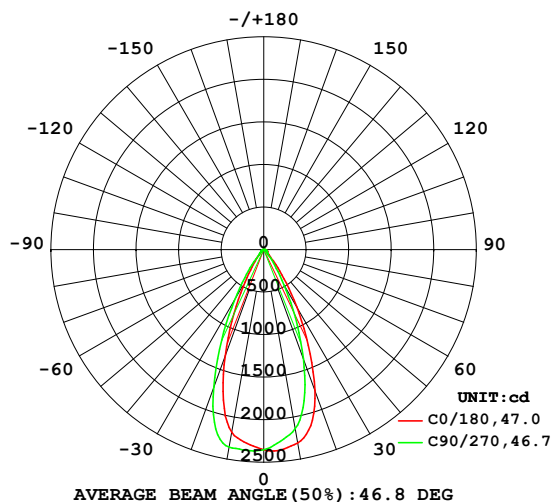


**LUMINAIRE PHOTOMETRIC TEST REPORT**

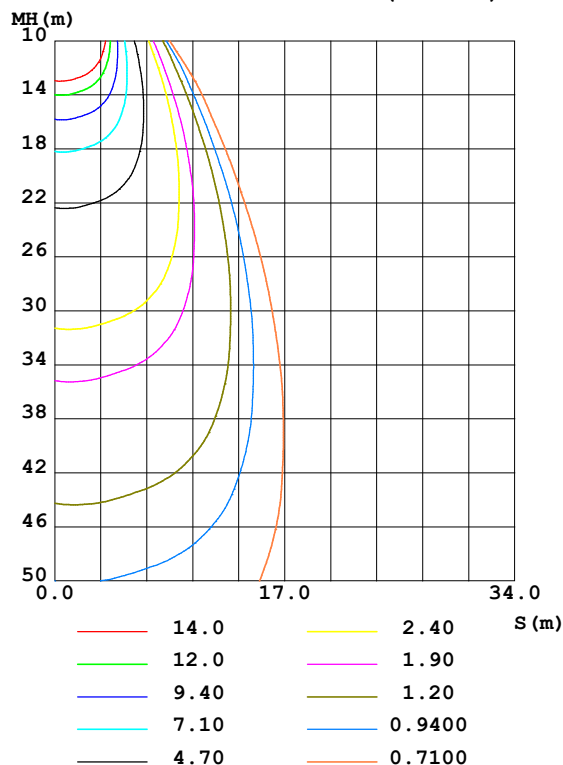
Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 102.08 lm/W			
MODEL	TRIDONIC SLE G7 09MM	Imax(cd)	2394	S/MH(C0/180)	0.67
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	0.76
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	1580.6	$\eta$ UP,DN(C0-180)	0.0,47.6
NOMINAL FLUX(lm)	1580.59	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,52.4
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	0.75

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:JEFF  
Test Date:13 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

### ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	2306	2205	2137	2128	2179	2267	2358	2346	0- 10	219.0	219.0	13.9,13.9
20	1759	1514	1363	1308	1327	1506	1722	1818	10- 20	545.1	764.1	48.3,48.3
30	775.2	585.7	480.8	426.3	441.8	541.9	697.1	797.6	20- 30	467.9	1232	77.9,77.9
40	175.5	135.4	109.9	99.47	107.1	114.4	140.3	182.9	30- 40	199.1	1431	90.5,90.5
50	59.99	52.69	48.03	45.50	47.10	48.51	53.75	59.84	40- 50	57.89	1489	94.2,94.2
60	40.00	36.64	34.07	33.07	34.04	34.29	37.04	39.72	50- 60	38.33	1527	96.6,96.6
70	27.21	24.79	22.83	21.90	22.59	23.13	25.25	27.35	60- 70	30.11	1557	98.5,98.5
80	11.10	9.577	8.831	8.817	9.066	9.153	10.21	11.44	70- 80	18.33	1576	99.7,99.7
90	0.1312	0.0728	0.0728	0.0726	0.0802	0.0765	0.0765	0.1487	80- 90	4.789	1581	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): 1464.4 lm

%lum = 92.6%

%lamp = 92.6%

Conical surface Flux(120deg): 1527.4 lm

%lum = 96.6%

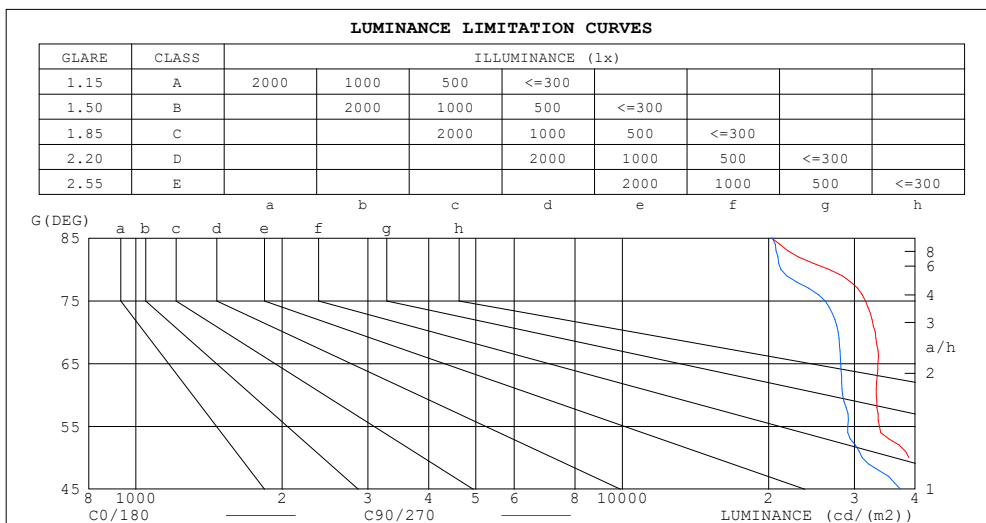
%lamp = 96.6%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	20286	20324
80	26610	21181
75	31606	26102
70	33114	27804
65	33537	28127
60	33296	28378
55	33783	29077
50	38843	31122
45	50462	37318

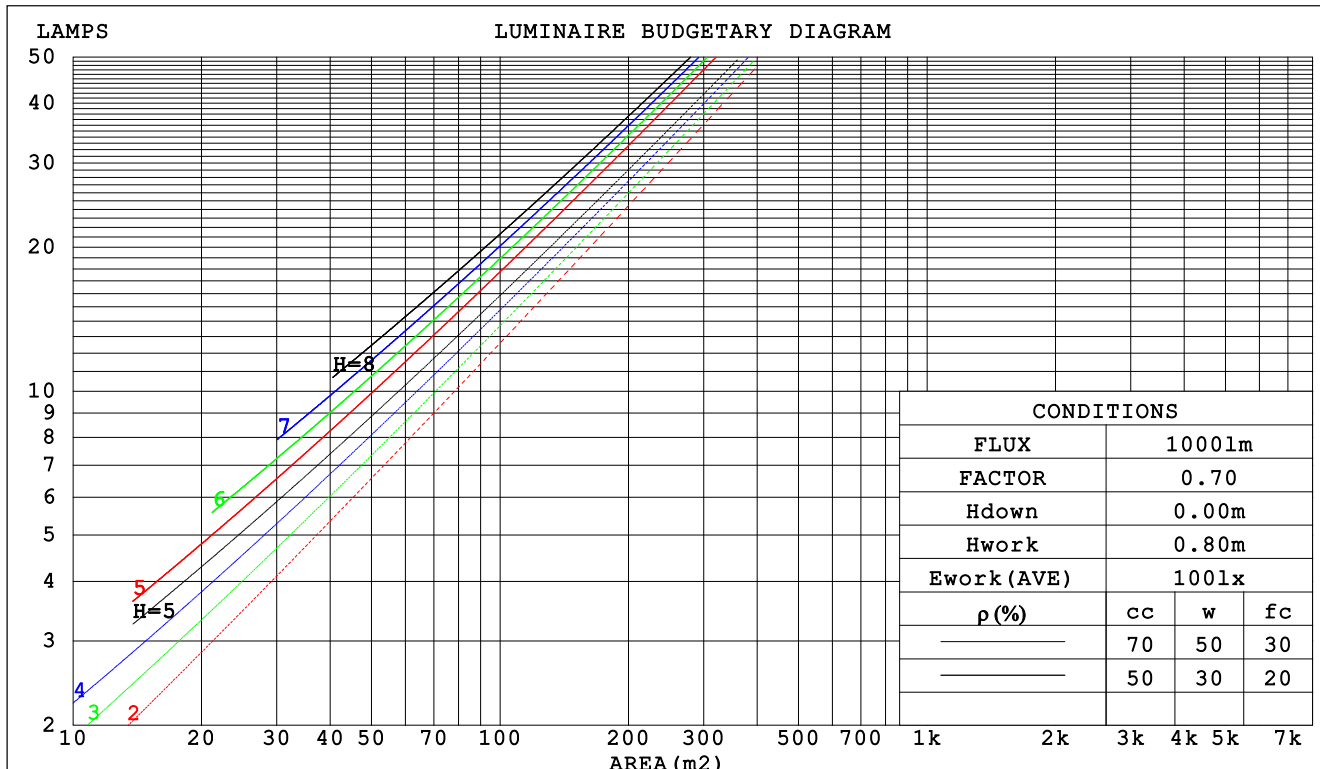
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.98	.94	.98	.95	.92	.95	.93	.90	.92	.90	.88	.87
3.0	.96	.91	.87	.95	.90	.87	.92	.88	.85	.90	.87	.84	.88	.85	.83	.81
4.0	.90	.85	.81	.89	.84	.80	.87	.83	.79	.85	.81	.78	.83	.80	.78	.76
5.0	.85	.79	.75	.84	.79	.75	.82	.78	.74	.81	.77	.74	.79	.76	.73	.72
6.0	.80	.75	.71	.80	.74	.70	.78	.73	.70	.77	.73	.69	.75	.72	.69	.67
7.0	.76	.70	.66	.76	.70	.66	.74	.69	.66	.73	.69	.65	.72	.68	.65	.64
8.0	.72	.67	.63	.72	.66	.63	.71	.66	.62	.70	.65	.62	.69	.65	.62	.60
9.0	.69	.63	.59	.68	.63	.59	.67	.62	.59	.67	.62	.59	.66	.62	.59	.57
10.0	.66	.60	.56	.65	.60	.56	.64	.60	.56	.64	.59	.56	.63	.59	.56	.55



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**WEC AND CCEC**

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	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	.182 .104 .033	.175 .100 .032	.163 .093 .030	.151 .087 .028	.141 .081 .026	
2.0	.172 .094 .029	.166 .092 .028	.156 .087 .027	.146 .082 .026	.137 .077 .024	
3.0	.162 .086 .026	.157 .084 .025	.148 .080 .024	.139 .076 .023	.132 .073 .023	
4.0	.152 .079 .023	.148 .078 .023	.140 .074 .022	.133 .072 .022	.127 .069 .021	
5.0	.144 .073 .021	.140 .072 .021	.134 .070 .020	.127 .067 .020	.122 .065 .020	
6.0	.137 .068 .020	.133 .067 .019	.127 .065 .019	.122 .063 .019	.117 .061 .018	
7.0	.130 .064 .018	.127 .063 .018	.122 .062 .018	.117 .060 .017	.112 .058 .017	
8.0	.124 .060 .017	.121 .060 .017	.117 .058 .017	.112 .057 .016	.108 .056 .016	
9.0	.118 .057 .016	.116 .057 .016	.112 .055 .016	.108 .054 .015	.104 .053 .015	
10.0	.113 .054 .015	.111 .054 .015	.107 .053 .015	.104 .052 .015	.100 .051 .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
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	.171 .157 .144	.147 .135 .124	.100 .093 .086	.058 .054 .050	.019 .017 .016	
2.0	.156 .132 .113	.134 .114 .097	.092 .079 .068	.053 .046 .040	.017 .015 .013	
3.0	.144 .114 .090	.123 .098 .078	.085 .068 .054	.049 .040 .032	.016 .013 .011	
4.0	.133 .099 .073	.114 .085 .063	.078 .060 .044	.045 .035 .026	.015 .011 .009	
5.0	.124 .087 .060	.106 .075 .052	.073 .053 .037	.042 .031 .022	.014 .010 .007	
6.0	.116 .078 .050	.100 .067 .044	.069 .047 .031	.040 .028 .018	.013 .009 .006	
7.0	.109 .070 .043	.094 .061 .037	.065 .043 .026	.038 .025 .016	.012 .008 .005	
8.0	.103 .064 .037	.089 .055 .032	.062 .039 .023	.036 .023 .013	.012 .008 .004	
9.0	.098 .059 .032	.085 .051 .028	.059 .036 .020	.034 .021 .012	.011 .007 .004	
10.0	.093 .054 .028	.080 .047 .024	.056 .033 .017	.033 .020 .010	.011 .006 .003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm										
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80					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	22.1	23.0	22.3	23.1	23.3	20.3	21.2	20.5	21.4	21.6
3H	22.8	23.6	23.1	23.8	24.0	21.3	22.1	21.5	22.3	22.5
4H	23.2	24.0	23.5	24.2	24.4	21.7	22.5	22.0	22.7	23.0
6H	23.5	24.2	23.8	24.5	24.7	22.0	22.7	22.3	23.0	23.2
8H	23.5	24.3	23.8	24.5	24.8	22.1	22.8	22.4	23.1	23.3
12H	23.5	24.2	23.9	24.5	24.8	22.1	22.8	22.4	23.1	23.4
4H 2H	22.2	23.0	22.5	23.2	23.4	20.7	21.5	20.9	21.7	21.9
3H	23.2	23.9	23.5	24.1	24.4	21.9	22.6	22.2	22.8	23.1
4H	23.7	24.3	24.0	24.6	24.9	22.5	23.1	22.8	23.4	23.7
6H	24.1	24.6	24.5	25.0	25.3	22.8	23.4	23.2	23.7	24.1
8H	24.2	24.7	24.6	25.0	25.4	23.0	23.5	23.4	23.8	24.2
12H	24.2	24.7	24.6	25.1	25.5	23.0	23.5	23.5	23.9	24.3
8H 4H	23.8	24.3	24.2	24.7	25.1	22.7	23.2	23.1	23.6	23.9
6H	24.3	24.7	24.7	25.1	25.5	23.2	23.6	23.6	24.0	24.4
8H	24.4	24.8	24.9	25.2	25.7	23.4	23.7	23.8	24.2	24.6
12H	24.5	24.9	25.0	25.3	25.8	23.5	23.8	24.0	24.3	24.7
12H 4H	23.8	24.3	24.2	24.6	25.0	22.7	23.2	23.1	23.5	23.9
6H	24.3	24.7	24.7	25.1	25.5	23.2	23.6	23.6	24.0	24.4
8H	24.5	24.8	24.9	25.2	25.7	23.4	23.7	23.9	24.2	24.7
Variations with the observer position at spacings:										
S = 1.0H	+ 1.4 / - 1.0					+ 0.7 / - 0.6				
1.5H	+ 2.8 / - 0.8					+ 1.3 / - 0.6				
2.0H	+ 0.6 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 1581 lm Total Lamp Luminous Flux. (8log(F/F0) = 1.6)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

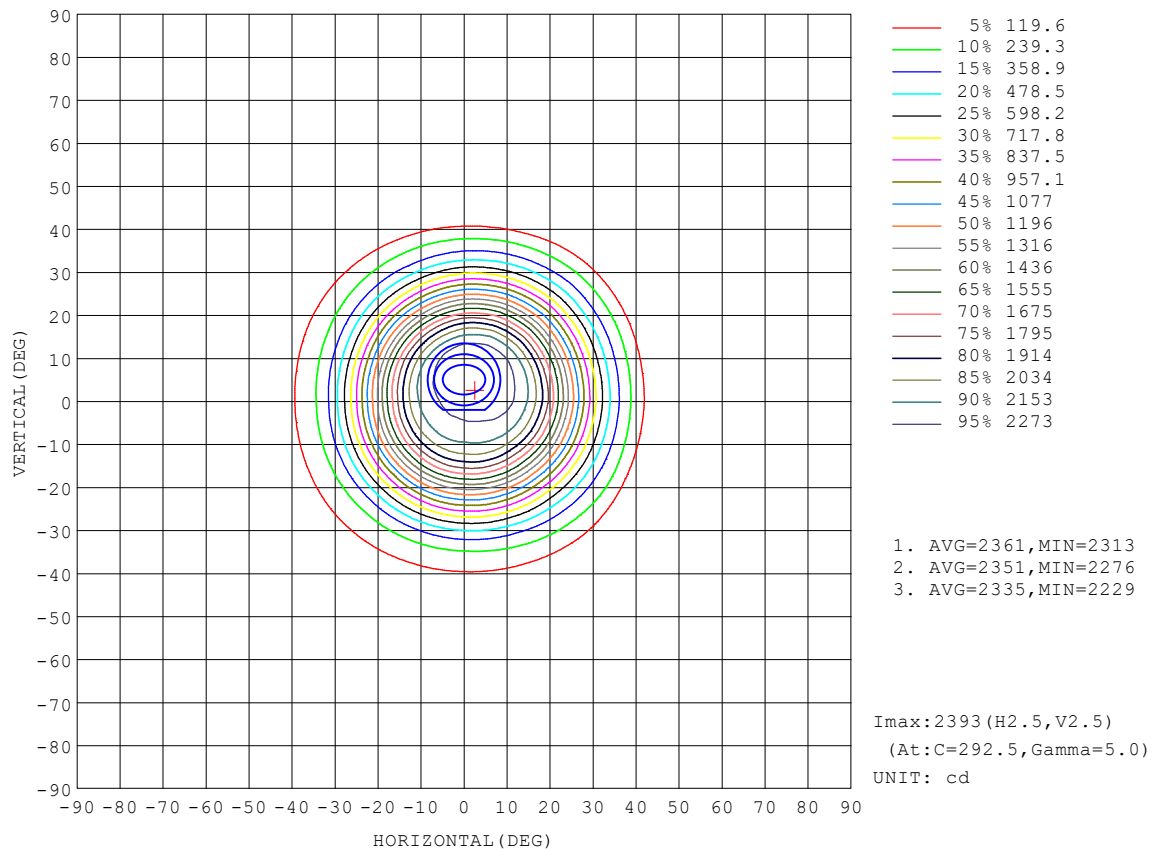
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	84	79	75	71
0.80	93	87	83	93	87	83	91	86	83	79
1.00	98	92	88	97	91	88	95	91	87	83
1.25	102	96	93	101	96	92	99	94	91	87
1.50	105	100	96	103	99	95	101	97	94	90
2.00	107	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	108	105	104	97
5.00	115	112	110	112	110	109	108	107	105	98
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: JEFF  
 Test Date: 13 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 7.995m [K=1.0000]  
 Remarks:

# ISOCANDELA DIAGRAM

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



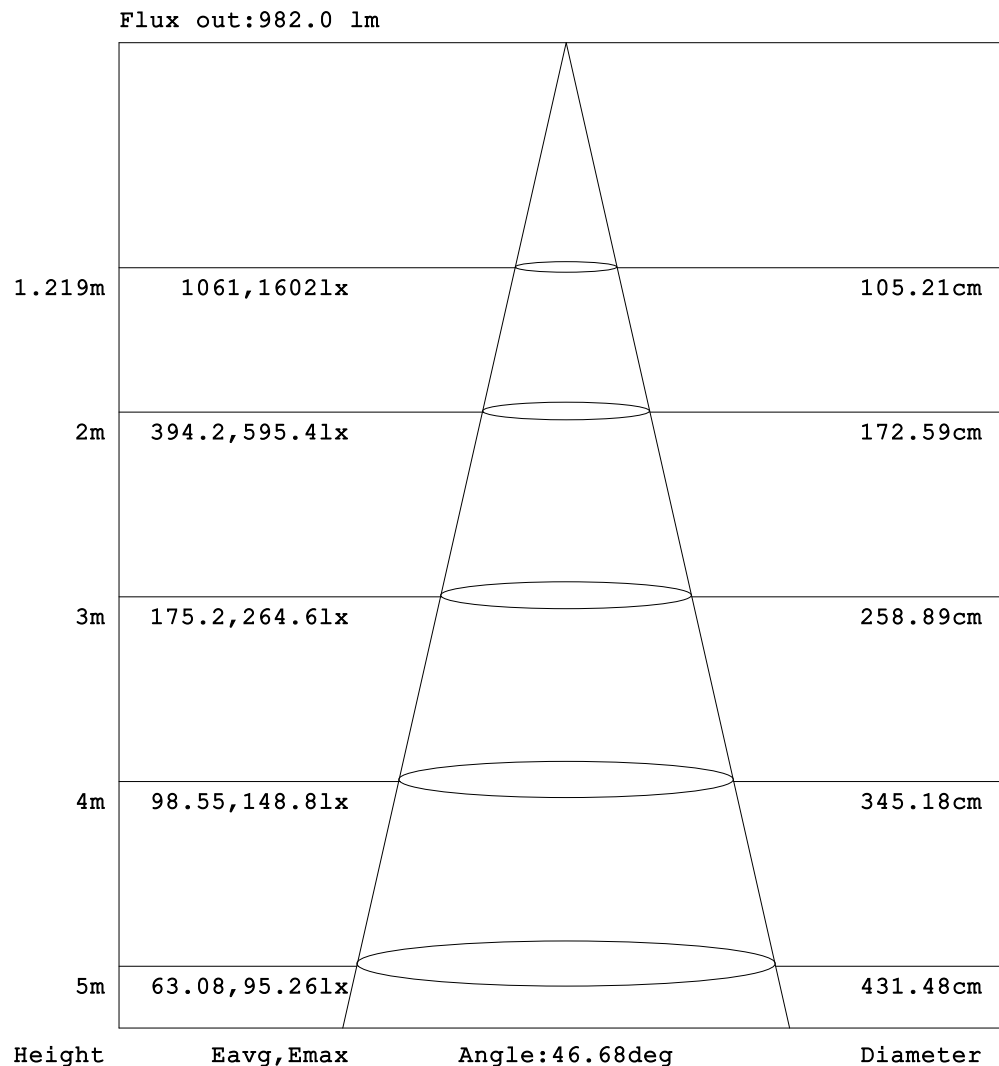
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



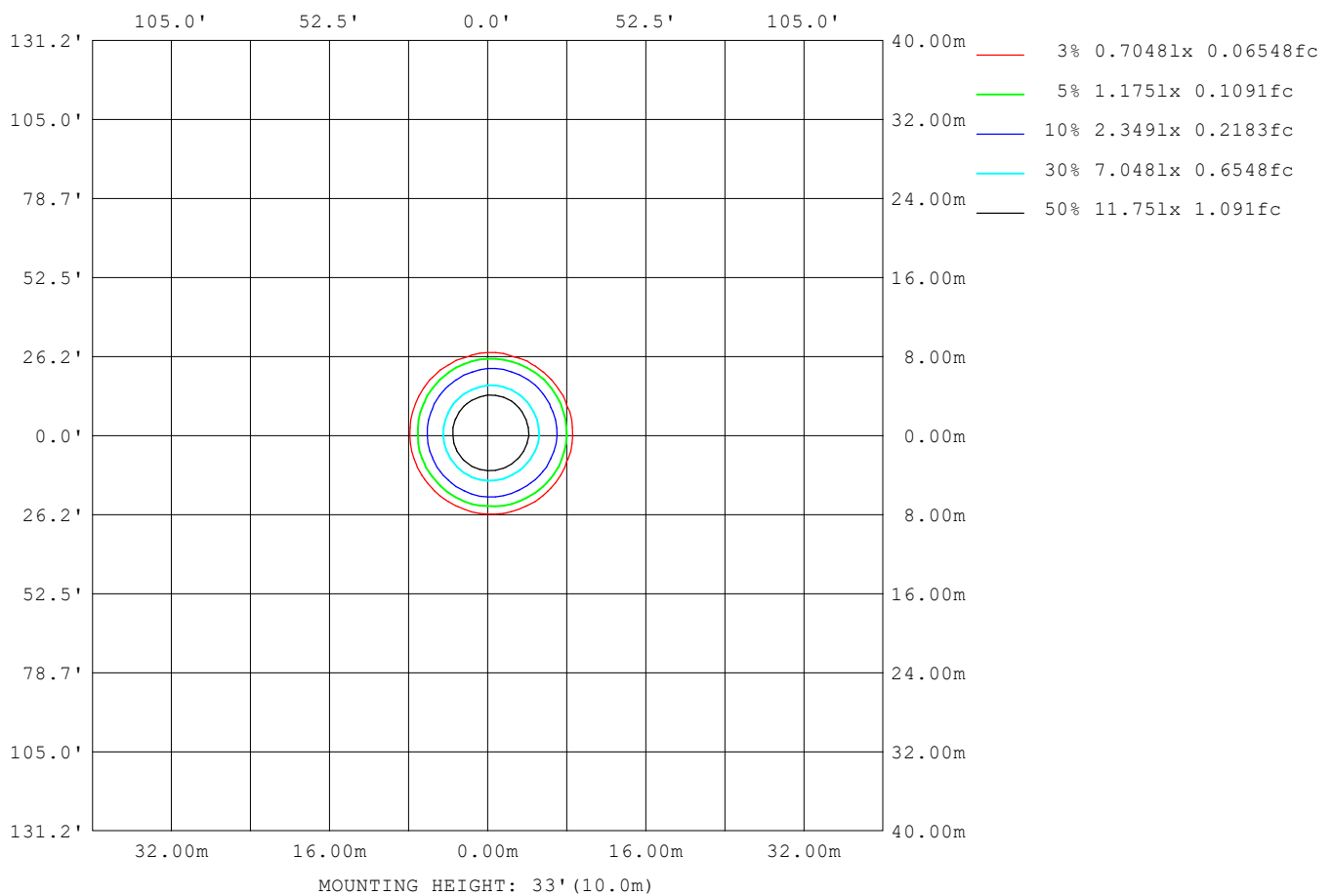
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 13 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.995m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	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:JEFF  
Test Date:13 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:239.9V I:0.0688A P:15.48W PF:0.9383 Lamp Flux:1580.59x1 lm		
NAME: BARREL_WHT_55 DEG_350mA_3000K CRI80	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

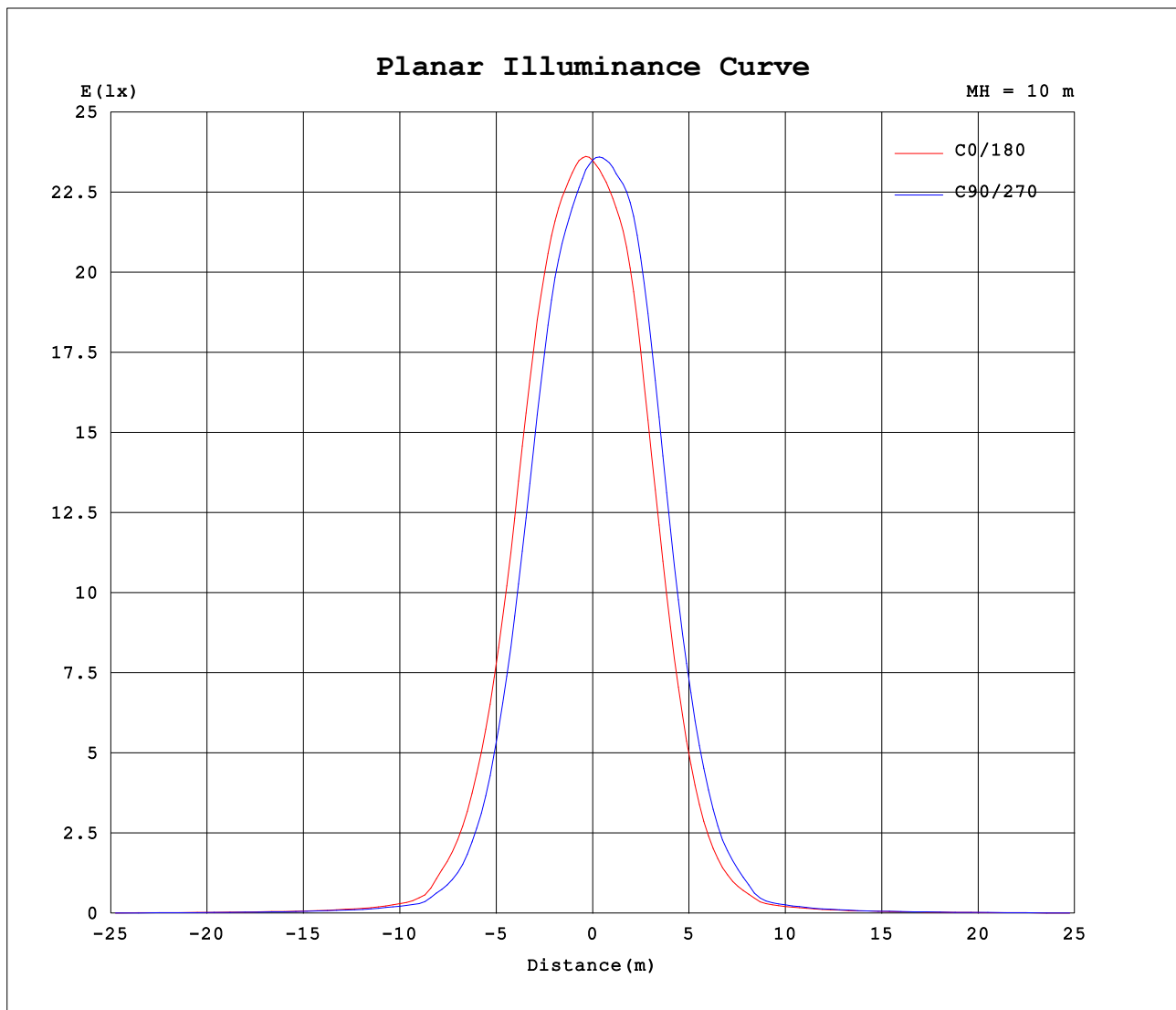
AvgL	cd/m2
L_0~180 (65) av	30825
L_0~180 (75) av	28839
L_0~180 (85) av	20720
L_90~270 (65) av	29564
L_90~270 (75) av	28018
L_90~270 (85) av	20269
L_45 (65) av	29912
L_45 (75) av	28329
L_45 (85) av	20270

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 January 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 13 January 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.995m [K=1.0000]  
Remarks:

