

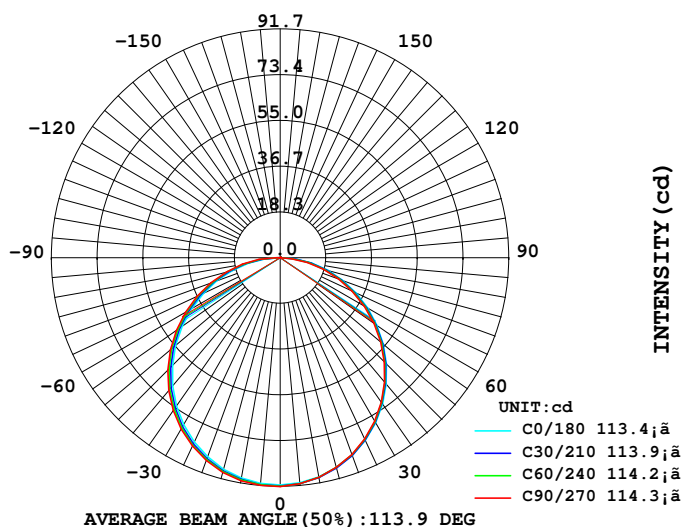
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number: GO2018-059

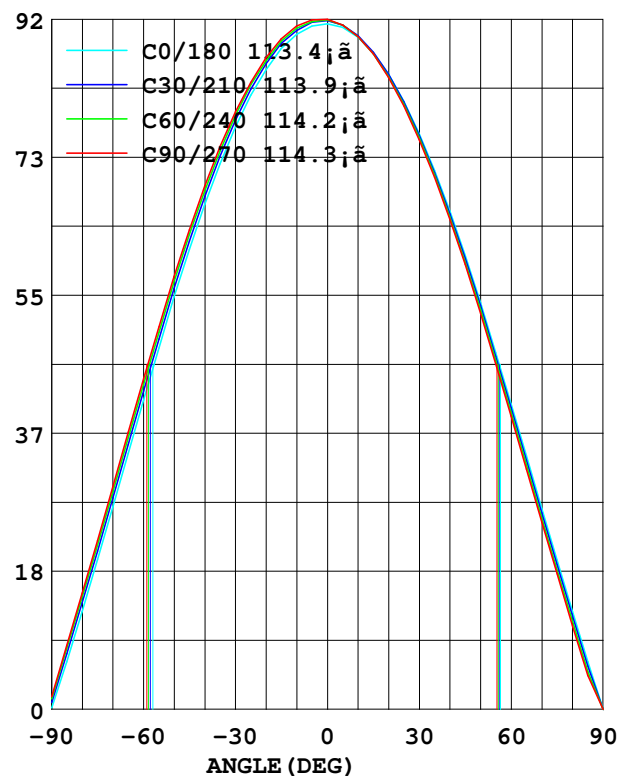
MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	SERIAL No.:

DATA OF LAMP		Imax(cd)	91.90	S/MH (C0/180)	1.26
MODEL	MAGIC CLOUD_4.5W_1.0x1.0ft	EFFICIENCY(%)	100.0	S/MH (C90/270)	1.29
NOMINAL POWER(W)	4.1	TOTAL FLUX(lm)	270.14	Voltage(V)	24.00
RATED VOLTAGE(V)	24	EFFICIENCY(lm/W)	65.9	Current(A)	0.170
NOMINAL FLUX(lm)	270.1	η up(%)	0.1	Power(W)	4.100
LAMPS QUANTITY	1	η down(%)	99.9	Power Factor(PF)	1.000
TEST VOLTAGE(V)	24.0	Effective Flux(lm)	266.8	EEI	0.172

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: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	89.70	89.90	90.80	90.30	89.30	90.00	89.40	90.10	0- 10	8.671	8.671
20.0	85.00	85.00	86.59	85.79	84.40	85.29	84.00	85.19	10- 20	24.84	33.51
30.0	77.40	77.20	79.40	78.19	76.50	77.70	75.70	77.40	20- 30	37.67	71.18
40.0	67.09	66.79	69.50	68.09	66.19	67.50	65.10	67.00	30- 40	45.45	116.6
50.0	54.79	54.40	57.50	56.00	54.00	55.40	52.60	54.70	40- 50	47.29	163.9
60.0	41.10	40.79	43.90	42.39	40.59	41.80	39.00	41.00	50- 60	43.18	207.1
70.0	26.90	26.69	29.60	28.20	26.69	27.59	24.90	26.69	60- 70	33.97	241.1
80.0	13.00	13.09	15.40	14.30	13.00	13.60	11.10	12.70	70- 80	21.34	262.4
90.0	0.200	0.100	1.700	0.900	0	0.400	0	0.400	80- 90	7.354	269.8
100.0	0	0	0.100	0	0	0.100	0	0.200	90-100	0.227	270.0
110.0	0	0	0	0	0	0	0	0.100	100-110	0.054	270.0
120.0	0	0	0	0	0	0	0	0.100	110-120	0.029	270.1
130.0	0	0	0	0	0	0.100	0	0	120-130	0.015	270.1
140.0	0	0	0	0	0	0	0	0	130-140	0.005	270.1
150.0	0	0	0	0	0	0	0	0	140-150	0.000	270.1
160.0	0	0	0	0	0	0	0	0	150-160	0	270.1
170.0	0	0	0	0	0	0	0	0	160-170	0	270.1
180.0	0	0	0	0	0	0	0	0	170-180	0	270.1
DEG	LUMINOUS INTENSITY: cd									UNIT: lm	

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

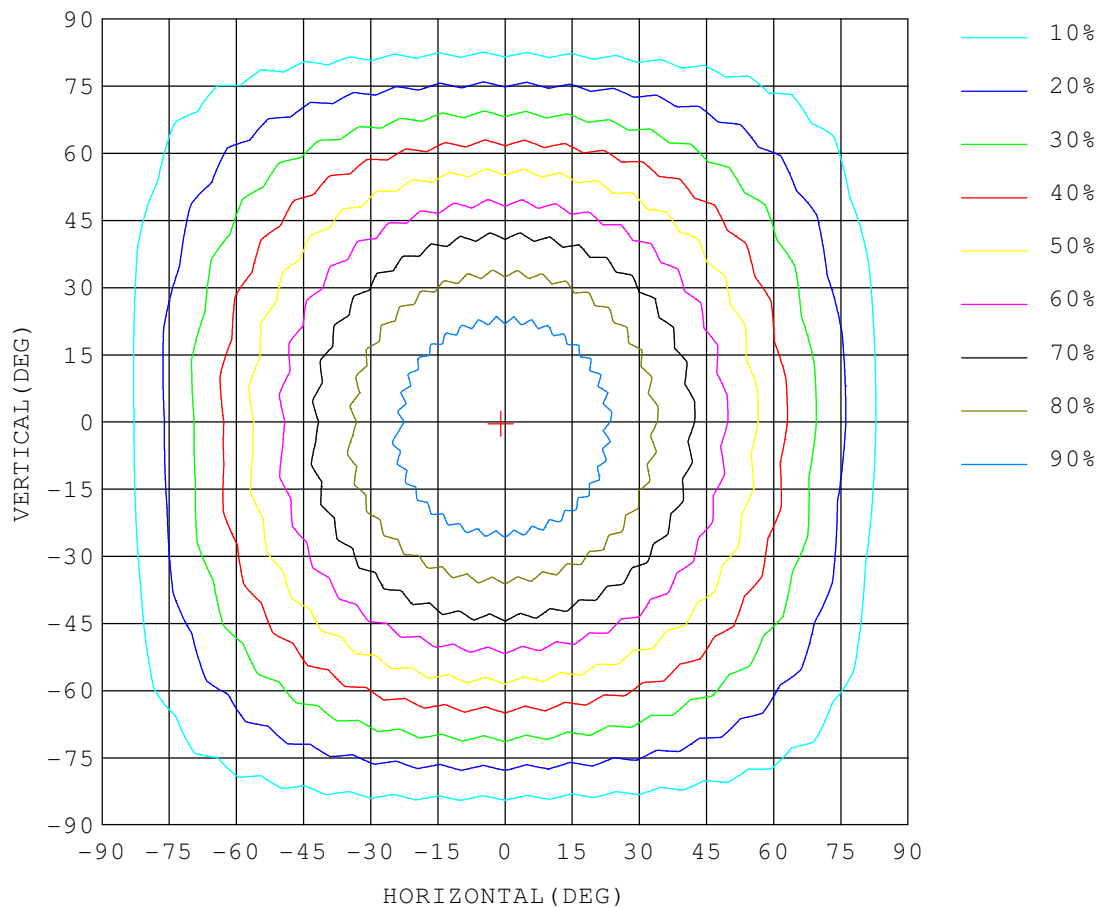
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 10.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	SERIAL No.:

UNIT: cd



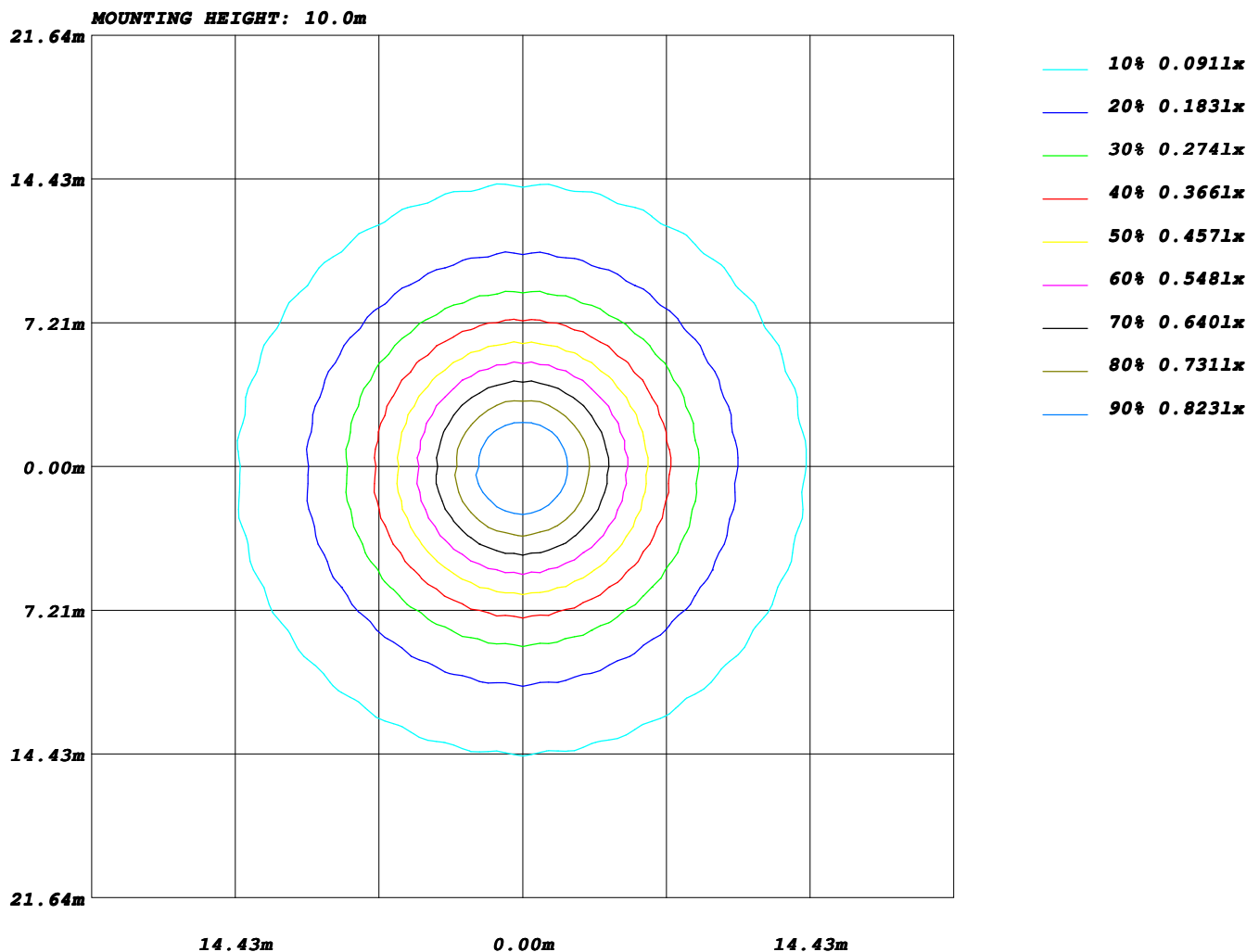
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

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

ISOLUX DIAGRAM

Report number: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	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: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	SERIAL No.:

VERTICAL (DEG)	AREA FLUX DIAGRAM																	UNIT:lm		Φ t	Φ a
	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90		
VERTICAL (DEG)	90	0.00	0.02	0.04	0.07	0.10	0.12	0.15	0.16	0.17	0.17	0.16	0.14	0.11	0.08	0.05	0.03	0.01	0.00	1.56	0.34
	80	0.01	0.04	0.11	0.19	0.29	0.39	0.48	0.54	0.57	0.57	0.53	0.46	0.37	0.27	0.18	0.09	0.03	0.01	5.13	4.78
	70	0.01	0.07	0.18	0.33	0.50	0.67	0.82	0.93	0.99	0.99	0.93	0.81	0.65	0.48	0.31	0.16	0.06	0.01	8.88	8.78
	60	0.01	0.09	0.24	0.45	0.70	0.94	1.16	1.32	1.41	1.40	1.32	1.15	0.93	0.67	0.43	0.23	0.08	0.01	12.5	12.5
	50	0.02	0.11	0.31	0.57	0.88	1.19	1.48	1.69	1.80	1.80	1.69	1.46	1.17	0.86	0.55	0.29	0.10	0.02	16.0	16.0
	40	0.02	0.13	0.36	0.67	1.04	1.42	1.76	2.01	2.15	2.15	2.00	1.75	1.40	1.01	0.65	0.35	0.12	0.02	19.0	19.0
	30	0.02	0.15	0.40	0.76	1.17	1.60	1.98	2.27	2.43	2.43	2.27	1.97	1.58	1.15	0.74	0.38	0.14	0.02	21.4	21.4
		0.02	0.17	0.43	0.81	1.26	1.72	2.14	2.46	2.63	2.63	2.45	2.13	1.71	1.24	0.79	0.42	0.16	0.02	23.2	23.2
		0.02	0.16	0.45	0.85	1.31	1.79	2.22	2.55	2.73	2.73	2.55	2.22	1.78	1.30	0.84	0.44	0.16	0.02	24.1	24.1
		0.02	0.16	0.44	0.84	1.31	1.81	2.25	2.58	2.75	2.74	2.55	2.22	1.78	1.29	0.82	0.43	0.16	0.02	24.2	24.1
		0.02	0.16	0.44	0.84	1.29	1.76	2.19	2.50	2.67	2.66	2.48	2.15	1.72	1.25	0.80	0.41	0.15	0.02	23.5	23.5
	-30	0.02	0.15	0.42	0.78	1.20	1.65	2.04	2.33	2.49	2.48	2.31	2.01	1.61	1.17	0.74	0.39	0.14	0.02	22.0	21.9
	-40	0.02	0.14	0.37	0.70	1.08	1.48	1.83	2.09	2.22	2.21	2.07	1.79	1.44	1.05	0.67	0.35	0.13	0.02	19.7	19.6
	-50	0.02	0.12	0.32	0.60	0.93	1.26	1.56	1.77	1.89	1.88	1.75	1.52	1.22	0.89	0.57	0.30	0.11	0.01	16.7	16.7
	-60	0.01	0.10	0.26	0.49	0.75	1.01	1.24	1.41	1.50	1.49	1.39	1.21	0.97	0.71	0.46	0.24	0.09	0.01	13.3	13.3
	-70	0.01	0.07	0.19	0.36	0.55	0.74	0.90	1.02	1.08	1.07	1.00	0.87	0.70	0.51	0.33	0.18	0.06	0.01	9.68	9.59
-80	0.01	0.05	0.12	0.23	0.34	0.45	0.55	0.62	0.65	0.65	0.60	0.53	0.43	0.31	0.20	0.11	0.04	0.01	5.90	5.67	
-90	0.00	0.02	0.05	0.09	0.14	0.18	0.21	0.23	0.24	0.24	0.22	0.19	0.15	0.11	0.07	0.04	0.01	0.00	2.20	0.97	
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)					20	30	40	50	60	70	80	90
Φ t	0.28	1.93	5.14	9.61	14.8	20.2	25.0	28.5	30.4	30.3	28.3	24.6	19.7	14.3	9.20	4.83	1.77	0.25	270		
Φ a	0.11	1.73	4.94	9.41	14.6	20.0	24.8	28.3	30.2	30.1	28.1	24.4	19.5	14.1	8.99	4.62	1.54	0.08		267	

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

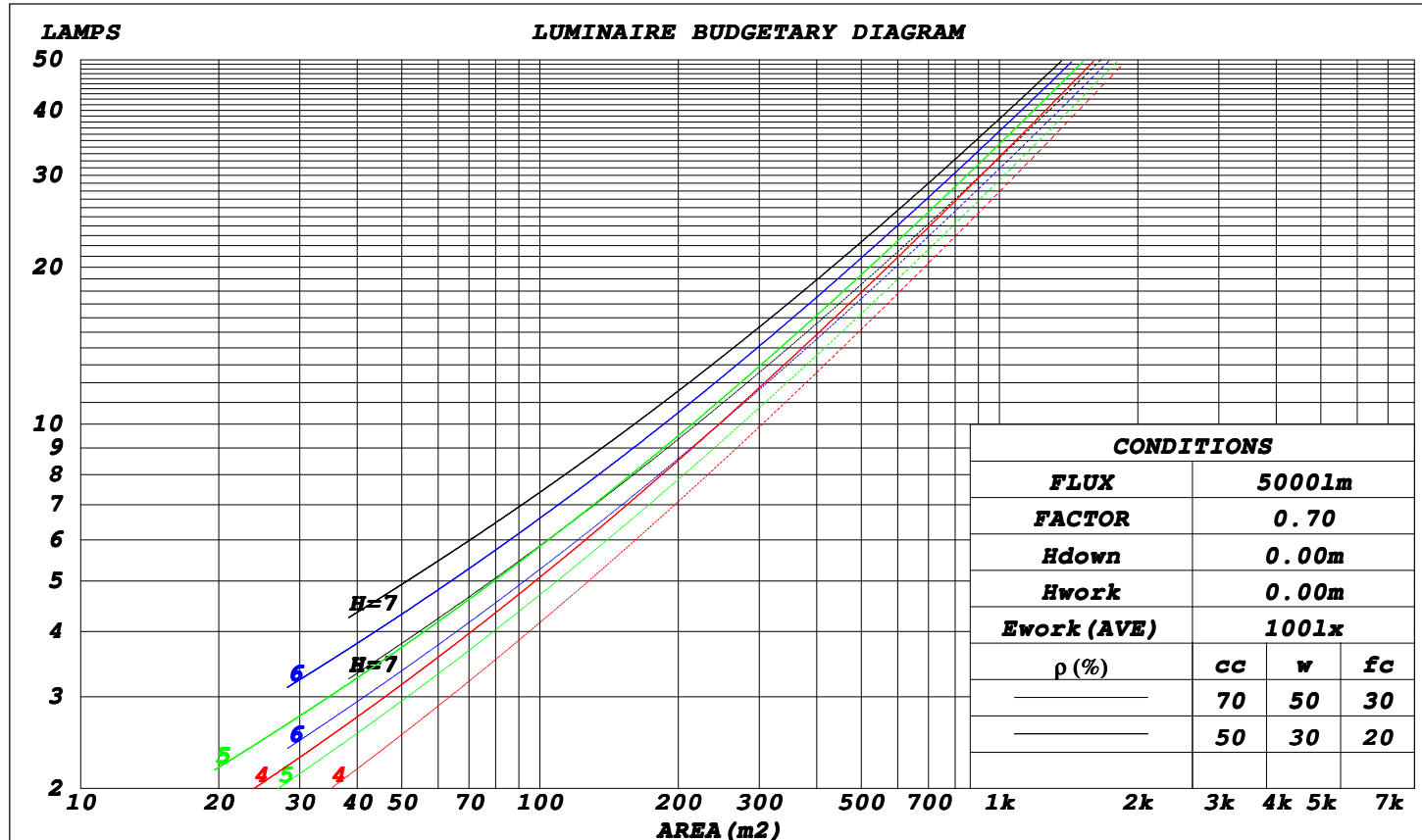
Test Set: 5.0 deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 10.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)				
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall			WEIGHT:	
SPECIFICATION: wall	DIMENSION: 305x305x21			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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.03	.99	.95	1.01	.97	.93	.97	.93	.90	.93	.90	.87	.89	.87	.85	.82
2.0	.90	.82	.76	.88	.81	.76	.84	.78	.74	.81	.76	.72	.78	.74	.70	.68
3.0	.78	.70	.63	.77	.69	.63	.74	.67	.62	.71	.65	.60	.68	.63	.59	.57
4.0	.69	.60	.53	.68	.60	.53	.65	.58	.52	.63	.57	.51	.61	.55	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.56	.50	.45	.55	.49	.44	.42
6.0	.56	.46	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.39	.37
7.0	.50	.41	.35	.50	.41	.35	.48	.40	.35	.47	.40	.35	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.43	.36	.31	.41	.35	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26
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: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)				
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall			WEIGHT:	
SPECIFICATION: wall	DIMENSION: 305x305x21			SERIAL No.:	

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															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.324	.184	.058	.317	.181	.057	.303	.174	.056	.291	.168	.054	.280	.162	.052															
2.0	.301	.165	.051	.294	.162	.050	.283	.157	.049	.272	.152	.048	.261	.148	.047															
3.0	.276	.147	.044	.271	.145	.044	.260	.141	.043	.251	.137	.042	.242	.134	.041															
4.0	.254	.132	.039	.249	.130	.038	.240	.127	.038	.231	.124	.037	.223	.121	.037															
5.0	.234	.119	.035	.229	.118	.034	.221	.115	.034	.214	.113	.034	.206	.110	.033															
6.0	.216	.108	.031	.212	.107	.031	.205	.105	.031	.198	.103	.030	.192	.101	.030															
7.0	.201	.099	.028	.198	.098	.028	.191	.097	.028	.185	.095	.028	.179	.093	.027															
8.0	.187	.092	.026	.184	.091	.026	.179	.089	.025	.173	.088	.025	.168	.086	.025															
9.0	.175	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023															
10.0	.165	.079	.022	.162	.078	.022	.158	.077	.022	.153	.076	.022	.149	.075	.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	.191	.191	.191	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.182	.157	.134	.156	.135	.116	.107	.093	.080	.061	.054	.046	.020	.017	.015	
2.0	.174	.133	.098	.149	.114	.085	.102	.079	.059	.059	.046	.035	.019	.015	.011	
3.0	.167	.115	.074	.143	.099	.064	.098	.069	.045	.057	.040	.027	.018	.013	.009	
4.0	.159	.102	.059	.136	.088	.051	.094	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.151	.092	.048	.130	.079	.041	.090	.055	.029	.052	.033	.017	.017	.011	.006	
6.0	.144	.083	.040	.124	.072	.035	.085	.051	.024	.050	.030	.015	.016	.010	.005	
7.0	.137	.076	.034	.118	.066	.030	.082	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.131	.071	.029	.112	.061	.026	.078	.043	.018	.045	.025	.011	.015	.008	.004	
9.0	.125	.066	.026	.107	.057	.023	.074	.040	.016	.043	.024	.010	.014	.008	.003	
10.0	.119	.061	.023	.102	.053	.020	.071	.038	.014	.041	.022	.009	.013	.007	.003	

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: GO2018-059

MANUFACTURER: BACKLIGHT SRL						Address:Via Volta 5 – Ornago (MB)					
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft						TYPE:wall		WEIGHT:			
SPECIFICATION:wall						DIMENSION: 305x305x21		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	12.2	13.7	12.4	13.9	14.1	12.4	13.9	12.7	14.1	14.4	
	3H	13.8	15.2	14.1	15.4	15.7	14.1	15.5	14.4	15.8	16.0
	4H	14.5	15.8	14.8	16.1	16.3	14.9	16.2	15.2	16.5	16.7
	6H	15.0	16.3	15.3	16.5	16.8	15.5	16.8	15.8	17.1	17.3
	8H	15.2	16.4	15.5	16.7	17.0	15.7	17.0	16.1	17.3	17.6
	12H	15.3	16.5	15.6	16.8	17.1	15.9	17.1	16.3	17.4	17.7
4H 2H	12.8	14.2	13.2	14.5	14.7	13.0	14.4	13.3	14.6	14.9	
	3H	14.7	15.8	15.0	16.1	16.5	14.9	16.1	15.3	16.4	16.7
	4H	15.5	16.6	15.9	16.9	17.2	15.8	16.9	16.2	17.2	17.6
	6H	16.2	17.1	16.6	17.5	17.9	16.6	17.6	17.0	17.9	18.3
	8H	16.4	17.3	16.8	17.7	18.1	16.9	17.9	17.4	18.2	18.6
	12H	16.6	17.4	17.0	17.8	18.2	17.2	18.0	17.6	18.4	18.8
8H 4H	15.8	16.8	16.3	17.1	17.5	16.1	17.1	16.6	17.4	17.8	
	6H	16.7	17.5	17.2	17.9	18.3	17.1	17.9	17.6	18.3	18.7
	8H	17.1	17.7	17.5	18.2	18.6	17.6	18.2	18.0	18.7	19.1
	12H	17.3	17.9	17.8	18.4	18.8	17.9	18.5	18.4	18.9	19.4
12H 4H	15.9	16.7	16.3	17.1	17.5	16.2	17.0	16.6	17.4	17.8	
	6H	16.8	17.5	17.3	17.9	18.4	17.2	17.9	17.7	18.3	18.8
	8H	17.2	17.8	17.7	18.3	18.7	17.7	18.3	18.2	18.7	19.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / – 0.1					+ 0.1 / – 0.1					
1.5H	+ 0.2 / – 0.2					+ 0.2 / – 0.2					
2.0H	+ 0.2 / – 0.2					+ 0.1 / – 0.2					

CIE Pub.117 Corrected 270.1 lm Total Lamp Luminous Flux. ($8\log(F/F_0) = -4.5$)

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:

UTILIZATION FACTORS TABLE

Report number: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	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) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	38	31
0.80	67	55	47	66	54	47	64	54	47	40
1.00	75	64	56	74	63	56	72	65	55	48
1.25	82	71	64	81	71	64	78	69	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	79	92	84	78	89	82	76	68
2.50	98	90	84	96	89	83	92	86	81	72
3.00	101	94	89	99	93	88	95	90	85	77
4.00	106	100	95	103	98	93	99	94	91	82
5.00	108	103	99	106	101	97	101	97	94	85
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SERNOM = 1.25		

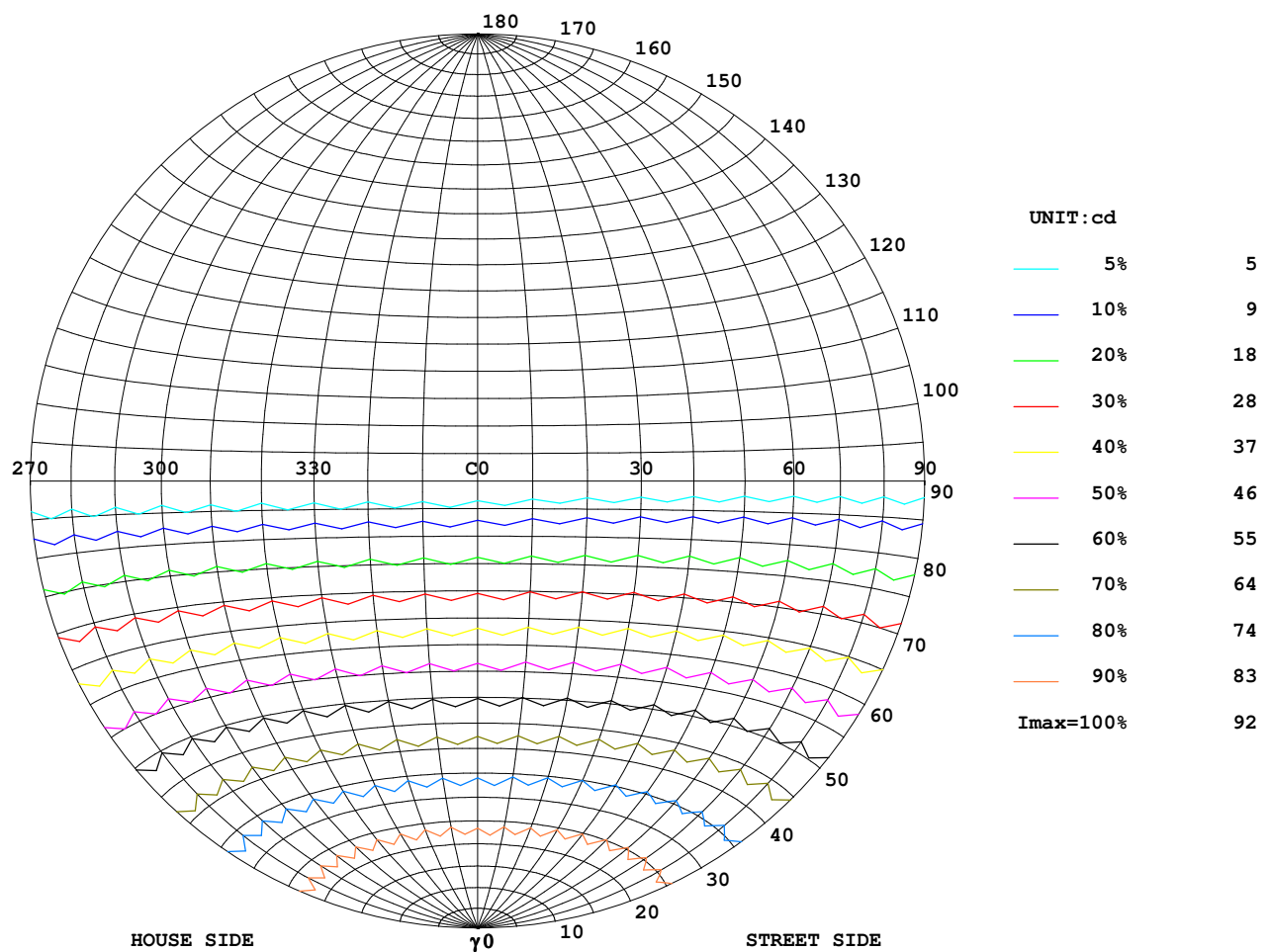
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

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

ISOCANDELA DIAGRAM

Report number: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	SERIAL No.:



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

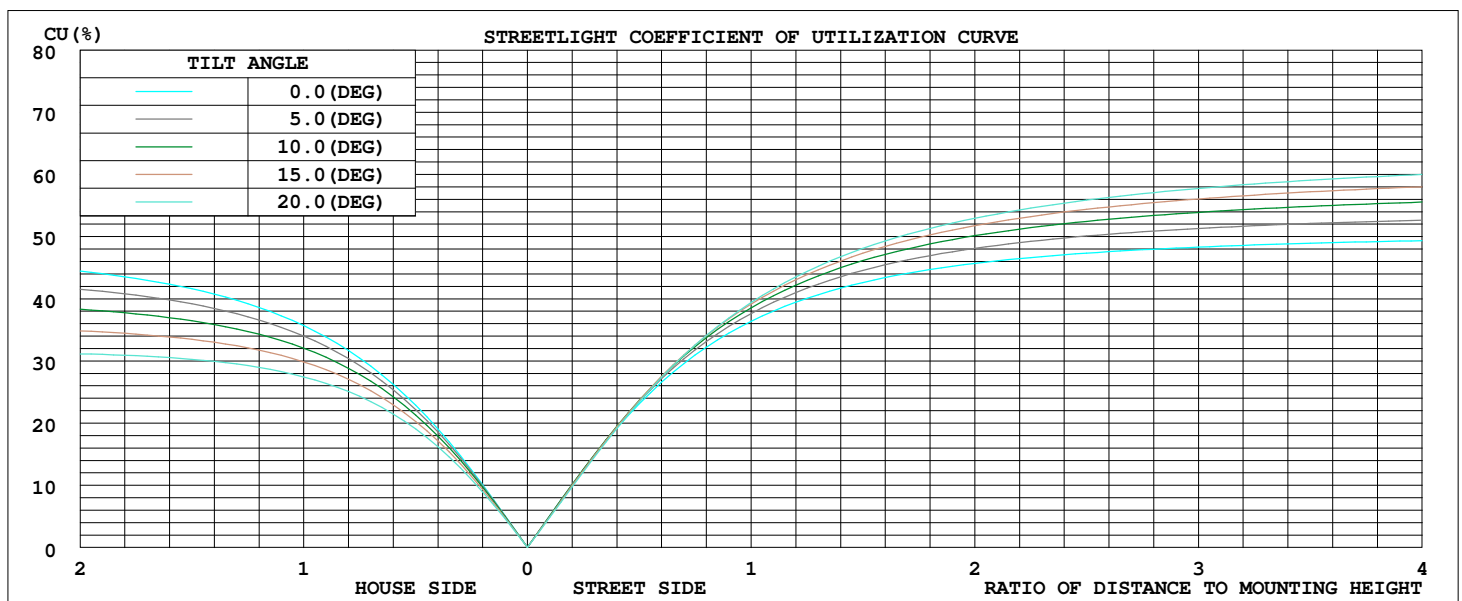
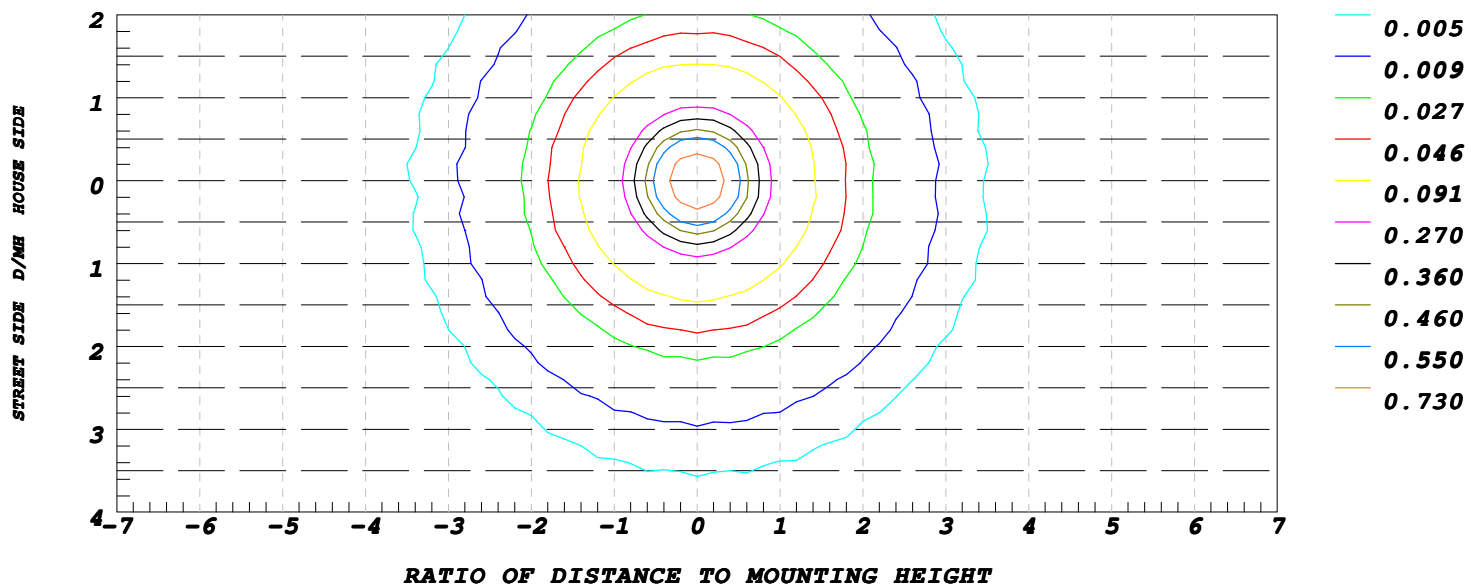
Test Set: 5.0 deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 10.000 m
 Remarks:

ISOLUX DIAGRAM

Report number: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 0.91 lx



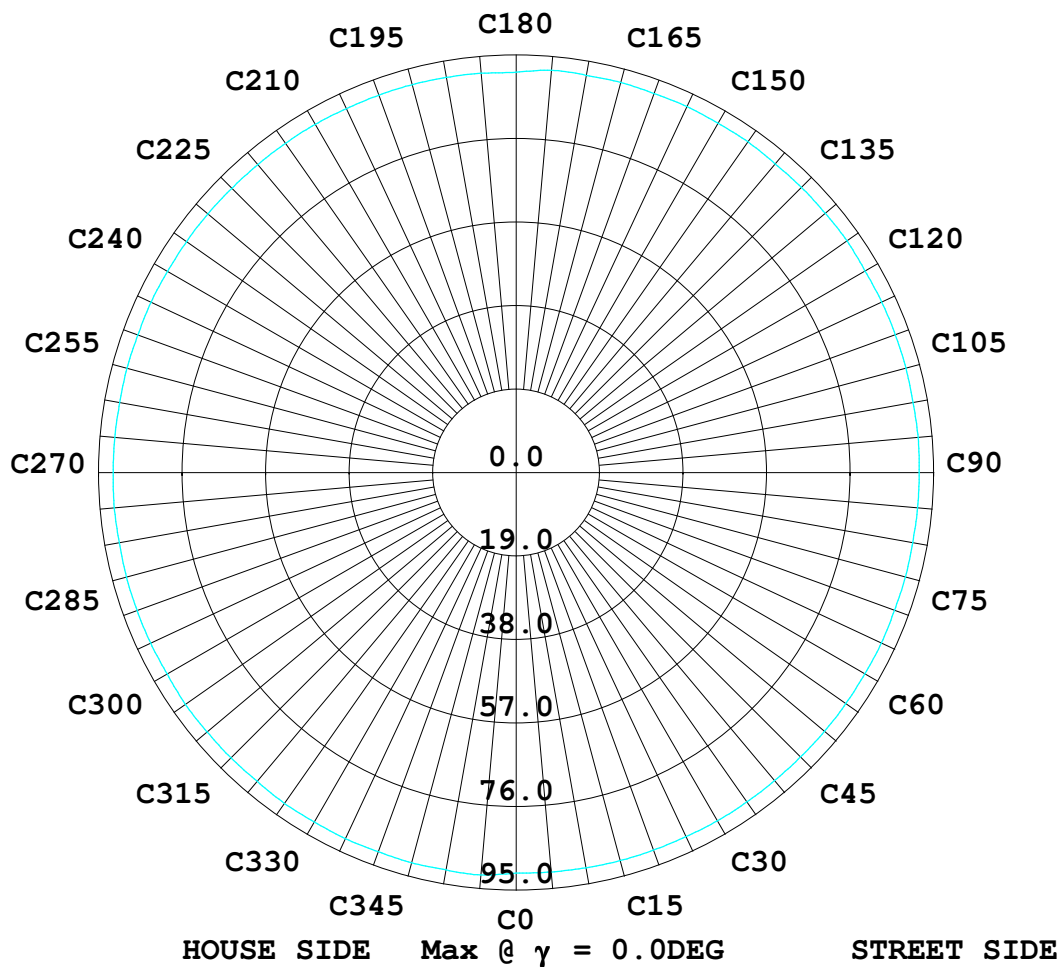
Test System: LSG-1800
Temperature: 25.3 DEG
Operators: G
Test Date: 03-06-2018

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

ISOCANDELA DIAGRAM

Report number: GO2018-059

MANUFACTURER: BACKLIGHT SRL	Address: Via Volta 5 - Ornago (MB)	
NAME: MAGIC CLOUD_4.5W_1.0x1.0ft	TYPE: wall	WEIGHT:
SPECIFICATION: wall	DIMENSION: 305x305x21	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: