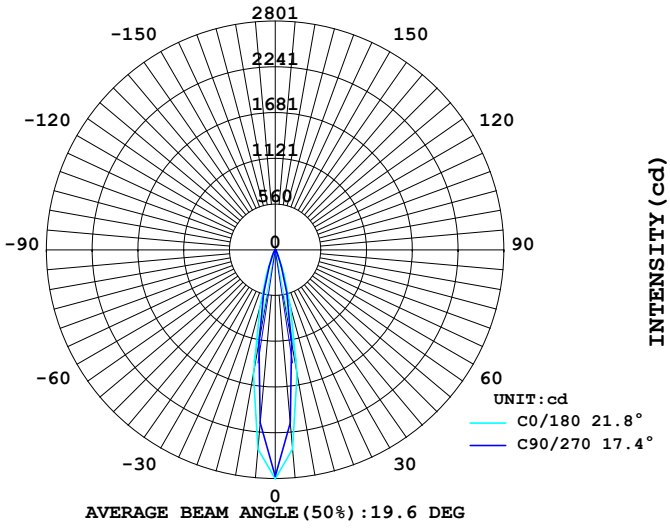
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

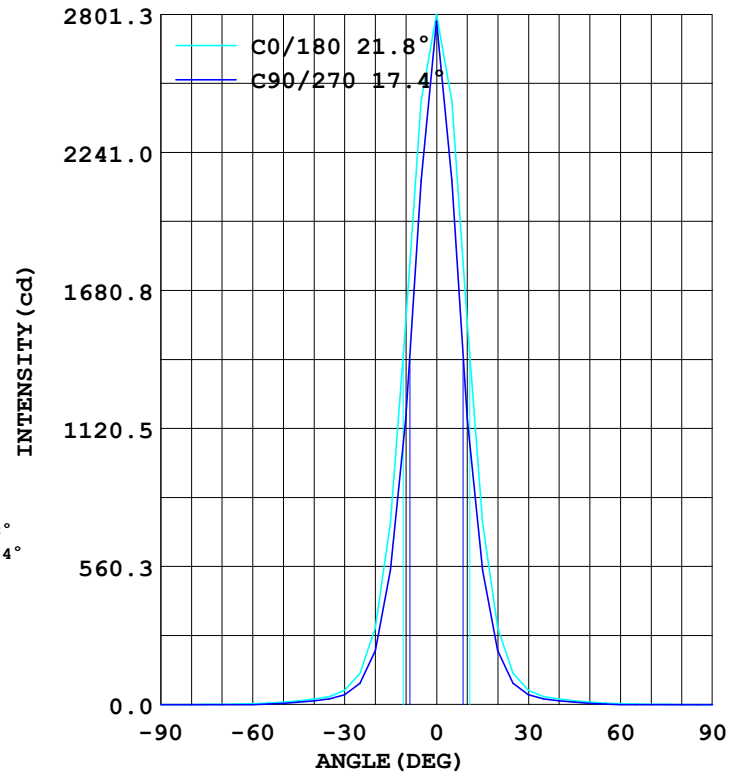
DATA OF LAMP		Imax(cd)	2801	S/MH(C0/180)	0.37
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	0.30
NOMINAL POWER(W)	7	TOTAL FLUX(lm)	476.48	Voltage(V)	230.3
RATED VOLTAGE(V)	230	EFFICIENCY(lm/W)	68.7	Current(A)	0.056
NOMINAL FLUX(lm)	476.5	η up(%)	0.0	Power(W)	6.940
LAMPS QUANTITY	1	η down(%)	100.0	Power Factor(PF)	0.540
TEST VOLTAGE(V)	230.3	Effictive Flux(lm)	384.3	EEI	0.000(E)

LUMINOUS INTENSITY DISTRIBUTION



AVERAGE BEAM ANGLE(50%):19.6 DEG

LUMINOUS INTENSITY DISTRIBUTION



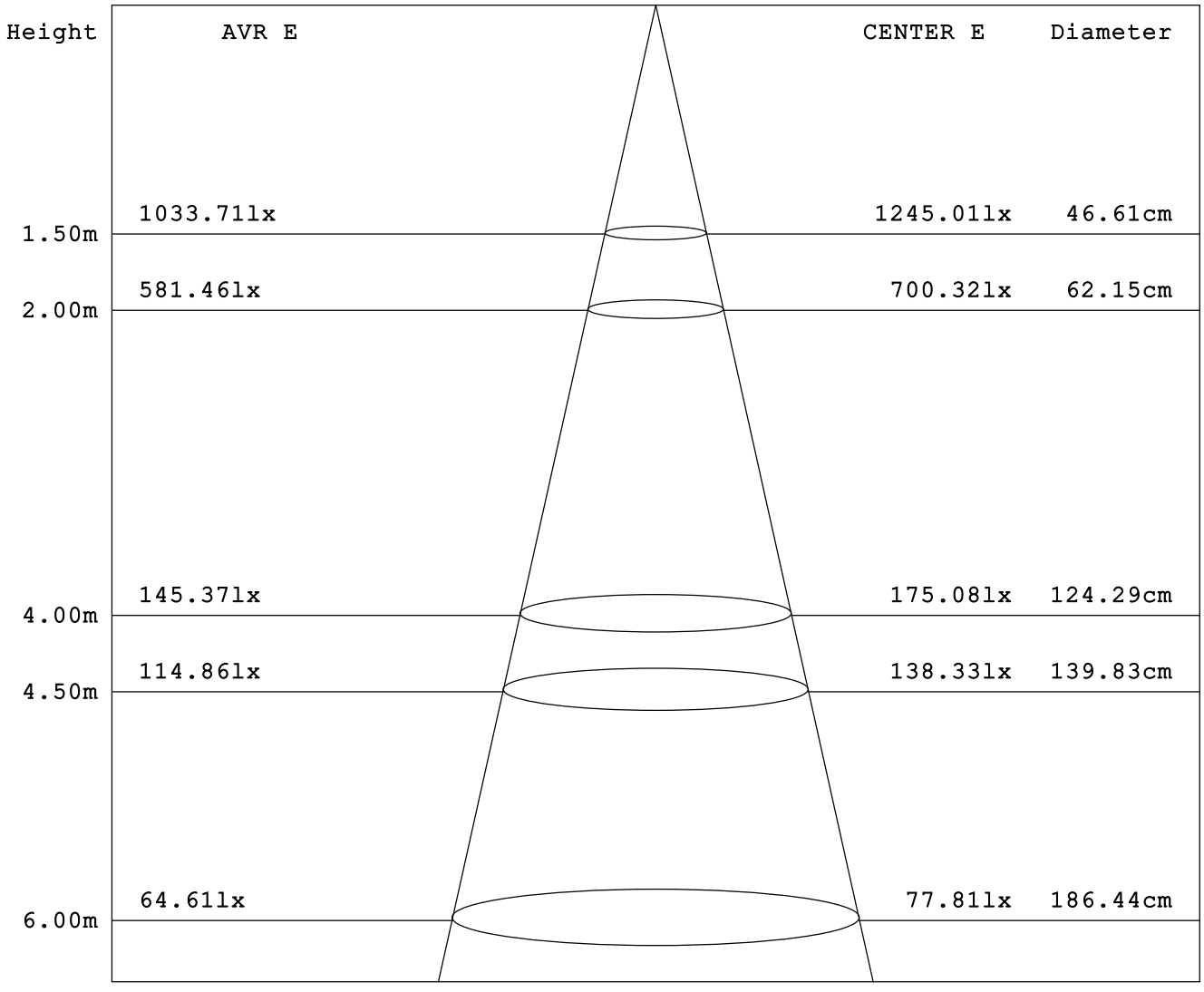
Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:
Test Date:09-08-2026

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.300 m
Remarks:

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



Angle:17.7deg

Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks:

ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

γ	C0	C90	C180	C270					γ	zone	total
10.0	1553	1161	1553	1161					0- 10	191.0	191.0
20.0	312.8	218.8	312.8	218.8					10- 20	193.2	384.3
30.0	57.17	40.09	57.17	40.09					20- 30	58.71	443.0
40.0	22.25	15.56	22.25	15.56					30- 40	19.05	462.1
50.0	9.506	5.097	9.506	5.097					40- 50	9.805	471.9
60.0	2.686	0	2.686	0					50- 60	3.505	475.4
70.0	0.964	0	0.964	0					60- 70	0.859	476.2
80.0	0	0	0	0					70- 80	0.199	476.4
90.0	0	0	0	0					80- 90	0	476.4
100.0									90-100		
110.0									100-110		
120.0									110-120		
130.0									120-130		
140.0									130-140		
150.0									140-150		
160.0									150-160		
170.0									160-170		
180.0									170-180		
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HopooColor HPG1800
Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG
Humidity:65.0%
Operators:
Test Distance:8.300 m
Test Date:09-08-2026
Remarks:

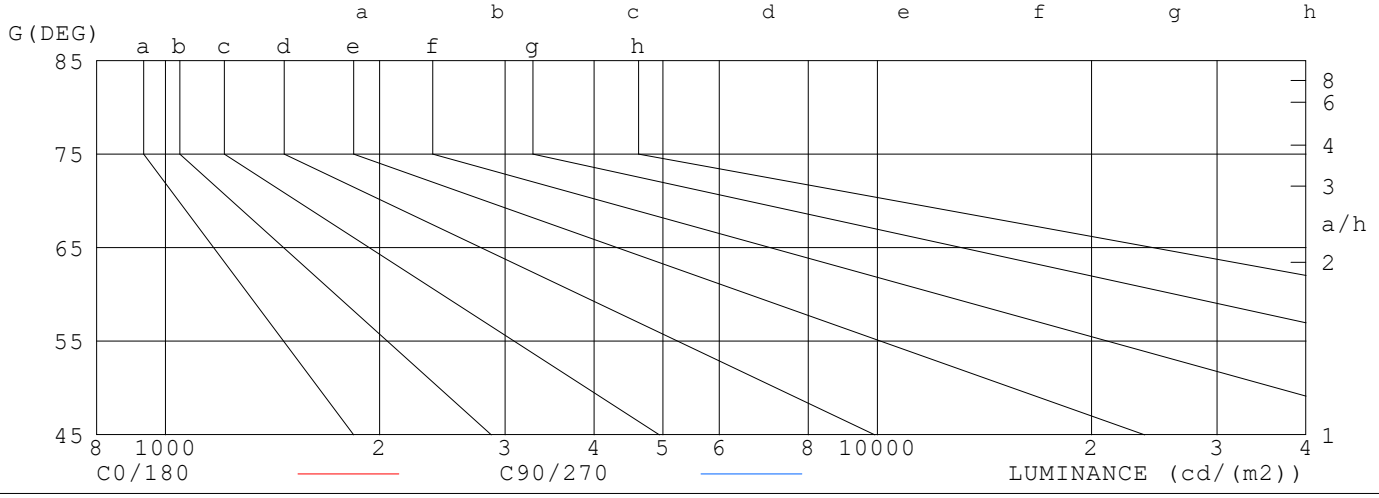
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



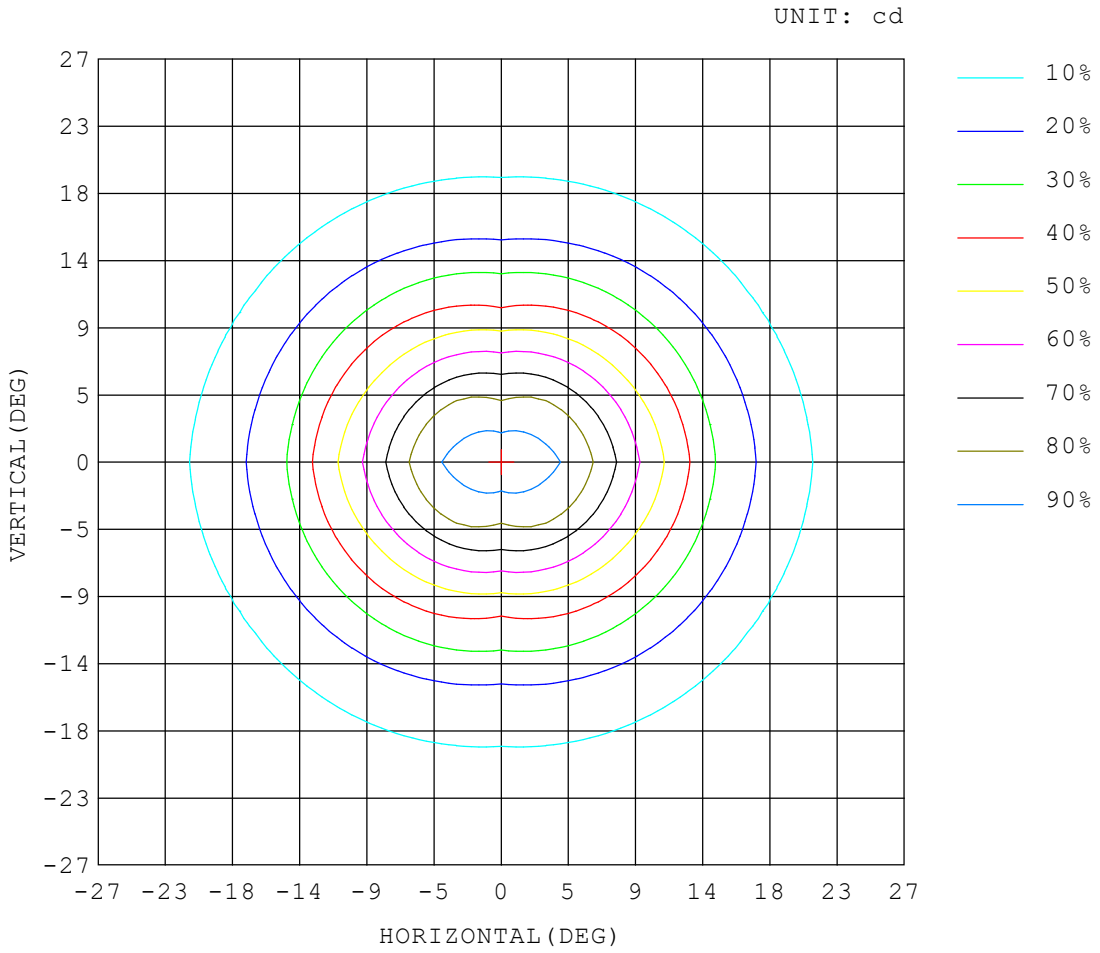
LUMINANCE cd/m2		
G(DEG)	C0/180	C90/270
85	0	0
80	0	0
75	11	0
70	28	0
65	39	0
60	54	0
55	91	34
50	148	79
45	215	137

Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



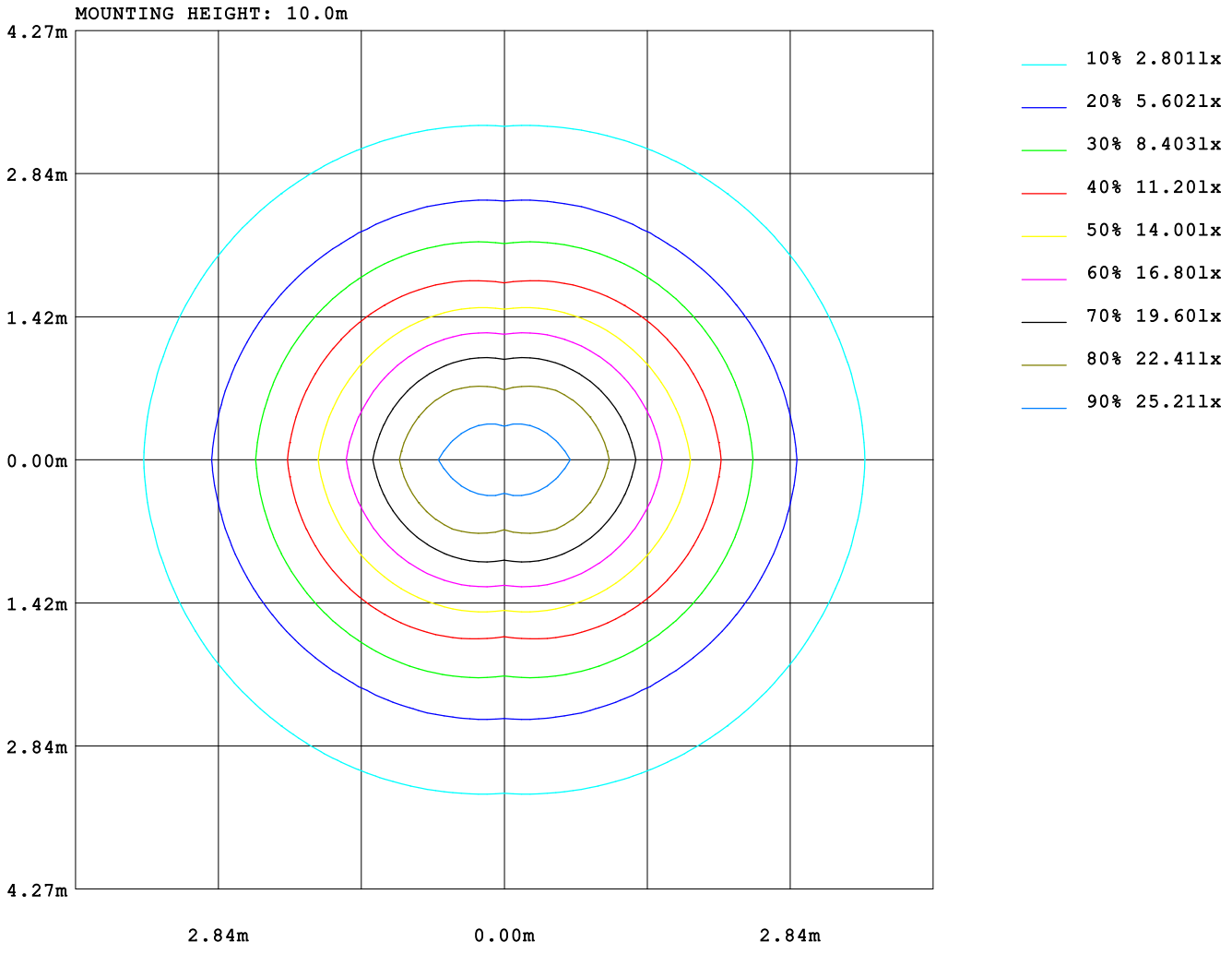
Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:
Test Date:09-08-2026

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.300 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks:

AREA LUMINOUS FLUX

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

AREA FLUX DIAGRAM — UNIT:lm

VERTICAL(DEG)	-27	-24	-21	-18	-15	-12	-9	-6	6	9	12	15	18	21	24	27	Φ t	Φ a
27	0.07	0.09	0.11	0.13	0.16	0.19	0.21	0.23	0.23	0.23	0.23	0.21	0.19	0.16	0.13	0.11	0.09	0.07	2.82	0.00
24	0.09	0.11	0.14	0.19	0.24	0.30	0.36	0.41	0.42	0.42	0.41	0.36	0.30	0.24	0.19	0.14	0.11	0.09	4.51	0.00
21	0.11	0.15	0.21	0.28	0.39	0.51	0.59	0.67	0.71	0.71	0.67	0.59	0.51	0.39	0.28	0.21	0.15	0.11	7.21	1.12
18	0.13	0.20	0.28	0.43	0.60	0.80	1.03	1.18	1.23	1.23	1.18	1.03	0.80	0.60	0.43	0.28	0.20	0.13	11.7	7.90
15	0.17	0.26	0.41	0.62	0.91	1.28	1.59	1.88	2.01	2.01	1.88	1.59	1.28	0.91	0.62	0.41	0.26	0.17	18.2	15.3
12	0.21	0.33	0.55	0.85	1.33	1.84	2.48	2.92	3.07	3.07	2.92	2.48	1.84	1.33	0.85	0.55	0.33	0.21	27.2	24.5
9	0.25	0.42	0.68	1.15	1.74	2.61	3.46	4.17	4.52	4.52	4.17	3.46	2.61	1.74	1.15	0.68	0.42	0.25	38.0	35.7
	0.28	0.50	0.82	1.40	2.19	3.32	4.46	5.53	6.01	6.01	5.53	4.46	3.32	2.19	1.40	0.82	0.50	0.28	49.0	47.0
	0.30	0.54	0.91	1.56	2.52	3.82	5.22	6.48	7.01	7.01	6.48	5.22	3.82	2.52	1.56	0.91	0.54	0.30	56.7	55.0
	0.30	0.54	0.91	1.56	2.52	3.82	5.22	6.48	7.01	7.01	6.48	5.22	3.82	2.52	1.56	0.91	0.54	0.30	56.7	55.0
	0.28	0.50	0.82	1.40	2.19	3.32	4.46	5.53	6.01	6.01	5.53	4.46	3.32	2.19	1.40	0.82	0.50	0.28	49.0	47.0
-9	0.25	0.42	0.68	1.15	1.74	2.61	3.46	4.17	4.52	4.52	4.17	3.46	2.61	1.74	1.15	0.68	0.42	0.25	38.0	35.7
-12	0.21	0.33	0.55	0.85	1.33	1.84	2.48	2.92	3.07	3.07	2.92	2.48	1.84	1.33	0.85	0.55	0.33	0.21	27.2	24.5
-15	0.17	0.26	0.41	0.62	0.91	1.28	1.59	1.88	2.01	2.01	1.88	1.59	1.28	0.91	0.62	0.41	0.26	0.17	18.2	15.3
-18	0.13	0.20	0.28	0.43	0.60	0.80	1.03	1.18	1.23	1.23	1.18	1.03	0.80	0.60	0.43	0.28	0.20	0.13	11.7	7.90
-21	0.11	0.15	0.21	0.28	0.39	0.51	0.59	0.67	0.71	0.71	0.67	0.59	0.51	0.39	0.28	0.21	0.15	0.11	7.21	1.12
-24	0.09	0.11	0.14	0.19	0.24	0.30	0.36	0.41	0.42	0.42	0.41	0.36	0.30	0.24	0.19	0.14	0.11	0.09	4.51	0.00
-27	0.07	0.09	0.11	0.13	0.16	0.19	0.21	0.23	0.23	0.23	0.23	0.21	0.19	0.16	0.13	0.11	0.09	0.07	2.82	0.00
HORIZONTAL(DEG)																				
Φ t	3.20	5.17	8.23	13.2	20.1	29.3	38.8	46.9	50.5	50.5	46.9	38.8	29.3	20.1	13.2	8.23	5.17	3.20	476	
Φ a	0.00	0.00	3.36	9.65	17.2	26.7	36.5	44.9	48.3	48.3	44.9	36.5	26.7	17.2	9.65	3.36	0.00	0.00		384

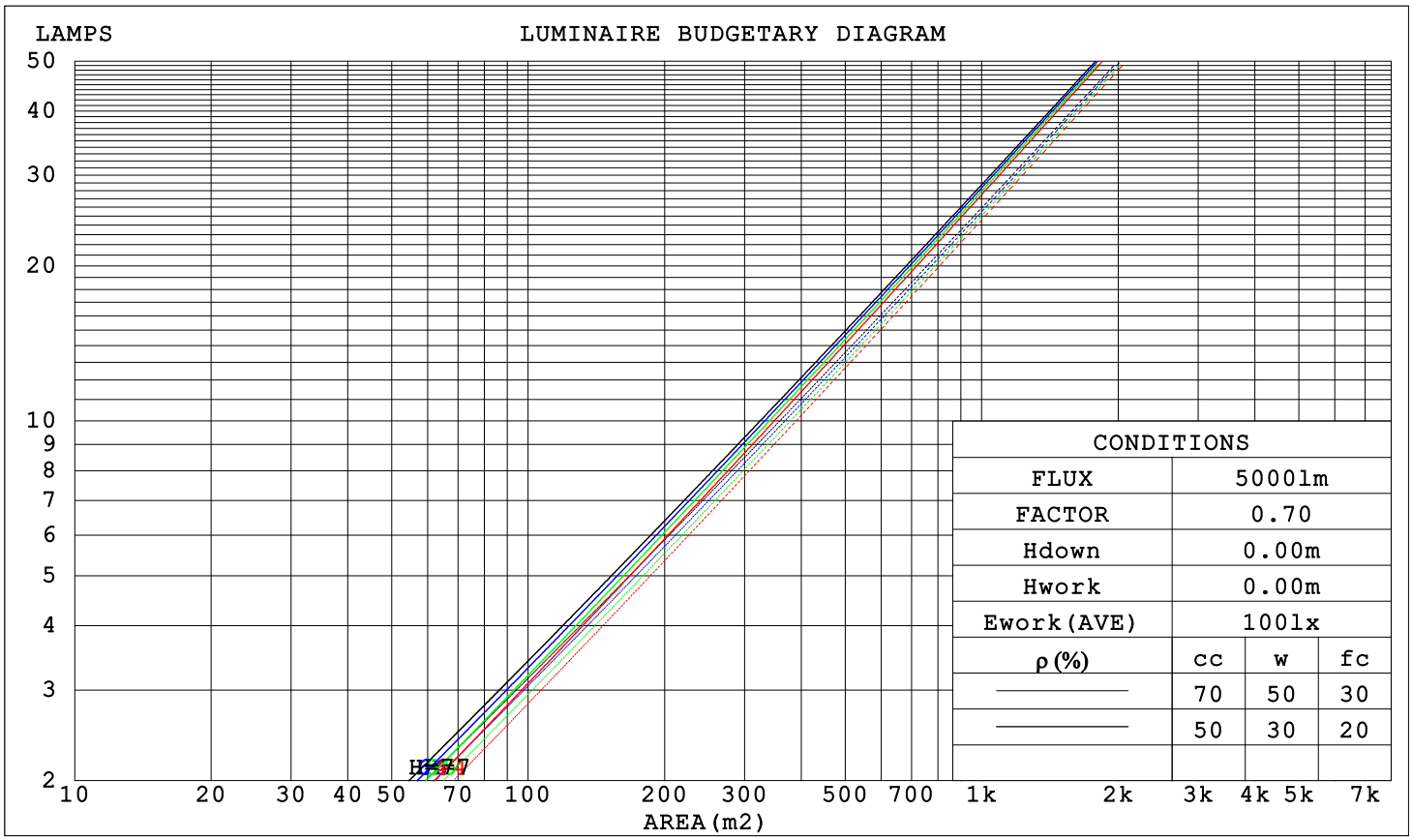
Test System:HopooColor HPG1800
Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG
Humidity:65.0%
Operators:
Test Distance:8.300 m
Test Date:09-08-2026
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

ρcc	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			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	1.13	1.11	1.09	1.11	1.09	1.08	1.07	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.02	1.06	1.03	1.01	1.03	1.01	.99	1.00	.98	.97	.97	.96	.95	.93
3.0	1.03	.00	.97	1.02	.99	.96	.99	.97	.95	.97	.95	.93	.95	.93	.92	.90
4.0	.99	.95	.92	.98	.95	.92	.96	.93	.91	.94	.92	.90	.93	.91	.89	.88
5.0	.96	.92	.89	.95	.91	.88	.93	.90	.88	.92	.89	.87	.90	.88	.86	.85
6.0	.93	.88	.85	.92	.88	.85	.91	.87	.85	.89	.86	.84	.88	.86	.84	.83
7.0	.90	.86	.83	.89	.85	.83	.88	.85	.82	.87	.84	.82	.86	.83	.81	.80
8.0	.87	.83	.80	.87	.83	.80	.86	.82	.80	.85	.82	.80	.84	.81	.79	.78
9.0	.85	.81	.78	.84	.81	.78	.84	.80	.78	.83	.80	.77	.82	.79	.77	.76
10.0	.82	.79	.76	.82	.78	.76	.81	.78	.76	.81	.78	.76	.80	.77	.75	.75



Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:
Test Date:09-08-2026

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.300 m
Remarks:

WEC AND CCEC

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

ρcc	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						Wall Exitance Coeffcients(WEC)									
0.0																
1.0	.136	.077	.024	.129	.074	.023	.117	.067	.021	.105	.061	.019	.095	.055	.018	
2.0	.126	.069	.021	.120	.066	.020	.110	.061	.019	.101	.057	.018	.092	.052	.016	
3.0	.117	.062	.019	.113	.060	.018	.104	.056	.017	.096	.053	.016	.089	.049	.015	
4.0	.110	.057	.017	.106	.055	.016	.099	.052	.016	.092	.049	.015	.086	.047	.014	
5.0	.103	.053	.015	.100	.051	.015	.094	.049	.014	.088	.047	.014	.083	.044	.013	
6.0	.097	.049	.014	.095	.048	.014	.089	.046	.013	.085	.044	.013	.080	.042	.013	
7.0	.092	.046	.013	.090	.045	.013	.085	.043	.012	.081	.042	.012	.077	.040	.012	
8.0	.088	.043	.012	.086	.042	.012	.082	.041	.012	.078	.040	.011	.075	.038	.011	
9.0	.084	.041	.011	.082	.040	.011	.078	.039	.011	.075	.038	.011	.072	.037	.011	
10.0	.080	.038	.011	.079	.038	.011	.075	.037	.010	.072	.036	.010	.070	.035	.010	

ρcc	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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.168	.158	.148	.144	.135	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.135	.113	.096	.116	.098	.083	.079	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.122	.098	.079	.105	.085	.069	.072	.059	.048	.042	.035	.029	.013	.011	.009	
5.0	.112	.086	.066	.096	.074	.057	.066	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.103	.076	.056	.088	.065	.049	.061	.046	.034	.035	.027	.020	.011	.009	.007	
7.0	.095	.067	.048	.082	.058	.042	.057	.041	.029	.033	.024	.018	.011	.008	.006	
8.0	.089	.060	.041	.076	.052	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.083	.055	.036	.071	.048	.031	.049	.033	.022	.029	.020	.013	.009	.006	.004	
10.0	.078	.050	.031	.067	.043	.027	.047	.031	.020	.027	.018	.012	.009	.006	.004	

Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks:

Uncorrected UGR Table

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	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	-3.2	-2.6	-3.0	-2.4	-2.3	-5.1	-4.5	-4.9	-4.3	-4.2
3H	-3.2	-2.6	-3.0	-2.4	-2.2	-5.2	-4.6	-5.0	-4.5	-4.3
4H	-3.3	-2.7	-3.0	-2.5	-2.3	-5.3	-4.8	-5.1	-4.5	-4.3
6H	-3.4	-2.8	-3.1	-2.6	-2.4	-5.4	-4.9	-5.1	-4.6	-4.4
8H	-3.4	-2.9	-3.1	-2.6	-2.4	-5.5	-4.9	-5.2	-4.7	-4.4
12H	-3.5	-3.0	-3.2	-2.7	-2.4	-5.5	-5.0	-5.2	-4.7	-4.5
4H 2H	-3.4	-2.8	-3.1	-2.6	-2.4	-5.2	-4.6	-5.0	-4.4	-4.2
3H	-3.4	-2.9	-3.1	-2.6	-2.4	-5.4	-4.9	-5.1	-4.6	-4.4
4H	-3.5	-3.0	-3.1	-2.7	-2.4	-5.5	-5.0	-5.1	-4.7	-4.4
6H	-3.6	-3.2	-3.2	-2.8	-2.5	-5.6	-5.2	-5.2	-4.8	-4.5
8H	-3.6	-3.2	-3.2	-2.9	-2.5	-5.6	-5.3	-5.2	-4.9	-4.5
12H	-3.7	-3.3	-3.3	-3.0	-2.6	-5.7	-5.3	-5.3	-5.0	-4.6
8H 4H	-3.6	-3.2	-3.2	-2.9	-2.5	-5.6	-5.2	-5.2	-4.9	-4.5
6H	-3.7	-3.4	-3.3	-3.0	-2.6	-5.7	-5.4	-5.3	-5.0	-4.6
8H	-3.8	-3.5	-3.4	-3.1	-2.7	-5.8	-5.5	-5.4	-5.1	-4.7
12H	-3.9	-3.6	-3.4	-3.2	-2.7	-5.9	-5.6	-5.4	-5.2	-4.7
12H 4H	-3.7	-3.3	-3.3	-3.0	-2.6	-5.7	-5.3	-5.3	-5.0	-4.6
6H	-3.8	-3.5	-3.4	-3.1	-2.7	-5.8	-5.5	-5.4	-5.1	-4.7
8H	-3.9	-3.6	-3.4	-3.2	-2.7	-5.9	-5.6	-5.4	-5.2	-4.7
Variations with the observer position at spacings:										
S = 1.0H	+ 2.2 / - 5.0					+ 2.5 / -11.5				
1.5H	+ 2.9 / - 6.8					+ 3.0 / - 9.3				
2.0H	+ 5.5 / - 6.2					+ 5.4 / -11.4				

CIE Pub.117 Corrected 476.4 lm Total Lamp Luminous Flux.(8log(F/F0) = -2.6)

Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks:

UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

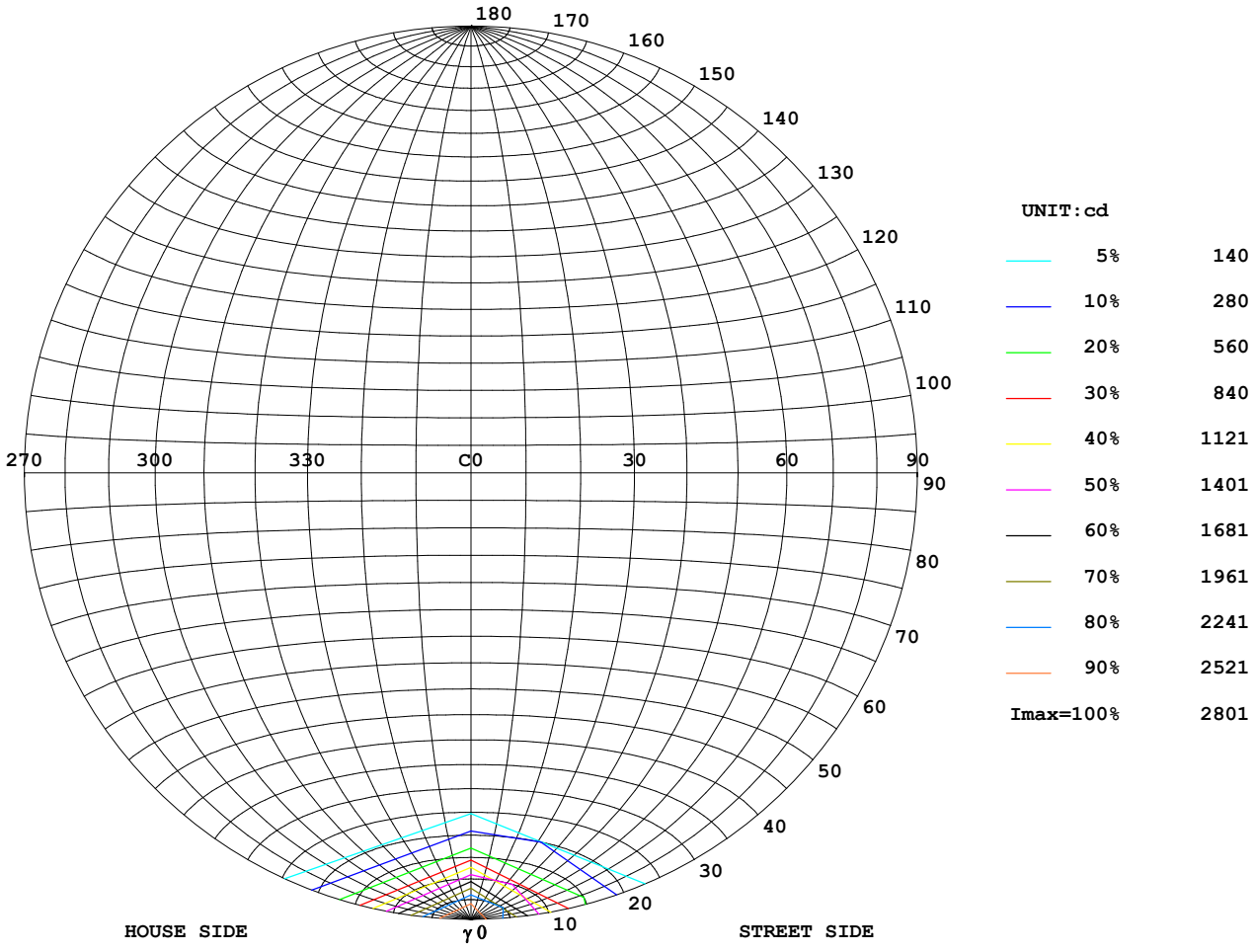
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	90	84	80	89	84	80	88	83	80	77
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	96	92	100	95	92	98	95	91	88
1.25	105	100	97	104	99	96	102	98	95	91
1.50	107	103	100	106	102	99	104	100	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended					SHRNOM = 1.25	

Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

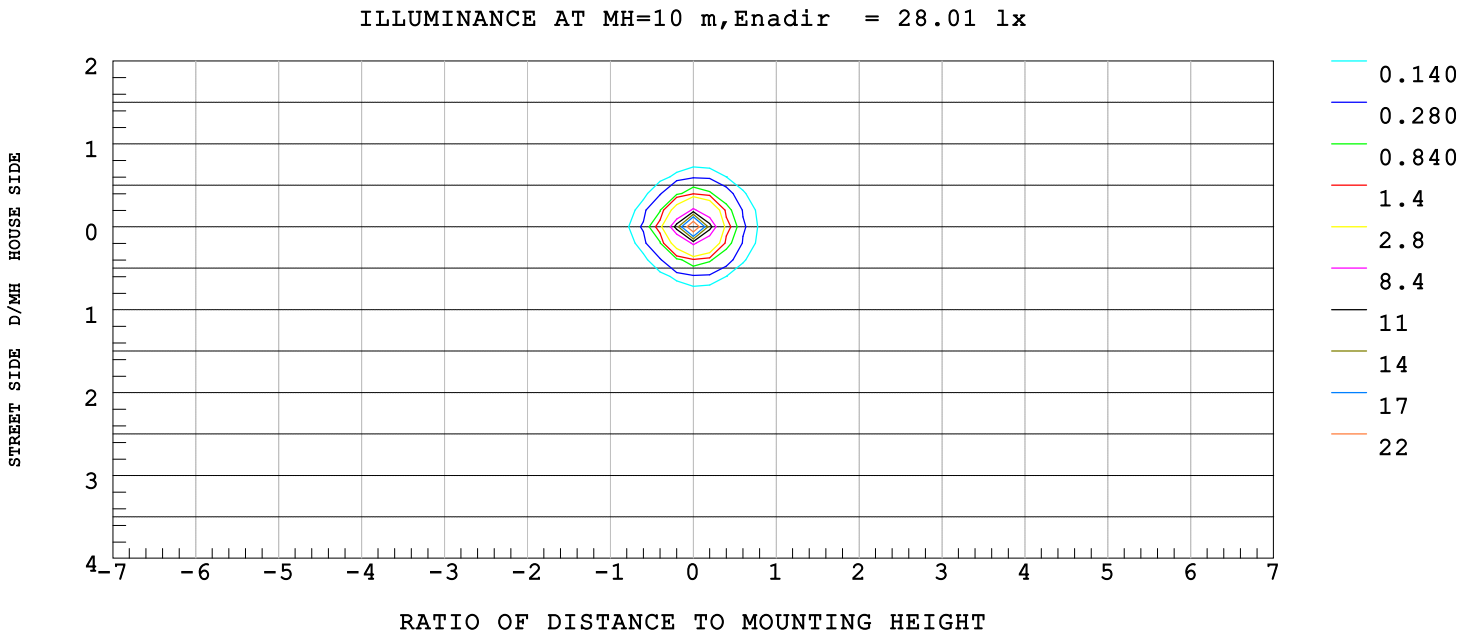


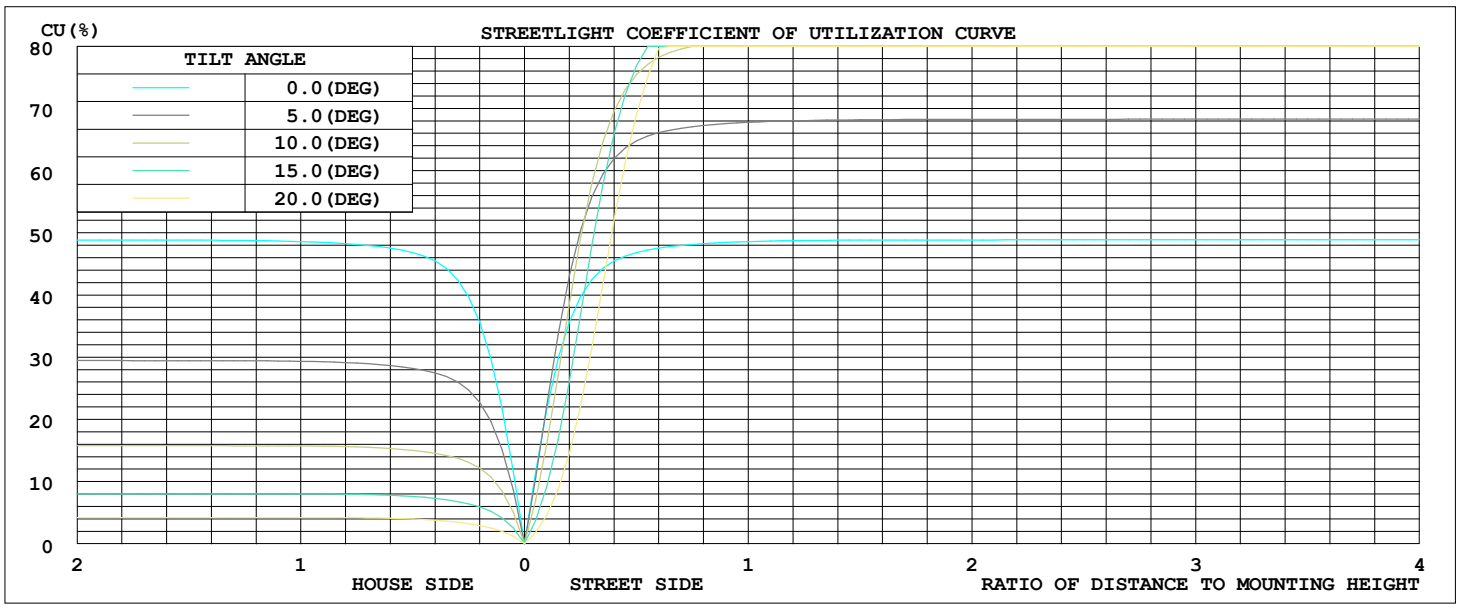
Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



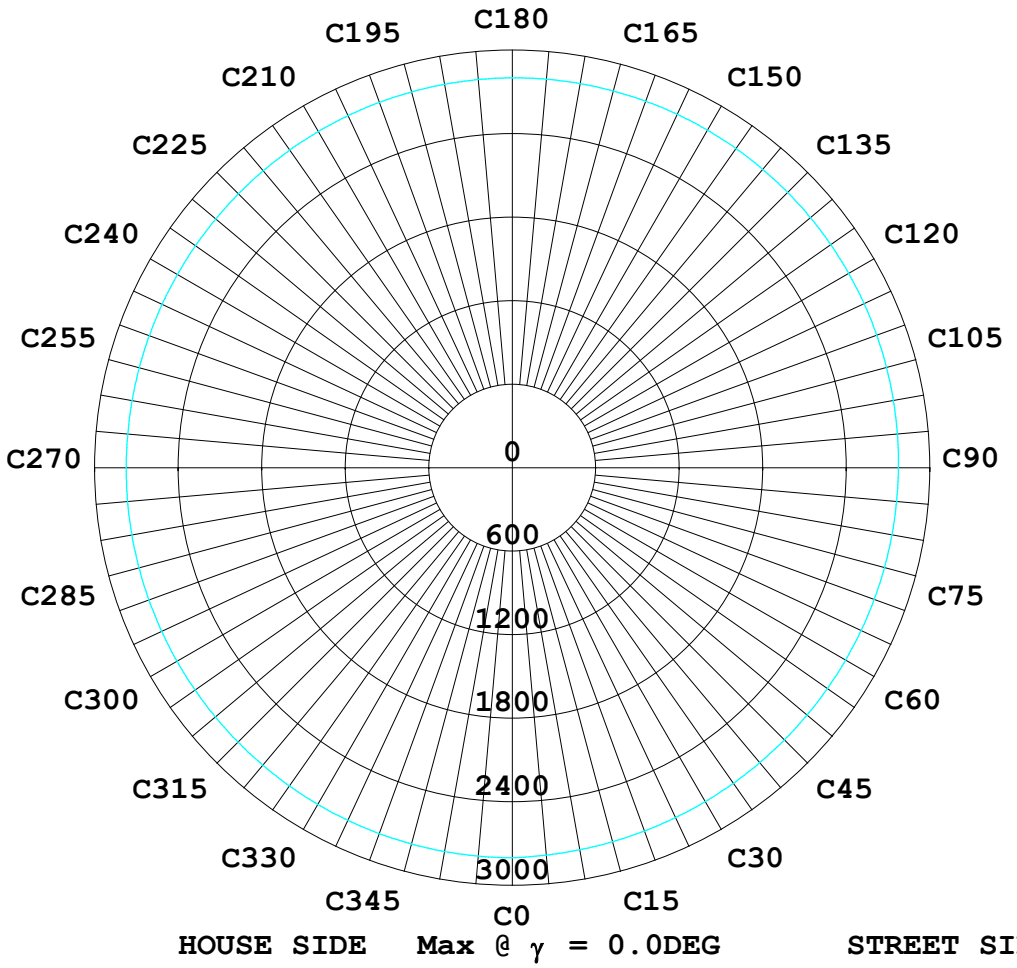


Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:
Test Date:09-08-2026

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.300 m
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

UNIT: cd

γ (DEG) \ C(DEG)	0	90	180	270
0.0	2801	2774	2801	2774
5.0	2449	2126	2449	2126
10.0	1553	1161	1553	1161
15.0	737	545	737	545
20.0	313	219	313	219
25.0	127	86.2	127	86.2
30.0	57.1	40.0	57.1	40.0
35.0	32.3	23.2	32.3	23.2
40.0	22.2	15.5	22.2	15.5
45.0	15.2	9.71	15.2	9.71
50.0	9.50	5.09	9.50	5.09
55.0	5.23	1.92	5.23	1.92
60.0	2.68	0.00	2.68	0.00
65.0	1.65	0.00	1.65	0.00
70.0	0.96	0.00	0.96	0.00
75.0	0.28	0.00	0.28	0.00
80.0	0.00	0.00	0.00	0.00
85.0	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00

Test System:HopooColor HPG1800 Test Set: 5.0deg/s C-Gamma (TYPE C)
Temperature:25.3DEG Humidity:65.0%
Operators: Test Distance:8.300 m
Test Date:09-08-2026 Remarks: