

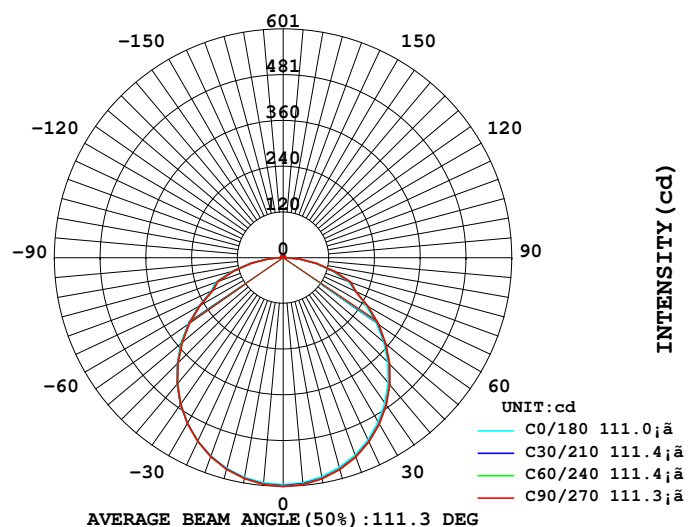
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number: GO2018-057

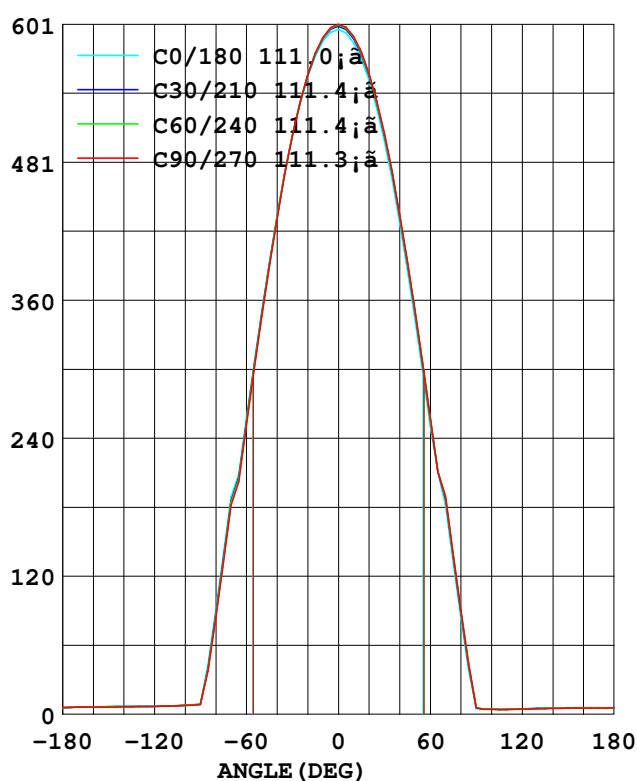
MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	SERIAL No.:

DATA OF LAMP		Imax(cd)	602.2	S/MH (C0/180)	1.25
MODEL	MAGIC CLOUD_28W_1000x1000m	Beam Flux (lm)	100.0	S/MH (C90/270)	1.24
NOMINAL POWER(W)	22.1	TOTAL FLUX(lm)	1781.9	Voltage(V)	24.10
RATED VOLTAGE(V)	24	EFFICIENCY (lm/W)	80.6	Current (A)	0.920
NOMINAL FLUX(lm)	1781.9	η up(%)	2.1	Power(W)	22.10
LAMPS QUANTITY	1	η down(%)	97.9	Power Factor(PF)	1.000
TEST VOLTAGE(V)	24.1	Effective Flux(lm)	1723.1	EEL	0.201

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



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:

ZONAL FLUX DIAGRAM

Report number: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	586.0	587.0	589.2	589.4	584.2	589.9	589.9	591.4	0- 10	56.77	56.77
20.0	554.5	553.3	556.1	555.7	551.9	559.1	557.7	560.2	10- 20	162.4	219.2
30.0	503.0	499.3	502.6	501.5	498.7	508.6	505.7	509.2	20- 30	245.5	464.7
40.0	434.0	427.6	431.5	429.4	428.8	440.6	436.2	441.0	30- 40	294.7	759.5
50.0	351.0	342.1	346.5	343.5	344.7	358.6	352.8	358.6	40- 50	303.6	1063
60.0	257.8	246.7	251.6	247.9	251.0	266.0	259.4	266.1	50- 60	271.8	1335
70.0	189.4	176.3	182.0	176.8	181.8	197.3	189.9	197.1	60- 70	216.3	1551
80.0	90.10	79.40	83.40	79.59	83.80	97.00	90.80	96.80	70- 80	144.3	1696
90.0	8.600	6.000	8.500	6.100	4.900	8.900	5.700	8.700	80- 90	48.45	1744
100.0	7.600	6.000	7.600	6.000	4.300	6.800	4.200	6.700	90-100	7.130	1751
110.0	7.100	5.700	7.200	5.800	4.300	6.200	4.100	6.100	100-110	6.302	1758
120.0	6.800	5.600	6.900	5.600	4.700	5.900	4.500	5.900	110-120	5.735	1763
130.0	6.600	5.700	6.700	5.600	5.100	6.200	4.900	6.200	120-130	5.215	1769
140.0	6.400	5.800	6.500	5.700	5.300	6.300	5.100	6.300	130-140	4.600	1773
150.0	6.300	6.000	6.400	5.800	5.400	6.300	5.300	6.400	140-150	3.776	1777
160.0	6.300	6.000	6.300	5.900	5.600	6.200	5.400	6.300	150-160	2.797	1780
170.0	6.200	6.000	6.200	5.800	5.600	6.100	5.500	6.300	160-170	1.699	1781
180.0	5.800	5.600	5.900	5.600	5.700	5.900	5.600	5.900	170-180	0.558	1782
DEG	LUMINOUS INTENSITY: cd									UNIT: lm	

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

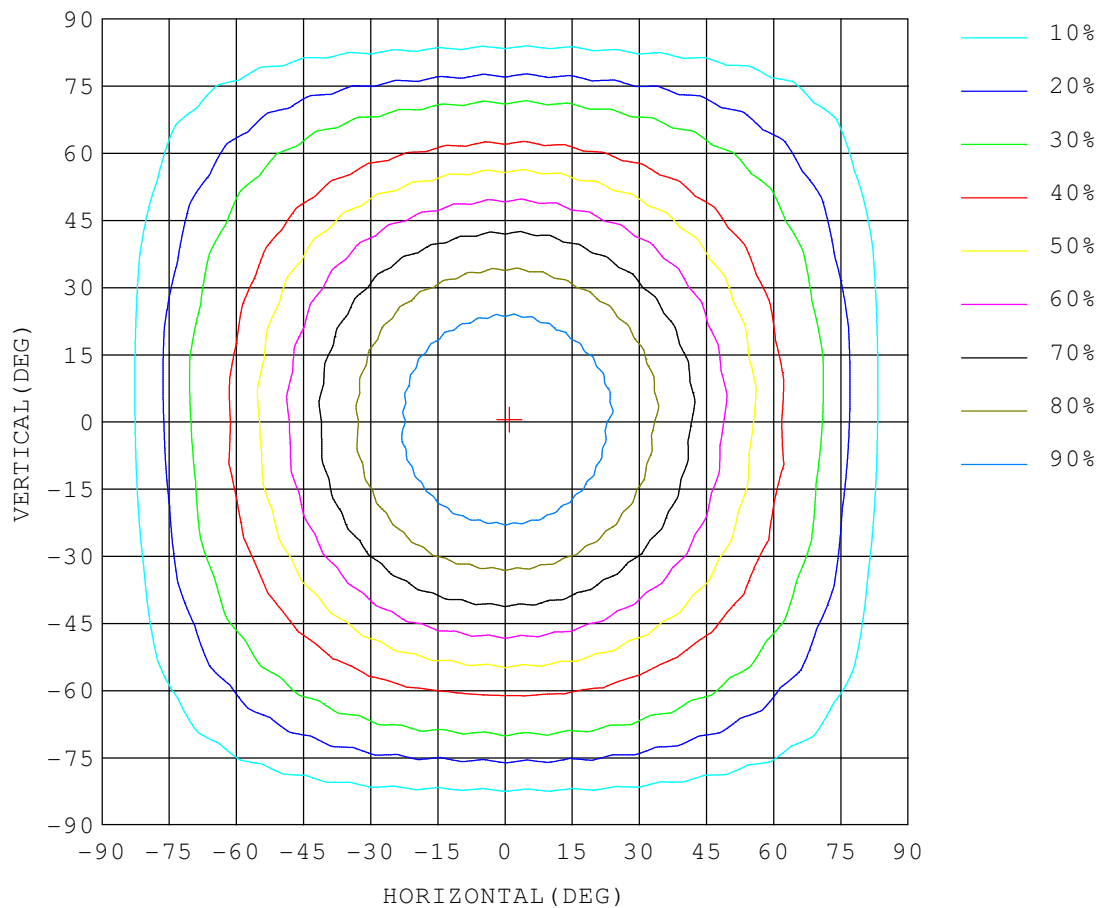
Test Set: 5.0 deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	SERIAL No.:

UNIT: cd



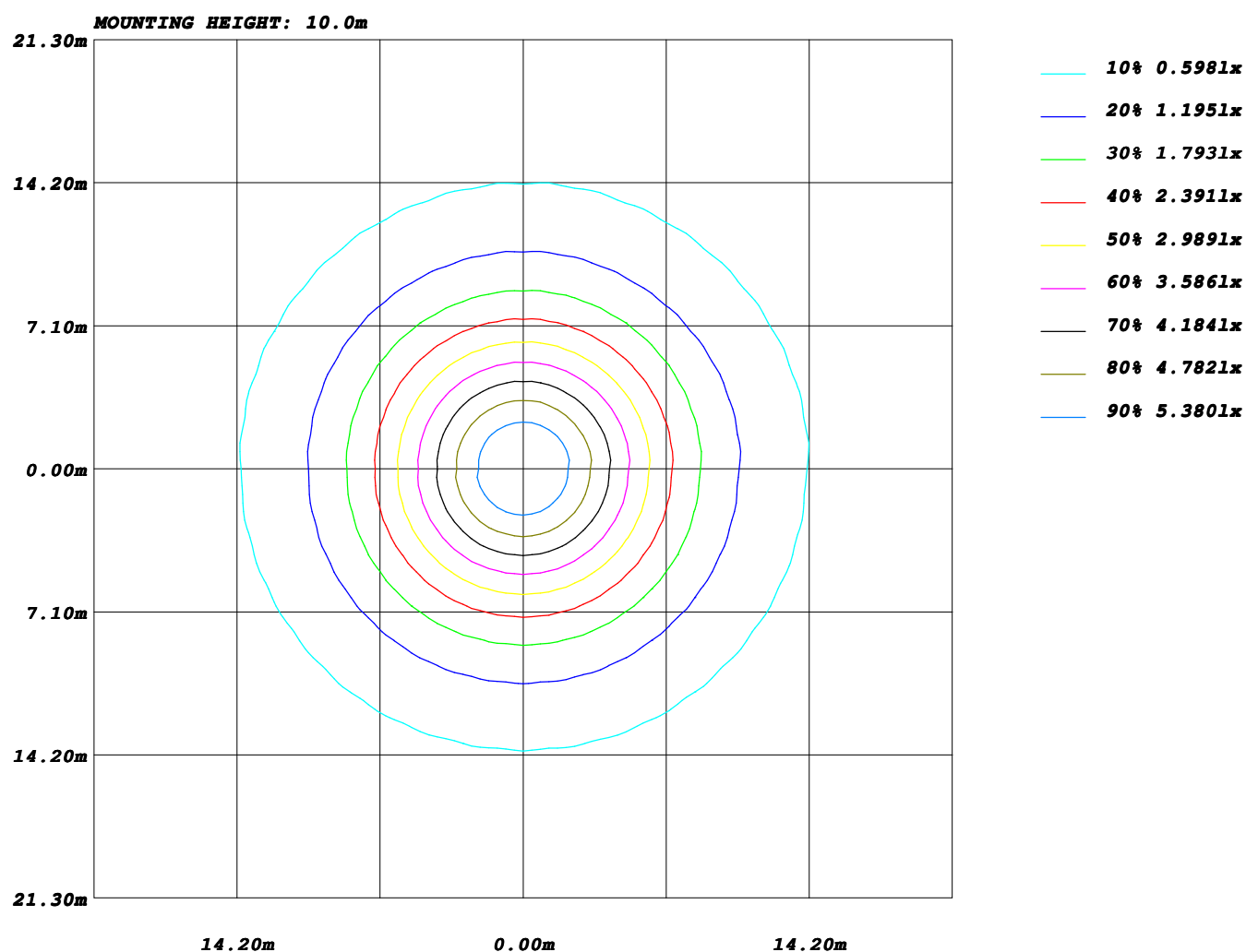
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

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

ISOLUX DIAGRAM

Report number: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	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: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	SERIAL No.:

		AREA FLUX DIAGRAM																	UNIT:lm		Φ t	Φ a
		0.03	0.13	0.29	0.51	0.76	1.00	1.19	1.36	1.46	1.48	1.40	1.20	1.00	0.76	0.53	0.32	0.14	0.03	13.6	5.09	
VERTICAL (DEG)	90	0.05	0.28	0.73	1.37	2.13	2.87	3.51	4.02	4.31	4.33	4.07	3.52	2.86	2.13	1.41	0.78	0.31	0.06	38.8	37.1	
	80	0.07	0.45	1.21	2.30	3.57	4.71	5.59	6.27	6.66	6.68	6.31	5.60	4.69	3.58	2.34	1.26	0.49	0.08	61.9	61.3	
	70	0.09	0.62	1.68	3.15	4.55	6.07	7.55	8.68	9.31	9.34	8.72	7.55	6.06	4.57	3.19	1.74	0.66	0.10	83.7	83.3	
	60	0.11	0.77	2.10	3.68	5.62	7.79	9.72	11.1	11.9	12.0	11.2	9.71	7.80	5.66	3.73	2.16	0.81	0.12	106	106	
	50	0.13	0.89	2.40	4.22	6.69	9.29	11.6	13.3	14.2	14.2	13.3	11.6	9.32	6.76	4.29	2.47	0.94	0.14	126	126	
	40	0.14	1.01	2.57	4.75	7.55	10.4	13.0	15.0	16.0	16.1	15.0	13.1	10.5	7.65	4.85	2.63	1.05	0.15	142	142	
	30	0.14	1.09	2.72	5.09	8.12	11.2	14.0	16.1	17.3	17.3	16.2	14.1	11.3	8.25	5.20	2.79	1.13	0.16	153	153	
	20	0.15	1.09	2.78	5.29	8.39	11.6	14.5	16.7	17.9	18.0	16.8	14.6	11.7	8.54	5.41	2.84	1.14	0.16	158	158	
	10	0.14	1.06	2.80	5.19	8.34	11.6	14.5	16.7	17.9	17.9	16.7	14.5	11.6	8.37	5.25	2.84	1.11	0.16	157	157	
	0	0.14	1.01	2.72	5.04	8.04	11.1	14.0	16.1	17.2	17.2	16.0	13.9	11.1	8.05	5.07	2.77	1.05	0.15	151	151	
	-10	0.12	0.95	2.57	4.65	7.41	10.3	12.9	14.9	15.9	15.9	14.8	12.9	10.3	7.43	4.68	2.61	0.98	0.14	140	140	
	-20	0.11	0.86	2.33	4.14	6.52	9.08	11.4	13.1	14.0	14.0	13.1	11.3	9.06	6.53	4.17	2.37	0.89	0.12	123	123	
	-30	0.09	0.72	2.00	3.64	5.46	7.54	9.49	10.8	11.6	11.6	10.9	9.45	7.52	5.47	3.67	2.04	0.75	0.10	103	103	
	-40	0.08	0.56	1.57	2.99	4.48	5.94	7.30	8.33	8.92	8.95	8.37	7.28	5.91	4.48	3.02	1.61	0.59	0.09	80.5	80.1	
	-50	0.06	0.39	1.09	2.11	3.31	4.49	5.46	6.08	6.43	6.45	6.13	5.46	4.47	3.32	2.14	1.13	0.42	0.07	59.0	58.3	
	-60	0.04	0.24	0.62	1.20	1.89	2.60	3.21	3.63	3.87	3.90	3.68	3.23	2.58	1.89	1.22	0.66	0.26	0.05	34.8	32.5	
	-70	0.03	0.12	0.25	0.42	0.63	0.84	1.01	1.12	1.18	1.20	1.15	1.02	0.83	0.62	0.43	0.27	0.13	0.03	11.3	2.55	
-80																						
-90																						
HORIZONTAL (DEG)																						
Φ t	1.71	12.2	32.5	59.8	93.5	129	160	184	197	197	184	160	129	94.1	60.6	33.3	12.8	1.90	1782			
Φ a	0.55	10.7	31.1	58.4	92.1	127	159	182	195	196	183	159	127	92.7	59.3	31.9	11.4	0.72		1723		

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

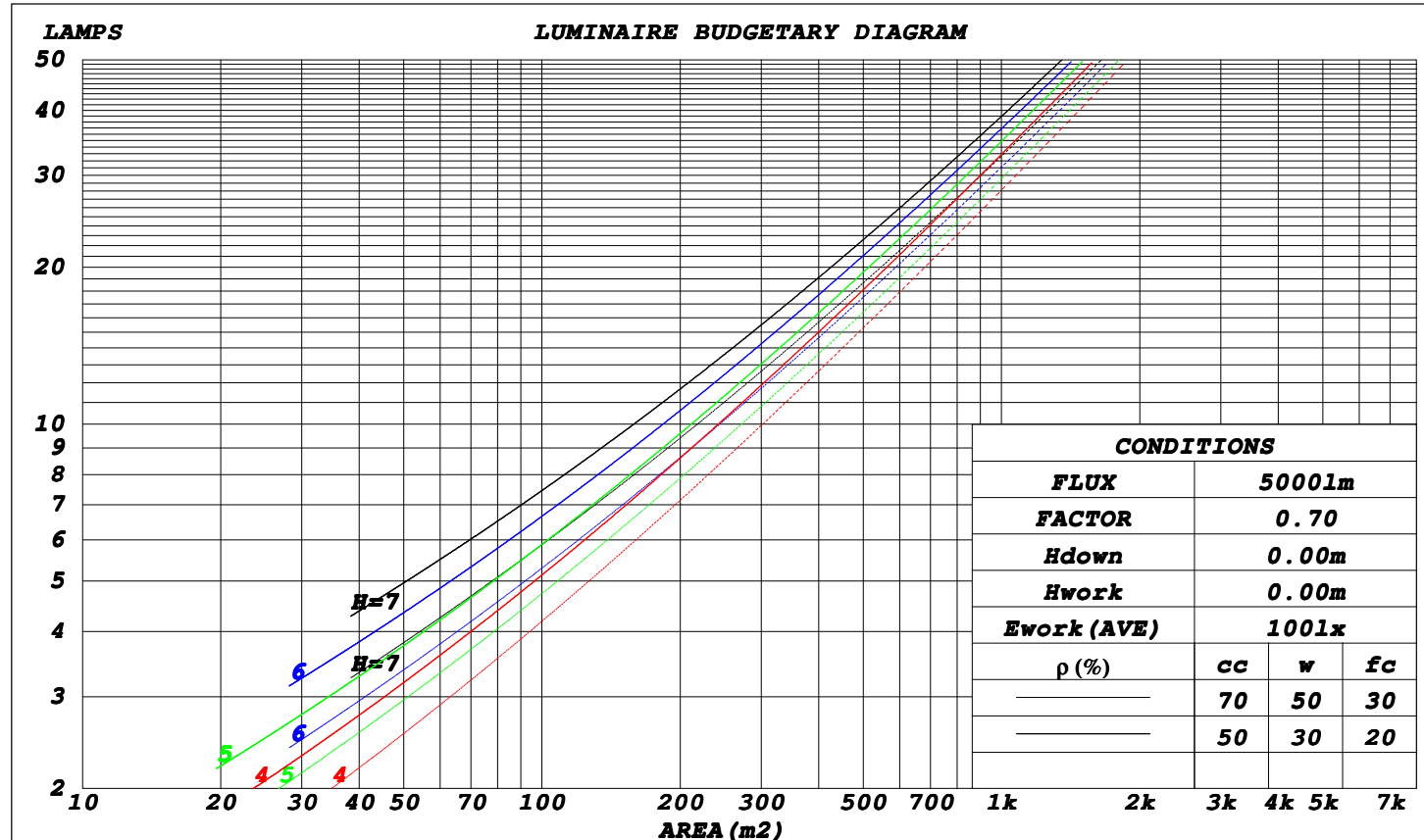
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)		
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:	
SPECIFICATION: wall	DIMENSION: 1000x1000x21	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	.81	.75	.83	.78	.73	.79	.75	.71	.76	.72	.69	.67
3.0	.78	.70	.63	.76	.69	.62	.73	.66	.61	.70	.64	.60	.67	.62	.58	.56
4.0	.69	.60	.53	.68	.59	.53	.65	.57	.52	.62	.56	.51	.60	.54	.50	.48
5.0	.62	.52	.46	.60	.52	.45	.58	.50	.45	.56	.49	.44	.54	.48	.43	.41
6.0	.55	.46	.40	.54	.46	.40	.52	.45	.39	.50	.44	.39	.49	.43	.38	.36
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.35	.46	.39	.34	.44	.38	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.35	.31	.41	.35	.30	.28
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.25
10.0	.39	.31	.26	.38	.31	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



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: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)					
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall			WEIGHT:		
SPECIFICATION: wall	DIMENSION: 1000x1000x21			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	.324	.184	.058	.316	.180	.057	.301	.173	.055	.288	.166	.053	.276	.160	.052	
2.0	.300	.164	.050	.293	.161	.050	.280	.156	.048	.268	.151	.047	.257	.146	.046	
3.0	.275	.146	.044	.269	.144	.043	.258	.140	.042	.247	.135	.042	.237	.131	.041	
4.0	.253	.131	.039	.247	.129	.038	.237	.126	.038	.228	.122	.037	.219	.119	.036	
5.0	.233	.119	.034	.228	.117	.034	.219	.114	.034	.210	.111	.033	.202	.108	.033	
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.195	.101	.030	.188	.099	.029	
7.0	.200	.099	.028	.196	.098	.028	.189	.095	.027	.182	.093	.027	.176	.091	.027	
8.0	.186	.091	.026	.183	.090	.025	.176	.088	.025	.170	.086	.025	.165	.084	.025	
9.0	.175	.084	.024	.171	.084	.023	.166	.082	.023	.160	.080	.023	.155	.079	.023	
10.0	.164	.079	.022	.161	.078	.022	.156	.076	.022	.151	.075	.021	.146	.073	.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	.207	.207	.207	.177	.177	.177	.121	.121	.121	.069	.069	.069	.022	.022	.022	
1.0	.198	.172	.150	.169	.148	.129	.116	.102	.089	.067	.059	.052	.021	.019	.017	
2.0	.190	.148	.113	.163	.128	.098	.111	.088	.068	.064	.051	.040	.021	.017	.013	
3.0	.182	.131	.090	.156	.113	.078	.107	.078	.055	.062	.046	.032	.020	.015	.011	
4.0	.174	.118	.074	.150	.102	.065	.103	.071	.045	.059	.041	.027	.019	.014	.009	
5.0	.167	.107	.063	.143	.093	.055	.099	.065	.039	.057	.038	.023	.018	.012	.008	
6.0	.159	.099	.056	.137	.086	.048	.095	.060	.034	.055	.035	.020	.018	.012	.007	
7.0	.153	.092	.050	.131	.080	.043	.091	.056	.031	.053	.033	.018	.017	.011	.006	
8.0	.146	.086	.045	.126	.075	.040	.087	.053	.028	.051	.031	.017	.016	.010	.006	
9.0	.140	.081	.042	.121	.071	.037	.084	.050	.026	.049	.029	.015	.016	.010	.005	
10.0	.134	.077	.039	.116	.067	.034	.080	.047	.024	.047	.028	.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: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)			
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall		WEIGHT:	
SPECIFICATION: wall	DIMENSION: 1000x1000x21		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	18.3	19.8	18.6	20.1	20.3	18.3	19.8	18.6	20.0	20.3
3H	20.3	21.6	20.6	21.9	22.2	20.1	21.5	20.5	21.8	22.1
4H	21.0	22.3	21.4	22.6	22.9	20.9	22.2	21.2	22.5	22.8
6H	21.6	22.8	22.0	23.2	23.5	21.4	22.6	21.8	23.0	23.3
8H	21.7	23.0	22.1	23.3	23.6	21.5	22.7	21.9	23.0	23.4
12H	21.9	23.0	22.3	23.4	23.7	21.6	22.8	22.0	23.1	23.4
4H 2H	19.0	20.3	19.4	20.6	20.9	19.0	20.3	19.3	20.6	20.9
3H	21.1	22.3	21.5	22.6	23.0	21.0	22.2	21.4	22.5	22.9
4H	22.0	23.1	22.4	23.4	23.8	21.9	22.9	22.3	23.3	23.7
6H	22.7	23.6	23.1	24.0	24.4	22.5	23.5	23.0	23.9	24.3
8H	22.9	23.8	23.3	24.2	24.6	22.7	23.6	23.1	24.0	24.4
12H	23.1	23.9	23.5	24.3	24.8	22.8	23.6	23.3	24.1	24.5
8H 4H	22.3	23.2	22.7	23.6	24.0	22.2	23.1	22.6	23.5	23.9
6H	23.1	23.9	23.6	24.3	24.8	23.0	23.7	23.5	24.2	24.6
8H	23.4	24.1	23.9	24.5	25.0	23.2	23.9	23.7	24.4	24.9
12H	23.7	24.2	24.2	24.7	25.2	23.4	24.0	24.0	24.5	25.0
12H 4H	22.3	23.1	22.8	23.6	24.0	22.2	23.0	22.7	23.5	23.9
6H	23.2	23.8	23.7	24.3	24.8	23.0	23.7	23.5	24.2	24.7
8H	23.5	24.1	24.0	24.6	25.1	23.3	23.9	23.8	24.4	24.9

Variations with the observer position at spacings:

S = 1.0H	+ 0.2 / - 0.1	+ 0.2 / - 0.1
1.5H	+ 0.1 / - 0.2	+ 0.1 / - 0.2
2.0H	+ 0.2 / - 0.4	+ 0.2 / - 0.5

CIE Pub.117 Corrected 1782 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.0)

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

Test Set: 5.0deg/s C-Gamma (TYPE C)
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 Remarks:

UTILIZATION FACTORS TABLE

Report number: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	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) $k(RI) \times RCR = 5$									
$k = 0.60$	56	45	38	56	44	38	54	44	37	31
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	62	55	71	64	55	47
1.25	82	71	63	80	70	63	77	68	62	54
1.50	87	76	69	85	75	69	81	73	67	59
2.00	93	85	78	91	83	77	88	81	75	67
2.50	97	89	83	95	88	82	91	85	80	71
3.00	101	94	88	98	92	87	94	89	84	75
4.00	105	99	94	102	97	92	98	93	90	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		

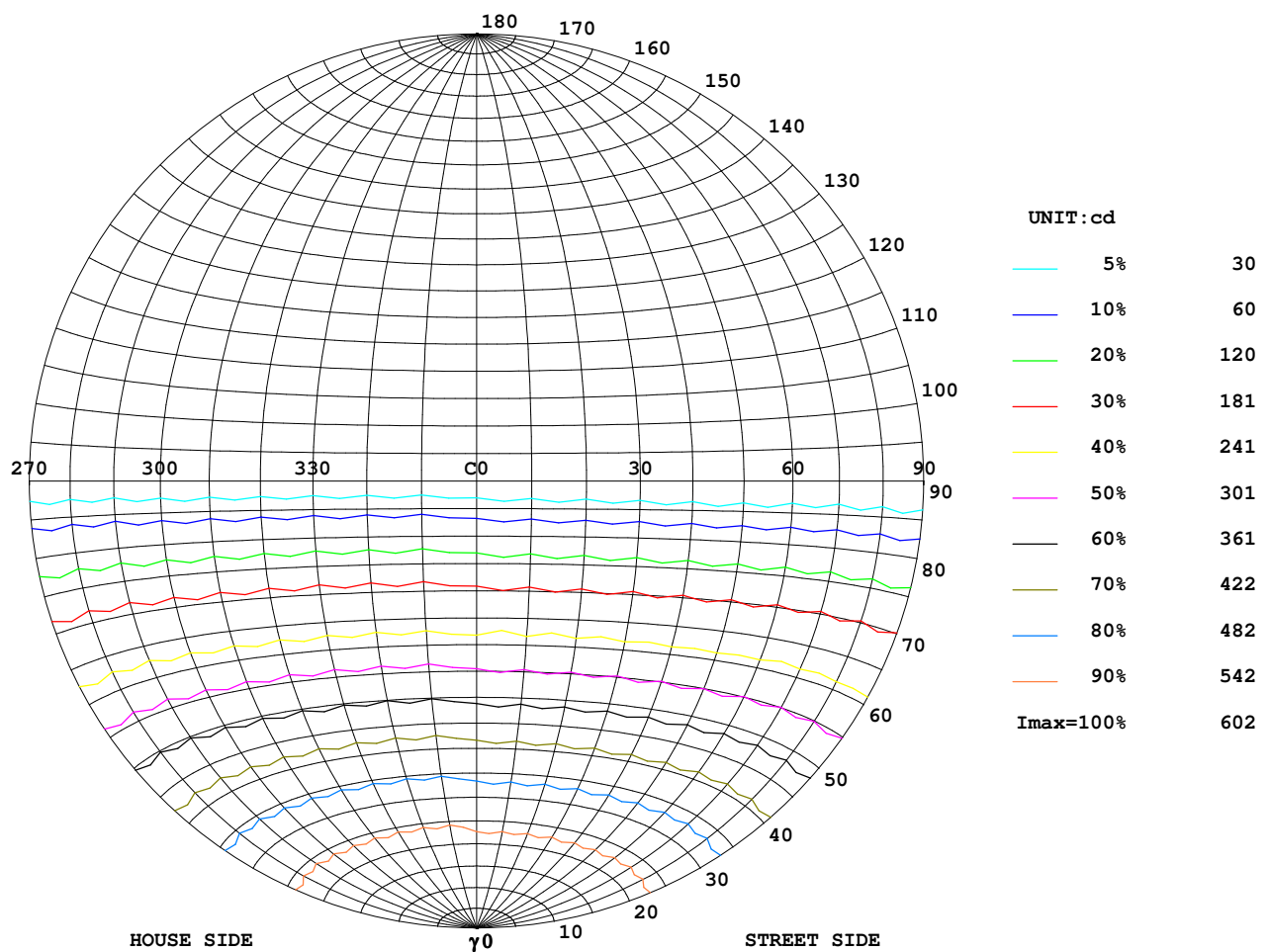
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

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

ISOCANDELA DIAGRAM

Report number: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	SERIAL No.:



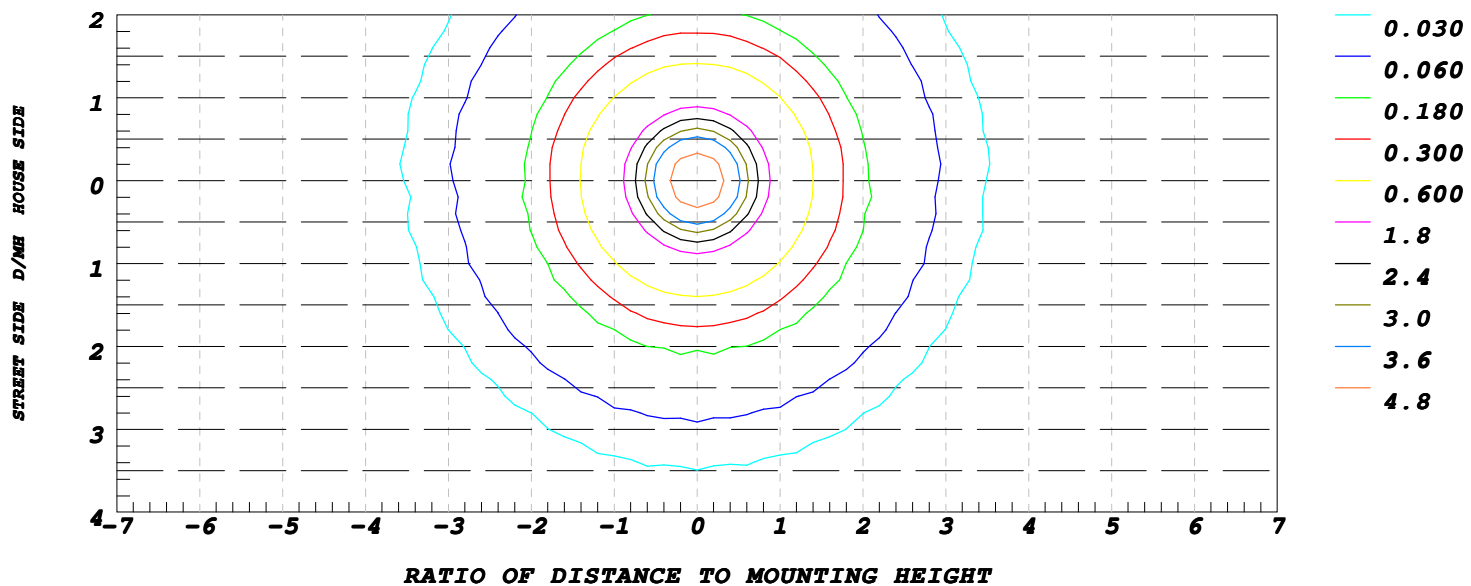
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

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

ISOLUX DIAGRAM

Report number: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 5.96 lx

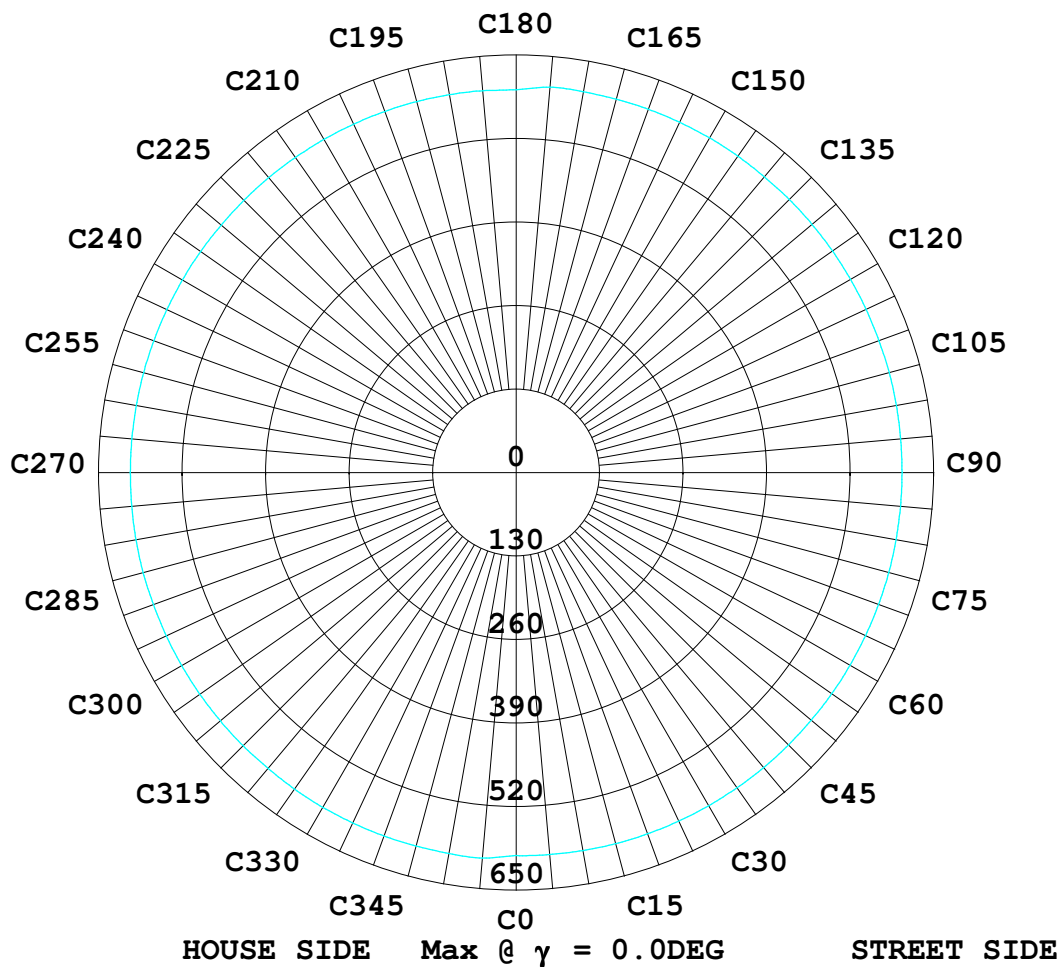
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

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

ISOCANDELA DIAGRAM

Report number: GO2018-057

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLUOD_28W_1000x1000m	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 1000x1000x21	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: