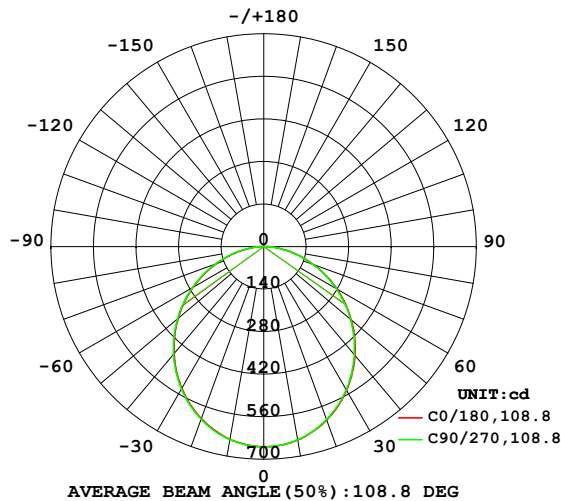


LUMINAIRE PHOTOMETRIC TEST REPORT

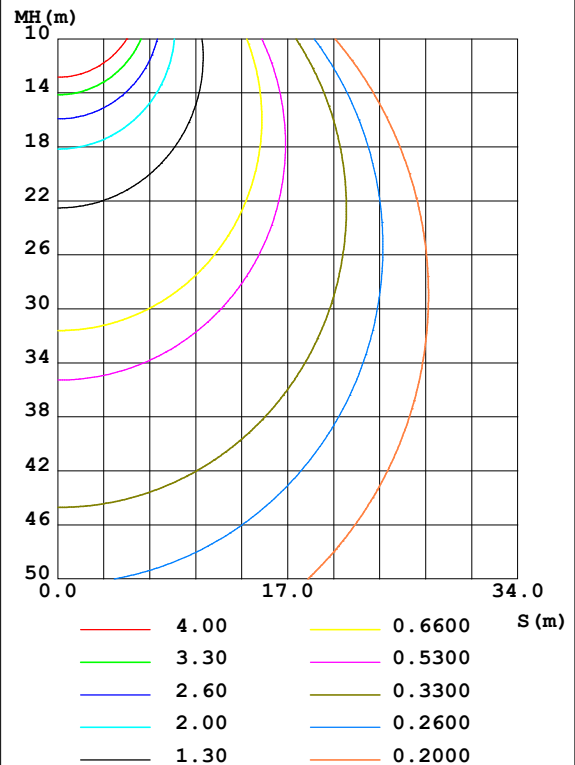
Test:U:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 101.72 lm/W			
CLE315mm	4000lm 830 ADV EM	Imax(cd)	658.9	S/MH(C0/180)	1.22
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	1818.5	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	1818.47	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:07 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	646.2	645.9	645.6	644.4	643.7	644.0	644.9	645.6	0- 10	62.23	62.23	3.42,3.42
20	607.2	606.6	605.3	603.7	602.3	603.0	604.4	605.8	10- 20	177.1	239.3	13.2,13.2
30	545.7	545.0	543.2	540.7	539.1	540.0	542.2	543.4	20- 30	265.3	504.7	27.8,27.8
40	467.2	466.4	464.1	461.5	459.4	460.3	462.3	464.5	30- 40	315.6	820.3	45.1,45.1
50	376.5	375.7	373.2	370.5	367.9	368.8	371.1	373.5	40- 50	323.1	1143	62.9,62.9
60	277.8	277.2	274.7	271.9	268.8	269.8	272.3	274.7	50- 60	289.1	1432	78.8,78.8
70	175.8	175.5	173.5	170.2	167.7	168.7	171.1	173.5	60- 70	220.3	1653	90.9,90.9
80	78.66	78.58	76.97	74.16	71.09	72.09	74.34	76.19	70- 80	129.5	1782	98,98
90	1.941	1.824	1.303	1.063	1.084	1.088	1.085	1.119	80- 90	36.39	1818	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): 983.52 lm

%lum = 54.1%

%lamp = 54.1%

Conical surface Flux(120deg): 1432.4 lm

%lum = 78.8%

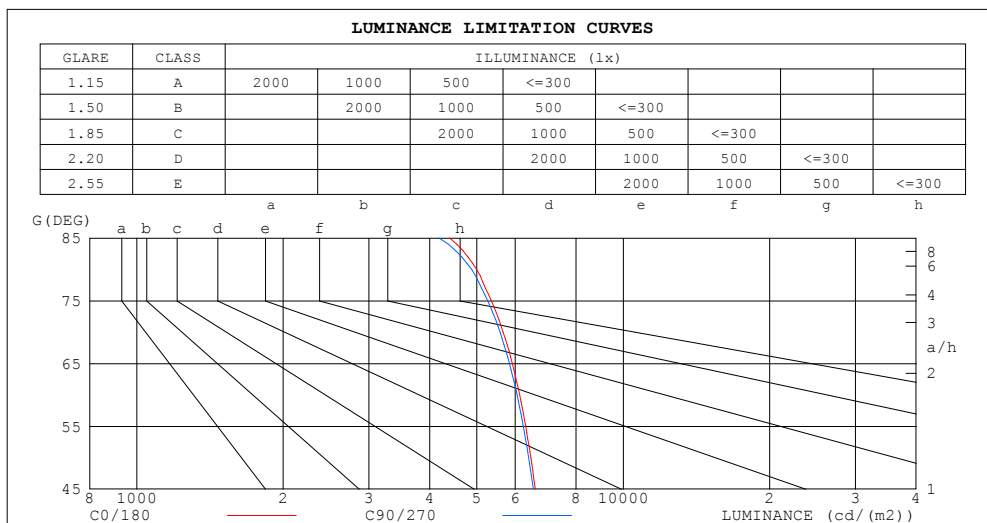
%lamp = 78.8%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:07 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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	4397	4183
80	4993	4880
75	5354	5264
70	5665	5584
65	5914	5837
60	6124	6048
55	6301	6232
50	6456	6392
45	6595	6537

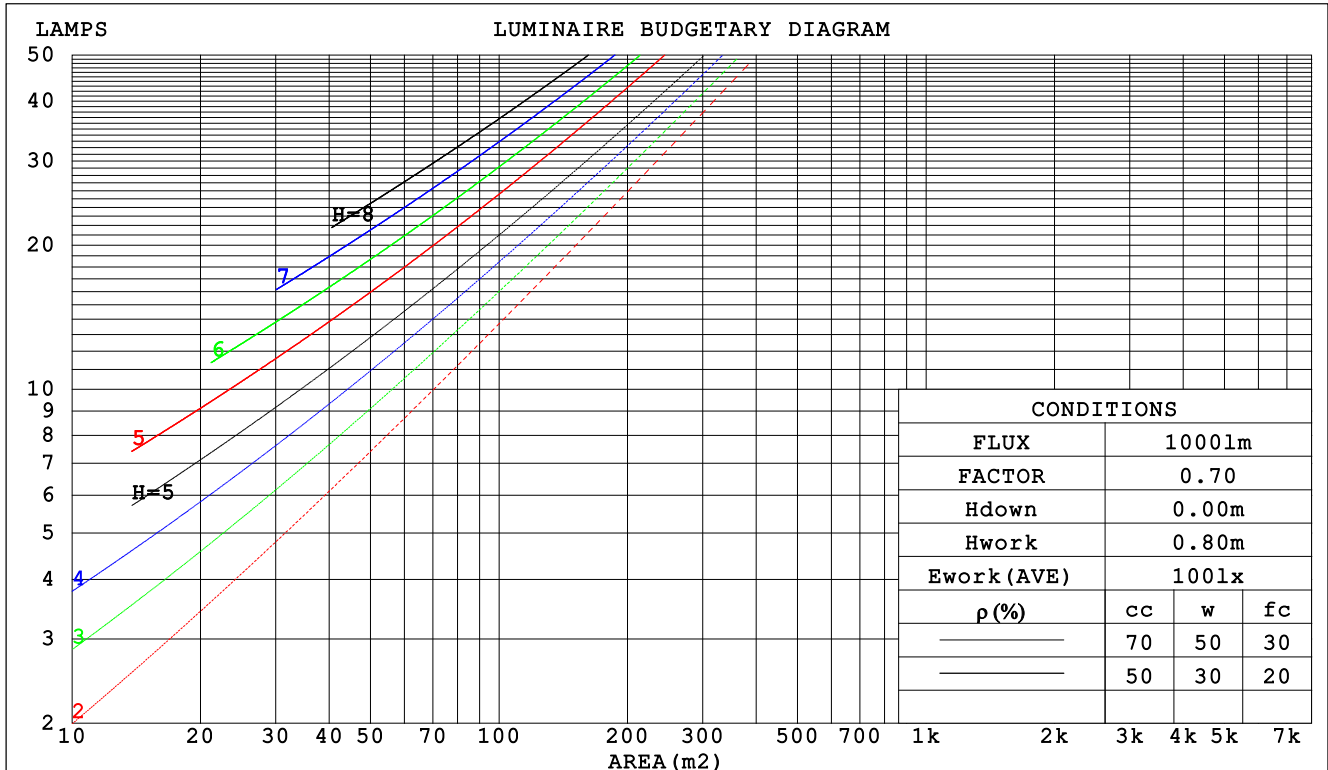
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:07 June 2017

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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	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	.42	.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	.27	.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:07 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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	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 .176 .056	.303 .173 .055	.290 .166 .053	.278 .160 .051	.267 .154 .050	
2.0	.291 .160 .049	.285 .157 .048	.274 .152 .047	.263 .147 .046	.253 .143 .045	
3.0	.269 .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	.147 .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:07 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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm										
NAME: PORT C_WHT_CLE315G3_500mA_3K					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	17.5	18.9	19.1	17.2	18.7	17.4	18.9	19.1
3H	18.7	20.1	19.0	20.4	20.6	18.7	20.1	19.0	20.3	20.6
4H	19.4	20.7	19.7	21.0	21.2	19.3	20.7	19.6	20.9	21.2
6H	19.9	21.1	20.2	21.4	21.7	19.8	21.1	20.1	21.3	21.6
8H	20.0	21.2	20.4	21.5	21.8	19.9	21.2	20.3	21.4	21.7
12H	20.1	21.3	20.5	21.6	21.9	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	19.9	21.0	21.3
4H	20.3	21.4	20.7	21.7	22.0	20.3	21.3	20.6	21.7	22.0
6H	20.9	21.9	21.3	22.2	22.6	20.9	21.8	21.3	22.2	22.5
8H	21.1	22.0	21.6	22.4	22.8	21.1	22.0	21.5	22.3	22.7
12H	21.3	22.1	21.7	22.5	22.9	21.2	22.0	21.7	22.4	22.8
8H 4H	20.6	21.5	21.0	21.8	22.2	20.6	21.4	21.0	21.8	22.2
6H	21.4	22.1	21.8	22.5	22.9	21.3	22.1	21.8	22.5	22.9
8H	21.7	22.3	22.1	22.8	23.2	21.6	22.3	22.1	22.7	23.2
12H	21.9	22.5	22.4	22.9	23.4	21.9	22.4	22.3	22.9	23.4
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	22.1	21.9	22.5	23.0	21.4	22.1	21.9	22.5	22.9
8H	21.8	22.4	22.3	22.8	23.3	21.8	22.3	22.2	22.8	23.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 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, 1818 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.1$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:07 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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

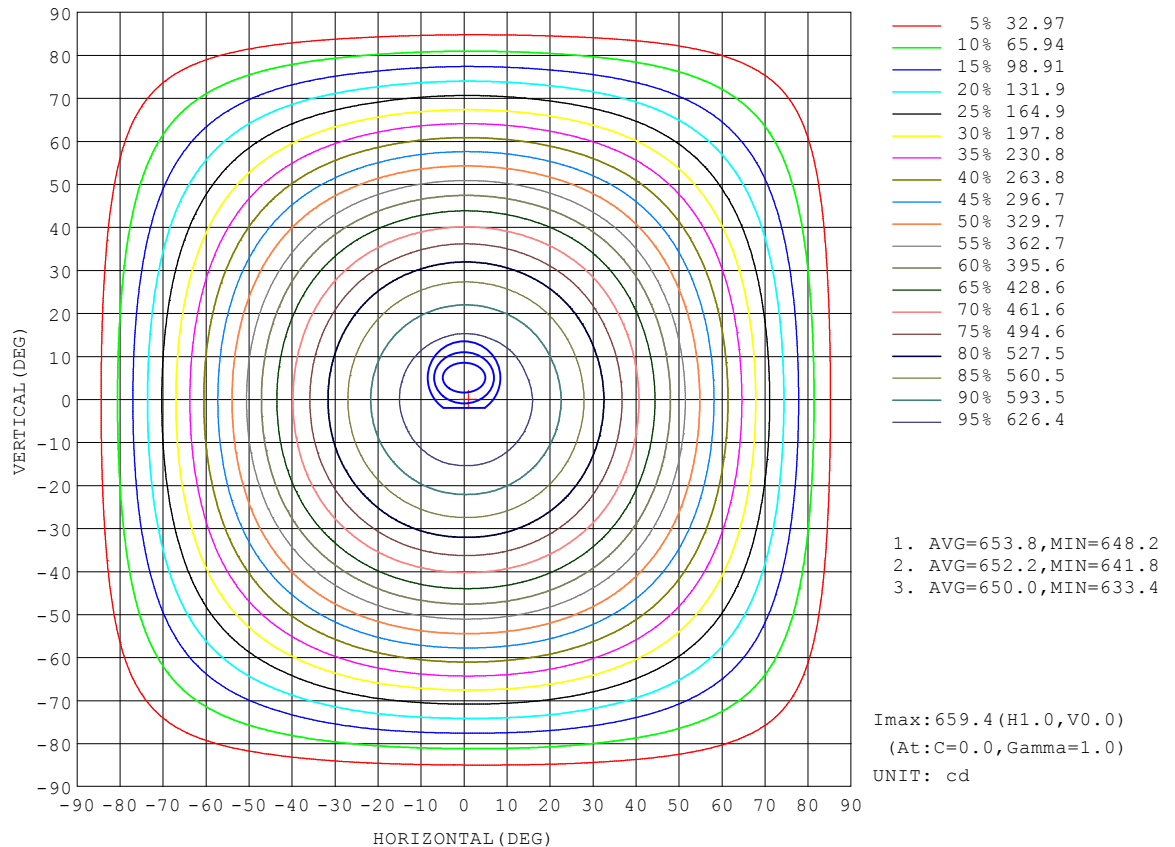
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	46	39	57	46	39	56	46	39	33
0.80	68	56	49	67	56	49	65	55	48	41
1.00	76	65	58	75	65	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	84	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:07 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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

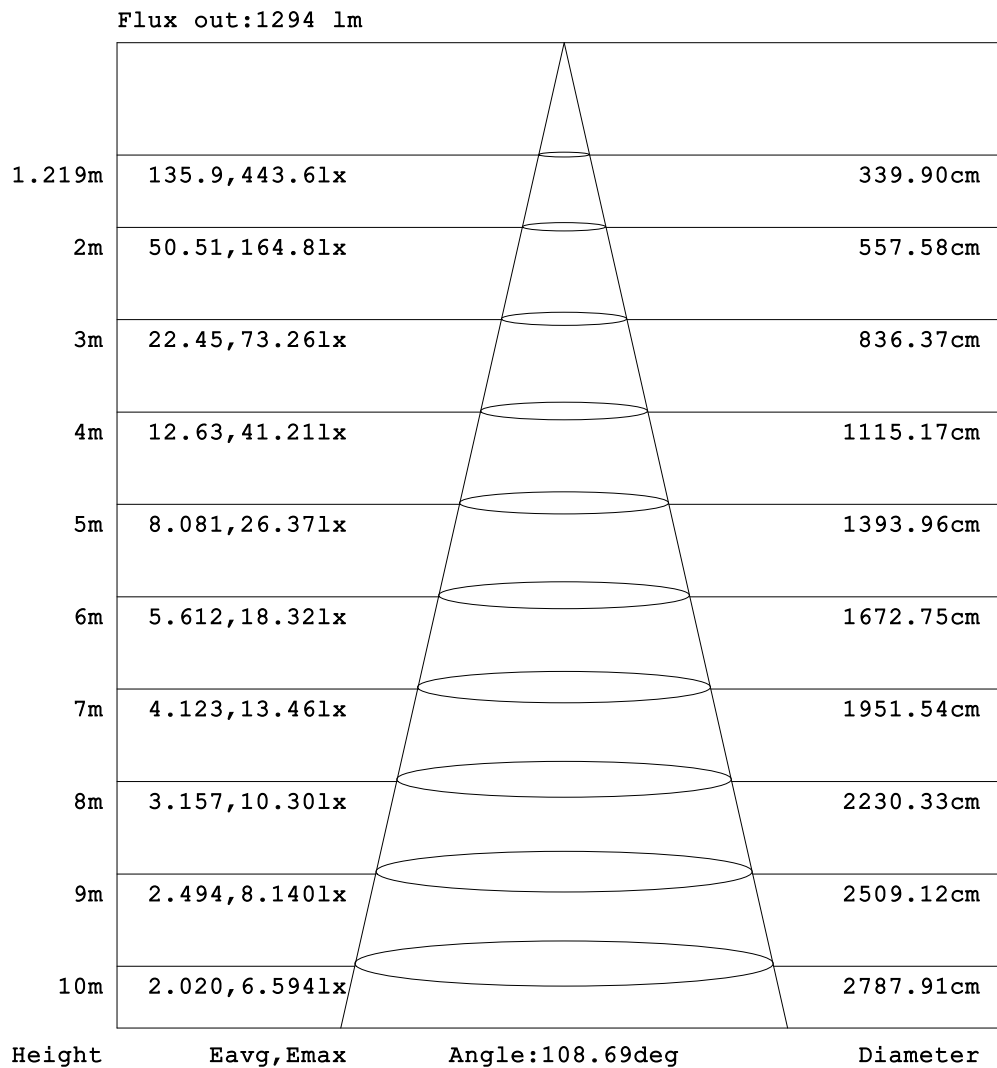


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Ky
Test Date: 07 June 2017

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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:



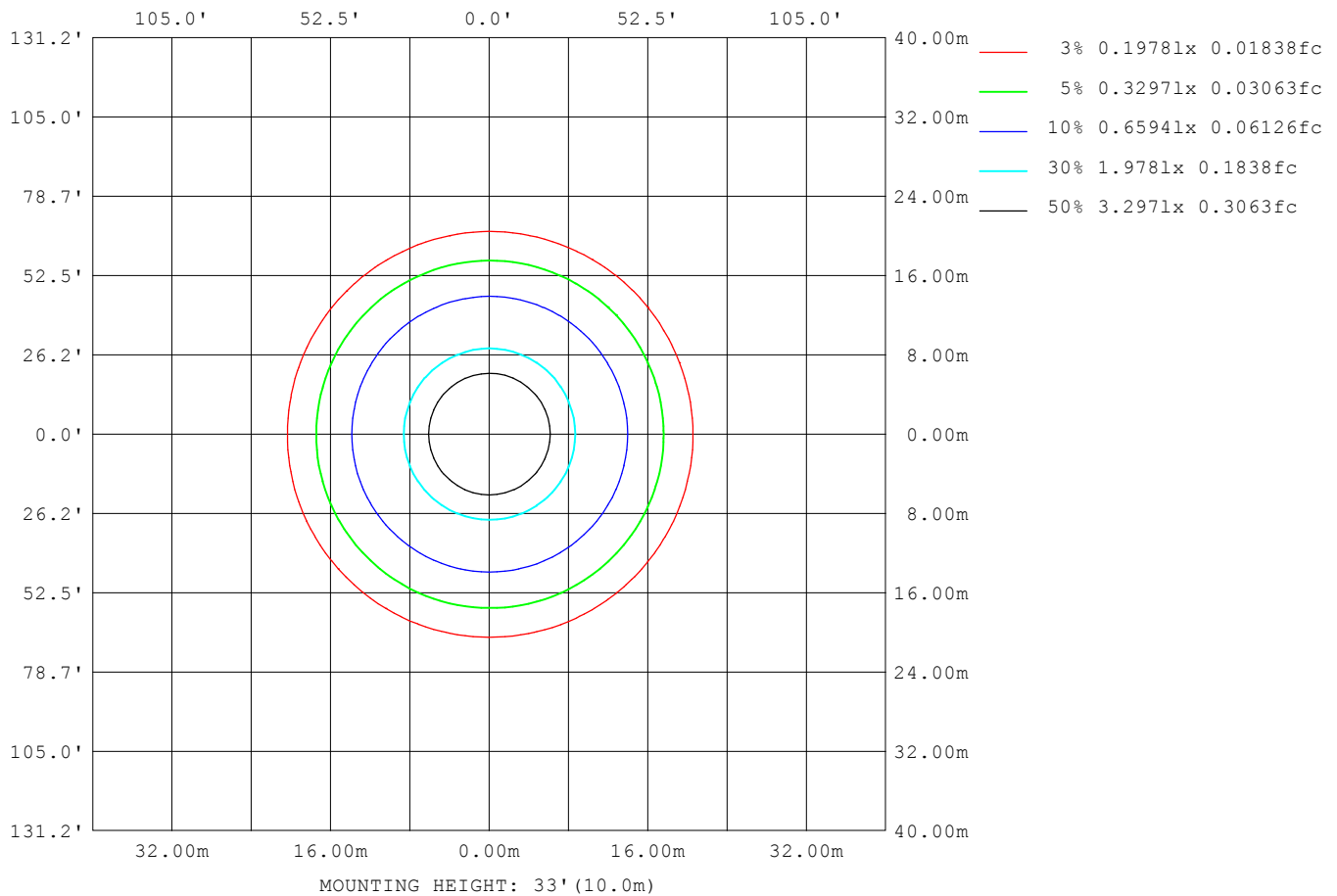
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:07 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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	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:07 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:240.10V I:0.0838A P:17.878W PF:0.8883 Freq:50.09Hz Lamp Flux:1818.47x1 lm		
NAME: PORT C_WHT_CLE315G3_500mA_3K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: Darkon	SUR.:	Shielding Angle:

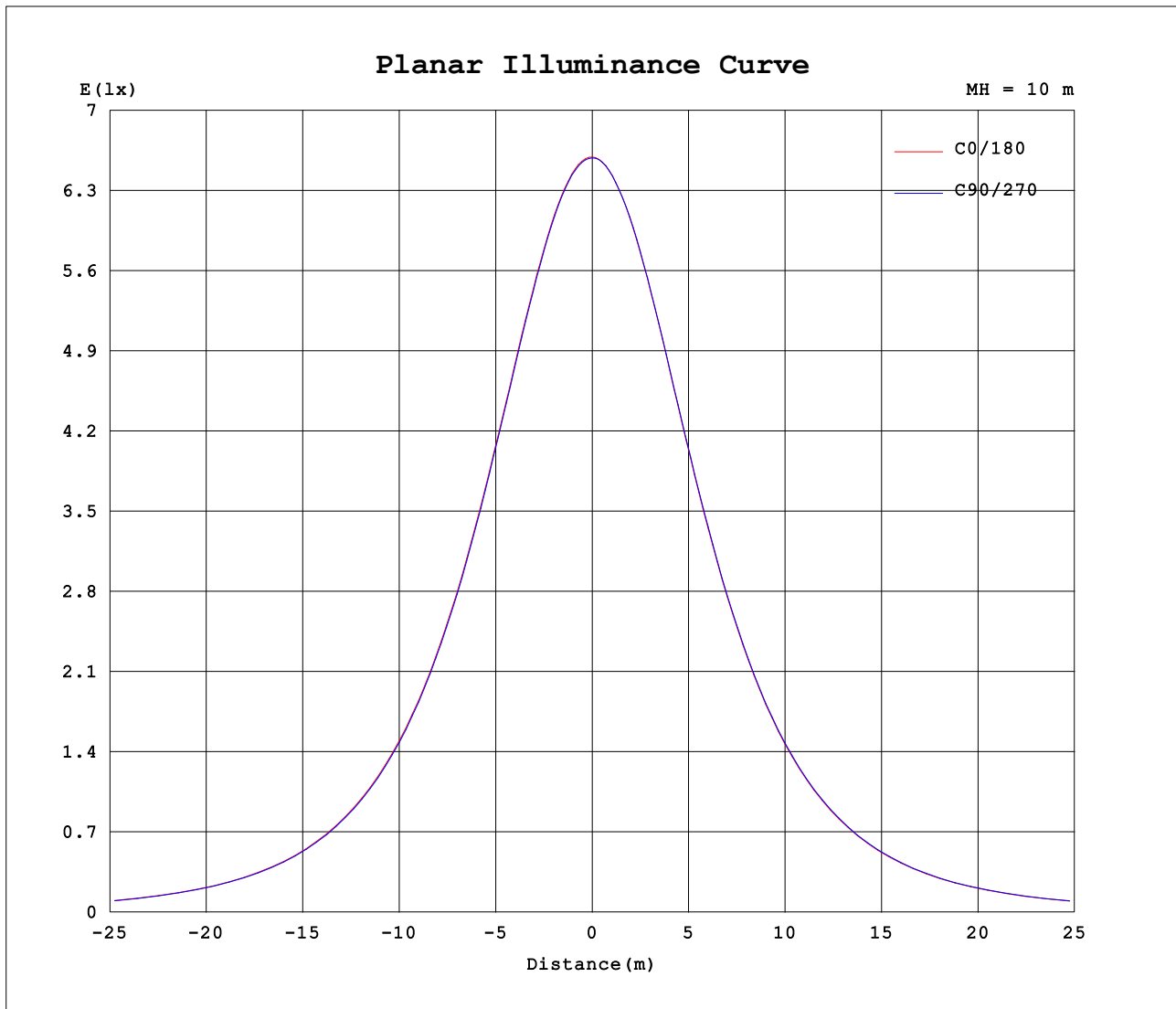
AvgL	cd/m2
L_0~180 (65) av	5794
L_0~180 (75) av	5188
L_0~180 (85) av	3973
L_90~270 (65) av	5806
L_90~270 (75) av	5219
L_90~270 (85) av	4035
L_45 (65) av	5801
L_45 (75) av	5204
L_45 (85) av	4004

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Ky
Test Date:07 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: 07 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:

