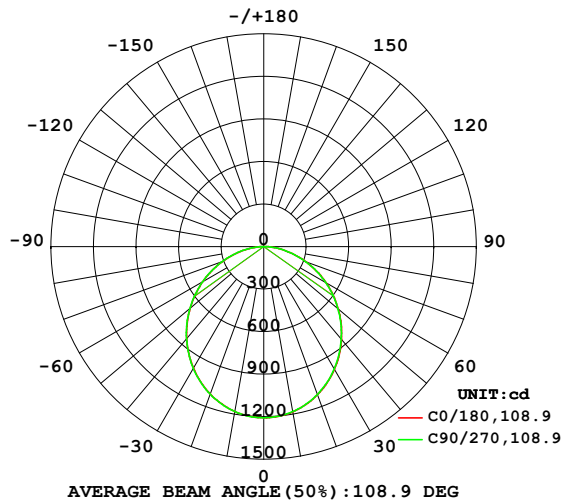


LUMINAIRE PHOTOMETRIC TEST REPORT

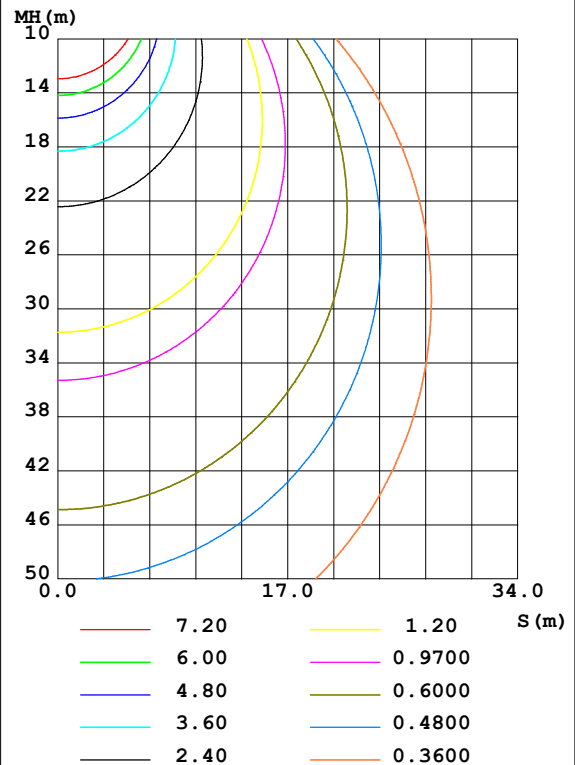
Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.95 lm/W			
CLE315mm	4000lm 840 ADV EM	Imax(cd)	1208	S/MH(C0/180)	1.23
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	3336.9	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	3336.86	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [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	1183	1183	1182	1181	1181	1181	1181	1182	0- 10	114.0	114.0	3.42,3.42
20	1111	1110	1109	1107	1106	1106	1108	1110	10- 20	324.5	438.6	13.1,13.1
30	997.9	997.5	995.6	992.3	991.2	992.4	993.3	996.8	20- 30	486.5	925.1	27.7,27.7
40	854.0	853.7	851.1	847.4	845.9	846.9	848.3	852.1	30- 40	578.9	1504	45.1,45.1
50	687.8	687.5	684.8	680.7	678.9	679.6	681.2	685.1	40- 50	593.0	2097	62.8,62.8
60	506.8	506.8	504.7	500.1	497.5	498.3	500.0	504.0	50- 60	530.9	2628	78.7,78.7
70	319.7	320.3	318.7	314.0	311.0	311.7	313.9	317.3	60- 70	404.7	3032	90.9,90.9
80	140.6	141.4	140.6	136.3	133.8	134.6	136.5	139.3	70- 80	237.7	3270	98,98
90	2.672	2.754	2.400	2.018	2.069	2.082	2.064	2.068	80- 90	66.74	3337	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1803.6 lm

%lum = 54.1%

%lamp = 54.1%

Conical surface Flux(120deg): 2627.8 lm

%lum = 78.7%

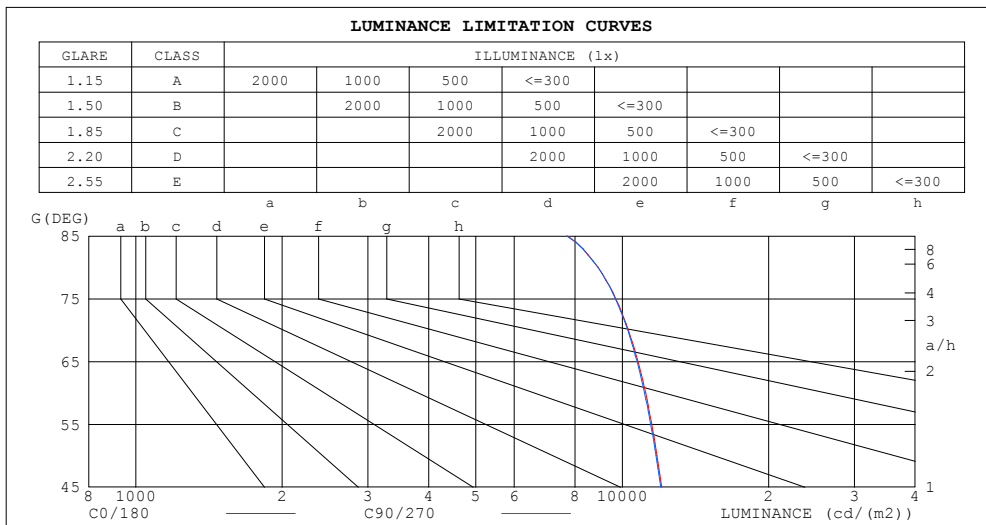
%lamp = 78.7%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7712	7684
80	8920	8915
75	9694	9683
70	10301	10264
65	10771	10727
60	11171	11117
55	11496	11443
50	11791	11734
45	12052	11998

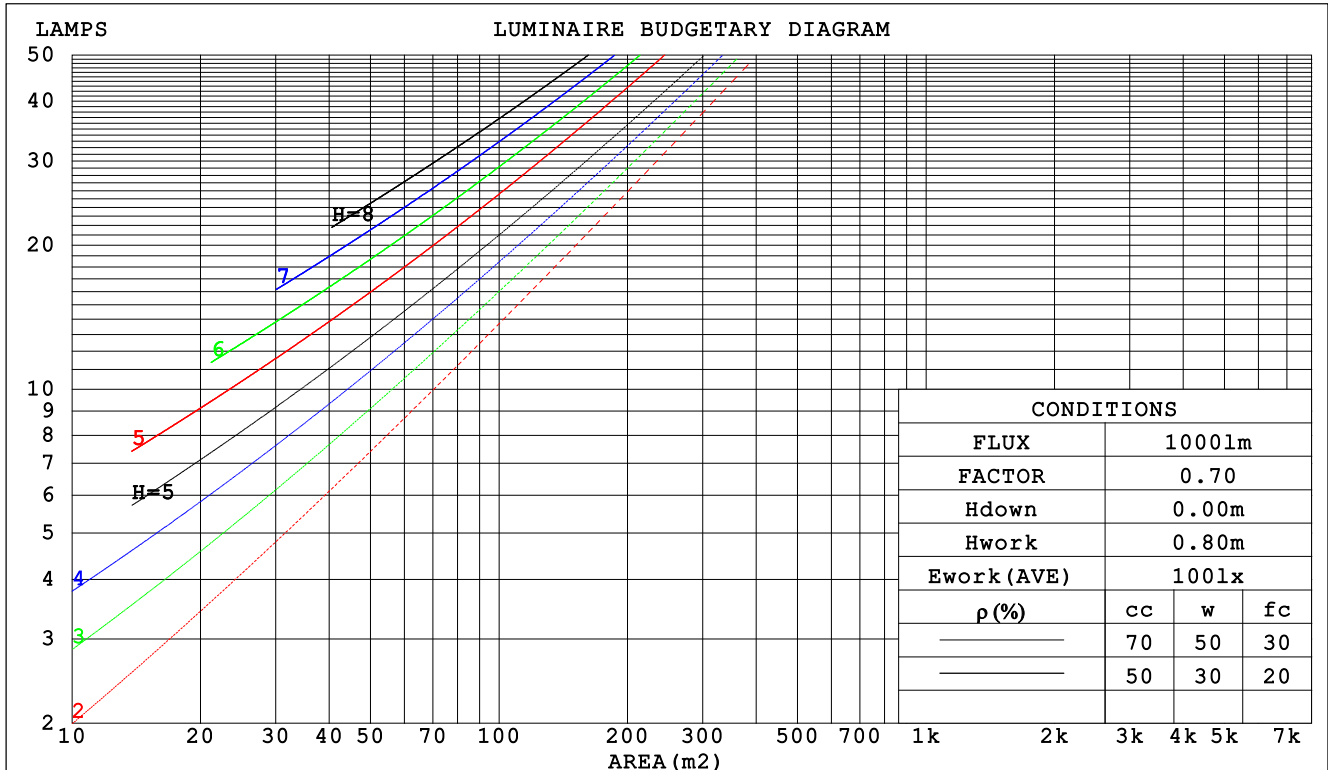
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding 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	1.00
1.0	1.04	.00	.96	1.02	.98	.94	.97	.94	.91	.93	.91	.88	.90	.88	.86	.84
2.0	.90	.84	.78	.89	.82	.77	.85	.80	.75	.82	.77	.73	.79	.75	.72	.70
3.0	.79	.71	.65	.78	.70	.64	.75	.68	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.70	.62	.55	.69	.61	.54	.67	.59	.54	.64	.58	.53	.62	.57	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.46	.58	.51	.46	.56	.50	.45	.43
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.45	.40	.51	.45	.40	.38
7.0	.51	.43	.36	.51	.42	.36	.49	.41	.36	.48	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.33	.46	.38	.32	.45	.37	.32	.44	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.35	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients (WEC)					
0.0						
1.0	.310 .177 .056	.303 .173 .055	.290 .166 .053	.278 .160 .051	.267 .155 .050	
2.0	.292 .160 .049	.285 .157 .048	.274 .152 .047	.263 .147 .046	.253 .143 .045	
3.0	.270 .143 .043	.264 .141 .043	.254 .137 .042	.244 .134 .041	.235 .130 .040	
4.0	.249 .129 .038	.244 .128 .038	.235 .124 .037	.226 .121 .037	.218 .119 .036	
5.0	.230 .117 .034	.225 .116 .034	.217 .113 .033	.210 .111 .033	.203 .108 .033	
6.0	.213 .107 .031	.209 .106 .030	.202 .104 .030	.195 .101 .030	.189 .099 .030	
7.0	.198 .098 .028	.195 .097 .028	.188 .095 .027	.182 .093 .027	.177 .092 .027	
8.0	.185 .090 .025	.182 .090 .025	.176 .088 .025	.171 .087 .025	.166 .085 .025	
9.0	.174 .084 .023	.171 .083 .023	.166 .082 .023	.161 .081 .023	.156 .079 .023	
10.0	.163 .078 .022	.161 .078 .022	.156 .076 .022	.152 .075 .021	.147 .074 .021	

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	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	.180 .156 .134	.154 .134 .116	.106 .092 .080	.061 .053 .046	.019 .017 .015	
2.0	.172 .132 .098	.148 .114 .085	.101 .079 .059	.058 .046 .035	.019 .015 .011	
3.0	.164 .114 .074	.141 .099 .064	.097 .068 .045	.056 .040 .027	.018 .013 .009	
4.0	.157 .101 .058	.134 .087 .051	.092 .061 .036	.053 .036 .021	.017 .012 .007	
5.0	.149 .091 .047	.128 .078 .041	.088 .055 .029	.051 .032 .017	.016 .010 .006	
6.0	.142 .082 .039	.122 .071 .034	.084 .050 .024	.049 .029 .014	.016 .010 .005	
7.0	.135 .075 .033	.116 .065 .029	.080 .046 .021	.047 .027 .012	.015 .009 .004	
8.0	.129 .069 .029	.111 .060 .025	.077 .042 .018	.045 .025 .011	.014 .008 .004	
9.0	.123 .065 .025	.106 .056 .022	.073 .039 .016	.043 .023 .009	.014 .008 .003	
10.0	.117 .060 .022	.101 .052 .020	.070 .037 .014	.041 .022 .008	.013 .007 .003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm										
NAME: PORT C_WHT_CLE315G3_900mA_4K					TYPE:LED			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
MFR.: Darkon					SUR.:			Shielding 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	17.2	18.7	17.4	18.9	19.1	17.1	18.7	17.4	18.9	19.1
3H	18.7	20.1	19.0	20.3	20.6	18.7	20.1	19.0	20.3	20.6
4H	19.3	20.7	19.6	20.9	21.2	19.3	20.7	19.6	20.9	21.2
6H	19.8	21.1	20.1	21.3	21.6	19.8	21.0	20.1	21.3	21.6
8H	20.0	21.2	20.3	21.5	21.7	19.9	21.2	20.3	21.4	21.7
12H	20.0	21.2	20.4	21.5	21.8	20.0	21.2	20.4	21.5	21.8
4H 2H	17.8	19.1	18.1	19.4	19.6	17.8	19.1	18.1	19.4	19.6
3H	19.5	20.7	19.9	21.0	21.3	19.5	20.7	19.8	21.0	21.3
4H	20.3	21.3	20.6	21.7	22.0	20.3	21.3	20.6	21.7	22.0
6H	20.9	21.8	21.3	22.2	22.5	20.9	21.8	21.3	22.2	22.5
8H	21.1	22.0	21.5	22.3	22.7	21.1	22.0	21.5	22.3	22.7
12H	21.2	22.0	21.7	22.4	22.8	21.2	22.0	21.7	22.4	22.8
8H 4H	20.6	21.4	21.0	21.8	22.2	20.5	21.4	21.0	21.8	22.2
6H	21.3	22.1	21.8	22.5	22.9	21.3	22.1	21.8	22.5	22.9
8H	21.6	22.3	22.1	22.7	23.1	21.6	22.3	22.1	22.7	23.1
12H	21.8	22.4	22.3	22.9	23.3	21.8	22.4	22.3	22.9	23.3
12H 4H	20.6	21.4	21.0	21.8	22.2	20.6	21.4	21.0	21.8	22.2
6H	21.4	22.0	21.8	22.5	22.9	21.4	22.0	21.8	22.5	22.9
8H	21.7	22.3	22.2	22.7	23.2	21.7	22.3	22.2	22.7	23.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 3337 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 4.2$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

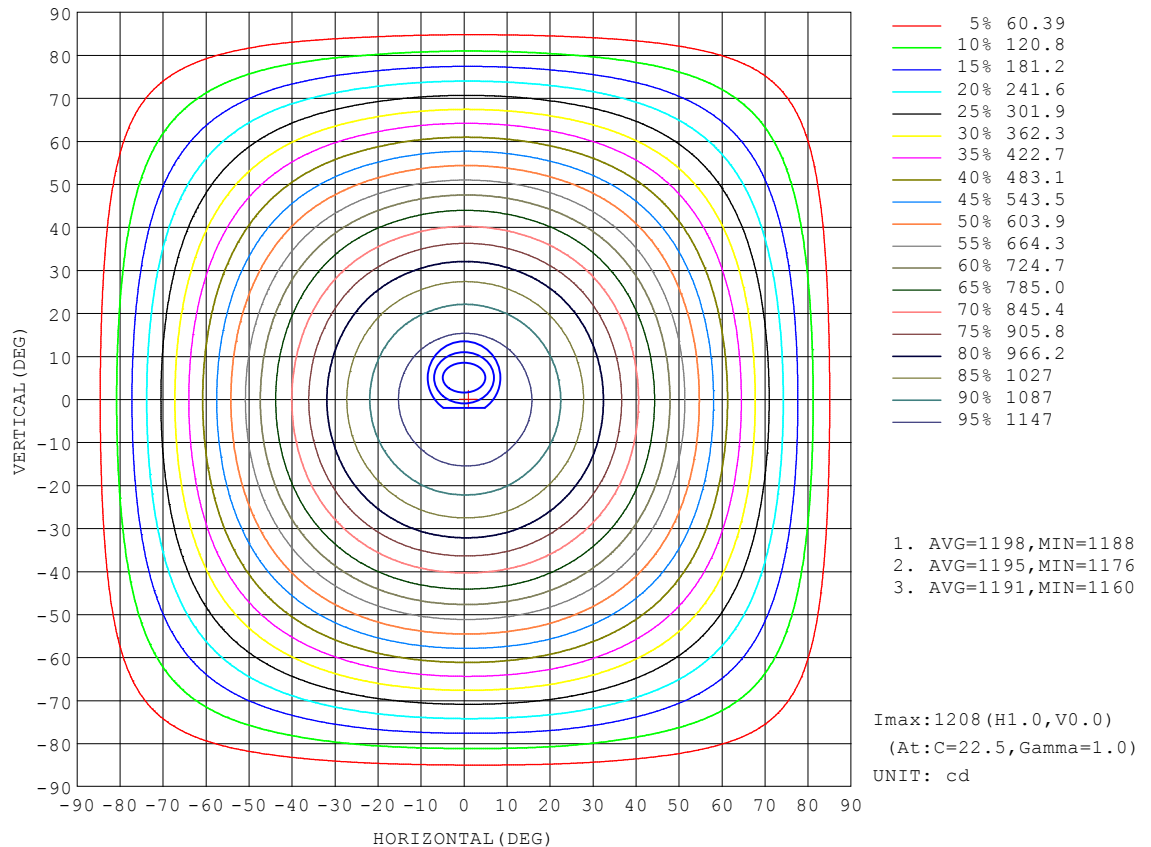
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	46	39	57	46	39	56	46	39	33
0.80	68	56	49	67	56	49	65	55	48	41
1.00	76	65	58	75	64	58	73	66	57	50
1.25	83	73	66	82	72	65	79	71	64	57
1.50	88	78	71	87	77	71	83	76	70	62
2.00	95	86	80	93	85	79	90	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	94	100	95	92	83
5.00	109	104	100	106	102	98	102	98	95	86
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

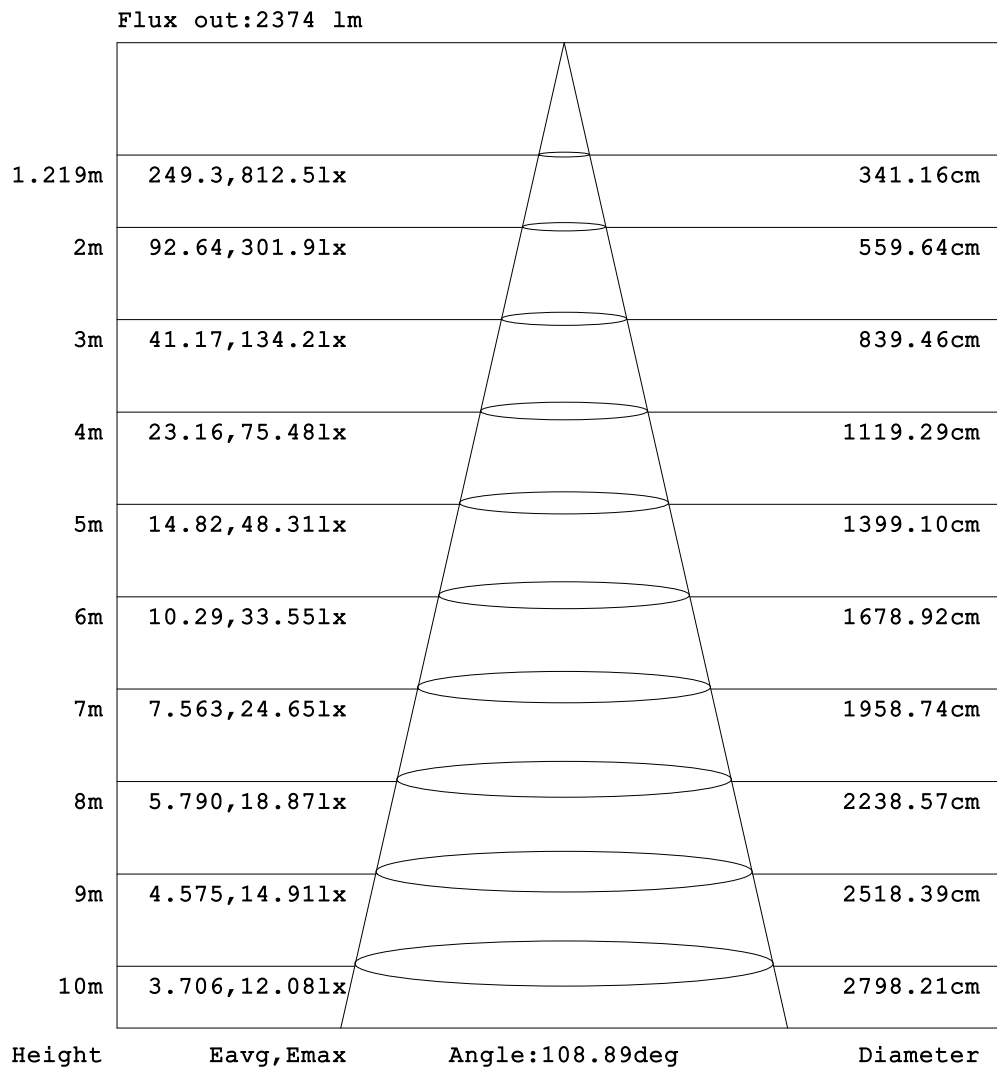


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

AAI Figure

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:



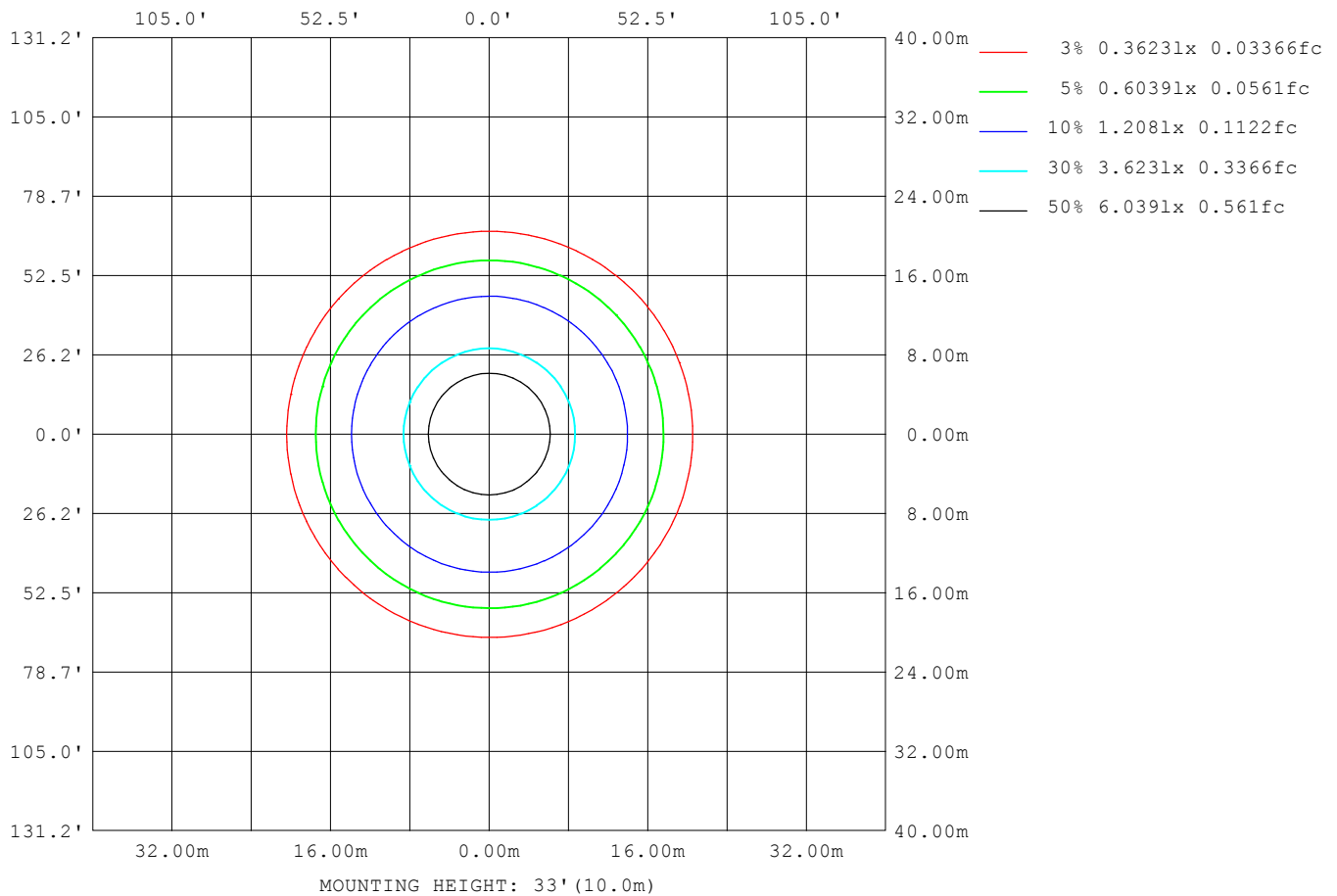
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:239.93V I:0.1446A P:33.055W PF:0.9529 Freq:50.08Hz Lamp Flux:3336.86x1 lm		
NAME: PORT C_WHT_CLE315G3_900mA_4K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

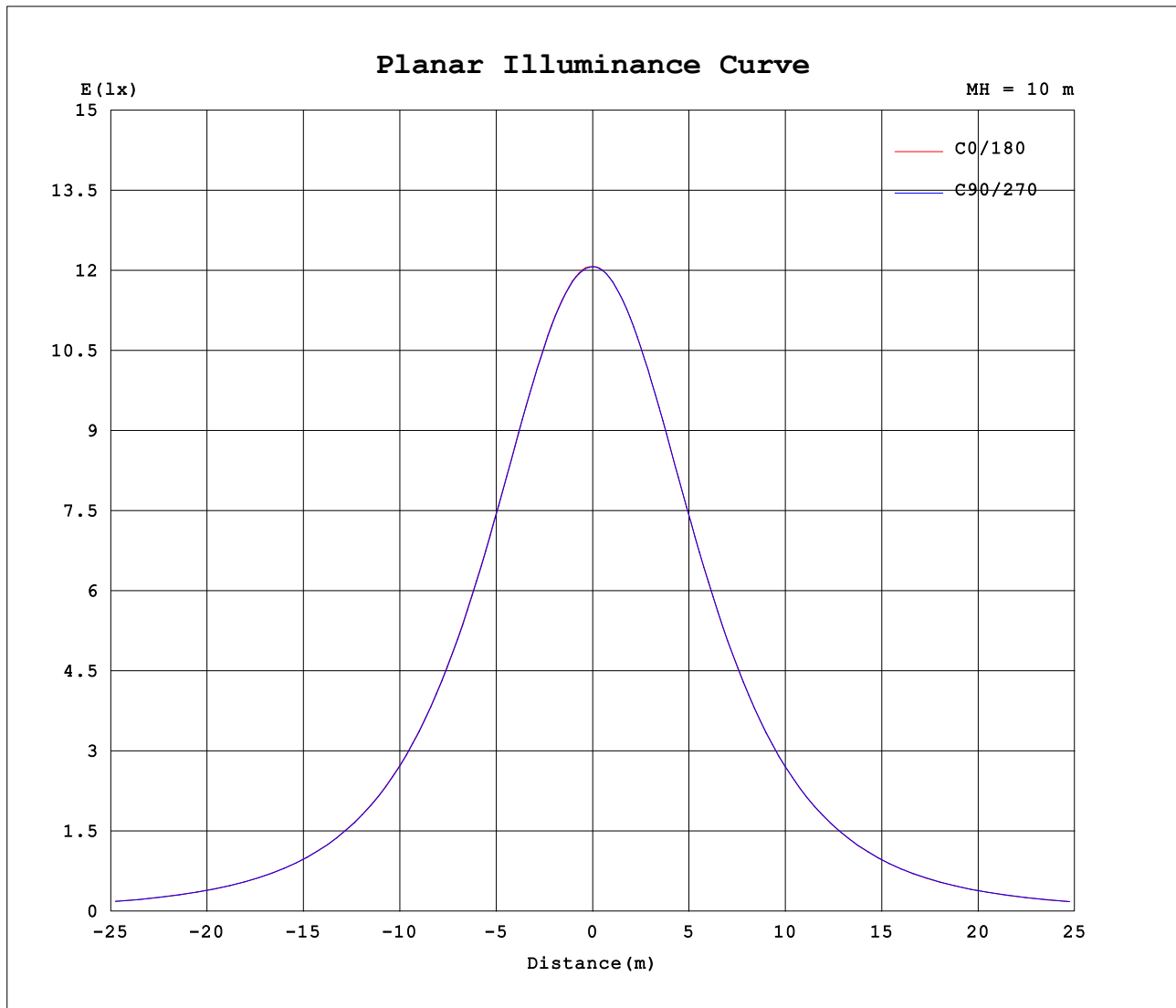
AvgL	cd/m2
L_0~180 (65) av	10648
L_0~180 (75) av	9520
L_0~180 (85) av	7300
L_90~270 (65) av	10664
L_90~270 (75) av	9584
L_90~270 (85) av	7420
L_45 (65) av	10660
L_45 (75) av	9559
L_45 (85) av	7358

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:06 June 2017

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:7.220m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Ky
Test Date: 06 June 2017

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 7.220m [K=1.0000]
Remarks:

