

LUMINAIRE PHOTOMETRIC TEST REPORT

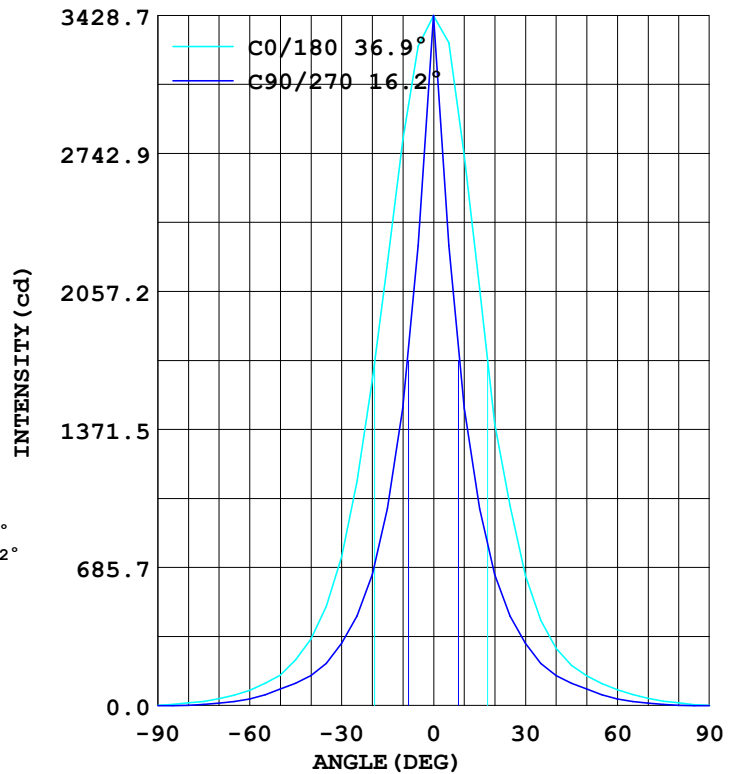
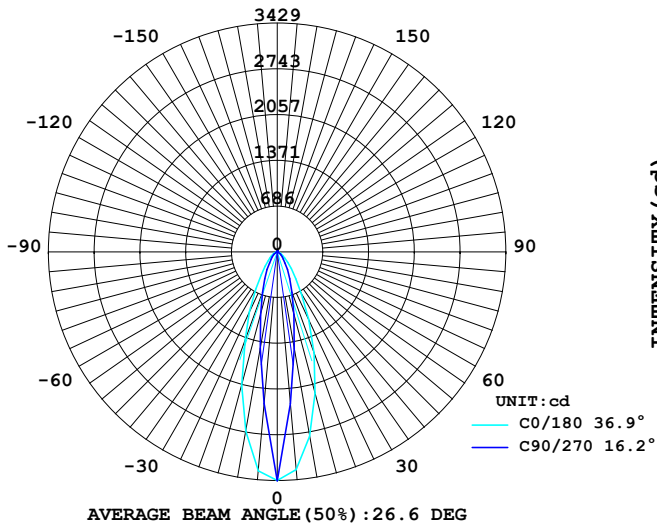
Report number:

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

DATA OF LAMP		Imax(cd)	3558	S/MH (C0/180)	0.61
MODEL		EFFICIENCY (%)	100.0	S/MH (C90/270)	0.28
NOMINAL POWER(W)	34	TOTAL FLUX(lm)	1527.3	Voltage(V)	23.36
RATED VOLTAGE (V)	23	EFFICIENCY (lm/W)	45.9	Current(A)	1.425
NOMINAL FLUX(lm)	1527.3	η up (%)	1.1	Power(W)	33.29
LAMPS QUANTITY	1	η down (%)	98.9	Power Factor (PF)	0.999
TEST VOLTAGE (V)	23.4	Effective Flux(lm)	1154.7	EEI	0.000 (E)

LUMINOUS INTENSITY DISTRIBUTION

LUMINOUS INTENSITY DISTRIBUTION



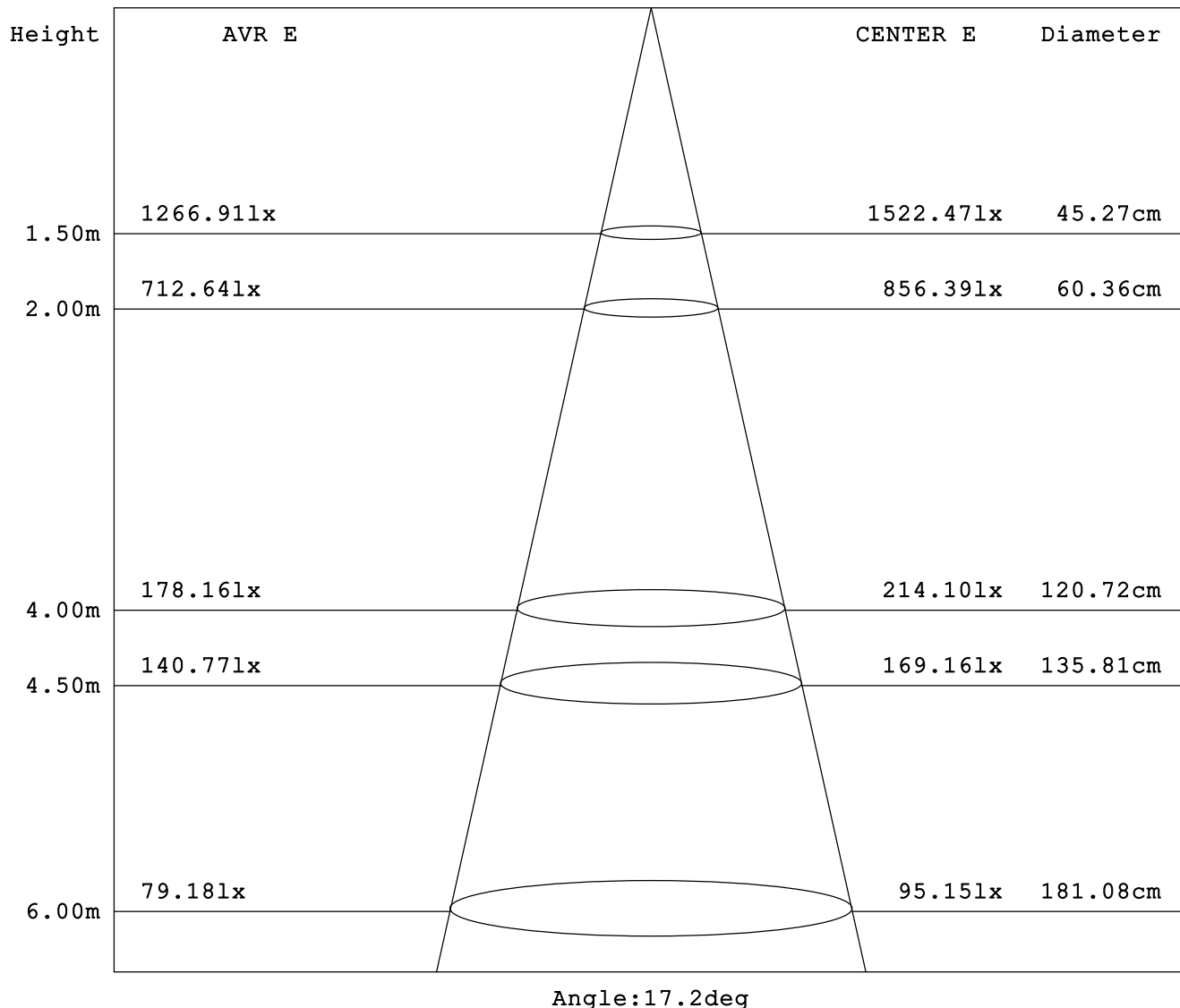
Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:
Test Date:07-21-2026

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.:



Test System:HopooColor HPG1800
 Temperature:25.3DEG
 Operators:
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Test Set: 5.0deg/s C-Gamma (TYPE C)
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 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	2807	1478	2732	1478					0- 10	250.2	250.2
20.0	1618	651.6	1402	651.6					10- 20	435.6	685.8
30.0	738.2	308.5	645.7	308.5					20- 30	349.9	1036
40.0	330.2	148.2	284.3	148.2					30- 40	216.3	1252
50.0	151.0	81.22	147.7	81.22					40- 50	128.2	1380
60.0	75.29	32.92	78.12	32.92					50- 60	74.36	1455
70.0	33.41	11.84	35.27	11.84					60- 70	37.32	1492
80.0	12.74	0.276	12.95	0.276					70- 80	14.83	1507
90.0	0.964	0	0.964	0					80- 90	3.192	1510
100.0	0.551	0	0.482	0					90-100	0.390	1510
110.0	0.482	0	0.482	0					100-110	0.260	1511
120.0	1.033	0.344	0.964	0.344					110-120	0.387	1511
130.0	2.273	2.411	2.066	2.411					120-130	1.248	1512
140.0	4.340	5.855	3.995	5.855					130-140	2.757	1515
150.0	6.889	9.300	6.406	9.300					140-150	4.066	1519
160.0	9.369	10.88	8.817	10.88					150-160	4.169	1523
170.0	11.09	11.02	10.54	11.02					160-170	2.972	1526
180.0	11.50	10.60	11.02	10.60					170-180	1.050	1527
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

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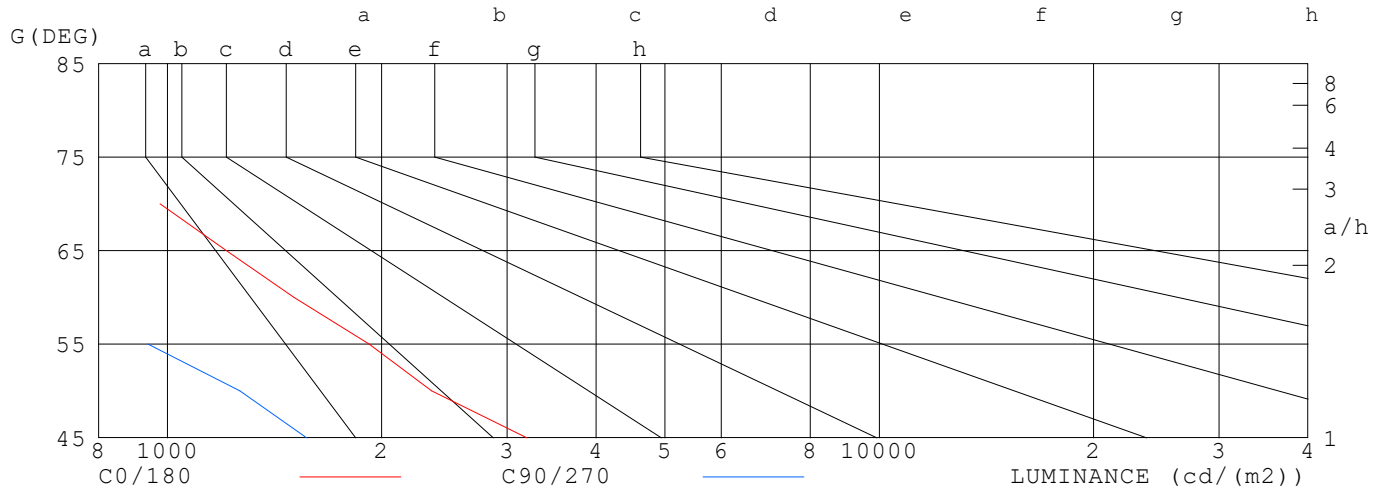
LUMINANCE LIMITATION CURVES

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



LUMINANCE cd/m2		
G (DEG)	C0/180	C90/270
85	553	0
80	734	16
75	796	218
70	977	346
65	1210	483
60	1506	659
55	1920	939
50	2349	1264
45	3199	1570

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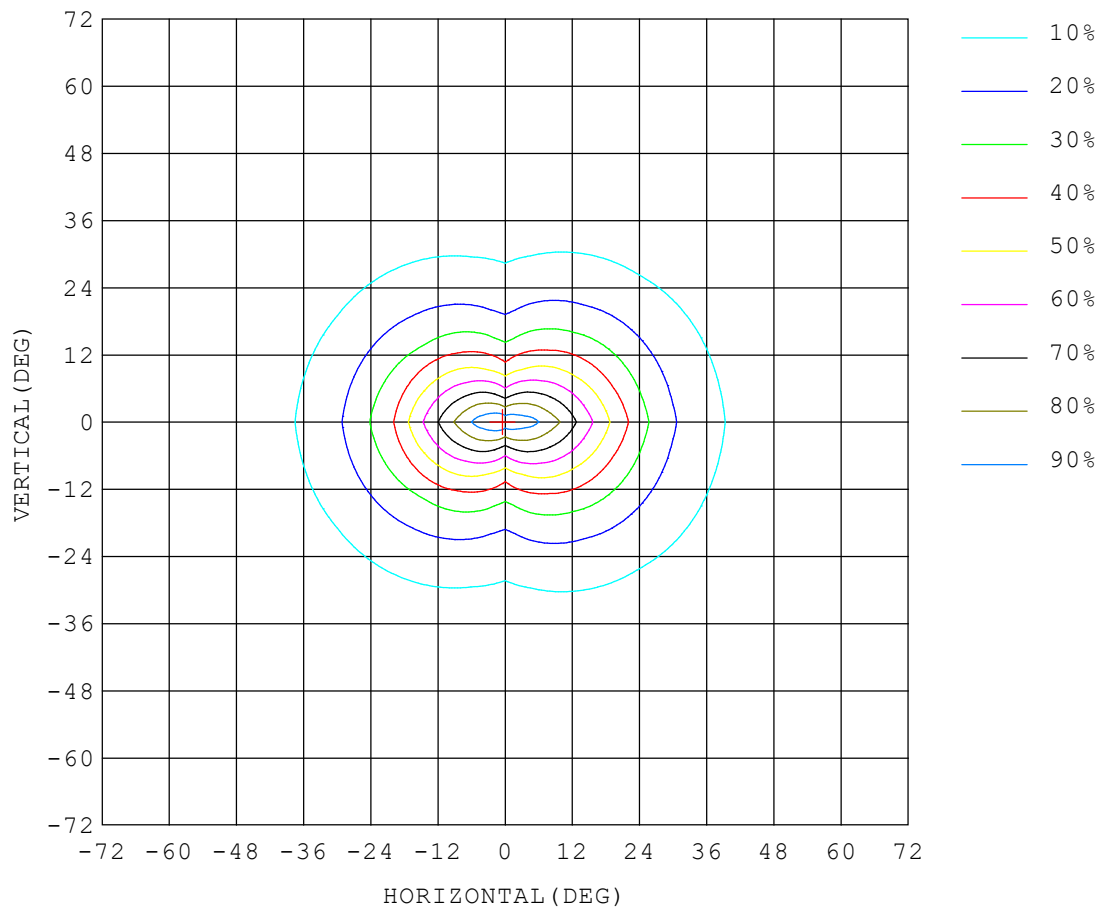
Test Set: 5.0deg/s C-Gamma (TYPE C)
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 Remarks:

ISOCANDELA DIAGRAM

Report number:

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

UNIT: cd



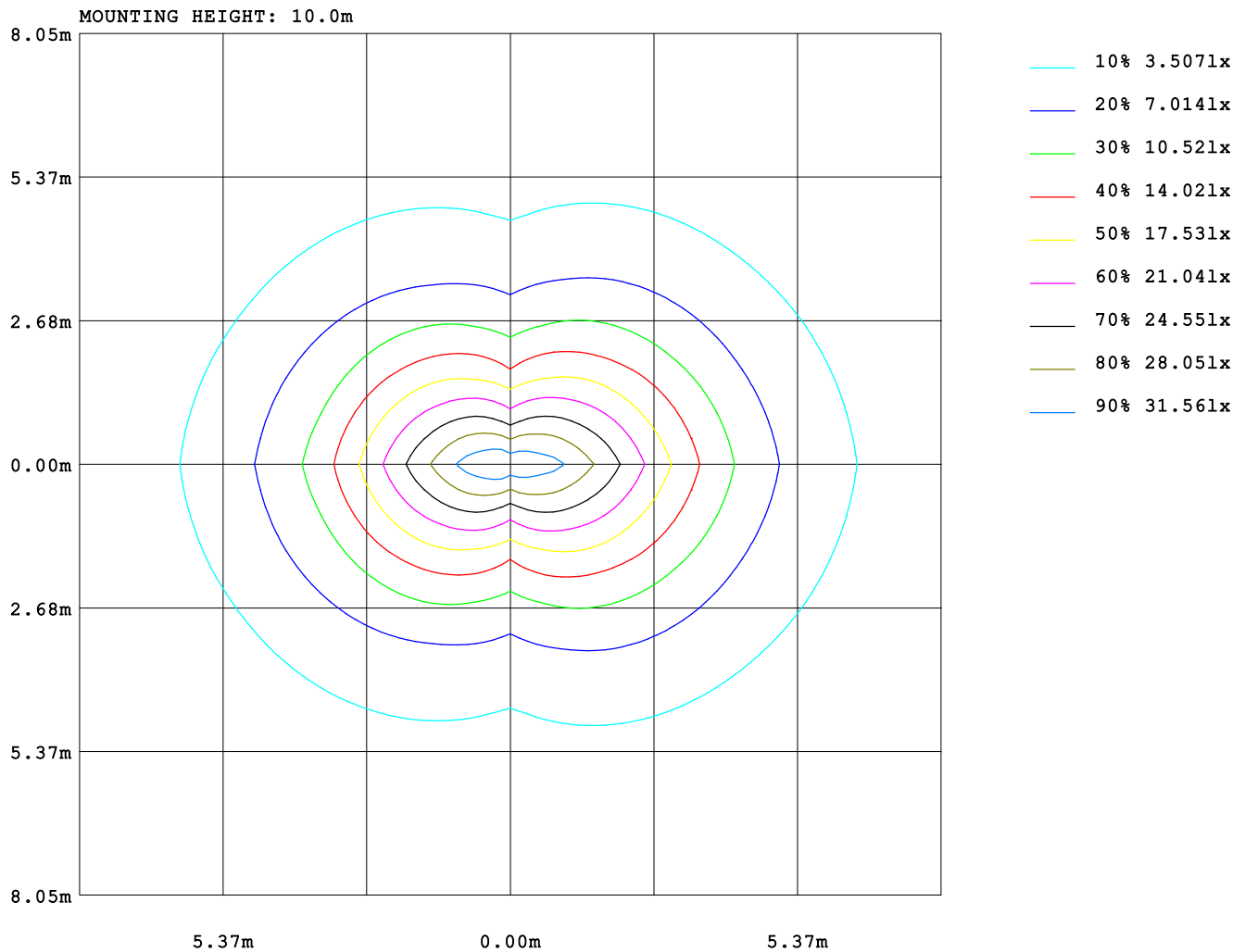
Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:
Test Date:07-21-2026

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
 Temperature: 25.3DEG
 Operators:
 Test Date: 07-21-2026

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

AREA LUMINOUS FLUX

Report number:

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

		AREA FLUX DIAGRAM																UNIT:lm			Φ t	Φ a
		0.06	0.10	0.15	0.21	0.27	0.32	0.35	0.35	0.32	0.32	0.34	0.34	0.31	0.26	0.21	0.15	0.10	0.06	4.23	0.00	
VERTICAL (DEG)	72	0.08	0.16	0.26	0.39	0.52	0.63	0.71	0.74	0.71	0.71	0.73	0.69	0.61	0.50	0.37	0.25	0.15	0.08	8.29	0.00	
	64	0.12	0.24	0.41	0.63	0.87	1.11	1.31	1.43	1.42	1.42	1.43	1.32	1.10	0.85	0.60	0.39	0.23	0.11	15.0	0.00	
	56	0.15	0.33	0.59	0.94	1.36	1.82	2.20	2.43	2.41	2.45	2.51	2.28	1.86	1.37	0.92	0.56	0.31	0.15	24.6	0.00	
	48	0.19	0.43	0.80	1.32	2.00	2.77	3.56	4.10	4.12	4.21	4.33	3.84	3.00	2.08	1.33	0.78	0.41	0.18	39.5	0.00	
	40	0.23	0.53	1.02	1.76	2.80	4.28	6.12	7.61	7.67	7.86	8.09	6.69	4.76	3.08	1.81	1.01	0.51	0.22	66.1	31.0	
	32	0.27	0.63	1.24	2.22	3.85	6.67	10.6	14.0	14.4	14.9	15.1	11.6	7.48	4.35	2.38	1.25	0.60	0.25	112	92.6	
	24	0.30	0.71	1.43	2.66	5.05	9.80	17.1	25.4	28.0	28.4	26.9	19.0	11.0	5.79	2.96	1.45	0.69	0.28	187	171	
		0.32	0.77	1.56	3.00	6.08	12.6	24.0	40.4	51.3	51.3	42.0	26.8	14.3	7.02	3.39	1.60	0.75	0.30	288	273	
		0.32	0.77	1.56	3.00	6.08	12.6	24.0	40.4	51.3	51.3	42.0	26.8	14.3	7.02	3.39	1.60	0.75	0.30	288	273	
		0.30	0.71	1.43	2.66	5.05	9.80	17.1	25.4	28.0	28.4	26.9	19.0	11.0	5.79	2.96	1.45	0.69	0.28	187	171	
		0.27	0.63	1.24	2.22	3.85	6.67	10.6	14.0	14.4	14.9	15.1	11.6	7.48	4.35	2.38	1.25	0.60	0.25	112	92.6	
	-24	0.23	0.53	1.02	1.76	2.80	4.28	6.12	7.61	7.67	7.86	8.09	6.69	4.76	3.08	1.81	1.01	0.51	0.22	66.1	31.0	
	-32	0.19	0.43	0.80	1.32	2.00	2.77	3.56	4.10	4.12	4.21	4.33	3.84	3.00	2.08	1.33	0.78	0.41	0.18	39.5	0.00	
	-40	0.15	0.33	0.59	0.94	1.36	1.82	2.20	2.43	2.41	2.45	2.51	2.28	1.86	1.37	0.92	0.56	0.31	0.15	24.6	0.00	
	-48	0.12	0.24	0.41	0.63	0.87	1.11	1.31	1.43	1.42	1.42	1.43	1.32	1.10	0.85	0.60	0.39	0.23	0.11	15.0	0.00	
	-56	0.08	0.16	0.26	0.39	0.52	0.63	0.71	0.74	0.71	0.71	0.73	0.69	0.61	0.50	0.37	0.25	0.15	0.08	8.29	0.00	
-64	0.06	0.10	0.15	0.21	0.27	0.32	0.35	0.35	0.32	0.32	0.34	0.34	0.31	0.26	0.21	0.15	0.10	0.06	4.23	0.00		
-72																						
		-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL (DEG)				16	24	32	40	48	56	64	72	
Φ t	3.42	7.77	14.9	26.2	45.6	80.2	132	193	221	223	203	146	88.9	50.6	28.0	14.9	7.48	3.26	1527			
Φ a	0.00	0.00	0.00	0.00	12.0	54.4	109	171	199	201	181	123	64.6	20.3	0.00	0.00	0.00	0.00		1155		

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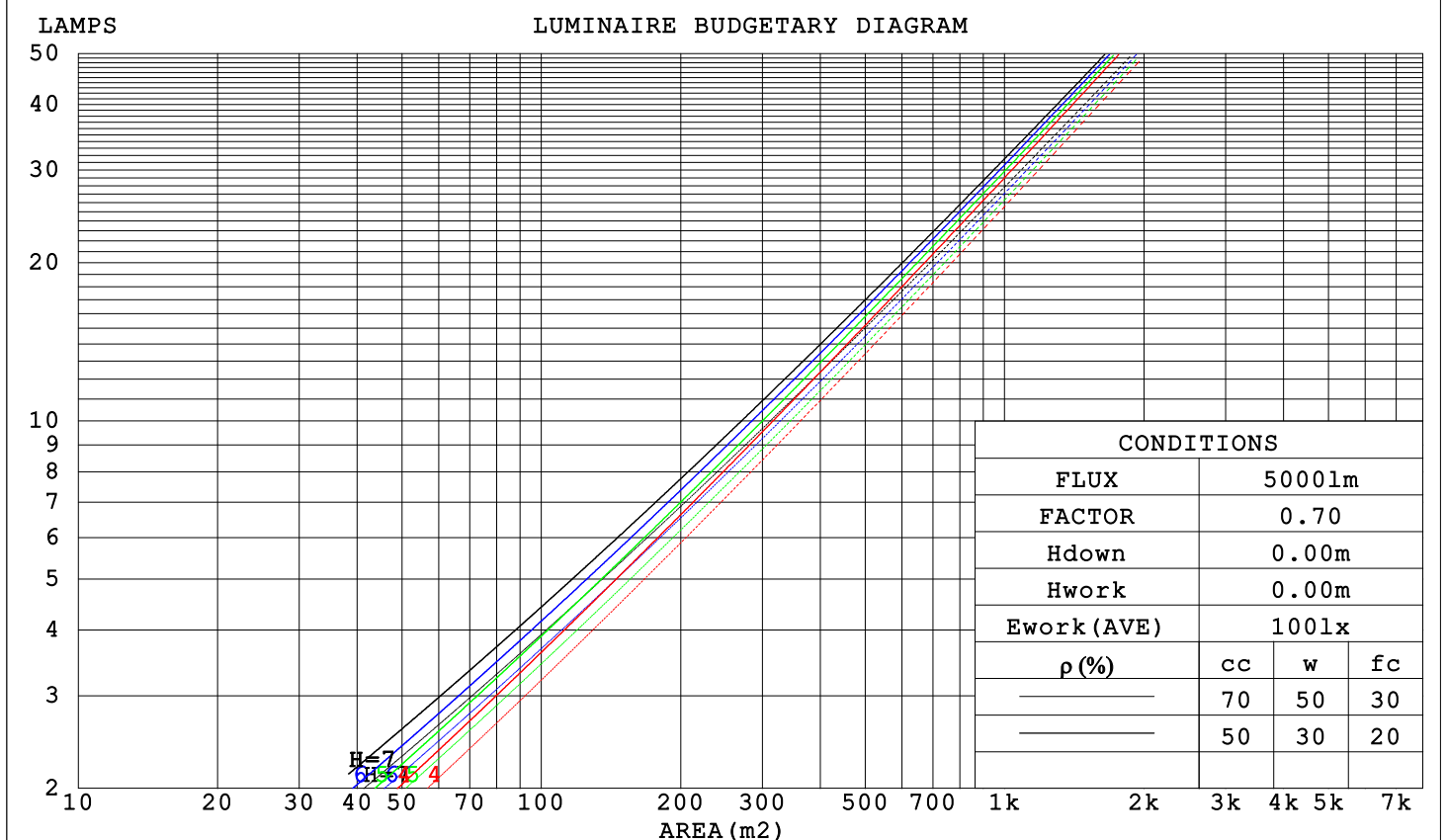
Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.300 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME:								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION:				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															


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WEC AND CCEC

Report number:

MANUFACTURER:															
Address:															
NAME:								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION:				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	.190	.108	.034	.183	.104	.033	.170	.097	.031	.157	.091	.029	.146	.085	.027	
2.0	.181	.099	.030	.175	.097	.030	.164	.091	.028	.154	.086	.027	.144	.081	.026	
3.0	.171	.091	.027	.166	.089	.027	.156	.085	.026	.148	.081	.025	.139	.077	.024	
4.0	.162	.084	.025	.157	.082	.024	.149	.079	.024	.141	.076	.023	.134	.073	.022	
5.0	.153	.078	.023	.149	.076	.022	.141	.074	.022	.134	.071	.021	.128	.068	.021	
6.0	.144	.072	.021	.141	.071	.020	.134	.069	.020	.128	.067	.020	.123	.065	.019	
7.0	.137	.068	.019	.134	.067	.019	.128	.065	.019	.123	.063	.018	.117	.061	.018	
8.0	.130	.063	.018	.127	.063	.018	.122	.061	.017	.117	.059	.017	.113	.058	.017	
9.0	.124	.060	.017	.121	.059	.017	.117	.058	.016	.112	.056	.016	.108	.055	.016	
10.0	.118	.057	.016	.116	.056	.016	.112	.055	.015	.108	.053	.015	.104	.052	.015	

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						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.199	.199	.199	.170	.170	.170	.116	.116	.116	.067	.067	.067	.021	.021	.021	
1.0	.181	.166	.153	.155	.142	.131	.106	.098	.091	.061	.057	.053	.020	.018	.017	
2.0	.166	.141	.120	.142	.122	.104	.098	.084	.072	.056	.049	.042	.018	.016	.014	
3.0	.154	.122	.097	.132	.106	.084	.091	.073	.059	.052	.043	.035	.017	.014	.011	
4.0	.144	.108	.080	.124	.093	.070	.085	.065	.049	.049	.038	.029	.016	.012	.010	
5.0	.135	.096	.068	.116	.083	.059	.080	.058	.042	.046	.034	.025	.015	.011	.008	
6.0	.128	.087	.058	.110	.075	.051	.076	.053	.036	.044	.031	.021	.014	.010	.007	
7.0	.121	.080	.051	.104	.069	.044	.072	.048	.031	.042	.028	.019	.013	.009	.006	
8.0	.115	.073	.045	.099	.064	.039	.068	.045	.028	.040	.026	.016	.013	.009	.005	
9.0	.110	.068	.040	.094	.059	.035	.065	.042	.025	.038	.025	.015	.012	.008	.005	
10.0	.105	.064	.036	.090	.055	.032	.063	.039	.023	.036	.023	.013	.012	.008	.004	

Test System:HopooColor HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:07-21-2026

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.300 m
 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	12.2	13.2	12.5	13.4	13.6	9.4	10.4	9.6	10.5	10.7
3H	12.6	13.5	12.9	13.7	14.0	9.5	10.4	9.8	10.6	10.9
4H	12.8	13.6	13.1	13.8	14.1	9.5	10.3	9.8	10.6	10.8
6H	12.8	13.6	13.2	13.9	14.2	9.4	10.2	9.7	10.5	10.7
8H	12.8	13.6	13.2	13.9	14.2	9.4	10.1	9.7	10.4	10.7
12H	12.8	13.6	13.2	13.9	14.2	9.3	10.1	9.7	10.3	10.6
4H 2H	12.2	13.1	12.5	13.3	13.6	9.7	10.5	10.0	10.8	11.0
3H	12.7	13.4	13.0	13.7	14.0	9.9	10.7	10.3	10.9	11.2
4H	12.9	13.6	13.3	13.9	14.2	9.9	10.6	10.3	10.9	11.2
6H	13.0	13.6	13.4	14.0	14.4	9.8	10.4	10.2	10.8	11.2
8H	13.1	13.6	13.5	14.0	14.4	9.8	10.3	10.2	10.7	11.1
12H	13.1	13.6	13.5	14.0	14.4	9.7	10.2	10.2	10.6	11.1
8H 4H	12.8	13.4	13.2	13.7	14.1	10.0	10.5	10.4	10.9	11.3
6H	13.0	13.5	13.5	13.9	14.3	9.9	10.3	10.3	10.8	11.2
8H	13.0	13.4	13.5	13.9	14.3	9.9	10.2	10.3	10.7	11.2
12H	13.1	13.4	13.5	13.9	14.4	9.8	10.1	10.3	10.6	11.1
12H 4H	12.8	13.3	13.2	13.7	14.1	9.9	10.4	10.4	10.8	11.2
6H	13.0	13.4	13.4	13.8	14.3	9.9	10.3	10.3	10.7	11.2
8H	13.0	13.3	13.5	13.8	14.3	9.8	10.2	10.3	10.6	11.1
Variations with the observer position at spacings:										
S = 1.0H	+ 1.2 / - 1.2					+ 1.4 / - 1.9				
1.5H	+ 2.0 / - 1.5					+ 1.0 / - 1.5				
2.0H	+ 2.8 / - 1.8					+ 1.8 / - 3.0				

CIE Pub.117 Corrected 1527 lm Total Lamp Luminous Flux. (8log(F/F0) = 1.5)

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 Temperature:25.3DEG
 Operators:
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 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) $k(RI) \times RCR = 5$									
$k = 0.60$	80	73	68	80	72	68	79	72	68	64
0.80	88	81	77	88	81	77	86	80	76	72
1.00	94	87	83	93	87	83	91	87	82	77
1.25	99	93	88	98	92	88	95	91	87	82
1.50	102	96	92	101	95	92	98	94	90	85
2.00	106	101	97	104	99	96	101	97	94	88
2.50	108	103	100	106	102	99	103	99	97	90
3.00	110	106	102	108	104	101	104	101	99	92
4.00	112	109	106	110	107	105	106	104	102	94
5.00	113	111	108	111	109	107	107	105	103	95
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004					Suspended			SHRNOM = 1.25		

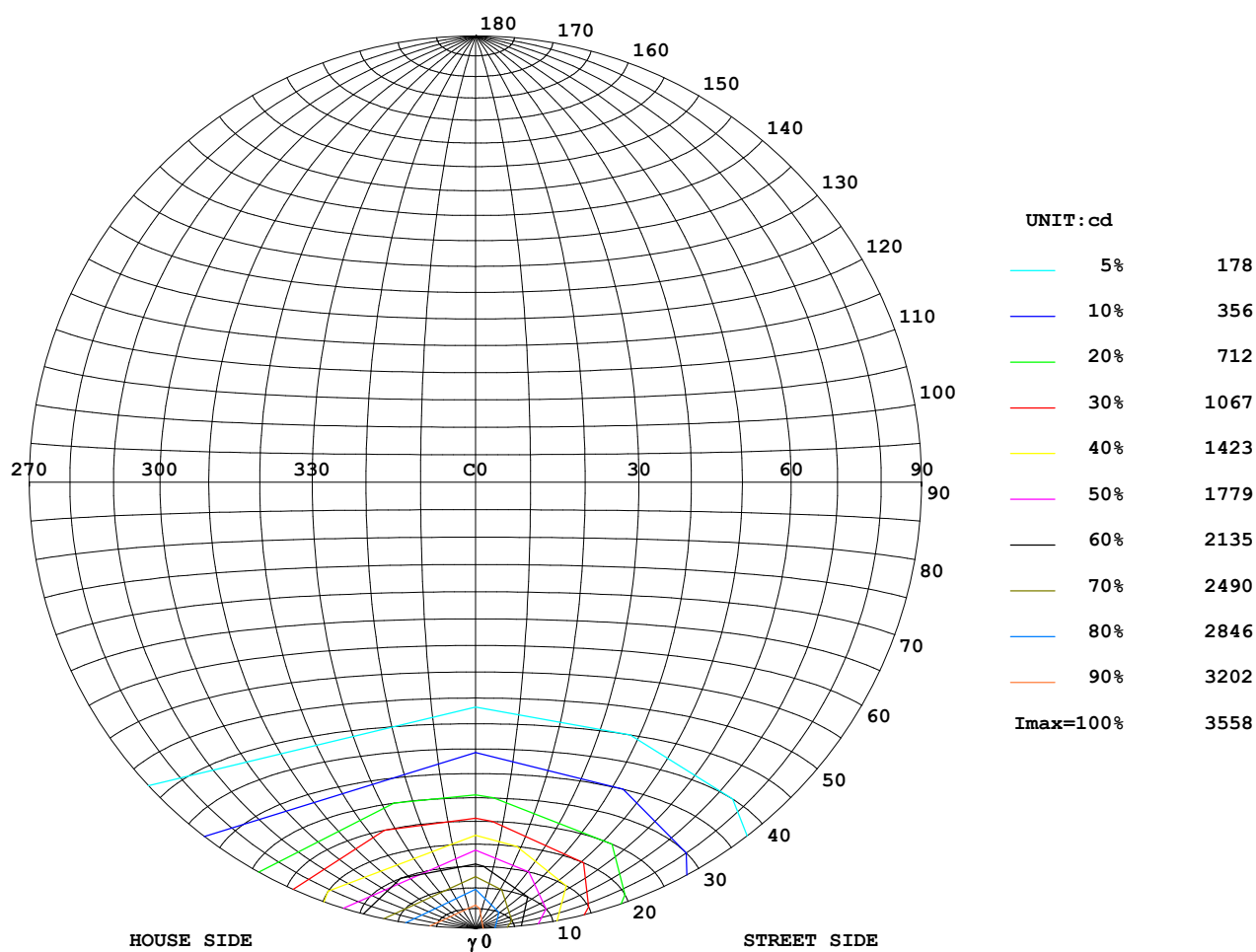
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ISOCANDELA DIAGRAM

Report number:

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



Test System: HopooColor HPG1800
 Temperature: 25.3 DEG
 Operators:
 Test Date: 07-21-2026

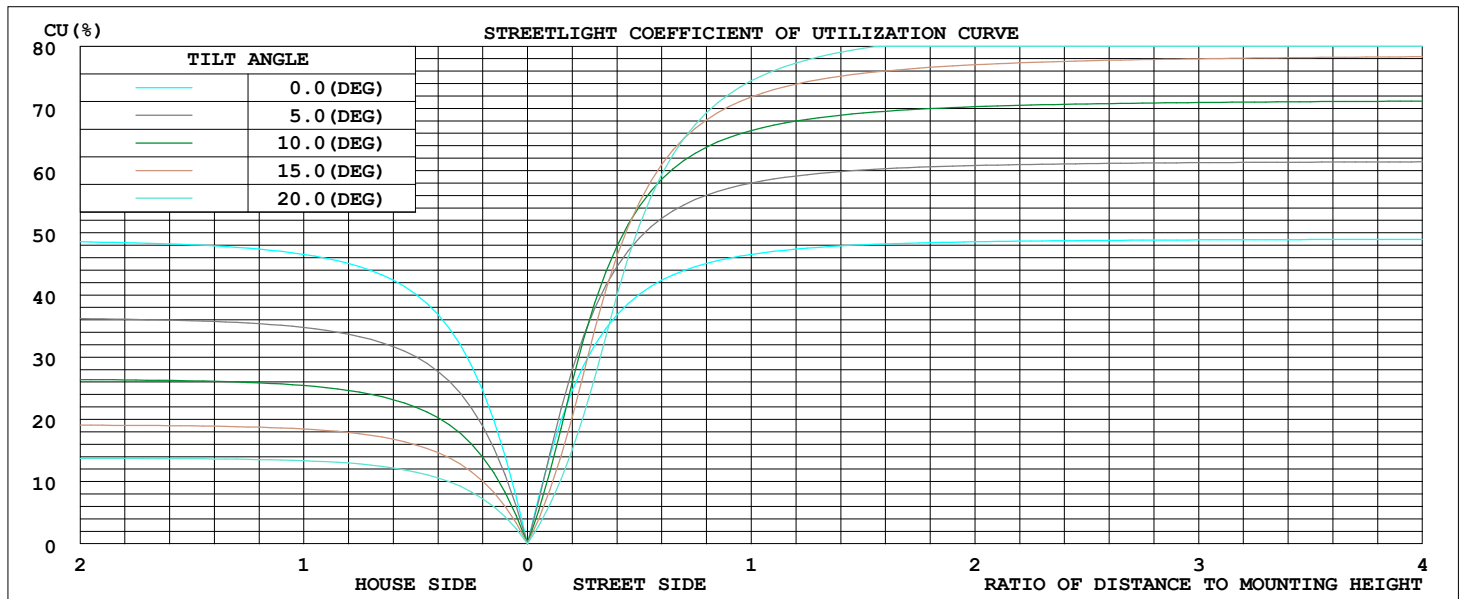
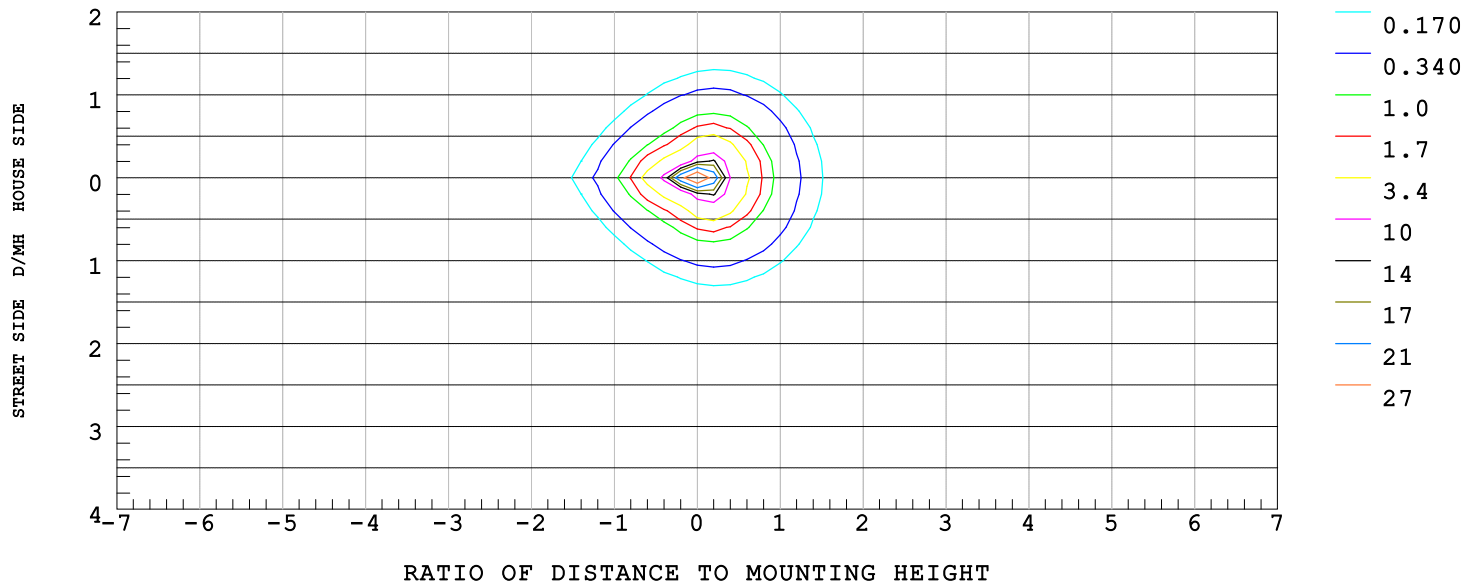
Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 8.300 m
 Remarks:

ISOLUX DIAGRAM

Report number:

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

ILLUMINANCE AT MH=10 m, Enadir = 34.26 lx

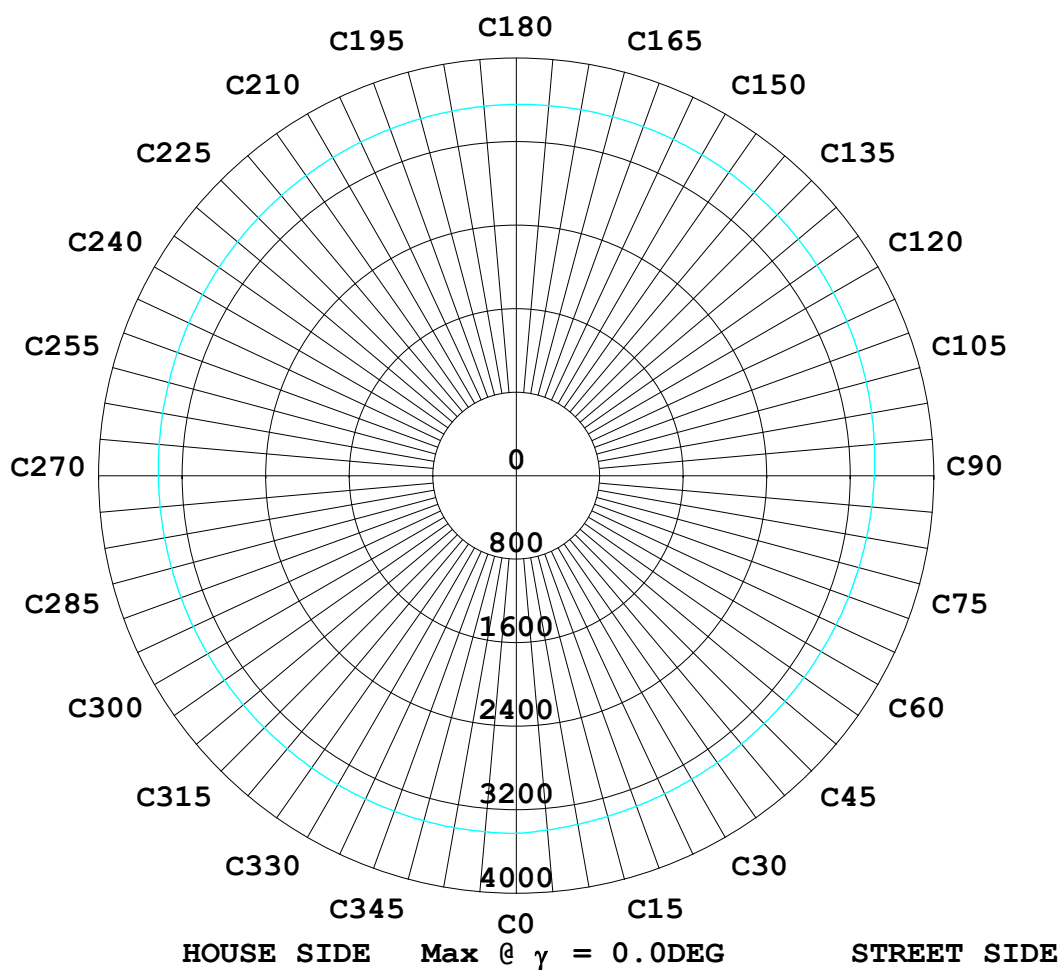

 Test System: HopooColor HPG1800
 Temperature: 25.3 DEG
 Operators:
 Test Date: 07-21-2026

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

ISOCANDELA DIAGRAM

Report number:

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



Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:
Test Date:07-21-2026

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

C (DEG)				
γ (DEG)	0	90	180	270
0.0	3426	3429	3558	3429
5.0	3275	2285	3293	2285
10.0	2807	1478	2732	1478
15.0	2196	978	2072	978
20.0	1618	652	1402	652
25.0	1113	445	993	445
30.0	738	309	646	309
35.0	493	208	423	208
40.0	330	148	284	148
45.0	226	111	200	111
50.0	151	81.2	148	81.2
55.0	110	53.8	109	53.8
60.0	75.2	32.9	78.1	32.9
65.0	51.1	20.3	54.4	20.3
70.0	33.4	11.8	35.2	11.8
75.0	20.5	5.64	21.3	5.64
80.0	12.7	0.28	12.9	0.28
85.0	4.82	0.00	4.54	0.00
90.0	0.96	0.00	0.96	0.00
95.0	0.69	0.00	0.69	0.00
100.0	0.55	0.00	0.48	0.00
105.0	0.48	0.00	0.48	0.00
110.0	0.48	0.00	0.48	0.00
115.0	0.69	0.00	0.62	0.00
120.0	1.03	0.34	0.96	0.34
125.0	1.51	1.17	1.44	1.17
130.0	2.27	2.41	2.06	2.41
135.0	3.16	3.99	2.96	3.99
140.0	4.34	5.85	3.99	5.85
145.0	5.58	7.71	5.16	7.71
150.0	6.88	9.30	6.40	9.30
155.0	8.19	10.3	7.64	10.3
160.0	9.36	10.8	8.81	10.8
165.0	10.4	11.0	9.78	11.0
170.0	11.0	11.0	10.5	11.0
175.0	11.5	10.8	11.0	10.8
180.0	11.5	10.6	11.0	10.6

Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:
Test Date:07-21-2026

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