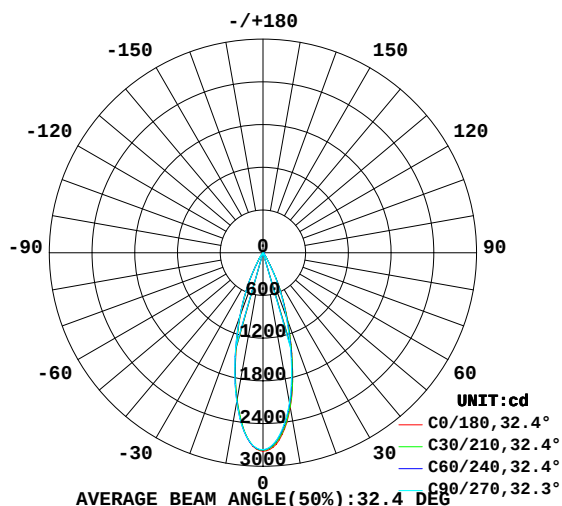


LUMINAIRE PHOTOMETRIC TEST REPORT

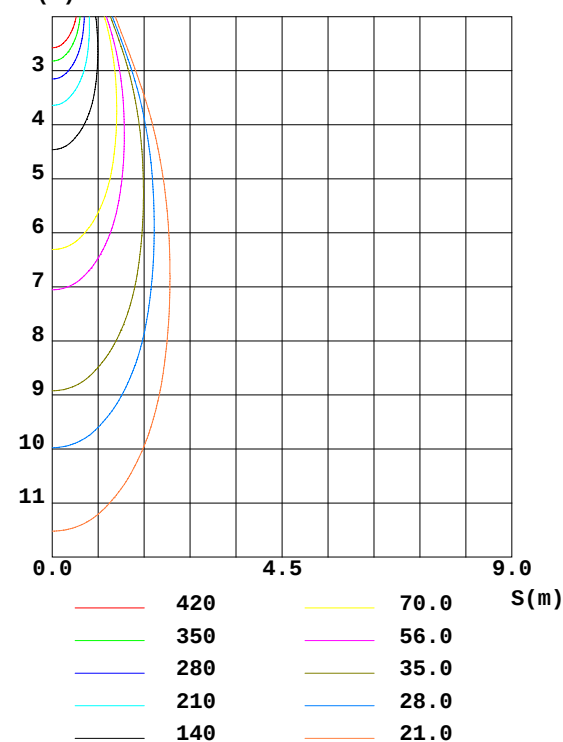
NAME: CL-Halo-D12 3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 74.40 lm/W			
MODEL		I _{max} (cd)	2787	S/MH(C0/180)	0.55
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	0.54
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	946.41	η UP, DN(C0-180)	0.2, 50.2
NOMINAL FLUX(lm)	946.408	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.2, 49.4
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	24	η down(%)	99.6	CIBSE SHR MAX	0.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2297	2176	2140	2111	2101	2109	2124	2142	0- 10	233.0	233.0	24.6, 24.6
20	1009	993.1	956.9	933.8	929.5	949.6	955.0	967.7	10- 20	417.1	650.1	68.7, 68.7
30	195.9	195.5	178.8	168.8	166.6	178.7	179.0	173.0	20- 30	235.9	886.1	93.6, 93.6
40	25.49	24.17	21.06	20.80	22.59	25.00	24.01	23.05	30- 40	47.22	933.3	98.6, 98.6
50	3.853	3.880	3.691	3.590	3.666	3.829	3.691	3.546	40- 50	7.321	940.6	99.4, 99.4
60	1.054	1.027	0.9660	0.9534	0.9278	0.9742	0.9734	0.9529	50- 60	1.857	942.5	99.6, 99.6
70	0	0	0	0	0	0	0	0	60- 70	0.3126	942.8	99.6, 99.6
80	0	0	0	0	0	0	0	0	70- 80	0	942.8	99.6, 99.6
90	0	0	0	0	0	0	0	0	80- 90	0	942.8	99.6, 99.6
100	0	0	0	0	0	0	0	0	90-100	0	942.8	99.6, 99.6
110	0	0	0	0	0	0	0	0	100-110	0	942.8	99.6, 99.6
120	0	0	0	0	0	0	0	0	110-120	0	942.8	99.6, 99.6
130	0	0.0001	0.0001	0.0000	0.0428	0.0167	0	0.0073	120-130	0.0005	942.8	99.6, 99.6
140	0.4332	0.4695	0.4963	0.4742	0.5721	0.5334	0.4853	0.4886	130-140	0.1418	942.9	99.6, 99.6
150	1.674	1.715	1.757	1.741	1.824	1.770	1.698	1.685	140-150	0.6422	943.6	99.7, 99.7
160	3.424	3.466	3.513	3.487	3.527	3.443	3.382	3.365	150-160	1.171	944.7	99.8, 99.8
170	4.911	4.905	4.932	4.879	4.961	4.837	4.794	4.800	160-170	1.169	945.9	99.9, 99.9
180	5.668	5.583	5.554	5.538	5.672	5.604	5.545	5.533	170-180	0.4948	946.4	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

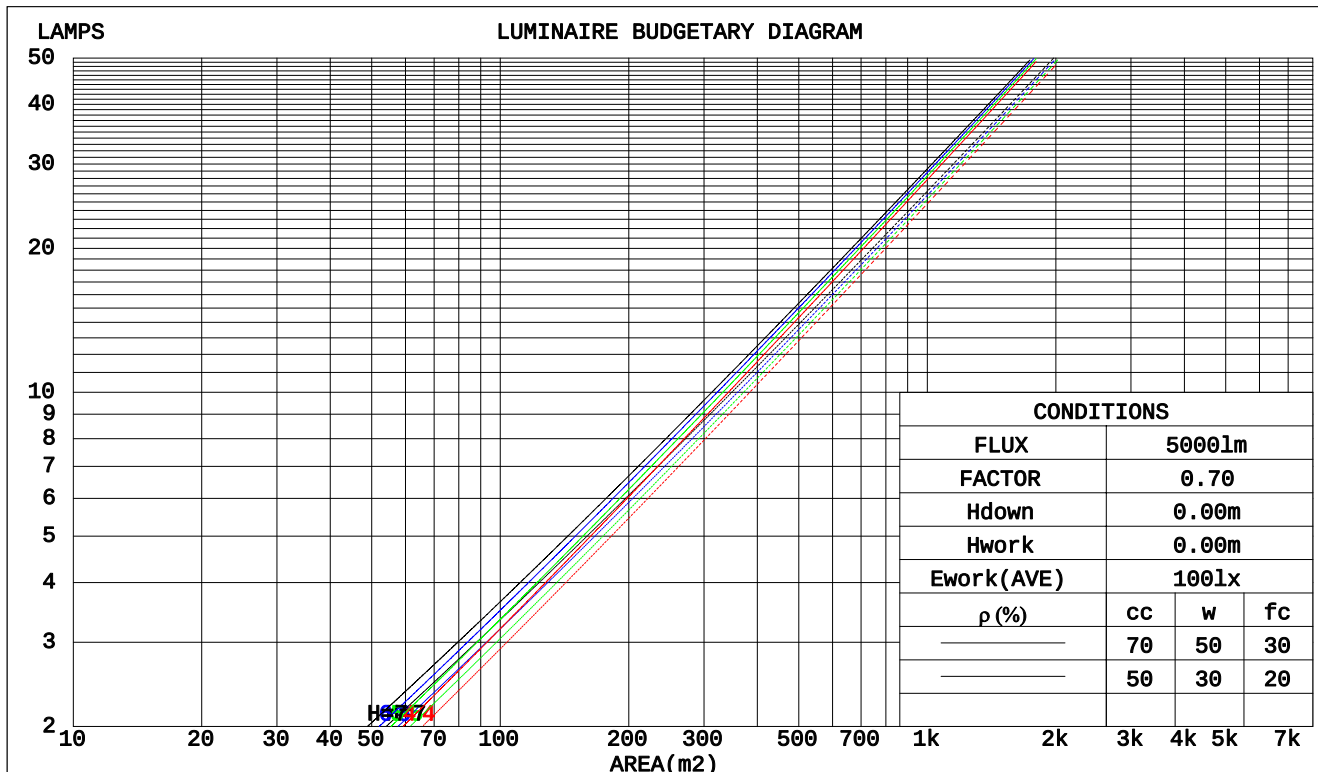
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:tang
 Test Date:2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
 Humidity:65.0%
 Test Distance:7.100m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: Halo-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

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	.00
1.0	1.12	1.10	1.08	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96
2.0	1.06	1.03	1.01	1.05	1.02	.99	1.02	.99	.97	.99	.97	.95	.96	.94	.93	.92
3.0	1.01	.97	.94	.90	.96	.94	.97	.94	.92	.95	.93	.91	.93	.91	.89	.88
4.0	.97	.92	.89	.96	.92	.89	.94	.90	.88	.92	.89	.87	.90	.87	.86	.84
5.0	.93	.88	.85	.92	.87	.84	.90	.86	.84	.88	.85	.83	.87	.84	.82	.81
6.0	.89	.84	.81	.88	.84	.81	.87	.83	.80	.85	.82	.79	.84	.81	.79	.78
7.0	.85	.81	.77	.85	.80	.77	.83	.80	.77	.82	.79	.76	.81	.78	.76	.75
8.0	.82	.77	.74	.82	.77	.74	.81	.77	.74	.80	.76	.74	.79	.76	.73	.72
9.0	.79	.75	.71	.79	.74	.71	.78	.74	.71	.77	.73	.71	.76	.73	.71	.70
10.0	.76	.72	.69	.76	.72	.69	.75	.71	.69	.74	.71	.68	.74	.71	.68	.67



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: Halo-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

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	.147	.083	.026	.140	.080	.025	.127	.073	.023	.115	.067	.021	.105	.061	.020		
2.0	.137	.075	.023	.131	.072	.022	.121	.067	.021	.111	.062	.020	.102	.058	.018		
3.0	.129	.068	.021	.124	.066	.020	.115	.062	.019	.107	.059	.018	.099	.055	.017		
4.0	.121	.063	.019	.117	.061	.018	.110	.058	.017	.103	.055	.017	.096	.052	.016		
5.0	.115	.059	.017	.112	.057	.017	.105	.055	.016	.099	.052	.016	.094	.050	.015		
6.0	.109	.055	.016	.106	.054	.015	.101	.052	.015	.096	.050	.015	.091	.048	.014		
7.0	.104	.052	.015	.102	.051	.014	.097	.049	.014	.092	.047	.014	.088	.046	.013		
8.0	.100	.049	.014	.098	.048	.014	.093	.047	.013	.089	.045	.013	.085	.044	.013		
9.0	.096	.046	.013	.094	.046	.013	.090	.044	.013	.086	.043	.012	.083	.042	.012		
10.0	.092	.044	.012	.090	.044	.012	.087	.042	.012	.083	.041	.012	.080	.040	.012		

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.193	.193	.193	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.172	.161	.150	.147	.138	.129	.101	.095	.089	.058	.055	.052	.019	.018	.017	
2.0	.155	.136	.120	.132	.117	.103	.091	.081	.072	.052	.047	.042	.017	.015	.014	
3.0	.140	.116	.097	.120	.100	.084	.083	.070	.059	.048	.041	.035	.015	.013	.011	
4.0	.128	.101	.080	.110	.087	.070	.076	.061	.049	.044	.036	.029	.014	.012	.010	
5.0	.118	.089	.067	.102	.077	.059	.070	.054	.041	.041	.032	.025	.013	.010	.008	
6.0	.110	.079	.057	.094	.069	.050	.065	.048	.035	.038	.028	.021	.012	.009	.007	
7.0	.103	.071	.049	.088	.062	.043	.061	.043	.030	.035	.025	.018	.011	.008	.006	
8.0	.097	.065	.043	.083	.056	.037	.058	.039	.026	.033	.023	.016	.011	.008	.005	
9.0	.091	.059	.037	.079	.051	.033	.054	.036	.023	.032	.021	.014	.010	.007	.005	
10.0	.086	.054	.033	.075	.047	.029	.052	.033	.021	.030	.020	.012	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

Uncorrected UGR Table

NAME: Halo-D12-3000k-RA90-34D						TYPE:					WEIGHT:				
DIM.:						SPEC.:					SERIAL No.:				
MFR.: VD						SUR.:					PROTECTION ANGLE:				
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	-1.8	-1.1	-1.6	-0.9	-0.7	-2.5	-1.8	-2.3	-1.6	-1.5					
3H	-1.9	-1.3	-1.7	-1.1	-0.9	-2.7	-2.0	-2.4	-1.8	-1.6					
4H	-2.0	-1.4	-1.8	-1.2	-0.9	-2.8	-2.1	-2.5	-1.9	-1.7					
6H	-2.1	-1.5	-1.8	-1.3	-1.0	-2.8	-2.2	-2.5	-2.0	-1.8					
8H	-2.1	-1.6	-1.8	-1.3	-1.1	-2.9	-2.3	-2.6	-2.1	-1.8					
12H	-2.2	-1.6	-1.9	-1.4	-1.1	-2.9	-2.4	-2.6	-2.1	-1.8					
4H 2H	-2.0	-1.4	-1.7	-1.2	-0.9	-2.7	-2.1	-2.5	-1.9	-1.7					
3H	-2.2	-1.6	-1.9	-1.4	-1.1	-2.9	-2.4	-2.6	-2.1	-1.8					
4H	-2.3	-1.8	-1.9	-1.5	-1.2	-3.0	-2.5	-2.7	-2.2	-1.9					
6H	-2.4	-1.9	-2.0	-1.6	-1.3	-3.1	-2.7	-2.7	-2.3	-2.0					
8H	-2.4	-2.0	-2.0	-1.7	-1.3	-3.2	-2.8	-2.8	-2.4	-2.0					
12H	-2.5	-2.1	-2.1	-1.7	-1.3	-3.2	-2.8	-2.8	-2.5	-2.1					
8H 4H	-2.4	-2.0	-2.0	-1.7	-1.3	-3.2	-2.8	-2.8	-2.4	-2.0					
6H	-2.6	-2.2	-2.1	-1.8	-1.4	-3.3	-2.9	-2.9	-2.5	-2.1					
8H	-2.6	-2.3	-2.2	-1.9	-1.4	-3.3	-3.0	-2.9	-2.6	-2.2					
12H	-2.7	-2.4	-2.2	-2.0	-1.5	-3.4	-3.1	-2.9	-2.7	-2.2					
12H 4H	-2.5	-2.1	-2.1	-1.7	-1.3	-3.2	-2.8	-2.8	-2.5	-2.1					
6H	-2.6	-2.3	-2.2	-1.9	-1.4	-3.3	-3.0	-2.9	-2.6	-2.2					
8H	-2.7	-2.4	-2.2	-2.0	-1.5	-3.4	-3.1	-2.9	-2.7	-2.2					
Variations with the observer position at spacings:															
S = 1.0H	+ 4.2 / -12.5					+ 3.8 / -11.8									
1.5H	+ 6.6 / - 9.5					+ 6.2 / - 8.5									
2.0H	+ 5.6 / - 8.7					+ 5.3 / - 8.3									

CIE Pub.117 Corrected 946.4 lm Total Lamp Luminous Flux.(8log(F/F0) = -0.2)

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: Halo-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

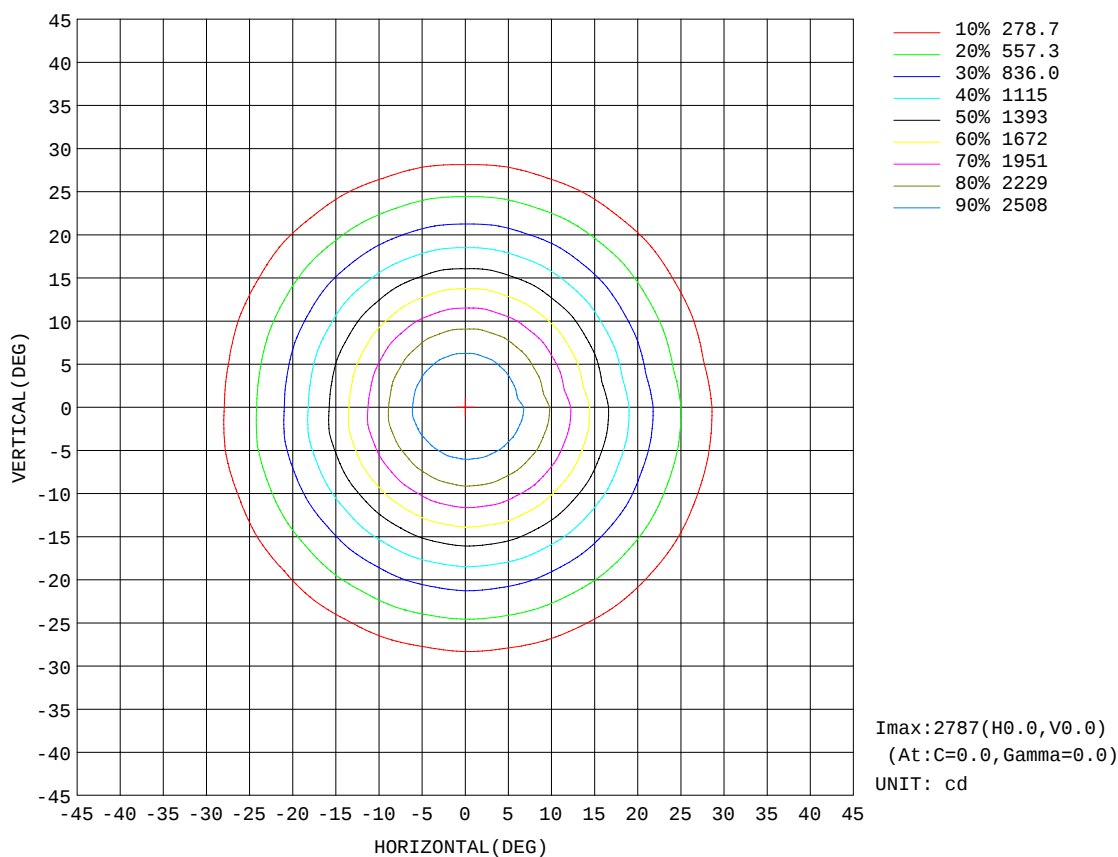
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	91	85	82	90	85	81	89	84	81	78
0.80	98	92	89	97	92	89	96	92	89	85
1.00	101	96	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	107	103	100	106	102	100	104	101	99	94
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	106	104	106	104	102	96
3.00	113	109	107	111	108	106	107	105	104	97
4.00	114	112	110	112	110	109	109	107	106	99
5.00	116	114	112	113	112	110	109	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: Ha1o-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

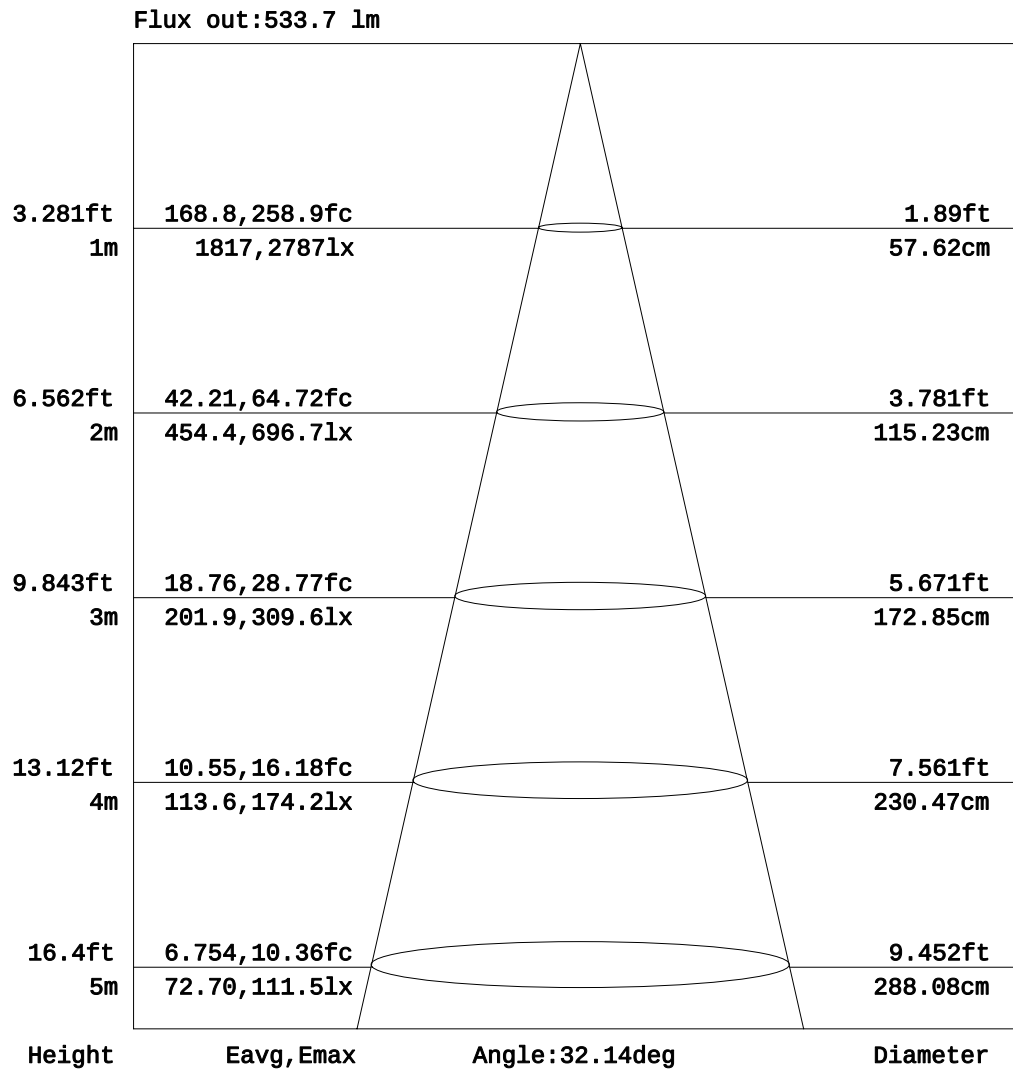


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

AAI Figure

NAME: Ha1o-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:



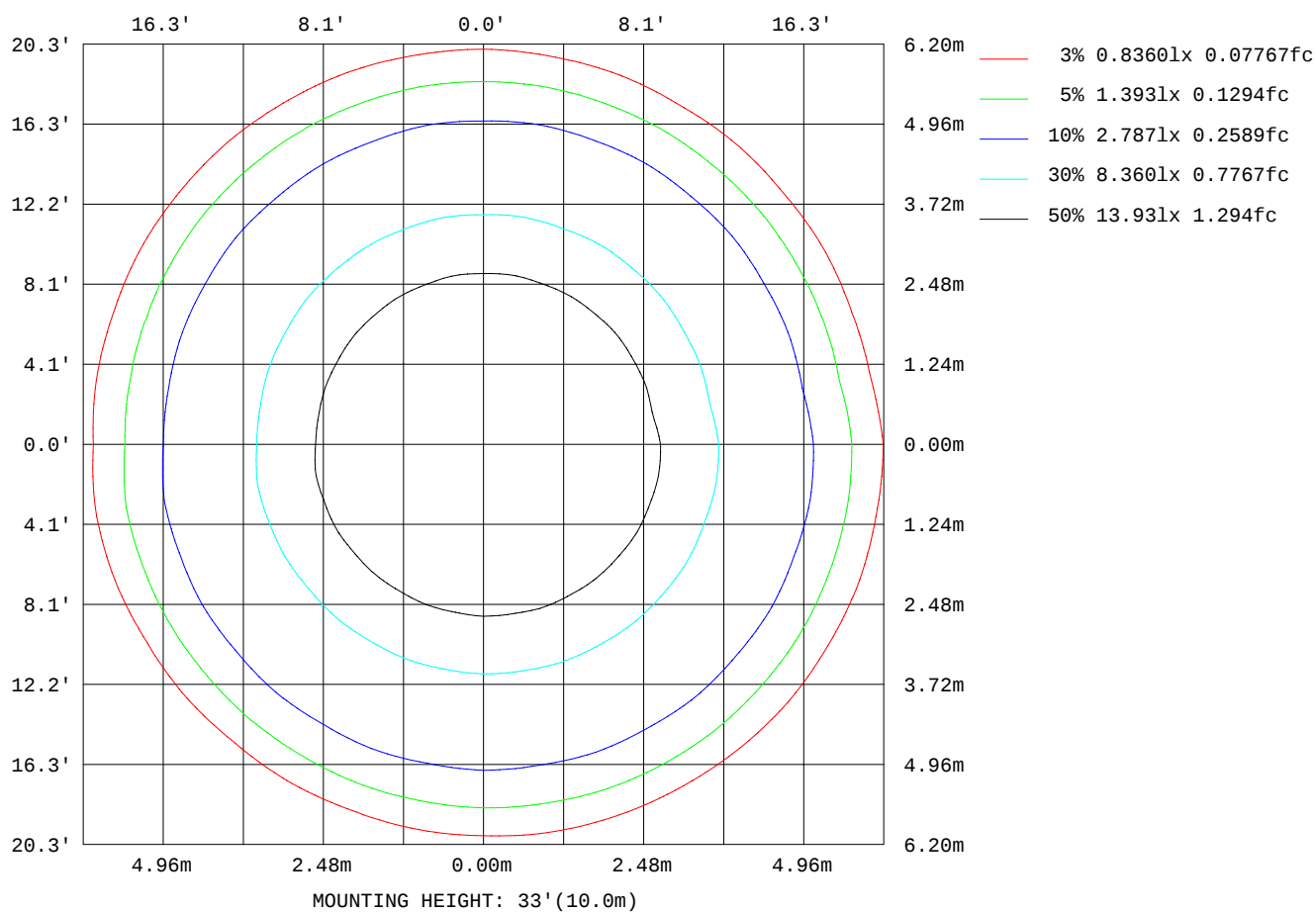
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: Ha1o-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Halo-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	946.408	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.1	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G	C plane(deg)																		
deg	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	36	36	36	36	36	36	36	35	35	34	34	34	34	33	34	34	34	35	33
60	21	20	21	20	21	20	21	20	20	19	20	19	19	19	19	19	20	19	19
65	7	6	7	6	7	6	6	5	6	6	6	5	6	5	6	5	6	6	5
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum calculated	specified maximum	maximum measured	specified maximum
Category 1	55 to 90	36	200	---	500
Category 2	65 to 90	7	200	---	500
Category 3	75 to 90	0	200	---	500

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Halo-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	946.408	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.1	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:2001 Average Luminance

G deg	C plane(deg)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	36	36	36	36	36	36	36	35	35	34	34	34	34	33	34	34	34	35	33
60	21	20	21	20	21	20	21	20	20	19	20	19	19	19	19	19	20	19	19
65	7	6	7	6	7	6	6	5	6	6	6	5	6	5	6	5	6	6	5
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

range (deg)	Maximum measured	Average Luminance(cd/sq.m)			
		Maximum limit for screen type & software category used			
		Type I,II screen Some neg.s'ware	Type I,II screen Only pos.s'ware	Type III screen Some neg.s'ware	Type III screen Only pos.s'ware
55 to 90	36	1000	1500	200	500
65 to 90	7	1000	1500	200	500

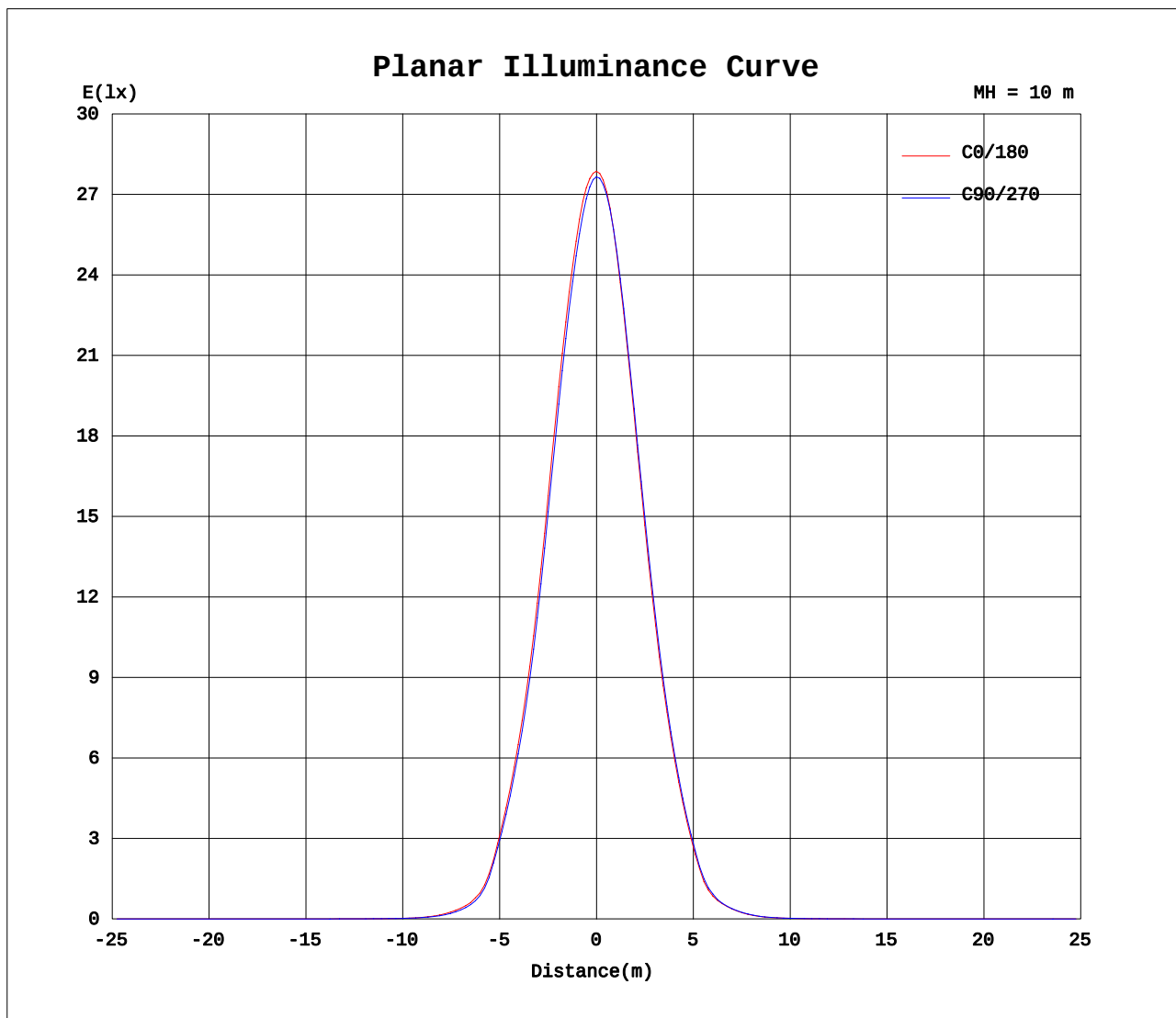
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

The luminaire satisfies the specified luminance criteria for
Negative Software with Type I & II Screen(Good to Moderate treatment).

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:tang
Test Date:2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.100m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Halo-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(°)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	2787	2783	2779	2776	2774	2772	2769	2768	2767	2766	2764	2764	2763	2762	2762	2761	2760	2760	2787
5	2638	2633	2621	2618	2606	2605	2593	2593	2584	2583	2576	2580	2574	2579	2577	2588	2590	2601	2600
10	2207	2209	2194	2195	2178	2174	2158	2159	2143	2140	2126	2124	2113	2117	2104	2116	2110	2125	2101
15	1596	1607	1591	1596	1576	1573	1556	1555	1533	1533	1513	1512	1496	1502	1493	1508	1500	1516	1485
20	1009	1014	1000	1008	996	991	975	972	959	957	943	944	932	938	930	943	943	956	929
25	558	563	556	560	551	549	537	536	526	525	514	516	506	511	505	513	508	515	490
30	196	199	197	199	196	195	191	188	181	179	172	171	168	169	169	172	174	178	167
35	74.6	74.8	73.4	73.1	71.0	70.2	67.5	66.1	63.2	62.0	60.2	60.5	60.3	62.0	63.4	66.4	68.2	71.7	68.7
40	25.5	25.7	25.1	25.1	24.3	24.1	23.0	22.5	21.4	21.1	20.3	20.3	20.0	20.7	20.9	22.1	22.7	24.0	22.6
45	8.29	8.44	8.35	8.46	8.30	8.34	8.13	8.05	7.77	7.65	7.40	7.36	7.28	7.36	7.39	7.63	7.75	8.09	7.79
50	3.85	3.88	3.84	3.90	3.86	3.90	3.86	3.83	3.73	3.69	3.61	3.61	3.56	3.59	3.59	3.67	3.69	3.77	3.67
55	2.07	2.06	2.06	2.05	2.07	2.06	2.07	2.03	2.00	1.96	1.96	1.92	1.93	1.90	1.94	1.94	1.97	1.98	1.91
60	1.05	1.02	1.04	1.02	1.04	1.01	1.04	0.99	1.00	0.97	0.98	0.95	0.96	0.93	0.97	0.95	0.98	0.97	0.93
65	0.30	0.27	0.29	0.25	0.28	0.24	0.27	0.23	0.26	0.23	0.26	0.23	0.26	0.23	0.26	0.23	0.27	0.25	0.20
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
135	0.11	0.16	0.12	0.16	0.11	0.17	0.12	0.17	0.12	0.17	0.11	0.16	0.11	0.16	0.12	0.15	0.11	0.17	0.23
140	0.43	0.48	0.44	0.49	0.45	0.49	0.46	0.50	0.46	0.50	0.46	0.50	0.45	0.50	0.45	0.49	0.45	0.49	0.57
145	0.95	1.00	0.97	1.01	0.98	1.02	0.98	1.03	0.99	1.03	0.99	1.03	0.99	1.03	0.98	1.02	0.98	1.02	1.10
150	1.67	1.71	1.68	1.71	1.70	1.73	1.71	1.75	1.73	1.76	1.73	1.76	1.73	1.75	1.73	1.75	1.72	1.75	1.82
155	2.53	2.57	2.55	2.58	2.56	2.59	2.57	2.61	2.59	2.63	2.60	2.63	2.60	2.63	2.59	2.62	2.58	2.60	2.68
160	3.42	3.47	3.44	3.47	3.45	3.48	3.46	3.50	3.48	3.51	3.50	3.51	3.48	3.50	3.47	3.49	3.46	3.47	3.53
165	4.24	4.29	4.25	4.29	4.25	4.28	4.26	4.29	4.26	4.30	4.27	4.30	4.26	4.29	4.25	4.27	4.24	4.26	4.31
170	4.91	4.95	4.90	4.94	4.88	4.93	4.88	4.92	4.88	4.93	4.89	4.92	4.87	4.90	4.85	4.89	4.85	4.91	4.96
175	5.40	5.45	5.38	5.41	5.34	5.39	5.33	5.38	5.33	5.38	5.32	5.36	5.32	5.35	5.30	5.36	5.32	5.39	5.47
180	5.67	5.67	5.63	5.63	5.58	5.58	5.56	5.56	5.55	5.55	5.54	5.54	5.53	5.54	5.54	5.54	5.56	5.59	5.67

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: tang
Test Date: 2022-04-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.100m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: HaLo-D12-3000k-RA90-34D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: VD	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C(DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	2783	2779	2776	2774	2772	2769	2768	2767	2766	2764	2764	2763	2762	2762	2761	2760	2760		
5	2596	2601	2597	2602	2599	2605	2602	2606	2601	2606	2602	2605	2598	2599	2593	2597	2589		
10	2090	2101	2097	2111	2107	2121	2117	2128	2124	2139	2132	2145	2136	2147	2139	2150	2139		
15	1480	1490	1487	1500	1499	1511	1509	1526	1519	1532	1520	1532	1528	1543	1534	1542	1527		
20	928	939	937	952	947	956	952	963	955	967	958	972	965	970	959	966	957		
25	489	497	496	505	501	507	504	514	510	518	513	520	515	521	514	521	516		
30	169	172	175	179	179	180	180	180	179	178	176	175	173	173	172	173	173		
35	69.4	71.7	72.0	73.8	72.9	73.8	72.6	72.2	70.6	70.3	68.7	68.9	68.0	68.7	68.1	68.8	67.8		
40	22.9	24.0	24.2	25.1	24.9	25.3	24.7	24.7	24.0	24.0	23.2	23.4	22.9	23.2	22.7	23.0	22.5		
45	7.84	8.15	8.20	8.44	8.38	8.53	8.32	8.27	7.99	7.92	7.67	7.67	7.48	7.55	7.47	7.58	7.49		
50	3.65	3.73	3.74	3.83	3.83	3.88	3.81	3.79	3.69	3.65	3.59	3.59	3.53	3.56	3.54	3.59	3.57		
55	1.94	1.93	1.97	1.98	2.01	2.02	2.01	1.98	1.97	1.93	1.93	1.91	1.93	1.91	1.93	1.93	1.93		
60	0.96	0.94	0.98	0.95	1.00	0.98	1.01	0.96	0.97	0.93	0.95	0.93	0.97	0.94	0.97	0.94	0.96		
65	0.24	0.21	0.24	0.22	0.25	0.22	0.25	0.21	0.26	0.22	0.25	0.21	0.25	0.22	0.24	0.21	0.24		
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
130	0.00	0.04	0.00	0.03	0.00	0.03	0.00	0.03	0.00	0.02	0.00	0.02	0.00	0.01	0.00	0.02	0.00		
135	0.19	0.23	0.18	0.22	0.17	0.21	0.16	0.20	0.16	0.19	0.15	0.19	0.14	0.19	0.15	0.20	0.17		
140	0.53	0.56	0.52	0.56	0.51	0.55	0.49	0.53	0.49	0.52	0.48	0.51	0.47	0.51	0.48	0.52	0.49		
145	1.07	1.10	1.06	1.08	1.04	1.06	1.02	1.04	1.00	1.02	0.99	1.01	0.98	1.01	0.99	1.03	1.00		
150	1.79	1.80	1.77	1.79	1.75	1.77	1.72	1.74	1.70	1.72	1.68	1.70	1.67	1.70	1.68	1.71	1.70		
155	2.63	2.65	2.61	2.63	2.58	2.59	2.56	2.57	2.53	2.55	2.52	2.53	2.50	2.53	2.51	2.55	2.53		
160	3.46	3.49	3.44	3.46	3.42	3.44	3.40	3.42	3.38	3.39	3.36	3.38	3.35	3.38	3.36	3.40	3.38		
165	4.24	4.25	4.20	4.22	4.18	4.20	4.16	4.19	4.15	4.17	4.13	4.16	4.12	4.16	4.13	4.17	4.15		
170	4.89	4.89	4.83	4.86	4.81	4.85	4.80	4.84	4.79	4.83	4.77	4.81	4.78	4.82	4.79	4.84	4.81		
175	5.39	5.40	5.33	5.36	5.30	5.35	5.29	5.34	5.28	5.32	5.28	5.31	5.27	5.31	5.28	5.35	5.31		
180	5.65	5.65	5.59	5.60	5.61	5.60	5.55	5.56	5.55	5.54	5.54	5.54	5.53	5.54	5.54	5.57	5.60		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
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Operators:tang
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
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Remarks: