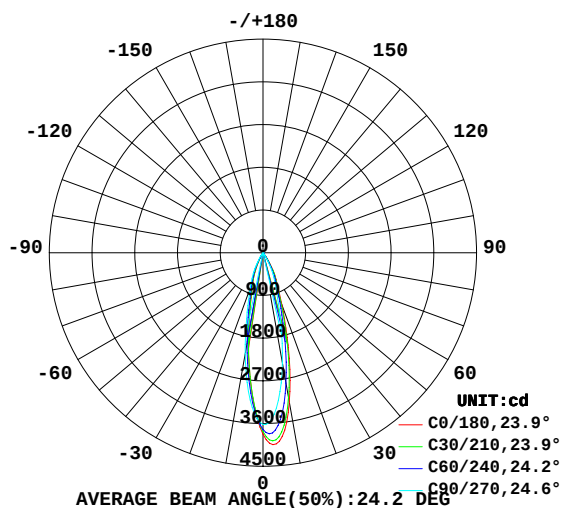


LUMINAIRE PHOTOMETRIC TEST REPORT

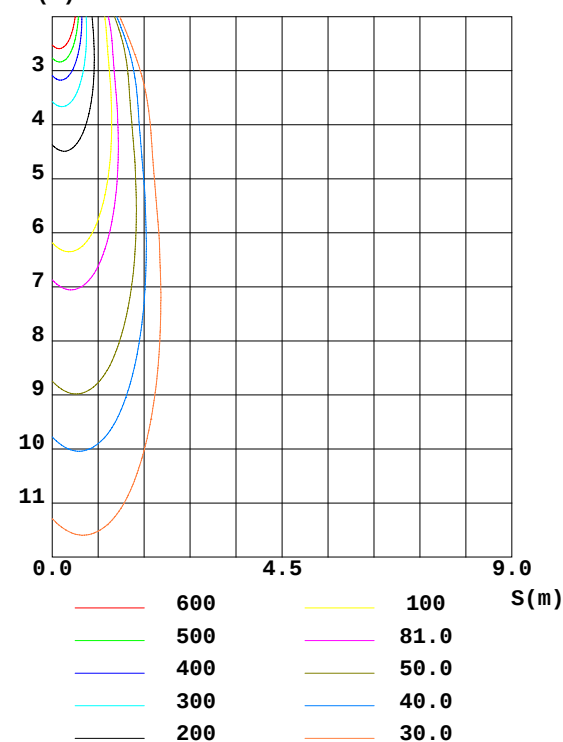
NAME: CL-Halo-D12-uls 3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 78.80 lm/W			
MODEL		Imax(cd)	4050	S/MH(C0/180)	0.52
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	0.43
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	983.38	η UP, DN(C0-180)	0.2, 51.3
NOMINAL FLUX(lm)	983.378	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.2, 48.3
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	24	η down(%)	99.6	CIBSE SHR MAX	1.00

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:Vando
Test Date:2021-03-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.000m [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	3200	2959	2361	1882	1751	1847	2163	2816	0- 10	285.4	285.4	29,29
20	1156	1042	819.3	641.3	602.9	650.6	779.2	1019	10- 20	399.6	685.1	69.7,69.7
30	408.6	339.9	212.9	126.3	109.8	142.1	221.6	351.4	20- 30	227.9	913.0	92.8,92.8
40	39.46	29.82	17.86	9.458	7.820	10.45	20.22	36.13	30- 40	57.74	970.7	98.7,98.7
50	4.912	4.419	3.602	2.418	2.158	2.511	3.665	4.725	40- 50	6.620	977.3	99.4,99.4
60	1.580	1.369	1.021	0.5505	0.4296	0.5983	1.061	1.408	50- 60	1.822	979.2	99.6,99.6
70	0.0883	0.0004	0	0	0	0	0	0.0003	60- 70	0.3666	979.5	99.6,99.6
80	0	0	0	0	0	0	0	0	70- 80	0.0004	979.5	99.6,99.6
90	0	0	0	0	0	0	0	0	80- 90	0	979.5	99.6,99.6
100	0	0	0	0	0	0	0	0	90-100	0	979.5	99.6,99.6
110	0	0	0	0	0	0	0	0	100-110	0	979.5	99.6,99.6
120	0	0	0	0	0	0	0	0	110-120	0	979.5	99.6,99.6
130	0	0	0.0003	0.0482	0.1381	0.0781	0	0	120-130	0.0038	979.5	99.6,99.6
140	0.2241	0.3073	0.4778	0.6741	0.8133	0.6974	0.4855	0.3281	130-140	0.1608	979.7	99.6,99.6
150	1.223	1.349	1.703	2.186	2.379	2.182	1.746	1.340	140-150	0.6436	980.3	99.7,99.7
160	3.213	3.342	3.745	4.282	4.465	4.204	3.705	3.227	150-160	1.239	981.6	99.8,99.8
170	5.191	5.211	5.317	5.459	5.647	5.404	5.146	4.998	160-170	1.287	982.9	99.9,99.9
180	5.977	5.821	5.716	5.688	5.995	5.823	5.670	5.686	170-180	0.5251	983.4	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

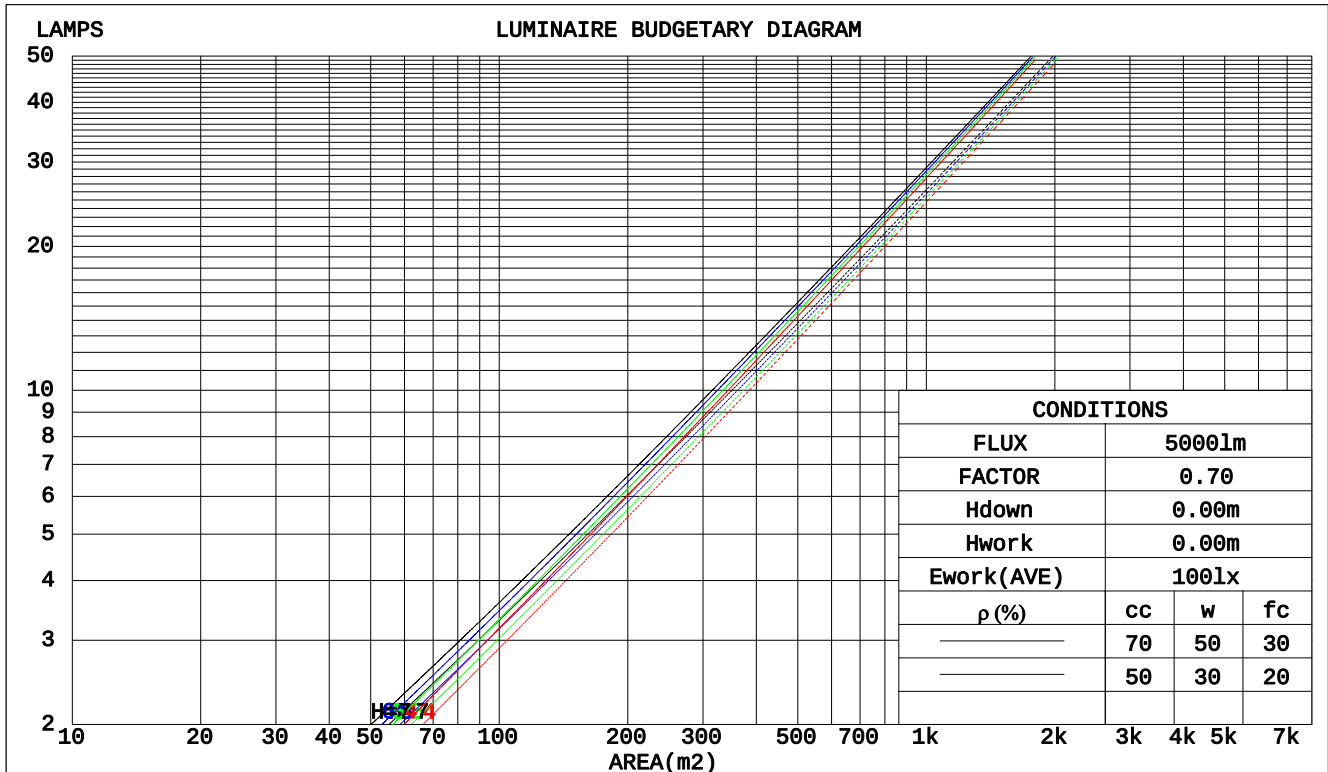
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Vando
Test Date:2021-03-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: HaLo-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

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	1.12	1.10	1.09	1.10	1.08	1.07	1.06	1.05	1.04	1.02	1.01	1.00	.99	.98	.97	.96
2.0	1.07	1.04	1.01	1.05	1.02	.99	1.02	.99	.98	.99	.97	.95	.96	.95	.93	.92
3.0	1.02	.98	.95	1.00	.97	.94	.98	.95	.93	.95	.93	.91	.93	.91	.90	.88
4.0	.97	.93	.90	.96	.92	.89	.94	.91	.88	.92	.89	.87	.90	.88	.86	.85
5.0	.93	.89	.86	.92	.88	.85	.91	.87	.84	.89	.86	.84	.88	.85	.83	.82
6.0	.90	.85	.82	.89	.85	.82	.87	.84	.81	.86	.83	.80	.85	.82	.80	.79
7.0	.86	.82	.79	.86	.81	.78	.84	.81	.78	.83	.80	.77	.82	.79	.77	.76
8.0	.83	.79	.76	.83	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.74	.73
9.0	.80	.76	.73	.80	.76	.73	.79	.75	.72	.78	.75	.72	.77	.74	.72	.71
10.0	.78	.73	.70	.77	.73	.70	.76	.73	.70	.76	.72	.70	.75	.72	.70	.69



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Vando
Test Date: 2021-03-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: HaLo-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	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 Coefficients(WEC)										
0.0																	
1.0	.144	.082	.026	.137	.078	.025	.125	.072	.023	.113	.065	.021	.102	.059	.019		
2.0	.135	.074	.023	.129	.071	.022	.118	.066	.020	.109	.061	.019	.100	.056	.018		
3.0	.126	.067	.020	.121	.065	.020	.113	.061	.019	.105	.057	.018	.097	.054	.017		
4.0	.119	.062	.018	.115	.060	.018	.107	.057	.017	.100	.054	.016	.094	.051	.016		
5.0	.112	.057	.017	.109	.056	.016	.103	.053	.016	.097	.051	.015	.091	.049	.015		
6.0	.107	.054	.015	.104	.052	.015	.098	.050	.015	.093	.048	.014	.088	.046	.014		
7.0	.102	.050	.014	.099	.049	.014	.094	.048	.014	.090	.046	.013	.086	.044	.013		
8.0	.097	.048	.013	.095	.047	.013	.091	.045	.013	.087	.044	.013	.083	.043	.012		
9.0	.093	.045	.013	.091	.044	.012	.087	.043	.012	.084	.042	.012	.080	.041	.012		
10.0	.089	.043	.012	.088	.042	.012	.084	.041	.012	.081	.040	.011	.078	.039	.011		

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	.130	.101	.095	.090	.058	.055	.052	.019	.018	.017	
2.0	.154	.136	.120	.132	.117	.104	.091	.081	.072	.052	.047	.042	.017	.015	.014	
3.0	.140	.116	.098	.120	.100	.085	.082	.070	.059	.048	.041	.035	.015	.013	.011	
4.0	.128	.101	.081	.110	.087	.070	.075	.061	.049	.044	.036	.029	.014	.012	.010	
5.0	.118	.089	.068	.101	.077	.059	.070	.054	.042	.040	.032	.025	.013	.010	.008	
6.0	.109	.079	.058	.094	.069	.050	.065	.048	.035	.038	.028	.021	.012	.009	.007	
7.0	.102	.071	.050	.088	.062	.043	.061	.043	.031	.035	.025	.018	.011	.008	.006	
8.0	.096	.064	.043	.082	.056	.038	.057	.039	.027	.033	.023	.016	.011	.008	.005	
9.0	.090	.059	.038	.078	.051	.033	.054	.036	.023	.031	.021	.014	.010	.007	.005	
10.0	.085	.054	.034	.074	.047	.029	.051	.033	.021	.030	.020	.012	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Vando
Test Date:2021-03-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

Uncorrected UGR Table

NAME: Halo-D12-3000k-RA90-20D						TYPE:					WEIGHT:				
DIM.:						SPEC.:					SERIAL No.:				
MFR.:						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	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	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	0.2	0.2	0.2	0.2	0.2
Room dimensions						Viewed crosswise					Viewed endwise				
x = 2H y = 2H	2.8	3.5	3.0	3.7	3.8	-0.4	0.3	-0.2	0.5	0.7	-0.4	0.3	-0.2	0.5	0.7
3H	2.7	3.3	2.9	3.5	3.7	-0.5	0.1	-0.3	0.3	0.5	-0.5	0.1	-0.3	0.3	0.5
4H	2.6	3.2	2.8	3.4	3.6	-0.6	0.0	-0.3	0.2	0.5	-0.6	0.0	-0.3	0.2	0.5
6H	2.5	3.1	2.8	3.3	3.6	-0.7	-0.1	-0.4	0.1	0.4	-0.7	-0.1	-0.4	0.1	0.4
8H	2.4	3.0	2.7	3.3	3.5	-0.7	-0.2	-0.4	0.1	0.3	-0.7	-0.2	-0.4	0.1	0.3
12H	2.4	2.9	2.7	3.2	3.5	-0.8	-0.2	-0.5	0.0	0.3	-0.8	-0.2	-0.5	0.0	0.3
4H 2H	2.6	3.2	2.8	3.4	3.6	-0.6	0.0	-0.3	0.2	0.5	-0.6	0.0	-0.3	0.2	0.5
3H	2.4	2.9	2.7	3.2	3.5	-0.8	-0.2	-0.5	0.0	0.3	-0.8	-0.2	-0.5	0.0	0.3
4H	2.3	2.8	2.6	3.1	3.4	-0.9	-0.4	-0.5	-0.1	0.2	-0.9	-0.4	-0.5	-0.1	0.2
6H	2.2	2.6	2.6	3.0	3.3	-1.0	-0.5	-0.6	-0.2	0.2	-1.0	-0.5	-0.6	-0.2	0.2
8H	2.1	2.6	2.5	2.9	3.3	-1.0	-0.6	-0.6	-0.3	0.1	-1.0	-0.6	-0.6	-0.3	0.1
12H	2.1	2.5	2.5	2.8	3.2	-1.1	-0.7	-0.7	-0.3	0.1	-1.1	-0.7	-0.7	-0.3	0.1
8H 4H	2.1	2.6	2.5	2.9	3.3	-1.0	-0.6	-0.6	-0.3	0.1	-1.0	-0.6	-0.6	-0.3	0.1
6H	2.0	2.4	2.5	2.8	3.2	-1.1	-0.8	-0.7	-0.4	0.0	-1.1	-0.8	-0.7	-0.4	0.0
8H	2.0	2.3	2.4	2.7	3.1	-1.2	-0.9	-0.7	-0.5	-0.0	-1.2	-0.9	-0.7	-0.5	-0.0
12H	1.9	2.2	2.4	2.6	3.1	-1.3	-1.0	-0.8	-0.6	-0.1	-1.3	-1.0	-0.8	-0.6	-0.1
12H 4H	2.1	2.5	2.5	2.8	3.2	-1.1	-0.7	-0.7	-0.3	0.1	-1.1	-0.7	-0.7	-0.3	0.1
6H	2.0	2.3	2.4	2.7	3.1	-1.2	-0.9	-0.7	-0.5	-0.0	-1.2	-0.9	-0.7	-0.5	-0.0
8H	1.9	2.2	2.4	2.6	3.1	-1.3	-1.0	-0.8	-0.6	-0.1	-1.3	-1.0	-0.8	-0.6	-0.1
Variations with the observer position at spacings:															
S = 1.0H	+ 4.9 / -13.6					+ 3.2 / -11.3									
1.5H	+ 7.5 / -11.2					+ 5.6 / - 7.7									
2.0H	+ 5.7 / - 6.1					+ 4.6 / - 5.9									

CIE Pub.117 Corrected 983.4 lm Total Lamp Luminous Flux.(8log(F/F0) = -0.1)

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Vando
Test Date:2021-03-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: Halo-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

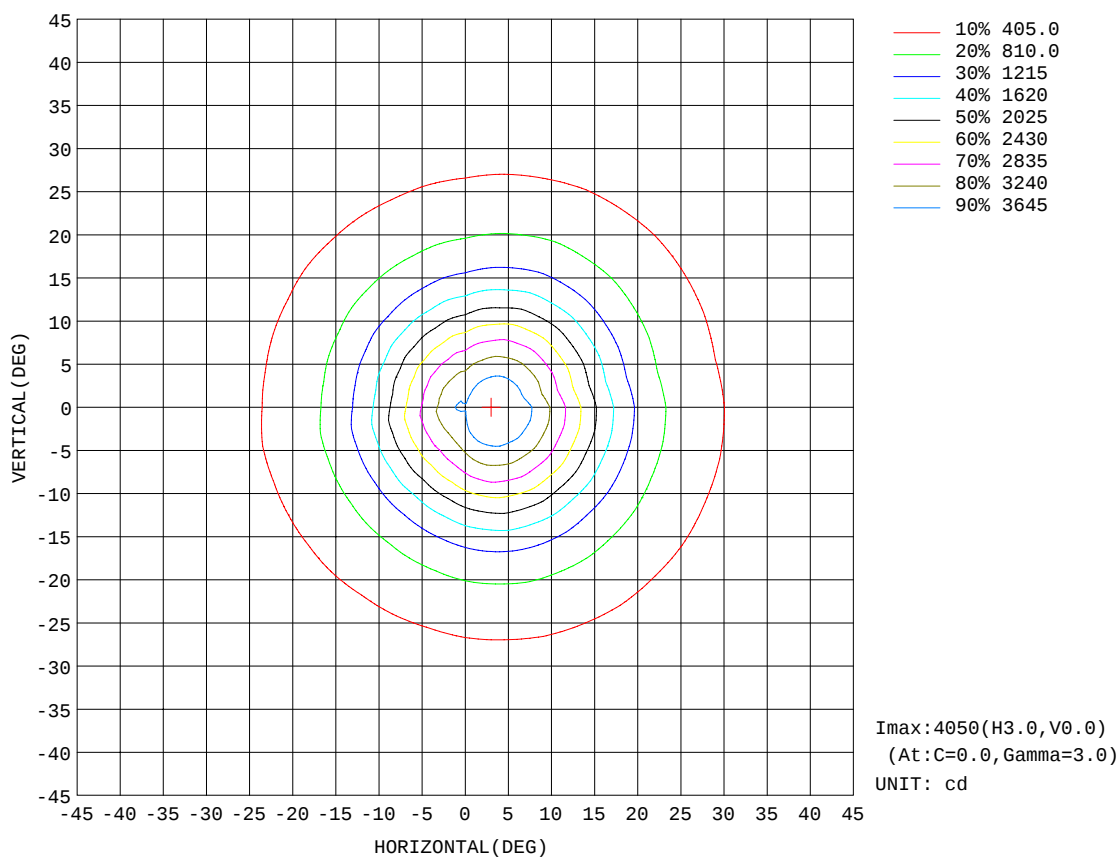
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	91	85	82	90	85	82	90	85	81	78
0.80	98	93	89	97	92	89	96	92	89	85
1.00	102	97	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	103	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:Vando
Test Date:2021-03-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: Ha1o-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

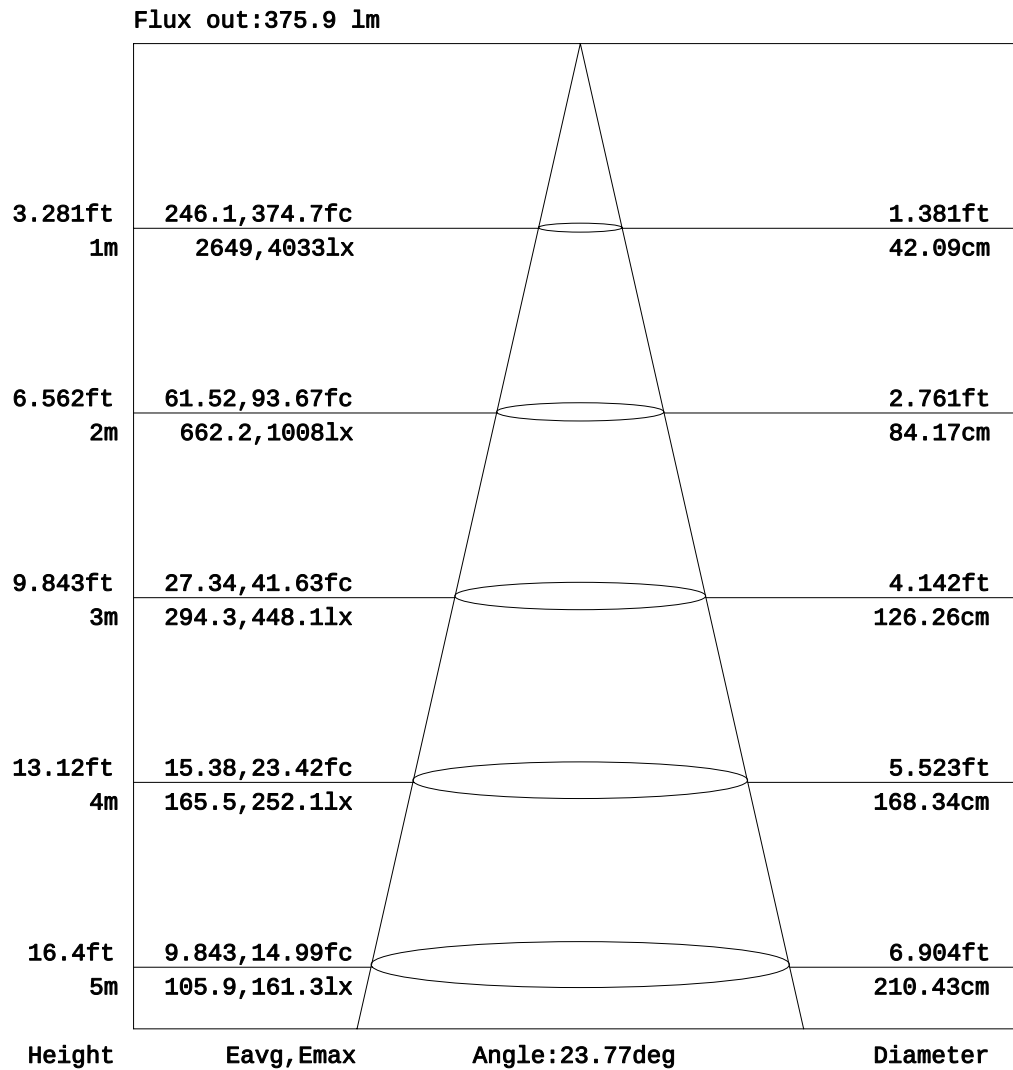


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Vando
Test Date: 2021-03-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks:

AAI Figure

NAME: HaLo-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



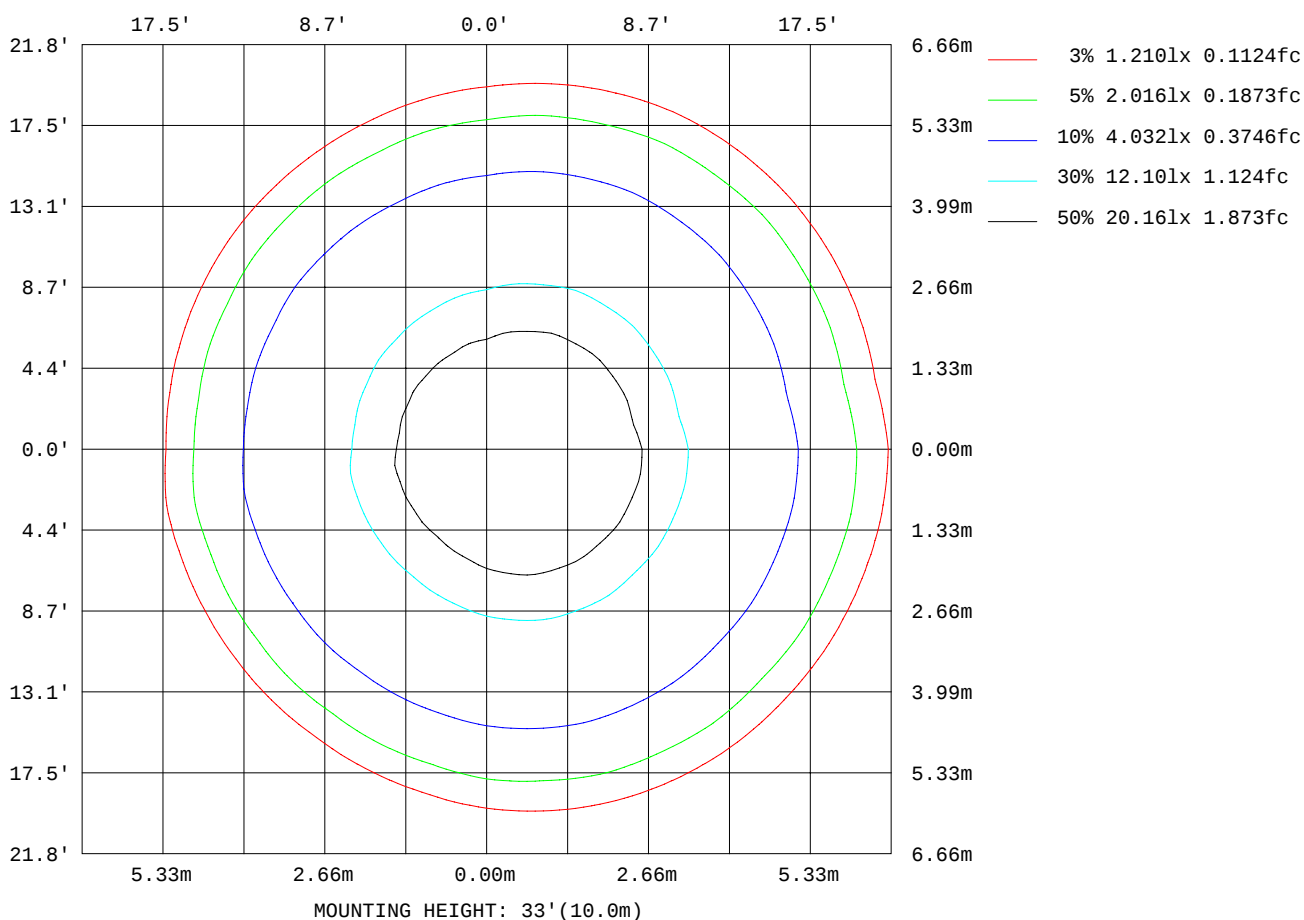
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Vando
Test Date: 2021-03-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: Ha1o-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Vando
Test Date: 2021-03-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Halo-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	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	983.378	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	48	47	46	45	44	43	41	39	38	35	32	28	25	23	23	21	21	21	20
60	32	31	30	29	28	27	26	24	23	20	18	14	13	11	11	10	10	9	9
65	18	17	17	15	14	12	12	9	8	6	4	1	1	0	0	0	0	0	0
70	3	1	2	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	48	200	---	500
Category 2	65 to 90	18	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:Vando
Test Date:2021-03-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

Average Luminance Table(CIBSE)

NAME: Halo-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	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	983.378	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	48	47	46	45	44	43	41	39	38	35	32	28	25	23	23	21	21	21	20
60	32	31	30	29	28	27	26	24	23	20	18	14	13	11	11	10	10	9	9
65	18	17	17	15	14	12	12	9	8	6	4	1	1	0	0	0	0	0	0
70	3	1	2	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	48	1000	1500	200	500
65 to 90	18	1000	1500	200	500

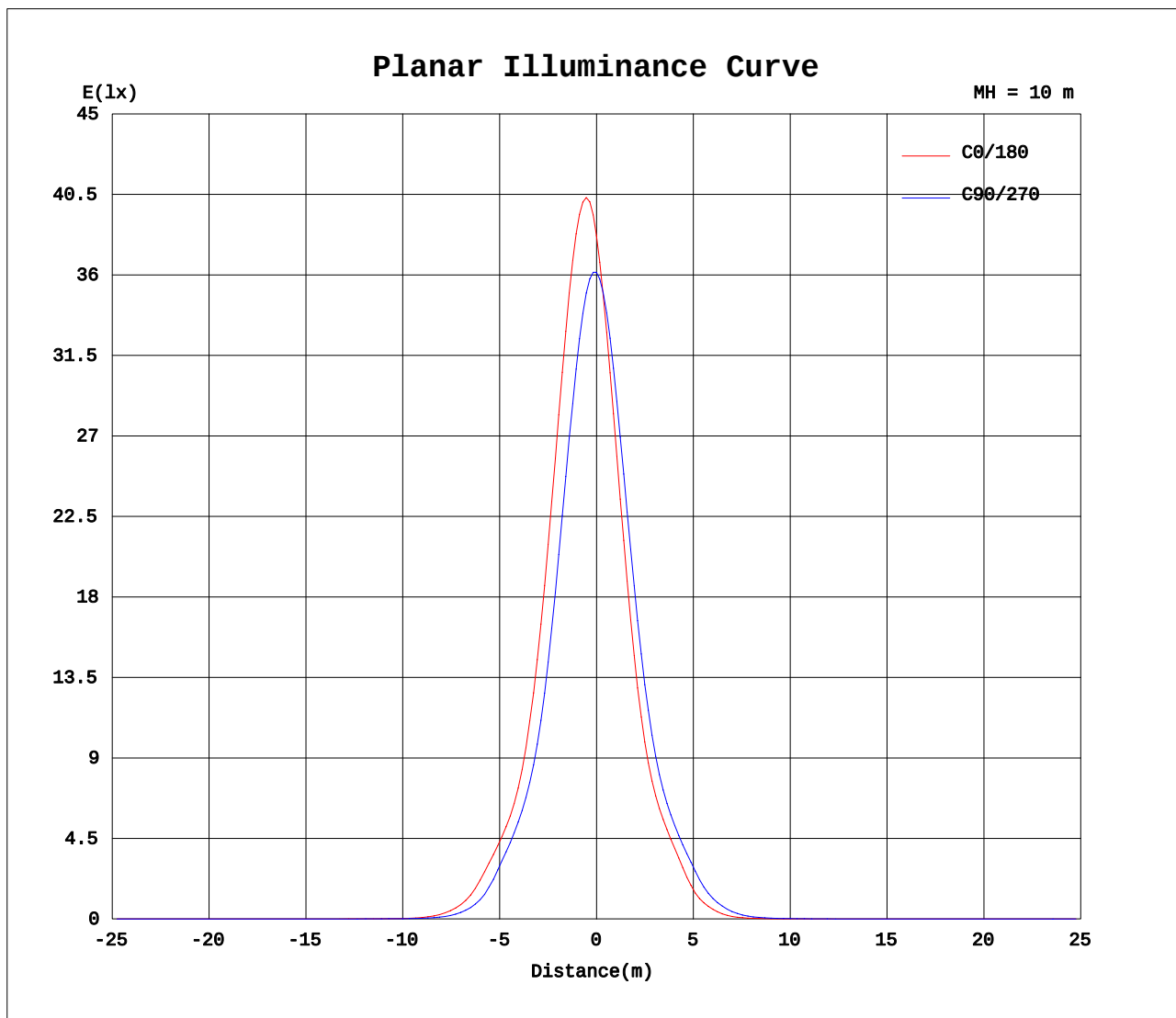
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

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:Vando
Test Date:2021-03-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Vando
Test Date: 2021-03-08

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: HaLo-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(°) γ (°)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	3822	3793	3791	3768	3769	3741	3722	3698	3680	3615	3620	3634	3659	3703	3726	3757	3776	3806	3822
5	3985	3974	3936	3892	3820	3753	3654	3558	3428	3281	3154	3067	2992	2967	2919	2908	2888	2910	2858
10	3200	3206	3145	3100	2997	2921	2787	2682	2511	2361	2188	2081	1960	1917	1848	1830	1800	1822	1751
15	2069	2080	2015	1986	1888	1838	1725	1644	1509	1403	1286	1196	1112	1074	1027	1011	997	1005	968
20	1156	1153	1121	1101	1056	1027	978	934	872	819	758	714	675	653	629	618	611	617	603
25	693	692	676	668	645	631	605	581	543	505	460	426	389	370	346	336	329	336	314
30	409	409	390	376	347	333	303	282	243	213	180	158	142	129	123	117	115	118	110
35	148	143	138	127	120	111	100	90.8	78.0	67.7	55.1	46.9	39.3	35.5	31.7	30.2	28.9	29.8	26.1
40	39.5	38.4	35.4	33.7	30.7	29.0	26.2	23.7	20.6	17.9	14.8	12.7	10.9	9.92	8.99	8.53	8.24	8.32	7.82
45	10.7	10.5	10.1	9.90	9.40	9.21	8.73	8.27	7.58	6.92	6.10	5.44	4.83	4.51	4.19	4.04	3.95	3.98	3.85
50	4.91	4.88	4.70	4.65	4.44	4.40	4.24	4.10	3.83	3.60	3.24	2.92	2.65	2.48	2.36	2.25	2.22	2.21	2.16
55	2.77	2.72	2.65	2.58	2.50	2.45	2.38	2.25	2.15	2.01	1.81	1.59	1.46	1.35	1.29	1.21	1.21	1.19	1.16
60	1.58	1.54	1.51	1.43	1.41	1.33	1.29	1.18	1.13	1.02	0.90	0.72	0.66	0.55	0.55	0.48	0.49	0.47	0.43
65	0.77	0.72	0.71	0.63	0.61	0.53	0.50	0.39	0.35	0.25	0.18	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00
70	0.09	0.04	0.05	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	0.04	0.02	0.06	0.03	0.09	0.05	0.09	0.14
135	0.00	0.06	0.01	0.07	0.04	0.10	0.07	0.13	0.11	0.18	0.18	0.25	0.23	0.30	0.27	0.32	0.29	0.33	0.39
140	0.22	0.27	0.24	0.30	0.27	0.34	0.33	0.40	0.40	0.48	0.49	0.59	0.60	0.68	0.67	0.73	0.70	0.73	0.81
145	0.60	0.64	0.62	0.68	0.67	0.74	0.75	0.84	0.87	0.96	1.02	1.14	1.19	1.28	1.31	1.37	1.37	1.39	1.47
150	1.22	1.25	1.23	1.30	1.31	1.39	1.41	1.52	1.58	1.70	1.81	1.95	2.04	2.16	2.21	2.29	2.30	2.32	2.38
155	2.11	2.13	2.13	2.19	2.22	2.29	2.34	2.45	2.53	2.67	2.80	2.96	3.08	3.21	3.28	3.36	3.37	3.41	3.44
160	3.21	3.23	3.22	3.27	3.31	3.38	3.42	3.53	3.61	3.74	3.86	4.02	4.13	4.26	4.31	4.40	4.41	4.45	4.47
165	4.32	4.34	4.32	4.36	4.38	4.44	4.46	4.56	4.59	4.70	4.77	4.90	4.96	5.07	5.09	5.18	5.16	5.23	5.23
170	5.19	5.23	5.17	5.23	5.19	5.23	5.20	5.27	5.25	5.32	5.30	5.39	5.38	5.47	5.45	5.54	5.52	5.60	5.65
175	5.71	5.74	5.68	5.70	5.62	5.66	5.58	5.62	5.55	5.60	5.55	5.59	5.56	5.62	5.59	5.66	5.68	5.77	5.88
180	5.98	5.98	5.90	5.90	5.82	5.82	5.76	5.76	5.72	5.72	5.66	5.67	5.66	5.67	5.70	5.71	5.75	5.80	6.00

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Vando
Test Date: 2021-03-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Halo-D12-3000k-RA90-20D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C(°)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
γ (°)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	3793	3791	3768	3769	3741	3722	3698	3680	3615	3620	3634	3659	3703	3726	3757	3776	3806		
5	2822	2853	2849	2903	2919	2968	3008	3092	3114	3246	3358	3496	3604	3709	3777	3837	3860		
10	1723	1759	1764	1836	1858	1938	1991	2105	2163	2337	2468	2643	2748	2884	2951	3020	3026		
15	960	982	993	1039	1063	1115	1162	1238	1296	1413	1519	1657	1734	1836	1877	1936	1927		
20	600	610	616	643	658	683	707	748	779	840	894	961	996	1043	1061	1080	1070		
25	314	329	338	366	382	409	432	466	490	533	568	607	625	646	653	660	654		
30	112	119	127	136	148	161	178	199	222	252	285	321	339	364	371	379	371		
35	26.6	29.3	32.2	37.5	42.0	49.0	56.3	66.9	76.3	91.8	105	118	129	133	138	135	134		
40	7.87	8.33	8.87	9.92	11.0	12.7	14.6	17.5	20.2	24.8	28.6	33.3	35.1	37.2	36.9	36.5	34.1		
45	3.86	3.99	4.14	4.46	4.75	5.27	5.79	6.59	7.36	8.48	9.29	10.2	10.5	10.6	10.4	10.2	9.75		
50	2.19	2.23	2.31	2.44	2.59	2.78	3.03	3.34	3.67	4.10	4.36	4.65	4.67	4.78	4.70	4.69	4.56		
55	1.21	1.20	1.27	1.33	1.43	1.52	1.69	1.86	2.06	2.24	2.41	2.50	2.55	2.57	2.59	2.58	2.57		
60	0.47	0.46	0.52	0.56	0.64	0.68	0.81	0.90	1.06	1.18	1.29	1.34	1.41	1.41	1.46	1.43	1.46		
65	0.00	0.00	0.00	0.00	0.03	0.03	0.12	0.16	0.28	0.36	0.48	0.52	0.60	0.60	0.68	0.65	0.68		
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	0.04	0.00	0.04		
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	0.09	0.13	0.07	0.11	0.05	0.09	0.03	0.06	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
135	0.34	0.37	0.32	0.34	0.27	0.30	0.23	0.25	0.18	0.19	0.11	0.13	0.08	0.11	0.06	0.10	0.05		
140	0.76	0.78	0.72	0.73	0.66	0.67	0.59	0.58	0.49	0.46	0.38	0.39	0.32	0.34	0.28	0.32	0.27		
145	1.43	1.43	1.37	1.35	1.28	1.25	1.15	1.11	0.99	0.94	0.82	0.80	0.72	0.72	0.66	0.69	0.65		
150	2.34	2.33	2.26	2.22	2.14	2.08	1.97	1.88	1.75	1.64	1.50	1.44	1.35	1.33	1.27	1.28	1.25		
155	3.38	3.37	3.30	3.25	3.16	3.09	2.97	2.86	2.70	2.58	2.42	2.33	2.24	2.19	2.12	2.13	2.09		
160	4.39	4.39	4.29	4.25	4.15	4.09	3.97	3.87	3.70	3.58	3.43	3.34	3.25	3.21	3.14	3.14	3.12		
165	5.15	5.13	5.04	5.02	4.93	4.90	4.78	4.73	4.59	4.51	4.37	4.31	4.23	4.22	4.15	4.18	4.14		
170	5.56	5.54	5.45	5.45	5.36	5.37	5.26	5.26	5.15	5.13	5.03	5.04	4.99	5.01	4.97	5.01	4.99		
175	5.79	5.78	5.69	5.69	5.61	5.62	5.54	5.56	5.45	5.48	5.41	5.46	5.41	5.47	5.45	5.52	5.49		
180	5.94	5.94	5.86	5.86	5.79	5.79	5.73	5.74	5.67	5.67	5.65	5.66	5.67	5.70	5.71	5.75	5.79		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Vando
Test Date: 2021-03-08

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.262
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks: