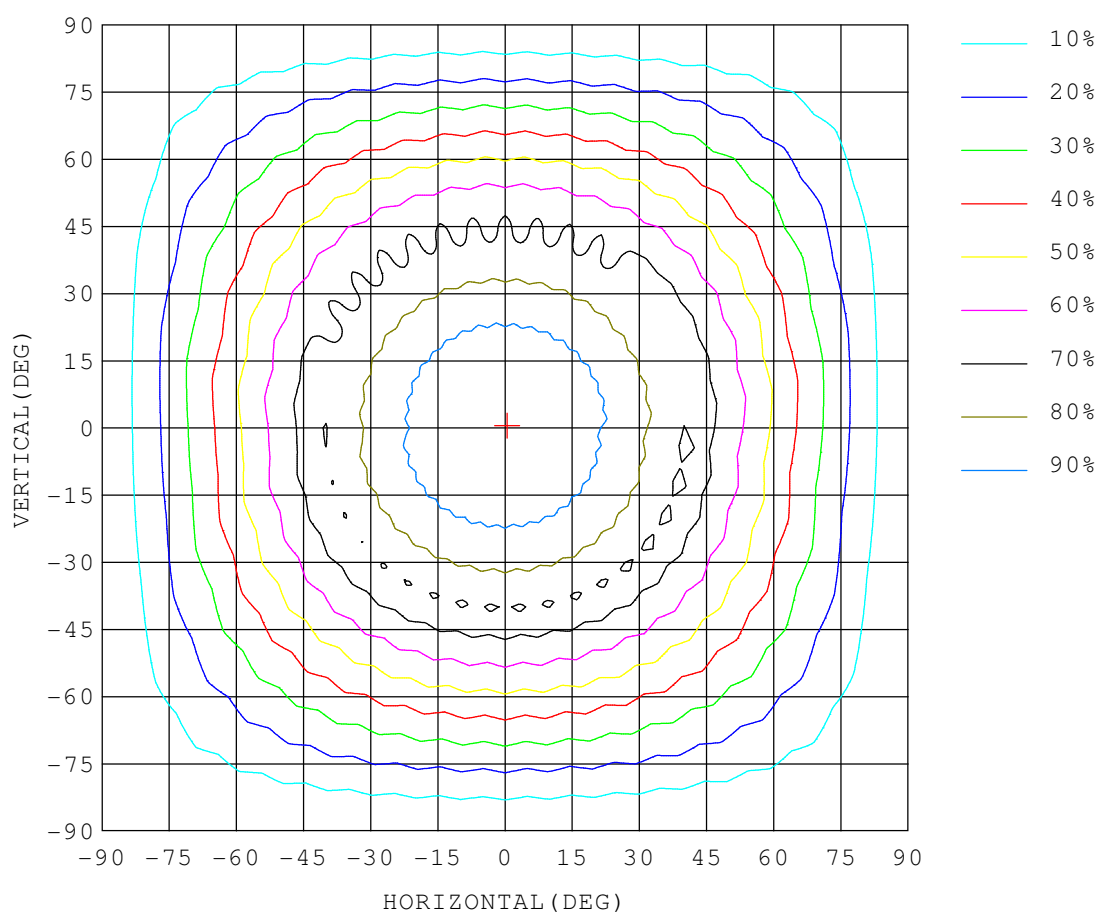
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:

UNIT: cd



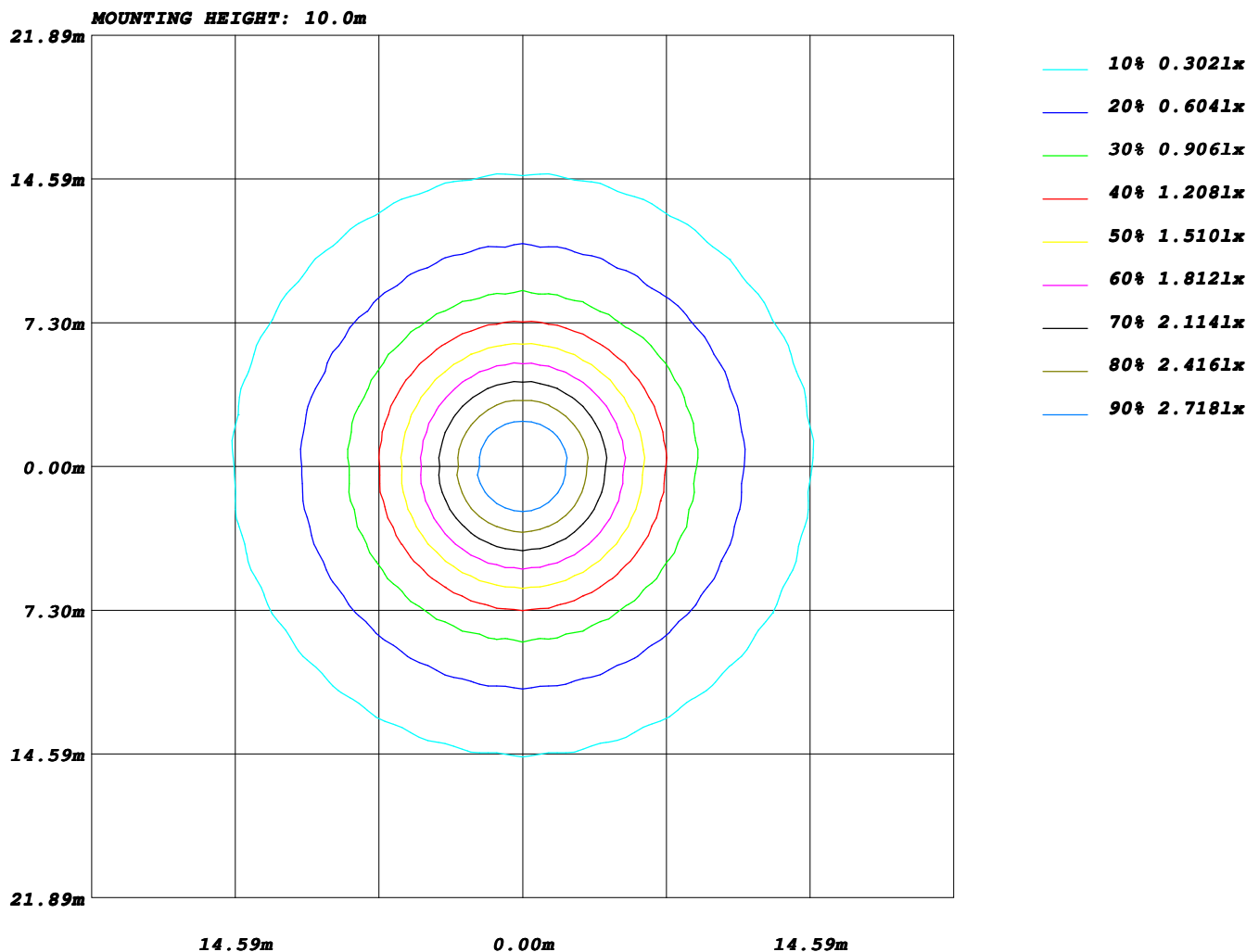
Test System:LSG-1800
Temperature:25.3DEG
Operators:G
Test Date:03-06-2018

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:10.000 m
Remarks:

ISOLUX DIAGRAM

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:



Test System: LSG-1800
Temperature: 25.3DEG
Operators: G
Test Date: 03-06-2018

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:



AREA LUMINOUS FLUX

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:

		AREA FLUX DIAGRAM																	UNIT:lm		Φ t	Φ a					
		0.01	0.07	0.15	0.26	0.38	0.51	0.63	0.71	0.75	0.75	0.70	0.60	0.48	0.35	0.24	0.14	0.06	0.01	6.79	2.67						
VERTICAL (DEG)	90	0.03	0.15	0.39	0.72	1.10	1.50	1.84	2.10	2.24	2.23	2.08	1.82	1.46	1.07	0.69	0.37	0.14	0.03	20.0	19.1						
	80	0.04	0.25	0.65	1.20	1.86	2.52	3.12	3.57	3.80	3.80	3.55	3.10	2.50	1.83	1.18	0.63	0.23	0.04	33.9	33.6						
	70	0.05	0.33	0.89	1.66	2.58	3.53	4.39	5.03	5.35	5.35	5.01	4.36	3.50	2.55	1.64	0.87	0.32	0.05	47.5	47.3						
	60	0.06	0.41	1.10	2.09	3.26	4.46	5.48	6.07	6.38	6.37	6.05	5.46	4.44	3.23	2.07	1.09	0.40	0.06	58.5	58.4						
	50	0.07	0.48	1.30	2.45	3.84	5.09	5.93	6.66	7.11	7.10	6.63	5.98	5.21	3.82	2.44	1.29	0.47	0.07	66.0	65.9						
	40	0.08	0.54	1.43	2.75	4.23	5.34	6.51	7.54	8.08	8.07	7.52	6.49	5.46	4.28	2.74	1.42	0.53	0.07	73.1	73.1						
	30	0.08	0.58	1.55	2.93	4.55	5.62	7.04	8.15	8.75	8.74	8.15	7.03	5.62	4.55	2.93	1.54	0.58	0.08	78.5	78.4						
		0.08	0.58	1.59	3.05	4.61	5.78	7.29	8.44	9.07	9.09	8.46	7.31	5.79	4.62	3.06	1.60	0.58	0.08	81.1	81.1						
		0.08	0.57	1.55	2.99	4.58	5.78	7.31	8.47	9.08	9.04	8.38	7.22	5.71	4.54	2.97	1.54	0.57	0.08	80.5	80.4						
		0.08	0.54	1.52	2.93	4.52	5.60	7.02	8.13	8.71	8.69	8.07	6.95	5.54	4.47	2.89	1.48	0.53	0.07	77.8	77.7						
	-30	0.07	0.51	1.42	2.70	4.25	5.44	6.45	7.46	8.00	7.99	7.43	6.40	5.39	4.21	2.66	1.39	0.50	0.07	72.4	72.3						
	-40	0.06	0.47	1.25	2.41	3.77	5.15	6.00	6.58	6.99	6.99	6.57	5.98	5.12	3.74	2.38	1.22	0.45	0.06	65.2	65.1						
-50	0.05	0.40	1.07	2.02	3.17	4.36	5.42	6.14	6.45	6.45	6.13	5.41	4.33	3.14	2.00	1.05	0.38	0.05	58.0	57.9							
-60	0.04	0.31	0.85	1.60	2.49	3.40	4.22	4.85	5.20	5.19	4.84	4.21	3.38	2.46	1.58	0.83	0.30	0.04	45.8	45.7							
-70	0.03	0.22	0.60	1.13	1.76	2.39	2.97	3.40	3.63	3.63	3.39	2.95	2.38	1.74	1.11	0.58	0.21	0.03	32.2	31.8							
-80	0.02	0.14	0.35	0.66	1.01	1.38	1.71	1.95	2.08	2.08	1.94	1.69	1.36	0.99	0.63	0.33	0.13	0.02	18.4	17.4							
-90	0.01	0.06	0.14	0.22	0.32	0.43	0.54	0.61	0.65	0.65	0.60	0.52	0.41	0.30	0.21	0.13	0.06	0.01	5.88	1.72							
		-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)										20	30	40	50	60	70	80	90
Φ t	0.95	6.61	17.8	33.8	52.3	68.3	83.9	95.9	102	102	95.6	83.5	68.1	51.9	33.4	17.5	6.43	0.92	941								
Φ a	0.38	5.92	17.1	33.1	51.6	67.7	83.2	95.2	102	102	94.9	82.9	67.5	51.3	32.8	16.8	5.71	0.33		913							

Test System: LSG-1800
 Temperature: 25.3 DEG
 Operators: G
 Test Date: 03-06-2018

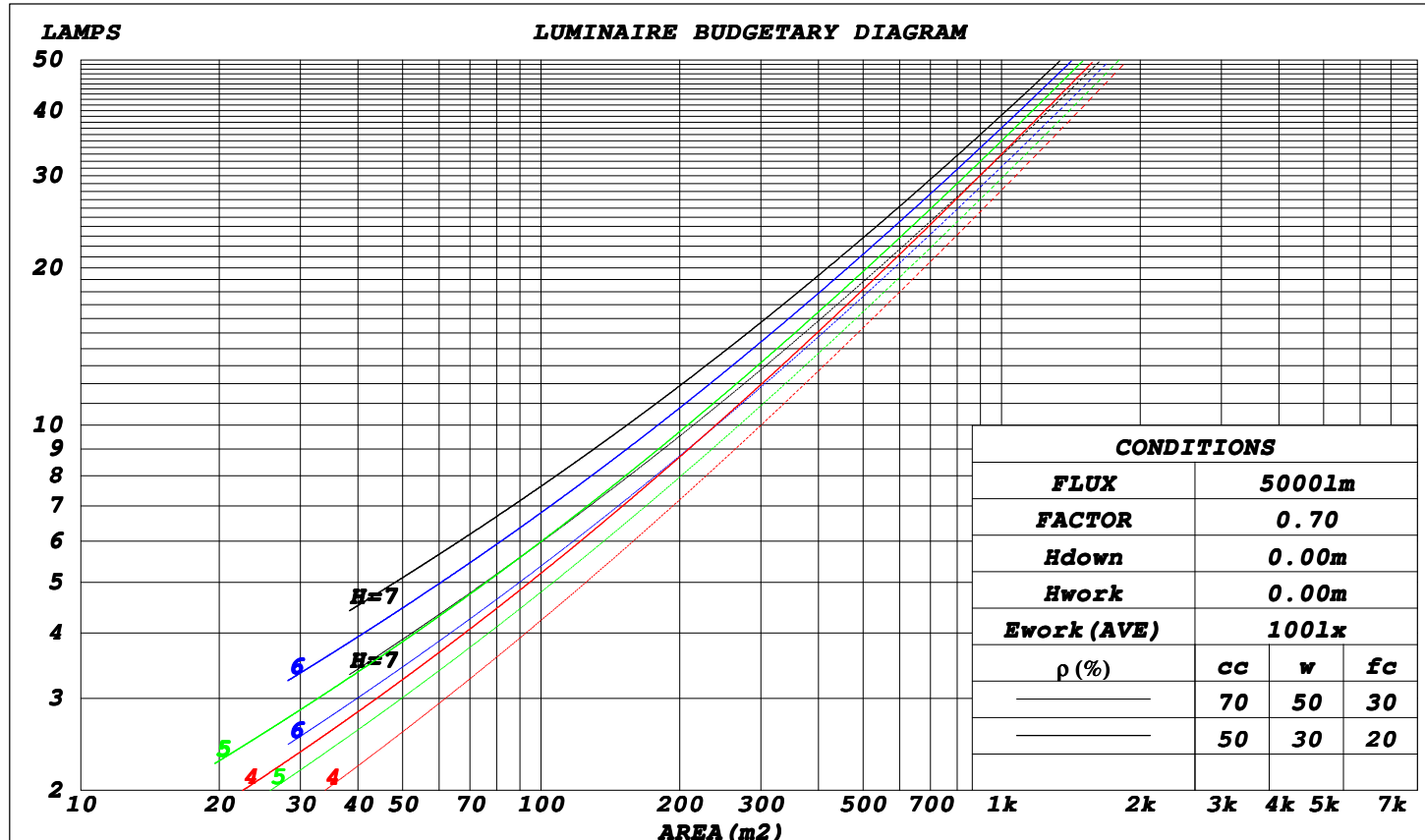
Test Set: 5.0 deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 10.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)				
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall			WEIGHT:	
SPECIFICATION: wall	DIMENSION: 500x500x21			SERIAL No.:	

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	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	.98
1.0	1.03	.98	.94	1.00	.96	.92	.95	.92	.89	.91	.88	.86	.87	.85	.83	.81
2.0	.89	.82	.76	.87	.80	.75	.83	.77	.72	.79	.75	.71	.76	.72	.69	.66
3.0	.78	.69	.62	.76	.68	.62	.72	.66	.60	.69	.64	.59	.67	.62	.58	.55
4.0	.68	.59	.52	.67	.58	.52	.64	.57	.51	.61	.55	.50	.59	.54	.49	.47
5.0	.61	.52	.45	.60	.51	.44	.57	.50	.44	.55	.48	.43	.53	.47	.42	.40
6.0	.55	.45	.39	.54	.45	.39	.52	.44	.38	.50	.43	.38	.48	.42	.37	.35
7.0	.49	.40	.34	.49	.40	.34	.47	.39	.34	.45	.38	.33	.44	.37	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.30	.41	.35	.30	.40	.34	.29	.27
9.0	.41	.33	.27	.41	.33	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.24
10.0	.38	.30	.25	.37	.30	.25	.36	.29	.24	.35	.29	.24	.34	.28	.24	.22



Test System: LSG-1800
 Temperature: 25.3DEG
 Operators: G
 Test Date: 03-06-2018

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 10.000 m
 Remarks:

WEC AND CCEC

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)				
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall			WEIGHT:	
SPECIFICATION: wall	DIMENSION: 500x500x21			SERIAL No.:	

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pf _c	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.327	.186	.059	.319	.182	.058	.304	.175	.056	.291	.168	.054	.279	.162	.052		
2.0	.303	.166	.051	.297	.163	.050	.284	.158	.049	.272	.153	.048	.261	.148	.047		
3.0	.279	.148	.044	.273	.146	.044	.261	.142	.043	.251	.137	.042	.241	.133	.041		
4.0	.256	.133	.039	.251	.131	.039	.240	.128	.038	.231	.124	.037	.222	.121	.037		
5.0	.236	.120	.035	.231	.119	.035	.222	.116	.034	.213	.113	.034	.206	.110	.033		
6.0	.218	.109	.031	.214	.108	.031	.206	.105	.031	.198	.103	.030	.191	.100	.030		
7.0	.202	.100	.028	.199	.099	.028	.191	.097	.028	.184	.095	.028	.178	.092	.027		
8.0	.189	.092	.026	.185	.091	.026	.179	.089	.025	.172	.087	.025	.167	.086	.025		
9.0	.176	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023		
10.0	.166	.079	.022	.163	.079	.022	.157	.077	.022	.152	.076	.022	.148	.074	.021		

pcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.205	.205	.205	.176	.176	.176	.120	.120	.120	.069	.069	.069	.022	.022	.022	
1.0	.196	.171	.148	.168	.147	.127	.115	.101	.088	.066	.058	.051	.021	.019	.017	
2.0	.189	.147	.112	.162	.127	.097	.111	.088	.067	.064	.051	.039	.021	.016	.013	
3.0	.181	.130	.088	.156	.112	.077	.107	.078	.054	.062	.045	.032	.020	.015	.010	
4.0	.174	.116	.073	.149	.101	.063	.103	.070	.044	.059	.041	.026	.019	.013	.009	
5.0	.166	.106	.062	.143	.092	.054	.098	.064	.038	.057	.038	.022	.018	.012	.007	
6.0	.159	.098	.054	.137	.085	.047	.094	.059	.033	.055	.035	.020	.018	.011	.007	
7.0	.152	.091	.048	.131	.079	.042	.090	.055	.030	.053	.033	.018	.017	.011	.006	
8.0	.146	.085	.044	.125	.074	.038	.087	.052	.027	.050	.031	.016	.016	.010	.005	
9.0	.139	.080	.040	.120	.070	.035	.083	.049	.025	.048	.029	.015	.016	.009	.005	
10.0	.134	.076	.038	.115	.066	.033	.080	.046	.023	.047	.027	.014	.015	.009	.005	

Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:

Uncorrected UGR Table

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL						Address:Via Volta 5 – Ornago (MB)					
NAME: MAGIC CLUOD_14W_500x500m						TYPE:wall		WEIGHT:			
SPECIFICATION:wall						DIMENSION: 500x500x21		SERIAL No.:			
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	16.6	18.1	16.9	18.4	18.6	16.7	18.2	16.9	18.4	18.7	
	3H	18.2	19.6	18.5	19.9	20.2	18.3	19.7	18.6	19.9	20.2
	4H	18.9	20.2	19.2	20.5	20.8	18.9	20.3	19.3	20.6	20.9
	6H	19.4	20.7	19.8	21.0	21.3	19.4	20.7	19.8	21.0	21.3
	8H	19.5	20.7	19.9	21.1	21.4	19.5	20.8	19.9	21.1	21.4
	12H	19.6	20.8	20.0	21.1	21.5	19.6	20.8	20.0	21.1	21.5
4H	2H	17.2	18.6	17.6	18.9	19.2	17.3	18.6	17.6	18.9	19.2
	3H	19.0	20.2	19.4	20.6	20.9	19.1	20.2	19.4	20.6	20.9
	4H	19.8	20.9	20.2	21.3	21.7	19.9	21.0	20.3	21.3	21.7
	6H	20.5	21.4	20.9	21.8	22.2	20.5	21.5	20.9	21.8	22.3
	8H	20.6	21.5	21.1	21.9	22.4	20.7	21.6	21.1	22.0	22.4
	12H	20.8	21.6	21.2	22.0	22.5	20.8	21.6	21.2	22.0	22.5
8H	4H	20.1	21.0	20.6	21.4	21.9	20.2	21.1	20.6	21.5	21.9
	6H	20.9	21.7	21.4	22.1	22.6	20.9	21.7	21.4	22.1	22.6
	8H	21.1	21.8	21.6	22.3	22.8	21.2	21.8	21.6	22.3	22.8
	12H	21.3	21.9	21.9	22.4	22.9	21.4	21.9	21.9	22.4	22.9
12H	4H	20.2	21.0	20.6	21.4	21.9	20.2	21.0	20.6	21.4	21.9
	6H	20.9	21.6	21.4	22.1	22.6	21.0	21.6	21.5	22.1	22.6
	8H	21.2	21.8	21.7	22.3	22.8	21.2	21.8	21.7	22.3	22.8
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	+ 0.2 / – 0.2					+ 0.2 / – 0.2					

CIE Pub.117 Corrected 941.2 lm Total Lamp Luminous Flux. (8log(F/F0) = -0.2)

Test System: LSG-1800
 Temperature: 25.3 DEG
 Operators: G
 Test Date: 03-06-2018

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 10.000 m
 Remarks:

UTILIZATION FACTORS TABLE

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:

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) $k(RI) \times RCR = 5$									
$k = 0.60$	55	43	36	54	43	36	53	42	36	29
0.80	65	53	45	64	52	45	62	52	45	37
1.00	73	62	54	72	61	54	70	63	53	46
1.25	81	70	62	79	69	62	76	67	61	53
1.50	86	75	68	84	74	67	81	72	66	58
2.00	93	84	77	91	83	76	87	80	74	66
2.50	97	89	82	95	87	81	91	84	79	70
3.00	101	93	87	98	92	86	94	88	84	75
4.00	105	99	94	102	97	92	98	93	89	80
5.00	107	102	98	105	100	96	100	96	93	83
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SERNOM = 1.25		

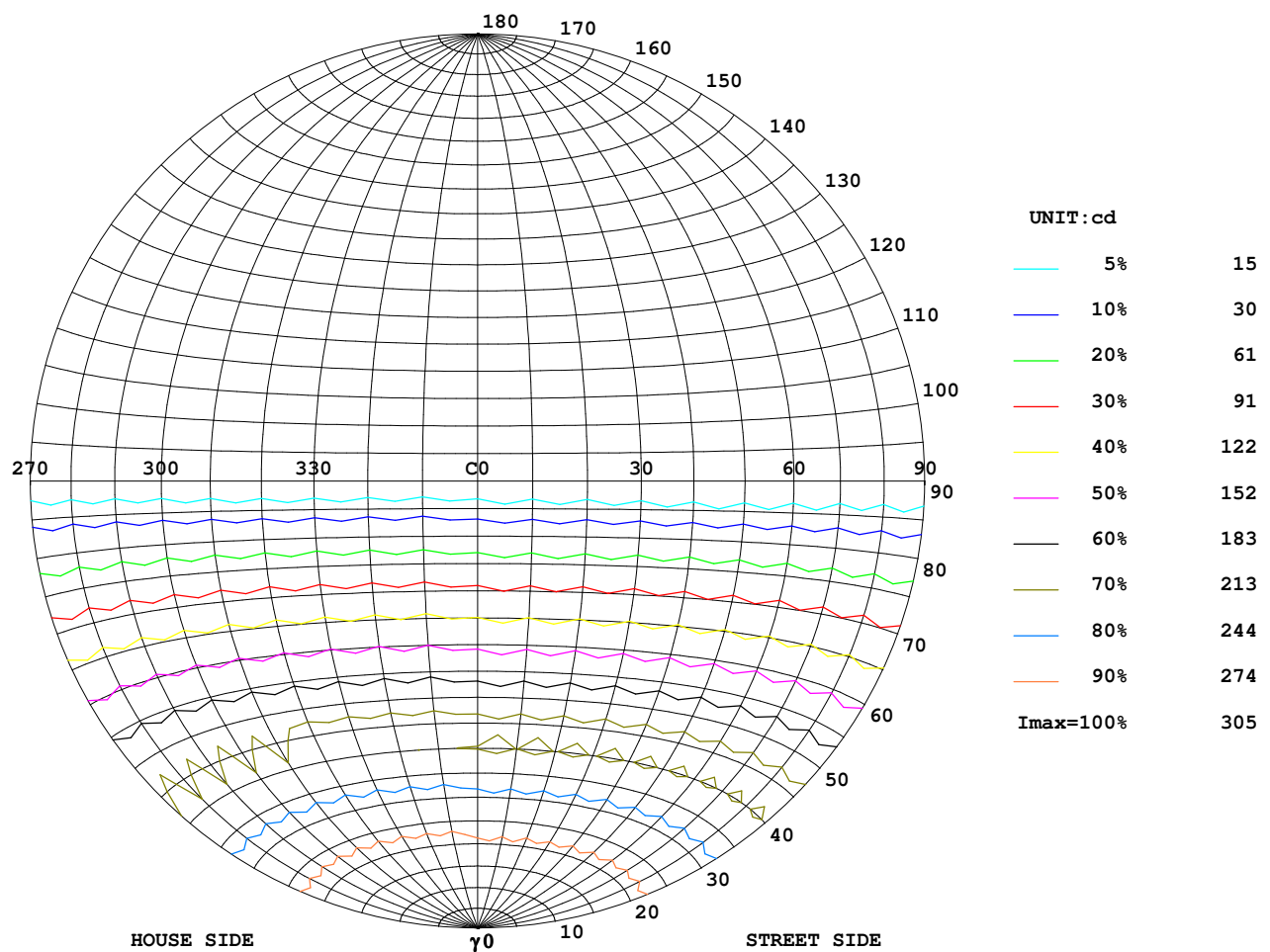
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

Test Set: 5.0 deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:



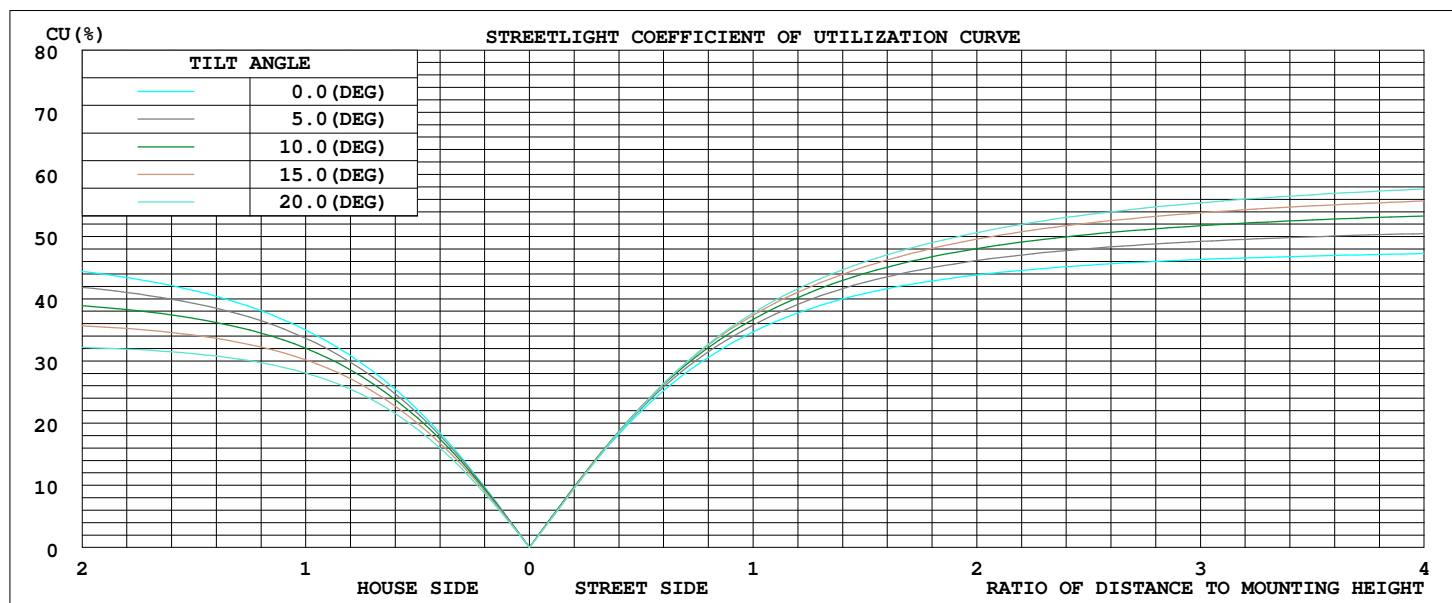
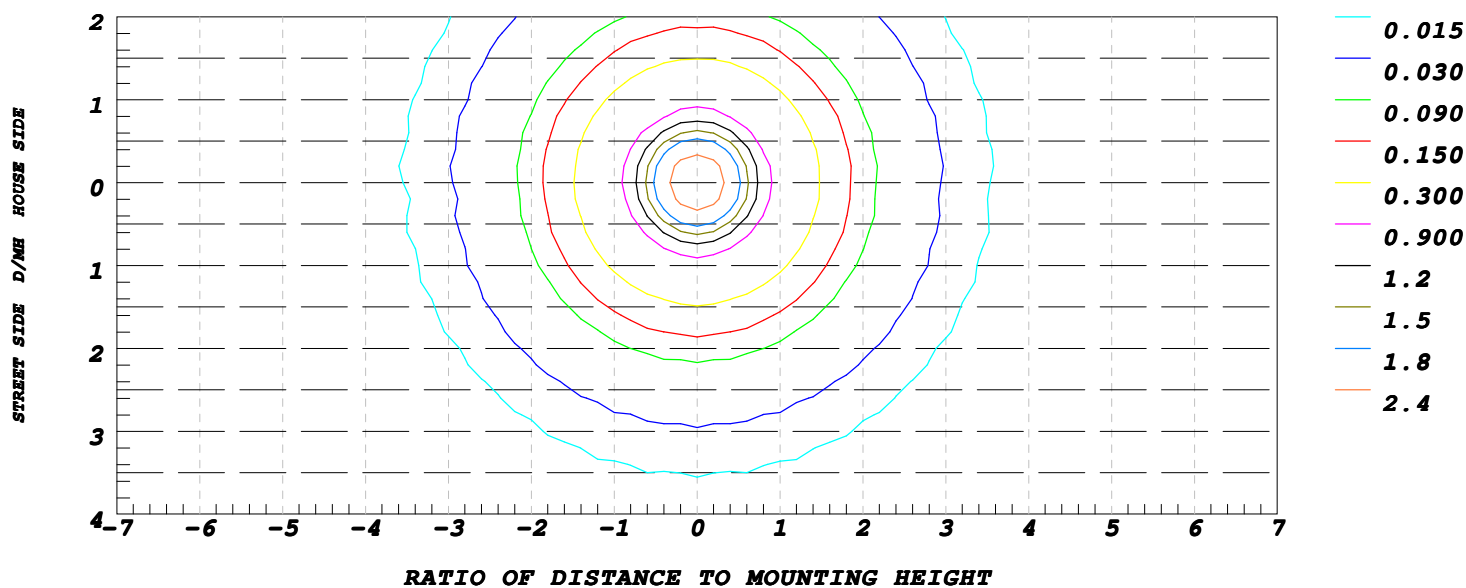
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

Test Set: 5.0 deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:

ISOLUX DIAGRAM

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 3.01 lx

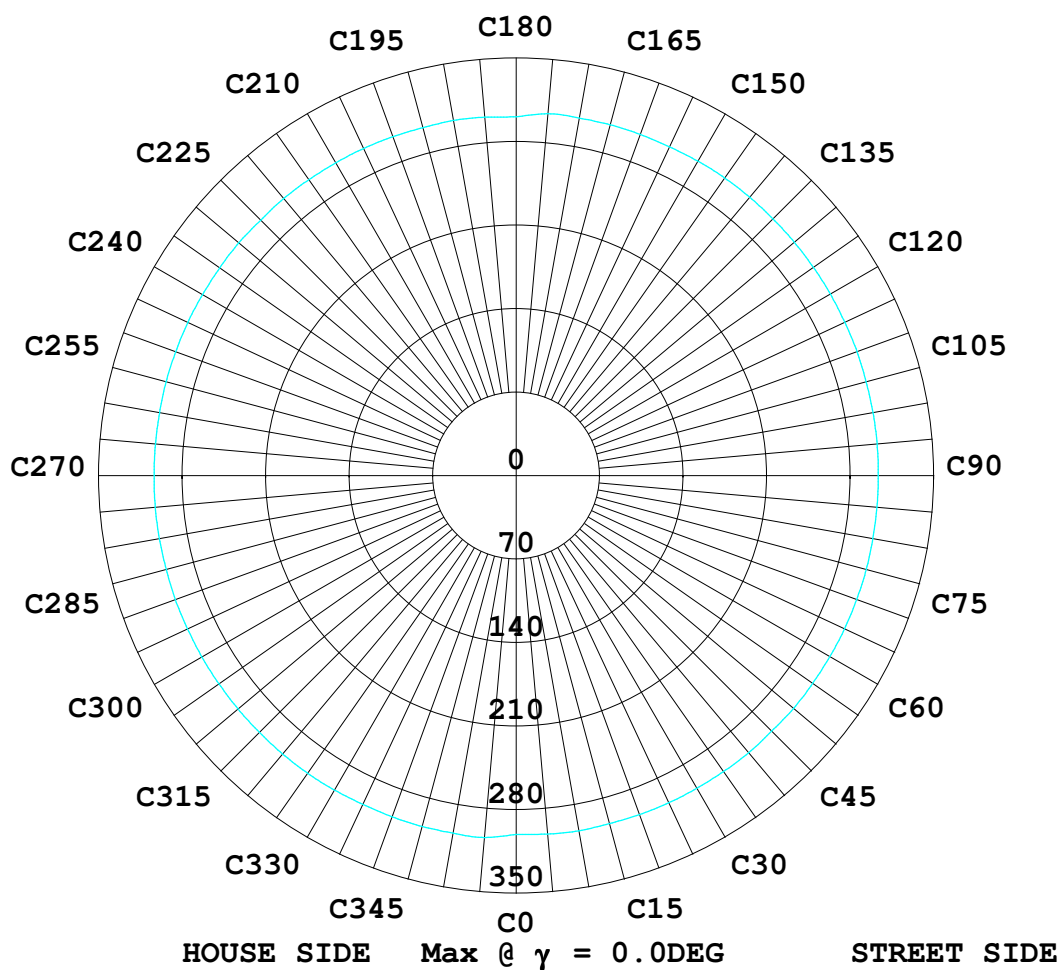
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number: GO2018-056

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_14W_500x500m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 500x500x21	SERIAL No.:



Test System: LSG-1800
 Temperature: 25.3DEG
 Operators: G
 Test Date: 03-06-2018

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 10.000 m
 Remarks: